ECONOMICS AND INDUSTRY STANDING COMMITTEE

THE STATE GOVERNMENT'S ROLE IN DEVELOPING AND PROMOTING INFORMATION COMMUNICATIONS TECHNOLOGY (ICT) IN WESTERN AUSTRALIA

Report No. 6
in the 37th Parliament

2007

ECONOMICS AND INDUSTRY STANDING COMMITTEE

THE STATE GOVERNMENT'S ROLE IN DEVELOPING AND PROMOTING INFORMATION COMMUNICATIONS TECHNOLOGY (ICT) IN WESTERN AUSTRALIA

Report No. 6

Presented by:
Ms J.A. Radisich, MLA
Laid on the Table of the Legislative Assembly
on 14 June 2007

COMMITTEE MEMBERS

Chair	Ms J.A. Radisich, MLA Member for Swan Hills
Deputy Chair	Mr G.A. Woodhams, MLA Member for Greenough
Members	Hon. Dr J.M. Edwards, MLA Member for Maylands
	Mr M.P. Murray, MLA Member for Collie-Wellington
	Mr A.J. Simpson, MLA Member for Serpentine-Jarrahdale

COMMITTEE STAFF

Principal Research Officer	Dr Loraine Abernethie, PhD from 20 November 2006
	Ms Jessica Shaw, BA (Hons) LLB(Hons) from 10 July 2006 to 27 September 2006
Research Officer	Mr Peter Frantom, BA from 12 February 2007
	Ms Jovita Hogan, BA (Hons) to 31 January 2007

COMMITTEE ADDRESS

Economics and Industry Standing Committee
Legislative Assembly
Parliament House
Harvest Terrace
PERTH WA 6000

Tel: (08) 9222 7494
Fax: (08) 9222 7804
Email: laeisc@parliament.wa.gov.au
Website: www.parliament.wa.gov.au

TABLE OF CONTENTS

COMMITTEE'S FUNCTIONS AND POWERS

The functions of the Committee are to review and report to the Assembly on: -

(a)   the outcomes and administration of the departments within the Committee's portfolio responsibilities;

(b)   annual reports of government departments laid on the Table of the House;

(c)   the adequacy of legislation and regulations within its jurisdiction; and

(d)   any matters referred to it by the assembly including a bill, motion, petition, vote or expenditure, other financial matter, report or paper.

At the commencement of each Parliament and as often thereafter as the Speaker considers necessary, the Speaker will determine and table a schedule showing the portfolio responsibilities for each committee. Annual report of government departments and authorities tabled in the Assembly will stand referred to the relevant committee for any inquiry the committee may make.

Whenever a committee receives or determines for itself fresh or amended terms of reference, the committee will forward them to each standing and select committee of the Assembly and Joint Committee of the Assembly and Council. The Speaker will announce them to the Assembly at the next opportunity and arrange for them to be placed on the notice boards of the Assembly.

INQUIRY TERMS OF REFERENCE

The Economics and Industry Standing Committee will inquire into and make recommendations on the role of the State Government in developing and promoting the local Information Communications Technology (ICT) industry as part of the Western Australian economy.

In particular, the Committee will examine -

(a)   the nature of assistance available to businesses to develop ICT technology;

(b)   the nature of assistance available to businesses to market ICT technology;

(c)   the effectiveness of support given to the local sector by the State Government, including an evaluation of procurement processes; and

(d)   any other issue the Committee deems relevant to the Inquiry.

CHAIR'S FOREWORD

I am pleased to present to the Legislative Assembly the 5th report of the Economics and Industry Standing Committee in the thirty-seventh Parliament. This report finalises the Committee's Inquiry into the State Government's Role in Developing and Promoting Information Communications Technology (ICT) in Western Australia.

The Committee pursued an inquiry into ICT in order to 'take the temperature' of the industry in WA. The reason for this was in recognition of the increasingly important role of ICT in the economic, social and cultural development of the State. The Committee intended to garner an understanding of the breadth and depth of the local industry, identify strengths and opportunities for industry and government, and ensure that government is engaging with, and supporting, the local industry at a meaningful level.

To achieve these objectives, the Committee set parameters for its study which included: an examination of the nature of assistance available to businesses to develop and market ICT; a review of the effectiveness of support given to the local sector by the State Government; an evaluation of procurement processes; and other issues relevant to ICT in WA.

Since the commencement of the Committee's inquiry important progress has been made in support of the ICT sector. Advances include a State Government announcement of the $100 million State Broadband Network, developments in contract liability provisions, and a commitment to radioastronomy. These developments have been acknowledged throughout the report, and importantly, other recommendations designed to carve a way forward for ICT industry development have been made.

I want to personally thank the many industry participants who gave willingly and generously of their time to provide assistance to the Committee during its deliberations. It is hoped that the relationship developed between the Committee members from different policital parties, and industry members, will serve the government and the ICT sector well in the future.

I would like to thank the Committee members who participated in the inquiry. In particular, I want to recognise the particular passion for ICT shown by Dr Judy Edwards MLA and Mr Tony Simpson MLA – and for the commitment that they share with me to ensure extra support is extended by the State towards the ICT industry.

On behalf of the Committee I would like to thank our Principal Research Officer, Loraine Abernethie, for the many months of tireless work that she invested in preparing this report. Thanks also to the committee's former Principal Research Officer, Jessica Shaw, former Research Officer, Jovita Hogan, for their assistance, as well as current Research Officer, Peter Frantom.

MS J.A. RADISICH, MLA
CHAIR

ABBREVIATIONS AND ACRONYMS

ABS	Australian Bureau of Statistics
ACCI	Australian Chamber of Commerce and Industry
ACEPT	Australian Centre for Energy and Process Training
ACS	Australian Computer Society Inc.
AEEMA	Australian Electrical and Electronic Manufacturers' Association
AGIMO	Australian Government Information Management Office
AIC	Australian Institute for Commercialisation
AiG	Australian Industry Group
AIIA	Australian Information Industry Association
AIIA (WA)	Australian Information Industry Association, Western Australian Branch
ANAO	Australian National Audit Office
ANZSIC	Australian and New Zealand Standard Industrial Classification
ARC	Australian Research Centre
AUSFTA	Australia United States Free Trade Agreement
Austrade	Australian Trade Commission
BIDS	Business Innovation Development Scheme
BIF	Biotechnology Investment Fund
BITS	Building on IT Strengths
BsB	Business-to-Business
CES	Consumer Electronics Show
CMMI	Capability Maturity Model® Integration
COE	Centre of Excellence
COMET	Commercialising New Technologies
CoMICTA	Committee for Marketing Information Communications Technology for Australia
CRC	Co-operative Research Centre

CSIRO	Commonwealth Scientific and Industrial Research Organisation
CUA	Common Use Arrangement
DCA	Department of Culture and the Arts
DCITA	Department of Communications, Information Technology and the Arts
DEST	Department of Education, Science and Training
DET	Department of Education and Training
DEWR	Department of Employment and Workplace Relations
DIMIA	Department of Immigration and Multicultural and Indigenous Affairs
DLI	Department of Land Information
DOFA	Department of Finance and Administration
DITR	Department of Industry, Tourism and Resources
DoIR	Department of Industry and Resources
DTF	Department of Treasury and Finance
EFIC	Export Finance and Insurance Corporation
EiR	Entrepreneurs in Residence Pty Ltd
EMDG	Export Market Development Grants
ESA	Endorsed Supplier Agreement
ESVCLP	Early Stage Venture Capital Limited Partnership
EXITE	Exploring Interests in Technology and Engineering
FMA Act	Financial Management and Accountability Act 1997
FSCSI	Federal Standing Committee on Science and Innovation
FTE	Full Time Equivalent
GCOC	General Conditions of Contract
GDP	Gross Domestic Product
GIDGITS	Girls Into Doing Great Information Technology Stuff
GITC WA4	Government Information Technology and Communications, Western Australia, Version 4

GSM	General Skilled Migration
GSP	Gross State Product
HiBIS	Higher Bandwidth Incentive Scheme
HPC	High Performance Computing
IBM	International Business Machines
ICIP	Industry Co-operative Innovation Program
ICNWA	Industry Capability Network of Western Australia
ICT	Information Communications Technology
ICTGCOC	ICT General Conditions of Contract
ICT ICC	Information Communications Technology Industry Collaboration Centre of Western Australia
IIF	Innovation Investment Fund
IMPCA	Institute for Multi-sensor Processing and Content Analysis
IP	Intellectual Property
IPP	Industry Participation Plan
IT	Information Technology
ITM	Innovation to Market
ITOL	Information Technology Online
IT&T	Information Technology and Telecommunications
iVEC	Interactive Virtual Environments Centre
IXC	Innovation Xchange
MIRA	Mileura International Radio Array
MMO RPGs	Massively Multiplayer Online Role Playing Games
MNC	Multi-National Corporation
MODL	Migration Occupations in Demand List
MUL	Multi Use List
NEDP	New Exporter Development Program
NICTA	National ICT Australia Ltd

NICTIA	National ICT Industry Alliance
NORFACE	New Opportunities for Research Funding Co-operation in Europe
NSW	New South Wales
NTF	National Training Framework
OECD	Organisation for Economic Cooperation and Development
OSTI	Office of Science, Technology and Innovation
POC	Proof of Concept
R&D	Research and Development
RAP	Radio Astronomy Park
SAP	Systems, Applications and Products in Data Processing
SBDC	Small Business Development Corporation
SBEN	Small Business Exporters Network
SBN	StateWide Broadband Network
SET	Science Engineering and Technical Subjects
SKA	Square Kilometre Array
SME	Small/Medium Enterprise
SPIRIT	Strategic Partnering in Resourcing Information Technology
TAFE	Technical and Further Education
TAFEWA	Technical and Further Education Western Australia
TIAC	Technology and Industry Advisory Council
UK	United Kingdom
US	United States of America
USFTA	United States Free Trade Agreement
VCLP	Venture Capital Limited Partnership
VET	Vocational Education and Training
WA	Western Australia
WAGON	Western Australian Government Overseas Network

WAICDS   Western Australian Innovation Capability Development Scheme

WAICTIDF   Western Australian Information and Communications Technology Industry Development Forum

WAITTA   WA Information Technology and Telecommunications Awards

WATRI   Western Australian Telecommunications Research Institute

WiT   Women in Technology

EXECUTIVE SUMMARY

The move toward the knowledge economy, together with its associated economic and social transformations, is having considerable impact on productivity growth in advanced economies of the world. Not only has Information Communications Technology (ICT) been an important factor in Australia's social and economic development at both a state and federal level, evidence suggests that world-class ICT capabilities will continue to be essential to sustained levels of economic and social development. ICT is not only an important industry in its own right; it is also an essential 'enabler' of development and growth in other industries, impacting upon business operations, government processes, cultural development and social engagement. The corollary to this is that ICT will continue to play an increasingly significant role in the lives of Western Australians.

On 14 June 2006 the Economics and Industry Standing Committee (the Committee) resolved to conduct an Inquiry into the Western Australian Government's role in developing and promoting the local ICT industry as part of the Western Australian economy. The Committee embarked upon this Inquiry because it recognised ICT as an important emerging sector for the Western Australian economy, as an enabler of other industries, and as something that crosses all portfolios of government. The Committee wanted to determine, first, whether the Western Australian Government is providing appropriate support to the industry, second, whether there are areas in which it might do better, and, third, whether there are any regulatory or other factors that impede the development of the ICT industry in the state. This Report, with its findings and recommendations, is the result of the Committee's investigations which combine data generated through public submissions, public hearings, briefings provided by a number of state and federal agencies and other key stakeholders, conference attendance and document analysis.

The Report acknowledges that factors such as the extraordinary breadth of products and services provided, the lack of a discrete ICT sector *per se* and the extension of ICT into so many other sectors of the economy and society make it extremely difficult to precisely and accurately define the ICT industry. Given this difficulty, the Committee applies the broad, general definition of the ICT industry as the provision of all hardware and software products and services, plus any ICT services used in conjunction with those products.

The Introduction to this Report provides a brief overview of the ICT industry both in Australia and Western Australia. It notes that for 2002-03 ICT's proportion of Australia's total gross value added, at 4.9%, was more than that of agriculture, forestry and fishing (3.3%), government administration and defence (4.4%), education (4.8%), and personal and other services (2%). In Australia ICT industry revenue from the production of ICT goods and services for 2004-05 totalled $54.4 billion. Australian Bureau of Statistics (ABS) data reveals that in August 2006 approximately 371,150 people were employed in ICT related positions, with 92% of these being full time employees, and 84.5% male. In Western Australia ICT revenue is estimated to be in excess of $6.6 billion for 2004. The industry provides direct employment for 23,000 and is indirectly responsible for between 107,000 and 161,000 jobs in the state. ICT contributed between 13.7% and 23.8% of Western Australia's Gross State Product.

ICT also plays a significant role in Australia's export performance. ABS data indicate that while exports for ICT goods and services totalled $5.14 billion for 2004-05, Australia has a trade deficit for ICT goods and services of $17.555 billion, a significant increase on the $10 billion deficit of 2001-02. It has been suggested that this increasing deficit indicates a decrease in both the local ICT industry and its international competitiveness.

In Western Australia the size of the ICT industry is comparative to that of agriculture, fisheries and forestry combined, and is the State's 12th largest industry. In 2003-04 the industry was worth around $2.9 billion, which was 3.3% of the State's total gross output. Locally produced ICT equipment exports in 2005 were reported at $84 million, up $10 million since 1995. However, Western Australia's imports of ICT equipment have grown faster than exports over the last decade.

Government is the largest procurer of ICT products and services in Australia. The most recent ABS survey of government ICT expenditure was conducted in respect of 2002-03. Excluding wages and salaries of ICT employees, government operating expenses for ICT stood at $5,060 million, $2,270 million of which was Commonwealth Government, the balance being State/territory and local governments. However, given the economic and social potential of the ICT industry, both nationally and for Western Australia, and the growing dependence upon technology and communication within business and the community, government needs to be more than merely a buyer of ICT technology. The government has a role to play in the ongoing development of the ICT industry as an enabler of social and economic development.

One of the fundamental drivers behind the Inquiry is the Committee's belief that the value and potential of the Western Australian ICT sector has been underestimated and, as a consequence, there has been inadequate investment by government into an industry that will potentially create opportunities for the state beyond the current period of strong, resource-driven economic growth. The Committee has a commitment to the development of a strong and vibrant local ICT industry in co-operation with government.

The Committee's investigations reveal a large number of federal and state initiatives and programmes available for the ICT industry, including general industry assistance schemes and those tailored specifically for the ICT industry. These government assistance initiatives and programmes do more than simply provide support to individual ICT enterprises. Given the capacity of ICT to enable other areas of economic and social activity, assistance to the ICT sector necessarily has a flow-on effect to economic and social development, economic diversification, jobs and market growth, and the international competitiveness of Western Australian companies, both domestically and internationally.

While the Committee initially set out to inquire into the nature of assistance available to businesses to develop and market ICT, and to examine the effectiveness of that support, it became clear early in the Inquiry that issues such as skills development, education and communications infrastructure, while not part of the ICT industry *per se*, directly impact upon the ability of the industry to be maintained and developed. The weight of evidence provided to the Committee demanded that these matters receive particular attention.

The chapters of the Report are directly related to the terms of reference, with chapters devoted to the assistance to develop the industry, the assistance to market the industry, the effectiveness of government support and, under 'any other issues', the impact of skills development, education and communications infrastructure. Also, as the digital content industry was one that was specifically drawn to the Committee's attention, this is discussed in detail as another issue deemed particularly relevant to the Inquiry.

The Report presents information concerning various programmes and initiatives proposed and implemented by the federal and Western Australian Governments to assist businesses develop the ICT sector. Given the broad possible definition of 'assistance' and the myriad of forms it may take, the programmes and initiatives discussed do not comprise an exhaustive list of all those available. Rather, discussion is limited to those programmes and initiatives that the Committee has had an opportunity to review in the course of this Inquiry.

Nature of assistance available to business to develop ICT technology

In 2001 the Australian Government introduced *Backing Australia's Ability - An Innovation Action Plan for the Future 2001,* allocating $3 billion over five years to 2005-06 to the promotion of science and innovation. The allocation of a further $5.3 billion in 2004 through *Backing Australia's Ability - Building Our Future through Science and Innovation*, brought the total funding provided to $8.3 billion over the 10 year period from 2001-02 to 2010-11. Against this background the federal government developed its 'Framework for the Future', which recognises the important role of ICT in industry and society, and the need to support the long-term growth and development of the industry and the nation's ICT capabilities.

The federal government has in place a number of programmes and initiatives, each designed to address specific issues and targeted at specific businesses such as Small/Medium Enterprises (SMEs). Research directed programmes and initiatives aim to help ICT businesses create new ideas and products, enhance their research and development (R&D) capabilities, develop proof-of-concept, and encourage public/private partnerships and interactions between researchers and industry. Commercialisation focussed programmes and initiatives include funding consultant business advisers, providing seed and pre-seed capital, encouraging entrepreneurship, increasing collaboration and exchange of intellectual property (IP) and encourage non-resident investment in the Australian venture capital industry. Many of these are briefly outlined in Chapter 2 of this Report.

In Western Australia it is recognised that while the resources sector is driving current economic prosperity and growth, for such growth and prosperity to be sustained the state also needs to grow its innovative sectors of marine, defence, biotechnology and ICT. As well as a number of initiatives designed to support ICT industry innovation and development, and their commercialisation, the Western Australian Government has undertaken a number of significant ICT infrastructure development initiatives. An outline of Western Australian programmes and initiatives designed to support the development of the local ICT industry is provided in Chapter 2.

Nature of assistance available to business to market ICT technology

As a complement to government support for ICT industry development, there is also a mutual benefit for government to provide marketing support for ICT businesses, particularly given its important role as an enabler for so many other industries.

In Western Australia ICT imports outweigh ICT exports. Many ICT businesses that are currently exporting or wish to develop export markets fall into the category of SME and do not have sufficient resources to allow them to access further interstate or overseas trade opportunities. Government is aware of this impediment to ICT trade development and has developed various programmes and initiatives that provide platforms that would otherwise not be available to assist business in their trade endeavours. Chapter 3 provides details on a number of these federal and state initiatives.

Effectiveness of support given to the local sector by the state government

The Committee does not have sufficient information to be able to assess the effectiveness of individual government funding programmes and initiatives. Therefore, in evaluating the effectiveness of government assistance to the ICT industry the Committee focussed its endeavours on how useful or helpful the ICT industry finds government assistance, and what issues and concerns the sector has about seeking and receiving such assistance. In doing so, the Committee necessarily takes an industry point of view. The issues raised in this evaluation may appear to be a group of disparate and discrete topics. However, they are joined by two common themes that emerged through analysis of evidence to the Inquiry. First, the aspects described here forms a commentary on what the ICT industry understands government to be engaged in to support their industry. Second, a common element of industry experience concerns communication from government, within government and between government and the industry.

The issues and concerns raised regarding the support provided by government to develop and market the ICT sector relate to the four main stages of the funding and application process, namely finding information, applying for funding, processing of the funding application and the evaluation of the funding and providing feedback to recipients.

The Inquiry has revealed that information regarding the funding opportunities available and how to access them is extremely difficult and time consuming to locate.

Providing the level of detail and documentation required as part of developing and submitting funding applications requires considerable effort and resources. The cost of applying for funding grants is often out of proportion to the amount of money available for the particular grant.

For some state government initiatives there has been a definite lack of uptake by industry members. The Department of Industry and Resources believes that this is largely a function of the current strong economic growth in Western Australia. Companies are extremely busy at present and simply do not have the time and resources to pursue government assistance. It has not been possible for the Committee to determine how much the lack of response is due to companies'

current level of activity or to determine the level of market and needs analysis that is conducted prior to the development of industry support initiatives.

The role of the Office of e-Government was an issue of particular concern raised throughout evidence. The Office of e-Government's role is not clear to industry and it is seen as not engaging sufficiently with industry.

Throughout the Inquiry it was clear that some states and their governments are much more proactive than others in supporting their local ICT industry. Queensland and Victoria are the two states held out as examples to be followed. It was generally felt that there is an opportunity for more active government promotion of the sector. The ICT industry is interested in the state government promoting their industry, advising the people with whom they deal, both nationally and internationally, that ICT is a vibrant and dynamic sector of the economy.

While there is debate as to whether or not there is sufficient venture capital in the state, the ICT industry argues that Western Australian ICT enterprises find it difficult to access capital, particularly seed, early stage and expansion capital. There is a funding gap in innovation progression between the proof of concept and proof of market stages of product development.

The difficulties associated with locating information on government programmes and initiatives, and the costs associated with developing and submitting funding applications are exacerbated by what industry sees as a lack of alignment between programmes at the state and federal level. Industry suggests that this situation could be improved by consolidating and aligning state and federal programmes through one central focus point.

The above issues and concerns represent, and are exacerbated by, what can be drawn together under the heading of communication issues. Chapter 4 of this Report identifies a need for improved and timely communication of information from government with regards to its assistance programmes and initiatives, and regarding the roles of particular agencies. It also discusses concerns regarding an apparent lack of coordination between government agencies as well as general communication between industry and government which seems to be less than optimal.

The Committee has identified two strategies which would help improve communication challenges between government and industry participants. The creation of an ICT portal and the establishement of a new position of Chief Information Officer are recommended as tools to achieve this goal.

Government procurement processes

Government is the largest purchaser of ICT goods and services in the country, and government procurement and its related issues are of considerable concern to the ICT industry. Western Australian Government ICT procurement must be conducted in accordance with the *State Supply Commission Act 1991*(WA) and related policies, and the *Public Works Act 1902*(WA). The Department of Treasury and Finance is responsible for whole of government Common Use Contracts, for developing and administering the State's procurement policies, processes and standards, and for providing procurement consultancy and advice to buyers. Western Australian

Government agency procurement occurs via established Common Use Arrangements (CUAs) or whole of government standing offers arrangements for the provision of commonly used goods and services. CUAs are established through a tender process. The purchase of ICT goods and services is via CUAs and most are mandatory in the Perth region while they are generally non-mandatory in regional areas to provide for Buy Local provisions and regional preferences. Strategic Partnering in Resourcing Information Technology (SPIRIT) is a CUA for the procurement of ICT services, and, with limited exceptions, all Western Australian government buyers of ICT services must do so within the SPIRIT framework.

Chapter 5 discusses the key issues and concerns raised with respect to government ICT procurement, including the:

- cost, uncertainty and length of time involved in qualifying for the tender process and for contract negotiation;

- lack of feedback on tenders and on which company had been successful in the tender;

- issue of uncapped liability and professional indemnity insurance levels;

- government default position of ownership of intellectual property;

- expertise of those involved in supplying and purchasing ICT;

- reluctance of government agencies to act as reference sites for suppliers; and

- concept of best value in the Buy Local Policy, and the effectiveness of the Buy Local Policy.

Also discussed are the effect of these issues in terms of the alignment between policy and practice, the loss of opportunity for industry development, the costs involved in negotiations and the risk certain government procurement practices pose to industry innovation.

Other issues deemed relevant to the inquiry

Education and skills development

While not part of the ICT industry itself, education and skills development are key issues raised throughout this Inquiry, and these are discussed in Chapter 6. The development of a skilled workforce is essential in maintaining growth within the ICT industry. Ongoing skills training and enhancement needs to be receptive to the ever changing requirements of the ICT industry to ensure there is a sufficient skilled labour force to meet local ICT demands. The roles performed by ICT professionals are becoming increasingly diverse which means that educational organisations involved in the provision of ICT training need to remain responsive to the changing parameters of the ICT industry.

More work is needed in liaison between the ICT industry and the Education and Training area of government to ensure that the training offered produces appropriately and relevantly skilled

people to fulfil ICT industry employment needs. Part of the problem associated with training and education is that the relationship between Western Australian universities and the industry has not been as close as it might have been.

The Primary and Secondary school system is seen as an extremely useful environment in which to develop basic ICT literacy skills as it equips students with generic ICT competencies and an understanding of current technologies. A good ICT experience at this stage can positively influence students' preparedness to consider undertaking further studies in ICT.

Parents exert a particularly strong influence on their children's decision making regarding careers. However, many parents have a rather reticent or suspicious attitude toward the industry due to the perceived vulnerability of the sector following the 'dot com' crash. Parents also have a view of ICT as being for 'geeks', and as being a boring and high risk career with limited financial reward.

A number of initiatives have been designed at both the federal and state level to counter the negative image and gender bias in the ICT industry. There are also initiatives to provide more resources for teachers responsible for the ICT programmes to enable them to become more proficient in developing advanced ICT literacy skills amongst their students. The additional training will also provide teachers with a better understanding of the skills requirements of the ICT industry. Also, a new training Information Technology (IT) Vocational Education and Training (VET) package has been developed to provide a more structured system of relevant and current qualifications and pathways into the industry.

Universities have been identified as a major source of new ICT professionals. The dynamic and ever changing nature of the ICT industry, however, has created problems for universities with ICT based degrees. There has been a general decline in the number of students electing to study science, engineering and technical subjects (SET). There is concern that the supply of these skills is failing to meet emerging demand.

Some universities have placed ICT within Business Faculties in the pursuit of more broadly based multidisciplinary ICT programmes and degrees. The ICT industry has indicated that there is a growing demand for ICT graduates to have a strong understanding of business. In Western Australia several universities have also produced hybrid degrees in, for example, Computer Science and Commerce, and Computer Science and Economics. Though there are a number of universities in the process of tailoring ICT programmes to more accurately reflect the skills required by the ICT industry, this transformation is progressing at a pace that seems unable to match demand.

The provision of skills training within the ICT industry is essential to maintain a sustainable level of growth and development. The ICT industry, like the educational institutions, needs to remain responsive to the continually changing requirements. Owing to the dynamic nature of information and communication technologies there is considerable pressure on those employed within the industry to constantly update their skills every three to five years to develop and maintain their competencies.

As well as excellent ICT skills, people in the ICT industry need to acquire business and management skills, and business skills development has become a high priority for industry members.

Telecommunications infrastructure

The provision of effective, efficient and affordable telecommunications infrastructure, in general, and broadband, in particular, is an issue of signal importance to the ICT industry. Broadband is an enabling technology that connects consumers and businesses to the online economies of knowledge and finance. While Australia has a large land mass, its population remains relatively small and unevenly distributed, and population centres are separated by long distances. It is necessary for services to reach the concentrated populations of the cities and of rural and remote areas, and to also interconnect these areas.

The Australian telecommunications network consists of carriers and service providers, fixed line customer networks, mobile networks, satellite services and wireless technologies. Not all locations access all components in the network and various mixes of delivery systems operate in any one location. Furthermore, this mix is ever-changing due to developments in technology or the impact of competition.

In August 2005 the federal government announced its *Connect Australia* communications package designed to make telecommunications in Australia 'future proof'. Through Connect Australia $1.1 billion was allocated to address identified gaps in services and $2 billion was to be provided as investment capital to provide income to fund new technologies in regional areas. In December 2006 the federal government released Broadband Blueprint, its national framework for broadband in Australia. On 7 March 2007 the Australian Government announced the $162.5 million Australian Broadband Guarantee to replace the Broadband Connect and Metro Broadband Connect programmes. The guarantee is designed to fill in those broadband blackspots remaining, whether in metropolitan or rural Australia.

The *Broadband Blueprint* argues against Australia's label as a 'broadband backwater'. However, while the Australian Government's blueprint presents quite a positive picture, evidence submitted to the Committee suggests that problems remain with the quality of Australian telecommunications infrastructure, the lack of universal access, and our dependence on one or two major communications carriers. Australia has a grossly sub-standard telecommunications infrastructure especially compared with countries such as Japan and South Korea. Both Telstra and the federal government have promised a great deal in terms of the roll out of fast Broadband, but the promises have not been delivered.

The Western Australian government has acknowledged the need for effective broadband technology at a state level, and recognises the vital role telecommunications infrastructure plays in economic and social development in the state. The Western Australian Government also acknowledges that access to fast and effective broadband services in the state is well below the standards found elsewhere in the world.

In November 2006 the WA StateWide Broadband Network (SBN) strategy was released. This strategy aims to facilitate access for more Western Australians to a high-speed and affordable

broadband service. Funding for the programme is derived from a ten year government contract worth $100 million per annum (the annual aggregate government departments and agencies' telecommunications spend). This aggregated spend will be offered to the market as an incentive to provide a private sector solution to deliver high speed broadband across the state. The SBN strategy was developed using the Alberta SuperNet model as the main point of reference and it is envisaged that a similar government/private sector culture will develop within Western Australia.

While the federal *Connect Australia* package is intended to address identified gaps in services, there is an apparent disagreement between the state and federal governments about whether or not the federal government will be contributing to the state's SBN. The Western Australian Government expects the Commonwealth Government will be required to continue to play a pivotal funding role in the development of accessible, high-speed and affordable broadband services in regional and remote areas of Western Australia.

Digital content industry

The digital content industry was one sector of the ICT industry that was raised in particular in this Inquiry. The economic, social and cultural importance of the digital content industry to Australia is generally acknowledged. There is potential for Western Australia to develop its digital content sector as an industry in its own right and as an enabler for other industries. However, significant components of the digital content industry work in isolation from each other. This fragmentation has meant less-than-optimal financial returns on investments and fewer opportunities for innovation. Furthermore, in August 2006, the Australian Trade Commission (Austrade) cut its funding for the TradeStart digital media export programme by 50%. Industry argues that this funding cut will have serious negative consequences for the Australia's digital content industry.

Western Australia has a considerable competitive advantage in the digital content sector with the computer games industry in the state being creative, innovative and dynamic and having great potential for development and growth. This is one area the state government could nurture as part of its aim to strengthen the Western Australian ICT sector.

FINDINGS

Page 10

> **Finding 1**
>
> The Western Australian ICT industry is growing at a strong rate. However, a disparity remains between imports and exports.

Page 11

> **Finding 2**
>
> Computer services exports from Western Australia are equal to the value of computer services imports. Data on ICT trade services is limited, particularly in ICT services such as audiovisual and related services or software royalties and fees.

Page 11

> **Finding 3**
>
> The government has a role to play in the ongoing development of the ICT industry as an enabler of social and economic development.

Page 12

> **Finding 4**
>
> Historically, investment by the government in the ICT sector has not been a funding priority. There is now greater recognition of the importance of this industry to our state's economy now and into the future.

Page 13

> **Finding 5**
>
> Government assistance allows firms to complete R&D projects and to launch projects that involve greater technological challenges than they might otherwise have pursued.

Page 34

Finding 6

The federal government has in place a number of programmes and initiatives, each designed to address specific issues and targeted at specific businesses such as SMEs. Research directed programmes and initiatives aim to help ICT businesses create new products and services, enhance their R&D capabilities, develop proof-of-concept, and encourage public/private partnerships and interactions between researchers and industry. Commercialisation focussed programmes and initiatives include funding consultant business advisers, providing seed and pre-seed capital, encouraging entrepreneurship, increasing collaboration and exchange of intellectual property and encourage non-resident investment in the Australian venture capital industry.

Page 36

Finding 7

The Western Australian Government recognises the significant potential for the local ICT industry to contribute to the further diversification and growth of the economy.

Page 38

Finding 8

Technology Park is an infrastructure facility which supports the emerging Western Australian innovation and ICT industries, and is a great asset to the ICT industry and to the Western Australian economy.

Page 41

Finding 9

The SKA project has a proposed budget of $1.63 billion, with an annual operating budget of $114 million. Australia has been short-listed as a potential site. The decision regarding the site will be made in 2010 and following phased in construction stages the SKA is planned to be fully operational by 2020. The SKA project is estimated to attract $400 million in infrastructure investment and provide considerable opportunities for Australian and Western Australian businesses.

Page 56

Finding 10

The Western Australian Government has an extensive range of programmes and initiatives in place to assist the development of ICT technology, ranging from substantial common user infrastructure through to direct commercial grants to ICT companies.

Page 78

Finding 11

The Western Australian Government has a wide range of programmes and initiatives in place to assist existing and potential exporters of ICT technology, ranging from smaller grants to assist with things like language translation through to sponsorship of awards and the development of marketing material, as well as larger schemes resulting in targeted trade missions to specific countries and assisting local ICT companies to attend Australian and International trade fairs.

Page 83

Finding 12

While website technology provides a powerful means of providing information to the community in a way that is easily accessed, there is an inherent risk that unless the sites are maintained the information available may not be accurate and/or may be misleading.

Page 85

Finding 13

Government funding is difficult to locate and industry is not always aware of what government has to offer. Applications can be time consuming and costly to prepare, particularly in relation to the amount of funding available. This significantly reduces the effectiveness of the funding received and makes it difficult to justify the cost of the effort of applying.

Page 92

Finding 14

The criteria the Department of Industry and Resources use to analyse the effectiveness of grants they support are unclear.

Page 97

> **Finding 15**
>
> The role of the Office of e-Government is unclear to industry and insufficient collaboration and communication occurs between the Office and industry participants.

Page 97

> **Finding 16**
>
> Many state government departments and agencies are unclear about the role of the Office of e-Government. There is a lack of clarity about the relationship individual agencies should have with the Office of e-Government and what intended benefits, if any, would flow from this.

Page 97

> **Finding 17**
>
> The name Office of e-Government gives rise to expectations about the core business of the Office and what it might deliver within government and between government and industry.

Page 100

> **Finding 18**
>
> The political leadership shown in Queensland and Victoria in support of their local ICT sector has been welcomed by the industry and has proven to be a useful component of industry development strategy.

Page 105

> **Finding 19**
>
> There is a funding gap in innovation progression between the proof of concept and proof of market stages.

Page 109

> **Finding 20**
>
> The Office of Science, Technology and Innovation (OSTI) has a venture capital database, which is updated twice a year and provided to companies on request.

Page 112

Finding 21

There is a lack of communication and coordination within and between government agencies, and between government and industry, with respect to state government support for ICT.

Page 116

Finding 22

Government is the largest procurer of ICT products and services in Australia.

Page 117

Finding 23

Government ICT procurement has been, and continues to be, a significant indirect support for the ICT industry.

Page 120

Finding 24

Western Australian Government procurement must be conducted in accordance with the *State Supply Commission Act 1991*(WA) and related policies, and the *Public Works Act 1902*(WA). State Government procurement is also governed by national and international agreements and government obligations such as the Australia United States Free Trade Agreement.

Page 122

Finding 25

Western Australian Government procurement of ICT goods and services occurs via established Common Use Arrangements (CUAs). CUAs are mandatory for most ICT goods and services purchasing in the Perth region and non-mandatory in regional areas to provide for Buy Local provisions. The procurement of ICT services must be done within the SPIRIT framework, a CUA designed for ICT services.

Page 123

Finding 26

Uncertainly regarding the future of SPIRIT is causing concern in the ICT sector. A review of SPIRIT is currently underway.

Page 126

Finding 27

Industry finds the process of qualifying as a supplier to government agencies complex and expensive.

Page 130

Finding 28

In November 2006 the Western Australian Government issued revised General Conditions of Contract for the Supply of Information and Communications Technology Goods and/or Services. These guidelines are mandatory for all new tenders called from January 2007. Guidelines are provided for a more structured and informed approach to determining liability issues. State Public Authorities are now advised that in most cases ICT supplier liability should be capped at appropriate levels, with unlimited liability only to be sought when necessitated by size, complexity or inherent risk of a particular project.

Page 132

Finding 29

Formalising the capped liability provisions in government procurement contracts would provide an immediate benefit to industry.

Page 132

Finding 30

For all tenders called for prior to January 2007, suppliers were required to accept unlimited liability provisions in government procurement contracts and no provision was made for liability to be capped at appropriate levels.

Page 137

> ### Finding 31
>
> There appears to be a mismatch in skills between government ICT practitioners and government procurement personnel.

Page 139

> ### Finding 32
>
> Many agencies have a non-codified policy of not providing references. However, there is no formal policy in Western Australia regarding government agencies acting as reference sites.

Page 140

> ### Finding 33
>
> Having a government reference site increases a company's chance of winning contracts, particularly when negotiating with potential overseas partners and markets. Not having a government reference site is a definite disadvantage to companies.

Page 141

> ### Finding 34
>
> Having a government agency as a reference site provides considerable advantage to individual ICT businesses and makes a significant contribution to the overall development of the local ICT industry at no cost to government.

Page 150

> ### Finding 35
>
> It is commonly agreed that government procurement and industry development are separate functions of government. Industry receives a strong signal from DoIR that this procurement is an important indirect industry development tool. DTF, on the other hand, are committed to their charter of delivering value for money in government procurement, which does not include consideration of potential industry development benefits.

Page 151

Finding 36

The 'Buy Local' Policy is a valuable industry development tool and needs to be maintained. For example, regional price preferences help local suppliers in non-metropolitan Western Australia, and the policy allows WA companies to compete with nationals and multinationals on a more equitable basis.

Page 157

Finding 37

The Western Australian Government's policy is to work with the business community to optimise the economic, social and environment benefits from the use and commercialisation of intellectual property created with government resources.

Page 158

Finding 38

The three key elements of the Western Australian Government policy on intellectual property are:

- the identification, protection and responsible management of IP;

- the allocation of rights to IP for optimum benefit to the state; and

- the encouragement of creativity and innovation in producing IP, including incentives to government employees.

Page 161

Finding 39

The Western Australian Government's policy and guidelines regarding intellectual property rights allow for these to be allocated to maximise the benefit of the use and commercialisation of intellectual property for Western Australia. However, the default position on intellectual property rights is that ownership remains with the government.

Page 164

Finding 40

In Victoria the default position in relation to the ownership of intellectual property lies with the supplier which is opposite to the situation in Western Australia.

Page 168

Finding 41

The Department of Industry and Resources support the establishment of a mechanism to trial local innovative technology and conduct pilot programmes to assist ICT innovation.

Page 173

Finding 42

More work is required by industry, government and the education sector to bring education in line with industry needs.

Page 176

Finding 43

While parents exert the most influence on their children's choice of career, they are especially cautious about encouraging children to enter the ICT industry. This is particularly so post the dot com crash of 2000. Parents are often unfamiliar with ICT themselves and therefore are not aware of opportunities in the sector, and this adds to their reluctance to encourage their children to take this career path.

Page 178

Finding 44

There is a lack of intention on behalf of young women to enrol in ICT courses at a tertiary level and/or enter the ICT industry.

Page 179

Finding 45

There is a perception that ICT is not an attractive career prospect. This is mainly due to its reputation as an antisocial, desk-bound occupation.

Page 180

Finding 46

The aspects of the ICT industry to which the Committee has been exposed indicate a vast breadth of engaging, dynamic and challenging opportunities across the sector, which debunks the perceptions held in the community about the ICT sector.

Page 181

Finding 47

Education and its institutions and training providers, from primary through to tertiary levels, play a pivotal role in the development of ICT skills and are vital to the ongoing development of the ICT industry.

Page 181

Finding 48

A number of federal and state educational initiatives have been put in place to raise the profile of Science, Engineering and ICT subjects in an attempt to increase student enrolments.

Page 184

Finding 49

There is concern that the supply of science, engineering and technical skills may not be growing sufficiently to meet demand within industry.

Page 186

Finding 50

Many universities are finding it difficult to be responsive to ICT industry needs as a consequence of the complex funding arrangements and long lead times required to make curriculum and course changes. Conversely, industry suffers from the inflexibility of tertiary institutions and the fact that the universities are not always one hundred percent up to date with industry demands.

Page 186

Finding 51

ICT is increasingly offered as a double major via Schools of Engineering or Business, as opposed to a discrete ICT faculty. This allows students to have a primary ICT skill set as well as exposure to business disciplines.

Page 186

Finding 52

There is a large number of commerce, law and other generalist graduates working in the ICT sector who have a skill set which complements engineering and other technical skill sets.

Page 187

Finding 53

While the provision of skills training within the ICT industry is essential to industry growth and development, training for individual staff members within companies is often inadequate.

Page 188

Finding 54

ICT industry employers have identified cost, quality and a lack of product neutrality as major factors that inhibit the provision of staff training.

Page 190

Finding 55

Ongoing ICT industry training is often inadequate and haphazard, and is not providing sufficient upskilling for those already employed within the ICT workforce.

Page 191

Finding 56

Permanent and temporary visas are being used to attract migrant workers to the ICT industry.

Page 197

Finding 57

Australia has a grossly sub-standard telecommunications infrastructure especially compared with countries such as Japan and South Korea. Both Telstra and the federal government have promised a great deal in terms of the roll out of fast broadband, but the promises have not been delivered.

Page 199

Finding 58

The Western Australian Government has acknowledged the need for effective broadband technology to be delivered throughout the State and has recognised that the State will have a role to play in delivering this.

Page 203

Finding 59

The Western Australian Government has committed to implementing the State Broadband Network, which will leverage $100 million per annum over 10 years of public sector communications spend to encourage the private sector to roll out high speed broadband across the state.

Page 203

Finding 60

The state government expects the Commonwealth Government will be required to continue to play a pivotal funding role in the development of accessible, high-speed and affordable broadband services in regional and remote areas of Western Australia.

Page 205

Finding 61

Developing infrastructure will allow further development in the digital content industry and assist in the retention of skilled people.

Page 207

Finding 62

Recent cuts in the TradeStart digital media export programme will have negative implications for the development of Western Australia's digital content industry.

Page 207

Finding 63

Western Australia exhibits a competitive advantage in the digital content sector of the ICT industry.

Page 209

Finding 64

There is a need for enhanced digital content industry support schemes targeting management skills development, incubators, marketing and investment attraction.

Page 210

Finding 65

The cross-agency group consisting of the Australian Broadcasting Corporation and ScreenWest to implement the objectives of Film and Television Production Fund has been abandoned.

Page 212

Finding 66

There is a perception of a lack of support for digital content developers in Western Australia, which leads to skilled people leaving the state.

Page 212

Finding 67

A relatively small government intervention could use the potential in the Western Australian digital content industry as an asset to leverage ICT digital content development in this state.

RECOMMENDATIONS

Page 20

Recommendation 1

The Western Australian Government investigates the potential for a CSIRO ICT Centre in the state to take advantage of emerging opportunities in the resources and e-health sectors.

Page 38

Recommendation 2

The value of technology park to members of the ICT industry could be significantly enhanced by facilitating increased informal communication on site.

Page 42

Recommendation 3

The Committe recommends that the state government continue to work closely with the federal government to optimise the benefits of the SKA project for Western Australia and to ensure that the ICT potential is captured within the state.

Page 85

Recommendation 4

The Western Australian Government must streamline and simplify its funding submission and grant application procedures. An easier application process would be fair to industry and a strengthening of the acquittal process would ensure an appropriate balance between accountability and accessibility.

Page 86

Recommendation 5

Western Australian Government should use on-line resources to help streamline grant application and follow-up procedures.

Page 87

Recommendation 6

Eligibility criteria and submission requirements should be relative to the total grant size available.

Page 90

Recommendation 7

Clear information about the state government funding process must be readily available to industry members. Applicants should have timely information at all stages of the process, including an assessment of, and advice on, unsuccessful applications.

Page 92

Recommendation 8

Transparent programme evaluation must be introduced to ensure funding opportunites meet state government strategic objectives and industry development needs.

Page 97

Recommendation 9

The government needs to clarify its expectations of, and parameters surrounding, the Office of e-Government and ascertain whether the Office is structured to meet these aspirations. Consideration should be given to whether some aspects of the Office of e-Government are better suited to other agencies such as the Department of Industry and Resources, the Department of Treasury and Finance and the State Supply Commission.

Page 97

Recommendation 10

If the Office of e-Government continues to exist its nomenclature should be amended to more accurately reflect the activities and functions of this Office.

Page 100

Recommendation 11

The Western Australian Government needs to provide strong political leadership and actively promote the local ICT sector through all means at its disposal.

Page 105

Recommendation 12

Government should investigate providing increased funding between the proof of concept and proof of market stages to help address the innovation progression funding gap.

Page 109

Recommendation 13

The Department of Industry and Resources needs to facilitate more industry networking and showcasing opportunities to facilitate industry accessing venture capital.

Page 114

Recommendation 14

The Committee recommends that the Western Australian Government, in cooperation with industry, develop an ICT portal that would:

- allow users to quickly and easily access information about the various assistance programmes;

- be constantly maintained to guarantee accurate information;

- provide a vehicle for industry feedback and promotion;

- provide for online submissions and applications;

- announce upcoming events; and

- facilitate any other opportunities benefitting the sector.

Page 114

Recommendation 15

Western Australian Government appoint a Chief Information Officer, a person with technical ICT expertise, leadership skills and a broad understanding of industry and government, whose role will be to champion ICT within government, and between government and industry.

Page 124

Recommendation 16

The current review of SPIRIT needs to be finalised as soon as possible to provide clarity and certainty to the industry.

Page 126

Recommendation 17

The state government should review its prequalification requirements for government procurement contracts to make this a more streamlined and cost efficient process.

Page 132

Recommendation 18

The Committee recommends assessment in January 2008 to determine whether the new liability provisions are meeting government and industry needs and expectations.

Page 135

Recommendation 19

The Committee recommends that procurement staff receive appropriate training in the new contract provisions to ensure that they are in a position to engage in active negotiations with industry, and not simply revert to the default position of uncapped supplier liability.

Page 138

Recommendation 20

The creation of a specialised ICT procurement team could be of benefit to all departments and agencies and the establishment of such should be considered by government.

Page 141

Recommendation 21

Government should develop and implement a policy that facilitates agencies acting as a reference site for suppliers.

Page 141

Recommendation 22

The Western Australian Government should consider developing a state government reference site pro-forma for use by government agencies.

Page 150

Recommendation 23

The Department of Treasury and Finance should take account of the overall benefit to industry of procurement undertaken by government.

Page 151

Recommendation 24

Government investigate ways of strengthening and expanding the 'Buy Local' Policy.

Page 165

Recommendation 25

The Western Australian Government policy and practice regarding intellectual property rights must be critically reviewed with a view to maximising commercialisation oppertunities.

Page 169

Recommendation 26

The Western Australian Government should develop a policy regarding government agencies trialling innovative ICT products and services.

Page 172

Recommendation 27

More collaboration between the ICT industry and the education sector is needed to ensure that the education and training offered produces appropriately skilled people for employment in the industry.

Page 173

Recommendation 28

The Department of Education and Training and universities must ensure that curriculum being delivered to students is relevant and useful.

Page 178

Recommendation 29

The Western Australian Government provides funding to accurately and positively communicate the opportunities in ICT specifically to young women.

Page 192

Recommendation 30

The Western Australian Government should work with the federal government to increase skilled migration (temporary and permanent) to help fill ICT employment vacancies.

Page 204

Recommendation 31

The federal government redirect funds which would otherwise have been spent to support the development of broadband in Western Australia to the Statewide broadband initiative.

Page 210

Recommendation 32

Reestablishment of the digital content cross-agency group to give profile to the industry within government and help generate whole-of-government commitment to expanding the sector.

Page 210

Recommendation 33

Relevant Ministers need to support a cross-agency group on digital content and implement key performance indicators for Directors General to reflect the development of the digital content industry as a government priority.

Page 213

Recommendation 34

The state government provide industry assistance and support to help maximise the opportunities for Western Australia's digital content industry.

MINISTERIAL RESPONSE

In accordance with Standing Order 277(1) of the Standing Orders of the Legislative Assembly, the Economics and Industry Standing Committee directs that the Minister for Energy; Resources; Industry and Enterprise report to the Assembly as to the action, if any, proposed to be taken by the Government with respect to the recommendations of the Committee.

CHAPTER 1   INTRODUCTION

1.1   The Committee

The Economics and Industry Standing Committee was appointed on 7 April 2005. Pursuant to Legislative Assembly Standing Order 287(3), the portfolio responsibilities of the Committee are:

- Energy;

- Consumer and Employment Protection;

- Science;

- Agriculture and Forestry;

- Fisheries;

- Water Resources;

- Housing and Works;

- Heritage;

- Planning and Infrastructure;

- State Development;

- Land Information;

- Tourism;

- Small Business;

- Racing and Gaming;

- Regional Development; and

- The Regional Development portfolios of the Midwest and Wheatbelt; the Kimberley, Pilbara and Great Southern.

In accordance with Assembly Standing Order 285 (2), the Committee determined to conduct an Inquiry in relation to its oversight of the Science and Innovation portfolio.

1.2 Conduct of the Inquiry

At its meeting on 14 June 2006 the Economics and Industry Standing Committee (the Committee) resolved to conduct an inquiry into the Western Australian Government's role in promoting and developing Information Communications Technology (ICT) in the state. The inquiry terms of reference were subsequently announced to the Legislative Assembly on 15 June 2006.

Advertisements calling for public submissions to the inquiry were placed in *The Australian* newspaper on 27 June 2006, and in *The West Australian* newspaper on 20 June 2006 and the 24 June 2006. Submissions were invited from state and Commonwealth Departments, industry groups, and a range of private sector companies. The Committee received 17 written submissions.[1]

The Committee conducted eight formal evidence hearings. Public hearings were noted on the Parliament's web site and the subsequent transcripts made available by the same means. Those who provided formal evidence are listed in Appendix Two.

The Committee also received a series of briefings from state and federal agencies, stakeholder groups and private individuals. Although briefings to the Committee are not transcribed and made publicly available, a list of those who provided the briefings can be found listed in Appendix Three.

The Committee facilitated a presentation to Members of Parliament by the Australian Information Industry Association (AIIA) on 21 November at Parliament House. The briefing provided an overview of the value of ICT as an enabler, industry development strategy and latest innovations.

Members of the committee attended three conferences in relation to the inquiry:

- ICT Outlook Forum, Melbourne, October 2006;[2]

- ICT Enabling Growth, Perth October 2006;[3] and the

- International Consumer Electronics Show (CES), Nevada, January 2007.[4]

Whilst in Melbourne the Committee also attended the Australian Electrical and Electronic Manufacturers' Association (AEEMA) Excellence Awards which showcase achievements and innovations by Australian manufacturing companies.

---

[1]   Submissions to the Inquiry are listed in Appendix One.

[2]   *ICT Outlook Forum*.   Available at: http://www.ictoutlookforum.com.au/index.html.   Accessed on 5 September 2006.

[3]   *ICT WA 2006 Conference*. Available at: http://www.ictwa.org.au. Accessed on 5 September 2006.

[4]   *International CES*. Available at: http://www.cesweb.org/default.asp. Accessed on 9 October 2006.

1.3   Background to the Inquiry

The Organisation for Economic Cooperation and Development (OECD) reports that 'economic and social transformations associated with the move to a knowledge economy are driving productivity growth in advanced economies and ICT plays a central role in that transformation'.[5] The data suggests that a 1.3% increase in Australian productivity growth over 1996-2000 can be attributed to ICT.[6]   Therefore, the ongoing development of the ICT industry is imperative for Western Australian industry to develop and to remain competitive in a global market.

Alongside the obvious gains in economic productivity, the social benefits of an ICT-enabled community include easier access to government services, individual networking and knowledge transfer, as well as enabling regional inclusiveness. The *ICT Framework for the Future* report states that, 'world-class ICT capabilities (e.g. in terms of skills and innovation) are fundamental to the ability to apply ICT in other industries and achieve broader national economic and social goals'.[7]   ICT, as a set of enabling technologies, has the potential to 'transform business operations, government processes, and society more generally'.[8]   The 2006 report of the ICT Skills Foresighting Working Group, *Building Australian ICT Skills*, states that the increasing importance of ICT to the economy makes ICT 'critical to the achievement of Australia's national goals, for example, future economic growth, national security, dealing with demographic change, environmental management, education and health'.[9]

As well as recognising the importance of the ICT industry as an enabler of economic and social change, the Committee also recognises that government has a key role to play in the purchase of ICT technologies and, consequently, in fostering and facilitating the development of the local ICT industry. In terms of government spending, Western Australia expended a total of $333 million in ICT operating expenses and $92 million in ICT capital expenditure in 2002-03. To compare, Victoria and Queensland expended $648 million and $587 million respectively in operating expenses, and $210 million and $358 million in capital expenses.[10]

It is against this background that the Committee examined the nature of assistance available to business to develop and market Western Australian ICT, and the effectiveness of existing state

---

[5]   Department of Communications, Information Technology and the Arts, *Enabling our Future. A Framework for the Information Communications Technology Industry*, Commonwealth of Australia, Canberra, April 2003, p18.

[6]   ibid.

[7]   ibid., p19.

[8]   ibid., p17.

[9]   Department of Communications, Information Technology and the Arts, *Building Australian ICT Skills: Report of the IT Skills Foresighting Working Group June 2006*, Commonwealth of Australia, Canberra, 2006, p17.

[10]   Australian Bureau of Statistics, *Government Technology, Australia*, 2002-03, 8119.0, 2006, p4. Available at: http://www.abs.gov.au/ausstats/abs@nsf/lookupMF/7D9B067EFEA3747CA2568A90013940F. Accessed on 4 January 2007.

government support provided to the local sector. The Committee also explored whether there are any regulatory or other factors which impede the development of the ICT industry in the state.

1.4 Definition of ICT

The ICT industry is notoriously difficult to define and, as *Enabling Our Future* notes, attempts to define the 'boundaries of "the ICT industry"' and to identify the 'groups of activities and firms which should be included' face certain challenges.[11] This difficulty of definition is also acknowledged by the Productivity Commission and the OECD, and is discussed in detail in *Enabling Growth: The Contribution of ICT to the Western Australian Economy*.[12] Contrary to what the term 'ICT industry' suggests, there is no discrete sector, and the term is generally used to refer to 'those businesses whose primary activity is making or providing ICT products or services'.[13] The Australian and New Zealand Standard Industrial Classification (ANZSIC) does not provide an ICT industry classification, and ICT producers operate across a number of ANZSIC industry categories such as computer services, telecommunication services, ICT manufacturing, and ICT wholesale. In the development of the ICT Satellite Account, the Australian Bureau of Statistics (ABS) acknowledges that while ICT plays an important role in our socioeconomic environment, statistically measuring such technologies presents 'significant conceptual and measurement challenges'.[14] For ABS purposes, ICT 'refers to the technologies and services that enable information to be accessed, stored, processed, transformed, manipulated and disseminated, including the transmission or communication of voice, image and/or data over a variety of transmission media'.[15] ICT products include computer hardware (including peripherals, parts, components and consumables), computer software, computer services, telecommunication assets and services, and wholesale and retail margins on ICT products. The ICT industry, therefore, by definition refers to enterprises involved in the wholesale and retail of these products and services. It is important to note that the ABS definition of ICT products and services does not

---

[11]   Department of Communications, Information Technology and the Arts, *Enabling Our Future. A Framework for the Information Communications Technology Industry*, Commonwealth of Australia, Canberra, April 2003, p15.

[12]   Western Australian Information Communications Technology Industry Development Forum, *Enabling Growth: The Contribution of ICT to the Western Australian Economy*, Technology and Industry Advisory Council, Government of Western Australia, Perth, 2006, pp4-7.

[13]   Department of Communications, Information Technology and the Arts, *Enabling Our Future: The ICT Framework for the Future report*, Commonwealth of Australia, Canberra, 2003, p15.

[14]   Australian Bureau of Statistics, *Australian National Accounts: Information and Communication Technology Satellite Account*, 2002-03, Cat. No. 5259-0, 2006, pp1 and 5. Available at: http://www.ausstats.abs.gov.au/ ausstats/subscriber.nsf/0/6CEE84DB2DDFE815CA2571290008571A/$FILE/52590_2002-03.pdf. Accessed on 4 January 2007.

[15]   Australian Bureau of Statistics, *Australian National Accounts: Information and Communication Technology Satellite Account*, 2002-03, Cat. No. 5259-0, Glossary, 2006. Available at: http://144.53.252.30/AUS STATS/abs@.nsf/Lookup/5259.0Glossary12002-03?OpenDocument. Accessed on 4 January 2007.

include those manufactured and used 'in house in the process of producing other goods and services'.[16]

To ascertain the value of ICT contributions to the Western Australian economy, *Enabling Growth* took a 'traditional and widely accepted approach', defining the ICT industry as the sub-sectors of the economy providing hardware, software and services that contribute to networks, systems and content. This allows for those firms whose core business is to produce hardware, software and services to install and support ICT products.

Given the difficulties associated with defining the ICT industry, for the purpose of this report, the Committee applies the broad, general definition of the ICT industry as the provision of all hardware and software products and any ICT services used in conjunction with those products. This broad definition attempts to encapsulate the extensive influence and use of technology in the economy and society.

1.5   The Industry

(a)   Australia

In 2002-03 ICT accounted for $36.2 billion or 4.6% of Australia's total Gross Domestic Product (GDP), and $34.8 billion or 4.9% of total gross value added.[17] Telecommunications services contributed 44.3% of this gross value added, computer services 28% and ICT wholesale 14.8%. ICT's 2002-2003 contribution to total gross value added ranked ninth when compared with the seventeen ANZSIC industry divisions. While the mining, construction, and finance and insurance divisions contributed more to the total gross value added than ICT (5%, 6.4% and 7.4% respectively), ICT's gross value added was more than that of agriculture, forestry and fishing (3.3%), government administration and defence (4.4%), education (4.8%), and personal and other services (2%).[18] ABS data, as shown in Figure 1 below, shows that ICT industry revenue from the production of ICT goods and services for 2004-05 totalled $54.5 billion.

---

[16]   Australian Bureau of Statistics, *Australian National Accounts: Information and Communication Technology Satellite Account*, 2002-03, Cat. No. 5259-0, 2006, p3.

[17]   ibid., p4. GDP refers to the total market value of IT less the cost of goods and services used in the production process. Gross value added removes the effects of taxes and subsidies. GDP = gross value added plus taxes, less subsidies on products.

[18]   ibid., p6.

Figure 1: ICT industry revenue ($ billion) from the production of ICT goods and services, 2004-05 (Total: $54.4 billion)
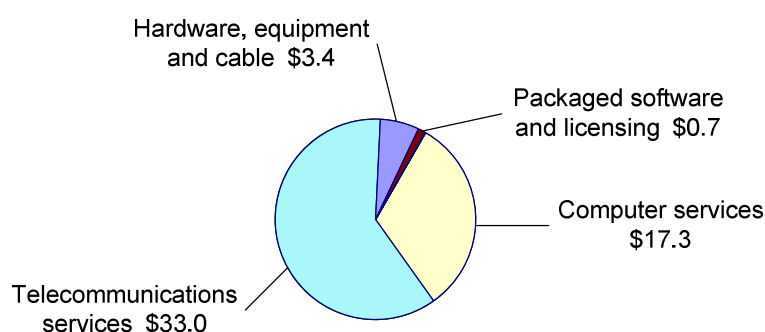
Source: ABS, *Information and Communication Technology, Australia,* 2004-05. Cat. 8126.0[19]

Enabling our Future reports 22,724 specialist ICT businesses in Australia in 2000-01, with the computer services sector comprising 83% of ICT firms (wholesale trade comprises 11%, telecommunications 4% and manufacturing 2%). Small/Medium enterprises (SMEs) dominate the Australian ICT sector, with Microfirms (those with four or less employees) comprising '82 percent of the total number of firms and 14 per cent of the overall industry'.[20] Large firms (those with 100 or more employees) comprise less than 1% of all specialist ICT firms; however, they earn 77% of the industry's income.[21] With the exception of a few significant Australian owned companies, these large firms are mainly foreign multinationals. Using interview data collected in 2003, the Sensis® Business Index Special Report revealed that 17% of SMEs were involved in some form of ICT production, either for sale, for internal use, or for embedding in non-ICT goods and services. Their survey of 1800 SMEs across Australia found that only 15% of all ICT production disclosed occurred in the ICT sector; the remaining 85% was produced by SMEs outside the ICT sector.[22] That said, of the total value of the Australian production of ICT products - $65.1 billion in 2002-2003 - the proportion produced by Australian specialist ICT businesses was 90%, which means the traditionally defined ICT industry still 'represents Australia's core

---

[19]   Department of Communications, Information Technology and the Arts, *Overview of the Australian ICT Industry*, November 2006, p2. Available at: http://www.dcita.gov.au/communications_and_technology/publications_and_reports/2006/november/overview_of_the_australian_ict_industry. Accessed on 17 April 2007.

[20]   Department of Communications, Information Technology and the Arts, *Enabling Our Future. A Framework for the Information Communications Technology Industry*, Commonwealth of Australia, Canberra, April 2003, p50.

[21]   ibid.

[22]   Department of Communications, Information Technology and the Arts, *ICT Production in Australian SMEs, a Sensis® Business Index Special Report 2005*. Available online at: http://www.dcita.gov.au/communications_and_technology/publications_and_reports/2005/july/ict_production_in_australian_smes/ict_production_by_australian_smes. Accessed on 4 January 2007.

capability in ICT production'.[23] Telecommunication services made the greatest contribution to ICT product value ($32.65 billion) followed by computer services ($15.52 billion), wholesale trade ($8.86 billion) and manufacturing ($1.81 billion), the remaining $6.22 billion being comprised of other industries combined.[24]

The ABS *Labour Force Survey* indicates that in August 2006 approximately 371,150 people were employed in ICT related positions, with almost 92% of these being full-time employees.[25] The *Labour Force* Survey also shows that males represented the vast majority of ICT employees (84.5%). The occupations most represented by female employees were computing support technicians (26.2%), computing professionals (18.8%) and Information Technology (IT) Managers (22.7%). In 2004-05, 5197 computing professionals settled in Australia, representing 19% of the total professional settler arrivals in Australia.[26]

With regards to ICT professionals, *Building Australian ICT Skills* reports that only approximately 40% of ICT professionals are found in the traditional Australian ICT sector (comprising of businesses that generate at least 50% of their income from ICT goods and services). The balance of ICT professionals are accounted for across other sectors such as banking, transport and agriculture, a situation that clearly 'reflect[s] the shift of the ICT industry into domains in which it operates, the integration of ICT in economic activity and the increasing reliance of all economic sectors on ICT-based goods and services'.[27]

(b) Western Australia

The contribution of ICT to the Western Australian economy goes beyond the aforementioned statistics. In the report *Enabling Growth: The Contribution of ICT to the Western Australian Economy*, the industry is recognised as contributing the following:

- ICT revenue is estimated to be in excess of $6.6 billion in 2004;

---

[23]   Australian Bureau of Statistics, *Australian National Accounts: Information and Communication Technology Satellite Account, 2002-03*, Cat. No. 5259-0, 2006, p6; Department of Communications, Information Technology and the Arts, *Building Australian ICT Skills: Report of the IT Skills Foresighting Working Group June 2006*, Commonwealth of Australia, Canberra, 2006, p60.

[24]   Department of Communications, Information Technology and the Arts, *ICT Production in Australian SMEs, a Sensis® Business Index Special Report 2005*. Available online at: http://www.dcita.gov.au/ communications_and_technology/publications_and_reports/2005/july/ict_production_in_australian_smes/ict _production_by_australian_smes. Accessed on 4 January 2007.

[25]   Australian Bureau of Statistics, *Labour Force Survey*, August 2006, as cited in Department of Communications, Information Technology and the Arts, *Overview of the Australian ICT Industry*, p1. Available at: http://www.dcita.gov.au/communications_and_technology/publications_and_reports. Accessed on 17 April 2007.

[26]   ibid. This is the proportion of those arrivals who stated an occupation.

[27]   Department of Communications, Information Technology and the Arts, *Building Australian ICT Skills: Report of the IT Skills Foresighting Working Group June 2006*, Commonwealth of Australia, Canberra, 2006, p60.

- There are an estimated 1,800 specialist ICT firms in Western Australia;

- The industry provides direct employment for 23,000 people and is indirectly responsible for between 107,000 and 161,000 jobs in the state (between 10 & 17% of the state's workforce);

- Multiplier analysis shows the total value of ICT use across the Western Australian economy to be somewhere between $10.1 billion and $17.6 billion; and

- ICT contributed between 13.7% and 23.8% to Western Australia's Gross State Product (GSP) in 2003-04.[28]

1.6   Trade Imperatives

(a)   Australia

Industry statistics released by the ABS indicate that exports of ICT goods and services totalled $5,140 million for 2004-05, with imports valued at $22,696 million, representing a trade deficit for ICT goods and services of $17,555 million.[29] *Australian ICT Trade Update 2006* reports the trade deficit figure of $19.7 billion for the year 2005.[30] This figure has climbed steadily from around $10 billion in 2001-02.[31] For 2005-06, both imports and exports of computer and information services experienced a slight increase. Exports of ICT goods for the same period also remained relatively steady, declining 1.8 percent from the previous year to stand at $2,170 million. In contrast to this, imports of ICT goods rose 10% to stand at nearly $17,000 million for 2005-06.[32] The total value of ICT goods imports and exports for 1995 to 2006 is shown in Figure 2 below.

---

[28]   Western Australian Information and Communications Technology Industry Development Forum and Department of Education and Training, *Enabling Growth: The Contribution of ICT to the Western Australian Economy*, February 2006.

[29]   Australian Bureau of Statistics, *Information and Communication Technology, 2004-05*, 8126.0, p19. Available at: http://www.abs.gov.au/Ausstats/abs@.nsf/0/197D7C1F38FC3F81CA2569A4007C29A0? Open. Accessed on 4 January 2007.

[30]   Houghton, John, *Australian ICT Trade Update*, Centre for Strategic Economic Studies, Melbourne, 2006, p1.

[31]   Department of Communications, Information Technology and the Arts, *Enabling our Future. A Framework for the Information Communications Technology Industry*, April 2003, p19.

[32]   Department of Communications, Information Technology and the Arts, *Overview of the Australian ICT Industry*, November 2006, p1.   Available at: http://www.dcita.gov.au/communications_and_technology/ publications_and_reports/2006/November/overview_of_the_australian_ict_industry. Accessed on 17 April 2007.

Figure 2: Total ICT goods - imports and exports (1995 to 2006)
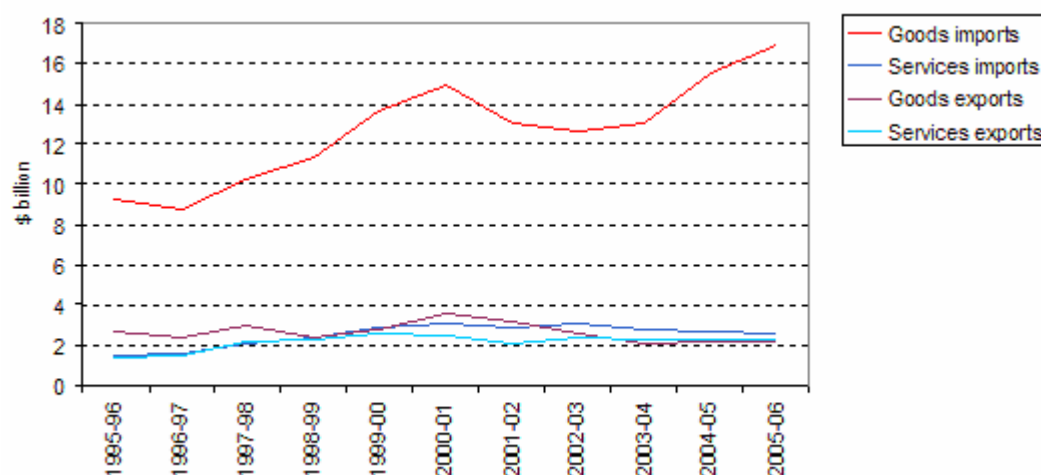
Source: STARS database[33]

Analysts suggest that a 'growing ICT deficit can be seen as an indicator of decline in the local ICT industry and a sign of declining international competitiveness in ICT production'.[34] There is a symbiotic relationship between users and producers such that the level of sophistication of users is enhanced by the presence of producers. It follows that if there is no industry producing goods and services, it would be more difficult for Australia to keep up internationally in terms of adoption and use.[35]

SMEs involved in ICT production and SMEs in the traditionally classified ICT sector are more likely to export goods and services than SMEs on average.[36] In May 2005, 25% of SMEs involved in ICT production and 46% of SMEs in the ICT sector reported exporting in the last three months. Seventy percent of ICT production SMEs and 52% of ICT sector SMEs reported having no plans to start exporting, leaving very small percentages of those who plan to start exporting within the next twelve months (5% and 4% respectively).[37] Of the SMEs that exported ICT goods and services, 45% reported revenue of between $50,000 and $100,000. The top regional destination for Small/Medium Enterprise (SME) ICT exports is Asia (48%), followed by

---

[33]   ibid., p3.

[34]   Houghton, John, *Australian ICT Trade Update*, Centre for Strategic Economic Studies, Melbourne, 2006, pviii.

[35]   ibid.

[36]   Department of Communications, Information Technology and the Arts, *ICT Production in Australian SMEs, a Sensis® Business Index Special Report 2005*. Available online at: http://www.dcita.gov.au/commun ications_and_technology/publications_and_reports/2005/july/ict_production_in_australian_smes/ict_producti on_by_australian_smes. Accessed on 4 January 2007.

[37]   ibid.

the Middle East (25%) and North America (21%). Exports are heavily service oriented, 'with computer and communications consultancies, often including aspects of software design to Asian destinations being among the most common'.[38]

(b)   Western Australia

The size of the ICT industry in Western Australia is comparative to that of agriculture, fisheries and forestry combined, and is the state's 12th largest industry. The industry is worth around $2.9 billion (or 3.3% of the state's total gross output).[39] Locally produced ICT equipment exports have risen from $74 million in 1995 to a reported $84 million in 2005. The Committee was informed that 'relatively low business operating costs, close proximity to Asian markets and shared time zone with most of Asia and low sovereign risk make Western Australia a preferred location and international business base'.[40]

Western Australia's imports of ICT equipment have grown faster than exports over the last decade. In 2005 ICT equipment imports were valued at $737 million, resulting in a deficit on the state's ICT equipment trade of approximately $628 million.[41]

Finding 1

The Western Australian ICT industry is growing at a strong rate. However, a disparity remains between imports and exports.

The 2006 *Australian ICT Trade Update* advises that Western Australian trade data on ICT services are limited.[42] Figures for 2005 indicate that imports and exports of communications services were equal at $67 million. For communications imports this represents a decrease of $14 million from 2004; exports rose from $59 million in 2004. Computer and information services exports stood at $11 million for 2005, down from $14 million in 2003. There is no published data for imports or exports in ICT services such as audiovisual and related services or software royalties and fees.[43]

---

[38]   ibid.

[39]   Western Australian Information and Communications Technology Industry Development Forum and Department of Education and Training, *Enabling Growth: The Contribution of ICT to the Western Australian Economy*, 2006, p11 and A4.

[40]   Department of Industry and Resources, *Western Australian Games Capability Directory*, *WA Games Developers*, Government of Western Australia, Perth, April 2007, p5.

[41]   Houghton, John, *Australian ICT Trade Update*, Centre for Strategic Economic Studies, Melbourne, 2006, p58.

[42]   ibid., p60.

[43]   ibid., p60.

Department of Communications, Information Technology and the Arts (DCITA) argues, however, that the trade deficit should not be considered in isolation from other economic and social benefits that evolve from the use of ICT. Australia as a whole, Western Australia included, is a large importer of ICT goods. This indicates widespread use of technology throughout the economy which, in turn, contributes to efficient production and increased exports in many other sectors.[44]

Finding 2

Computer services exports from Western Australia are equal to the value of computer services imports. Data on ICT trade services is limited, particularly in ICT services such as audiovisual and related services or software royalties and fees.

1.7   Why Government Intervention is Necessary

The Committee is cognisant of the economic and social potential of the ICT industry both nationally and for Western Australia. The growing dependence upon technology and communication within business and the community has meant that government needs to be more than merely a buyer of ICT technology. The government has a role to play in the ongoing development of the ICT industry as an enabler of social and economic development.

Finding 3

The government has a role to play in the ongoing development of the ICT industry as an enabler of social and economic development.

The Committee was informed that:

> *We need the strongest ICT industry we can in Western Australia for government to be able to deliver on its initiatives, whether through health, sustainable environment or delivering benefits to the community.*[45]

---

[44]   Department of Communications, Information Technology and the Arts, *Enabling our Future. A Framework for the Information Communications Technology Industry*, Commonwealth of Australia, Canberra, April 2003, p19.

[45]   Miss Sharon Brown, Chair, Information and Communications Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence,* 25 October 2006, p2.

The Committee has a commitment to the development of a strong and vibrant local ICT industry with co-operation from government. This was one of the fundamental drivers behind initiating the Inquiry. The Committee believe that in Western Australia ICT has been 'an under-estimated industry of value and growth'[46] and historically there has been inadequate investment by government into an industry that will potentially 'create outcomes for the state once the current boom starts to diffuse'.[47]

Finding 4

Historically, investment by the government in the ICT sector has not been a funding priority. There is now greater recognition of the importance of this industry to our state's economy now and into the future.

An analysis of the Australian ICT industry found that it is 'dynamic and vibrant,' and generally consists of people of 'innate intelligence and passion … [who] do not want to rely on government handouts [and who accept that ICT] is a free-market industry that favours open markets and competitive forces'.[48] The analysis also suggests that despite this, 'Australia has failed to produce IT companies that have been globally successful outside of niche markets. Australian IT companies … fail to reach their full potential in international markets'.[49] Speaking at the 2006 ICT Outlook Forum in Melbourne David Skellern of National ICT Australia Ltd (NICTA) said:

> although Australia can do well at commercialisation, we are unable to retain the benefits that come from growing companies taking their products to the world. Unlike other smaller countries, we don't have a large local company that can capture the value.[50]

Alex Zelinsky of the Commonwealth Scientific and Industrial Research Organisation (CSIRO) 'pointed out that "we are actually in a great economic situation, now's the time to be investing and innovating to create the future products that will drive exports"'.[51]

Many government assistance programmes are based on the premise that ICT enterprises find it difficult to enter the market.[52] The Department of Industry, Tourism and Resources (DITR)

---

[46]   ibid.

[47]   ibid..

[48]   Davidson, Peter, 'Intensive care needed for ICT', *Information Age*, February 11, 2005, pp2-3.

[49]   ibid. p2.

[50]   ICT Outlook Forum, *Panel Session: Does Australia Need a Nokia?*, Available at: http://www.ictoutlook forum.com.au/asset/307.pdf. Accessed on 30 May 2007.

[51]   ibid.

[52]   Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p14.

advise that this can result in 'spill-overs' from private enterprise research and development (R&D) that the businesses themselves are not in a position to develop. These include 'platform technologies' that have the potential to support broader industry development or that are subject to market barriers to support. Without government assistance potential benefits to both the industry and the state are at risk of being lost entirely or significantly delayed.[53] An Organisation for OECD survey into government research and development (R&D) funding showed that 'government funding not only allowed firms to accelerate the completion of R&D projects (enabling them to introduce new products or services into the market sooner), but also encouraged them to launch projects that entailed greater technological challenges tha[n] they might otherwise have pursued'.[54]

Finding 5

Government assistance allows firms to complete R&D projects and to launch projects that involve greater technological challenges than they might otherwise have pursued.

Furthermore, producers of ICT goods and services may not have sufficient information regarding 'prices, product quality, industry capability, market opportunities and developments or potential demand', which necessarily impacts upon their ability to make effective business decisions and develop their markets.[55] DITR also advocates for government assistance on the grounds of Australia's geographic remoteness and relatively small population. Australia can suffer from a lack of 'critical mass' in particular areas of business and industry and, consequently, an inadequately skilled workforce. [56]

Government assistance initiatives and programmes do more than simply provide support to individual ICT enterprises. Given the capacity of ICT to enable other areas of economic and social activity, assistance to the ICT sector necessarily has a flow on effect to economic and social development, economic diversification, jobs and market growth, and the international competitiveness of Western Australian companies, both domestically and internationally.

---

[53]   ibid., p14.

[54]   Organisation for Economic Cooperation and Development, *Government R&D Funding and Company Behaviour - Measuring Behavioural Additionality*, 2006, p7. Available at: http://www.oecd.org/dataoecd/ 34/23/36919354.pdf. Accessed on 4 January 2007.

[55]   Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p14.

[56]   ibid..

1.8   Submissions and Industry Associations

The submissions received and evidence gathered by the Committee came mainly from government agencies and industry associations. While there are some submissions from individual ICT firms, very few businesses involved in the ICT industry contacted the Committee.

Evidence presented to the Committee in the initial submissions suggested that ICT industry participants, particularly SMEs, face resource and other challenges and, therefore, may simply have lacked the time and resources necessary to make a submission. There is always the possibility that SMEs may hold little interest or desire in participating in a Parliamentary review.

The Committee proceeded in its Inquiry on the assumption that SMEs had delegated their representation to their industry bodies and associations. However, evidence was presented that a significant percentage of ICT companies are not members of ICT associations. The Department of Industry and Resources (DoIR) advised that while it enjoyed a good relationship with industry associations, 'those industry associations do not capture, as members, all of the industry', and hypothesised that they were 'missing a generation of emerged companies that have not joined the industry associations and have gone their own way'.[57]

Subsequent to initial evidence, DoIR's ICT industry audit revealed that 'more than 60 per cent of respondents also are members of IT professional associations but only 40 per cent of them were members of ICT industry associations'.[58] This audit led DoIR to conclude that 'there is a whole range of very dynamic companies that are already internationally competitive that we were not across in the sense of day-to-day contact'.[59]

The Committee therefore notes that while it values and respects the contribution of the ICT industry associations to this Inquiry, there is probably a significant number of ICT companies whose views have not necessarily been represented to the Committee, either directly or through another body. Individual Committee members have had a good level of personal contact with industry participants, and they have used their personal exposure to the industry to help contribute to the report.

---

[57]   Mr Stephen Grocott, Director, Innovative Industry, Department of Industry and Resources, *Transcript of Evidence,* 23 August 2006, p3.

[58]   Ms Daniela Mattheys, Manager ICT and Nanotechnology Industry Development, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p3.

[59]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May, p3.

CHAPTER 2   THE NATURE OF ASSISTANCE AVAILABLE TO BUSINESSES TO DEVELOP ICT

This Chapter presents information concerning various programmes and initiatives proposed and implemented by the federal and Western Australian Governments to assist businesses develop the Information Communications Technology (ICT) sector.

Section 2(6) of the *Productivity Commission Act (1998) (Cwth)* states that:

> assistance *includes any act that, directly or indirectly:*
>
> *(a) assists a person to carry on a business or activity; or*
>
> *(b) confers a pecuniary benefit on, or results in a pecuniary benefit accruing to, a person in respect of carrying on a business or activity.*[60]

As the Productivity Commission and the Western Australian Department of Treasury and Finance (DTF) note, such a definition does not restrict assistance to only the provision of direct government subsidies to particular businesses or industries.[61]   Rather it allows for assistance to take a multitude of forms including:

> *tariffs, quotas, anti-dumping duties and regulatory restrictions on imported goods and services, as well as tax concessions and subsidies for domestic producers. Assistance also arises from the provision of underpriced services by government agencies and from government procurement policies.*[62]

DTF also advise that assistance can:

> *take the form of common-user infrastructure or similar location-specific incentives (such as 'technology parks'), or it could be based on the characteristics of certain activities (such as research and development grants).*[63]

This chapter provides a brief description of government programmes, both federal and Western Australian, that are available to assist the ICT industry develop their business. Given the broad possible definition of 'assistance' and the myriad of forms it may take, the programmes and initiatives discussed do not comprise an exhaustive list. Rather, this chapter outlines those assistance programmes and initiatives that the Committee has had an opportunity to review in the course of this Inquiry.

---

[60]   Commonwealth of Australia, *Productivity Commission Act 1998, Part 2, Section 10(6)*.

[61]   Productivity Commission, *Trade & Assistance Review 2005-06*, Annual Report Series, Commonwealth of Australia, Canberra, 2007, p1.1; Submission No. 17 from Department of Treasury and Finance, May 2007, p1.

[62]   Productivity Commission, *Trade & Assistance Review 2005-06*, Annual Report Series, Commonwealth of Australia, Canberra, 2007, p1.1.

[63]   Submission No. 17 from Department of Treasury and Finance, May 2007, p.1.

2.1 Federal Government Initiatives

In 2001 the Australian Government introduced *Backing Australia's Ability - An Innovation Action Plan for the Future 2001,* allocating $3 billion over five years to 2005-06 to 'promote science and innovation'.[64] *Backing Australia's Ability* developed four particular national research priorities: 'An Environmentally Sustainable Australia', 'Promoting and Maintaining Good Health', 'Frontier Technologies for Building and Transforming Australian Industries', and 'Safeguarding Australia'.[65] The allocation of a further $5.3 billion in 2004 through *Backing Australia's Ability - Building Our Future through Science and Innovation*, brought the total funding provided to $8.3 billion over the 10 year period from 2001-02 to 2010-11.[66] *Backing Australia's Ability - Building Our Future through Science and Innovation* focussed on three main concerns: 'Strengthening Australia's Ability to Generate Ideas and Undertake Research', 'Accelerating the Commercialisation of Ideas' and 'Developing and Retaining Skills'.[67]

Against the background of the first stage of *Backing Australia's Ability*, the federal government recognised the increasingly important role of ICT in industry and society, and the need 'to support both the longer-term development of the industry and growth of a national ICT capability'.[68] To this end, it developed its 'Framework for the Future' of the Australian ICT Industry, the main elements of which include the need for:

- *sustained* government and industry leadership *to build the profile of ICT in Australia by emphasising its role in achieving national objectives;*

- *a world-class public and private* ICT research and development base *with a consistent focus on commercial outcomes and collaboration;*

- *a* skills capability base *which provides both the technical and business skills necessary to develop and maintain leading applications, to create thriving ICT*

---

[64] Department of Education, Science and Training, *Backing Australia's Ability - An Innovation Action Plan for the Future*, Commonwealth of Australia, Canberra, 2001. Available at: http://backingaus.innovation.gov.au/default2001.htm. Accessed on 6 December 2006.

[65] Department of Education, Science and Training, *Backing Australia's Ability - Building Our Future through Science and Innovation*, Commonwealth of Australia, Canberra, 2004, p5. Available at: http://backingaus.innovation.gov.au. Accessed on 6 December 2006.

[66] Department of Education, Science and Training, *Backing Australia's Ability - Building Our Future through Science and Innovation*, Commonwealth of Australia, Canberra, 2004, p5; Department of Education, Science and Training, *The Australian Government's Innovation Report 2005-06: Backing Australia's Ability: Real Results Real Jobs*, 2006, p1. Available at: http://www.dest.gov.au/sectors/science_innovation/publications_resources/profiles/innovation_report_2005_06.htm. Accessed on 6 December 2006.

[67] Department of Education, Science and Training, *Backing Australia's Ability - Building Our Future through Science and Innovation*, Commonwealth of Australia, Canberra, 2004, p5. Available at: http://backingaus.innovation.gov.au. Accessed on 6 December 2006.

[68] Department of Communications, Information Technology and the Arts, *Enabling our Future. A Framework for the Information Communications Technology Industry*, Commonwealth of Australia, Canberra, April 2003.

businesses, and which builds widespread ICT fluency in the general community to enable full participation in the information economy;

- *a* secure communications infrastructure *which provides the broadband connectivity essential for industry development, national defence, commercial growth, advanced research applications and government service delivery;*

- development of a supportive environment for innovative ICT businesses *through policies focused on building and fostering market opportunities for small and medium enterprises, ensuring there are appropriate intellectual property and standards frameworks in place, and on attracting and retaining investment in high value added capabilities;*

- development of a culture of risk-taking and innovation*; and*

- effective and coordinated approaches to e-Government *by the Commonwealth, States and Territories.*[69]

The *Enabling our Future* framework report[70] concludes that there were a number of 'niche' opportunities for Australian ICT businesses, including:

- *the development of specialised ICT applications in sectors of the economy with demanding leading-edge customers;*

- *specialist applications such as security services, which apply across several industry sectors;*

- *applications arising from the widespread adoption of standardised Internet-based services (web services);*

- *the development of consumer applications such as computer games, and specialised operating systems for embedded microchip applications; and*

- *the provision of specialist services in support of other large users, such as regional hubs for high-end technical support services (e.g. virus response), high-end professional services (e.g. systems design and architecture) and specialised R&D.*

The framework report[71] also recognises that in order to take advantage of these opportunities and compete in a global marketplace, SMEs face particular and significant challenges concerning access to early stage capital, international markets, and government and big business contracts.

---

[69]   ibid., p2.

[70]   ibid, p5.

[71]   ibid., p5.

The framework for the future report[72] recommendations identifiy broad and specific issues concerning leadership and coordination, research and development, and infrastructure that need to be addressed further. Issues concerning connectivity, standards, intellectual property (IP), skills, promoting 'Technology Australia', building innovative SMEs, networks and clusters, and an information base for the ICT are outlined. As these are fully documented in the report they are not reproduced here.

The following brief outline of the various federal government initiatives relating to the development of ICT categorises them as being either (a) research focused - with a view to creating new ICT ideas and products; or (b) commercialisation focused - with a view to developing the ICT business through providing advice and capital. Furthermore, programmes are designed for specific purposes and are aimed at helping specific businesses. For example, organisational and process innovation activities (improving marketing, financial management and strategic planning) are not supported by the R&D Tax Concession or the Commercial Ready Programme; these activities are supported by programmes such as the Commercialising New Technologies (COMET) programme, Innovation Investment Fund (IIF), and the Pre-seed Fund support. Programmes such as COMET, Commercial Ready, IIF, the Pre-Seed Fund and the R&D Tax Offset programme are available to SMEs only.[73] It should also be noted that the R&D/commercialisation divide is not a strict one and there is some overlap across some programmes, depending on how activities such as 'commercialisation' and 'innovation' are defined.[74]

(a)   Research Focussed: Creating New ICT Ideas and Products

(i)   *Advanced Networks Programme:*

$21 million was allocated over the three years until 2006-07 to extend the Australian Government's Advanced Networks Programme (ANP). The aim of ANP is to 'continue and intensify research and to explore opportunities to commercialise leading-edge broadband applications'.[75] The three projects funded under the ANP are CeNTIE (Centre for Networking Technologies for the Information Economy), GrangeNet (GRid And Next GEneration Network), and m.Net.

---

[72]   ibid., pp6-12.

[73]   Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p5 and 10.

[74]   For a discussion on the complexity of defining such concepts, refer to House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, Commonwealth of Australia, Canberra, June 2006, pp8-16.

[75]   Department of Education, Science and Training, *Facts Sheet May 2004*. Available at: http://backingaus. innovation.gov.au/back_res2004.htm. Accessed on 6 December 2006.

(ii)   *Information and Communications Technology (ICT) Centre of Excellence: National ICT Australia*

In October 2002 the National ICT Australia (NICTA) Centre of Excellence was established, with the federal government allocating $129.5 million of *Backing Australia's Ability* funds for the five years operation until 2005-06.[76]   The NICTA Centre of Excellence was allocated additional funding of $251 million for the five years from 2006-07 to 2010-11, $126.3 million from the Department of Communications, Information Technology and the Arts, and $124.7 million from the Australian Research Council (ARC).[77]   NICTA has facilities in Kensington (NSW), Sydney, Canberra, Melbourne, Brisbane and Adelaide, and links with research institutions in Western Australia.[78]   The latter appear to be highly regarded, and dismay was expressed to the Committee on a number of occasions that NICTA did not have a dedicated facility in Western Australia.[79] One of NICTA's objectives is to establish links with SMEs to increase their awareness of NICTA research activities and to allow SMEs to be involved in developing research projects.[80]

(iii)   *Commonwealth Scientific and Industrial Research Organisation (CSIRO)*

The CSIRO ICT Centre (Information and Communication Technologies Centre) has a charter to develop innovative information and communication technology (ICT) to address issues of national significance such as health, public safety and the environment. This work is undertaken with both government and industry partners, and in collaboration with other ICT research agencies. The CSIRO ICT Centre is also the hub for ICT research in CSIRO, working closely with its CSIRO flagships, providing access to CSIRO's expertise in ICT research for industry and other sectors.[81]

While headquartered in Sydney, there are two other major centres - the e-Health Research Centre, based in Queensland and the Tasmanian ICT Centre. The e-Health Research Centre is a leading national research facility in ICT for healthcare innovations established as a joint venture between CSIRO and the Queensland Government. Its research program aims to improve the quality and

---

[76]   Department of Education, Science and Training, *The Australian Government's Innovation Report 2005-06: Backing Australia's Ability: Real Results Real Jobs*, 2006, p29. Available at: http://www.dest.gov.au/ sectors/science_innovation/publications_resources/profiles/innovation_report_2005_06.htm. Accessed on 6 December 2006.

[77]   Department of Education, Science and Training, *Facts Sheet May 2004*. Available at: http://backingaus. innovation.gov.au/back_res2004.htm. Accessed on 6 December 2006.

[78]   National ICT Australia Ltd, 2004. Available at: http://www.nicta.com.au. Accessed on 6 December 2006; National ICT Australia Ltd, *Annual Report* 2005. National ICT Australia Limited.

[79]   *ICT WA 2006 Conference*, *Enabling Growth*, plenary session, Perth, 27 October 2006.

[80]   Department of Education, Science and Training, *The Australian Government's Innovation Report 2005-06: Backing Australia's Ability: Real Results Real Jobs*, 2006, p29. Available at: http://www.dest.gov.au/sectors /science_innovation/publications_resources/profiles/innovation_report_2005_06.htm.   Accessed   on   6 December 2006.

[81]   CSIRO ICT Centre, nd. Available at: http://www.ict.csiro.au. Accessed on 7 March 2007.

safety of healthcare through an ICT research program focused on applied outcomes and active adoption by the health system.[82]

The Tasmanian ICT Centre, established in September 2006, is jointly funded by the Australian Government (through the Intelligent Island Program) and CSIRO. Some of the key areas of research focus include improved outcomes from health information; and management of land and water resources for sustainable use via sensor networks and robotics.[83]

The Committee met with Dr Alex Zelinsky, Director, CSIRO ICT Centre, and was impressed with the work being undertaken. He highlighted opportunities for transformational technology development in the mining sector in Western Australia. He also pointed to considerable work done in the e-health arena, and noted the need for better collaboration between states on this topic.[84] These comments reinforce projections made at the CES session on health. Here it was stated that there was an almost insatiable demand for e-health care and that companies like Philips projected that 30% of their effort in the next few years would be in the health domain.[85]

Western Australia is well placed to take advantage of these trends by building on the work currently undertaken, but seeking greater synergies through collaboration.

Recommendation 1

The Western Australian Government investigates the potential for a CSIRO ICT Centre in the state to take advantage of emerging opportunities in the resources and e-health sectors.

(iv)   R&D Tax Concession

Backing Australia's Ability introduced new elements into the R&D Tax Concession programme, namely the Tax Offset, the 175% Premium R&D Tax Concession and effective life treatment for R&D plant. Rather than being offered on a competitive basis, these programmes are eligibility based. Eligibility criteria for the Tax Offset programme include a turnover of up to $5 million and

---

[82]   *e-Health Research Centre*, nd. Available at: http://e-hrc.net. Accessed on 7 March 2007.

[83]   Tasmanian ICT Centre, nd. Available at: http://www.ict.csiro.au/page.php?cid=116. Accessed on 7 March 2007.

[84]   Informal meeting with Dr Alex Zelinsky, CSIRO ICT Centre, Perth, 6 March 2007.

[85]   Perry, Jeff, ConnectedCare-Motiva, Philips Consumer Healthcare Solutions, at *Future of Consumer Electronics: Convergence with Home Health*, 3rd Tier Panel Session, International Computer Electronics Show, Nevada, 8 January 2007.

R&D expenditure of less than $1 million. The 125% R&D Tax Concession and the 175% Premium R&D Tax concession support businesses of any size.[86]

For the five year period from 2006-07, approximately $390 million was allocated in addition to the tax expenditure of the 125% R&D Tax Concession, which, according to the 2006-07 estimate, was up to $360 million per annum.[87] In 2006 the Department of Industry, Tourism and Resources (DITR) advised that 5500 businesses were supported via taxation concessions for product-related R&D activities, amounting to approximately $500 million per annum, making this the largest support initiative 'in terms of funding and number of businesses supported'.[88] In 2004-05 most R&D expenditure under the concession (65.5%) was claimed by large business (with more than 200 employees).

Australian public sector R&D is performed in government research laboratories and universities and in 2002-03 this amounted to expenditure of $2.5 billion and $3.4 billion respectively. This R&D is predominantly in the areas of health, primary products, non-oriented research, environment and manufacturing. While this represents a total investment of $5.9 billion, it represents only 72% of R&D conducted in the public sector.[89] DEST's 2005-06 *Australian Government Innovation Report* states that 'public sector R&D is highly complimentary to business R&D', 18.4% of which was directed toward information and communication services, the balance being in manufacturing, commercial services and tourism, and energy.[90] DITR reports that the private sector in Australia 'traditionally under-invests in R&D', thus the tax concessions 'provide[s] an additional return to firms in recognition that private returns may not be high and that there are broader knowledge spill-overs that accrue to community'.[91]

---

[86]   Department of Industry, Tourism and Resources, 2006. *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p10.

[87]   Department of Education, Science and Training, *Facts Sheet May 2004*. Available at: http://backingaus. innovation.gov.au/back_res2004.htm. Accessed on 6 December 2006.

[88]   Department of Communications, Information Technology and the Arts, *Enabling our Future. A Framework for the Information Communications Technology Industry*, Commonwealth of Australia, Canberra, April 2003; Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p4 and 5.

[89]   Department of Education, Science and Training, *The Australian Government's Innovation Report 2005-06: Backing Australia's Ability: Real Results Real Jobs*, 2006, p6. Available at: http://www.dest.gov.au/sectors /science_innovation/publications_resources/profiles/innovation_report_2005_06.htm.   Accessed   on   6 December 2006.

[90]   ibid., p6.

[91]   Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p16.

(v) *Commercial Ready*

Commercial Ready is the consolidation of three programmes (Biotechnology Investment Fund (BIF), R&D Start, and Innovation Access) into one.[92] $209 million per annum was allocated for R&D, proof of concept, and early stage commercialisation, and across all sectors. Commercial Ready supported 564 businesses in 2005-06.[93] 50% of this is used for R&D activities, 30% for early stage commercialisation and 20% for proof of concept. Eligibility criteria include a turnover less than $100 million (recently increased from $50 million).[94] Commercial Ready is intended to produce 'additionality' - 'an outcome or a behaviour that would not otherwise have occurred, or would have occurred more slowly, if government support had not been forthcoming'.[95] Grants are up to $5 million. The Organisation for Economic Cooperation and Development (OECD) research shows that it is through their establishment of 'profitable and sustainable firms' in the long-term, rather than investing in the more short-term commercialisation of a particular technological innovation, that programmes such as Commercial Ready yield positive results.[96]

(vi) *Cooperative Research Centres (CRCs)*

The OECD report, *Public-Private Partnerships for Research and Innovation: An Evaluation of the Australian Experience* argues that:

> governments need to be more responsive to the rapid transformation of innovation processes and related business needs and strategies, and that greater use of public-private partnerships can increase this responsiveness and enhance the efficiency and cost-effectiveness of technology and innovation.[97]

The Cooperative Research Centre (CRC) Programme, established in 1990, is one such public-private partnership and aims to improve the utilisation and commercialisation of Australian R&Dt efforts. It does this by, first, linking researchers with industry and, second, facilitating 'industry contribution to CRC education programmes to produce industry-ready graduates'.[98]

---

[92]   ibid., p19.

[93]   ibid., p4 and 5.

[94]   ibid., p10.

[95]   ibid., p11.

[96]   Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p19; Organisation for Economic Cooperation and Development, *Government R&D Funding and Company Behaviour*, 2006. Available at: http://www.oecd.org/document/16/0,2340,en_2649_37417_ 36918928_1_1_1_37417,00.html. Accessed on 17 January 2007.

[97]   Organisation for Economic Cooperation and Development, *Public Private Partnerships for Research and Innovation: An Evaluation of the Australian Experience*, 2004, p1. Available at: http://www.oecd.org/ dataoecd/49/16/25718007.pdf. Accessed on 17 January 2007.

[98]   Department of Education, Science and Training, *Cooperative Research Centres, About the Programme. Overview*, nd. Available at: http://www.crc.gov.au. Accessed on 17 January 2007.

Since its inception and up until Round 9 (2004), the CRC Programme had funded 158 CRCs across 6 sectors (manufacturing, ICT, mining and energy, agriculture and rural based manufacturing, environment, and medical science and technology). Of these, 18 were in the ICT sector.[99] In 2006 there were 56 CRCs operating in these six sectors, five of which were ICT CRCs.[100]

Since the CRC Programme commenced, the combined cash and in-kind contributions for all parties involved totals over $11 billion. Of this, the CRC Programme has committed over $2.6 billion, universities $2.8 billion, industry $2.1 billion and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) over $1.1 billion.[101]

Insight Economics' report on the economic impact of CRCs outlines the three ways in which beneficial impact is gained from funding CRCs, namely through the application of CRC generated knowledge/intellectual property, access to international knowledge networks, and enhanced skills formation.[102] The OECD finds that the CRC Programme has successfully achieved its four objectives: 'research excellence; effective collaboration; creation of new educational opportunities; and the translation of research outputs into economic, social and environmental benefits to Australia'.[103] Despite the CRC Programme's success, the OECD raises a number of issues for consideration. First, with regard to long-term management of the CRC portfolio, it suggests that 'the majority of CRCs would not be viable without government financial support in the foreseeable future. Even those which could be self-sustained, on pure economic terms, would find it harder to operate cohesively without the "glue" of CRC Program funds'.[104] Second, with regards to Small/Medium Enterprise (SME) participation and internationalisation, it notes that SME participation in CRCs is considered by some to be too low. The report suggests this situation needs clarifying and monitoring, and draws attention to the fact that 'a niche strategy involving key foreign participants and/or start-ups has been highly successful in some fields.[105] Third, noting that one of the goals of many other policy instruments is to also develop and improve science-industry relationships, 'it is necessary to determine an efficient division of policy

---

[99]   Allen Consulting Group, *The Economic Impact of Cooperative Research Centres in Australia. Delivering Benefits for Australia*. A Report for the Cooperative Research Association Inc. The Allen Consulting Group Pty Ltd, Melbourne, 2005, p5.

[100]   Department of Education, Science and Training, *Innovation in Australia: A Guide to the Cooperative Research Centres Programme*, nd. Available at: http://www.crc.gov.au/htmldocuments/Documents?PDF/ CRC_Innovation_australia.pdf. Accessed on 17 January 2007.

[101]   ibid.

[102]   Allen Consulting Group, *The Economic Impact of Cooperative Research Centres in Australia. Delivering Benefits for Australia*. A Report for the Cooperative Research Association Inc. The Allen Consulting Group Pty Ltd, Melbourne, 2005, pp12-29.

[103]   Organisation for Economic Cooperation and Development, *Public Private Partnerships for Research and Innovation: An Evaluation of the Australian Experience*, 2004, p5. Available at: http://www.oecd.org/ dataoecd/49/16/25718007.pdf. Accessed on 17 January 2007.

[104]   ibid., p6.

[105]   ibid., p6.

objectives between the CRC program and other relevant schemes and programs managed by the Australia Research Council, notably the Centres of Excellence and the Linkage Projects, and by AusIndustry, notably the R&D Start and Commercialising Emerging Technologies programs'.[106]

In the Minister's foreword to the 2002 round guidelines, applicants are encouraged 'to think innovatively about how they can better involve the many SMEs that make up an integral part of Australia's industrial structure. It is important that Centres develop linkages with SMEs to facilitate technology transfer'.[107] Furthermore, the guidelines note 'SME sponsorship of postgraduate students and assisting SME employees to work in a CRC on a temporary secondment' as successful approaches and suggests that 'flexibility should be provided for SMEs to join and exit the proposed CRC through associate programs, where such participation would provide a strategic advantage for SMEs'.[108]

The OECD found the main barriers to SME participation in the CRC programme are:

- *the relatively high input in senior management resources required from applicants/core participants;*

- *the expectation of core participants to commit resources for a long period, often seven years; and*

- *the difficulty of giving SMEs enough influence when mixing small and large players in a cooperative venture.*[109]

Australia's CRC programme has been criticised by the Productivity Commission in its March 2007 report, *Public Support for Science and Innovation.* In addressing questions concerning the Commission's claim that there is 'too much emphasis on funding research with commercial potential, rather than research that's for the public good',[110] Australian Productivity Commissioner, Mike Woods, stated that:

> *there's been a trend towards the commercialisation and we think that it's important to raise concerns to not let that trend go too much further and in fact in some cases, such as with the Cooperative Research Centres, we would like it to turn back to the specific goals of the broader economic, social and environmental benefits from those programs.*[111]

---

[106]   ibid., p6.

[107]   ibid., p22.

[108]   ibid., p22.

[109]   ibid., p22.

[110]   Eastley, Tony, 'Commission Report Faults Funding for Science', ABC Online, AM, 27 March 2007. Available at: http://www.abc.net.au/am/content/2007/s1882363.htm. Accessed on 28 March 2007.

[111]   Woods, Mike, 'Commission Report Faults Funding for Science', ABC Online, AM, 27 March 2007. Available at: http://www.abc.net.au/am/content/2007/s1882363.htm. Accessed on 28 March 2007.

As well as calling for a return to the original economic, social and environmental objectives of the CRC programme, the Commission argued that:

> *a better match between funding levels and the specific mission of the various CRCs would involve:*
>
> - *a higher share of public funding in areas where the social benefits are likely to be the greatest - the national benefit CRCs;*
>
> - *a lower level of support in the industrial research CRCs that focus on pre-competitive research (innovation in industrial processes and business practices) ...; and*
>
> - *an even lower level of funding for Centres aimed primarily at commercialising research outcomes such as the business development CRCs.*[112]

The Commission also suggested that the CRC programme is 'management-intensive':

> *The CRC program is geared toward large-scale, longer-term research programs, which are more suited to big research users. There are relatively cumbersome avenues for CRC partners to enter and exit the venture and a heavy compliance burden.*[113]

(b) Commercialisation Focussed: Developing ICT Business through Providing Advice and Capital

(i) Commercialising New Technologies (COMET) Programme

COMET is a merit based programme designed to assist small, high potential Australian enterprises commercialise their innovative products. This programme was developed to address the finding that 'most early-stage firms were not "investment ready" because they suffer from a poor grasp of the realistic market opportunity for their product and/or limited understanding of intellectual property and general business management skills'.[114] The corollary of this is that venture capitalists have little confidence in the prospects of such businesses and see them as very high risk.[115]

---

[112] Productivity Commission, *Public Support for Science and Innovation. Productivity Commission Research Report*, Commonwealth of Australia, Canberra, March 2007, pp453-54.

[113] Productivity Commission, *Public Support for Science and Innovation. Productivity Commission Research Report, Overview*, Commonwealth of Australia, Canberra, March 2007, p15.

[114] Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p27.

[115] ibid., p27.

The programme provides 'knowledge intensive services' specifically tailored to each grantee's needs.[116] These services take the form of financial and business assistance through subsidising access to COMET approved private sector consultant business advisers. Business advisors provide assistance in the following areas:

- *management development including participation in approved management skills development courses;*

- *engagement of mentors;*

- *strategic and business planning, including an export strategy if appropriate;*

- *market research;*

- *market validity;*

- Intellectual Property *strategy; and*

- Proven Technology *(including finalising* Working Prototypes*)*.[117]

Grants are capped at $120,000 per successful applicant, providing around $80,000 to $100,000 to each grantee. With additional funding of $100 million dollars provided, COMET was extended for seven years to June 2011. In 2006 there was a total of 14 COMET Business Advisers.[118]

The 2002 review of COMET found that of the businesses assisted by the programme:

- 27% had secured equity funding through their COMET experience;

- a further 31% were conducting equity funding negotiations;

- 37% of clients had finalised one or more strategic alliances;

- a further 31% were involved in strategic alliance negotiations; and

- 16% of clients had completed joint ventures.[119]

---

[116]   ibid., p28.

[117]   AusIndustry, *COMET Customer Information Guide Version 2.1*. 2005, p2. Available at: http://www. ausindustry.gov.au/library/COMETCustInfoGuideFINAL13Sept04v21July05pdf2007302114849pdf. Accessed on 6 December 2006.

[118]   Department of Education, Science and Technology, *Facts Sheet May 2004*. Available at: http://backingaus. innovation.gov.au/back_com2004.htm. Accessed on 6 December 2006; Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p28.

[119]   Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p28.

DITR analysis of Business Adviser information reveals that 77 companies had sourced approximately $90 million from July 2004 to December 2005.[120] DITR also advise that in excess of 1170 companies have been supported by COMET since 1999. These companies have:

- *Raised in excess of $380 million in capital;*

- *Created 265 strategic alliances;*

- *Made 446 licensing deals and agreements;*

- *Commenced 95 manufacturing projects; and*

- *Launched 211 products or services launched onto the market.*[121]

(ii)   Information Technology Online Programme (ITOL)

The Information Technology Online programme (ITOL) aims to accelerate the adoption of e-business solutions.[122] ITOL is a competitive funding programme offering funding up to $200,000 for qualifying collaborative industry-based projects designed to 'accelerate the adoption of business-to-business (BsB) e-commerce solutions across a wide range of industry sectors, especially clusters of SMEs'.[123] During 2004-2005, ITOL funded nine projects to cluster groups involving 50 organisations.[124] On 29 May, 2006 the Minister for Communications, Information Technology and the Arts, Senator the Hon. Helen Coonan, announced the successful applicants for Round 14. No further rounds are being held and ITOL will be completed by June 2007.[125]

(iii)   Extension of the Building on IT Strengths (BITS) Incubator Programme

It is recognised by government that ICT SMEs face particular difficulties in accessing business development capital, mainly due to the industry's reputation for unpredictability and rapid

---

[120]   ibid.

[121]   ibid., p29.

[122]   Department of Communications, Information Technology and the Arts, *ITOL Objectives*, 2006. Available at: http://www.dcita.gov.au/communications_for_business/funding_programs__and__support/ITOL/itol_objecti ves. Accessed on 3 January 2007.

[123]   ibid.

[124]   Department of Education, Science and Training, *The Australian Government's Innovation Report 2005-06: Backing Australia's Ability: Real Results Real Jobs*, 2006, p2. Available at: http://www.dest.gov.au/ sectors/science_innovation/publications_ resources/profiles/innovation_report_ 2005_06.htm. Accessed on 6 December 2006.

[125]   Department of Communications, Information Technology and the Arts, *ITOL Objectives*, nd. Available at: http://www.dcita.gov.au/communications_for_business/funding_programs__and__support/ITOL/itol_objecti ves. Accessed on 7 January 2007.

change.[126]   Building on IT Strengths (BITS) is an incubator programme designed to help innovative early-stage or start-up ICT companies overcome some of the difficulties faced in financing their operations. BITS provides 'incubation' services in the form of seed capital and business advice to innovative ICT companies in the early phase of their operation.[127] Following evaluation and assessment of the programme against its objectives, the BITS Incubator programme was extended with additional funding of $36 million over four years to 2007-08.[128] As at 30 June 2004, there had been 345 companies accepted as BITS incubatees. These companies came from a broad 'cross-section of the ICT industry including communications hardware and software, business intelligence tools, security and safety, life sciences and biotechnology and e-commerce applications'.[129] Western Australia received $10 million to fund the Entrepreneurs in Residence Incubator Centre, discussed in section 2.3 below.[130]

(iv)   ***The Pre-Seed Fund***

Under *Backing Australia's Ability,* $78.7 million was provided for the Pre-Seed Fund over ten years to 2010-11, with $72.7 million of this being allocated as capital.[131] Private industry has also contributed to the fund, resulting in total funds of over $100 million. The Fund consists of four specialist pre-seed funds each with its own fund managers. The programme is directed towards encouraging private sector enterprises to become involved in funding and managing the commercialisation of university and public sector research and development that would otherwise not attract venture capital.

More specifically, the objectives of Pre-Seed Fund are to:

---

[126]   Department of Communications, Information Technology and the Arts, *Building on Information Technology Strengths (BITS) Incubator Program (Including the BITS Intelligent Island Incubator) Annual Report 2003-04*, Commonwealth of Australia, Canberra, 2005, piii.

[127]   Department of Education, Science and Training, *Backing Australia's Ability - Building our Future Through Science and Innovation Facts Sheet May 2004*: *Backing Skills: Extension of the BITS Incubator Programme*. Available at: http://backingaus.innovation.gov.au/2004/commercial/bits_incubator.htm.   Accessed on 7 December 2006; Department of Communications, Information Technology and the Arts, *Building on Information Technology Strengths (BITS) Incubator Program (Including the BITS Intelligent Island Incubator) Annual Report 2003-04*, Commonwealth of Australia, Canberra, 2005, p3.

[128]   Department of Education, Science and Training, *Facts Sheet May 2004*. Available at: http://backingaus. innovation.gov.au/back_com2004.htm. Accessed on 6 December 2006.

[129]   Department of Education, Science and Training, *The Australian Government's Innovation Report 2005-06: Backing Australia's Ability: Real Results Real Jobs*, 2006, p47. Available at: http://www.dest.gov.au/ sectors/science_innovation/publications_resources/profiles/innovation_report_2005_06.htm. Accessed on 6 December 2006.

[130]   Department of Communications, Information Technology and the Arts, B*uilding on Information Technology Strengths (BITS) Incubator Program (Including the BITS Intelligent Island Incubator) Annual Report 2003-04*. Commonwealth of Australia, Canberra, 2005, p2.

[131]   Department of Education, Science and Training, *Fact Sheets May 2004*.   Available at: http://backingaus.innovation.gov.au/back_com2004.htm.   Accessed on 6 December 2006; Department of Industry, Tourism and Resources, *All Programs and Services: Pre-Seed Fund*, 2006.   Available at: http://www.industry.gov.au. Accessed on 16 January 2007.

- *assist the commercialisation of Research and Development (R&D) activities undertaken by universities and public sector research agencies by providing finance and managerial advice;*

- *encourage private sector investment in R&D activities undertaken in universities and public sector research agencies for commercialisation;*

- *build linkages between universities, public sector research agencies, the finance community and business for the commercialisation of R&D activities;*

- *build entrepreneurial and intellectual property management skills in Australian universities and public sector research agencies; and*

- *encourage researchers in universities and public sector research agencies to consider the commercial opportunities of their research discoveries.*[132]

Investment in any one project or company is capped at $1 million.[133] To be eligible, enterprises submitting project proposals 'must be controlled by and have at least 50 percent of their intellectual property owned by a university, a public sector research organisation or qualifying researchers'.[134]

(v) Building Entrepreneurship in Small Business Program

In 2005 the federal government allocated $39 million to 2007-08 for the Building Entrepreneurship in Small Business Program, thus extending the $60 million over four years to 2005-06 provided via the Small Business Assistance Program. It incorporates the Small Business Enterprise Culture Program, Small Business Incubator Program and Small Business Answers Program, and introduces succession planning for small business.[135] This is a merit-based competitive grants programme 'set up to encourage entrepreneurship, help small businesses access information, and encourage the development of incubators aimed at fostering the growth of start-up firms'.[136] The programme consists of four initiatives:

- Training and Mentoring Projects;

---

[132] Department of Industry, Tourism and Resources, *All Programs and Services: Pre-Seed Fund*, 2006. Available at: http://www.industry.gov.au. Accessed on 16 January 2007.

[133] Department of Education, Science and Training, *Fact Sheets*, May 2004. Available at: http://backingaus. innovation.gov.au/back_com2004.htm.   Accessed on 6 December 2006.

[134] Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p26.

[135] Department of Industry, Tourism and Resources, *All Programs and Services: Building Entrepreneurship in Small Business Program*, nd. Available at: http://www.industry.gov.au. Accessed on 16 January 2007; AusIndustry, *Product Summary*, nd.   Available at: http://www.ausindustry.gov.au/library/Product Summary/14090614043553.pdf. Accessed on 17 January 2007.

[136] Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p5.

- Succession Planning;

- Small Business Incubators; and

- Small Business Field Officers.[137]

The Small Business Field Officers component of this programme replaced the Small Business Answers initiative and is funded until 30 June 2008.[138]

(vi) Industry TechLink Program, Techfast, and InnovationXchange Intermediaries

These are pilot programmes aiming to overcome the barriers to transforming new technology into marketable goods and services through 'encourag[ing] greater collaboration and exchange of intellectual property'.[139] This should result in increased 'take-up and transfer of technology-related intellectual property between businesses, and between businesses and the research sector'.[140] Identifying and accessing the technology from the researchers is difficult, particularly for SMEs, and collaboration, something that correlates highly with innovation, is often problematic.[141] SMEs often lack the time, information and other resources that might allow them to connect with other SMEs and thus lack experience in collaboration. Intermediaries provide the mechanism by which such companies can collaborate. Intermediaries and assistance, such as provided under the TechLink, Techfast and InnovationXchange Intermediary programmes, aim to address these issues.

(1) Industry TechLink

Industry TechnLink was established through the Innovation Access Program - Industry with funding of $6 million over four years to 2006. This programme has now ceased and is being evaluated. During its period of operation, Industry TechLink assisted over 2,200 SMEs, with half of all enquiries coming from regional Australia. Assistance included free technology advice for SMEs by providing telephone or on-site contact with consultants who diagnosed technology related problems and suggested solutions.[142]

---

[137]   Department of Industry, Tourism and Resources, *All Programs and Services: Building Entrepreneurship in Small Business Program*, nd. Available at: http://www.industry.gov.au. Accessed on 16 January 2007.

[138]   AusIndustry, *All AusIndustry Products: Small Business Field Officers Program (SBFO)*, nd. Available at: http://www.ausindustry.gov.au. Accessed on 17 January 2007.

[139]   Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p5.

[140]   ibid., p5.

[141]   ibid., p22.

[142]   ibid., p24.

(2) **Techfast**

This is a pilot programme established in 2004 with the provision of $2.5 million in funding. Techfast works to facilitate commercial relationships between SMEs and public sector research institutions. Techfast provides 'hands-on' advice to established, technology-based SMEs by, first, identifying the firm's technological needs and searching public sector research institutions' IP for a match, second, assisting in negotiations for the transfer of IP, and, third, developing a 'technology adaptation plan and prepar[ing] a path to market strategy'.[143]

(3) **InnovationXchange (IXC)**

Innovation Xchange (IXC) was established in 2003 with $1.22 million from the Innovation Access Program-Industry. The programme is open to institutions and businesses of any size, both in Australia and overseas. IXC provides 'highly skilled, trusted intermediaries (specialist innovation, commercialisation and business development support staff) who work under a code of ethics to get confidential access to the strategic intentions and technological developments of participating firms and institutions'.[144] The intent behind the use of 'commercially neutral' intermediaries is to find opportunities for collaboration. Originally operating in the life sciences area, IXC now includes areas such as manufacturing, construction, information technology, medical devices and material sciences. IXC has links in the United Kingdom, the United States of America and Denmark.[145]

(vii) **Innovation Investment Fund (IIF)**

According to DITR, Australia has 'an immature early-stage venture capital market' despite a 'very competitive private equity market'.[146] Out of 27 OECD countries, Australia is ranked 17th 'in terms of venture capital investment as a percentage of GDP'.[147] DITR suggests this is because of:

- a lack of knowledge of the technology development sector;

- an aversion to risk amongst Australian investors;

- a lack of availability of skilled early stage fund mangers; and

- technology developers' lack of understanding regarding how to effectively package their product and/or company into an 'investor-ready' form.[148]

---

143 ibid., p24.

144 ibid., p23.

145 ibid., pp23-24.

146 ibid., p25.

147 ibid., p25.

148 ibid., p25.

The Innovation Investment Fund (IIF) is designed to:

- *encourage the development of new-technology companies commercialising R&D, by addressing capital and management constraints;*

- *develop a self-sustaining, early-stage, technology-based venture capital industry;*

- *develop fund managers with experience in the early stage venture capital industry; and*

- *establish in the medium term a 'revolving' or self-funding program.*[149]

A combined total of nine venture capital funds were established via round one licensed funds (operational in 1998) and the second round (operational in 2001). This represented a $358.05 million investment. Fund managers are skilled in raising private capital and managing venture capital investments, and are licensed for 10 years. Following the Venture Capital Review (2005), the Government allocated $200 million in the 2006-07 budget ($40 million per annum for 5 years) to support 10 new funds, 'to be matched by a minimum of one to one investment by the private sector investment'.[150]

(viii) Industry Cooperative Innovation Program (ICIP)

Announced in October 2004 with the allocation of $25 million, Industry Cooperative Innovation Program (ICIP) is scheduled to run until 2011, and is designed to build sectors through assisting collaboration between parties engaged in an innovation project that has spillover effects.[151] This is a competitive programme, with the most competitive consortia (of no less than three members) being offered funding of up to 50% of the project's eligible expenses.[152]

ICIP has two streams. Stream A provides maximum funding of $150,000 for projects that can be completed within 18 months. Consortia involved in project scoping or innovation mapping are funded under Stream A. Stream B funds up to $3 million for projects to be completed within three years. Consortia involved in research and development, proof of concept, innovation

---

[149] Department of Industry, Tourism and Resources, *All Programs and Services: Innovation Investment Fund*, 2006. Available at: http://www.industry.gov.au. Accessed on 16 January 2007.

[150] Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, pp25-6; Department of Industry, Tourism and Resources, *All Programs and Services: Innovation Investment Fund*, nd. Available at: http://www.industry.gov.au. Accessed on 16 January 2007.

[151] Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p25; Department of Industry, Tourism and Resources, *All Programs and Services: Industry Cooperative Innovation Program (ICIP)*, nd. Available at: http://www.industry.gov.au. Accessed on 16 January 2007.

[152] Department of Industry, Tourism and Resources, *All Programs and Services: Industry Cooperative Innovation Program (ICIP),* nd. Available at: http://www.industry.gov.au. Accessed on 16 January 2007.

demonstration and adaptation, and innovation implementation activities are funded under Stream B.[153]

(ix) Venture Capital Limited Partnership (VCLP) and Early Stage Venture Capital Limited Partnership (ESVCLP)

Venture Capital Limited Partnership (VCLP) was introduced in 2002 to encourage non-resident investment in the Australian venture capital industry in 'relatively high-risk start-up and expanding businesses that would otherwise have difficulty in attracting investment through normal commercial means'.[154] The incentive takes the form of an exemption from taxation on profits or gains on equity investment in Australian companies with total assets not exceeding $250 million.[155] In its 2006-07 Budget the Australian Government announced its intention to relax some of the conditions associated with this programme, for example, removing the restrictions on investors' country of residence and 'relaxing the requirement that 50 per cent of assets and employees must be located in Australia for 12 months after the making of the investment'.[156] Thirteen VCLPs had been registered by 30 April 2006, with approximately $1.5 billion in capital commitments.[157]

In May 2006 the federal government announced its Early Stage Venture Capital Limited Partnership (ESVCLP) designed to assist Australian companies commercialise their technologies and innovations domestically before doing so globally. These partnerships, expected to open late 2006-07, will replace the Pooled Development Fund which closed to registrations as at 31st December 2006. The incentive provided via ESVCLPs will take the form of 'flow-through income tax treatment and a tax exemption for income, both revenue and capital, received by its partners whether resident or non-resident'.[158] To be eligible for consideration, a partnership:

- must not have more than $100 million in committed capital;

- must invest in companies with total assets not exceeding $50 million immediately prior to the investment;

---

[153]   ibid.

[154]   Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p27.

[155]   ibid.

[156]   ibid.

[157]   Department of Industry, Tourism and Resources, *All Programs and Services. Venture Capital Limited Partnerships (VCLP) Fact Sheet*, nd. Available at: http://www.industry.gov.au. Accessed on 16 January 2007.

[158]   Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006, p27.

- must agree to divest itself of any holdings once the total assets of the investee company exceed $250 million.[159]

Investors will not be able to deduct investment losses as ESVCLP income is tax exempt. At the time of this report, ESVCLP is not operational and is awaiting the necessary legislation to allow it to commence operations.[160]

Finding 6

The federal government has in place a number of programmes and initiatives, each designed to address specific issues and targeted at specific businesses such as SMEs. Research directed programmes and initiatives aim to help ICT businesses create new products and services, enhance their R&D capabilities, develop proof-of-concept, and encourage public/private partnerships and interactions between researchers and industry. Commercialisation focussed programmes and initiatives include funding consultant business advisers, providing seed and pre-seed capital, encouraging entrepreneurship, increasing collaboration and exchange of intellectual property and encourage non-resident investment in the Australian venture capital industry.

2.2 Western Australian Government Initiatives

The Western Australian Government has shown an increased preparedness to provide assistance to ICT companies to develop the industry. Most recently, the Government's commitment has been borne out through the declaration of Western Australia's four pillars of diversification as an economic development strategy.

In August 2006 the Minister for Energy; Resources; Industry and Enterprise, the Hon. Fran Logan stated that 'while the resources sector is central to the State's economic strength, sustainable prosperity will be assured through the growth of innovative sectors such as marine and defence, biotechnology, and ICT'.[161]

---

[159]   ibid.

[160]   Department of Industry, Tourism and Resources, *All Programs and Services. Early Stage Venture Capital Limited Partnerships (ESVCLP) Fact Sheet*, nd. Available at: http://www.industry.gov.au. Accessed on 16 January 2007.

[161]   Hon. Fran Logan, MLA, 'State urges Commonwealth to think "beyond the boom"', *Media Statement*, 22 August 2006.

Western Australia's Four Pillars of Economic Diversification

- information and communications technology

- biotechnology

- marine and defence

- renewable energies

As part of the Four Pillars strategy to broaden Western Australia's economic base for the future, the Government has made a variety of investments. For example, in April 2007, Interzone, a Chicago, Illinois-based publisher of massively multiplayer online role playing games (MMO RPGs) established a game development studio in Perth. This was made possible through the Western Australian Government granting assistance of $500,000 in support of the project.[162]

In discussing the need for government support for the ICT industry, the Committee acknowledges the important role of ICT as an enabler to the state's current economic drivers. Equally, the Committee recognises the exceptional potential of ICT based enterprises to drive the economy in the future.

Industry development is a long-standing and legitimate pursuit of government to help stimulate local economies and promote jobs growth. In a highly competitive global environment government assistance can be mutually beneficial to the ICT sector and the local economy. In many but not all cases, government assistance can help influence the development of new technology, providing an attractive location for companies to locate, educating a workforce to service a company's needs, and meeting other industry development objectives.

DoIR states that over the three years to 2006 its programmes to assist business develop ICT technology have focused on:

> *a) Assisting companies with product development services;*
>
> *b) Education on product development processes;*
>
> *c) Commercialisation assistance and education; and*
>
> *d) Assistance in capital raising.*[163]

---

[162]   Hon. Fran Logan, MLA, Minister for Energy; Science and Innovation, 'Computer Games', *Brief Ministerial Statement*, 3 April 2007. This initiative is discussed further in the digital content industry section of Chapter 6.

[163]   Submission No. 8 from Department of Industry and Resources, August 2006, p6.

> **Finding 7**
>
> The Western Australian Government recognises the significant potential for the local ICT industry to contribute to the further diversification and growth of the economy.

(a)   Infrastructure

To raise awareness of Western Australia's particular needs and have them addressed, the Western Australian Government participated in the federal government's National Broadband Strategy Implementation Group. As Broadband has been identified as a particular issue of concern to this inquiry, this and other issues relating to telecommunications infrastructure are discussed in detail in Chapter 6.

Other significant ICT infrastructure development initiatives include:

- Mass Spectrometry laboratory at the University of Western Australia;

- National Networked TeleTest Facility at Edith Cowan University ($1.5 million provided);

- Interactive Virtual Environments Centre (iVEC);

- Technology Park; and

- Australian Marine Complex Business and Technology Centre.

In 2004 the Western Australian Government announced its intention to 'leverage new and existing infrastructure projects to attract national and international businesses and institutions to invest in the formation of new ICT industry clusters'. However, the *Enabling Future Prosperity Progress Report* advises that 'no activities have been conducted to address this initiative'.[164]

Western Australian government support has also been provided toward the establishment of:

- call centres in Joondalup (Stellar and Westpac), Bunbury, Albany and Collie (Synergy) and Manjimup and Bridgetown (with the Royal Life Saving Society (WA)); and

---

[164]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Austrlia, Perth, 2004, p16; Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p16.

- 'cutting edge' software development centres by IBM, Motorola and Raytheon.[165]

DoIR advise that the Western Australian Government has provided $5.4 million over four years to Motorola 'to employ 200 programmers'.[166] This will afford 'opportunities for collaborative research and development with the State's tertiary institutions (particularly UWA) and associated graduate training'.[167]

The following section outlines those infrastructure development initiatives that were particularly drawn to the Committee's attention.

(i)   Technology Park

Established in 1985, Technology Park has become Australia's leading address for ICT research and development. Located within the technology cluster are 'over 90 organisations representing R&D technology based industry; research organisations, education institutions; support organisations, Park management, and government'.[168] The ICT Industry Collaboration Centre (ICT ICC) advised the Committee that the Park is operated by DoIR as an 'infrastructure facility supporting WA Innovation industries' and is a 'great asset to the WA economy and to the ICT industry'.[169]

Currently, the Western Australian Government is considering a plan to expand the park precinct from its current 42 hectares to a wider 314 hectares. The Committee has been informed that the objectives of the new 'Technology Precinct' will be:

- *active promotion of innovation, enterprise and creativity as key drivers of industry development;*

- *supporting commercialisation of new ideas and investment in knowledge intensive and creative industries;*

- *building relationships between industry, research institutions and education to support development and commercialisation of innovation;*

- *recognising the important role of small business in the innovation process; and*

---

[165]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Austrlia, Perth, 2004, p16.

[166]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p7.

[167]   ibid.

[168]   Technology Park Western Australia, *About Us. Our Vision.* Available at: http://techparkwa.org.au/about-vision.shtml. Accessed on 17 April 2007.

[169]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, 3 August 2006, p7.

- *creating opportunities for international linkages for information and technology exchange.*[170]

Evidence presented to the Committee suggested that though the precinct itself is a great asset to the Western Australian economy and the ICT industry it lacks an informal social/retail centre. ICT ICC advised that 'Technology Park needs a social hub, coffee shops, retail and tavern to bring it in to (sic) line with its competition in other states and overseas, to attract employees to the environment and promote interchange between innovators'.[171] It was suggested that by creating a 'social hub' this 'would encourage the social networks which are crucial to clustering and allow the knowledge exchange that can plant the seed for innovation'.[172]

Finding 8

Technology Park is an infrastructure facility which supports the emerging Western Australian innovation and ICT industries, and is a great asset to the ICT industry and to the Western Australian economy.

Recommendation 2

The value of technology park to members of the ICT industry could be significantly enhanced by facilitating increased informal communication on site.

(ii)   *The Australian Marine Complex Technology Precinct*

The Australian Marine Complex was established in 2003 with combined state and federal government funding of $200 million. The Australian Marine Complex Technology Precinct is one of the four specialist precincts in the complex. As well as innovation and technology development for the marine industry, research and development at the Technology Precinct encompass ICT, life sciences, and resources and energy. In 2005 Raytheon Australia, a US defence technology contractor specialising in systems integration for submarines and aircraft became the first tenant in the Technology Precinct. This site is now their main facility for naval systems software design

---

[170]   Electronic Mail from Department of Industry and Resources, 19 April 2007.

[171]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, 14 August 2006, p7.

[172]   ibid., p7.

and engineering.[173] The design phase of the Australian Marine Complex Technology Precinct was planned for completion in mid 2006 with construction of the Central Services Facility to begin in September 2006.[174] A $12 million central support facility complex for technology based organisations in the Precinct is planned, and practical completion is scheduled for February 2008.

The Department of Education and Training (DET) and Challenger TAFE are establishing the Australian Centre for Energy & Process Training (ACEPT) in the Precinct, representing a $21 million Government/Industry investment. The expected completion date for ACEPT is 2007.[175]

(iii)   Commitment to Radioastronomy

The Radio Astronomy Park (RAP)

The Western Australian Government has committed to invest $7 million in developing radio astronomy in the state through establishing a world-class Radio Astronomy Park (RAP) at Boolardy Station, a site of unique radio quietness in the Murchison Region of Western Australia.[176] This site is of particular significance to Australia's bid to host the square kilometre array telescope, as discussed below. DoIR reported that the Western Australian government has 'allocated $4.08 million to cover various infrastructure requirements of the RAP site' and is developing a proposal to access funds from the federal government's telecommunications funding.[177] The announcement of the RAP has generated considerable international interest in the state's radio astronomy industry and DoIR advise that 'the RAP site has attracted A$80 million in future investments'.[178]

The RAP is to be the site of two major initial projects forming the Mileura International Radio Array (MIRA) as well as a number of smaller experiments. Essential infrastructure was planned

---

[173]   *Australian Marine Complex Western Australia*, nd, np. Available at: http://www.landcorp.com.au/portal/ page?_pageid=331,1&_dad=portal&_schema=PORTAL. Accessed on 13 December 2006; *Australian Marine Complex, Technology Precinct*, nd, np. Available at: http://www.techparkwa.org.au/newsprecinct. shtml. Accessed on 13 December 2006; *Premier's Awards For Excellence In Public Sector Management. Winners 2005*. Available at: http://www.premiersawards.dpc.wa.gov.au/index.cfm?event =winners2005. Accessed on 13 December 2006.

[174]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p2.

[175]   *Australian Marine Complex, Technology Precinct*, nd, np. Available at http://www.techparkwa.org.au/ news-precinct.shtml. Accessed on 13 December 2006.

[176]   Commonwealth and Scientific and Industrial Research Organisation, *Australian SKA Planning Office Newsletter,* 10 April 2007. Available at: http://www.atnf.csiro.au/news/aspo-newsletter/ASPO_newsletter _10.pdf. Accessed on 10 May 2007.

[177]   Submission No. 8 from the Department of Industry and Resources, August 2006, p18.

[178]   Submission No. 8 from the Department of Industry and Resources, August 2006, p18; Department of Industry and Resources/OSTI, 'WA - Galaxies ahead in radio astronomy', *State of the Future: Office of Science, Technology and Innovation News*, edn. 1, September, 2006, p6.

to allow the first hardware for the MIRA Widefield Array to be installed by the end of March 2007.[179]

Through the Office of Science, Technology and Innovation, funding was also made available for the Australian Astronomy Major National Research Facilities Program, the Australian Research Council's Western Australian super computing project, and the Australian Communications and Media Authority's radio-quiet-zone project. Part of the State Government's investment in radio astronomy consists in $500,000 to fund a new professorial position at Curtin University of Technology.[180]

Other initiatives aimed at developing and promoting Western Australia's radio astronomy sector include:

- taking an exhibition booth at the 26th General Assembly of the International Astronomical Union in Prague, August 2006. This is to specifically promote the RAP and radio astronomy investment opportunities in Western Australia; and

- sponsoring and supporting the Asia-Pacific Radio Science Conference, Perth 2007, a conference with specific focus on radio astronomy and the Square Kilometre Array (SKA).[181]

(iv)   The Square Kilometre Array (SKA)

Australia is one of two sites short-listed from four candidate sites as the host of the Square Kilometre Array (SKA), the world's largest radio telescope. The other short-listed site is South Africa. The telescope is comprised of thousands of antennas (arrays), the majority of which are spread over a one kilometre central region. Originally planned for a site at Mileura station, near Meekathara, the core area will be at the adjacent RAP site at Boolardy Station, 90 kilometres west of Mileura.[182] The budget for the proposed project is estimated at Euro 1 billion or A$1.63 billion, with an annual operating budget estimated at Euro 70 million or A$114 million.[183] Australia is one of the 17 consortium countries and is a 10% partner. The decision regarding the SKA site is

---

[179]   Commonwealth and Scientific and Industrial Research Organisation, *Australian SKA Planning Office Newsletter,* 10 April 2007. Available at: http://www.atnf.csiro.au/news/aspo-newsletter/ASPO_newsletter _10.pdf. Accessed on 10 May 2007.

[180]   Department of Industry and Resources, Office of Science, Technology and Innovation, 'WA - Galaxies ahead in radio astronomy', *State of the Future: Office of Science, Technology and Innovation News*, edn. 1, September, 2006, p6.

[181]   Submission No. 8 from Department of Industry and Resources, August 2006, p20.

[182]   Premier, the Hon. Alan Carpenter, *Media Statement*, 13 February 2007. Available at: http://www.media statements.wa.gov.au. Accessed on 22 March 2007.

[183]   *Australian SKA Industry Cluster*, nd, np. Available at: http://www.atnf.csiro.au/ska/cluster.doc. Accessed 12 April 2007. Based on Euro 1 = A$1.6276.

expected to be made in 2010. Phase I of building is scheduled for completion by 2014, full array building by 2018 and a fully-operating SKA by 2020.[184]

Such a major project will provide important development opportunities for Australian and Western Australian businesses. The expected operating costs of the SKA are between 5% and 8% per annum of the building costs, with a considerable proportion of that being spent in the host country.[185] DoIR, in collaboration with CSIRO and local industry, has identified potential opportunities for Western Australian companies in the 'construction of radio telescopes, provision of telecommunications infrastructure through mid-west and north-west Western Australia and development and manufacture of innovative electronic components and devices'.[186] Premier's Research Fellow, Dr Peter Quinn, argues that 'having the SKA in WA will make WA the focus of international scientific attention and allow the state and its institutions to benefit enormously from the technological and economic spinoffs such a facility would bring'.[187] Establishing the SKA at Boolardy Station will bring 'A$400 million of infrastructure investment in roads, remote power and buildings, with spin-offs for employment, property values and education'.[188]

Finding 9

The SKA project has a proposed budget of $1.63 billion, with an annual operating budget of $114 million. Australia has been short-listed as a potential site. The decision regarding the site will be made in 2010 and following phased in construction stages the SKA is planned to be fully operational by 2020. The SKA project is estimated to attract $400 million in infrastructure investment and provide considerable opportunities for Australian and Western Australian businesses.

---

[184]   *Square Kilometre Array*, nd, np. Available at: http://www.skatelescope.org. Accessed 12 April 2007.

[185]   Dr Peter Quinn, 'The SKA Cluster Initiative - Next Generation Radio-Astronomy & Industry Opportunities', briefing of The Australian SKA Industry Cluster Steering Committee, 6 December 2006.

[186]   Commonwealth and Scientific and Industrial Research Organisation, *Australia Telescope National Facility*, 2006. Available at: http://www.atnf.csiro.au/SKA/WA _rqz.html. Accessed on 7 December 2006; Department Of Industry And Resources, Office of Science, Technology and Innovation, 'WA - Galaxies ahead in radio astronomy', *State of the Future: Office of Science, Technology and Innovation News*, edn. 1, September, 2006, p6; Submission No. 8 from Department of Industry and Resources, August 2006, pp19-20; Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p16.

[187]   Madden, Catherine, 'Dr Quinn and the quest to win the SKA', in *The West Australian*, 27 March, 2006, p2. Available at: http//www.sciencewa.net.au/science_archive.asp?pg=30&NID=650. Accessed on 7 December 2006.

[188]   ibid., p1.

> **Recommendation 3**
>
> The Committe recommends that the state government continue to work closely with the federal government to optimise the benefits of the SKA project for Western Australia and to ensure that the ICT potential is captured within the state.

(v)   Premier's Research Fellowship Program

The Premier's Fellowships were established in 2003-04 to draw excellent researchers to the state and thus contribute economic, environmental and social benefits to Western Australia.[189]   Another facet of the state government's contribution to the development of radio astronomy in Western Australia is the awarding of two Premier's Fellowships in radio astronomy, each worth $1 million over four years. The Minister for Science and Innovation, the Hon. Fran Logan stated that the Premier's Fellowships 'would aim to build and sustain world-class research teams and increase the level of external funding brought to the State'.[190]   Premier's Fellowships in Radio Astronomy have been awarded to Dr Lister Staveley-Smith of the CSIRO Australia Telescope National Facility in New South Wales and Dr Peter Quinn of the European Southern Observatory based in Germany.[191]

(vi)   iVEC

The Interactive Virtual Environments Centre (iVEC) was established in June 2000 as a joint venture between Central TAFE, CSIRO, Curtin University of Technology and The University of Western Australia; Murdoch University joined the venture in 2005. Opened by the Premier of Western Australia in May 2002, the iVEC facility set out to 'enhance the uptake of High Performance Computing (HPC) and visualisation in Western Australia by the education sector, the research community and major industries'.[192]

In July 2005 the Premier of Western Australia announced the allocation of $3.1 million in funding to iVEC2. Funding was also received from iVEC partners ($1.3million) and the Australian

---

[189]   Department of the Premier and Cabinet, *Premier's Research Fellowship Program*, nd.   Available at: http://www.scienceandinnovaton.dpc.wa.gov.au/index.cfm?event=researchFellowship.   Accessed on 7 December 2006.

[190]   Hon. Fran Logan, MLA, 'Radio Astronomy Park for Western Australia', *Media Statement*, 10 March 2006.

[191]   ibid.

[192]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Australia, Perth, 2004, p6.

Partnership for Advanced Computing ($1.2 million).[193]   Following this, iVEC's developed its broader mission:

> *to increase Western Australia's innovative capacity and economic development through the exploration, evolution and exploitation of advanced computing technology, high-speed communications, scientific visualisation, grid technologies and e-Research infrastructure.*[194]

As at May 2007, DoIR advise that it is:

> *currently finalising a new funding arrangement with iVEC focusing on greater industry development outcomes. Funding of $7.8 million over three years from 2007/08 to 2009/10. Funding support aims to grow supercomputing and visualisation capability in Western Australia and provide a suitable vehicle to promote and encourage the uptake of open source solutions by the broader community.*[195]

(b)   Commercialisation Focussed Activities

As well as the specific funding programmes discussed below, there are a number of activities undertaken by DoIR specifically aimed at developing the capital base of the state's ICT industry.

In 2002, along with the federal government and other state governments, the Western Australian Government supported the establishment of the Australian Institute for Commercialisation (AIC). AIC is a service organisation developed to help businesses, research organisations and governments fast-track the commercialisation of their innovations. It does this through facilitating technology transfer and brokerage of IP, and providing commercialisation project management services, IP management advice, market research, opportunity analysis and commercialisation skills development programmes. AIC has three business units: TechFast (for assisting SMEs), the Office of ICT Commercialisation, and Solutions and Consultancy.[196]   The progress report for *Enabling Future Prosperity* states that 'the Department of Industry and Resources partnered with the Australian Institute for Commercialisation (AIC) to provide the AIC's "Gateway" model to local companies'.[197]   The Gateway methodology assesses a company's commercialisation progress and provides advice for their further development.

---

[193]   iVEC, 'iVEC ARRC' in *iVEC Annual Report 2005/06*, 2006. Available at: http://www.ivec.org. Accessed on 4 May 2007.

[194]   ibid.

[195]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p7.

[196]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Australia, Perth, 2004, p8; Australian Institute for Commercialisation, 2006.   Available at: http://www.ausicom.com/ default.asp. Accessed on 22 January 2007.

[197]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p17.

(c)   Programme/Initiative Specific Information

(i)   Centres of Excellence in Science and Technology

The Centre of Excellence in Science and Technology (COE) Program receives funding via the Innovate WA Strategy. The Office of Science and Innovation lists 39 COEs currently supported by this programme.[198] The aim of the COE Program is to improve Western Australia's science and innovation capability by supporting research excellence that is primarily based in Western Australia. The core investment objective of the COE programme is to apply investment 'to the purchase of science and innovation infrastructure with the objective of enhancing access to substantial Federal funding or to attract investment in science and innovation from the private sector and other sources'.[199] Infrastructure, here, includes research personnel, services and fit-out of buildings, and new materials and equipment. The guidelines for potential applicants advise that a co-investment of cash and in-kind resources is a necessary eligibility requirement, and the minimum level of cash and in-kind investment by proponents is $3 for every $1 of State investment.[200]

Under this programme, approximately $3.5 million has been provided since 2003 to eight ICT research centres.[201]

During the course of the inquiry the Western Australian Telecommunications Research Institute (WATRI), the Centre of Excellence in e-Medicine (e-Medicine) and the Institute for Multi-sensor Processing and Content Analysis (IMPCA) came to the particular attention of the Committee.

(1)   Western Australian Telecommunications Research Institute (WATRI)

The Western Australian Telecommunications Research Institute (WATRI) is a joint venture between Curtin University of Technology and the University of Western Australia formed in September 2002. WATRI works at the nexus between university and industry, and focuses on taking innovations into the marketplace, with particular emphasis placed on 'supporting industry implementation of telecommunications and electronic technologies, to maintain their competitiveness in this global sector'.[202] WATRI has five research laboratories, focusing on

---

[198]   Department of the Premier and Cabinet, Office of Science and Innovation, *Guidelines for Western Australian Centres of Excellence in Science and Innovation (Revised August 2005)*, 2006, p1. Available at: http://www.scienceandinnovation.dpc.wa.gov.au/COEGuidelines-revisedAugust2005.pdf. Accessed on 19 January 2007.

[199]   ibid., p3.

[200]   ibid., p1.

[201]   Submission No. 8 from Department of Industry and Resources, August 2006, p6.

[202]   Curtin University of Technology, *Western Australian Telecommunications Research Institute*, nd. Available at: http://esc.curtin.edu.au/brochures/WATRI%20BROCHURE.pdf. Accessed on 16 April 2007.

wireless systems, signal processing, networking, and electronics and electro-magnetic compatibility technology, and has approximately 40 staff and PhD students.[203]

(2) Centre of Excellence in e-Medicine (e-Medicine)

The Centre of Excellence in e-Medicine (e-Medicine) is a Western Australian state funded research organisation established in August 2005. The core partners in e-Medicine are the Lions Eye Institute and the University of Western Australia. e-Medicine research focuses on improving medical testing and diagnosis of disease in such a way that patients do not have to travel to hospitals and health care centres. This is particularly significant for people in rural and remote regions where there is limited access to health care specialists.[204]

e-Medicine's activities focus on:

- *Research & Development of affordable, portable and non-invasive diagnostic tools;*

- *Research & Development of intelligent electronic medical record systems, imaging algorithms and computer-aided diagnostic software;*

- *Education & Training of healthcare professionals in the area of telemedicine; and*

- *Clinical Services in rural and remote areas.*[205]

(3) Institute for Multi-sensor Processing and Content Analysis (IMPCA)

The Institute for Multi-sensor Processing and Content Analysis (IMPCA) aims to assist the interpretation of large volumes of technology-generated data by 'developing automated procedures to categorise and manage data sets, to find patterns and anomalies inherent in the data, and to assign contextual meaning and structure to the data'.[206] IMPCA's key research areas are:

- Scalability and Robust Systems for Behaviour Recognition; and

- Bridging the Semantic Gap in Content Management.

IMPCA, in collaboration with DTI Group Ltd and the Transport Authorities and Police Services of Western Australia, has founded the Centre of Excellence for Infrastructure and Transport

---

[203]   Western Australian Telecommunications Research Institute, Briefing, 27 September 2006.

[204]   Centre of Excellence in e-Medicine, *About Us*, nd. Available at: www.emedicine.com.au. Accessed on 16 April 2007.

[205]   ibid.

[206]   Institute for Multi-sensor Processing and Content Analysis, *Research*, nd. Available at: http://impca.cs. curtin.edu.au/research.php. Accessed on 16 April 2007.

Surveillance to significantly expand research in the area of large scale surveillance for public transport.[207]

(ii)   Online WA Innovation Centre Portal

The portal provides a suite of resources such as an innovation guide, a directory of companies that assist in the commercialisation process, a bulletin board to link up innovators with investors, and a diary of education and networking events. The 'Networks and Partnerships' section of the WA Innovation Centre website was developed to enable local innovators to investigate online opportunities for commercial, financial and technical partnerships.

(iii)   SoftwareMark CMMI Demonstration Project

The SoftwareMark Capability Maturity Model® Integration (CMMI) Demonstration programme, a collaboration between the Western Australian Government and Software Engineering Australia, was launched in February 2005 to provide funding for SME staff to gain formal certification in business and software development skills. Funding was available to the first 10 eligible Western Australian businesses to apply for SoftwareMark training, and reduced their participation in the programme from $28,000 to $18,000.[208]   Only two companies took up this funding offer and successfully completed the course. This low level of interest resulted in a re-allocation of funding.[209]

According to DoIR, the SoftwareMark 'has not yet really had an impact [nationally and internationally] where it has achieved the status, let us say, of the International Standards Organisation series of quality assurance, and until it has, there is not much point in our putting money into this initiative'.[210]

> *We have not got a formal status for the SoftwareMark. It is not like ISO 9001 or the 1400 series or anything like that. It seems to me, at the moment, to be*

---

[207]   ibid.

[208]   Department of Industry and Resources, 'SoftwareMark Demonstration Project' in *The e-News - ICT Newsletter*, May, 2004, p14.   Available at: http://www.pivod.com.au/news/press/DepartmentofIndustry andResources_enews.pdf.   Accessed on 13 December 2006.   Department of Industry and Resources, 'SoftwareMark Demonstration Project' in *The e-News - ICT Newsletter*, June, 2004, p12.   Available at: www.DepartmentofIndustryandResources.wa.gov.Au/documents/businessandindustry/enews_June_2004. pdf. Accessed on 13 December 2006.

[209]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Australia, Perth, 2004, p9; Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p4.

[210]   Mr Stephen Grocott, Director/General Manager*,* Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p5.

something nice to have as a marketing tool but nothing that has anything like the significance of market acceptance.[211]

(iv)   ICT Industry Collaboration Centre (ICT ICC)

The ICT Industry Collaboration Centre (ICT ICC) was established at Technology Park, Bentley, in January 2005 as a partnership between DoIR and Western Australian ICT Industry Associations.   DoIR funded the employment of an executive officer and various industry development activities through the provision of $100,000 per annum for three years to December 2007.[212]

ICT ICC lists its strategic objectives as being:

- *To facilitate and collate research on the WA ICT industry and draw on external experiences.*

- *To facilitate industry collaboration with technical researchers on joint projects.*

- *To identify gaps & opportunities for the WA ICT industry to deliver innovation and solutions.*

- *To catalyse cross-sector and cross-discipline innovation in the WA ICT industry.*

- *To foster development of professional competencies to capitalise on identified opportunities.*

- *To develop and promulgate WA ICT policies.*

- *To identify opportunities where constituents can benefit from ICT ICC collaboration and inputs.*

- *To link constituents with venture capital and other funding sources.*

- *To become a proactive communication channel to media, government and other external stakeholders.*

- *To develop industry clusters.*[213]

---

[211]   ibid.

[212]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p4.

[213]   Information Communication Technology Industry Collaboration Centre of Western Autralia, *Projects and Services*, 2006. Available at: http://icticc.org.au/projects& services/content.cfm. Accessed on 22 January 2007.

DoIR advise that ICT ICC was successful in hosting the ICT WA conference in November 2005, and in 2006.[214] The conference attracts a number of local, national and international speakers and delegates. ICT ICC also conducts 'ICT Today & Tomorrow' events. Originally hosted by DoIR, these events provide a forum for government agencies and industry sectors to meet and discuss their current and future ICT requirements with the local ICT industry. At each 'ICT Today & Tomorrow' event, a major local ICT procurer presents their technology plans and in doing so 'provides local companies with an opportunity to gain information to assist them with their product development planning'.[215]

(v)   *WA Innovation Centre*

The Western Australian Innovation Centre at Technology Park, Bentley, was established under the Western Australian Innovation Initiative, and opened in December 2004 by the then Minister for State Development, the Hon. Clive Brown. Its purpose is to facilitate the development of knowledge and commercialisation skills, and the formation of networks.

The Innovation Centre is:

> *managed by Event Matrix for the Department of Industry and Resources and provides a focal point and meeting place for entrepreneurs, innovators and service providers. Initiatives being implemented include: a 12-month education and training programme; quarterly networking sessions; an innovation services directory; Inventor of the Year award and incubator programme.*[216]

Other DoIR initiatives developed under the Western Australian Innovation Initiative include:

- facilitating the WA component of the Australian Innovation Festival (2005) by funding a Festival Coordinator position. In 2006 this funding was not necessary as the Festival was sustainable without WA Government support;

- publishing a commercialisation guide: 'Path to Commercialisation: A Guide for Planning an Early Stage Innovation Project'(2004);

- subsidising workshops on capital raising and commercialisation;

- funding of the Innovation Capability Development Scheme (discussed further below);

---

[214]   ICT ICC provided $30,000 in sponsorship for the 2006 conference. In Electronic Mail from Department of Industry and Research, 2 May 2007, p7.

[215]   Submission No. 8 from Department of Industry and Resources, August 2006, p7; Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p11.

[216]   Western Australian Innovation Centre, *Innovation Directory, Innovation Centre WA*, nd. Available at: http://www.innovation.wa.gov.au/Innovation/ Innovation%20Directory/i/innovation_centre. Accessed on 13 December 2006.

- producing the Innovation Centre WA website;

- developing the Government Intellectual Property policy (discussed in Chapter 5); and

- providing a free patent searching facility to allow companies to search global patent registries free of charge. [217]

(vi)   OpenSource Demonstration Centre

The OpenSource Demonstration Centre was launched in August 2004 and located at the WA Innovation Centre, Technology Park, Bentley.[218]   It was developed to assist the trial and evaluation of Open Source and proprietary software, and to provide a place where software developers 'can meet to collaborate on new software development projects'.[219]   The OpenSource Demonstration Centre has:

- hosted visitors from the industry, government and education sectors;

- hosted conferences and seminars with local, national and international speakers; and

- provided work experience for university graduates and Technical and Further Education (TAFE) and high school students.[220]

In November 2006 the OpenSource Demonstration Centre was closed 'to allow other demonstration-by-industry projects to rotate through the demonstration wing of the Innovation Centre'.[221]   The activities of the OpenSource Demonstration Centre have been transferred from Technology Park and incorporated into the iVEC facility. DoIR advise that iVEC 'provides a suitable vehicle to promote and encourage the uptake of open source solutions by the broader community'.[222]   DoIR also advise that they are working with iVEC to develop an Open Source symposium later in 2007 'to further promote the benefits of the software to the WA business sector as a business IT solution'.[223]

---

[217]   Submission No. 8 from Department of Industry and Resources, August 2006, pp6-7 and 8; Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p6.

[218]   Electronic Mail from Department of Industry and Resources, 31 May 2007.

[219]   Submission No. 8 from Department of Industry and Resources, August 2006, pp8-9.

[220]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p12.

[221]   Electronic Mail from Department of Industry and Resources, 31 May 2007.

[222]   ibid.

[223]   ibid.

(vii)   *Western Australian Innovation Capability Development Scheme (WAICDS)*

The Western Australian Innovation Capability Development Scheme (WAICDS), including a Capital Access Programme, was established with an allocation of $500,000 to help companies develop and commercialise innovative products and services.[224] It does this through facilitating 'industry access to investment and development capital by contributing to the cost of preparing investment proposals, feasibility studies and Commonwealth funding applications'.[225] Capital Access grants provide up to 50% of eligible expenditure, to a maximum of $25,000. The grant is offered on a matching basis, in cash or in kind, and the applicant must commit to a minimum of $50,000 expenditure. Eligibility criteria apply and applicants are assessed against merit-based selection criteria.[226]

Under the first round of WAICDS - Capital Access, 12 Western Australia companies received funding, with grants totalling $284,568 provided to assist those companies obtain further development funding. The second WAICDS Capital Access Round 2 closed on 28th July 2005 and $228,067 was distributed amongst seven Western Australian companies. As at February 2006, these companies had raised $5.7 million from external sources.[227]

(viii)   *i3 - Innovation in ICT Program*

i3 is part of the Innovation Capability Development Scheme and aims to assist Western Australian ICT SMEs 'develop or commercialise innovative ICT products and services. The programme aims at improving the international competitiveness of the Western Australian ICT industry, by funding eligible development activities'.[228] Eligible companies are funded up to 50 percent of

---

[224]   Department of Industry and Resources, *Western Australian Innovation Capability Development Scheme - Capital Access: General Information and Guidelines*, p2. Available at: www.innovation.wa.gov.au/ Innovation/Innovation_Guide/capital_access_round_2_guidelines.pdf. Accessed on 13 December 2006.

[225]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Australia, Perth, 2004, p9; Western Australian Innovation Centre, 'Minister launches Gallop Government's Innovation Initiative', 2004, p2. Available at: http://www.innovation.wa.gov.au/Innovation?news?2004/05/Minister% 20launches%20Innovation%20Initiative. Accessed on 13 December 2006.

[226]   Department of Industry and Resources, *Western Australian Innovation Capability Development Scheme - Capital Access: General Information and Guidelines*. Available at: www.innovation.wa.gov.au/ Innovation/Innovation_Guide/capital _access_round_2_guidelines.pdf. Accessed on 13 December 2006.

[227]   Department of Industry and Resources, *Western Australian Innovation Capability Development Scheme - Capital Access: General Information and Guidelines*. Available at: www.innovation.wa.gov.au/ Innovation/Innovation_Guide/capital_access_round_2_guidelines.pdf. Accessed on 13 December 2006; Submission No. 8 from Department of Industry and Resources, August 2006, p7; Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, pp6-8.

[228]   Department of Industry and Resources, *Innovation Capability Development Scheme: Innovation in ICT (i3) Program: General Information & Guidelines*, nd, p1. Available at: http://www.Department of Industry and Resources.wa.gov.au/i3. Accessed on 12 December 2006.

agreed activities costs to a maximum of $10,000 and on a matching cash basis only. Payments are made in arrears and subject to presentation of evidence of expenditure.

To be eligible, applicants must be an incorporated body undertaking innovation and/or innovation related services in Western Australia. The applicant must also be able to demonstrate that there is a real need for the funding, that without support the project may not proceed. Applicants must also show their ability to match the funding, dollar for dollar, and demonstrate the benefits of the project to Western Australia. Additionally, companies (including parent or affiliated companies) must have a combined annual turnover of less than $20 million and a workforce of less than one hundred people, including consultants and contractors.[229] According to the *Enabling Future Prosperity* progress report $10,000 grants were awarded to eight Western Australian ICT companies.[230]

(ix)   *Technology Transfer and Diffusion Scheme*

Enabling Future Prosperity advised the Western Australian government's intention to 'implement a Technology Transfer and Diffusion Scheme to encourage SMEs to adopt new technologies and best practice processes'.[231] However, the Progress Report states that while the scheme 'does exist it is currently without funding and as such no activities have been implemented under this initiative'.[232] This report further advises that DoIR is working with the Eastern Metropolitan Region Council's Industry Cluster Development Project to improve technology transfer between the mining technology and services sector and appropriate CRCs and CSIRO divisions.

(x)   *ICT Vendor Identification Service*

In 2004 the Western Australian Government reported that it would work with resources industries to ascertain their future ICT needs and to link these with local ICT capabilities, thus helping large project developers procure their ICT requirements from local companies. It argued that 'by leveraging the strengths the State has in industries such as mining and oil and gas, local firms will be better equipped to develop strategic plans and respond to global market trends.'[233] Subsequently, the ICT Vendor Identification Service was established in February 2006 via the

---

[229]   ibid.

[230]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p8.

[231]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Australia, Perth, 2004, p9.

[232]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report,* Government of Western Australia, Perth, 2006, p8.

[233]   ibid., p11.

Industry Capability Network which is delivered under contract by the Western Australian Chamber of Commerce. This project is currently funded by DoIR until July 2007.[234]

(xi) Entrepreneurs in Residence Pty Ltd (EiR)

In June 2000, $10 million was allocated from the federal government's BITS Incubator programme to establish the EiR Centre at Technology Park in Bentley, Western Australia, with the aim of helping to develop successful ICT enterprises. EiR services include: 'investment analysis and risk assessment; capital provision; incubation management and support; investment readiness and exit management; residential infrastructure support; and funds management'.[235] The BITS 2003-04 Annual Report states that EiR 'has been successful in attracting significant coinvestment from the public and private sectors. Revenues and employment in a number of incubate companies have increased significantly and some are now making sound progress in international markets'.[236] Activity levels for 2003-04 stand at 42 applications, 3 new incubatees and 4 graduates.[237] Since 2000, in addition to incubation services, EiR has provided accommodation to over twenty Western Australian ICT companies and commercialisation advice to more than 100 additional businesses. DoIR has contributed over $615,000 to EiR since 2000[238]. DoIR advise that they will cease funding EiR in 2008/09.[239]

(xii) Technology Roadshow

The Technology Roadshow involves a prime mover and trailer containing state of the art computer systems and technology software travelling throughout Western Australia. The aim of the roadshow is to demonstrate to regional businesses how adopting the latest technology can improve their operational efficiency. It also aims to stimulate innovation, allow technology transfer of opensource software applications, and decrease the digital divide by increasing awareness of the ways in which the Internet can assist distance education, employment and health. Since May 2005, the Technology Roadshow, sponsored by DoIR, Telstra BigPond and Scania, visited 21 communities in the nine development regions, attending major regional events in collaboration with local agencies such as the Regional Development Commissions, Local Councils and Telecentres.[240] Mr Kevin Russell, DoIR's Infrastructure Division Manager, states that the

---

[234]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, 2006, p11.

[235]   Department of Comunications, Information Technology and the Arts, *Building on Information Technology Strengths (BITS) Incubator Program (Including the BITS Intelligent Island Incubator) Annual Report 2003-04*, Commonwealth of Australia, Canberra, 2005, p19.

[236]   ibid.

[237]   ibid.

[238]   Submission No. 8 from Department of Industry and Resources, August 2006, p6.

[239]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p7.

[240]   Submission No. 8 from Department of Industry and Resources, August 2006, p8.

Roadshow has been 'a huge success' and that 'feedback from business people has been "excellent"'.[241]

(xiii)   Submissions to the Federal Government

In support of the local ICT industry, the Western Australian Government makes submissions to the federal government. For example, the government lodged a submission to the House of Representatives Standing Committee on Economics, Finance and Public Administration 'Inquiry into the state of Australia's manufacturing export and import competing base now and beyond the resources boom'. This submission 'highlights priority areas or drivers the Australian Government must focus on to enhance the competitiveness of the Australian manufacturing industry'.[242] In August 2006 DoIR advised they were in the process of preparing a submission to the federal government's Industry Policy Statement regarding the opportunities and risks for Australian industry over the coming 10 years.[243]

(xiv)   Studies to Identify Industry Capability and New Opportunities

The Western Australian government has undertaken a number of studies and surveys aimed at developing its understanding of the ICT industry in the state. In 2005 the Technology and Industry Advisory Council commissioned a report into the contribution ICT makes to the Western Australian economy. The report titled, *Enabling Growth: The Contribution of ICT to the Western Australian Economy*, and released in February 2006, was based on a sample of 200 businesses and contains a number of recommendations for considerations.[244]

In collaboration with the Australian Electrical and Electronic Manufacturers Association, DoIR commissioned the Western Australian Electronics Industry Cluster Study. The purpose of this study was to identify the state's capabilities as well as any existing and potential ICT clusters. Completed in 2005, this study identified more than 700 Western Australian businesses involved in the manufacture of electronic components and devices.[245]

---

[241]   Geddy, Rodney, 'WA's tech truck bridges digital divide' in *Computerworld*, 16 February 2006.

[242]   Submission No. 8 from Department of Industry and Resources, August 2006, p8.

[243]   ibid., p9.

[244]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p18; Western Australia Information and Communications Technology Industry Development Forum, *Enabling Growth: The Contribution of ICT to the Western Australian Economy*, 2006.

[245]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Australia, Perth, 2004, p11; Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p10.

DoIR also report that an ICT and biotechnology survey was conducted in 2005, canvassing 142 ICT companies on issues such as capabilities, export markets, and such like. The results were presented to Department staff during 2005.

In its submission to the Inquiry, DoIR advises that 'the department has a good broad understanding of the local ICT industry gained through regular interaction with the industry and periodic industry surveys,' but also acknowledged 'the need for a more detailed understanding of the industry's composition, strengths, weaknesses and barriers to growth'.[246]

In response to this need DoIR, with the support of ICT ICC and the Industry Capability Network Western Australia, undertook an ICT industry audit project with the following objectives:

> *1. Identify the composition of the WA ICT industry (using a supply chain approach).*

> *2. Identify the capability of the WA ICT industry, including research and development.*

> *3. Identify market imperfections hindering the development of the WA ICT industry.*

> *4. Identify the opportunities available to the WA ICT industry.*[247]

The purpose of the audit was to:

- systematically assess the issues facing the local ICT industry;

- develop a strategy and vision targeting market imperfections; and

- facilitate future industry growth as the next stage of DoIR's relationship with industry.

In evidence provided in August, DoIR advised the survey component of the project was to be completed by early December, with the final report to be released early in 2007.[248] In May 2007 DoIR advised that the audit had been completed and the draft report prepared, and that 'some very clear priorities have come out of the audit for our attention and, therefore, for the government's attention'.[249] These priority interest areas for the ICT industry include:

- addressing issues such as labour costs and skills and housing shortages created by the impact of the current economic boom;

- increasing export activity and access to international supply chains;

- state government provided common use infrastructure such as incubator units;

---

[246]   Submission No. 8 from Department of Industry and Resources, August 2006, p3.

[247]   ibid.

[248]   Mr Paul Gale, Senior Project Manager, Department of Industry and Resources, *Transcript of Evidence,* 23 August 2006, pp2-3.

[249]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p2.

- government purchasing and contract management;

- state government assistance to access federal funding;

- state government promotion of the ICT industry as an enabler of efficiency and productivity for other businesses; and

- increased involvement in the SKA project[250]

However, at the time of this report, the findings had not yet been presented to the Minister for consideration or to industry for ratification.[251] DoIR anticipate conducting 'an industry seminar in about July'.[252]

(xv)   *Innovation to Market (ITM)*

Innovation to Market (ITM) is a Small Business Development Corporation (SBDC) programme developed to replace the Business Innovation Development Scheme (BIDS). It was designed to help small businesses and individuals plan the commercialisation of an innovation and overcome impediments to the commercialisation process. ITM provides assistance in:

- *identifying the need in the market;*

- *setting goals, assessing risks and developing a plan for achieving your goals;*

- *costing the development and commercialisation process;*

- *protecting the intellectual property developed and maintaining a competitive advantage; and*

- *having a commercialisation strategy.*[253]

ITM is a three-stage programme, with eligible participants being able to access funding at stages two and three. Each stage of the programme consists of a questionnaire. Stage one asks applicants to think about their current stage in the commercialisation process; stage two addresses issues concerning the applicant's desired outcomes; and stage three asks applicants to identify barriers to commercialisation. At each stage eligible participants are offered specialised consultancy services to undertake a general evaluation of the innovation's potential (stage one), conduct an evaluation of the innovation's commercial viability (stage two) and assist with commercialisation issues such as intellectual property and marketing. When participants near the end of stage three they are eligible to be partially reimbursed for their costs.[254] The Western

---

[250]   ibid., pp2-4.

[251]   ibid., p2.

[252]   ibid., p4.

[253]   Small Business Development Corporation, *Innovation to Market*, 2007. Available on: http://www.sbdc.com. Au/drilldown/drilldown.asp?refid=4.21. Accessed on 1 February 2007.

[254]   ibid.

Australian Budget 2006-07 shows the estimated actual value of ITM grants for 2005-06 to be $60,000, up $30,000 from 2004-05. Forward estimates for 2007-08, 2008-09 and 2009-10 are $60,000 per annum.[255] SBDC report that in the 2005-06 financial year $22,000 in assistance was provided to 13 clients for commercialising innovations.[256]

Finding 10

The Western Australian Government has an extensive range of programmes and initiatives in place to assist the development of ICT technology, ranging from substantial common user infrastructure through to direct commercial grants to ICT companies.

---

[255]   Department of Treasury and Finance, *Western Australian Budget 2006-07. Small Business Development Corporation*, 2006. Available at: http://www.dtf.wa.gov.au/cms/bud_content.asp?ID=1514#Small_Business. Accessed in 1 February 2007.

[256]   Small Business Development Corporation, *Small Business Services*, 2006. Available at: http://www.sbdc. com.au/publications/pubz03/2006/sections/06_SBS.pdf. Accessed on 1 February 2007.

CHAPTER 3   THE NATURE OF ASSISTANCE AVAILABLE TO BUSINESSES TO MARKET ICT

As a complement to government support for Information Communications Technology (ICT) industry development, there is also a mutual benefit for government to provide marketing support for ICT businesses.

Once a new technology has been commercialised, suitable markets need to be found and exploited. Traditionally, the Western Australian Government has assisted in marketing primary products-based industries. The ICT sector is the same proportion of the Western Australian economy as the Agriculture, Forestry and Fisheries industries combined, so it is a logical progression for the Western Australian Government to support the ICT industry, particularly given its important role as an enabler for so many other industries.

In Western Australia ICT imports outweigh ICT exports. This deficit is also reflected at the national level. Many ICT businesses that are currently exporting or wish to develop export markets fall into the category of Small/Medium Enterprise (SME). These companies do not have sufficient resources to allow them to access further interstate and overseas trade opportunities. The Western Australian Government is aware of this impediment to ICT trade development and has developed various programmes and initiatives that provide platforms that would otherwise not be available to assist business in their trade endeavours.

3.1   Federal Government Initiatives

Australia's strengths in 'industry sectors such as information and communications technologies (ICT) and biotechnology are not as well known' as those in the mining and agricultural sectors in which the country has a competitive advantage.[257] The ICT sector, therefore, requires 'strong promotion and attraction efforts'.[258] *Global Returns*[259] identifies the ICT sector as a priority for both investment promotion and investment attraction. This report also advises that a key element of the federal government's investment plan is the 'development of a national investment brand to ensure influential and consistent messages about Australia's attractiveness as an investment destination [were …] reinforced in the marketplace.'[260]

ICT, along with biotechnology and nanotechnology, was flagged as a priority area to be marketed via an industry-specific plan under a 'Technology Australia' brand.[261] The primary strategy here

---

[257]   Invest Australia, *Global Returns: The National Strategic Framework for Attracting Foreign Direct Investment, Commonwealth of Australia*, Commonwealth of Australia, Canberra, 2002, p4.

[258]   ibid., p4.

[259]   ibid., pp4-5.

[260]   ibid., pp4-5.

[261]   ibid., p7.

was 'targeted chief executive officer-level contact in key international markets, including through private sector involvement and advocacy by Australian expatriate groups'.[262]   Other strategies proposed included the publication and dissemination of a range of promotional materials, an integrated communication strategy and the redevelopment of Invest Australia's website.   These strategies were suggested with the aim of developing an overseas network with the express intention of generating investment leads.

Alongside this strategy for attracting foreign direct investment in the Australian ICT industry, there are a number of federal government initiatives, including grants and funding schemes that are available to help firms involved in the ICT industry to market and export their goods and services. Following is a brief summary of initiatives and programmes available.

(i)   The Australian Trade Commission (Austrade)

The Australian Trade Commission (Austrade) is a statutory agency within the Australian Government's Foreign Affairs and Trade portfolio. Austrade's remit is to assist Australian firms in developing export business for their products and services by helping them select appropriate export markets and marketing strategies. Advice is also provided on overseas investment and joint venture opportunities.[263]   In his June 2006 'Statement of Expectations'[264] the Minister for Trade, the Hon. Mark Vaile MP, advised that one of his expectations of Austrade was that it would 'direct[ing] its resources and services to:

- *help Australian businesses succeed in exporting and in international business*

- *encourage more Australian businesses into exporting*

- *facilitate an expansion of Australian exports*

- *assist in inculcating an export culture in Australian business and the Australian community*

- *build effective links and networks with and among Australian businesses*

- *advise Australian businesses of the risks and obligations of doing business internationally'.*

In doing so, particular attention is to be given to the following:

- *supporting small to medium-sized businesses,*

---

[262]   ibid., p7.

[263]   Austrade, *What is Austrade?* and *Austrade Services*, nd. Available at: http://www.austrade.gov.au. Accessed on 29 January 2007.

[264]   Hon. Mark Vaile MP, *'Statement of Expectations' for the Australian Trade Commission*, 2006. Available at: http://www.austrade.gov.au/AboutAustrade1351/default.aspx. Accessed on 29 January 2007. The Minister's statement outlines 15 expectations in total.

- *assisting new and irregular exporters, and*

- *encouraging exporters to remain committed to pursuing opportunities in overseas markets.*[265]

Austrade list their services to Australian companies as follows:

- *practical export information and advice*

- *identification of overseas opportunities*

- *on-the-ground exporting support overseas and in Australia*

- *a comprehensive trade exhibition program*

- *services to identify potential overseas business partners and to research and access high potential markets for Australian companies*

- *strategic export planning and network formation services.*[266]

General information provided via Austrade's website or an export advisor is free of charge. Specifically tailored advice is also provided based on an hourly rate and quoted in advance. There are 18 Austrade offices in Australia, and Austrade is represented in over 140 locations in more than 60 countries.[267]

(ii)   New Exporter Development Program (NEDP)

The New Exporter Development Program (NEDP) targets SMEs that have either not exported before or have limited export experience. NEDP consists in a range of services such as providing advice and information on how to begin exporting, export coaching, and 'on the ground' assistance in foreign markets.[268] NEDP support is delivered via TradeStart and its partner organisations, both domestic and overseas. Eligible businesses work with an export adviser who helps them, first, assess their export capability (by examining export capability and export readiness, identifying key markets, and providing financial and management advice) and, second, prepare for their selected market (by advising on marketing plans and strategies, giving feedback on promotional materials, providing information on economic conditions and commercial practices in selected markets, and evaluating product and/or service suitability for target markets).

---

[265]   ibid.

[266]   Austrade, *Austrade Services*, nd.   Available at: http://www.austrade.gov.au/corporate/layout/0,,0_S1-_CORPXID005-2_-3_-4_-5_-6_-7_,00.html. Accessed on 29 January 2007.

[267]   Austrade, *What is Austrade?* nd. Available at: http://www.austrade.gov.au. Accessed on 29 January 2007.

[268]   Austrade, *For Australian Exporters - Export Assistance, Grants, and Help - New Exporter Development Program (NEDP)* and *Tradestart*, nd. Available at: http://www.austrade.gov.au. Accessed on 23 Janaury 2007.

NEDP also provides up to 20 hours free, individually tailored in-market services.[269] Austrade advised the Australian National Audit Office (ANAO) that a survey revealed that 72% of former NEDP clients went on to make further export sales.[270]

(iii)   TradeStart

TradeStart in its current form was launched with the 2002-03 budget announcement of $21.5 million funding over four years.[271] Commencing in July 2002, TradeStart is part of Austrade's NEDP domestic network and consists of 'a national network of export assistance offices, [and] partnerships between Austrade and a range of local private and public sector organisations throughout Australia'.[272] These include partners drawn from state governments, industry associations, local governments and regional development bodies. There are approximately 60 TradeStart offices in rural and regional Australia.[273] As part of NEDP, TradeStart principally targets SMEs in regional and outer metropolitan areas. TradeStart services are delivered by export advisers employed via arrangements between Austrade and service providers or 'allies'.[274]

ANAO's 2005/2006 TradeStart audit report finds that in targeting companies export advisers generally used 'well-considered and innovative' approaches that were 'adapted to local conditions'.[275] Export advisers travel extensively and their mobility, particularly when combined with their access to local networks, allows them to work with potential clients in locations remote from TradeStart's offices.

With regards to TradeStart's performance, ANAO reported that in an Austrade survey for 2003-04, 82% of TradeStart clients rated their 'satisfaction with service as good or better'.[276] ANAO also found that TradeStart was 'quite successful in achieving exports by the target SMEs. The rate at which clients converted to exporters in 2003-04 equates to 48% of the number recruited that

---

[269]   Austrade, *For Australian Exporters - Export Assistance, grants, and help - TradeStart*, nd. Available at: http://www.austrade.gov.au. Accessed on 23 January 2007.

[270]   Australian National Audit Office, *Provision of Export Assistance to Rural and Regional Australia through the TradeStart Program. 2005/2006 Audit Report*, 2006, p7. Available online at: http://www.anao.gov.au. Accessed on 29 January 2007.

[271]   ibid., p2.

[272]   Austrade, *For Australian Exporters - Export Assistance, Grants, and Help - TradeStart*, nd. Available at: http://www.austrade.gov.au. Accessed on 23 January 2007.

[273]   Austrade's website advises there are 54 TradeStart offices including 8 Export Hubs. The July 2006 'EMDG "In Brief'' brochure states there are 60 TradeStart offices in rural and regional Australia.

[274]   Australian National Audit Office, *Provision of Export Assistance to Rural and Regional Australia through the TradeStart Program, 2005/2006 Audit Report*, 2006, p2. Available online at: http://www.anao.gov.au. Accessed on 29 January 2007.

[275]   ibid., p5.

[276]   ibid., p7.

year for rural and regional Australia'.[277] The rate for 2004-05 was 41%, and ANAO advise that these rates 'compare favourably' with whole-of-programme rates.

As TradeStart is specifically aimed at SMEs it is not surprising that half of the 2003-04 export sales were for less than $20,000. Interestingly, the average programme cost for each export sale is also $20,000, a high cost that ANAO sees as reflecting the resource intensive TradeStart model itself and the nature of its targeted client base.[278] ANAO advised that many of the TradeStart clients interviewed during the course of their audit believed 'that they would not have achieved an export sale without the assistance of Austrade through the TradeStart program' and suggests this indicates the 'considerable impact' of TradeStart in rural and regional Australia.[279]

The Australian Electrical and Electronic Manufacturers' Association (AEEMA) submitted that with regards to existing mechanisms in place to assist export:

> *the National TradeStart Allies program (e.g. AEEMA/Austrade TradeStart Program) is well-established and provides the initial 'catchment' for a large number of new exporters in Australia.[280]*

(iv) Export Markets Development Grant Scheme (EMDG)

The Export Markets Development Grant Scheme (EMDG) was established in 1974 and is administered by Austrade and is the federal government's main financial assistance programme for businesses who are currently exporting or who wish to develop their export potential. The programme's aim is to help SMEs become sustainable exporters by providing assistance through partially reimbursing their eligible export promotion expenses. Under EMDG, eligible firms can receive up to 7 grants of up to $150,000 per year. While the grants are non-competitive, payment is subject to funds available under the scheme. The maximum payable to a group of related companies is $250,000 per annum. Businesses receive 50 percent of their eligible export promotion expenditure over the $15,000 threshold, that is, 50% of (total eligible expenses less $15,000). Costs incurred for export promotion to New Zealand are excluded from EMDG.[281] Eligibility criteria include: an annual income of not more than $30 million in the grant year; eligible promotion activity expenditure of at least $15,000 in the grant year; ownership of the

---

[277]   ibid., p7.

[278]   ibid., p7.

[279]   ibid., p7

[280]   Submission No. 12 from Australian Electrical and Electronic Manufacturers' Association Limited, September 2006, p10.

[281]   Austrade, *Export Market Development Grants 2006-07 grant year - In Brief*, July 2006, p2. Available at: http://www.austrade.gov.au/EMDG-Update/default.aspx. Accessed on 23 January 2007.

product being promoted (with some exceptions applying); promoted for export a product or service that is substantially of Australian origin.[282]

A total of 3277 of grants value at $123.9 million were provided under this scheme to Australian businesses in 2004-05.[283]   A Centre for International Economics survey revealed that EMDG 'induces export promotion, boosts exports, improves the sustainability of small and medium enterprises (SMEs), and has a positive impact on export culture. The impact of the scheme was shown to be greatest in the presence of finance constraints and smaller firm size'.[284] In its 2005 review of EMDG Austrade found that as well as 'further developing an export culture in Australia' and generating additional exports, the programme effectively increased the number of SMEs that developed into new exporters and/or achieved sustainability in export markets.[285]

The review identified a number of ways in which EMDG might be improved and, subsequent to this, a number of changes to EMDG were announced in January 2006 by the Minister for Trade, the Hon. Mark Vaile MP. Primary amongst these was a recommendation that EMDG continue beyond the 2005-06 grant year. Funding was allocated for a further five years until the end of 2010-11. Other changes recommended in the review and subsequently adopted in the *EMDG Legislation Amendment Act 2006*(Cwlth) include, but are not limited to:

- increasing the overseas visit allowance to $300 per day, an increase of $100 per day;

- flexibility, in strictly limited and defined circumstances, in the 'principal status' requirement;

- modifying the 'Australian origin' rules; separating and capping the claimable expense categories for overseas representatives ($200,000) and marketing consultants ($50,000) per claim; and

- removing the export performance test from the EMDG scheme.[286]

---

[282]   Austrade, *Export Market Development Grants 2006-07 grant year - In Brief*, July 2006, p2. Available at: http://www.austrade.gov.au/EMDG-Update/default.aspx. Accessed on 23 January 2007; Austrade, *Review of the Export Market Development Grants Scheme 2005, Summary,* p3. Available at: http://www.austrade. gov.au/exportgrants. Accessed 23 January 2007.

[283]   House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, Commonwealth of Australia, Canberra, 2006, p230; Austrade, *For Australian Exporters - Export Assistance, Grants, and Help - Export Market Development Grants (EMDG) Scheme - overview*, nd. Available at: http://www.austrade.gov.au.   Accessed on 23 January 2007; Parliament of Australia, Parliamentary Library, Bills Digest no. 124 2005-06. Export Market Development Grants Legislation Amendment Bill 2006.   Available at: http://www.aph.gov.au/library/pubs/BD/2005-06/06bd124htm. Accessed on 23 January 2007.

[284]   Austrade, *Review of the Export Market Development Grants Scheme 2005, Summary,* p4. Available at: http://www.austrade.gov.au/exportgrants. Accessed 23 January 2007.

[285]   ibid., p5.

[286]   Austrade, *For Australian Exporters - Export Assistance, Grants, and Help - Changes to the EMDG scheme*, nd. Available at: http://www.austrade.gov.au. Accessed on 23 January 2007.

Because the EMDG budget is now capped at $150 million per annum until 2005-06, if the demand for grant funding exceeds this budget figure, grant payments to eligible applicants are reduced. This was the situation in the 2002/03 round when insufficient funds meant that 900 successful applicants had their grants reduced by approximately 25% of their entitlement.[287] The Australian Chamber of Commerce and Industry (ACCI) expressed its great concern regarding this shortfall in funding and what it saw as the 'likely run-down' of the scheme.[288] The scheme review revealed that this means that businesses cannot be sure how much they will receive and this, in turn, reduces the incentive to spend on export marketing. The review suggested that EMDG's effectiveness could be improved by:

- *indexing the scheme's budget to the consumer price index [and]*

- *allowing any program funds not spent in years of low-grant demand to be carried forward over the life of the program.*[289]

The review also found that application, audit and payment processes could be streamlined within appropriate accountability requirements. It found that 'Austrade should step up its efforts to assist applicants to lodge timely and accurate applications which would lead to quicker and more certain grant payments'.[290]

The ACCI's May 2003 review of the scheme acknowledged that:

> *the Export Market Development Grants Scheme (EMDGS) is an integral part of the export promotion strategy of many Australian exporters, especially smaller to medium sized exporters.*[291]

However, according to the ACCI, the real value of the programme:

> *has fallen by 16 per cent over the past six years, and is likely to fall by some 27 percent by 2005/06 unless it is indexed for inflation (not allowing for any new program funding).*[292]

Using official inflation figures (consumer price index measure) for 2002-03 and an anticipated 3% figure out to 2005/06, the ACCI suggested that:

---

[287]   Parliament of Australia, Parliamentary Library, Bills Digest no. 124 2005-06. Export Market Development Grants Legislation Amendment Bill 2006.   Available at: http://www.aph.gov.au/library/pubs/BD/200506/06bd124htm. Accessed on 23 January 2007.

[288]   Australian Chamber of Commerce and Industry, 'Export Market Development Grants Scheme', ACCI Review No. 99 - May, 2003.

[289]   Austrade, *Review of the Export Market Development Grants Scheme 2005, Summary*, p10. Available at: http://www.austrade.gov.au/exportgrants. Accessed 23 January 2007.

[290]   ibid.

[291]   Australian Chamber of Commerce and Industry, 'Export Market Development Grants Scheme', Review No. 99, May 2003, p1.

[292]   ibid., p1.

the net present value of the EMDGS Program in 2002/03 will be $A126 million in 1996/97 dollar terms (a loss of real value of around $A24 million, or just over 16 per cent), a figure which will move to just under $A110 million in 2005/06 (the end of the current program period; a fall of more than $A40 million, or 27%.[293]

The ACCI estimated the failure to index the fund for inflation would result in a cumulative shortfall of just under $A66 million in 2002-03, or approximately 44% of the nominal value of the EMDG scheme for that year.[294] In April 2006 the Australian Industry Group (AiG) voiced its concerns about the continued erosion in funding for the EMDG Scheme. It argued that the erosion of the scheme had been significant and there had been a 'substantial narrowing of its eligibility criteria, to the point where the Scheme's effectiveness is now seriously threatened'.[295]

In the 2005-06 Budget the Australian Government announced an additional $30 million had been allocated to the EMDG, spread over two financial years. Funding for 2005-06 was increased by $20 million taking the total EMDG budget to $170.4 million. The remaining $10 million was allocated to the existing 2006-07 budget, taking it to $160.4 million.[296] Of this total in 2006-07 appropriation revenue, Austrade's Agency Budget Statements advise that 'grant expenditure relating to the EMDG scheme is budgeted at $152.4 million, … the balance of $8.0 million in expenditure related to administrative costs of running the EMDG scheme on behalf of the Government'.[297]

This increase in funding and other changes to the scheme were certainly welcomed by industry. AiG advised that the Government had made:

---

[293]   ibid., p3.

[294]   ibid., p4.

[295]   Australian Industry Group, *Manufacturing Futures: Achieving Global Fitness*, April 2006, p62. Available at: http://www.aigroup.asn.au/aigroup/pdf/publications/reports/general_reports/Manufacturing_futures_full. pdf. Accessed on 23 January 2007.

[296]   Department of Transport and Regional Services, Ministerial Statements, *Trade, Business, Tourism and Investment*, 2005, p2. Available at: http://www.budget.gov.au/2005-06/ministerial/html/dotars-18.htm. Accessed on 29 March 2007; Austrade, *EMDG fact sheet: Agribusiness*, Australian Trade Commission, 2006, p1; Austrade, *Austrade Portfolio Budget Statement 2006-2007*. Available at: http://www.dfat.gov.au/ dept/budget/2006_2007_pbs/pbs_2006_2007_austrade.pdf. Accessed on 17 January 2007; Austrade, *Austrade Portfolio Budget Statement 2005-2006*. Available at: http://www.dfat.gov.au/dept/budget/2005_ 2006_pbs/pbs_2005_2006_austrade.pdf. Accessed on 17 January 2007.

[297]   Austrade, *Austrade Portfolio Budget Statement 2006-2007*. Available at: http://www.dfat.gov.au/dept/ budget/2005_2006_pbs/pbs_2005_2006_austrade.pdf. Accessed on 17 January 2007.

some welcome changes to the operation of the Scheme, notably increasing the market visit allowance, widening the eligibility claims relating to the overseas use of intellectual property and removing the export performance test, which will provide more incentive for SMEs to explore potential export markets.[298]

However, AiG argue that:

these initiatives fall substantially short of addressing the twin key issues of ensuring that the Scheme is accessible to a critical range of Australian exporters and consequently providing increased funding to support their activities.[299]

Given ACCI's predicted shortfall in funding, this addition of $30 million falls well below the $40 million forecast as necessary to maintain the fund.

The effects of this degradation of funding are twofold. First, the efforts of Australian exporters to develop overseas markets are undermined and, second, the confidence many SME exporters had in the scheme has been lost.[300] The AiG argue that the additional $30 million over three years 'does not address the fundamental problems posed by the narrowing of the eligibility to claim reimbursement'.[301] The Group also suggests that uncertainty over whether or not full payment will be received, particularly when combined with the long time lag between applying for and receiving funds, 'undermine the efficacy of the Scheme'.[302]

AEEMA submitted that:

Export development assistance is crucial if manufacturers are to exploit the many opportunities provided in emerging economies. The key assistance program for export development is the federal scheme, EMDG, but industry is becoming increasingly concerned that this program is being eroded through onerous eligibility criteria, complex application processes and reduced funding. SMEs are once again discouraged from trying to access the program – those who do have to use consultants because of the complex processes, and this adds to their business costs.[303]

---

[298] Australian Industry Group, *Manufacturing Futures: Achieving Global Fitness*, April 2006, p62. Available at: http://www.aigroup.asn.au/aigroup/pdf/publications/reports/general_reports/Manufacturing_futures_full.pdf. Accessed on 23 January 2007.

[299] ibid., p63.

[300] Australian Chamber of Commerce and Industry, 'Export Market Development Grants Scheme', Review No. 99, May 2003, p1.

[301] Australian Industry Group, *Manufacturing Futures: Achieving Global Fitness*, April 2006, p63. Available at: http://www.aigroup.asn.au/aigroup/pdf/publications/reports/general_reports/Manufacturing_futures_full.pdf. Accessed on 23 January 2007.

[302] ibid.

[303] Submission No. 12 from Australian Electrical and Electronic Manufacturers' Association Limited, September 2006, p7.

For Western Australian companies, the limitations of the EMDG issue of export concerns not only export to overseas markets, but export to other Australian states.

> *The limitation of the EMDG is that it does not provide assistance for companies marketing to New Zealand and it does not provide assistance in accessing Australia Eastern States. Whilst these limitations may seem obvious for an "export" program, they represent significant limitations for Western Australian companies.*[304]

(v) *Export Finance and Insurance Corporation (EFIC)*

Established in 1991, the Export Finance and Insurance Corporation (EFIC) is Australia's Export Credit Agency and is a statutory corporation owned in total by the Commonwealth of Australia. Under the *Export Finance and Insurance Corporation Act 1991*(Cwlth), the four functions allotted to EFIC are to:

- *to facilitate and encourage Australian export trade by providing insurance and financial services and products to persons involved directly or indirectly in such trade;*

- *to encourage banks and other financial institutions in Australia to finance or assist in financing exports;*

- *to manage the Australian Government's aid-supported mixed credit program (a facility which has now been discontinued, although loans are still outstanding under it); and*

- *to provide information and advice regarding insurance and financial arrangements to support Australian exports.*[305]

EFIC was established to provide clients with 'internationally competitive insurance and finance services' such as structured finance and insurance solutions, risk management services and advice, and operates in the areas of market not serviced by the private insurance and finance sector. EFIC is a self-funding entity and its obligations are guaranteed by the Australian Government.[306] EFIC lists its objectives as including:

- *support more exports, including from small to medium sized companies;*

- *generate a positive net income to provide sufficient capital for future growth;*

---

[304] Submission No. 4, Closed Submission.

[305] Export Finance and Insurance Corporation, *Governance - Overview of EFIC's Role*, nd. Available at: http://www.efic.gov.au. Accessed on 23 January 2007.

[306] Export Finance and Insurance Corporation, *Governance - Overview of EFIC's Role*, nd. Available at: http://www.efic.gov.au. Accessed on 23 January 2007; Export Finance and Insurance Corporation, *Mission and Objectives*, nd. Available at: http://www.efic.gov.au. Accessed on 23 January 2007.

- *provide quality services to exporters at a sustainable cost.*[307]

EFIC services are subject to exporters meeting certain product specific eligibility requirements as well as criteria concerning Australian content, Australian benefit, and environmental protection and impact.[308]

3.2   Western Australian Government Initiatives

The Western Australian Government has recognised that while currently the resources sector is central to the State's economic strength, sustainable prosperity will only be assured through the growth of innovative sectors including the ICT industries.

An important factor in growing the sector is appropriate marketing opportunities. One way in which government can support the ICT sector is through providing platforms to assist the export of local ICT products. To this end, the Western Australian government promotes the state's ICT companies through sponsorship, networking opportunities and direct assistance. Initiatives have included sponsorship of company attendance at the Australia New Zealand Technology Network Showcase Conference, Silicon Valley, and facilitation of information briefings and workshops for the ICT industry.[309]

The Western Australian Government also participates in federal initiatives that support the marketing of Australian ICT goods and services. For example, the Department of Industry and Resources (DoIR) has a role in the Committee for Marketing ICT for Australia (CoMICTA), a national committee comprised of Commonwealth, State and Territory governments, industry members and research organisations. CoMICTA's role is to coordinate Australia's trade and investment attraction strategies and its approach to marketing the Australian ICT industry as both an investment location and a supplier of ICT products and services. In addition to this, the Government also provides a suite of programmes to assist the marketing of local ICT goods and services.

The following provides a brief summary of various Western Australian marketing programmes and activities that have come to the Committee's attention.

---

[307]   Export Finance and Insurance Corporation, *Mission and Objectives*, nd.   Available at: http://www.efic.gov.au. Accessed on 23 January 2007.

[308]   Export Finance and Insurance Corporation, *Criteria and Eligibility*, nd.   Available at: http://www.efic.gov.au. Accessed on 23 January 2007.

[309]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Australia, Perth, 2004, p8; *Department of Industry and Resources, Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, pp11-12.

(a)   Small Business Development Corporation (SBDC) Programmes and Initiatives

(i)   *TradeStart*

In 2003 the Small Business Development Corporation (SBDC) and DoIR commenced joint delivery of Austrade services to SMEs in the Perth metropolitan under the TradeStart programme.[310] From October 2006 SBDC became the sole provider of these TradeStart services in the Perth metropolitan area.

(ii)   *Export Accelerator*

Export Accelerator is a SBDC programme available only to SBDC's approved TradeStart clients to assist them prepare to export. Assistance up to $2,500 plus GST is given in the areas of intellectual property (IP) registration, language translation, export training and marketing materials.[311]

(iii)   *Small Business Exporters Network (SBEN)*

Established by SBDC in 2004/05, the Small Business Exporters Network (SBEN) aims to assist first time and potential exporters develop export markets and sustain them effectively. The SBEN has a central exporters' portal to allow small businesses to access information and services, including an on-line forum to allow members to share information.[312]

(b)   Department of Industry and Resources Programmes and Initiatives

(i)   *Marketing Programmes and Services*

(1)   *TradeStart*

While DoIR were not successful in their bid to deliver TradeStart services in metropolitan Perth they have won a four year contract with TradeStart 'for the support of export of what is generically known as the mining support services industry'.[313] DoIR argued that ICT is a very important part of the broad category of mining support services.[314]

---

[310]   Small Business Development Corporation, *Small Business Export Support at Hand*, 3 February 2003. Available at: http://www.sbdc.com.au/ drilldown/news.asp?refid=6.3&newsid=79. Accessed on 25 January 2007.

[311]   Small Business Development Corporation, *Small Business Services*, nd. Available at: http://www.sbdc. com.au/publications/pubz03/2006/sections/06_SBS.pdf. Accessed on 1 February 2007.

[312]   ibid.

[313]   Mr Stephen Grocott, Director/General Manager*,* Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p13.

[314]   ibid., p14.

(2)   *ICT Trade Missions to Targeted New Markets*

In January 2005 an allocation of $100,000 was made by the then Minister for State Development, the Hon. Clive Brown, for ICT companies to target new markets. A DoIR workshop with ICT industry organisations and companies was then held and from this, markets were identified in China, Singapore, Malaysia, Dubai and the United States. Targeted missions were sent to each identified country.

China - Six companies, i-Park, Omnistar, Secure Systems, NGIS, Brookstone and Abridge Solutions visited Hangzhou and Shanghai with the aim of learning about local market conditions and creating responsive corporate strategies. DoIR indicate that all companies met their mission objectives.[315]

Singapore/Malaysia - Abridge Solutions, Barrett Communications, Free Cargo, Omnitronics, Q-Mac Electronics and Webspy comprised the companies involved in the trade mission to Singapore and Malaysia. Of these, Q-Mac Electronics, FreeCargo, Abridge Solutions and Webspy all negotiated contracts as a result of their involvement with the mission.[316]

Dubai - Abridge Solutions, Brookstone Technologies, Embedded Technologies, I-Park, Info Vision, Jumbo Vision and WA GO Online accompanied the mission. I-Park and Embedded Technologies were successful in obtaining contracts as a result of participating in the trade mission.[317]

United States/ANZATech 2005 - A total of 11 companies, Guardian Technologies, VibraQ Corporation Ltd., Secure Systems Ltd., Prime Key, Optimiser Digital Management, Imagemation, Embedded Technologies, Brookstone Technologies and Palmteq went with the trade mission to the United States and to attend the ANZATech conference. As a result of attending the conference, Palmteq has now established an office in San Francisco that employs 16 people and has a turnover of US$2.5 million.[318]

In October 2006 DoIR supervised a mission of four ICT companies to the United Kingdom to attend the Intelligent Transport Systems Exhibition. DoIR 'subsidised the cost of stand space and business matching and subsidised airfares/accommodation for the companies, to the value of $1,500 per company, under the Market Access Program'.[319]

---

[315]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p2.

[316]   ibid., p2.

[317]   ibid., p2.

[318]   ibid., p2.

[319]   ibid., p8.

(3)   Export Clinics

DoIR advised that 'boot-camp' training was provided to ICT companies via a workshop conducted in October 2005. This training aimed to help companies prepare for their participation in the 2005 ANZATech Showcase and Conference in California and, thus, increase their potential to export to the United States.[320]   While DoIR planned an August 2006 workshop for new ICT exporters and another for existing exporters in October 2006 a review of DoIR's involvement with ANZATech revealed that 'it was not the best vehicle for companies trying to enter the US market'.[321] This determination, combined with budgetary constraints that precluded further DoIR sponsorship of ANZATech, the planned boot-camps were not conducted.[322]

(4)   International Trade and Investment Offices

Through DoIR, senior trade and investment specialists are available in the State's network of International Trade and Investment Offices. According to DoIR, these specialists:

- *Identify positive new export markets and joint ventures for WA goods and services*

- *Match local business with international opportunities*

- *Attract new business and investment to WA*

- *Provide information vital to export or investment success*

- *Provide direct access to expert first-hand knowledge of your industry and export destination*

- *Offer assistance with the export process and the establishment of business bases overseas*

- *Offer advice on political, economic and cultural conditions in target regions*

- *Assist with missions, exhibitions and company visits to and from WA, which promote trade*

- *Assist WA companies in promoting their products and services through various networks and linkages*

---

[320]   ibid., p3.

[321]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p3; Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p15; Submission No. 8 from Department of Industry and Resources, August 2006, p10.

[322]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p3.

- *Introduce companies wishing to source overseas products, services and technologies to competent WA suppliers*

- *Provide information on WA companies, industries and the general business climate of the State*

- *Provide Government-to-Government liaison*

- *Assist new exporters to get involved in international trade through TradeStart and other programs.*[323]

International Trade and Investment Office regional desks are divided into the following priority markets:

- *China, Taiwan and Hong Kong*

- *South/South East Asia — including Singapore, Indonesia, Malaysia, Thailand and Brunei*

- *Japan and South Korea*

- *The Middle East, Africa and India*

- *USA and Canada*

- *Europe*[324]

DoIR advise that as a result of Western Australian Trade Offices in China, Malaysia and Dubai helping to identify opportunities in Hangzhou, Shanghai, Dubai, Singapore and Malaysia, 21 ICT companies participated in 2005 trade delegations to these markets.[325]

(5)   ICT Export Directory (ICT Industry Capability Directory)

The Western Australian ICT Export Directory was developed in 2005 and listed details of more than 300 Western Australian ICT companies, their products and services, current export markets and targeted markets. The database was distributed internationally via DoIR's networks.[326]

---

[323]   Department of Industry and Resources, *Western Australia's International Trade and Investment Offices*, 2006, p4.   Available at: http://www.DepartmentofIndustryandResources.wa.gov.au/documents/exportand trade/international_offices.pdf. Accessed on 25 January 2007.

[324]   ibid., p3.

[325]   Submission No. 8 from Department of Industry and Resources, August 2006, p10.

[326]   Department of Industry and Resources, *Information and Communications Technology (ICT) Western Australia. Export Directory*, November 2005. Available at: http://www.DepartmentofIndustryandResources. wa.gov.au/documents/exportandtrade/ICT_Export_Directory_2005.pdf. Accessed on 25 January 2007.

In the latter half of 2006 a consultation process was embarked upon between the Western Australian Government Overseas Network (WAGON), the ICT Industry Collaboration Centre (ICT ICC) and the Industry Capability Network of WA (ICNWA).[327]   As a result of this consultation, DoIR concluded that the ICT Export Directory was not adequate and that a more localised document 'highlighting the capabilities of the WA ICT sector would be more useful, for business matching and partner identification'.[328]   As a result, DoIR has developed the ICT Industry Capability Directory. It is intended that the Directory will be launched in July 2007 and is to be sponsored by ICT ICC. Upon completion of the ICT Capability Directory, 'WAGON along with DoIR's Investment Attraction Branch, will use this document to target investment opportunities'.[329]

The DoIR ICT industry audit revealed that the industry is 'fairly fragmented and diverse' and that there is a need for 'comprehensive marketing material both for overseas use through the Western Australian overseas office network and for internal marketing'.[330]   Profiling Western Australian ICT businesses on the ICT Industry Capability Directory is intended to fill this need.[331]   DoIR advise that there will be two capability directories, with one being dedicated to companies interested in participating in the Square Kilometre Array (SKA) project.[332]

One finding of the DoIR ICT industry audit is that the nature of the export market has changed. According to DoIR:

> *it is not much about export markets in the traditional sense of countries. It is about export markets in the sense of our international expertise in this specialised area. I am not saying that we want to export to the UK or the United States; we want to sell to multinationals - targeting companies rather than countries. That is the difference in how to promote export. There is the traditional way of going to trade fairs in a country, but we are now looking at a company, whether it is IBM or CSC or whomever, that has markets already established. You want to become a supplier into those markets and you do not do that through government-to-government anymore; you do it through the multinationals.[333]*

---

[327]   Electronic Mail from Department of Industry and Resources, 10 May 2007, p1.

[328]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p5.

[329]   ibid., p5.

[330]   Ms Daniela Mattheys, ICT and Nanotechnology Industry Development, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p4; Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence*, 16 May 2007, p4.

[331]   Ms Daniela Mattheys, ICT and Nanotechnology Industry Development, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p4.

[332]   Mr Terry Burnage, General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p5.

[333]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence*, 16 May 2007, p3.

(6)   ProjectConnect ICT

Project Connect ICT was launched in September 2006. This initiative is funded by DoIR ($113,000)[334] and operated by the Industry Capability Network of Western Australia (ICNWA), a branch of the WA Chamber of Commerce and Industry. ProjectConnect is a supplier database 'which helps suppliers identify procurement opportunities and provides project buyers with information on supplier capability'.[335]   At present, DoIR and ICNWA are in the process of streamlining the database to ensure that it remains relevant to current procurement activities.

ICNWA consultants are engaged specifically to search for opportunities for Western Australian ICT firms that are registered and advising them of those opportunities.[336] Opportunities that are identified through ProjectConnect can be local, national or international.

In conjunction with ProjectConnect, the WA Information and Communications Technology (ICT) Capability Database Directory was developed to promote local ICT products and services to domestic and international markets. Companies wishing to list on the database are required to complete a questionnaire and to supply their company brochure. This allows the matching of companies with client requests and other market opportunities such as partnering.[337]

(7)   Conduct Forums in Targeted Overseas Markets to Provide Major Procurers with Information on the Capability and Capacity of the Western Australian ICT Industry to Deliver Strategic Solutions.

While in 2004, the Western Australian Government advised that it would 'conduct forums in targeted overseas markets to provide major procurers with information on the capability and capacity of the Western Australian ICT industry to deliver strategic solutions',[338] the *Enabling*

---

[334]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p8.

[335]   ibid., p5.

[336]   Submission No. 8 from Department of Industry and Resources, August 2006, p10; Department of Industry and Resources, *Information Communication and Technology Industry Audit and Project Connect*, nd. Available at: http://www.DepartmentofIndustryand Resources.wa.gov.au/businessandindustry/9DA1A4CA 83E6447096D5074807F8B674.asp. Accessed on 29 March 2007; *ProjectConnect*. Available on: http:// www.projectconnect.com.au. Accessed on 1 February 2007.

[337]   Submission No. 8 from Department of Industry and Resources, August 2006, pp10-11; Department of Industry and Resources, *WA Information and Communications Technology (ICT) Capability Database Directory*, nd.   Available at: http://www.DepartmentofIndustryandResources.wa.gov.au/documents/ businessandindustry/ICT_database_letter_for_web_v2_eicu(3).DOC. Accessed on 12 December 2006.

[338]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Australia, Perth, 2004, p14.

Future Prosperity Progress Report advises that 'this project has not commenced'.[339]   However, since that report DoIR has advised the Committee of the initiative in this regard. First:

> *Outside of arranged market visits or targeted missions which promote ICT capabilities and capacity, the WAGON staff are constantly on the look-out for opportunities to promote WA ICT capabilities.[340]*

Second:

> *DoIR also works closely with Austrade and the Austrade ICT Global Network members are well briefed on the capabilities and capacity of the WA ICT sector.[341]*

Third:

> *During 2002-06 DoIR partnered Austrade in the delivery of the TradeStart New Exporter Development Program and this program assisted ten WA ICT companies receive a commercial outcome in a new market.[342]*

(ii)   Sponsorships and Awards

(1)   Secrets of Australian ICT Innovation Competition

The Secrets of Australian ICT Innovation competition is an annual national competition run by the CoMICTA. DoIR advise that the Secrets competition is well known within the ICT industry and is considered to be a prestigious award.[343]   Winning companies are provided the opportunity to participate in a number of major national ICT industry events that allows them to present their innovation to a global audience.[344]   DoIR have sponsored this competition to the value of $5,000 each year from 2002 to 2006.

Over the first four years of the competition, 35 Western Australian companies were selected as finalists, with 9 winning their respective categories, and 117 companies entered for the 2005 competition. In 2006 the Secrets competition attracted 14 nominations from Western Australia with two going on to win awards in their specific categories. According to DoIR, competition

---

[339]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, 15.

[340]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p5.

[341]   ibid.

[342]   ibid.

[343]   ibid.

[344]   ibid., p1.

winners have been successful in presenting their innovations at events in the USA, UK and Asia Pacific regions.[345]

(2) *Assisting local companies to attend ICT trade fairs*

During 2005, DoIR assisted WA ICT companies to attend:

- CeBIT Australia - Sydney;

- CeBit New York;

- ANZAtech - San Francisco; and

- CommunicAsia - Singapore.

In recognition of ANZATech as the 'premier US event for showcasing Australian and New Zealand technology companies to international investors', DoIR was a major sponsor of the ANZATech showcase in San Francisco in 2004 and 2005, subsidising the attendance of 9 Western Australian ICT companies in 2005.[346]

While DoIR has been a sponsor of CeBIT Australia, 'there was insufficient interest [in participating on a Western Australian stand for CeBIT 2007] to warrant a WA stand and so sponsorship was not required'.[347] DoIR advise that:

> *CeBIT Australia covers the entire spectrum of converging technologies including telecommunications, software, IT services and information technology. The lack of industry interest in participating at CeBIT Sydney 2007 signals to the Department an evolution of and maturity within the industry. Given the resources boom many ICT companies are operating at full capacity thus requiring fewer mechanisms in sourcing of additional business. In addition CeBIT is a generic ICT exhibition and numerous local ICT companies have signals a greater interest in promotional activities to the end user market.*[348]

---

[345]   Department of Industry and Resources, Secrets of IT Innovation Competition, nd. Available at: http://www. DepartmentofIndustryandResources.wa.gov.au/businessandindustry/07AAA49086ED42CABFB1754DC7E D1E93.asp. Accessed on 1 February 2007; Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p15; Submission No. 8 from Department of Industry and Resources, August 2006, p10.

[346]   Submission No. 8 from Department of Industry and Resources, August 2006, p7. Department of Industry and Resources, Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report, 2006, p17.

[347]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p7.

[348]   ibid., p7.

In June 2006 DoIR once again co-ordinated a Western Australian stand at CommunicAsia. On this occasion six Western Australian companies were involved.[349]

DoIR was also major sponsor of the 2007 GO3 Electronic Entertainment Expo and Conference held in Perth. GO3 is 'the southern hemisphere hub for the world's leading electronic entertainment companies'.[350] DoIR provided $40,000 in funding for GO3 and 'coordinated a stand on which eight companies exhibited'.[351]

In 2006 DoIR provided $5,500 in sponsorship funding to the inaugural Digital Interactive Media in Entertainment and Arts Conference (DIMEA). DIMEA is a 'cross-disciplinary conference that will bring together researchers from the areas related to digital interactive media in entertainment and arts'.[352] DoIR argues that the conference not only 'established significant collaboration and identified business opportunities between industry and researchers', it also 'attracts leading researchers to Perth and assists in building local capacity and attracting investment in the area of Digital Media and Entertainment computing in WA'.[353]

(3) Western Australian Information Technology and Telecommunications Awards (WAITTA)

The Western Australian Branch of the Australian Computer Society, Inc. (ACS) has conducted the Western Australian Information Technology and Telecommunications Awards (WAITTA) annually since 1991. The awards aim to 'recognise outstanding performance and contributions by members of the IT&T community in Western Australia'.[354] DoIR is currently a platinum sponsor of WAITTA and provided $7,500 of financial support towards the latest annual awards. In-kind support is also provided by a number of DoIR officers who have volunteered their time and expertise to sit on a number of judging panels.[355] Testimonials from various category winners demonstrate the value of these awards to the local ICT industry:

---

[349]   ibid., p8.

[350]   *GO3 Electronic Entertainment Expo and Conference*, nd. Available at: http://www/go3.com.au. Accessed on 10 May 2005.

[351]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p6.

[352]   Digital Interactive Media in Entertainment and Arts. *DIMEA 2007, 2ⁿᵈ International Conference on Digital Interactive Media in Entertainment and Arts*, nd. Available at: http://www.dimea.org. Accessed on 11 May 2007.

[353]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p8.

[354]   *Western Australian Information Technology and Telecommunications Awards*. Available at: http://www. waitta.asn.au. Accessed on 16 April 2007.

[355]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p1.

In what has been an amazing year for ReadOn, our WAITTA product category award stands out as a highlight. We have little doubt that the award will continue to contribute directly and indirectly to our future growth and success. Since winning the award we have finalised a deal with a major American software manufacturer to distribute ReadOn throughout North America.

Phil Mangano, iTech Consulting – Winner of the 15th WAITTA 2005 Product Award

Winning the WAITTA Award helped us get in the door with potential investors who previously hadn't returned our calls. That's the best outcome any such award could possibly deliver. If your company meets the award criteria, I encourage you to submit your nomination today.

Jim Plamondon, Thumtronics Ltd – Winner of the 15th WAITTA 2005 Innovation Award

Within one month we were contacted by an attendee that promoted us to a client. We are about to embark on a $150,000 project with him that has provided our first serious entrée into the domestic market resource sector.

Mike Dowen, RAWsat Pty Ltd – Winner of the 15th WAITTA 2005 Exporter Award

Being a winner of WAITTA has been positive and provided DLI with a number of positive outcomes from stakeholder/customer benefits to internal faith in commitments to future IT investments.

Craig Mariano, Department of Land Information – Winner of the 15th WAITTA 2005 Online Award.[356]

(iii)   *Marketing Information and Materials*

(1)   *WA Export Allies Group*

Export Allies has been discussed in the federal government initiatives above. The WA Export Allies Group is comprised of representatives from Austrade, DoIR, the Department of Foreign Affairs and Trade, the Department of Agriculture, Tourism Western Australia and the Department of Culture and the Arts. The SBDC advise that during 2005-06 the WA Export Allies Group distributed information on export assistance programmes for Western Australian businesses, including information on trade and market development activities, events and seminars, and available grants and assistance.[357]

---

[356]   *Western Australian Information Technology and Telecommunications Awards.* Available at: http://www. waitta.asn.au. Accessed on 16 April 2007.

[357]   Small Business Development Corporation, *Small Business Services*, nd. Available at: http://www.sbdc.com. au/publications/pubz03/2006/sections/06_SBS.pdf. Accessed on 1 February 2007.

(2)   Marketing Material

DoIR's 2005 promotional booklet, 'Western Australian Information and Communications Technology: Innovation, Quality and Creativity' was distributed at the various trade fairs attended by DoIR and the network of Western Australian Government Trade Offices. DoIR also produced promotional posters for tradeshows such as ANZAtech and CeBIT-Sydney.[358] In 2005 DoIR produced and distributed a promotional CD, 'Western Australia - A Shining Light in ICT'. This disc presented information on investing in Western Australia, the ICT Export Directory and the WA Overseas Office Network.[359]

Finding 11

The Western Australian Government has a wide range of programmes and initiatives in place to assist existing and potential exporters of ICT technology, ranging from smaller grants to assist with things like language translation through to sponsorship of awards and the development of marketing material, as well as larger schemes resulting in targeted trade missions to specific countries and assisting local ICT companies to attend Australian and International trade fairs.

With regards to the overall support provided by government to assist ICT businesses to market their products, AEEMA suggest that current government agency arrangements do not allow market needs to be identified. Nor do these support arrangements allow businesses:

> *to acquire the necessary knowledge to develop strategies (and tactics) to better integrate onshore operations with offshore supply. Current government agency arrangements are not adequately addressing these needs. Specific program funding arrangements need to be established to ensure that the teams have the resources to follow-up on identified opportunities. Whilst FTAs and the like are designed to liberalise trade, the reality is that the Australian manufacturing industry is competing with overseas industries from many nations that provide substantial government funding for market access development.*[360]

AEEMA argue for the need for a national branding strategy:

> *The active support of a targeted and focused international branding and marketing campaign for Australian innovation results in much higher awareness and appreciation of ICT's potential. To be effectively globally integrated, industry needs to be driven by strong strategic policies (agreed industry/government 'game plans'), marketing programs which*

---

[358]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, Perth, 2006, p15.

[359]   Submission No. 8 from Department of Industry and Resources, August 2006, p11.

[360]   Submission No. 12 from Australian Electrical and Electronic Manufacturers' Association Limited, September 2006, p6.

are focused and targeted and a branding strategy which reflects not just our technology, capabilities but our ability to integrate, and to deliver cost-effective solutions to meet market needs.[361]

The National ICT Industry Alliance (NICTIA), established in January 2001, is involved in the development of such a national strategy. One impediment to this, particularly for Western Australian ICT enterprises, is the lack of any link between the Western Australian based ICT ICC and NICTIA.[362]

---

[361]   ibid., p6.

[362]   ibid., p7.

CHAPTER 4 THE EFFECTIVENESS OF SUPPORT GIVEN TO THE LOCAL SECTOR BY THE STATE GOVERNMENT

This Report identifies a range of assistance measures delivered to the Information Communications Technology (ICT) industry by the Western Australian Government. The Committee's terms of reference also include an examination of the effectiveness of state government support given to the local sector. The Committee considers performance evaluation of outputs and outcomes of public assistance to be valuable in that it, first, 'provides a guide to the success, or otherwise, of public support in achieving the objectives sought'[363] and, second, assists in determining whether or not public support could be increased profitably or might be decreased.

However, while an assessment of effectiveness of government support programmes was part of the Inquiry's terms of reference, the Committee has received insufficient information to be able to make such an assessment. Despite the Department of Industry and Resources' (DoIR) evidence concerning its follow-up requirements with grant recipients,[364] the Committee has been unable to access particular information on government funded programmes. Therefore, in its evaluation of the effectiveness of government support, the Committee has focussed its endeavours on how useful or helpful the ICT industry finds government assistance, and what issues and concerns the sector has about seeking and receiving such assistance. This means that the Committee's examination of the effectiveness of government support provided to the ICT industry necessarily takes an industry point of view.

While at first glance the following issues and concerns may appear to be a group of disparate and discrete topics, they are joined by the two common themes revealed through the analysis of evidence to the Inquiry. First, the aspects described here forms a commentary on what the ICT industry understands government to be engaged in to support their industry. Second, a common element of industry experience concerns communication from government, within government and between government and the industry.

4.1 Stages of the Funding and Application Process

The issues and concerns identified by industry participants relate to four main stages of the funding and application process.

- Finding information;

- Applying for funding;

---

[363] Productivity Commission, *Public Support for Science and Innovation*, Draft Research Report, Productivity Commission, Canberra, 2006, p7.3.

[364] Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, pp5 and 11-13.

- Processing of the funding application; and

- Evaluation of the funding programme and feedback to participants.

(a)   Finding Information

With regards to locating information, the Inquiry has revealed that finding information from government was often extremely difficult and time consuming. Part of this difficulty would be number of websites across government agencies and the level of difficulty in navigating those sites. According to the Office of e-Government, recently there was up to 1600 web sites across government agencies. Following rationalisation of web sites across agencies, this number is now down to approximately.[365] To be effective, these sites would require continual maintenance to ensure accuracy of information and reduce the risk of discrepancies of website data between agencies.

Another aspect of the difficulty in locating government information is finding the right person to talk to.   This   is   exemplified   by   the   Australian   Information   Industry Association's (AIIA's) evidence concerning their members' efforts to get funding.

> *One of the things that our members, from the small companies to the big companies, struggle with is that if they are trying to do something creative, get funding to go offshore or build skill positions in their companies, it is difficult for them to find anybody in government who owns programs, explains how to work with programs, explains how to promote programs, get a reference or any of the things that tie to their business. There is never one group that owns all of this stuff. An example is the Department of Industry and Resources. Three ministers potentially look after DOIR and they interact, crossover and do all sorts of things. There is not one single point in DOIR a company can go to and say that it is an ICT company and it is doing X and wants someone to talk to about what it can do. We cannot get that level of detail. On the back of that, we have almost the same thing at a federal level, although a little bit better contained. Heaven forbid if a company wanted federal funding, support or referencing a company, it would spend an enormous amount of time working out whether lines join up. A lot of these companies do not have the time or resources to track down this stuff.[366]*

> *We do not want to spend three weeks trying to track down the person we need to talk to. Eventually we go to talk to that person and, inevitably, they have moved and are now under a different minister and the game has changed. That continually happens here. It is a particular issue with DOIR.[367]*

---

[365]   Ms Jo Bryson, Executive Director, Office of e-Government, *Transcript of Evidence*, 28 February 2007, p3.

[366]   Ms Cheryl Robertson, Strategy Consultant, Australian Information Industry Association, *Transcript of Evidence,* 20 September 2006, p11.

[367]   Ms Cheryl Robertson, Strategy Consultant, Australian Information Industry Association, *Transcript of Evidence,* 20 September 2006, pp11-12.

One result of this lack of clarity is that ICT industry members are not as informed as they need to be about government assistance programmes. As AIIA commented:

> *The reality is that when we were putting this [idea of a website portal] together, from an executive's point of view, none of us was aware of what program or programs were available.*[368]

AIIA's argument concerning the difficulty in finding information is supported by the Committee's experience. In researching for this Inquiry the Committee often found it difficult to locate information from various government and business websites. It was often difficult to navigate the sites and to determine whether or not the information was accurate, current or out of date.

Finding 12

While website technology provides a powerful means of providing information to the community in a way that is easily accessed, there is an inherent risk that unless the sites are maintained the information available may not be accurate and/or may be misleading.

(b) Applying for Funding

Evidence suggests that Small/Medium Enterprises (SMEs) find it difficult to access funding and that one reason for this is the time and other resources that are needed to develop and submit funding applications.

> *Businesses like ours need advice, and help to prepare business plans, industry presentations and funding submissions.*[369]

Competitive programmes offering a relatively low level of funding were felt by those submitting to the Inquiry to be costly to prepare, taking considerable time and effort.

> *We were unhappy with this [I3 Innovation in ICT] program because:*
>
> *a. The level of funding was very low. There is a non-trivial effort to prepare an application. On a reasonable "opportunity cost", the effort involved is hard to justify the potential returns and it is a competitive grant so there is real chance that many applicants will be unsuccessful. […]*

---

[368] Mr Louis Martini, WA Chair, Australian Information Industry Association, *Transcript of Evidence,* 20 September 2006, p12.

[369] Submission No. 2 from Team Technology (WA) Pty Ltd, July 2006, p4.

c. [...] The sum of all effort spent by applicants must be less that the sum of funding provided – if not, the whole grant program has the effect of a net loss to the industry.[370]

BroadbandNet Pty Ltd discussed this in terms of a state grant they were awarded:

for putting infrastructure and wireless communications into the north mid-west area, from Perth up to Mullewa and over to Geraldton. The funding was approved some nine months ago. To date we still have not got a positive response as to when the funds will be available, even though we completed the project some five months ago. ... There were some changes to the original agreement that had to be ratified. I believe those changes were signed off over four months ago.[371]

AIIA (WA) submitted that:

Many of these [state and federal programs] have benefits, however could be improved. ... Often programs are limited to amounts of around $10,000. The amount of effort ICT companies, both small and large, have to go to in an attempt to secure this funding often does not justify the cost of the effort required.[372]

The Australian Electrical and Electronic Manufacturers' Association (AEEMA) advise that accessing government support is one more regulatory compliance cost that adds to the burden of SMEs in that it 'divert(s) resources from the key task of meeting global competitive challenges … and weakens their competitiveness'.[373] AEEMA argues that there is an:

overwhelming belief that the multiplicity of policy programs, their application processes and the myriad details sought by government for assistance are far too time-consuming, costly and onerous .... [and that] SMEs in particular are turning away from seeking any support for their growth activities because the efforts required to obtain that support are too much of a costly burden.[374]

With regard to post-grant reporting requirements, the Department of Industry and Resources (DoIR) advise that for businesses receiving any sort of government support:

---

[370]   Submission No. 4, Closed Submission. i3 provides up to $10,000. See Chapter 2.

[371]   Mr Andrew Winterburn, Managing Director, BroadbandNet Pty Ltd, *Transcript of Evidence,* 13 September 2006, p2.

[372]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, September 2006, p14.

[373]   Submission No. 12 from Australian Electrical and Electronic Manufacturers Association Limited, September 2006, p11.

[374]   ibid.

it is a condition of the assistance that we provide to them that they report back at regular intervals on outcomes achieved in terms of sales, partnerships formed, or technologies transferred, that sort of thing.[375]

While the level of reporting varies according to the programme, feedback from companies is generally required at 6 months, 12 months or 24 months. According to DoIR the longer-term reporting back is required to capture whether or not the company achieved 'ongoing or longer-term benefit'.[376] Furthermore, this:

is specifically relevant in situations where we provide some sort of export assistance because companies usually have a long lead time to develop those international relationships and the outcomes are often achieved only after approximately two years. That is why we have the requirement for longer reporting.[377]

DoIR advised that this requirement is necessary in order 'to justify the use of the money', to show evidence of whether or not the support is working, and 'to justify to the Department of Treasury and Finance, the minister and other parts of the department that what we do is worthwhile'.[378]

Finding 13

Government funding is difficult to locate and industry is not always aware of what government has to offer. Applications can be time consuming and costly to prepare, particularly in relation to the amount of funding available. This significantly reduces the effectiveness of the funding received and makes it difficult to justify the cost of the effort of applying.

Recommendation 4

The Western Australian Government must streamline and simplify its funding submission and grant application procedures. An easier application process would be fair to industry and a strengthening of the acquittal process would ensure an appropriate balance between accountability and accessibility.

---

[375] Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p11.

[376] ibid., p12.

[377] Ms Daniela Mattheys, Manager, ICT and Nanotechnology, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, pp12-13.

[378] Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p11 and 12.

Recommendation 5

Western Australian Government should use on-line resources to help streamline grant application and follow-up procedures.

The issue of costs associated with developing and submitting funding applications was not limited to smaller State provided programmes. The Department of Industry, Tourism and Resources (DITR) note that while competitive grant schemes allow for 'targeting of support' and 'better performance monitoring' such programmes 'usually impose higher application and compliance costs for businesses'.[379]

With particular reference to the Export Markets Development Grant (EMDG) scheme, AEEMA[380] states that:

> *industry is becoming increasingly concerned that this program is being eroded through onerous eligibility criteria, complex application processes and reduced funding. SMEs are once again discouraged from trying to access the program, and this adds to their business costs.*

In a study of Australia's manufacturers' capacity to engage in globally competitive markets, the Australian Industry Group (AiG) found similar concerns raised through their industry consultations and survey. The AiG report, *Manufacturing Futures: Achieving Global Fitness*, states that:

> *there was an overwhelming feeling from industry that the nature of government involvement, particularly in relation to the administration of grants and programs, has become too complex and costly. Many companies stated that they were reluctant to apply for grants because of the time demanded to apply, the costs involved and the uncertainty of funding.*[381]

AiG report respondents saying the cost of applying is in terms of the 'documentation required and the absolute finite detail that was applied' and that the process is often so complicated that firms need to 'engage outside consultants who know how to weave their way through it'.[382] Furthermore, 'industry members believed the application process for many of the federal

---

[379]   Department of Industry, Tourism and Resources, *Submission from the Department of Industry, Tourism and Resources to the Productivity Commission Study into Science and Innovation*, September 2006.

[380]   Submission No. 12 from Australian Electrical and Electronic Manufacturers Association Limited, September 2006, p7.

[381]   Australian Industry Group *Manufacturing Futures: Achieving Global Fitness*, 2006, p51. Available at: http://www.aigroup.asn.au. Accessed on 14 December 2006.

[382]   ibid.

government grant initiatives are overly bureaucratic, and are inconsistent with the innovative requirements of global business in the 21st century'.[383]

The House of Representatives Standing Committee on Science and Innovation recently reported on the burden to SMEs of the funding programme application process and reporting requirements. Their report, *Pathways to Technological Innovation*, notes that evidence 'has emphasised the costs to businesses associated with applications for innovation assistance and, if successful, the compliance reporting requirements which are perceived by some to be "onerous"'.[384] The result of this is that some SMEs become 'disqualified' by the funding process itself. The House of Representatives Committee 'strongly advocates simplification of application processes and streamlining of reporting requirements where possible'.[385]

Submissions to the Inquiry suggest that one of the main ways in which this situation might be improved is through increasing the value of competitive and non-competitive funding to help justify the cost of developing and submitting funding applications.

> *Assistance in the form of competitive grant funding must be at a level that makes it worthwhile submitting an application. An absolute minimum would be $50,000. Assistance in the form of low-value non-competitive funding can be invaluable in providing support.*[386]

> *AIIA recommends that the WA Government ... increases the size of funding available to enable ICT companies to justify the cost of effort to secure the funding.*[387]

Recommendation 6

Eligibility criteria and submission requirements should be relative to the total grant size available.

Submissions also recommended improved government assistance, advice and direct support in preparing funding submissions. Team Technology (WA) Pty Ltd suggested that some businesses:

---

[383]   ibid., p67.

[384]   House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, The Parliament of the Commonwealth of Australia, Canberra, 2006, p57.

[385]   ibid.

[386]   Submission No. 4, Closed Submission.

[387]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p14.

already have staff available to investigate funding opportunities, attend information workshops and seminars, seek alliance partners and prepare funding submissions, web sites and presentations ... businesses like mine aren't in such a fortunate position. Most of our time goes into servicing our existing clients and the day to day running of the business.[388]

The Committee notes that some companies have raised the issue of government assistance in developing funding submissions. The Committee views the role of government as being to provide clear information and straight forward access to opportunities, and the role of companies to evaluate this and participate in accordance with their own business planning. Government guidance should be provided to give grant applicants a better appreciation of the criteria of that particular funding round.

While acknowledging that there are a 'growing number of organisations, with similar competing offerings, all aimed at assisting companies with innovation and commercialisation activities', Team Technology (WA) Pty Ltd submitted that:

Without available in-house resources, and/or funding, most of these information sessions are virtually useless. Basically, for us, and I suspect many others, there is an almost insurmountable gap between where we are now, in terms of cashflow and people, to where we need to be to take advantage of the information provided.

Although there are many avenues for obtaining funding or collaboration, it's very difficult to achieve unless the business has already reached a significant level of commercial success.[389]

(c) Processing of Funding Applications

The following table provide an example of the steps involved in DoIR processing an application for stage government funding.

---

[388] Submission No. 2 from Team Technology (WA) Pty Ltd, p3.

[389] ibid., pp3-4.

Table 1: Steps in DoIR Funding Application and Evaluation Process

STEPS	WAICDS		i3
	ROUND ONE	ROUND TWO	2005
1. Applications	Opened: 29/12/04 Closed: 21/01/05	Opened: 21/06/05 Closed: 28/07/05	June 2005 01/07/05
2. Register Applications			
3. Letter Acknowledging Application	25/01/05	11/08/05	19/07/05
4. Eligibility Assessment *	04/02/05	August 2005	
5. Financial Assessment & Due Diligence	28/02/05	August 2005	
6. Merit Assessment	28/02/05	13/10/05	
7. Recommendation to Minister	24/03/05	17/10/05	
8. Ministerial Approval **	11/04/05	28/10/05 ***	
9. Letter of Offer	10/06/05	01/11/05	15/08/05
10. Agreement			22/08/05
11. Provision of Funds	30% on signing agreement 70% on completion of programme	30% on signing agreement 70% on completion of programme	January 2006

*Ineligible letters sent at this step; **Unsuccessful applicant letters sent at this step; ***Approved by DDG on behalf of Ministry Delegated Authority)
Developed from information supplied for Department of Industry and Resources[390]

Some criticisms of this process have been raised by industry. In particular, concern has been expressed about the length of time between the opening of applications and receipt of grant funds.

> *The process was slow. We proposed a series of activities approximately 5 weeks ahead of the grant. We ended-up self funding the activities and found out several weeks after we had completed the work that we were unsuccessful in securing funding. If funding is to be offered, it is imperative that it be done on a timely basis and the timeline must be available to applicants.* [391]

Additionally, some respondents have advised that they would appreciate being kept informed about the status of their grant application throughout the process.

---

[390] Correspondence from Department of Industry and Resources, 29 May 2007; Electronic Mail from Department of Industry and Resources, 31 May 2007.

[391] Submission No. 4, Closed Submission.

Recommendation 7

Clear information about the state government funding process must be readily available to industry members. Applicants should have timely information at all stages of the process, including an assessment of, and advice on, unsuccessful applications.

(d)   Evaluation of the Funding Programme and Feedback to Participants

Comment was made on the evaluation of the effectivness of funding programmes from the points of view of both DoIR and industry participants.

By way of example, DoIR evaluation resulted in its no longer supporting companies to attend ANZATech. While sponsorship of attendance at ANZATech had certainly brought benefits in the past with companies such as Palm Technology, DoIR had:

> *met with several companies that felt that the business matching had not been appropriate for what their requirements were. At that point, looking at the product offer from Anzatech and our budget situation, it was probably quite appropriate to put our relationship with Anzatech on hold and look at what other options there were that would deliver a better bang for the buck for Western Australian SMEs ... While Anzatech is on hold at the moment, we are actually looking at supplementary opportunities to try to deliver a better outcome than was the objective for Anzatech.*[392]

The Committee notes that for some state government initiatives there was a lack of take up by industry members. For example, only two places of the ten offered for the SoftwareMark CMMI Demonstration programme were taken up. DoIR also advises of a similar lack of uptake for sponsorship to CeBIT in Germany and New South Wales. After emailing all companies on their database, some 680 companies, DoIR received only four responses, three of which were 'noncommittal and one was positive'.[393]

However, with regards to SoftwareMark, DoIR argue that:

---

[392]   Mr Terry Burnage, General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p14.

[393]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p6.

this initiative did not really have the support of the market nationally and internationally. It was not something that was being specified in government contracts or in major contracts by national governments or by large customers such as resource companies. It was something that had come up as an idea and the idea had simply not taken off.[394]

DoIR suggests that the lack of response is an indication that 'generally, companies are so busy at the moment that they are not interested. They have not got the time and the resources to pursue these opportunities. They are focusing very narrowly on their day-to-day business'.[395] DoIR suggest that 'industry's interest in working with Government can be in inverse proportion to their own business climate i.e. when a company is engaged to capacity, their requirement for or involvement in Government initiated programs often diminishes'.[396]

Industry do not necessarily dispute DoIR's point of view, but their primary concerns differ, and they believe that greater emphasis should be placed on follow-up and evaluation to ensure the right programmes are in place. For example, in relation to one company's grant application it was stated that:

there was no follow-up or assessment. We consider this to be paramount to an effective funding program .[397]

ICT ICC also called for post grant reviews. According to ICT ICC, such reviews would:

determine if the grant schemes are achieving their strategic objectives. This is not intended to criticise audit and reporting arrangements currently in place but to lift them to a strategic review level.[398]

The criteria DoIR use to analyse the effectiveness of the myriad of grants they support are unclear to the Committee. Equally, industry has advised that they do not receive sufficient feedback in cases where they are unsuccessful in their grant applications or when a funding stream ceases without industry consultation.

---

[394]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p5.

[395]   ibid., p6.

[396]   Electronic Mail, Department of Industry and Resources, 7 May 2007, p6.

[397]   Submission No. 4, Closed Submission.

[398]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, August 2006, p6.

Finding 14

The criteria the Department of Industry and Resources use to analyse the effectiveness of grants they support are unclear.

Recommendation 8

Transparent programme evaluation must be introduced to ensure funding opportunites meet state government strategic objectives and industry development needs.

4.2   Role of the Office of e-Government

The 2002 Functional Review Taskforce Review into the Effective Delivery of Government Priorities made some 89 recommendations regarding reforms to the State's public sector.[399] As a result of this review, the Department of Industry and Technology's 'procurement operations were transferred to the Department of Treasury and Finance, and its e-Government related functions were transferred to the Department of Premier and Cabinet'.[400] Consequently, in February 2003, the Office of e-Government was established in the Department of the Premier and Cabinet with a view to 'help capture and better coordinate public sector online opportunities'.[401]

According to the Office of e-Government, its mission is 'to transform how Government does business through leadership and collaboration in the use of Information and Communications Technology'.[402] The goals of the Office of e-Government are to improve internal efficiency, transform service delivery and engage the community. One of its key functions is to 'encourage a better understanding of e-Government and promote its benefits to the public sector, business and

---

[399] Department of the Premier and Cabinet, *Reform Projects, Functional Review Reform Projects*, 2005. Available at: http://www.functionalreview.dpc.wa.gov.au/index.cfm?event=reformProjects. Accessed on 22 May 2007; Department of the Premier and Cabinet, *History of Reviews, Restructures and Recommendations Affecting Department of Industry and Resources's Structure and Reporting Arrangements*, nd. Available at: http://www.dpc.wa.gov.au/psmd/pubs/psrd/agencyreview/documents/DepartmentofIndustryandResourcesHistory.pdf. Accessed on 22 May 2007.

[400] Department of the Premier and Cabinet, *History of Reviews, Restructures and Recommendations Affecting Department of Industry and Resources's Structure and Reporting Arrangements*, nd. Available at: http://www.dpc.wa.gov.au/psmd/pubs/psrd/agencyreview/documents/DepartmentofIndustryandResourcesHistory.pdf. Accessed on 22 May 2007.

[401] Department of the Premier and Cabinet, *Functional Review: The Office of e-Government*, nd. Available at: http://www.functionalreview.dpc.wa.gov.au/index?event=eGovernment. Accessed on 22 May 2007.

[402] Office of e-Government, *About Us*, nd. Available at: http://www.egov.wa.gov.au/index.cfm?even=about Us. Accessed on 17 March 2007.

the community'.[403] The Office of e-Government advised that since its inception it 'has looked at public sector management issues, rather than the portfolio of the economic development of the industry'.[404] The Office of e-Government stated that:

> *probably the main message from us is that although we are about transforming the operations of government to provide better service delivery and to ensure that we provide the community with the services it wants and needs, rather than the structures they have always had, we are also working closely with our colleagues in DOIR and Treasury and Finance, and to a lesser extent in the State Supply Commission, to ensure that our outcomes and our work are consistent with policy objectives such as industry development.[405]*

Industry associations advised the Committee that they were consulted in the formation of the Office of e-Government and recognised that the Office has a limited charter.

> *Industry was involved in a series of workshops leading up to the formation of the Office of e-Government. The Department of the Premier and Cabinet was very inclusive of industry in terms of developing a charter for the Office of e-Government, for which we are grateful.[406]*

> *From our point of view we obviously welcome the fact that the Office of e-Government is promoting ICT and its uptake of ICT within government and the community and best practice, which we certainly applaud.[407]*

According to the Office of e-Government, there was no model or agency upon which it has based itself and its strategies. Rather, the Office of e-Government:

> *look[s] around the world for best practice and incorporate[s] that and then tak[es] it one stage further. Our citizen-centric government, which is a strategy that will be launched next month, will break new ground in new thinking - certainly in Australia - across our equivalents.[408]*

---

[403]   Government of Western Australia, *2007-08 Budget: Budget Statements,* Budget Paper No. 2, Volume 1, Government of Western Australia, Perth, May 2007, p98.

[404]   Ms Jo Bryson, Executive Director, Office of e-Government, Department of the Premier and Cabinet, *Transcript of Evidence*, 28 February 2007, p2.

[405]   Mr Sven Bluemmel, Director, Strategy and Policy, Office of e-Government, Department of the Premier and Cabinet, *Transcript of Evidence*, 28 February 2007, p4.

[406]   Mr Geoffrey Harben, Branch Executive Committee Member, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p12.

[407]   Mr Louis Martini, WA Chair, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p13.

[408]   Ms Jo Bryson, Executive Director, Office of e-Government, Department of the Premier and Cabinet, *Transcript of Evidence,* 28 February 2007, p5, citing Mr Steve Gittinger, Gartner consultant.

The Government of Western Australia 2007-08 Budget Statements shows that the Office of e-Government has 30 Full Time Equivalent (FTE) staff estimated for 2006-07, and a target of 33 FTEs for 2007-08. This represents a significant increase from the 2006-07 figure of 27 FTEs.[409] These staff members are assigned to work on four streams:

- Strategic policy coordination scheme - incorporating the web review and the electronic service delivery strategy;

- Telecommunications - incorporating the Connect to Government strategy;

- Strategy and policy - incorporating work on trusted and secure government; and

- Executive and strategic planning and projects across the public sector - incorporating all significant agency budget bids.[410]

The Office of e-Government lists its environmental scan for a whole-of-government Enterprise Architecture Program as a major achievement for 2006-07.[411] According to the Premier of Western Australia, the Hon. Alan Carpenter:

> *enterprise architecture is the development of a framework for the funding and procurement of information and communication technology in the public sector context, with a set of agreed principles and objectives directed towards maximising the benefits of ICT investment.*[412]

In evidence to the Committee, the Office of e-Government stated that it has 'close links to industry because we see it as an important stakeholder'.[413] For example, the Director, Strategy and Policy, sits on an information industry round table that includes representatives from the State Supply Commission, Treasury, DoIR, ACS and AIIA, and the Executive Director sits on the Technology and Industry Advisory Council (TIAC).[414] With regards to the assistance available from their office, the Office of e-Government advises:

---

[409] Government of Western Australia, *2007-08 Budget: Budget Statements,* Budget Paper No. 2, Volume 1, Government of Western Australia, Perth, May 2007, p99.

[410] Ms VJ Bryson, Executive Director, Office of e-Government*, Department of the Premier and Cabinet, Western Australia, Legislative Assembly, *Parliamentary Estimates Committee (Hansard),* 23 May 2007, pE184.

[411] Government of Western Australia, *2007-08 Budget: Budget Statements,* Budget Paper No. 2, Volume 1, Government of Western Australia, Perth, May 2007, p99.

[412] Hon. Alan Carpenter, Premier, Western Australia, Legislative Assembly, *Parliamentary Estimates Committee (Hansard),* 23 May 2007, pE179.

[413] Ms Jo Bryson, Executive Director, Office of e-Government, Department of the Premier and Cabinet, *Transcript of Evidence*, 28 February 2007, p2.

[414] ibid., pp2-3.

probably the most valuable way in which we provide assistance is that we make ourselves available to local industry and share with industry where we are going and what solutions industry can provide to ensure that it is in the best position to compete.[415]

To this end representatives of the Office of e-Government address industry forums and hold meetings with the local industry.[416] This provides an opportunity for the Office of e-Government to outline its role and:

> *what kinds of solutions we will be looking for from the market and what government will be looking [for] from the market. The idea behind that was that those local industry members will then be in a much more competitive position, because they will have that knowledge, and those industry members who are not local or do not have a local presence may be at a slight disadvantage because they will not have the same level of insight. We are not discriminating in that regard. We will talk to anyone who has a good reason to talk to us. However, we make an effort to ensure that local industry has access to our strategic thinking and what that means for the sector, so that when it is providing solutions in response to tenders and so forth in six, 12, 18 or 24 months it will know what the government is looking for strategically. That is probably the key nature of the direct assistance that we provide.*[417]

Evidence presented to the Committee suggests that the role of the Office of e-Government is unclear to members of the ICT industry.

> *One thing that is a little bit sensitive is the role of the office of e-Government in relation to the rest of the agencies in the community. I feel that it is hidden away a little. From an industry perspective, I do not think its definition and role is clear.*[418]

In contrast to the Office of e-Government's assertion that it has close links to industry, evidence was presented concerning a lack of collaboration. AIIA felt that, perhaps due to its limited charter, the Office of e-Government did not engage with industry 'and from our point of view, that may be what is missing'.[419] ICT ICC also expressed concern on this issue:

> *We are very disappointed from an industry perspective at the lack of collaboration that goes on in relation to the areas it [Office of e-Government] is working on. It will collaborate with people in Sydney and New South Wales generally. When I have brought*

---

[415]   Mr Sven Bluemmel, Director, Strategy and Policy, Office of e-Government, Department of the Premier and Cabinet, *Transcript of Evidence*, 28 February 2007, p4.

[416]   Ms Jo Bryson, Executive Director, Office of e-Government, Department of the Premier and Cabinet, *Transcript of Evidence*, 28 February 2007, p4.

[417]   Mr Sven Bluemmel, Director, Strategy and Policy, Office of e-Government, Department of the Premier and Cabinet, *Transcript of Evidence*, 28 February 2007, p4.

[418]   Miss Sharon Brown, Chair, Information and Communications Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence*, 25 October 2006, p10.

[419]   Mr Louis Martini, WA Chair, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p13.

that to the attention of the people involved, they said that they do not want to have only a local bent, or words to that effect. That is fine, but they should also have our component in there. There is a real gap at the moment between the way the Office of e-Government collaborates and works with industry, Treasury and Finance and the Department of Industry and Resources.[420]

Similarly, it was AIIA's view:

that the consultation side of the Office of e-Government has not worked particularly well. I think that industry would say that with some exceptions they do not get a great deal of opportunity to discuss standards and policy with the Office of e-Government as well as it may want to.[421]

Since their original submission AIIA have noted that:

the Office of eGovernment has also sought to engage industry more in recent times, which is most welcome. This sort of collaborative approach can only lead to more practical and fully informed outcomes.[422]

In its May 2007 evidence DoIR acknowledged their awareness of the ICT industry's perception of the Office of e-Government. DoIR advised that industry:

feel[s] their capabilities and their aspirations are not fully addressed by the Office of e-Government. Not having sat in meetings as an observer between the industry and the Office of e-Government, it is difficult for us to comment from the perspective as to who is right or wrong in those circumstances. The views of the industry have been so pronounced and so long-lived that it would suggest there is something worth investigating there.[423]

Given the Office of e-Government's purpose and the number of FTEs in its employ, the Committee believe that this level of confusion about the Office's role and its willingness to talk with industry is not conducive to good government. Furthermore, the name 'Office of e-Government' itself signifies an agency that has a broad sphere of activity and responsibility, whereas in practice the Office appears to have quite a narrow remit.

---

[420]   Miss Sharon Brown, Chair, Information and Communications Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence*, 25 October 2006, pp10-11.

[421]   Mr Geoffrey Harben, Branch Executive Committee Member, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p12.

[422]   Submission No. 16 from Australian Information Industry Association Ltd, April 2007, p4.

[423]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p16.

Finding 15

The role of the Office of e-Government is unclear to industry and insufficient collaboration and communication occurs between the Office and industry participants.

Finding 16

Many state government departments and agencies are unclear about the role of the Office of e-Government. There is a lack of clarity about the relationship individual agencies should have with the Office of e-Government and what intended benefits, if any, would flow from this.

Recommendation 9

The government needs to clarify its expectations of, and parameters surrounding, the Office of e-Government and ascertain whether the Office is structured to meet these aspirations. Consideration should be given to whether some aspects of the Office of e-Government are better suited to other agencies such as the Department of Industry and Resources, the Department of Treasury and Finance and the State Supply Commission.

Finding 17

The name Office of e-Government gives rise to expectations about the core business of the Office and what it might deliver within government and between government and industry.

Recommendation 10

If the Office of e-Government continues to exist its nomenclature should be amended to more accurately reflect the activities and functions of this Office.

4.3   Pro-Active Government

Throughout this Inquiry it has become clear to the Committee that some states more actively and effectively support their local ICT industries than do others. Some of this support takes effect at

the policy level in the form of more 'industry friendly' intellectual property (IP) and liability provisions in government procurement contracts, or in government agencies acting as reference sites for suppliers. One important form of support not discussed thus far is the active promotion of the ICT industry by members of government.

The two examples brought most often to the Committee's attention are Queensland and Victoria. Queensland's commitment to innovation and creativity is evident from the moment a person logs onto the Queensland Government website at http://www.qld.gov.au. Visitors to the site are immediately welcomed to Queensland the **Smart State**. According to this site:

> *The Smart State is a Queensland Government vision of a State where knowledge, creativity and innovation drive economic growth to improve prosperity and quality of life for all Queenslanders.*[424]

AIIA advised that:

> *the Queenslanders are very good at selling the story anywhere and everywhere ... They certainly entice companies to come to Queensland as a starting point from anywhere in Australia because the environment is right. They entice companies to come from anywhere in the world to Queensland because it is a great tourist destination and the environment is right. They actually sell the package. Then they sell the package into collaborating with Asia, in particular, at the moment into sectors that they are good at as well. It is right across the board.*[425]

In discussing the issue of government agencies providing references for suppliers, AIIA stated that:

> *Queensland does that very well. From the Premier down, they actually talk about what people in their state are doing, how that is working and whether that is going global. They get behind them. There is a lot more promotion of ICT over there than there is here, and at some level I think there is a lot more understanding of ICT across certainly the Parliament than there is here.*[426]

ICT ICC also believes that the Queensland Government has a good understanding of ICT within the state:

> *I think the advantage of Queensland is that it got on board with being a smart state very early in the piece. Also, Queensland is not afraid to speak out and market itself and tell the great stories that it has over there. Even though Alan Carpenter was previously the minister responsible for ICT, I would question the across-the-board understanding, whether it is a Liberal or a Labor government, of ICT within Western Australia. They*

---

[424]   Queensland Government, *What is the Smart State?*, nd. Available at: http://www.smartstate.qld.gov.au/ strategy/index.shtm#what. Accessed on 25 May 2007.

[425]   Ms Cheryl Robertson, Strategy Consultant, Australian Information Industry Association, *Transcript of Evidence,* 20 September 2006, p7.

[426]   ibid., p5. The issue of government reference sites is returned to in Chapter 5.

certainly know about the resources side and the energy side, but ICT I think at the moment is still very much a cloud to them. We have great difficulty in actually defining what ICT means. In the past couple of months or so we have had some success when we have articulated that ICT has to be core infrastructure moving forward, the same as the rail, road and ports. They seem to be getting a grasp on it now, but, to be honest, I feel that the ICT industry is not being well articulated within Parliament and by both sides of the house. It may be an education process, or it may be just giving some examples and saying we have these great mining companies, and we have Henderson, which is fantastic, but we also have a fantastic ICT industry. However, that just gets left out.[427]

With regards to the situation in Victoria, e-Centric Innovations believes that the Victorian Government is committed to the industry, that the Victorian Government leads by example, and cites the huge efforts undertaken by the government to address industry concerns regarding IP and unlimited liability, and the fact that the Victorian Government does provide credibility for the industry by acting as a reference site.[428]

The Victoria Government established Multimedia Victoria as part of its Department of Innovation Industry and Regional Development. Its purpose is to develop the ICT sector and 'drive economic growth through access to and use of sophisticated ICT'.[429] Victoria also has a dedicated Minister for Information and Communication Technology. Multimedia Victoria suggest that the factors contributing to Victoria being a leading ICT state include their dedicated Minister and bureaucracy, and a vertically integrated department, with all government ICT purchasing carried out by the Chief Technology Officer, rather than Treasury.[430]

With particular reference to the Multimedia Victoria portal, ICT ICC advised that:

Victoria has a list of case studies that are success stories. There are at least 25 case studies, with a one or two-page overview of different companies that they are working on. It also talks about its clusters and what it is focusing on - its initial ones and the ones it is moving onto.[431]

ICT ICC advised that they are working with DoIR on the possibility of a Western Australian state portal along similar lines to that which exists in Victoria. ICT ICC believes that:

There is no reason that we cannot actively promote our ICT industry and our successes in that. If ministers are going overseas, all they need to do is check on that portal and say, "We do not only do mining in Western Australia. There is wine, there is ICT, and there

[427] Miss Sharon Brown, Chair, Information and Communications Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence,* 25 October, 2006, p5.

[428] e-Centric Innovations, Briefing, 17 October 2006.

[429] Multimedia Victoria, *About Multimedia Victoria*, nd. Available at: http://www.mmv.vic.gov.au/Home. Accessed on 25 May 2007.

[430] Multimedia Victoria, Briefing, 17 October 2006.

[431] Ms Valerie Maxwell, Research Associate, Information and Communications Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence,* 25 October, 2006, p5.

are all these other things." That can give people a good overall view. That is something that we can work on with DOIR, or whichever department, and make sure it is kept up to date. However, it needs to be an initiative that is not done just once. It needs to be continual. All our successes need to be attributed across the members and the ministers so that when they are travelling they can get that message out. Peter Beattie does that very well.[432]

DoIR's ICT industry audit revealed that the industry is 'interested in the state government promoting their industry as an enabler, as an effective tool of business efficiency and business productivity'.[433]

Finding 18

The political leadership shown in Queensland and Victoria in support of their local ICT sector has been welcomed by the industry and has proven to be a useful component of industry development strategy.

Recommendation 11

The Western Australian Government needs to provide strong political leadership and actively promote the local ICT sector through all means at its disposal.

4.4   Facilitating Introductions with Venture Capitalists

A 1997 Coopers and Lybrand study suggested that venture capital provided only 2% to 3% of Small/Medium Enterprise (SME) equity; the balance came from either bank finance or the owner's private funds.[434]

Australian Bureau of Statistics Venture Capital and Later Stage Private Equity data for 2005-2006 show that while, at June 2006, $4316 million had been invested in 902 investee companies, the largest proportion of this had gone to investee companies in the late/buy-out/sale stages ($1325

---

[432]   Miss Sharon Brown, Chair, Information and Communications Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence,* 25 October, 2006, p5.

[433]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p4.

[434]   Caslon Analytics, *Guide: e-Capital & Investment*, July 2005, p3. Available at: www.caslon.com.au/ecapital guide7.htm. Accessed on 15 March 2007.

million) and the smallest to pre-seed stage entities ($21million).[435]   The value of investment according to investee stage for 2005-06 is as follows:

Leveraged and Management Buy-out, and Management Buy-in stage:	$1325 million
Turnaround stage:	$ 351 million
Late Expansion stage:	$ 989 million
Early Expansion stage:	$1187 million
Start-up stage:	$ 379 million
Seed stage:	$ 65 million
Pre-seed stage:	$ 21 million[436]

Most venture capital and later stage private equity investment is in investee companies with head offices in NSW ($1234 million or 29%) and Victoria ($934 million or 22%). Investment in companies with a Western Australian head office was at $604 million, or 14% of total investment (invested in 71 companies), which is on a par with Queensland ($619 million or 14%).[437] This figure represents a significant increase in venture capital investment in Western Australian companies, up from $300 million at June 2005, or 8.5% of the total of $3532 million.

A Thomson Financial and AVCAL Survey also found NSW and Victoria to be the states to attract the major proportion of private equity investment. PricewaterhouseCoopers suggest that what they refer to as the 'over-representation of Victoria' can be explained by that state's historical prominence in the industrial and information technology (IT) sectors. They also suggest that 'Queensland's share is partly a reflection of its "Smart State" initiatives'.[438]

According to the research, analysis and strategies consultancy, Caslon Analytics, most venture capital funds are sector-specific and operate for seven to ten years.[439] Examining the situation according to the industry of the investee company, the Australian Bureau of Statistics (ABS) data show that manufacturing and utilities are the predominant industry of investment ($1039 million or 24%). Venture capital and later stage private equity investment in the transport and communications industry showed a June 2006 value of $579 million (13%), which represents a reduction from the June 2005 figure of $623 million or 18% of the total investment of $3532 million. Furthermore, the data by activity of the investee show that manufacturing and transport related activities attracted the major share of funds ($1579 or 37%). IT, media, electronics and communications activities attracted $681 million (16%), and while this is a significant proportion

[435]   Australian Bureau of Statistics, *Venture Capital and Later Stage Private Equity, 2005-06*, Catalogue No. 5678.0, p10 and Table 14, 2006.

[436]   ibid., Table 14.

[437]   ibid., Table 11. Note: percentages given are of the total value of investments at June of nominated year.

[438]   PricewaterhouseCoopers, *Economic Impact of Private Equity and Venture Capital in Australia*, AVCAL, Sydney, 2006, p7.

[439]   Caslon Analytics, *Guide: e-Capital & Investment*, July 2005, p2. Available at: www.caslon.com.au/ecapital guide7.htm. Accessed on 15 March 2007.

of total investments as at June 2006, it also represents a reduction in both dollar value and percentage of the total for 2005 ($728 million or 20%) and 2004 ($697 million or 22%).[440]

In 2004 Axiss Australia suggested that the fact that 'Australia is now very much a service-based economy' was reflected in 'increasing levels of venture capital and private equity investment in sectors such as information and communications technology (ICT), biotechnology and retail services'.[441]   However, as shown above, the value of venture capital assisting IT, media, electronics and communications activities has fallen as a percentage of total funds since 2004.

In 2006 PricewaterhouseCoopers published their findings on the impact of private equity and venture capital investment on the Australian economy. One major finding of their study was that:

> *Australian technological innovation and R&D commercialisation are some of the main benefits of PE investment: three-quarters of investee companies launched new products in the past year, while only 27% did so prior to the PE investment. Furthermore, for the recipients of venture capital in particular, the investment is usually necessary for the first product launch to occur.*[442]

When compared with other countries, Australia's private equity industry has a lot of room to grow. According to PricewaterhouseCoopers:

> *relative to GDP, the level of Australian PE investment is around three-quarters of that in the UK. Compared to the US and Israel the Australian industry is approximately one-third size.*[443]

With specific reference to Australian internet companies, Caslon Analytics advises that venture capital investment in this sector 'tends to be small' with several funds having 'total portfolios of well under a million dollars'.[444] Furthermore:

> *only around 230 of an estimated 13,000 ITC enterprises received VC funding since 1992. US fund raising in 2000 was 115 times greater than in Australia; when adjusted for population differences US and EU fund raising exceeds Australia's by a factors (sic) of eight and 1.6 respectively.*[445]

---

[440]   ABS, *Venture Capital and Later Stage Private Equity, 2005-06*, Catalogue No. 5678.0, Table 12 and 13, 2006.

[441]   Axiss Australia, a Division of Invest Australia, *Venture Capital and Private Equity in Australia*, Australian Government, Sydney, September 2005, p2.

[442]   PricewaterhouseCoopers, *Economic Impact of Private Equity and Venture Capital in Australia*, AVCAL, Sydney, 2006, p4.

[443]   ibid., p7.

[444]   Caslon Analytics, *Guide: e-Capital & Investment*, July 2005, p3.   Available at: www.caslon.com.au/ ecapitalguide7.htm. Accessed on 15 March 2007.

[445]   ibid.

With regards to life cycle support and funding for innovation and commercialisation, the House of Representatives Standing Committee on Science and Innovation found one of the consensus issues to emerge from evidence concerned access to finance and venture capital:

> *Access to adequate finance and venture capital is vital to support innovation development in new and existing businesses. Evidence suggested that accessing adequate finance is a significant challenge for many businesses due to:*
>
> - *insufficient business angel activity and the relative immaturity and the risk averse nature of the venture capital industry in Australia;*
>
> *and*
>
> - *the risk averse nature of the traditional finance sector in Australia.*[446]

Pathways to Technological Innovation notes the existence of an 'innovation progression gap' for development of research with commercial outcome potential. This 'gap' refers to 'a gap in funding to support the development of basic research to the level where it becomes a commercially attractive, investment ready proposition'.[447] As a result of the innovation progression gap, funding for proof of concept and prototype/product development is not available.

The need to address the innovation progression gap was iterated by the Western Australian Telecommunications Research Institute (WATRI) in its briefing to the Committee. WATRI identify the funding gap at the application validation or proof of market stage of innovation, as shown in the following diagram.[448]

---

[446] House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, The Parliament of the Commonwealth of Australia, Canberra, June 2006, p156.

[447] ibid., p162.

[448] Diagram is taken from: Western Australian Telecommunications Research Institute, Briefing, Presentation to the Economics and Industry Standing Committee, 27 September 2006.
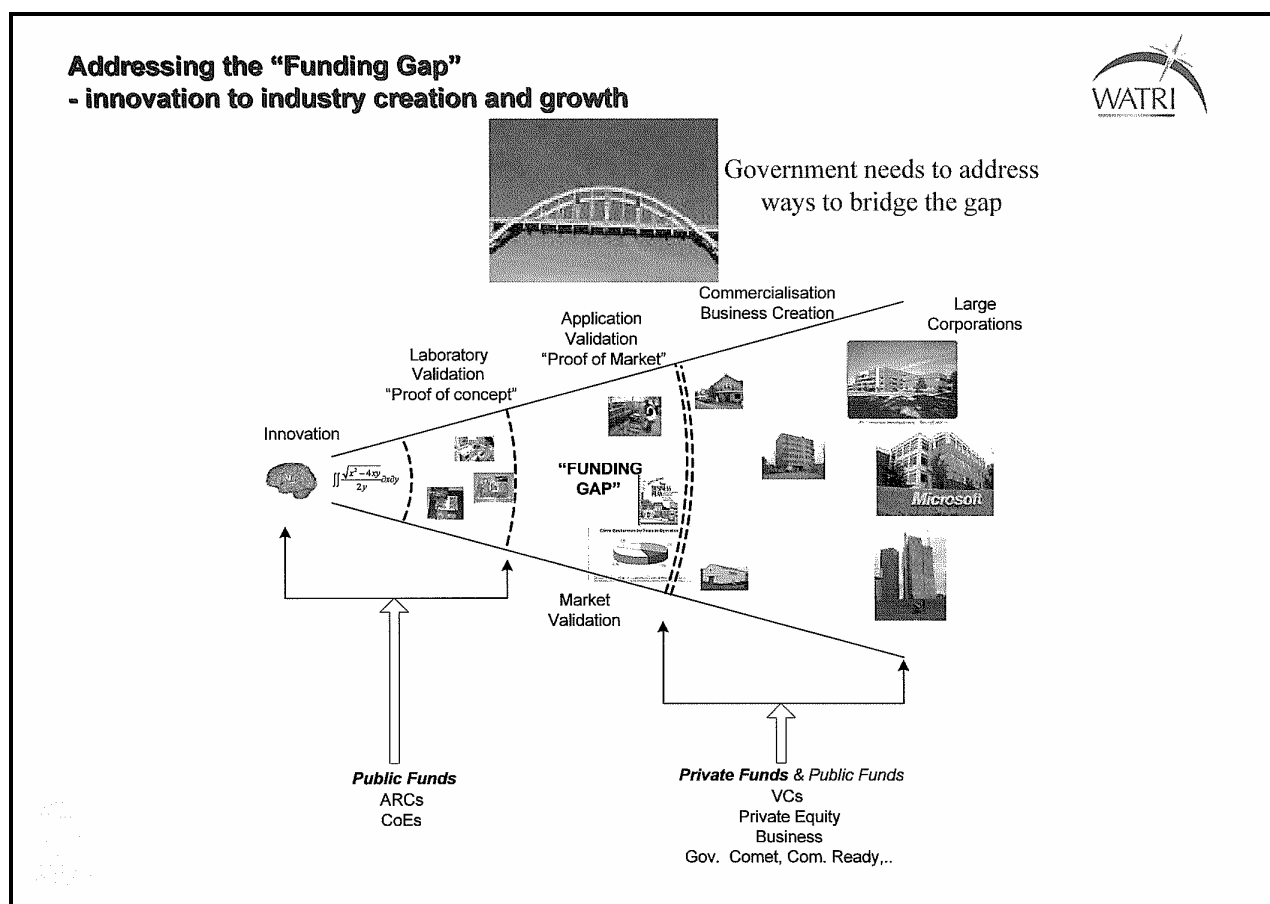
WATRI argues that 'government needs to address ways to bridge the gap' and that doing so will allow 'another "BIG BANG" in this State'.[449]

The gap in funding innovation progression was also noted at the ICT Outlook Forum in October 2006. Here, John Hewson argued that Australia does not do enough in supporting education and research. Hewson stated that 'in Australia, if you want research money you spend the bulk of your time getting it and then accounting for it, and very little time actually on the research itself'.[450] The funding gap between ideas and production was also cited by Neil Bryans of Australia's Defence Science and Technology Organisation as a major reason why Australia does not have more large local enterprises similar to those found in other countries, for example, Nokia in Finland or Saab in Sweden.[451]

---

[449]   Western Australian Telecommunications Research Institute, Briefing, Presentation to the Economics and Industry Standing Committee, 27 September 2006.

[450]   ICT Outlook Forum, *Panel Session: Does Australia Need a Nokia?*, 2006. Available at: http://www.ictout lookforum.com.au/asset/307.pdf. Accessed on 30 May 2007.

[451]   ibid.

> **Finding 19**
>
> There is a funding gap in innovation progression between the proof of concept and proof of market stages.

> **Recommendation 12**
>
> Government should investigate providing increased funding between the proof of concept and proof of market stages to help address the innovation progression funding gap.

DITR argues the need for continued government support, a need that is also recognised in countries such as the United States that have mature venture capital markets. According to the OECD's 2004 science technology report, *Venture Capital: Trends and Policy Recommendations*, 'the United States has the oldest and one of the largest venture capital markets in the OECD'.[452] Nevertheless, US venture funding has also 'suffered from the recent global downturn in technology and financial markets'.[453] This situation is exacerbated by the fact that the average fund and deal size are increasing, particularly where tradition favours later-stage and larger-scale deals, and there has been an acceleration of fund mergers and market consolidation. The implications for early-stage firms requiring small capital injections are that such risk capital will become less available.[454] The OECD suggests that:

> *Particularly at the beginning, the risk profile of seed and start-up firms is generally too high to attract sufficient private equity capital, hence the need for risk-sharing between the public and private sectors.*[455]

According to the OECD, government programmes should continue to be used to 'pump-prime' private venture financing, a position that is supported by the cooperateive research organisation, NORFACE (New Opportunities for Research Funding Co-operation in Europe), a partnership between 12 European research councils. NORFACE argues that:

---

[452] Organisation for Economic Cooperation and Development, *Venture Capital: Trends and Policy Recommendations*, 2004, p4. Available at: http://www.oecd. org/dataoecd/4/11/28881195.pdf. Accessed on 10 April 2007.

[453] ibid.

[454] ibid., p14.

[455] ibid., p20.

Given the accumulating evidence of the importance of a functioning venture capital market for entrepreneurship, innovation, and growth of the economy, it is important that governments continue to support the development of early stage venture capital markets. ... The challenge remains to encourage both the supply of risk capital from professional investors as well as the flow of high quality ventures that are 'investment ready'.[456]

In its briefing to the Committee, e-Centric Innovations suggested that industry in Australia lacks the codification of risks that occurs in more sophisticated markets such as that in Silicon Valley where risk is better understood.[457]

The Australian Information Industry Association WA Branch (AIIA (WA)) submitted that:

The irony in WA is that there is a community of angel investors and venture capital firms with capital to invest. However, unlike the situation in more sophisticated markets like the US, there is no established culture of doing so and little awareness of the long-term gains that can flow from smart investment in firms in the ICT sector.[458]

While the industry acknowledges the Commonwealth Government's initiatives designed to decrease the innovation progression gap and increase funding via pre-seed funds, evidence presented to the House of Representatives suggested that:

- pre-seed funds do not address the risk-averse nature of fund managers that makes them reluctant to invest in early stage technology-based innovation;

- being an incorporated entity, which is a qualifying criteria for pre-seed funding, does not necessarily represent the best option, particularly where intellectual property is concerned;

- the $1 million investment limit of the pre-seed fund is not sufficient to support development in certain sectors, and there are 'limited opportunities for subsequent and more substantial early stage venture capital funding'.[459]

Initial finance for new SMEs generally comes from informal sources such as owners, family and friends. Following this initial start-up, additional finance may also come from more formal

---

[456]   New Opportunities for Research Funding Co-operation in Europe (Norface), International *Research & Policy Seminar Series on Venture Capital 2006-2007*, p3. Available at: http://www.norface.org. Accessed on 10 April 2007.

[457]   e-Centric Innovations, Briefing, 17 October 2006.

[458]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p24.

[459]   House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, The Parliament of the Commonwealth of Australia, Canberra, June 2006, pp164-65.

sources such as the 'business angels' or 'angel investors' and from professional venture capital firms or banks and other financial institutions.[460]

The House of Representatives Standing Committee on Science and Innovation received much evidence that the lack of early stage venture capital in Australia is a 'major impediment to the commercialisation of innovation'; obtaining capital beyond that of family and friends is 'particularly problematic for technology-based start-ups'.[461] *Pathways* concluded that there were essentially two reasons for this funding gap in early stage finance:

- *the venture capital sector in Australia is too risk averse due to its immaturity and lack of investors with sufficient expertise; and/or*

- *there is a lack of quality investment opportunities for investors.*[462]

While there is evidence that Australia's venture capital market is increasing, it is still relatively small and the shortage of venture capital continues. Companies attempting to access existing venture capital face additional challenges such as the demands made by venture capital companies, which include:

- *differentiated IP that has been de-risked and is unencumbered;*

- *an articulate champion to spearhead the scientific development;*

- *proof of a market and customers with a demonstrated need; [and]*

- *a defined exit strategy.*[463]

With regards to the situation in Western Australia, AIIA (WA) suggests that Western Australian ICT enterprises find it difficult to access capital, particularly seed, early stage and expansion capital. AIIA (WA) state that:

---

[460]   House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, The Parliament of the Commonwealth of Australia, Canberra, June 2006, pp178-79. Business angels are 'high net worth individuals … often retired executives or entrepreneurs who want to make their money work for them … most angel investments are in the range of $50,000 to $1 million'; Austrade, *Understanding venture capital investment*, nd, pp1-2. Available at: http://www.austradeict.gov.au/ Understanding-VC/default.aspx. Accessed on 15 March 2007. For a discussion of business angel investment in Australia, see House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, The Parliament of the Commonwealth of Australia, Canberra, June 2006, pp180-81.

[461]   House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, The Parliament of the Commonwealth of Australia, Canberra, June 2006, p179.

[462]   ibid., p180.

[463]   ibid., p183.

High-tech start-up companies in Australia have generally struggled to get the attention of the venture capital community. Pre-venture capital is particularly difficult to attract.

Relative to the situation in the more traditional industries venture capitalists often have difficulty in putting a value on software and services assets which largely revolve around issues of intellectual property.[464]

AIIA (WA) cite 'difficulties in raising seed and expansion capital' as one of the 'key issues that impact on the development aspirations of local industry companies in the ICT sector', one that presents a 'critical impediment to the creation of new companies'.[465] Team Technology (WA) Pty Ltd advises:

Without 'early' funding and/or practical 'hands on' assistance we are finding it extremely difficult just to apply for venture capital funding, let alone actually acquiring it.[466]

Team Technology (WA) Pty Ltd argues that there is a lack of forums in which ICT businesses could 'present innovations and products, to government agencies or venture capitalists, in an environment where intellectual property is protected'.[467] This company called for the Western Australian Government to do more than provide a 'shop front' and to work 'hand in hand' to provide such forums.

DoIR, however, suggests that there is sufficient capital available in Western Australia. For DoIR:

the scarcity of venture capital is a very interesting topic. If you were to talk to the companies that are attempting to raise venture capital, the failures will always be on the provider's side. If you talk to the provider, the failure to supply capital to a particular company is because that company is not investor-ready. Our view is that, by-and-large, at the moment, there is an adequate supply of capital in the market. What we have focused on is getting companies investor-ready rather than introducing them to venture capitalists and saying, 'There they are.' We are one step back from that point.[468]

DoIR argues that it is not that difficult for companies to connect with venture capitalists. For DoIR, the difficulty 'is understanding what the venture capitalists want in terms of you meeting their eligibility requirements'.[469] DoIR advises that:

---

[464] Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p24.

[465] ibid., p23 and 24.

[466] Submission No. 2 from Team Technology (WA) Pty Ltd, July 2006, p4.

[467] ibid.

[468] Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p7.

[469] ibid.

venture capitalists are about commercialisation and new ideas. It is a separate segment of the capital market. The problems that we have had, and we have had attempts at this in the past, is that companies that are looking to commercialise, or individuals looking to commercialise, do not want to let go of the management of that idea. In other words, they want the capital at below the market rate but they want it so that they still control the development of the product, even though they do not have the business skills necessary to do it.[470]

In contrast to DoIR's position, throughout its investigation the Committee was presented with evidence that leads it to conclude that availability of, and access to, venture capital is a key issue for the ICT sector.

DoIR advised that the issue of venture capital is one of the most difficult to deal with and they lack sufficient resources to allow them to tackle it.[471] However, they also advised that 'within the research and commercialisation area within OSTI [Office of Science, Technology and Innovation] they do have a venture capital database, which is provided to companies on request'; this database is updated twice a year.[472]

Finding 20

The Office of Science, Technology and Innovation (OSTI) has a venture capital database, which is updated twice a year and provided to companies on request.

Recommendation 13

The Department of Industry and Resources needs to facilitate more industry networking and showcasing opportunities to facilitate industry accessing venture capital.

---

[470]   ibid.

[471]   ibid., p8.

[472]   Ms Daniela Mattheys, Manager, ICT and Nanotechnology Industry Development, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p8.

4.5 State/Federal Coordination of Government Assistance Programmes

This report has identified the difficulties the ICT industry faces in locating information on government programmes and initiatives, and the costs associated with developing and submitting funding applications.[473]

While the Committee recognises the number of programmes and initiatives in place, evidence was presented that these problems are exacerbated by what industry sees as a lack of alignment or cohesion between programmes either at the state and/or federal level.

While recognising the numerous programmes available to assist the ICT industry, AIIA submits that these could be improved by 'consolidat[ing] and align[ing] the State and Federal programs through one central focus point'.[474] The Western Australian Information and Communications Technology Industry Development Forum (WAICTIDF) suggests that 'the State Government should ensure that State policies and programs complement and leverage off Federal programs available to the industry'.[475] DoIR also suggest a lack of coordination between state and federal programs. According to DoIR:

> *We have found this administration at the federal level the most distant, in my experience, in terms of wanting to talk to the states about programs. We have found a lot of the programs, the so-called action agendas that the federal government focuses on, are developed without much consultation with the states. That is certainly true.*[476]

DoIR advised that they intend to work at the micro level and work more closely with the local Commonwealth offices, particularly as 'there is a whole suite of new programs on the table'.[477]

4.6 ICT Portal

The Committee has identified a major overarching issue that emerges through analysis of the effectiveness of support given to the local ICT sector; namely a problem with communication. This occurs at various stages within the delivery of government support to the sector, as described earlier in this chapter.

---

[473]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p14.

[474]   ibid.

[475]   Submission No. 11 from Western Australian ICT Industry Development Forum, September 2006, Appendix 1.

[476]   Mr Stephen Grocott, Director/General Manager*,* Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p6.

[477]   ibid.

Evidence suggests a need for improved and timely communication of information from government with regards to its assistance programmes and initiatives, and regarding the roles of particular agencies. There is also concern over an apparent lack of coordination between government agencies. Additionally, general communication between industry and government seems to be less than optimal.

Submitters have made it clear to the Committee that communication needs to be maintained throughout the funding process, from the invitation to apply, through the assessment and qualifying process, to the allocation and payment of funds and post-grant reviews of the outcomes of the funding awarded.

Members of the ICT industry have expressed concern about what they see as a lack of coordination between government agencies. For example, AIIA advised:

> *One of the things that our members, from the small companies to the big companies, struggle with is that if they are trying to do something creative, get funding to go offshore or build skill positions in their companies, it is difficult for them to find anybody in government who owns programs, explains how to work with programs, explains how to promote programs, get a reference or any of the things that tie to their business. There is never one group that owns all of this stuff.*[478]

BroadbandNet Pty Ltd also expressed similar concerns:

> *When we have come to the state to ask for support in a local entity, we have found that everyone is willing to talk and to try to help, but the wheels seem to be a little slow in turning to provide us with guidance.*[479]

According to ICT ICC:

> *Quite often if you are going into the various agencies, one group will be doing something and another group will do something contra to what the other group is doing and they do not know about it.*[480]

> *Currently the way in which we as an industry approach government in relation to that is a bit fragmented, because Treasury and Finance looks at the purchasing component of it. The Department of the Premier and Cabinet has the Office of e-Government, which is supposedly providing advice in that arena. There are also three areas of DOIR, with three different ministers. Sometimes they cross over. Sometimes they do not know what the other area is doing.*[481]

---

[478]   Ms Cheryl Robertson, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p11.

[479]   Mr Andrew Winterburn, BroadbandNet Pty Ltd, *Transcript of Evidence*, 13 September 2006, pp1-2.

[480]   Miss Sharon Brown, Chair, Information and Communications Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence*, 25 October 2006, p11.

[481]   ibid., p4.

With regards to the confusion of roles within government agencies, AIIA advised:

> *It is very difficult for us because the Office of e-Government sits within the Department of the Premier and Cabinet; procurement sits within the Department of Treasury and Finance; and industry development sits within the Department of Industry and Resources. They have different ministers and, as you heard, in one department's case there are three ministers. Sometimes our ability to consult with these people and to get some common purpose is difficult. Government would see industry development and procurement as being different things. We agree that procurement should not be a means by which to drive industry development. Whether the Department of Industry and Resources thinks that is another matter. Where the Office of e-Government sits in all of that and what it is attempting to do is another issue for us. If anything, we are a little confused about how it is trying to align itself.*[482]

Finding 21

There is a lack of communication and coordination within and between government agencies, and between government and industry, with respect to state government support for ICT.

The Committee believes that there is a need, first, to consolidate government information concerning ICT in such a way as to make it more easily accessible to the sector and, second, to improve communication within government and between government and industry. AIIA (WA) advocated that to achieve this end it is not necessary to have a department of ICT. Rather, AIIA (WA) called for 'the consolidation of all things ICT that the government potentially can offer, help with and wants to know about'.[483]

ICT ICC recognised the need to involve particular agencies, but recommended an agency or group within an agency be charged with a coordinating role:

> *We need to have a coordinating role or group of people. It is not the Office of e-Government as it currently is. It should be specifically across Premier and Cabinet, DOIR, Treasury and Finance in relation to policies and implementation of ICT and technologies across government and what we are looking at for the state from a sustainable perspective. They should be all on the same page.*[484]

AIIA (WA) advised the Committee that this could be accomplished by developing an on-line ICT portal that would act as a 'virtual technology park where ICT organizations can come together

---

[482]   Mr Geoffrey Harben, Branch Executive Committee Member, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p12.

[483]   Ms Cheryl Robertson, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p11.

[484]   Miss Sharon Brown, Chair, Information and Communications Technology Industry Collaboration Centre of WA, *Transcript of Evidence*, 25 October 2006, p11.

electronically, so they don't have to be in the same physical location'.[485] Such a portal would act as an on-line one-stop-shop for the ICT industry and provide a site where:

> *people can find out where these things are. We are more than happy to talk to any department at any place or even go to Canberra and talk to the feds. As a starting point, we need to know where it is.*[486]

AIIA (WA) further suggest that:

> *One of the ways to make it easier for companies, instead of thinking about it in terms of bringing the grants together in one place so a company can access them in one place, is perhaps thinking about it in terms of business events. For example, think of the things a business goes through. The website would suggest to those people starting a business to click on a point and that would give them the information on the support that is available. A business may be undertaking R&D and they can click on that area to find out what support is available. It may be commercialising R&D, and the relevant support can be available on a website. Instead of thinking in terms of bringing things together, think about it in terms of the phases that a business goes through and leverage what support is available from that perspective.*[487]

The Committee believes that an ICT portal could effectively allow government and business to share information.

---

[485] Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p23.

[486] Ms Cheryl Robertson, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p11-12.

[487] Mr James McAdam, General Manager, Australian Information Industry Association, *Transcript of Evidence,* 20 September 2006, p12.

Recommendation 14

The Committee recommends that the Western Australian Government, in cooperation with industry, develop an ICT portal that would:

- allow users to quickly and easily access information about the various assistance programmes;

- be constantly maintained to guarantee accurate information;

- provide a vehicle for industry feedback and promotion;

- provide for online submissions and applications;

- announce upcoming events; and

- facilitate any other opportunities benefitting the sector.

Recognising the importance of the ICT sector as one of the four pillars of state economic development and the need for higher levels of communication and coordination, the Committee makes the following recommendation:

Recommendation 15

Western Australian Government appoint a Chief Information Officer, a person with technical ICT expertise, leadership skills and a broad understanding of industry and government, whose role will be to champion ICT within government, and between government and industry.

CHAPTER 5   GOVERNMENT PROCUREMENT

5.1   Significance of Government Procurement to Industry

It is generally acknowledged that government is the largest procurer of Information Communications Technology (ICT) products and services in Australia.[488] The most recent ABS survey of government ICT expenditure was conducted in respect of 2002-03. Excluding wages and salaries of ICT employees, government operating expenses for ICT stood at $5,060 million, $2,270 million of which was Commonwealth Government, the balance being State/Territory and local governments.[489] Research by Intermedium suggests that federal government ICT contracts for 2005-06 were worth $3,200 million.[490]

Selling ICT 'to government is hard, especially for small Australian IT companies. But the size of the public sector relative to the entire economy is hard to ignore'.[491] The Western Australian Department of Treasury and Finance (DTF) state that the State's 'public sector is a major customer of the local ICT industry' and that 'in this capacity, procurement can be viewed as indirectly supporting the local ICT industry'.[492] DTF advised that for 2004-05 approximately $350 million was spent on ICT goods and services by the general public sector, representing 10% of general public sector total goods and services spending. Of this $350 million, $160 million was spent on information technology (IT) services, $90 million on IT goods and $100 million on telecommunications goods and services.[493] The Auditor General for Western Australia reports that over the next decade the State's public sector agencies 'are undertaking or have scheduled more than 150 major ICT projects, at a cost of at least $1.5 billion'.[494] According to the Auditor General for Western Australia:

---

[488]   Australian Information Industry Association Ltd, *Government Procurement Position Paper*, September 2001. Available at: www.aiia.com.au/i-cms.isp?file=133/GovernmentProcurement.pdf.   Accessed on 23 May 2007; Australian Computer Society, *Policy for Government Operations*, nd.   Available at: http://www.acs.org.au/members/display.cfm? href=acsPolicies6.htm. Accessed on 23 May 2007.

[489]   Australian Bureau of Statostocs, Y*ear Book Australia, 2005.* 1301.0. Available at: http://www.abs.gov.au /Ausstats/abs@.nsf/Lookup/69412618B3C0879ECA256F7200832F23?opendocument.   Accessed on 8 February 2007.

[490]   Intermedium, *Government Sales Fundamentals*, nd. Available at: http://intermedium.e-newsletter.com.au/ link/id/8a7fd63b0cfa0eeaaca7/page.html. Accessed on 23 May 2007.

[491]   Davidson, Peter, 'Intensive care needed for ICT', *Information Age*, February 11, 2005, p2.

[492]   Submission No. 9 from Department of Treasury and Finance, August 2006, p1.

[493]   ibid.

[494]   Auditor General for Western Australia, *Auditor General's Report. Second Public Sector Performance Report 2007*, Report 3, April 2007, Office of the Auditor General Western Australia, Perth, 2007, p11.

this comprises 151 projects (and programs of projects) with budgets of $1 million or more in 31 agencies. Twenty of the projects have budgets over $16 million. ... There are also a larger number of projects with budgets of less than $1 million. There are more projects underway in agencies than included in these estimates because only those capital works project proposals which have been submitted to DTF have been taken into account.[495]

Evidence presented to the Inquiry suggests that this level of expenditure makes the government ICT market very attractive to ICT companies. According to Australian Information Industry Association WA Branch (AIIA (WA)), 'effective government procurement of ICT goods and services plays a key role in stimulating ICT industry growth'.[496] AIIA (WA) also suggests that it is not only the size of the government market that is attractive; this particular market 'can provide the opportunity to work on innovative solutions'.[497]

As previously noted, DTF advise that 'the Western Australian public sector is a major customer of the local ICT industry. In this capacity, procurement can be viewed as indirectly supporting the local ICT industry'.[498] However, despite this, DTF also advise that 'the DTF does not have a direct industry assistance or development role'[499] and believes that 'procurement and industry development are best kept as separate functions'.[500]

In contrast to this, the Department of Industry and Resources (DoIR) believes that there is an obvious synergy between industry development and the role of government agencies when trying to develop efficiencies and productivity improvements in the public sector. This is because 'in the vast majority of cases, the value-for-money solution for an agency will come from a local source rather than a package from the eastern states or overseas'.[501]

Finding 22

Government is the largest procurer of ICT products and services in Australia.

---

[495]   ibid., pp11-12.

[496]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p4.

[497]   ibid., p29.

[498]   Submission No. 9 from Department of Treasury and Finance, August 2006, p1.

[499]   ibid., p1.

[500]   ibid., p3.

[501]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p15.

Finding 23

Government ICT procurement has been, and continues to be, a significant indirect support for the ICT industry.

5.2 Federal Government ICT Procurement Arrangements

In November 2005 the then Special Minister of State, Senator the Hon. Eric Abetz, announced the Australian Government's intention to make ICT contracting with the government 'simpler and easier'.[502] This process involved developing draft model contracts that are in line with government regulations and guidelines. These draft models, known as SourceIT model contracts, were developed in consultation with industry and agencies, and released for comment in May 2006. They are designed for the procurement of hardware acquisition and support, licence and support of commercial off-the-shelf software, and IT consultancy services, and the Department of Finance and Administration (DOFA) expect them to 'make the preliminary stages of agreeing terms more efficient'.[503] DOFA advise that the Australian Government Information Management Office (AGIMO) will consult further with stakeholders in order to:

- *Gather feedback on the operation of the model contracts;*

- *Keep up-to-date with outcomes of other ICT procurement related reviews and incorporate outcomes as necessary and appropriate;*

- *Enhance the User Notes and Guide to effectively address contracting issues in ICT procurement;*

- *Seek agency and supplier views on categories for inclusion in a potential next suite of model contracts; and*

- *Consider options for supporting more complex ICT contract arrangements.*[504]

In November 2006 the Parliamentary Secretary to the Minister for Finance and Administration, Senator the Hon. Richard Colbeck, announced changes to the arrangements by which businesses become endorsed suppliers to the Australian Government. Up until that time, businesses selling ICT to the federal government needed to pre-qualify via the Endorsed Supplier Arrangement (ESA) programme. Government agencies purchased from ESA endorsed suppliers, with

---

[502] Department of Finance and Administration, *SourceIT - Model Contracts: About ICT Contracts*, nd. Available at: http://www.finance.gov.au/sourceit/index.asp. Accessed on 8 February 2007.

[503] ibid.

[504] ibid.

endorsement granted once a firm met 'quality, standards, service and financial viability criteria'.[505] The ICT SME Joint Industry Government Working Party noted that 'the ESA could potentially make it difficult for some SMEs to compete for very small contracts as they need to go through the extensive ESA endorsement process even for, say, a $20,000 contract'.[506] One of the changes introduced in November 2006 was the end of the ESA programme. Senator Colbeck stated that 'businesses will no longer have to jump through hoops to become endorsed government suppliers', thus ending 'an old regime of red-tape and overregulation'.[507]

Suppliers of ICT goods and services wishing to sell to the federal government are now to demonstrate their suitability through an ICT multi-use list (MUL) to be administered by the Department of Finance. Potential suppliers voluntarily submit their business details and statement of financial viability through a simple online registration process. Senator Colbeck advised that the new supplier arrangements benefited new and existing suppliers by the removal of the requirement(s) for:

- *suppliers to acquire and retain insurances at arbitrary levels which may be much higher than those suggested by an agency's procurement risk assessment;*

- *a financial viability assessment in anticipation of contracts with government and allowing agencies to conduct a financial viability assessment only when required for a specific procurement;*

- *endorsed suppliers to maintain performance guarantees; and*

- *endorsed suppliers to maintain insurances for seven years.*[508]

It is important to note that 'inclusion of an ICT supplier on the ICT MUL does not imply that the Australian Government endorses the use of that supplier's product or services'.[509] Also, the

---

[505]   ICT SME Joint Industry Government Working Party, *Final Report to Senator the Hon. Helen Coonan*, March 2005, p6. Available at: http://www.acs.org.au/publication.docs/ICTSMEJWP-IndustryReport FINAL.pdf. Accessed on 8 February 2007.

[506]   ibid.

[507]   Senator the Hon. Richard Colbeck, 'Removing red tape to open up Australian Government office equipment and ICT market', *Media Release*, 29 November, 2006. Available at: http://www.parlsecfinance.gov.au/ media/2006/mr_052006.htm. Accessed on 8 February 2007.

[508]   ibid.

[509]   Department of Finance and Administration, *Information and Communication Technology Multi Use List (ICT MUL)*, nd.. Available at: http://www.finance.gov.au/ictmul. Accessed on 8 February 2007.

Department of Finance and Administration advise that it is not mandatory to use the ICT MUL for agency procurement.[510]

In addition to SourceIT model contracts and the ICT MUL, Australian Government procurement is also assisted via the Australian Government Tender System, AusTender. AusTender provides notification of publicly available business opportunities with Australian Government agencies under the *Financial Management and Accountability Act 1997(*Cwlth*)*, and selected agencies under the *Commonwealth Authorities and Companies Act 1997*(Cwlth). Suppliers of ICT goods and services register their area of interest and receive automatic email notification of opportunities for these agencies in appropriate areas.[511]

The Inquiry of the House of Representatives Standing Committee on Science and Innovation into strategies to overcome potential impediments into Australian technological innovation and its commercialisation reported evidence encouraging the Australian Government to consider 'a review of its purchasing and procurement policies to make them more supportive of Australian innovative and technology-based SMEs'.[512] This House of Representatives Committee recommended that the Australian Government 'investigate mechanisms to encourage Government procurement of technological innovation from Australian small to medium enterprises where available'.[513]

5.3 State Government ICT Procurement Arrangements

Western Australian Government procurement must be conducted in accordance with the *State Supply Commission Act 1991*(WA) and related policies, and the *Public Works Act 1902*(WA). State Government procurement is also governed by national and international agreements and government obligations such as the Australia United States Free Trade Agreement.[514] In January 2003 the then Premier of Western Australia, the Hon. Geoff Gallop, announced changes to government procurement practices, that purchasing of goods and services would be 'streamlined'

---

[510] Department of Finance and Administration, *Information and Communication Technology Multi Use List (ICT MUL)*, nd. Available at: http://www.finance.gov.au/ictmul. Accessed on 8 February 2007; Department of Finance and Administration, *Commonwealth GITC 4: Notice to all users of the GITC Contracting Framework*, nd. Available at: http://www.gitc.finance.gov.au/scripts/docloader.asp?id= 400001. Accessed on 8 February 2007.

[511] Department of Finance and Administration, *AusTender*, nd. Available at: https://www.tenders.gov.au/federal /index.cfm. Accessed on 8 February 2007.

[512] House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, June 2006, Parliament of the Commonwealth of Australia, Canberra, 2006, p198.

[513] ibid., p201.

[514] State Supply Commission, *Procurement Policy*, 2006. Available at: http://www.ssc.wa.gov.au. Accessed on 9 February 2007; Submission No. 8 from Department of Industry and Resources, August 2006, p14.

and that Government procurement, with expertise 'consolidated into one entity', would operate with a common commercial strategy.[515] According to DTF:

> *The Procurement Reform agenda is directed towards achieving savings across Government, obtaining better procurement outcomes for agencies, improving planning processes and risk management, and making more effective use of resources.*[516]

In Western Australia DTF is responsible for whole of government Common Use Contracts, for developing and administering the State's procurement policies, processes and standards, and for providing procurement consultancy and advice to buyers.[517]

Finding 24

Western Australian Government procurement must be conducted in accordance with the *State Supply Commission Act 1991*(WA) and related policies, and the *Public Works Act 1902*(WA). State Government procurement is also governed by national and international agreements and government obligations such as the Australia United States Free Trade Agreement.

(a)   Common Use Arrangements (CUAs)

Western Australian government agency procurement occurs via established Common Use Arrangements which are 'whole-of-government standing offer arrangements, awarded to a single or a panel of suppliers for the provision of specific goods or services commonly used within Government'.[518] CUAs are established through a tender process and purchasing via CUAs must be in accordance with State Supply Commission policies and guidelines. The purchase of ICT goods and services is via CUAs and most are mandatory in the Perth region while they are generally non-mandatory in regional areas to provide for Buy Local provisions and regional preferences.[519]

---

[515]   Premier, the Hon. Geoff Gallop, *Media Statement*, 3 January 2003. Available at: http//:www.mediastate ments.wa.gov.au. Accessed on 9 February 2007.

[516]   Department of Treasury and Finance, *Procurement Reform*, 2006. Available at: http://www.dtf.wa.gov.au/ cms/ref_index.asp. Accessed on 9 February 2007.

[517]   Department of Treasury and Finance, *Common Use Arrangements No. 146601 - SPIRIT: Buyers Guide*, 2006, p9. Available at: htto://www.dtf.wa.gov.au/cms/uploadedFiles/SPIRIT%20Buyers%20 Guide%20-%20July%202006.pdf. Accessed on 9 February 2007.

[518]   Department of Treasury and Finance, *Common Use Arrangements*, nd. Available at: http://www.dtf. wa.gov.au/cms/pro_content.asp?ID=572. Accessed on 9 February 2007; Department of Treasury and Finance, *Common Use Arrangements. Information for Buyers*, nd. Available at: http://www.dtf.wa.gov.au/cms/pro_content.asp?ID=464. Accessed on 9 February 2007.

[519]   Office of Government Procurement, Department of Treasury and Finance, *2005-06 Procurement Reform Benefits Realisation Report*, Government of Western Australia, Perth, 2006, p37.

Procurement reform has resulted in significant changes to policy and purchasing thresholds. The public tender threshold has been increased from $50,000 to $100,000, and verbal quotations are acceptable for purchases less than $10,000. For purchases of $1,000 or less, direct purchasing can occur and CUAs have been converted to 'pick and buy' arrangements, removing the requirement to obtain multiple quotes. There has also been standardisation of contract documentation across the public sector.[520] On 1 January 2007 new General Conditions of Contract (GCOC) for the supply of ICT goods and/or services (except those procured under Strategic Partnering in Resourcing IT (SPIRIT)) and new Request Documents came into effect. It is mandatory for State Public Authorities to use the ICT request and GCOC for ICT procurements (ICTGCOC).[521] DTF advise that extensive consultation occurred with the State Solicitor's Office in the development of these documents, which means that there should be no need to vary the ICTGCOC. The ITCGCOC defaults in favour of the government. Nevertheless, when deemed appropriate, there is provision for an agency to vary the ITCGCOC on a case-by-case basis.[522] Importantly these documents cover issues concerning liability and intellectual property (IP), which are discussed in detail below.

(b)   SPIRIT (Strategic Partnering in Resourcing IT)

Strategic Partnering in Resourcing IT (SPIRIT) is a CUA for the procurement of ICT services, and, with limited exceptions, all Western Australian government buyers of ICT services must do so within the SPIRIT framework. There are two stages to the SPIRIT open tendering process. In the first stage, suppliers must apply to qualify for one or more services, and on qualifying, sign the Head Agreement. Qualified suppliers have also agreed to use the standard Government Information Technology and Communications, Western Australia, Version 4 (GITC WA4) Terms and Conditions (Customer Contract). Their details are then made available to buyers by being placed on the SPIRIT Marketplace System. Buyers search this system for suppliers qualified to supply their required services and invite them to obtain a copy of the Request document(s). For purchases less than $10,000, invitations are issued directly; for purchases over this amount, invitations are issued via Gem (government electronic market) Tendering. The second stage consists of the supplier responding to such invitations and negotiating a contract for the supply of particular services.[523] While the SPIRIT Head Agreement has no termination date, the GITC WA4 Customer Contracts signed for each particular procurement transaction allow for a five-year

---

520   ibid., p5 and 88.

521   Department of Treasury and Finance, *Guide for the use of the ICT General Conditions of Contract & Request Document*, 2006, p3. Available at: www.dtf.wa.gov.au/cms/uploadedFiles/Guide%20for%20the%20Use %20of%20the%20ICT%20General%20Conditions%20of%20Contract%20&%20Request%20Document%20 .dot. Accessed on 9 February 2007. Note: Under the SPIRIT framework, procurement must use the SPIRIT Request and GITC WA4 and these are discussed later in the report.

522   ibid., p3.

523   Department of Treasury and Finance, *Common Use Arrangements No. 146601 - SPIRIT: Buyers Guide*, July 2006, p4 and 10. Available at: htto://www.dtf.wa.gov.au/cms/uploadedFiles/SPIRIT%20Buyers%20 Guide%20-%20July%202006.pdf. Accessed on 9 February 2007.

maximum term. For very high value and complex purchases, there is also the provision for negotiation on a case-by-case basis.[524]

According to DTF:

> With 350 suppliers on SPIRIT, it is a very competitive framework. The advantage of the
> SPIRIT framework is that agencies can look on a database and see who the suppliers are
> in the particular ICT area of what they are buying.[525]

Finding 25

Western Australian Government procurement of ICT goods and services occurs via established Common Use Arrangements (CUAs). CUAs are mandatory for most ICT goods and services purchasing in the Perth region and non-mandatory in regional areas to provide for Buy Local provisions. The procurement of ICT services must be done within the SPIRIT framework, a CUA designed for ICT services.

The Australian Information Industry Association (AIIA) has expressed the concern of its members about the possibility of SPIRIT being replaced with CUAs, a possibility that raises two key concerns for industry.

> The first issue is the qualification process. ... All of industry had to agree to a common set
> of terms and conditions - in our industry that is not an easy thing to do - and produce case
> study information in a very granular way around the many hundreds of services that
> companies might provide. It was a long and time-consuming exercise. One concern we
> have had is that the common use arrangement process may require companies to requalify.
>
> The second issue is that common use arrangements to date have been restricted
> arrangements for a very small number of companies, whereas SPIRIT is all inclusive.
> Everybody in the industry is able to be a part of SPIRIT and also able to come and go.
> You can bid for government business without being a qualified SPIRIT participant
> provided that by the time contracts come about, you have gone through the process. The
> common use arrangements are fixed for a finite period, usually three years, and there is no
> coming and going. You are either on it or you are out. If you are out, in theory, you are
> out of doing business with government for the next three years. There has been some
> serious concern about that.[526]

---

[524]   ibid., p6.

[525]   Mr Alex Taylor, Director, Strategic Sourcing Reform, Department of Treasury and Finance, *Transcript of Evidence*, 28 February 2007, p6.

[526]   Mr Geoffrey Harben, Branch Executive Committee Member, Australian Information Industry Association, *Transcript of Evidence*, 20 September, 2006, p7.

AIIA's concern is that a move away from the SPIRIT framework would be expensive for industry, particularly small companies who do not have the resources available to multinationals.[527] DTF advise that 'the SPIRIT framework has been in place for a number of years and has delivered some particularly good outcomes for industry and government'. SPIRIT is currently being reviewed and DTF have considered a number of views on the success or usefulness of the framework.[528]

While not committing themselves to this position, DTF advise that they:

> *accept that it is unlikely that there will be any strong reason to go through a full pre-registration process again ... but our current thinking - we hear industry's concerns - is that we would not want to go through another registration process unless there is a very good reason for doing so. I guess, in summary, we are looking at where we go with the SPIRIT framework, and we are talking to industry about options, and they are broadly within the spectrum that ranges from, "Let's just finish with SPIRIT and get into a normal process with no pre-registration, and people will put their hands up for quotes and tenders as they wish to put them up," to "Do we maintain a registration process standard accompanied by standard contract documentation etc?"*

> *We hope and expect to have that resolved by about mid-year - June or July this year - and we are actively engaged with industry and we can take their views on board.[529]*

The Committee notes that DTF consulted with stakeholders 14th February 2007 and 11th April 2007.[530]

Finding 26

Uncertainly regarding the future of SPIRIT is causing concern in the ICT sector. A review of SPIRIT is currently underway.

---

[527]   ibid., p7.

[528]   Mr Alex Taylor, Director, Strategic Sourcing Reform, Department of Treasury and Finance, *Transcript of Evidence,* 28 February, 2007, pp4-5.

[529]   ibid., p5.

[530]   Department of Treasury and Finance, *The Future of SPIRIT*, nd. Available at: http://www.dtf.wa.gov.au/ cms/pro_cotent.asp?ID=1720. Accessed on 6 June 2007.

> **Recommendation 16**
>
> The current review of SPIRIT needs to be finalised as soon as possible to provide clarity and certainty to the industry.

5.4 Issues Concerning Government Procurement

The Western Australian Auditor General's recent performance examination of the major ICT projects shows that while some major ICT projects have been delivered successfully, generally speaking ICT projects are particularly difficult to deliver.[531] The report identifies three main difficulties for government agencies:

- *the duration of some projects were two to three times longer than estimated*

- *budgets were exceeded by over 100 per cent*

- *intended benefits were delayed or not fully realised*[532]

While particular difficulties relating to ICT procurement are experienced by government agencies, the suppliers and potential suppliers to such contracts also experience difficulties with the government ICT procurement processes. Concern was raised in submissions regarding the cost, uncertainty and length of time involved in qualifying for the tender process and for contract negotiation. These issues are particularly pertinent for SMEs. Submissions also commented on the lack of feedback on tenders and on which company had been successful in the tender.

(a) Cost of Qualifying and Tendering

The issue of time and resources needed to qualify as a government supplier and to tender on government contracts is a significant issue for SMEs.

> *Just the process of tendering has a large cost to our company. This is in addition to the proposal that we prepared for our initial engagement with Government 3 years ago.*[533]

> *The government ICT market is also recognised as being one that is costly to do business with. AIIA members cite the cost of tendering and uncommercial terms and conditions ... as being major hurdles to doing business in the government ICT market.*[534]

---

[531]   Auditor General for Western Australia, *Auditor General's Report. Second Public Sector Performance Report 2007*. Report 3, April 2007, Office of the Auditor General Western Australia, Perth, 2007, p11 and 13.

[532]   ibid., p13.

[533]   Submission No. 4, Closed Submission.

Qualifying to be part of SPIRIT was an extremely expensive exercise.[535]

The Gartner Group's research report suggests that government should take steps 'to ensure that vendor costs of response are always less than 5 percent of the value of any contract'.[536] This position is supported by AIIA (WA) who argue that:

> *the cost of bidding or tendering for government work should be minimised, ideally, less than 5% of the total value of the contract. Reducing costs will allow more companies to bid, thereby increasing competition and the governments [sic] choice of solutions.*[537]

For this reason, AIIA (WA) was concerned SPIRIT-qualified companies may have to requalify under CUA arrangement processes, further adding to their costs. Similarly, the ICT Industry Collaboration Centre (ICT ICC) argues that:

> *over-heads for SMEs working with Government are too high, particularly responding to quotes and tenders or getting on to panels to fulfil the government multiple quotes requirement, when they never get awarded the job.*[538]

ICT ICC state that CUAs are beneficial to both Government and suppliers as 'suppliers on the panel have already been selected as suitable and agreed to the terms and conditions'.[539] However, ICT ICC believe:

> *there are issues arising that there are many companies which have done all the work of getting on to a panel but never get any work out of it. This is frustrating as the work is "invisible as there is no longer a need to advertise jobs, simply pick off the panel or get a few invited quotes".*[540]

With regards to small companies feeling excluded from government goods and service providing opportunities because of the investment qualifying and tendering requires, DTF advised:

> *In the SPIRIT pre-qualified framework right now, I think there is something in the order of 350 or more businesses that are pre-qualified. The process is continuing to pick up new players all the time. There was a major pre-qualification model several years ago, but it is open, so people are coming forward and getting on the panel regularly now. If it is specifically around getting onto the pre-qualified model, I am surprised. It is not that*

---

[534]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p29.

[535]   Mr Geoffrey Harben, Branch Executive Committee Member, Australian Information Industry Association, *Transcript of Evidence*, 20 September, 2006, p7.

[536]   Davidson, P., 'Intensive care needed for ICT', *Information Age*, February 11, 2005, p5.

[537]   Submission No. 6 from Australian Information Industry Association Ltd, WA Branch, August 2006, p30.

[538]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, August 2006, p14.

[539]   ibid., p11.

[540]   ibid., p11.

onerous a process. It is about a supplier proving that it has the skills to perform in the particular category that it is applying for and agreeing to the terms and conditions that government wants agreed upfront, which gets them to the pre-qualification point. It is, I guess, something that would be worthy of review as part of where we are going now. [541]

Finding 27

Industry finds the process of qualifying as a supplier to government agencies complex and expensive.

Recommendation 17

The state government should review its prequalification requirements for government procurement contracts to make this a more streamlined and cost efficient process.

(b)   Uncapped Liability and Professional Indemnity Insurance Levels

(i)   *Uncapped Liability*

Uncapped liability for government contracts as a significant difficulty for the ICT industry was very clearly a theme in evidence presented to the Committee. Several submissions identify the uncapped liability provisions as unreasonable and as an impediment to the development of the ICT industry, with some seeing it as an 'alternative to proper risk management and balanced risk sharing'.[542]   Again, this was particularly so for SMEs who find it difficult, if not impossible, to obtain insurance with unlimited liability coverage due either to budgetary constraints or an unwillingness on behalf of underwriters to provide the cover. Larger companies, on the other hand, are either self-insured or able to buy the necessary cover.[543]

---

[541]   Mr John Tondut, Acting Executive Director, Office of Government Procurement, Department of Treasury and Finance, *Transcript of Evidence*, 28 February 2007, p6.

[542]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, August, 2006, p13; Submission No. 7 ATUG-WA, August 2006, p7; Submission No. 8 from Department of Industry and Resources, August 2006, p16; Submission No. 11 from Western Australian Information and Communications Technology Industry Development Forum, September 2006.

[543]   Submission No. 8 from Department of Industry and Resources, August 2006, p16.

The reason that capping of contracts is so important is that it acts as a disincentive to do business with government for both Australian and multinational companies. So, it is a disincentive right across the board to do business with government. If someone cannot come into a contract understanding what the liability will be if things go wrong, he cannot insure against it. If it is a small Australian company, it is potentially putting its entire business and possibly a home at risk in doing business with government. It is very important from the government side of the fence if it wants to see best-of-breed solutions delivered and reduce costs in contracting with the industry.[544]

This position is supported in the Gartner research group's report on the state of Australia's ICT industry. Here, Hayward argues that 'the insistence on unlimited liability in contracts deters most domestic IT companies from responding, as well as a fair number of large multinational corporations'.[545] Hayward posits that removing unlimited liability from government procurement contracts is an immediate policy issue that the government and IT industry should address.[546] For Hayward, 'limiting liability to a reasonable multiple of contract value would not only increase the number of responses and therefore options for government, but would also accelerate the contractual negotiations and reduce the costs of IT procurements on both government and suppliers'.[547] A respondent in an AIIA study reported that 'smaller suppliers often agreed to the government's uncapped liability position because they could not afford to miss out on the business or to negotiate these issues'.[548] For larger ICT suppliers who were in a better position to object to the unlimited liability provisions, the result was time consuming and expensive negotiations.[549] This problem is recognised by DoIR, who state that not only does the unlimited liability clause 'limit the opportunity for government to receive a wide range of high quality proposals, but it also represents additional costs to suppliers and thus higher prices paid by government'.[550]

It is not only the value of the cover required; AIIA advise that the time that companies are required to hold the insurance is also problematic:

And quite often they ask them to carry that insurance for up to seven or 10 years after the end of the contract, which is a hell of a long time for someone to have to carry that cost, which again leaves people not wanting to go into business because it is too hard and not commercial for them.[551]

---

[544] Mr James McAdam, General Manager, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p3.

[545] Davidson, Peter, 'Intensive care needed for ICT', *Information Age*, February 11, 2005, p5.

[546] ibid., p3.

[547] ibid., p5.

[548] Australian Information Industry Association, *Better Practice, Better Outcomes: Reforming Liability Regimes Under Government ICT Contracts*, 2004, AIIA Ltd, Canberra, p20.

[549] ibid.

[550] Submission No. 8 from Department of Industry and Resources, August 2006, p16.

[551] Ms Cheryl Robertson, Strategy Consultant Australian Information Industry Association, *Transcript of Evidence*, 20 September, 2006, p9.

At the federal level, liability in Australian Government contracts was limited, with guidelines issued in August 2006. Senator the Hon. Helen Coonan states that supplier liability 'has been a significant issue for the ICT industry in Australia for a number of years'.[552] Furthermore:

> *the previous liability and related insurance requirements were at times a significant impediment to companies wishing to bid for Australian Government contracts. This was particularly so for medium and small ICT firms, which were not in a position to negotiate with their insurers.*[553]

The Australian Government ICT Liability Policy states:

> *1.1 The ICT liability policy requires agencies subject to the* Financial Management and Accountability Act 1997 *(the FMA Act) to, in most cases, cap the liability of ICT suppliers at appropriate levels. Unlimited liability should only be required when there is a compelling reason.*

> *1.2 The ICT liability policy has been specifically developed by the Australian Government for ICT contracts to reflect the following particular characteristics of ICT procurement:*

> - *always insisting on unlimited supplier liability may significantly reduce market competition, as many ICT suppliers, particularly small to medium enterprises (SMEs), are unwilling or unable to accept such liability;*

> - *always insisting on unlimited or unjustifiably onerous supplier liability may result in agencies paying a higher than necessary contract price, as a supplier may include the cost of excessive insurance cover and their own risk premium in its price;*

> - *the nature of some information technology (IT) development is inherently high risk, and an alliance-based or cooperative approach to sharing risk is sometimes necessary to find a supplier willing to undertake the work; and*

> - *it is often difficult to identify the exact cause of a catastrophic IT system failure, and hence where liability for such failure lies, particularly where there are more than two parties with interconnecting responsibilities.*[554]

With the exception of purchases under the Whole of Government Telecommunications Arrangements, this policy applies to all Australian Government ICT goods and services purchases. The guide recognises that due to the complexity and diversity of ICT purchasing contracts no single risk management approach, risk assessment or set of liability clauses will be appropriate for

---

[552] Department of Communications, Information Technology and the Arts, *A Guide to Limited Supplier Liability in ICT Contracts with Australian Government Agencies*, Foreword, 2006. Available at: http://www/dcita. gov.au/__data/assets/pdf_file/41968/LimitingLiabilityReport.pdf. Accessed on February 11 2007.

[553] ibid.

[554] ibid., p1.

all ICT contracts. Given this, guidance is provided to help Australian Government agencies and ICT suppliers understand and work within the policy.[555]

Victoria is recognised in Australia as a leading ICT state and has a Minister dedicated to ICT. In December 2005 the Multimedia Victoria released its *ICT Industry Plan 2005-2010* in which it outlines new initiatives aimed at encouraging greater innovation through reforming its whole-of-government ICT procurement policies.[556] These new initiatives included:

- *ensure that apportionment of liability in ICT contracting reflects actual project risk and minimises the need for ICT contractors to bear unlimited liability;*

- *ensure that types and levels of insurance required in ICT contracts are appropriate having regard to actual project risks;[and]*

- *ensure that tender documentation specifies the expected contract provisions for dealing with these issues (following appropriate risk analysis), or flags that these will be negotiated with shortlisted suppliers.*[557]

Multimedia Victoria's five-year strategy was welcomed by industry. Angus Robinson, Chief Executive of the Australian Electrical and Electronic Manufacturers' Association (AEEMA), said:

> *the Plan reaffirmed Victoria's leading role in shaping industry development strategies that were relevant to the rapid changes that are evolving globally.*[558]

In Western Australia DTF's September 2006 'Procurement Reform Benefits Realisation Report' for 2005-06 noted with regards to ICT contracting that guidelines and associated templates relating to the capping of supplier liability had been developed with consultation from industry and government agency specialists.[559] In November 2006 revised *General Conditions of Contract for the Supply of Information and Communications Technology Goods and/or Services* were released. These guidelines 'became mandatory for new tenders called from January 2007'.[560] Clause 22.1 of this General Contract states that:

---

[555]   ibid., p2.

[556]   Corporate Public Affairs, Department of Infrastructure, *Victorian Government ICT Industry Plan 2005-2010*, State of Victoria, Melbourne, December 2005, p27.

[557]   ibid.

[558]   Robinson, Angus M, 'AEEMA welcomes Victoria's five-year ICT industry growth plan', *AEEMA Media Release* 15/05, 13 December 2005.

[559]   Department of Treasury and Finance, Office of Government Procurement, *2005-06 Procurement Reform Benefits Realisation Report*, Government of Western Australia, Perth, 2006, p62.

[560]   Electronic Mail from Department of Treasury and Finance, 29 May 2007, p1. Note: an amended set of guidelines was issued in April 2007, the amendment consisting of the inclusion of a clause on the use of lobbyists.

(a) The Contractor must take out and maintain insurance in relation to all liabilities of the Contractor under the Contract as specified in the Contract Documents, for the benefit of the parties named in the Contract Documents.

(b) The insurance required under 22.1(a) must be on the terms, for the period of time and for the amounts specified in the Contract Documents.[561]

The Guide to the contract conditions recognises that 'a more structured and informed approach' to determining liability issues would result in cost savings and improved outcomes for both government and ICT suppliers.[562] The guide clearly states:

State Public Authorities using the new ICT General Conditions of Contract and Request documents should adopt a risk management approach to determine supplier liability. Public Authorities should in most cases cap the liability of ICT suppliers at appropriate levels. Unlimited supplier liability should only be sought when it is justified by the size, complexity or inherent risk of the project.[563]

Guidance is then provided on how to identify risks, quantify the liability that arises from the risks and treat the liability within the terms and conditions of the contract.

Finding 28

In November 2006 the Western Australian Government issued revised General Conditions of Contract for the Supply of Information and Communications Technology Goods and/or Services. These guidelines are mandatory for all new tenders called from January 2007. Guidelines are provided for a more structured and informed approach to determining liability issues. State Public Authorities are now advised that in most cases ICT supplier liability should be capped at appropriate levels, with unlimited liability only to be sought when necessitated by size, complexity or inherent risk of a particular project.

While the Committee welcomes this change in conditions, it is noted that the SPIRIT Buyers Guide still advises:

---

[561] Government of Western Australia, *General Conditions of Contract for the Supply of Information and Communications TechnologyGoods and/or Services,* November 2006, p49. Available at: http://www.dtf.wa. gov.au/cms/uploadedFiles/General%20Conditions%20of%20Contract%20ICT.doc. Accessed on 9 February 2007. Note: There is an April 2007 edition of these Conditions of Contract, and the clauses referred to in this report remain unchanged. This is available at: http://www.dtf.wa.gov.au/cms/pro_content.asp?ID=1327.

[562] Department of Treasury and Finance, *Guide for the use of the ICT General Conditions of Contract & Request Document - Draft -* November 2006, p29. Note: There is a March 2007 edition of these Conditions of Contract, and the clauses referred to in this report remain unchanged. This is available at: http://www.dtf. wa.gov.au/cms/pro_content.asp?ID=1327.

[563] ibid.

Intentionally, the terms and conditions are relatively even-handed but default in favour of the government. This is appropriate, given that the document represents standard government ICT procurement terms. Nevertheless it remains open to Qualified Suppliers to convince an agency, on a case-by-case basis, that the default position is inappropriate and that the operation of a particular provision should be altered via the Contract Details [... and ....]

In a practical sense there is no need for either party to seek a variation to the Terms and Conditions. By judicious use of the Contract Details, it is possible to vary the effect of most clauses, which are likely to be contentious. Where the contract structure does not enable such a variation to take effect, this is because the Contract Authority requires those provisions to remain unaltered.[564]

In addition to this, GITC WA4, which relates to SPIRIT, Clause 25.1 states:

The liability of either party for breach of this Contract or for any other common law or statutory cause of action arising out of the operation of this Contract will be determined under the relevant law in Australia that is recognised, and would be applied, by the High Court of Australia.[565]

Clause 25.2 addresses limitations to liability:

If so specified in the Contract Details, liability arising under this clause 25 will be limited. Unless expressly stated otherwise in the Contract Details, the limit on liability specified in the Contract Details will apply for the benefit of both parties in respect of each single occurrence or a series of related occurrences arising from a single cause.[566]

In September 2006 AIIA suggested that changes to the unlimited liability on government procurement contracts would be one factor that would:

certainly assist in raising the profile, growing the sector and showing how quickly we can get some quick runs on board in some areas. With the unlimited liability issue, we could have a quick return.[567]

In a supplementary submission in April 2007, AIIA advised:

---

[564]   Department of Treasury and Finance, *Common Use Arrangements No. 146601 - SPIRIT: Buyers Guide*, 2006, p14. Note: There is a March 2007 edition of this Guide, and the clauses referred to in this report remain unchanged. This is available at Available at: http://www.dtf.wa.gov.au/cms/uploadedFiles/SPIRIT_ Buyers_Guide_March 2007.

[565]   Department of Treasury and Finance, *GITC WA4 Terms and Conditions (Customer Contract)*, *Customer Contract for SPIRIT*, December 2005, p41. Available at: http://www.dtf.wa.gov.au/cms/uploadedFiles/ GITC_WA4_Terms_and_Conditions_(Customer_Contract)__December_2005.pdf. Accessed on 9 February 2007.

[566]   ibid., p41.

[567]   Mr Louis Martini, WA Chair, Australian Information Industry Association, *Transcript of Evidence*, 20 September, 2006, p6.

the ICT industry is 'cautiously optimistic' about the new liability provisions. Most have warmly welcomed the ability to now influence the liability provisions, which should, through informed discussion, result in a better outcome for both parties.[568]

Finding 29

Formalising the capped liability provisions in government procurement contracts would provide an immediate benefit to industry.

Finding 30

For all tenders called for prior to January 2007, suppliers were required to accept unlimited liability provisions in government procurement contracts and no provision was made for liability to be capped at appropriate levels.

During the course of its Inquiry representations were made to the Committee from industry advocating for a default position of capped liability. While the government has provided for liability to be negotiated, the default position remains with the government and it is up to the suppliers to convince an agency that the default position is inappropriate. At this stage, the Committee is unable to determine the implications of the practical implementation of the new model, that is, to determine whether it has been embraced and most contracts are now capped or whether the old standard of being capped is still in place in practice.

The Committee has some reservations that whilst the new regime might seem attractive and go some way to meeting industry needs, a practical consideration for industry negotiating with government is the level of authorisation and skill of government officers engaged at that level of procurement.

Recommendation 18

The Committee recommends assessment in January 2008 to determine whether the new liability provisions are meeting government and industry needs and expectations.

---

[568]   Submission No.16 from Australian Information Industry Association, April 2007, p1.

(ii) *Professional Indemnity*

With specific regard to professional indemnity levels, submissions to the Inquiry saw the current requirements as being both out of step with international practice and the size or scale of the project.[569] As AIIA stated:

> *The insurance indemnity issue - the amount of insurance that small companies have to carry to cover themselves or a one-man team working - costs enormous amounts of money, which is not actually necessary. There does not seem to be any background going into picking a number for the insurance that is required. That is a big issue for our small members.*[570]

Furthermore, many agencies take the default position even though the contract value is relatively small. For small companies, professional indemnity insurance in the millions of dollars is 'almost prohibitive'.[571]

The ICT Contract Guide states that:

> *A good indication as to whether or not professional indemnity insurance is a requirement under the Contract, is for the Agency to determine if a financial or economic loss, bodily injury, property loss or damage, defamation, infringement of copyright, misleading or deceptive conduct could occur or be suffered by the Agency or a third party as a result of goods or services provided by the Contractor.*
>
> *If so, then PI insurance is a requirement.*[572]

GITC WA4 Clause 15.9 states that suppliers must have an insurance policy that provides minimum value professional indemnity insurance of $1 million per claim, as well as public liability ($5 million minimum value per claim) and product liability ($5 million minimum value per claim) insurance.[573]

---

[569]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, August 2006, p14; Submission No. 7 from ATUG-WA, August 2006, p7.

[570]   Ms Cheryl Robertson, Strategy Consultant, Australian Information Industry Association, *Transcript of Evidence*, 20 September, 2006, pp8-9.

[571]   Mr Geoffrey Harben, Branch Executive Committee Member, Australian Information Industry Association, *Transcript of Evidence*, 20 September, 2006, p9.

[572]   Department of Treasury and Finance, *Guide for the use of the ICT General Conditions of Contract & Request Document - Draft* - November 2006, p14. Note: There is a March 2007 edition of these Conditions of Contract, and the clauses referred to in this report remain unchanged. This is available at: http://www.dtf. wa.gov.au/cms/pro_content.asp?ID=1327.

[573]   Department of Treasury and Finance, *GITC WA4 Terms and Conditions (Customer Contract), Customer Contract for SPIRIT*, December 2005, p25. Available at: http://www.dtf.wa.gov.au/cms/uploadedFiles/ GITC_WA4_Terms_and_Conditions_Customer_Contract)_-_December_2005.pdf. Accessed on 9 February 2007.

(iii)   Overarching Liability and Professional Indemnity Issues

One issue that arises is any possible disjuncture between procurement policy and agency practice. In August 2004 a study undertaken for AIIA found that:

> *the practice of a significant number of agencies in a significant number of ICT contracts is to cap the liability of ICT suppliers under these contracts and in some cases, exclude some areas of the supplier's liability. This practice is not consistent with the expressed policy position of most government which is not to cap or exclude the liability of suppliers.*[574]

For this 2004 study, AIIA obtained information relevant to the situation in Western Australia through a telephone interview with an ICT procurement legal adviser to the Western Australian government. During this call it was suggested that while the preferred position was not to limit liability, this common law position was not rigorously enforced and that 'agencies tended to make their own decisions on this issue - often without legal advice'.[575] Given that negotiation on these issues is costly in terms of time and resources for all parties, it is important that all parties to the procurement process are aware of procurement policy and have guidance in how to implement this policy for the benefit of all involved. For AIIA, changing policy also requires disseminating information about those changes.

> *Policy change also depends on the promulgation of that policy. Around some of the procurement type issues, we could well change the arrangements towards capping liability or commercialisation of intellectual property. But unless those get out into the field and they are being delivered by the people who are signing contracts, we will not see that flow through as quickly as we otherwise might. There is an education process to policy change as well.*[576]

Given that the changes were introduced in late 2006, there have been relatively few contracts let under the new arrangements. AIIA suggests that:

> *it is perhaps too early to form a view on how they are operating in practice. There does appear to be a willingness to negotiate, but there is also some uncertainly. Our experience in other jurisdictions is that culture and habit are strong and changes must be implemented with ongoing education and support if they are to be effective. In particular, we suggest that procurement officials receive suitable education on how to undertake appropriate risk assessments so that the liability determined is well based, rather than being a 'best guess'.*[577]

---

[574]   Australian Information Industry Association. *Better Practice, Better Outcomes: Reforming Liability Regimes Under Government ICT Contracts*, 2004, p1.   Available at: http://www.aiia.com.au/icms.isp?file=133/ BetterPracticeBetterOutcomesReport.pdf. Accessed on 9 February 2007.

[575]   ibid., p20.

[576]   Mr James McAdam, General Manager, Australian Information Industry Association, *Transcript of Evidence*, p6.

[577]   Submission No. 16 from Australian Information Industry Association Ltd, April 2007, p1.

AIIA note that DTF have been working with Risk Cover to develop guidelines, but that 'there is still some significant refinement required.'[578] Nevertheless, AIIA remain confident that the revised contract position on supplier liability will result in more ICT businesses being interested in supplying to government.[579]

Recommendation 19

The Committee recommends that procurement staff receive appropriate training in the new contract provisions to ensure that they are in a position to engage in active negotiations with industry, and not simply revert to the default position of uncapped supplier liability.

(c)   ICT Procurement and Supply Expertise

The issues raised regarding the expertise of people involved in the purchasing and supply of ICT for government agencies concern the particular skills of both government ICT procurement staff and staff of ICT businesses. As DoIR indicate, because of the technical nature of ICT goods and services, ICT purchasing 'tends to be done outside the established procurement channels within the department'.[580]   Consequently, these staff have ICT skills and expertise rather than procurement and contract management skills.[581] In contrast, and perhaps not surprisingly, SMEs developing innovative ICT products and services have excellent ICT skills and knowledge, but may lack appropriate contract negotiation and risk management skills.[582]

> *Small operations in this industry tend to have people who are technically very skilled, clever and creative but may lack business acumen, skills and commercial know-how.*[583]

> *Integrating understanding of the product development process with the development of skills in technology entrepreneurship provides the other missing leg to a more effective innovation system in Australia.*[584]

---

[578]   ibid., pp1-2.

[579]   ibid., p2.

[580]   Mr Stephen Grocott, Director, Innovative Industry, Department of Industry and Resources, *Transcript of Evidence*, 23 August, 2006, p8.

[581]   ibid., p8.

[582]   Mr James McAdam, General Manager, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p3; Submission No. 11 from Western Australian Information and Communications Technology Industry Development Forum, September 2006, p3.

[583]   Submission No. 11 from Western Australian Information and Communications Technology Industry Development Forum, September 2006, p3.

Many of them [ICT entrepreneurs] have the technical skills to build a product but they do not have the business skills to successfully market the product, sell it and grow their business.[585]

This lack of correlation between available expertise and skills requirements necessarily impacts upon procurement outcomes, particularly in terms of cost and completion time increases.

The need for improved negotiating skills for industry personnel has been recognised by the Western Australian Government. In January 2007 the Government awarded $20,000 to AIIA to enable four[586] local ICT companies to participate in AIIA's 2007 'Developing Business Skills for ICT Entrepreneurs Program'.[587] This funding represents a $5,000 subsidy (50% of the course fee) for up to four local participants. The subsidy will be paid progressively, subject to the participant attending each stage of the programme.[588]

With regards to government personnel, DoIR argues that 'ICT purchasing is done by people who are not trained in purchasing and contract management. That is why we have seen contracts balloon in value and duration'.[589] According to DoIR:

many State Government contracts have been let to suppliers proposing the "best value" proposition, only for the project not to meet performance and budget requirements, resulting in "scope creep" and cost overruns. That is, the original "best value" proposal becomes something far from "best value".[590]

A respondent to an AIIA study advised that 'Western Australian agency procurement personnel were not adequately trained or equipped to effectively conduct a risk assessment in relation to an ICT procurement, nor to properly negotiate complex liability issues'.[591]

AIIA argue that:

---

[584]   Submission No. 12 from Australian Electrical and Electronic Manufacturers' Association Limited, September 2006, p5.

[585]   Mr James McAdam, General Manager, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p3.

[586]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p6.

[587]   Facsimile from Hon. Fran Logan, MLA, Minister for Energy; Resources; Industry and Enterprise, April 2007.

[588]   ibid.

[589]   Mr Stephen Grocott, Director, Innovative Industry, Department of Industry and Resources, *Transcript of Evidence*, 23 August, 2006, p8.

[590]   Submission No. 8 from Department of Industry and Resources, August 2006, p16.

[591]   Australian Information Industry Association. *Better Practice, Better Outcomes: Reforming Liability Regimes Under Government ICT Contracts*, 2004, p20. Available at: http://www.aiia.com.au/icms.isp?file=133/ BetterPracticeBetterOutcomesReport.pdf. Accessed on 9 February 2007.

It is important that both parties have a sound assessment of risk when it comes to doing a contract and that having uncapped liability and very high levels of insurance is actually not good risk management and it is not good project management. It is much better to have adequately trained procurement officials who can make a realistic assessment of risk, can apportion that risk to the party best able to carry it, and apply a level of insurance that is sensible to that risk and then manage the project and manage the risk throughout the life of the project. That is a much better way to do that and will bring much better outcomes in terms of government and industry being able to deliver on the project if you have a more robust risk assessment process right up front.[592]

The SPIRIT Buyers Guide advises that 'negotiations should be based on appropriate levels of business, financial and technical due diligence that provide both parties with a surety and understanding of the service requirements of the contract'.[593] However, in order for this to occur, those negotiating the contract, both government and industry personnel, need to have the requisite level of skills.

In its May 2007 evidence, DoIR advised that:

we remain convinced that contract management is a key issue in government purchasing. We think that what we said in our submission in August 2006 has been borne out with the example of shared services and the problems they are experiencing. We expect that until something is done that this situation will repeat itself because you cannot expect mid-level public servants to deal effectively with the sort of people that multinationals can wheel in at contract negotiation stage.[594]

Finding 31

There appears to be a mismatch in skills between government ICT practitioners and government procurement personnel.

---

[592]   Mr James McAdam, General Manager, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p9.

[593]   Department of Treasury and Finance, *Common Use Arrangements No. 146601 - SPIRIT: Buyers Guide*, 2006, p14. Note: There is a March 2007 edition of this Guide, and the clauses referred to in this report remain unchanged. This is available at Available at: http://www.dtf.wa.gov.au/cms/uploadedFiles/SPIRIT_Buyers_Guide_March 2007.

[594]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p2.

Recommendation 20

The creation of a specialised ICT procurement team could be of benefit to all departments and agencies and the establishment of such should be considered by government.

(d) Government Agencies as Reference Sites

According to Bob Hayward, then Senior Vice President of the Gartner research group, 'the hardest part of success for many small Australian suppliers is to get their first 20 customers, to gain sufficient scale, cash flow and client references'.[595] In Australia the private-sector ICT market is relatively small. Furthermore, as there are few internationally renowned Australian ICT companies, these do not represent effective reference points. In contrast, the public-sector ICT market is a 'disproportionately large part' of the total market.[596] Logically, then, Australian SMEs want access to the government markets to help them build their business and assist entry into international markets. Hayward argues that securing government agencies as reference sites is vital, particularly in the early phases of business development.[597]

Evidence of the importance of government references for the export market was reported by the House of Representatives with regards to the Australian Government's procurement policies. That inquiry revealed evidence that 'emphasised the potential advantage of government support for Australian innovation when seeking to access international markets, noting "the perceived need by overseas buyers for "sales endorsement" by one's own home Government"'.[598]

With regards to the Western Australian position concerning government agencies as reference sites, the DTF advised that referee checks formed part of the usual qualitative selection process in government procurement, and:

> *in a lot of cases, the referees will be other government agencies who have used the services of that supplier ... past performance with other government agencies is taken into consideration when agencies make buying decisions.*[599]

This indicates that suppliers are able to nominate agencies as referees, that references can be made 'at the request of the supplier'.[600] In contrast, however, DoIR, advises that 'many agencies have a

---

[595]   Davidson, Peter, 'Intensive care needed for ICT', *Information Age*, 11 February 2005, p4.

[596]   ibid., p2.

[597]   ibid., p4.

[598]   House of Representatives Standing Committee on Science and Innovation. *Pathways to Technological Innovation*, Parliament of the Commonwealth of Australia, Canberra, June 2006, p199.

[599]   Mr Alex Taylor, Director, Strategic Sourcing Reform, Department of Treasure and Finance, *Transcript of Evidence*, 28 February 2007, p5.

non-codified policy of not providing references for suppliers'.[601]   This is despite the fact that 'there is no policy regarding WA agencies acting as a reference site at this point'.[602]

Finding 32

Many agencies have a non-codified policy of not providing references. However, there is no formal policy in Western Australia regarding government agencies acting as reference sites.

The inability to secure government agencies as reference sites proved to be a significant concern for Western Australian ICT businesses on two main fronts. First, the ICT industry believes that having a government agency as a reference site would provide considerable advantage to business development. It is seen by industry as a way in which government purchasing can support industry development.[603] For example, ICT ICC advised that:

> *the Government 'policy' of not giving references is an impediment when trying to use the fact that a company is a supplier to WA Government as a reference for other business with Government or others, including export business. This is particularly true for SMEs and is counter to a policy of encouraging local business and international trade.*[604]

This is echoed by AIIA (WA):

> *Government clients provide important reference sites for most ICT companies, assisting companies to develop, thereby increasing employment opportunities and stimulating economic growth [...] Securing Government reference sites is a key target for companies looking to grow their business.* [605]

Second, not having a government reference site is, in itself, a definite disadvantage. One AIIA member advised the industry body that in negotiating with potential overseas partners:

> *having Government as a reference site may make a 5% difference to winning the business - not having home Governments as a customer can have a negative 10% impact.*[606]

---

[600]   ibid., p5.

[601]   Submission No. 8 from Department of Industry and Resources, August 2006, p17.

[602]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p9.

[603]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p9.

[604]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, August 2006, p14; Submission No. 7 from ATUG-WA, August 2006, p7.

[605]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p4 and 12.

[606]   ibid., pp12-13.

<div style="border:1px solid black; padding:10px;">

Finding 33

Having a government reference site increases a company's chance of winning contracts, particularly when negotiating with potential overseas partners and markets. Not having a government reference site is a definite disadvantage to companies.

</div>

One submission to the Inquiry describes their attempts to gain a reference from the Western Australian Department of Health. While 50% of this submitter's market is the public health system, and their 'belief that the customer has been happy with the level of service we have provided and the quality and capability of our product', their request for the department to provide support in the form of a reference site 'was declined on the basis that it was contrary to "policy"'.[607] According to this evidence, 'to have our own local Health Department refuse to provide a factual reference for us is not only non-cooperative, it is damaging'.[608]

For industry, their call for government reference sites is not a call for government 'hand-holding', for references for unsatisfactory provision of goods and services, or an endorsement of a particular product or service. Rather, it is an acknowledgement of the very significant impact having a Western Australian Government referee can have on the development of the local ICT industry especially when trading with the Asia-Pacific market as it would allow further advantage to be taken of the state's geographic proximity.[609] AIIA stated that:

> *we want the government to support reference sites and what IT is actually doing with the government.*[610]

Allowing ICT providers to use government as a reference site is a position supported by DoIR. It recognises that for many ICT SMEs having a Government reference site is 'often a powerful marketing tool'.[611] DoIR advised that:

> *There is no particular stance or position that the government takes on this matter. Therefore, we are suggesting that the default position should be that we do give references, unless a case can be made against that. There will be cases where it is not appropriate, but our position is that we will give a reference.*[612]

---

[607]   Submission No. 4, Closed Submission.

[608]   ibid.

[609]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p12 and 26.

[610]   Ms Cheryl Robertson, Strategy Consultant, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p5.

[611]   Submission No. 8 from Department of Industry and Resources, August 2006, p17.

[612]   Mr Paul Gale, Senior Project Manager, Department of Industry and Resources, *Transcript of Evidence,* 23 August 2006, pp8-9.

In support of an initiative to have government agencies as reference sites, DoIR suggest that this could be 'coordinated through the State Supply Commission'.[613]

Furthermore, in discussing the possibility of an agency trialling (rather than purchasing) local industry products, DoIR suggested that government agencies might be 'used as a test site for product development, and it can then become a reference site. Government purchasing is very important as a reference for other markets'.[614]

Finding 34

Having a government agency as a reference site provides considerable advantage to individual ICT businesses and makes a significant contribution to the overall development of the local ICT industry at no cost to government.

Recommendation 21

Government should develop and implement a policy that facilitates agencies acting as a reference site for suppliers.

Recommendation 22

The Western Australian Government should consider developing a state government reference site pro-forma for use by government agencies.

(e)   Buy Local and Building Local Industry Policy

The Western Australian 'Buy Local' Policy aims to 'maximise opportunities for Western Australian businesses to bid for government work and when competitive win government work'.[615] In doing so, it intends to 'maximise the participation of local and small businesses in the supply of goods, services, housing and works purchased or contracted by government agencies or

---

[613]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p9.

[614]   Mr Stephen Grocott, Director, Innovative Industry, Department of Industry and Resources, *Transcript of Evidence*, 23 August, 2006, p8.

[615]   State Supply Commission, *Buy Local Policy*, Government of Western Australia, Perth, 2002, p5.

their agents on behalf of the State Government'.[616] The policy requires all government agencies to adopt a 'buy as close to home as possible' philosophy and to 'adopt practices to achieve this outcome'.[617] The Buy Local Policy covers all state government purchasing and contracting and 'applies to all State government public authorities within the meaning of the *State Supply Commission Act 1991*, all state government trading enterprises and any other state government authority or entity, unless specifically exempted by State Cabinet'.[618] Achieving a value for money outcome for government is a primary focus of the Policy. The Policy states that 'the consideration of a purchase or contract's whole-of-life costs and other social or economic benefits must outweigh the simple one-off purchase price view, or purchasing at the lowest initial cost'.[619]

'Value for money' is determined by assessing the bid or quotation against a set of criteria, weighted when appropriate, with 'specific consideration … given to compliance with specifications, local content and local industry and economic development'.[620] In recognising that government is a major buyer, the DTF stated that its 'core brief is value for money. Our objective is to get the best value outcome for government we can buy'.[621] DTF define value for money as:

> *in simple terms [it] is about looking at prices and quality and making a judgment call on what is the best value. The State Supply Commission policy provides quite a number of details around that. There are factors such as the Buy Local policy itself that we take into account in a judgment call, but in simple terms it is to look at the quality and price and make a judgment on the best outcome for government in a longer term sense.*[622]

The Committee is concerned that DTF's definition of value for money in practice means lowest cost. Given that DTF staff are not necessarily ICT practitioners, it is imperative that enough attention is given to other aspects of the ICT purchase such as systems interoperability, potential for obsolescence of the product, service and systems support, and awareness of current ICT innovations.

With regards to agency consideration for relationships built with companies or ease of dealing or other experiences with a particular company, it was explained that:

---

[616]   ibid., p2.

[617]   ibid., p2.

[618]   ibid., p2.

[619]   ibid., p3.

[620]   State Supply Commission, *Buy Local Policy*, Government of Western Australia, Perth, 2002, p11. For a complete list of selection criteria and their indicators, refer to Buy Local Policy, Attachment A, Planning and Practice Checklist.

[621]   Mr John Tondut, Acting Executive Director, Office of Government Procurement, Department of Treasury and Finance, *Transcript of Evidence*, 28 February 2007, p1.

[622]   ibid., p2.

often in the qualitative criteria there are components that look at those sorts of issues: they look at the experience of the company, the proposal that it is putting forward and the capacity to deliver an ongoing service. Hence, local presence and capacity to deliver things in an ongoing viable way are important.[623]

According to DTF, qualitative criteria do not have less weight than price. In determining value for money, agencies look at quality and at 'qualitative criteria':

normally, in a tender all the players are ranked on a qualitative basis separate to price. They are ranked on price and then we make a judgment between the two.[624]

However, this is not always the perception held within industry. One submission to the Inquiry suggested that the Buy Local Policy did not sufficiently support local ICT companies:

Overall, it is our experience that State Government procurement does not provide adequate recognition for the value of supporting local ICT companies. There is a local buying policy but the focus of that is on a marginal price preference rather than of true "support".[625]

Industry development is a key element of the policy which clearly states that agencies must consider 'the potential for local industry development and employment creation through government buying. Purchasing decisions must be undertaken in accordance with specific industry development initiatives'.[626] Furthermore, the State Supply Commission sees the policy as having the potential to assist SMEs into the government supply market and in doing so develop to become 'export ready'.[627] In practice, this requires all quotations and tenders be evaluated in terms of the extent of their local content. The Policy defines local content as 'the proportion of the contract that is undertaken locally in Western Australia ie the majority of the contract outcomes must be managed and delivered from within Western Australia'.[628] DoIR advise that local content is 'the proportion of value add in the contract which occurs locally. It is not a function of ownership'.[629] Whether or not a purchase is determined as 'local' is dependent on the 'purchase or contract delivery point, or where the purchase or contract outcome is ultimately used, and whether or not a compliant local bid was received determine if the purchase or contract was awarded to a local business'.[630] For example:

---

[623]   ibid., p2.

[624]   ibid., p2.

[625]   Submission No. 4, Closed Submission.

[626]   State Supply Commission, *Buy Local Policy*, Government of Western Australia, Perth, 2002, p4.

[627]   ibid., p5.

[628]   ibid., p5.

[629]   Submission No. 8 from Department of Industry and Resources, August 2006, p15.

[630]   State Supply Commission, *Buy Local Policy: Buy Local Report 2005/06*, Government of Western Australia, Perth, 2006, p3.

Perth Region

Where there is a requirement to purchase goods, services or works for delivery and use in the Perth Region it can be reported as awarded to a local business:

- *When the purchase or contract was awarded to a business located within WA, or*

- *If there were no compliant bids received from business located within WA and the purchase or contract was awarded to a business located in another State or Territory of Australia or New Zealand.*

- *In the event a compliant bid is received from a business located within WA and a "value for money" decision is made to award the purchase or contract to a business located in another State or Territory of Australia or New Zealand then it cannot be reported that the purchase or contract was awarded to a local business.*

Regional Western Australia

- *Where there is a requirement to purchase goods, services or works for delivery or use in regional WA it can be reported as awarded to a local business:*

- *When the purchase or contract was awarded to a business located within the prescribed distance from the regional point of delivery or use, or*

- *If there were no compliant bids received from businesses located within the prescribed distance then it can be reported as awarded to a local business if it was awarded to a business located outside the prescribed distance but within WA, or*

- *If there were no compliant bids received from businesses located within either the prescribed distance or the remainder of WA then it can be reported as awarded to a local business if it was awarded to a business located in another State or Territory of Australia or New Zealand.*

In the event a compliant bid is received from a business located within the prescribed distance and a "value for money" decision is made to award the purchase or contract to a business located outside the prescribed distance then it cannot be reported as awarded to a local business.

In the event no compliant bids are received from businesses located within the prescribed distance but a compliant bid is received from a business located within WA and a "value for money" decision is made to award the purchase or contract to a business located outside the State then it cannot be reported as awarded to a local business.[631]

The Policy includes two specific initiatives designed to give preferential consideration to local businesses. First, when evaluating and comparing quotations, a 20% Imported Content Impost is applied to those portions containing goods and/or services imported into Australia (excluding New

---

[631]   ibid., pp3-4.

Zealand).[632]   Second, in the final analysis of bids between competing Western Australian businesses, and for comparative purposes only, Regional Price Preferences (both business and content) are applied within a set distance from a purchase or contract delivery point.   These preferences operate in a framework of regional zones that cover the state.   For eligible regional businesses, the Regional Business Preference applies a price preference to the total cost of the bid.[633]   For purchases of goods and services other than housing and works, the cost of quotations from eligible businesses is reduced by 10% of the total cost of the bid, up to a maximum of $50,000.   For housing and works purchases, the reduction is 5% up to a maximum of $50,000. The Regional Content Preference applies to materials and services purchased from regional businesses for use in regional contracts.   This content preference is available to all Western Australian businesses.[634]   For purchases of goods and services other than housing and works, the cost of regional content claimed is reduced by 10% of the regional content cost, up to a maximum of $50,000.   For housing and works purchases, the reduction is 5% up to a maximum of $50,000.[635]

The Policy sets agencies a minimum local purchasing target of 80% of all government purchases and contracts.[636]   For all tenders with an estimated value of $750,000 or more, local content must be included as a weighted selection criterion with a minimum 20% weighting.   Furthermore, for contracts of a lesser value, agencies are encouraged to adopt a similar approach.[637]

DTF admits that the Buy Local Policy 'is a fairly complex document and the various aspects of it depend on what we buy and from where we buy it'.[638] Within this Department, part of the Office of Government Procurement's core role is:

> *to strengthen the implementation of the government's buy local policy. ... We encourage regional buyers to consider buying local products. It is not mandatory to use the common-use contracts in regional areas to buy PCs or photocopiers etc. The availability of the regional distribution network is an important consideration in the selection process when a common-use contract is entered into with a manufacturer to buy some technological equipment, for example. That is one of the factors taken on board in deciding which companies will get onto the panel in the first place. Eight or nine manufacturers are contracted for supplying PCs, and they have something in the order of 30 regional distributors that they will use for the distribution network and the after-sales warranty and that sort of thing. We are encouraging a whole-of-life model and we are encouraging*

---

632   State Supply Commission, *Buy Local Policy*, Government of Western Australia, Perth, 2002, p13.

633   ibid., p14.

634   ibid., p14.

635   ibid., p15.

636   ibid., p8.

637   ibid., p6.

638   Mr John Tondut, Acting Executive Director, Office of Government Procurement, Department of Treasury and Finance, *Transcript of Evidence*, 28 February 2007, p3.

manufacturers to have links through the supply chain with the distributors. That is one way of strongly supporting the buy local policy in a regional sense.[639]

The Office of Government Procurement also supports the buy local policy regionally through its satellite offices in Bunbury, Geraldton and Kalgoorlie. According to DoIR, the role of these offices is to:

> *work with the local government buyers to identify the local needs, to work with the local industry associations and to understand the local industry capacity and to see whether more products can be bought locally. The regional officers work with the head officers of the government agencies in Perth, who have traditionally tended to focus on buying and coordinating out of Perth. We are encouraging the regional officers to buy locally when there is a local regional market.*[640]

The Buy Local 2005/2006 report provides data from the 105 agencies that submitted buy local reports. Of these, 93% (based on the *number* of purchases and contracts awarded) and 92% (based on the *value* of purchases and contracts awarded) of agencies reported achieving the 80% local purchasing target.[641] With regard to purchases and contracts for delivery or use in regional Western Australia, data from 103 agencies reveals that 92% (based on the *number* of purchases and contracts) and 95% (based on the *value* of purchases and contracts) were awarded to 'local' businesses.[642]

In November 2004 the Western Australian Government announced its intention to implement its 'Building Local Industry Policy'.[643] This policy, which must be read in conjunction with the Western Australian State Supply Commission's Buy Local Policy and the Australian Industry Participation National Framework, recognises the Government's role in maximising opportunities for local business through, first, the facilitation of major development projects and, second, through 'its own purchasing power'.[644] The Procedural Guidelines for this policy advise that 'local businesses have a legitimate expectation that they will be given a full, fair and reasonable opportunity to be considered for major work being undertaken in Western Australia in both the

---

[639] ibid., p3.

[640] ibid., p3.

[641] State Supply Commission, *Buy Local Policy: Buy Local Report 2005/2006.* Government of Western Australia, Perth, 2006, p5.

[642] ibid., p10. Note: while 105 agencies submitted buy local reports, two such reports varied from reporting requirements, thus some of the regional data was not included.

[643] Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Australia, Perth, 2004, p11.

[644] Department of Industry and Resources, *Building Local Industry Policy: Procedural Guidelines*, April 2004, p2. Available at: http://www.doir.wa.gov.au/documents/businessandindustry/000095.Leonie.Moore.doc. Accessed on 2 March 2007.

public and private sector'.[645] Furthermore, the Government would demonstrate its commitment through:

- *encouraging and supporting major project proponents to seek out appropriate and competitive local suppliers;*

- *identifying the benefits of purchasing from Western Australian businesses; and*

- *assisting local businesses to become more competitive and capable of taking advantage of opportunities in the global supply chain.*[646]

One of the key initiatives of this policy was to ensure the Buy Local Policy provisions were applied to all public sector procurement contracts. Thus local businesses would be better able to compete with national and multinational companies and/or establish relationships with them.[647]

In 2006 DoIR reported that the Building Local Industry Policy had been implemented across the Western Australian Government. An important element of this policy is the requirement for Industry Participation Plans (IPPs) to show how project purchasing demonstrates commitment to the policy, how local industry participation will be maximised, and how Western Australian and Australian industry will receive 'full, fair and reasonable' opportunity to supply goods and services to the project. An IPP is required for all Government-funded projects or contracts of over $20 million or of capital equipment value of more than $1 million.[648] DoIR reports that 'this has resulted in WA ICT companies securing contracts worth approximately $57.2 million. A further $8 million was secured via a voluntary Industry Participation Plan'.[649]

DoIR advises that the application of Industry Participation Plans could help ensure the necessary processes to provide SMEs with opportunities to successfully gain government procurement contracts. The Department advised that:

> *Where a contract involving a layered supply chain is being developed, with a prime contractor and a number of subcontractors, prime contractors should be encouraged to identify opportunities for local SMEs in their procurement strategies. The Department*

---

[645]   ibid.

[646]   ibid.

[647]   Department of Industry and Resources, *Building Local Industry Policy: Procedural Guidelines*, 2004, p3. Available at: http://www.doir.wa.gov.au/documents/businessandindustry/000095.Leonie.Moore.doc. Accessed on 2 March 2007; Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Australia, Perth, 2004, p11.

[648]   Department of Industry and Resources, *Building Local Industry Policy: Procedural Guidelines*, 2004, p4 and 8. April 2004, p2. Available at: http://www.doir.wa.gov.au/documents/businessandindustry/000095.Leonie. Moore.doc. Accessed on 2 March 2007.

[649]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy Progress Report*, Government of Western Australia, 2006, p12.

assists with this process by developing an Industry Participation Plans in collaboration with the prime contractor.[650]

As the following demonstrate, evidence submitted to the Committee suggests that the Buy Local Policy is well regarded by the ICT industry, and the need for such a policy was reinforced.

> *Overall it is fair to summarise that the WA Industry Associations all unanimously agree that the "Buy Local Policy" needs to be maintained.*[651]

> *Buy Local is a valuable industry development tool and reasonably effective in making multinationals consider local alternatives.*[652]

In addition to this ICT industry support for the Buy Local Policy, it is 'strongly supported' by DoIR who states that:

> *without it [the policy] agencies could revert to pre-Buy Local Policy practices which included restrictive tenders and prejudice against local suppliers.*[653]

Apart from the main benefit of maximising opportunities for local businesses to win government work, submissions pointed to wider implications of the Buy Local Policy:

> *The Buy Local Policy provides some small recognition of the additional contribution made to the WA economy by local industry.*[654]

> *This Buy Local Policy is the basic means by which the local industry is treated equitably by Western Australian State Government agencies.*[655]

In light of this, ICT ICC recommends that:

> *the Government introduces a mechanism to consider the full economic and supply impacts of doing business with companies that have not made a commitment to local representation.*[656]

ICT ICC raised one major concern regarding the Buy Local Policy, namely the impact of free trade agreements. ICT ICC advised that:

---

[650] Submission No. 8 from Department of Industry and Resources, August 2006, p15.

[651] Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, Attachment 2, August 2006, p1.

[652] Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p33.

[653] Submission No. 8 from Department of Industry and Resources, August 2006, p15.

[654] Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, Attachment 2, p3.

[655] Submission No. 8 from Department of Industry and Resources, August 2006, p15.

[656] Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, Attachment 2, August 2006, p4.

This policy has seen some difficulties due to its potential conflict with international free trade agreements, however, other countries and states find a way through this issue and so should WA.

and

with the ramifications of the proposed Free Trade Agreements there is quite possibly a strong need for it to be strengthened or modified to maintain its intent within the terms of the FTAs.[657]

Having outlined the issue, ICT ICC recognised that where free trade agreements applied:

the Buy Local Policy may not be fully applicable or that special negotiation may be required to adapt the policy to suit the agreement (or vice versa) yet still achieve local benefit.[658]

DoIR notes that the current form of the Australia New Zealand Government Procurement Agreement may prevent local suppliers being given preference and that 'for this reason Western Australia is no longer a signatory'.[659] With regards to the Australia United States Free Trade Agreement (AUSFTA), the State must treat Western Australian suppliers and those from the United States as equals, that is, it cannot discriminate on the 'basis of degree of foreign affiliation or ownership'.[660] However, according to the DoIR:

Western Australia joined the USFTA on the basis that supply policies supporting local industry would not be weakened. As such there is scope under the AUSFTA for programs which support:

a) any form of preference to benefit small and medium enterprises.

b) measures to protect treasures of artistic, historic, or archaeological value.

c) measures for the health and welfare of indigenous people.

d) measures for the economic and social advancement of indigenous people.[661]

While generally recognising the advantages of the Buy Local Policy, evidence was presented suggesting that these advantages could be increased if the policy were strengthened.

---

[657]   ibid., p11 and Attachment 2, p1.

[658]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, Attachment 2, August 2006, p3.

[659]   Submission No. 8 from Department of Industry and Resources, August 2006, p14.

[660]   ibid.

[661]   ibid.

The WA ICT Industry is strongly supportive of a Buy Local Policy, which would benefit the State if it is strengthened.[662]

If there are to be changes to the Buy Local Policy they should strengthen the potential for local WA or regional suppliers to win Government business against the multi nationals or remote suppliers who put nothing into the WA economy and are not encumbered with the workplace compliance and local taxation costs of the WA suppliers.[663]

AIIA (WA) recommended that the Western Australian Government 'continue to explore and refine' this Policy, and proposed that it could be improved by:

Allow[ing] larger companies to outline the methods and policies they have to partner with local companies;

Allow[ing] local industry companies to outline what strategies they have to collaborate with larger partners; and

Encourag[ing] and fund "Proof of Concept" (POC) projects with government.[664]

Finding 35

It is commonly agreed that government procurement and industry development are separate functions of government. Industry receives a strong signal from DoIR that this procurement is an important indirect industry development tool. DTF, on the other hand, are committed to their charter of delivering value for money in government procurement, which does not include consideration of potential industry development benefits.

Recommendation 23

The Department of Treasury and Finance should take account of the overall benefit to industry of procurement undertaken by government.

---

[662]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, Attachment 2, August 2006, p3.

[663]   ibid., Attachment 2, p4.

[664]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p33.

Finding 36

The 'Buy Local' Policy is a valuable industry development tool and needs to be maintained. For example, regional price preferences help local suppliers in non-metropolitan Western Australia, and the policy allows WA companies to compete with nationals and multinationals on a more equitable basis.

Recommendation 24

Government investigate ways of strengthening and expanding the 'Buy Local' Policy.

(f) Intellectual Property (IP) in Government Procurement

The importance IP to the ICT industry is generally acknowledged in Australia and throughout the world.[665] According to AIIA, IP is a 'core "product" and asset of any ICT business… The success of an ICT company is dependent on how that IP can be exploited - or commercialised - for economic return'.[666] DoIR recognises that 'new intellectual property is the feedstock for the ICT industry'.[667] The Australian ICT industry 'excels' in the 'provision of sophisticated solutions for the public sector', which makes the issue of IP in government procurement of signal importance.[668] This importance is also generated by the fact that, as previously demonstrated, governments represent the single largest customer for the Australian ICT industry, and their procurement policies have significant impact on the industry's growth and development.

The protection of ICT intellectual property in government procurement is a major issue raised in evidence to this Inquiry, particularly with regard to the default IP ownership by the government. The following outlines the IP ownership position in government procurement at the Federal and State level, providing the backdrop to evidence provided to the Committee.

---

[665] For details on international IP policy and procurement practice in countries such as Canada, USA, United Kingdon, Japan, Finland, Hong Kong and Singapore, see Australian Information Industry Association, *Intellectual Property: Unleashing our IP Potential*, AIIA Ltd, ACT, 2006.

[666] Australian Information Industry Association, *Intellectual Property: Unleashing our IP Potential*, AIIA Ltd, ACT, 2006, p5.

[667] Submission No. 8 from Department of Industry and Resources, August 2006, p16.

[668] Davidson, Peter, 'Intensive care needed for ICT,' *Information Age,* 11 February 2005, p5.

(i)   Federal Government IP Policy

The Australian National Audit Office notes that the Australian Government is a 'significant generator, acquirer and user of IP'.[669]   The Prime Minister, in his 1997 Statement, *Investing for Growth*, acknowledges that 'effective commercialisation of discoveries and intellectual property is an essential component of wealth creation', and that improving innovation outcomes 'necessarily involves going beyond support for basic R&D into the realm of successful commercialisation of R&D, ideas, and intellectual property'.[670]   Prime Minister Howard argues that:

> *Australia has a strong and effective system for protecting intellectual property.   This system provides an incentive for businesses to innovate.   It facilitates trade in innovative products and services and encourages the transfer of new technologies from overseas.*[671]

Investing for Growth recognises that intellectual property is an issue in domestic and international market development and, therefore, Australia would continue its work with the World Trade Organisation to 'influence the broadening of the international trade agenda in a way that is consistent with Australian interests, including in competition and investment policies, protection of intellectual property, and environmental regulations'.[672]

In this Statement, the Prime Minister specifically acknowledged the importance of '**fostering the development of the information industries** to capitalise on employment growth and export opportunities' and announced that 'facilitating the licensing of rights for intellectual property developed within government contracts to Australian-based firms for commercialisation' would be part of the Information Industries Action Agenda.[673]   The Prime Minister advised that the Government was working to 'protect intellectual property in the digital age, through development of proposals for reform of the existing legal framework in consultation with interested parties'.[674]   The Statement also acknowledged the centrality of creatively utilising information technology to achieving competitive advantage for Australian companies.   Here, protecting intellectual property was seen as a key trade issue to be addressed.[675]

Importantly for this Inquiry, *Investing for Growth* committed the Government to develop guidelines by March 1998 to facilitate licensing of rights to intellectual property developed within government contracts to Australian-based firms for commercialisation.   This was claimed as 'a

---

[669]   Australian National Audit Office, *Management of Intellectual Property in the Australian Government Sector. The Auditor-General Audit Report No. 22 2006-07 Performance Audit*, Commonwealth of Australia, Canberra, 2007, p11.

[670]   Prime Minister's Statement, *Investing for Growth. The Howard Government's Plan for Australian Industry.* Commonwealth of Australia, Canberra, 1997, pp37-38.

[671]   ibid., p30.

[672]   ibid., p52.

[673]   ibid., p65.

[674]   ibid., p69.

[675]   ibid., p74.

significant reversal of the [then] current position whereby the Commonwealth retained these rights and it will establish an in-principle position of allowing suppliers prepared to take the commercial development risks to more fully exploit their innovations'.[676]

Since the Prime Minister's 1997 Statement, the following documents have been developed:

- *The Commonwealth IT IP Guidelines - Management and Commercialisation of Commonwealth Intellectual Property in the Field of Information Technology*, 2000, Department of Communications, Information Technology and the Arts.

- *A Whole of Government Approach to IP Management Issues Paper*, September 2005, Attorney-General's Department.

- *Draft Whole of Government Intellectual Property Principles*, September 2005, Attorney-General's Department.

In *The Commonwealth IT IP Guidelines* the then Minister for Communications, Information Technology and the Arts, the Hon. Senator Richard Alston, stated that part of the Government's response to the challenge of effectively competing in an information economy 'lies in promoting to industry how to successfully commercialise intellectual property. We want new keen players with great ideas to excel in this market, but we know they don't always understand the nuts and bolts of commercialising their work'.[677] A core feature of these *Guidelines* is that agencies are 'encourage[d] to only acquire the IP necessary for achieving their corporate missions and to be alert to opportunities for financial savings'.[678] This is evidenced by the following 'main messages' contained in the *Guidelines*:

- *Commonwealth agencies should be conscious of the significance of their role as a major producer, instigator and consumer of IT-related IP, and the value of that IP as a national strategic resource.*

- *It is desirable that IP be recorded, valued, managed and utilised to best effect, as with any other asset.*

- *In contracts relating to IT-related IP, agencies should not automatically assume that all IP rights must be vested in the Commonwealth, but should consider whether vesting IP in, or granting a licence to, the supplier or contractor might yield savings and a product that in the long term more effectively meets agency objectives.*

---

[676]   ibid., p77.

[677]   Department of Communications, Information Technology and the Arts, *The Commonwealth IT IP Guidelines - Management and Commercialisation of Commonwealth Intellectual Property in the Field of Information Technology*, Commonwealth of Australia, Canberra, 2000, p2.

[678]   ibid., p2.

- • *Relevant Commonwealth financial arrangements should allow incentives for agencies to acquire only the IP they really require, and to allow commercialisation of their IP if this is appropriate.*[679]

As well as discussing relevant policy statements, the *Guidelines* report that they 'reflect[s] a view which has been expressed in a range of policy documents over recent years that:

- • *agencies should be conscious of opportunities for savings by confining their ownership of IP to that which is really necessary for the achievement of their corporate missions; and*

- • *Australian industry should be given the opportunity to commercialise IP for the benefit of industry and consumers'.*[680]

However, such encouragement is qualified in the discussion of the application of the *Guidelines*. Section 2.18 states:

> *The purpose of the guidelines is stated in* **Section 2.1***. It is anticipated all agencies will take account of these guidelines in the management of IT-related IP. However, the application of the guidelines may be affected by the corporate mission of the agency concerned. In particular, the guidelines will apply differently to an agency whose major role is the creation of IP.*[681]

And Section 2.19 advises:

> *The guidelines are intended to be flexible rather than prescriptive in their operation. They are not intended to create rights for industry or give rise to any firm expectations on the part of industry that IP relating to a particular project will necessarily be treated in any particular way.*[682]

The theme of flexibility in enhancing commercialisation of IP was continued in the *Issues Paper on Government IP Management*. This *Paper* acknowledges the recommendation of the Australian National Audit Office report, *Intellectual Property Policies and Practices in Commonwealth Agencies* that agencies should develop 'appropriate IP management policies and implement supporting systems and procedures', and highlights the IT IP Guidelines 'as a useful source of guidance for agencies' on the management of IT systems IP.[683] The *Paper* also notes that:

---

[679]   ibid., p3.

[680]   ibid., p6.

[681]   ibid., p7.

[682]   ibid., p7.

[683]   Attorney-General's Department, *Issues Paper on Government IP Management*, Commonwealth of Australia, Canberra, September 2005, p2.

Concerns have been raised, particularly from within the information, communications and technology (ICT) sector, that Australian Government agencies do not use the flexibility in IP ownership that is encouraged by the IT IP Guidelines and that, in practice, IP rights tend to be retained by the individual agencies and opportunities for commercialisation, sharing or re-use are lost.[684]

The federal government's approach to IP management is to be a 'whole of government' approach. However, this approach 'is not expected to create any new government policy, but rather will assist agencies to interpret and apply existing government policies as they relate to IP, including those generally affecting management, commercialisation and licensing of Government assets'.[685]

In September 2005, and 'within the framework of existing government policies as they relate to IP', the Attorney-General's Department issued a draft set of sixteen 'whole of government' IP principles.[686]   These principles acknowledge that IP is to be managed so as to benefit the Australian community at large, rather than discrete agencies. This document states that:

Agencies should identify means and circumstances where IP materials can be gainfully reused or shared between and across agencies or jurisdictions, and where they can facilitate public access to IP material, including, as appropriate, opportunities for commercialisation.[687]

With regards to creating and acquiring IP, Principle 8 advises that 'agencies should maintain a flexible approach in considering options for ownership, management and use of IP'.[688] To assist in this, agencies are encouraged to consider:

- *the agency's core objectives and activities;*

- *opportunities for obtaining value for money in all IP arrangements;*

- *opportunities for financial savings in procurement contracts including through vesting IP or licensing IP to the supplier; and*

- *government policy objectives, including the promotion of industry development.*[689]

The call for flexibility is also evident in the notes concerning Principle 10, which state that 'when procuring IP material … an agency should endeavour to only obtain the ownership or licensing rights it requires to meet the government's objectives'.[690]

---

[684]   ibid., p2.

[685]   ibid., p1.

[686]   Attorney-General's Department, Draft *Whole of Government Intellectual Property Principles*, Commonwealth of Australia, Canberra, September 2005, p1.

[687]   ibid.

[688]   ibid., p3.

[689]   ibid., p3.

In 2007 the Australian National Audit Office (ANAO) issued a report on the management of IP in the government sector. As well as acknowledging the Government's recognition of the need to successfully manage IP and outlining reasons why IP issues are of increasing importance and benefit to government and the Australian community, the report argues that:

> *although there is no one-size-fits-all approach to IP management, there are general principles that should underpin the management of IP in an agency. Successful IP management also requires that agencies be first aware of and understand their IP management needs, and then implement appropriate measures for the management of IP within their agencies.*[691]

The ANAO's 2007 report refers to the findings of earlier ANAO audit (Report No. 25 of 2003-04), making particular reference to the finding that 'few agencies had developed policies or plans addressing the management of IP within the organisation'.[692]   While the 2003-04 report recommended 'an overarching approach and guidance on IP management' be developed to increase awareness of the IP issues within agencies, the 2006-07 report states that by December 2006, such an overarching approach had not been finalised. Furthermore:

> *although there had been progress in developing both a Statement of IP Principles (the IP Principles) and a manual of better practice guidance on IP management (the IP Manual), it is still not clear when either the IP Principles or the IP Manual can be expected to be finalised or released.*
>
> *As a result, there continues to be little profile given to the importance of IP management. Nor is there a clear source of support or guidance for agencies on how to develop and implement measures to better manage their IP, according to their individual needs and circumstances.*[693]

Ensuring that practice is in line with the spirit of the policy would address criticism such as that contained in the Hayward report which states that the Department of Communications, Information Technology and the Arts' guidelines govern treatment of IP created as a result of government projects, but:

> *these guidelines are rarely taken into consideration by most government agencies. If followed, they would ensure that government has royalty-free use of IP that results from any work, but that ownership and subsequent commercialisation should reside with the company best able to exploit the IT for the benefit of the country.*[694]

---

[690]   ibid., p3.

[691]   Australian National Audit Office, *Management of Intellectual Property in the Australian Government Sector.* The Auditor-General Audit Report No. 22 2006-07 Performance Audit, Commonwealth of Australia, Canberra, 2007, p13.

[692]   ibid., p15.

[693]   ibid., p16.

[694]   Davidson, Peter, 'Intensive care needed for ICT', *Information Age*, 11 February 2005, p5.

The ANAO recommends that 'the overarching approach to IP management be finalised as soon as is practicable … [as], when appropriately communicated, the overarching approach could give the necessary profile to the importance of IP management'.[695]

(ii)   *Western Australian Government IP Policy*

In the Premier's Circular, number 2003/04, of April 2003, the then Premier, Dr Geoff Gallop, announced Cabinet endorsement of the new Government Intellectual Property (IP) Policy. Dr Gallop stated that the new IP Policy reflected the Government's recognition that:

> *IP created with Government resources is a major potential source of value to the Western Australian economy and community. Government's Policy is to actively seek to optimise the economic, social and environmental benefits to Western Australians from the use and commercialisation of that intellectual property in conjunction with the business community.*[696]

Finding 37

The Western Australian Government's policy is to work with the business community to optimise the economic, social and environment benefits from the use and commercialisation of intellectual property created with government resources.

The Premier also stated that this IP Policy was 'consistent with Government's view that the development of industry and the economy generally is central to the quality of life of Western Australians and is the responsibility of the whole of Government'.[697] In this Circular, attention was drawn to the three key elements of the policy, namely the identification, protection and responsible management of IP, the allocation of rights to IP for optimum benefit to the state, and the encouragement of creativity and innovation in producing IP, including incentives to government employees.[698]

---

[695]   Australian National Audit Office, *Management of Intellectual Property in the Australian Government Sector. The Auditor-General Audit Report No. 22 2006-07 Performance Audit*, Commonwealth of Australia, Canberra, 2007, p16.

[696]   *Premier's Circular*, No. 2003/04, 14/4/2003, Government of Western Australia, Perth, 2003.

[697]   ibid.

[698]   *Premier's Circular*, No. 2003/04, 14/4/2003, Government of Western Australia; Department of Industry and Resources, *Government Intellectual Property Policy and Best Practice Guidelines*, 2003, p6. Available at: http://www.doir.wa.gov.au/documents/businessandindustry/IPpolicy_ may2003(1).pdf.   Accessed on 27 February 2007.

Finding 38

The three key elements of the Western Australian Government policy on intellectual property are:

▪ the identification, protection and responsible management of IP;

▪ the allocation of rights to IP for optimum benefit to the state; and

▪ the encouragement of creativity and innovation in producing IP, including incentives to government employees.

Policy specifically relating to IP was introduced in Western Australia in 1987, subjected to various revisions, and culminating in the current policy as detailed in the May 2003 *Government Intellectual Property Policy and Best Practice Guidelines*. This IP policy also commits to a comprehensive review by the Government Intellectual Property Policy Council 'as soon as practicable' four years after its release.[699]

According to the policy document:

> *this revision of the Government's IP Policy retains the 'good government' objectives of the previous policies but contains a much stronger industry and economic development emphasis than its predecessors.*[700]

This increased emphasis is reflected in the Policy Statement which states that:

> *Government will actively seek to optimise the economic, social and environmental benefits to Western Australians from the use and Commercialisation of that Intellectual Property in conjunction with the Business Community.*[701]

The 2003 IP Policy also outlines seven Key Principles with which agencies must consistently work:

> *(a) to manage and utilise their IP to enhance delivery of services and performance of core functions;*
>
> *(b) to preserve and enhance the operational value of the IP;*

---

[699] Department of Industry and Resources, *Government Intellectual Property Policy and Best Practice Guidelines*, 2003, p7. Available at: http://www.doir.wa.gov.au/documents/businessandindustry/IPpolicy_may2003(1).pdf. Accessed on 2 March 2007.

[700] ibid., p6.

[701] ibid., p6.

(c) to maintain and build upon core business;

(d) to work in a spirit of cooperation with the Business Community in the development and Commercialisation of IP;

(e) to adopt risk management methodologies to ensure that Government is only exposed to an acceptable and managed level of risk;

(f) to seek to apply best practice in the Management and Commercialisation of IP; and

(g) to operate in an accountable manner and be prepared to justify their processes and decisions in an auditable and transparent way.[702]

In assisting agencies to evaluate how proposed actions may benefit Western Australia, the policy provides a set of factors to be considered. These include:

- *Contribution to the development of the Business Community;*

- *The inclusion of small to medium businesses in IP related opportunities;*

- *Creation of new research and training opportunities; and*

- *Creation of new knowledge based industries.*[703]

To help government agencies comply with their obligations under the IP policy, a set of 'best practice' guidelines is also provided by the Government. These Guidelines cover the key areas of:

- *Management of Intellectual Property*: General issues in the management of IP; Identifying, protecting and recording IP; Addressing IP in contracting; Human resource related IP issues; Management of IP related risks; and IP generated from grant funding.

- *Allocation of IP Rights*: General allocation issues; allocation of IP under government contracts; allocation of government owned IP; and Allocation of IP between government agencies.

- *Employee Incentives.*[704]

With regards to the specific issue of ownership of IP, the Guidelines direct agencies to ensure that 'rights to IP are allocated to optimise the Benefit to Western Australia from the use and Commercialisation of the IP'.[705] Ownership of IP is discussed in connection with the 'best

---

[702]   ibid., p6.

[703]   ibid., p7.

[704]   ibid., pp8-15.

[705]   ibid., p6.

practice' management of IP.   Best practice for the management of IT includes the following examples:

> *A. 4   ensuring that IP ownership is clear and traceable*
>
> *A.10   ensuring that all contracts under which IP might be created specifically address the issues of ownership of and rights to pre-existing IP, and also to IP to be created during the contract*
>
> *A.15   actively managing contracts to ensure that the ownership of IP created will vest as agreed in the contract*
>
> *A.18   avoiding joint ownership of IP unless there is a contract in place which clearly addresses the joint owners' ability to use and Commercialise the IP.*[706]

While the commercialisation of IP by Government agencies is an important matter for consideration, this Inquiry is mainly concerned with the impact of IP ownership on the ICT industry rather than the ways in which various agencies are able to manage and commercialise their IP.[707] The Guidelines recognise that it is not essential for agencies to own the IP developed in government funded projects or contracts, that agencies can fulfil their operational needs, both current and future, without necessarily owning the generated IP. Furthermore, vesting IP rights with the contracted developer may, in fact, lead to further benefits for the State including reduced contract costs, increased business development, increased innovation and commercialisation. Additionally, Government is released from having to commercialise its IP assets.[708]

The Guidelines state that 'IP rights can be allocated for strategic reasons including facilitating the broader use of the IP or innovation in Western Australia for non-commercial purposes, encouraging creativity and innovation and enabling the Rights Recipient to commercialise the IP or Innovation'.[709]

---

[706]   ibid., pp8-10.

[707]   Commercialisation of Government owned IP by Government agencies is addressed in various documents such as: House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, The Parliament of the Commonwealth of Australia, Canberra 2006; Productivity Commission, *Public Support for Science and Innovation.* Draft Research Report, Commonwealth of Australia, Canberra, 2006; Department of Industry and Resources, *Commercialising Government Owned Innovations: A Guide for the Commercialisation of Government Owned Innovations and Intellectual Property*, Draft, Government of Western Australia, Perth, 2005; and van Bruchem, Peter, *Commercialisation of Government-owned Innovation*, 2004, *LESANZ News*, June, 2004, pp1-2.

[708]   Department of Industry and Resources, *Government Intellectual Property Policy and Best Practice Guidelines*, 2003, p13. Available at: http://www.doir.wa.gov.au/documents/businessandindustry/IPpolicy_ may2003(1).pdf. Accessed on 2 March 2007.

[709]   ibid., p11.

Nevertheless, the default Policy position on IP rights is that ownership remains with the government. This is evidenced in the Guidelines' best practice for agencies in the allocation of IP rights which states that:

> *where it is difficult to determine what IP rights may be required by Government to optimise the Benefit to Western Australia, Allocating ownership of IP prior to its creation to the Government Agency and postponing an assessment on any further Allocation of IP rights to the Contracted Developer, Collaborative Developer or Rights Recipient until the potential additional uses and value of the IP can be better ascertained.*[710]

Finding 39

The Western Australian Government's policy and guidelines regarding intellectual property rights allow for these to be allocated to maximise the benefit of the use and commercialisation of intellectual property for Western Australia. However, the default position on intellectual property rights is that ownership remains with the government.

The ownership of IP rights in contract material is addressed in the Government of Western Australia's November 2006 *Draft Guide for the Use of the ICT General Conditions of Contract & Request Document*. This guide clearly states:

> *This clause provides an option for either the State (Intellectual Property Owner) or the Contractor (successful respondent) to own the IP Rights to all the Contract materials.*
>
> *The default position within the documents is for the State to own all IP Rights.*[711]

This position is also iterated in relation specifically to the supply of software development services in that:

> *Agencies should pay particular attention to the IP Rights clauses and state who is to own the IP of the developed software. The default position is that the State owns the IP in Developed Software.*[712]

Agencies are advised that 'the ownership of IP needs to be carefully considered on a case-by-case basis. There may be circumstances when the State would wish to commercialise it's (sic) IP'.[713]

---

[710]   ibid., p11.

[711]   Department of Industry and Resources, *Draft Guide for the Use of the ICT General Conditions of Contract & Request Document*, 2006, p18. Note: There is a March 2007 edition of these Conditions of Contract, and the clauses referred to in this report remain unchanged. This is available at: http://www.dtf.wa.gov.au/cms/pro_ content.asp?ID=1327.

[712]   ibid., p10.

[713]   ibid., p18.

The implication, here, is that while the default position is government ownership, the intent of the policy is to allow flexibility and only have State ownership under circumstances when the State aims to commercialise the IP. However, as the following discussion of issues raised in evidence, such as alignment between policy and practice, negotiation costs and procurements skills, indicate, this is a problematic position.

Evidence to the Inquiry suggests that despite the changes to Government IP Policy and their reflection in the guidelines provided, IP ownership in government procurement remains a concern for the ICT industry.

(1)   Alignment and Continuity between Policy and Practice

In an Issues Paper on government IP management, the Attorney-General's Department advised that:

> concerns have been raised, particularly from within the information, communications and technology (ICT) sector, that Australian Government agencies do not use the flexibility in IP ownership that is encouraged by the IT IP Guidelines and that, in practice, IP rights tend to be retained by the individual agencies and opportunities for commercialisation, sharing or re-use are lost.[714]

As AIIA note:

> The IP policy of government can, of course, be distinguished from the practices of the government and its agencies in dealing with IP ownership issues. IP policy is also different from the specific default positions for IP ownership that are set out in the contracting templates used by that government.[715]

The DTF's Customer Contract for SPIRIT, Clause 22.1 (a) concerning materials created under the contract states that:

> all Intellectual Property Rights in Developed Software or other items that have been developed for the Customer under this Contract ('Developed Materials') are assigned to the Customer.[716]

While Clause 22.1(a) is subject to Clauses 22.1(b) and 22.1(c), which state that the extent to which other parties may own or share the IP must be specified in the contract details, government

---

[714]   Attorney-General's Department, *Issues Paper on Government IP Management*, Commonwealth of Australia, Canberra, September, 2005, p2.

[715]   Australian Information Industry Association, *Intellectual Property Unleashing our IP Potential*, AIIA Ltd, ACT, 2006, p35.

[716]   Department of Treasury and Finance, *GITC WA4 Terms and Conditions (Customer Contract)*, *Customer Contract for SPIRIT*, December 2005, p37. Available at: http://www.dtf.wa.gov.au/cms/uploadedFiles/ GITC_WA4_Terms_and_Conditions_(Customer_Contract)_December_2005.pdf. Accessed on 9 February 2007.

ownership is clearly the default position. Intellectual Property is barely mentioned in the SPIRIT Buyers Guide. Reference is made to the fact that IP requirements should be determined prior to the Request being issued, and attention is drawn to the Intellectual Property Policy as one of the other government policies impacting upon procurement.[717]

It is difficult to ascertain the precise extent to which the encouraged flexibility is put into practice. Nevertheless, the DoIR submits that while the IP policy stipulates that the benefits from IP rights are to be maximised, 'this policy statement is rarely realised with the IP typically locked within an agency'.[718] This failure to be flexible has potentially serious repercussions.

(2)   Loss of Opportunities for Industry Development

The fact that the encouraged flexibility in IP rights allocation is rarely put into practice represents a loss of opportunities for industry development. The Australian Computer Society (ACS) states that 'after completion [of a procurement contract] it is rare for government to want to commercially exploit software - it only needs unfettered use and the ability to maintain the software and to get contractors to perform those tasks'.[719] ICT ICC advises that 'intellectual property rights being locked-away in government' presented a procurement policy impediment to the ICT industry.[720] AIIA (WA) sees the government default position of IP ownership as effectively reducing competition as 'some ICT companies (both SME and MNC) will not bid for government business' with this default position in place.[721] 'Moreover', says AIIA (WA), 'it inhibits ICT industry development in WA - local companies cannot obtain strategic Government business that is essential for growth and export and MNCs may elect to invest in other jurisdictions'.[722] For both government and the ICT industry, moving away from a government 'we pay, we own' default approach and developing a more flexible approach 'can achieve significantly better outcomes in the commercialisation of intellectual property'.[723] In order to grow and commercialise their products, ICT businesses need to develop and own their IP. For locally owned SMEs, forfeiting IP rights to government means 'they "give away the farm" and are

---

[717]   Department of Treasury and Finance, *Common Use Arrangements No. 146601 - SPIRIT: Buyers Guide*, 2006, p17 and 20. Note: There is a March 2007 edition of this Guide, and the clauses referred to in this report remain unchanged. This is available at Available at: http://www.dtf.wa.gov.au/cms/uploadedFiles/ SPIRIT_Buyers_Guide_March2007.

[718]   Submission No. 8 from Department of Industry and Resources, August 2006, p16.

[719]   Submission No. 15 from Australian Computer Society, Inc., March 2007, p2.

[720]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, August 2006, p13.

[721]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p21.

[722]   ibid., p21.

[723]   ibid., p22.

precluded from further developing that IP for potential future customers, both in Australia and export markets'.[724]   Similarly, ACS argues that:

> *an assignment of IP by a supplier technically precludes the supplier from ever re-using their own code for anyone else. It is a bit like requiring lawyers to assign copyright in their precedents just because you want a small contract drafted.*[725]

This position is supported by other bodies such as ICT ICC and ATUG-WA.[726]   It is also supported by the DoIR which recognises that 'new intellectual property is the feedstock for the ICT industry' and that restrictive IP ownership clauses in government procurement contracts 'impede[s] the development of business and the growth of the ICT industry'.[727]

In comparing the situation in Western Australia with that in other states, Mr James McAdam of AIIA suggests that other states such as Queensland have a more flexible approach to IP rights.[728]

> *also proactively make the IP that exists in government contracts available in the public domain, so companies can come along and take some IP that has been developed in the delivery of a government contract and commercialise that IP for sale to other governments, for sale to industry and for export.*[729]

In its briefing to the Committee, Multimedia Victoria advised that the default position in Victoria is supplier ownership, not government, with any digression from this position needing the approval of the Departmental Secretary. If companies use the IP developed through a government procurement contract they must acknowledge their 'Made in Victoria' status.[730]

Finding 40

In Victoria the default position in relation to the ownership of intellectual property lies with the supplier which is opposite to the situation in Western Australia.

---

[724]   Australian Information Industry Association, *Intellectual Property: Unleashing our IP Potential*, AIIA Ltd, ACT, 2006, p5.

[725]   Submission No. 15 from Australian Computer Society, Inc., March 2007, p2.

[726]   See Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, August 2006; Submission No. 7 from ATUG-WA, August 2006, p7; and Submission No. 8 from Department of Industry and Resources, August 2006, p16.

[727]   Submission No. 8 from Department of Industry and Resources, August 2006, p16.

[728]   Mr James McAdam, General Manager, Australian Information Industry Association, *Transcript of Evidence,* 20 September 2006, p6.

[729]   ibid.

[730]   Multimedia Victoria, Briefing, 17 October 2006.

In contrast to this flexibility, according to AIIA:

> *to be frank, here in WA, IP is locked up in government contracts. The government owns it and it sits on the shelf.*[731]

While DoIR does not accept industry's 'contentions that it [government ownership of IP] is a major barrier to growth', it does accept that Western Australia's position is 'one which was developed during the Second World War'.[732]   Given this, and when combined with industry's persistent concerns, DoIR agree that IP ownership 'is certainly an area that needs revisiting … Our position is that yes, it needs to be critically reviewed'.[733]

Recommendation 25

The Western Australian Government policy and practice regarding intellectual property rights must be critically reviewed with a view to maximising commercialisation oppertunities.

---

(3)   Negotiating IP in Contracts is Costly

The cost of negotiating the contract position on IP rights is costly in terms of time, money and other resources, for both the ICT business and government. According to AIIA (WA):

> *This could be reduced significantly if both parties adopted a more informed and flexible approach, understanding general IP principles and each other's requirements[.]   The current position is to a large extent, driven by a government procurement culture that lacks sufficient expertise on IP matters and is inherently risk averse.*[734]

By using restrictive intellectual property clauses not only does government potentially impede industry development, it also will 'possibly pay more for ICT services'.[735]

---

[731]   Mr James McAdam, General Manager, Australian Information Industry Association, *Transcript of Evidence*, 20 September 2006, p6.

[732]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p8.

[733]   ibid.

[734]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p21.

[735]   Submission No. 8 from Department of Industry and Resources, August 2006, p16.

(4) *Procurement and Negotiation Skills*

This issue is related to the general issue of the contract negotiation skills of people involved in the procurement of ICT, as discussed previously. In 2000 the Department of Communications, Information Technology and the Arts' IT IP Guidelines sent a clear message that:

- *Decision makers should be encouraged to develop an understanding of the issues, options and risks in management and commercialisation of IT-related IP;*

- *Agencies should take steps to ensure that suitable training in IP management ... is made available to decision makers within the Commonwealth;*

- *Decision makers should obtain appropriate, early professional advise to assist in identification and resolution of IP planning and management issues.*[736]

AIIA (WA) argues that in Western Australia 'the current position is to a large extent, driven by a government procurement culture that lacks sufficient expertise on IP matters and is inherently risk averse'.[737]

(g)   Government Procurement and ICT Innovation

Evidence presented to the Committee suggests that there are three main ways in which government procurement negatively impacts upon innovation in the local ICT industry. The first relates to the retention of IP by government, which as already been discussed in this Report. The other two concern the tender specification requirements for proven technology and the substantial size of ICT projects.

ACS states that, understandably, 'government procurement processes in Australia are notable for their strict probity controls and for their hyper aversion to risk'.[738] A function of this risk aversion is that requests for proposals and tender documents are generally based on particular specifications for proven technology, that is, they are based on list of required, proven items. According to ICT ICC, 'tenders are usually based on a functional specification which must be complied with and a best value evaluation of complying bids'.[739]

This assertion is supported by ACS:

---

[736]   Department of Communications, Information Technology and the Arts, *The Commonwealth IT IP Guidelines. Management and Commercialisation of Commonwealth Intellectual Property in the Field of Information Technology*. Commonwealth of Australia, Canberra, 2000, p3.

[737]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p21.

[738]   Submission No. 15 from Australian Computer Society, Inc., March 2007, p1.

[739]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, August 2006, p12.

there are frequently requests for proposals (RFPs) that specify the requirements in terms that preclude any innovative solution being bid because current 'proven' technology is explicitly called for. That is done because the current paradigm is for a winning bidder to be announced and for the winning bidder's product to be rolled out full scale.[740]

Industry believes that innovative solutions that are untried will not win government business as it represents too great a risk.[741] DoIR's statement that 'a small proportion of State Government ICT expenditure is on specific projects, where new/innovative solutions are being sought/offered'[742] adds weight to industry's position. ACS suggest that under the current procurement framework 'there would be few award winners from last Friday [WAITTA Awards] that could sell to government under current procurement arrangements'.[743]

One alternative proposed to the Committee is to have requests for proposals that require 'outcomes rather than provide[d] a shopping list of required items'; requests should be 'specified in outcome terms and explicitly call[ed] for innovative solutions to be bid'.[744] While recognising that changes would have to be made to the procurement process to accommodate outcomes-based procurement, ACS argue that this would mean that 'the public sector might have a hope of achieving the kind of productivity gains that the private sector enjoys from innovation'.[745] DoIR, too, see that specific procurement projects offering innovative solutions is the 'area [that] offers the real opportunity for industry development'.[746]

Another way in which industry suggests that government procurement could help ICT innovation is to provide an alternative to large-scale projects. ICT ICC suggests that 'there could be an opportunity with a large project to carry out a pilot development phase as a proof of a product and then deliver the final project as a second phase'.[747] For ICT ICC:

it may be better to seek new approaches and run low-cost pilot and proof of concept activities that can be further developed if the innovative concept is shown to be successful. This means a change in purchasing practises that would allow a successful supplier to engage in a long-term relationship around the development of a specific product, rather than being constantly dragged down by having to compete for the next little piece of business.[748]

---

[740] Submission No. 15 from Australian Computer Society, Inc., March 2007, p1.

[741] ibid.

[742] Submission No. 8 from Department of Industry and Resources, August 2006, p17.

[743] Submission No. 15 from Australian Computer Society, Inc., March 2007, p1.

[744] ibid., p1.

[745] ibid., p1.

[746] Submission No. 8 from Department of Industry and Resources, August 2006, p17.

[747] Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, August 2006, p12.

[748] ibid.

DoIR advises that:

> *In the past, the local industry has been keen for government agencies to trial their products. The agencies have been equally reluctant to do so, because of the additional cost and risk associated with purchasing something as a prototype.*[749]

DoIR support the establishment of a mechanism such as a 'specialised program, or programs where Government trials local innovative technology or specific "development funds" which agencies can access to conduct pilot programs is required'.[750] As well as directly assisting innovation, such programmes would also assist government agencies act as reference sites for local ICT companies. According to DoIR, by trialling a product and using this as a 'test site for product development' an agency:

> *can then become a reference site. Government purchasing is very important as a reference for other markets. It is a variation of that theme of "Buy my prototype". We are saying "Trial my prototype".*[751]

While DoIR advise that some areas of government such as Main Roads, Education and the TAFEs have 'a positive attitude to local industry' and engage in trialling products, it also understands that 'very few agencies would volunteer to do this' and that a policy would definitely be required to make it work.[752]

Finding 41

The Department of Industry and Resources support the establishment of a mechanism to trial local innovative technology and conduct pilot programmes to assist ICT innovation.

---

[749] Mr Stephen Grocott, Director, Innovative Industry, Department of Industry and Resources, *Transcript of Evidence*, 23 August 2006, p8.

[750] Submission No. 8 from Department of Industry and Resources, August 2006, p17.

[751] Mr Stephen Grocott, Director, Innovative Industry, Department of Industry and Resources, *Transcript of Evidence*, 23 August 2006, p8.

[752] ibid., p9.

Recommendation 26

The Western Australian Government should develop a policy regarding government agencies trialling innovative ICT products and services.

CHAPTER 6   OTHER ISSUES DEEMED RELEVANT TO THE INQUIRY

The Committee has identified that while skills development, education and communications infrastructure are not part of the Information Communications Technology (ICT) industry *per se*, they directly impact upon the ability of the industry to be maintained and developed. The weight of evidence provided to the Committee demanded that these matters receive particular attention in this report.

6.1   Education and Skills Development

(a)   Background

The development of a skilled workforce is essential in maintaining growth within the ICT industry. Ongoing skills training and enhancement needs to be receptive to the ever changing requirements of the ICT industry to ensure there is a sufficient skilled labour force to meet local ICT demands.

The exigency in meeting the skilled labour requirement has prompted both federal and state governments to adopt education initiatives designed to provide a constant flow of ICT skilled labour. In February 2004 the Western Australian Government released the *Enabling Future Prosperity Strategy* designed to provide the framework for more collaboration between government and industry within the ICT sector with an aim to provide:

> *positive impacts on the local ICT industry by building confidence and capability, attracting investment and trade, generating new business and jobs, and signalling to the community the importance of this growing industry sector.*[753]

In February 2005 the federal government established the ICT Skills Foresighting Working Group to contribute to the 'consideration of the Australian ICT labour market'.[754] The Working Group focussed on both the ICT industry and the ICT skill levels required in the broader business market.

The Working Group's 2006 report highlights the changing nature of ICT employment and indicates that the roles performed by ICT professionals are becoming increasingly diverse. This indicates a requirement that educational organisations involved in the provision of ICT training need to remain responsive to the changing parameters of the ICT industry.

---

[753]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy*, Government of Western Australia, Perth, November 2004, p1.

[754]   Department of Communications, Information Technology and the Arts, *Building Future Skills in Australian ICT*. Available at www.minister.dcita.gov.au/media/media_release/building_future_skills_in_australian_ict 2. Accessed on 12 March 2007.

(b)   The Role of Education in Developing ICT Skills

Education plays a key role in the development of ICT skills. The Australian Information Industry Association (AIIA (WA)) advise 'that education and training providers are vital for the future growth of the ICT industry'[755] and that there must be:

> *a progressive, responsive and adaptive education system that will build and refresh the ICT skills pools required to satisfy the demands of a dynamic industry and a knowledge economy.*[756]

AIIA (WA) go on to say that the ICT industry is 'dependent on the success, commitment and effectiveness of [the] education and training systems'.[757] This view is also endorsed by the ICT Industry Collaboration Centre (ICT ICC). ICT ICC informed the Committee that 'having a training curriculum which is aimed at producing the highly technical skills base for the [ICT] industry'[758] is strongly supported by the ICT industry. Whilst ICT ICC acknowledges the involvement of the Department of Education and Training, they are critical of the amount of interaction actually occurring.

> *Some contact has occurred between the Department and industry via the ICT ICC Round Table on skills needs for the industry but there needs to be stronger focus on this needs matching in government.*[759]

ICT ICC went on to recommend that:

> *More work is needed in liaison between the ICT industry and the Education & Training area of government to ensure that training offered produces appropriately and relevantly skilled people to enter the ICT industry.*[760]

Recommendation 27

More collaboration between the ICT industry and the education sector is needed to ensure that the education and training offered produces appropriately skilled people for employment in the industry.

---

[755]   Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p18.

[756]   ibid.

[757]   ibid.

[758]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, August 2006, p8.

[759]   ibid., p8.

[760]   ibid., p8.

The Western Australian Information and Communications Technology Industry Development Forum (WAICTIDF)[761] advise that as part of the State Government's support for the local ICT industry, the Government 'should continue to implement and improve ICT educational policies in primary, secondary and tertiary technical education'.[762]

From the submissions that raised the issue of the role of education in developing skills for the ICT industry, it was apparent that there is a belief that more work is required to bring 'education' in line with industry needs.

Finding 42

More work is required by industry, government and the education sector to bring education in line with industry needs.

Recommendation 28

The Department of Education and Training and universities must ensure that curriculum being delivered to students is relevant and useful.

DOIR suggested that more interaction between industry and education bodies was required to better equip graduates with the necessary ICT skills. This could be achieved by 'working with industry and the tertiary sector to better communicate industry's needs to academia'.[763] ICT ICC advised the Committee that 'part of the problem is that there has not been a close enough relationship between the universities in WA and the industry'.[764]

---

[761] The Western Australian ICT Industry Development Forum was established in 2003/04 to advise the relevant Minister on policies and strategies necessary to ensure the continuing development of the Information and Communications Technology Industry and the application of information and communication technologies across industry and the community generally in Western Australia.

[762] Submission No. 11 from Western Australian Information and Communications Technology Industry Development Forum, September 2006, p10.

[763] Submission No. 8 from Department of Industry and Resources, Government of Western Australia, August 2006, p5.

[764] Mr Greg Boalch, Director, Informations and Communictions Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence,* 25 October 2006, p6.

A number of recent Commonwealth Government inquiries into ICT skills development have found that similar issues are being encountered at a national level.[765] These issues comprise the basic premise that educational programmes need to be more cognisant of the requirements of the ICT industry. Consequently, a number of education initiatives have been put in place at a state and national level to alleviate some industry concerns.

(c)   Education Initiatives

(i)   Primary and Secondary Education

The Primary and Secondary school system is seen as an extremely useful environment to develop basic ICT literacy skills. Students can be equipped with generic ICT competencies that will allow them to have a good working knowledge of the current technologies. The success of the school ICT education programme will often be reflected in the number of students considering taking their ICT study on to a tertiary level. Poor ICT school programmes can have a detrimental effect on the number of students considering the ICT industry as a possible career path.

In 2004 the Victorian Government undertook a survey into 'the influences and motivations that sway 17 - 19 year olds as they make decisions about further studies and future careers'.[766] The key finding was that the way ICT was taught in schools and the limited subject choices available have an extremely negative influence.[767] The survey also found that a general lack of knowledge about the different types of ICT jobs and courses available presents a major barrier to a career in the area, and there was uncertainty about exactly where an ICT qualification would lead in the employment market.[768]

When deciding whether or not to pursue a career in ICT, the most important influence was word of mouth, followed by parents, teachers, career advisers, friends, Technical and Further Education (TAFE) and university open days, careers expos and the VTAC guide.[769] Multimedia Victoria survey results released in 2001 show that 'parents remain the most important influence, and by a significant margin' and that such parental influence can be 'very strong and very direct'.[770] While parents are in such an influential position:

---

[765]   House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, Commonwealth Parliament, Canberra, June 2006; Department of Communications, Information Technology and the Arts, *Building Australian ICT Skills, Report of the ICT Skills Foresighting Working Group June 2006*, Commonwealth of Australia, Canberra, 2006.

[766]   Department of Infrastructure, Multimedia Victoria, *Attitudes to ICT Careers and Study among 17-19 Year Old Victorians*, Government of Victoria, Melbourne, 2004, p1.

[767]   ibid., p5.

[768]   ibid., p1.

[769]   ibid., p5.

[770]   Department of Infrastructure, Multimedia Victoria, *Reality Bytes: An In-depth Analysis of Attitudes about Technology and Career Skills*, Government of Victoria, Melbourne, 2001, p24. Available at: http://www. mmv.vic.gov.au/uploads/downloads/Resource_Centre/RealityBytes.pdf. Accessed on 15 May 2007.

Most parents and many career teachers indicated a lack of confidence in providing guidance and advice outside of their immediate experience to young people about their options – the pace of change has been so rapid that nobody seemed to have a clear picture of the world beyond their personal experience.[771]

Multimedia Victoria's study also found that parents had a rather 'reticent attitude' toward computers. There are several factors that generate this lack of parental confidence, including:

- parents' attitudes to computers, which is largely a result of 'ignorance and unfamiliarity rather than bad experiences'; and

- parents' own inadequate information technology (IT) training, which was often 'very stressful and uncomfortable' and conducted by trainers who 'did not appear to be fully competent'.[772]

Parents are also influenced by what they perceive as the 'recent demonstrations of the vulnerability of the "dot coms"'.[773] Many parents also remain:

suspicious of the online world, and these suspicions are fuelled by tabloid media promulgating an image of the Internet as a tool for copyright infringement, anarchy and all manner of sexual deviance. On a less sensational level, there is a concern that children are "losing their appreciation of print-based technologies and ... the preparedness to put in the effort that the older technologies demanded."[774]

Edward Mandla suggests that when children ask their parents about a career in ICT the parents respond with: 'stay away'. The main reason for this response is the perception of ICT as being for 'geeks, [with] no money in it, high risk, high unemployment rate, doesn't lead anywhere, long hours programming in dark windowless rooms, off shored, not on boards, not on governments agenda, anyone can get in at any time'.[775]

Research conducted by Judy Young into women in the ICT sector confirm Multimedia Victoria's study. Young argues that if parents:

when acting as advisors are unaware, ill informed or hold out of date views of the nature of ICT carers, then many girls may reject careers in the industry based on misinformation.[776]

---

[771]   ibid., p21 and 24.

[772]   ibid., p54.

[773]   ibid., p25.

[774]   ibid., p25.

[775]   Mandla, Edward, *The IT Profession: Today and Tomorrow*, nd. Available at: http://www.mandla.com.au/ index.php?option=com_content&task=view&id=51&Itemid=36. Accessed on 15 May 2007.

[776]   Young, Judy, 'The extent to which information communication technology careers fulfil the career ideals of girls', *Australasian Journal of Information Systems*, vol. 10, no. 2, May 2003, p115.

There is also evidence of gender bias on the part of parents in deciding whether or not to encourage their female children to pursue an ICT career.[777]

Finding 43

While parents exert the most influence on their children's choice of career, they are especially cautious about encouraging children to enter the ICT industry. This is particularly so post the dot com crash of 2000. Parents are often unfamiliar with ICT themselves and therefore are not aware of opportunities in the sector, and this adds to their reluctance to encourage their children to take this career path.

Another notable problem area prohibiting the survey respondents from choosing a career within the ICT industry was the perception that ICT careers were boring and mainly involved sitting in front of a computer for most of the working day. This was deemed to be a major deterrent for young women in particular. While the proportion of females (13%) and males (11%) who found that 'the IT subjects at school are far too difficult' are comparable, their perceptions vary with regard to the degree of boredom associated with IT subjects at school and whether or not school inspired them to undertake further study and/or a career in IT. The survey found that:

- 59% of females reported that the IT subjects at school are boring (50% of males);

- 60% of females reported that the IT subjects at school do not inspire you to consider a career in IT (47% of males); and

- 59% of females reported that the IT subjects at school do not inspire you to consider further IT study (43% of males).[778]

In comparison to the 13% of boys who indicated they would undertake tertiary study and nominated ICT as their intended area of study, not one girl nominated an intention to study ICT at a tertiary level.[779] Similarly, a study of Year 9 students in Tasmania found that only 5% of these students intended to enter ICT careers, and of these, boys outnumbered girls four to one.[780] Multimedia Victoria notes some male and female differences in perceptions of ICT, including:

---

[777]   Department of Infrastructure, Multimedia Victoria, *Evaluation of* New Realities *Campaign - Key Findings* , 2003, p3. Available at: http://www.mmc.vic.gov.au/uploads/downloads/Skills_careers?2003Evaluation.pdf. Accessed on 15 May 2007.

[778]   Department of Infrastructure, Multimedia Victoria, *Attitudes to ICT Careers and Study among 17-19 Year Old Victorians*, Government of Victoria, Melbourne, 2004, p11.

[779]   ibid., p12.

[780]   Young, Judy, 'The extent to which information communication technology careers fulfil the career ideals of girls', *Australasian Journal of Information Systems*, vol. 10, no. 2, May 2003, p115.

- *Males tended to be more likely to be able to identify the benefits of an IT career than females.*

- *Females perceived IT careers as lacking the opportunity for interaction with others as well as the use of communications skills that are required by more people oriented careers (eg: nursing, psychologist).*

- *Females typically viewed IT as a communication tool (eg: e-mail, MSN Messenger - "to Gossip"), not a career.*[781]

The flow on effect of this perception of ICT is reflected at the tertiary level where figures indicate that 'less than 15% of IT undergraduates are women'.[782]

A number of private and government cooperative initiatives have been set up to both highlight this gender imbalance and to redress the problem. IBM sponsors a number of programmes designed to promote careers in IT to female secondary school students. For example, the 'School Speakers Program', run through Swinburne University of Technology, Melbourne, the University of Technology Sydney, Women in Technology (Inc) (WiT) New Zealand, and WiT Queensland allow 'teams of female IBM employees and university students (to) visit schools across Australia and New Zealand to demystify study and career opportunities in IT and engineering'.[783]

IBM also sponsors the 'Go Girl, Go For I.T.' careers showcase programme. First held at Monash University in Melbourne in 2000, this programme 'aims to demonstrate to students and teachers that IT is an exciting, rewarding and positive career option for women'.[784] The 'Go Girl, Go For I.T.' careers showcase has also been held at Murdoch University, Perth, on several occasions, the most recent being in March 2006. At the IBM/WiT WA sponsored two day event that caters for over 2,500 female students, 'female role models selected from leading corporate, education and government organisations throughout Western Australia'[785] share experiences and offer career advice. The program for the careers showcase is based around four main streams:

- Web Queens;

- Lynx

---

[781] Department of Infrastructure, Multimedia Victoria, *Evaluation of* New Realities *Campaign - Key Findings* , 2003, p3. Available at: http://www.mmc.vic.gov.au/uploads/downloads/Skills_careers?2003Evaluation.pdf. Accessed on 15 May 2007.

[782] *Go Girl, Go For I.T.*, Available at: http://gogirlwa.org.au/index.php?thepage=About. Accessed on 15 May 2007.

[783] IBM, *Women in the Workforce - Australia,* nd. Available at: http://www-07.ibm.com/au/diversity/advancement_of_women.html. Accessed on 15 May 2007.

[784] ibid.

[785] *Go Girl, Go For I.T.*, 2005. Available at: http://gogirlwa.org.au/index.php?thepage=About. Accessed on 15 May 2007.

- Mega Misses; and

- Cyber Chicks.[786]

IBM, in conjunction with the ANZ Banking Group, also run week long camps 'designed to encourage young women aged between 13 and 15 years, to study and pursue careers in IT'.[787] The Exploring Interests in Technology and Engineering (EXITE) camps provide the participants with access to a 'panel of leading women at IBM and from across the IT industry'.[788] The ultimate goal of EXITE is to provide young women with 'positive role models and hands-on experience in technology with the hope that the camps spark their interest and encourage them to pursue careers in technical fields'.[789] EXITE camps have been held in New South Wales, Victoria and Queensland.

A joint initiative between WiT and Girls Into Doing Great Information Technology Stuff (GIDGITS) has produced the 'Technology Can Take You Anywhere' programme. The programme is a 'one-day event aimed at increasing the numbers of young women participating in the Information Communication Technology (ICT) and Biotechnology industries'.[790] The one day event provides students from Year 6 to Year 12 with access to interactive workshops, career and study guidance and real world role models.[791]

Finding 44

There is a lack of intention on behalf of young women to enrol in ICT courses at a tertiary level and/or enter the ICT industry.

Recommendation 29

The Western Australian Government provides funding to accurately and positively communicate the opportunities in ICT specifically to young women.

---

[786]   ibid.

[787]   IBM, *Women in the Workforce- Australia*, nd. Available at: http://www-07.ibm.com/au/diversity/advance ment _of_women.html. Accessed on 15 May 2007.

[788]   ibid.

[789]   ibid.

[790]   ibid.

[791]   ibid.

The Australian Information Industry Association (AIIA) advise that awareness is a very real problem facing the ICT industry and that an accurate description of what an ICT career involves is simply not getting through to many young students.

> *... a role in the IT industry is not about sitting in a 6 x 6 cubicle tapping away on a computer all day and cutting code. It is a role that involves people skills; it is a job one can do anywhere in the world, and it is fast-paced and changing. When we talk to students about the sorts of jobs that they would like to do, the kind of description we get back from them is exactly what our industry offers. Yet they do not think of our industry as somewhere that they would like to study and work.*[792]

Young's study reveals the potential for 'now obsolete features of the industry such as a heavy emphasis on technology' to preclude women from pursuing ICT as a career. Young also suggests that the industry has broadened to such an extent that 'many of the historical negative barriers that portray the industry as solitary, male dominated and "nerdy" are no longer appropriate'.[793]

The Committee was told that quite simply 'ICT is not seen as a glamorous career'[794] and that the problem associated with having a poor image is that the ICT industry is not attracting the people it so desperately requires.

> *If we do not have these people, we do not have the smarts, we do not have innovation and we do not have new ideas, new products and new services that give us export income and, more importantly, sustainable growth.*[795]

Finding 45

There is a perception that ICT is not an attractive career prospect. This is mainly due to its reputation as an antisocial, desk-bound occupation.

---

[792]   Mr James McAdam, General Manager, Australian Information Industry Association, *Transcript of Evidence,* 20 September 2006, p3.

[793]   Young, Judy, 'The extent to which information communication technology careers fulfil the career ideals of girls', *Australasian Journal of Information Systems*, vol. 10, no. 2, May 2003, p115.

[794]   Mr Greg Boalch, Director, Information Communication Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence,* 25 October 2006, p6.

[795]   ibid., p6.

Finding 46

The aspects of the ICT industry to which the Committee has been exposed indicate a vast breadth of engaging, dynamic and challenging opportunities across the sector, which debunks the perceptions held in the community about the ICT sector.

The Federal Standing Committee on Science and Innovation (FSCSI) undertook a comprehensive investigation into Australian technological innovation and pathways to commercialisation. As part of the investigation, FSCSI looked at education and the role it plays in providing students with scientific, engineering and technology skills.

During the investigation FSCSI was advised that education reform, starting at school level, is required to address the deficiencies in science and technology skills. The Australian Innovation Association told FSCSI that:

> *there is a need for significant reform of the school system to support the development of a culture of scientific and technological entrepreneurship.*[796]

The FSCSI was also advised that 'we should educate our students to create a job and not just look for a job'[797] and that 'education reform, starting at school level, is required to address deficiencies in business and entrepreneurial skills'.[798]

A number of initiatives have been put into effect at both the Federal and State levels. These initiatives are designed to provide more resources for teachers responsible for the ICT programmes. The initiatives will allow teachers to become more proficient in developing advanced ICT literacy skills amongst the students. The additional training will also provide teachers with a better understanding of the skills requirements of the ICT industry. Some of the programmes include:

- Partnerships in ICT Learning: a project that involves partnerships between University and schools aimed at professional learning about using ICTs in new curriculum and pedagogical frameworks. The project provides professional learning pathways for pre-service teachers, teachers and university staff;

- Making Better Connections: an initiative that focuses on teacher's professional development in their use of ICT;

---

[796] House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, The Parliament of the Commonwealth of Australia, Canberra, June 2006, p68.

[797] ibid., p67.

[798] ibid., p67.

- Teaching Australia - Australian Institute for Teaching and School Leadership: this initiative supports and advances the effectiveness and standing for the teaching profession. ICT will be addressed within this context; and

- Australian Government Quality Teacher Programme: this initiative focuses on the renewal of teacher's skills and understanding within a range of priority areas including literacy, numeracy, mathematics, science and technology (including ICT), and vocational education.[799]

Educational innovation in response to the changing and growing demands of industries like ICT is also reflected within school curricula. At the middle childhood schooling phase, which encompasses school years 6 and 7, Technology and Enterprise is now a core learning area.[800]

Finding 47

Education and its institutions and training providers, from primary through to tertiary levels, play a pivotal role in the development of ICT skills and are vital to the ongoing development of the ICT industry.

Finding 48

A number of federal and state educational initiatives have been put in place to raise the profile of Science, Engineering and ICT subjects in an attempt to increase student enrolments.

(ii)   *Vocational education and training initiatives*

Vocational education and training (VET) programmes allow students to undertake vocational studies in conjunction with mainstream education curriculum. All VET programmes comply with the National Training Framework (NTF) and are delivered through a range of delivery mediums including schools, TAFEWA, agricultural schools and universities. Subjects offered through the VET programme are designed to equip students with the skills required in the workplace.

---

[799]   Department of Communications, Information Technology and the Arts, *Building Australian ICT Skills, Report of the ICT Skills Foresighting Working Group June 2006*, Commonwealth of Australia, Canberra, 2006, p9.

[800]   Department of Education and Training, *Outcomes and Standards*, nd. Available at: http://www.det.wa.edu/ outcomesandstandards/taught.html. Accessed on 16 March 2007.

Under the NTF, VET provides secondary students with nationally recognised training taken from the National Training Packages programme. The NTF is a nationally consistent, industry led system designed to:

- improve the competitiveness of individual enterprises and the nation;

- provide for nationally-consistent VET qualifications;

- provide high-quality skill outcomes to maintain individuals' employability and increase their productivity;

- provide for nationally-recognised qualifications; and

- meet industry requirements.[801]

Under the National IT Training Package, which was developed in co-operation with the ICT industry, a new training IT VET package has been developed which 'provides a far more highly developed and structured system of qualifications and pathways to better reflect the current emerging ICT skills and needs of the industry'.[802]

The new training package is called *Information and Communications Technology* in recognition of 'the broad scope of its industry application and also the convergent nature of its own and related technologies'.[803] The new qualifications are designed to meet the 'current and future needs of new and existing personnel working in a range of work functions and activities within the industry'.[804]

A number of new units have been incorporated into the new VET ICT training package. These are predominantly ICT specialist units and focus on software development, programming languages, mathematical techniques and process automation. Additional units at a mid level were also developed for fault finding, equipment care, testing and user/technical documentation.[805]

---

[801]   Department of Education and Training, *Vocational Education and Training for School Students in Western Australia*, Ministerial Policy Statement, Government of Western Australia, Perth, 18 August 2005, p2.

[802]   Department of Communications, Information Technology and the Arts, *Building Australian ICT Skills*, *Report of the ICT Skills Foresighting Working Group June 2006*, Commonwealth of Australia, Canberra, 2006, p33.

[803]   Department of Education and Training, *Commissioners Information Bulletin* 283, 12 May 2006. Available at: http://apprenticeship.det.nsw.edu.au/html/ cibs/283.htm. Accessed on 19 March 2007.

[804]   ibid.

[805]   ibid.

(iii) *University and ICT skills Development*

Universities have been identified as a major source of new ICT professionals.[806] The dynamic and ever changing nature of the ICT industry, however, has created problems for universities with ICT based degrees.[807] The rapid technological change within the industry has made it difficult for universities to structure curricula to match current needs and trends. With a slow cyclic response of reviewing, developing and implementing new curricula, universities are taking years to respond to the changes in the ICT industry. Slow responses do not adequately satisfy the requirements of an industry undergoing constant change and advancement.

The ICT Skills Foresighting Working group indicate that a more collaborative approach between universities and industry is required, stating that:

> *This nexus, between the capabilities of universities and other higher education bodies and industry needs, relies on effective linkages and collaborative approaches between industry and universities to avoid misalignment in the demand and supply cycles.*

> *A number of universities have openly stated their preference for focussing on providing foundation skills to ICT students, rather than focussing on specialised narrow skills, which they argue might quickly become redundant as market demand changes.*[808]

There is some suggestion that it is not 'possible for universities to respond to narrow, short-term technical specialisations'.[809] There is also strong debate about whether stand alone ICT faculties can survive given the changing dynamics of the ICT industry, 'constrained funding levels, falling ICT course enrolments and increased government reporting requirements'.[810]

In the 2006 Commonwealth Standing Committee on Science and Innovation report entitled *Pathways to Technological Innovation* it was suggested that there was a general decline in the number of students electing to study science, engineering and technical subjects (SET). The report indicated that there was 'concern that the supply of SET skills may not be growing sufficiently to meet emerging demand, especially within industry'.[811] Findings indicated that falling university enrolments in SET degrees was a result of the deteriorating numbers of students

---

[806] Department of Communications, Information Technology and the Arts, *Building Australian ICT Skills*, *Report of the ICT Skills Foresighting Working Group June 2006*, Commonwealth of Australia, Canberra, 2006, p34.

[807] ibid., p34.

[808] ibid., p35.

[809] ibid., p34.

[810] ibid., p34.

[811] House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, The Parliament of the Commonwealth of Australia, Canberra, June 2006, p67.

opting to study 'SET-based subjects (particularly mathematics and the physical sciences) in senior schooling years'.[812]

Finding 49

There is concern that the supply of science, engineering and technical skills may not be growing sufficiently to meet demand within industry.

The obvious waning attraction of SET subjects, both at school and university, may influence the number of students opting to undertake technology related courses, particularly including those that are ICT related. The existence of similar problems confronting both streams of study supports the belief that there is a national trend involving students moving away from fields of education incorporating science and technology based units.

Universities that do not have stand alone ICT faculties[813] would often place ICT courses within the various Science Faculties, particularly Engineering. However, as a result of the decline in the number of enrolments within engineering and science oriented courses in general, there has been a move to include ICT elsewhere.

Some universities have placed ICT within Business Faculties in the pursuit of more broadly based multidisciplinary ICT programmes and degrees. The ICT industry has indicated that there is a growing demand for ICT graduates to have a strong understanding of business. Examples of the new hybrid courses include the University of Technology Sydney where a combined technology-business degree is now available.

In Western Australia several universities have also produced similar degree combinations. The University of Western Australia has a double degree option in Computer Science and Commerce, and in Computer Science and Economics. These have been created to allow students 'to combine a major in Computer Science or Information Technology with a major in Economics'.[814] Successful completion of the course leads to the award of both Bachelor of Computer Science and Bachelor of Economics degrees. A double degree in Computer Science and Economics is also available.

Murdoch University offers a Bachelor of Business Informatics degree. This course 'seeks to prepare graduates who have a primary skill set in Information Technology, but who also have

---

[812] ibid.

[813] Currently there are four universities with stand alone ICT faculties, they are Monash University, Queensland University of Technology, University of Technology Sydney and Wollongong University.

[814] University of Western Australia, 'Courses, Bachelor of Computer Science', *UWA Handbooks 2007*. Available at: http://courses.handbooks. uwa.edu.au/c6/61010. Accessed on 15 March 2007.

exposure to the business disciplines ..... allowing them to exploit the convergence of business and ICT'.[815]

Curtin University of Technology offers a Bachelor of Commerce (Business Information Systems) Honours degree. No undergraduate course offering a combination of ICT and another discipline is currently offered at Curtin University. Edith Cowan University offers a Computer Science supporting major as part of its Bachelor of Business degree.

The report of the Foresighting Working Group indicates that this conjunction between ICT related courses and other disciplines is being actively pursued by a number of universities.

> *Many universities are making provision for more complex arrangements in cross-disciplinary degrees, such as combining ICT units with studies in commerce, languages and health sciences to enable wider choices which may raise the employability skills of graduates. Project management in particular is receiving a strong focus. Some universities are also recognising that for graduates to be marketable in an international ICT employment market, they made need a good understanding of the regulatory regimes and IP rules in different overseas jurisdictions.*[816]

Though there are a number of universities that are in the process of tailoring ICT programmes to more accurately reflect the skills required by the ICT industry, this transformation is progressing at a pace that is unable to match demand. Industry bemoans the slow pace and the universities imply that they are restricted in their ability to respond. Universities, however, consider that they are:

> *severely constrained and lack the [flexibility] to respond to industry and market demands and potential student preferences. This includes legal and funding requirements placed upon them by government when making curriculum and course changes, and the long lead times in preparing information and marketing on new course offerings.*[817]

ICT ICC indicated that as a major component of funding for universities is determined by student numbers, the declining enrolments for ICT courses has meant that it is becoming increasingly difficult for universities to be responsive to the needs of the ICT industry.

> *The universities have a lot of requirements that they are trying to deal with in terms of having to do a lot of reporting and satisfying a lot of masters. Also the funding that goes to the different departments within the university is linked to enrolments. Since 2002, across the board, there has been more than a 50 per cent reduction in ICT enrolments in these schools - certainly in both computer science and information systems at Curtin, and I think*

---

[815]   Murdoch University, *Courses*, nd. Available at: http://handbook.murdoch.edu.au/courses/detail07.lasso? crscdhb=3. Accessed on 14 March 2007.

[816]   Department of Communications, Information Technology and the Arts, *Building Australian ICT Skills, Report of the ICT Skills Foresighting Working Group June 2006*, Commonwealth of Australia, Canberra, 2006, p35.

[817]   ibid.

the Victorian universities as well. We were talking about larger starting numbers in Victoria but going from 4 000 to 2 000 enrolments in that same period means that not only fewer students are enrolling but also the number of staff are cut. These staff are trying to support large numbers of courses and to give the students diversity but they do not have extra time, certainly not to do research. They are under the hammer because according to the formula the number of students determines how much money is provided. How can they do their teaching within that? That means it is difficult to get people working on industry liaison, industry placement and new curriculum and managing all of that relationship.[818]

Finding 50

Many universities are finding it difficult to be responsive to ICT industry needs as a consequence of the complex funding arrangements and long lead times required to make curriculum and course changes. Conversely, industry suffers from the inflexibility of tertiary institutions and the fact that the universities are not always one hundred percent up to date with industry demands.

Finding 51

ICT is increasingly offered as a double major via Schools of Engineering or Business, as opposed to a discrete ICT faculty. This allows students to have a primary ICT skill set as well as exposure to business disciplines.

Finding 52

There is a large number of commerce, law and other generalist graduates working in the ICT sector who have a skill set which complements engineering and other technical skill sets.

6.2   Developing ICT Skills - Industry Training

(a)   Training Within Industry

The provision of skills training within the ICT industry is essential to maintain a sustainable level of growth and development. The ICT industry, like the educational institutions, needs to remain

---

[818]   Mr Greg Boalch, Director, Information and Communications Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence,* 25 October 2006, p6.

responsive to the continually changing requirements. Owing to the dynamic nature of information and communication technologies there is considerable pressure on those employed within the industry to 'look at completely overhauling their skill sets every three to five years to remain competent'.[819]

The Australian Computer Society (ACS) believe that approximately 20 days of training and personal development is required every year to facilitate a successful overhaul of skill sets within an appropriate and satisfactory time frame. Many ICT employers 'felt that five to ten days was sufficient in theory - but in practice amounted to only one to five days a year'.[820] The shortfall between required training time and actual training time led the President of ACS, Mr Edward Mandla, to say that 'people are hideously under-trained' and that it confirmed ACS's 'suspicions that individual training had slowed to only a few days a year'.[821]

Finding 53

While the provision of skills training within the ICT industry is essential to industry growth and development, training for individual staff members within companies is often inadequate.

A number of factors have been identified as probable cause for the disparity between the amount of time required for training and the actual amount of time taken. ACS undertook an Employment Survey in 2006 designed to 'provide detailed information on the employment outlook for ICT professionals in Australia'.[822] The results[823] show that while most of the respondents indicated a willingness to undertake training or retraining many found that the cost associated with training courses and the time involved in attending were prohibitive.[824]

The Department of Industry and Resources (DoIR) advise that their ICT industry audit reveals that the 'availability of skills' is a priority for the industry and that 'there is a definite shortage of skills within the industry at the moment'.[825] DoIR also advise that they have provided support to the

---

[819]   Davidson, Peter, 'ICT pro's too slow to update skills', *Information Age*, 14 December 2005. Available at: http://www.infoage.idg.com.au/index. php/id;1242280014;fp;fpid. Accessed on 21 March 2007.

[820]   ibid.

[821]   ibid.

[822]   ACS Staff, 'ICT employment rises but old problems remain', *Information Age*, 18 October 2006. Available at: http://www.infoage.idg.com.au/index.php/id;859409196;fp;4;fpid;1479507376. Accessed on 21 March 2007.

[823]   Survey results are based on responses from ACS members. Overall survey response was 8.6 per cent.

[824]   ACS Staff, 'ICT employment rises but old problems remain', *Information Age*, 18 October 2006. Available at: http://www.infoage.idg.com.au/index.php/id;859409196;fp;4;fpid;1479507376. Accessed on 21 March 2007.

[825]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p2.

ACS Foundation to assist skills development in the state's ICT related industry sectors. This assistance is in the form of a $30,000 scholarship fund plus $12,000 in Executive Officer support.[826]

Concern was also expressed by employers within the ICT industry about 'the quality of training delivered to their staff and [they] expressed reservations about whether it met their needs, so failing to return on their investment in training which they saw as expensive'.[827] A lack of product neutrality in technical training was also seen as an inhibiting factor.

Finding 54

ICT industry employers have identified cost, quality and a lack of product neutrality as major factors that inhibit the provision of staff training.

Compounding the industry training issue is the gap between what 'training has been identified as being necessary by firms and that being planned'.[828] In soft skill (non-technical) training, which includes areas like general business training, communication skills, presentation skills and dispute resolution, there was a 30% gap between the amount of training being planned and the amount actually required. The difference was not as marked for training within the technical field where there is a 25% shortfall in planned training and required training.[829]

The Committee was informed that the industry does not invest sufficiently in training and developing its own staff and many of the industry concerns about the lack of skilled people is possibly a by-product of poor industry planning.[830]

The ICT Skills Foresighting Working Group noted from this lack of industry training that:

---

[826]   Electronic Mail from Department of Industry and Resources, 2 May 2007, p7.

[827]   ACS Staff, 'ICT employment rises but old problems remain', *Information Age*, 18 October 2006. Available at: http://www.infoage.idg.com.au/index.php/id;859409196;fp;4;fpid;1479507376. Accessed on 21 March 2007.

[828]   Department of Communications, Information Technology and the Arts, *Building Australian ICT Skills, Report of the ICT Skills Foresighting Working Group June 2006*, Commonwealth of Australia, Canberra, 2006, p39.

[829]   Davidson, Peter, 'ICT pro's too slow to update skills', *Information Age*, 14 December 2005. Available at: http://www.infoage.idg.com.au/index.php/id;1242280014;fp;fpid. Accessed on 21 March 2007.

[830]   Multimedia Victoria, Briefing, 17 October 2006.

ICT professionals should not be relying on their employers to supply all their training needs. Because there is a consistent gap across all training areas surveyed, it is reasonable to assume that employers consider that employees should be contributing to their own training requirements - around 25 per cent of their own technical training and 30 per cent for training in non-technical areas.[831]

The Working Group also confirmed that those within the ICT industry need to overhaul their skills set on a regular basis, failure to do so may mean that current ICT employees run the risk of having their own skills set outdated in 'as little as three to five years'.[832]

Insufficient and/or ineffective training is not only an issue for ICT industry employees. There is also a notable shortfall in the amount of business management training many ICT employers undertake. One of the strongest themes in the submissions to the Commonwealth Standing Committee on Science and Innovation inquiry into *Pathways to Technological Innovation* was the connection between 'business and entrepreneurial skills to innovation and commercialisation'.[833] The final report of the Commonwealth Standing Committee stated that 'evidence to the inquiry overwhelmingly suggested that Australia lacks people with adequate high level business skills and an entrepreneurial culture'.[834]

In his submission to the Commonwealth Standing Committee, Mr Scott-Kemmis reiterates one of the major findings of the earlier Karpin[835] report:

... while Australian managers have acknowledged strengths, they also have distinct weaknesses, and ...these tend to cluster in those areas which are most critical for the successful manager and business profile for the 21st century. These areas include leadership including management of a diverse workforce, strategic skills, a learning focus, and international orientation.[836]

AIIA (WA) also identify business skills development within the ICT industry as a high priority. In its submission, AIIA (WA) state 'many smaller ICT companies throughout Australia while often having developed leading edge technology products often have deficiencies in business

---

[831] Department of Communications, Information Technology and the Arts, *Building Australian ICT Skills, Report of the ICT Skills Foresighting Working Group June 2006*, Commonwealth of Australia, Canberra, 2006, p40.

[832] ibid.

[833] House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, The Parliament of the Commonwealth of Australia, Canberra, June 2006, p81.

[834] ibid.

[835] Karpin, D., *Enterprising Nation: Renewing Australia's Managers to Meet the Challenges of the Asia-Pacific Century*, Report of the Industry Task Force on Leadership and Management Skills (the Karpin Report), Australian Government Publishing Service, Canberra, 1995.

[836] House of Representatives Standing Committee on Science and Innovation, *Pathways to Technological Innovation*, The Parliament of the Commonwealth of Australia, Canberra, June 2006, p82.

skills which can undermine the company's development aspirations'.[837] AIIA (WA) advise in response to the identified deficiencies in business skills that it had initiated a national programme entitled 'Developing Skills for ICT Entrepreneurs'.[838] The programme is aimed at addressing 'a perceived lack of leadership and broad expertise amongst emerging ICT sector professionals' and is intended to develop entrepreneurial skills in Small/Medium Enterprise (SME) professionals in the ICT industry.[839]

DoIR advised that 'it is very rare to find the research and product development skills, business skills and marketing skills in the same person'.[840] DoIR introduced an 'Entrepreneurs in Residence' programme in 2000 to provide commercialisation assistance. The programme has to date provided incubation services and accommodation to over 20 Western Australian companies that are currently involved in developing ICT technology. The programme has also provided commercialisation advice, including advice on capital raising, intellectual property management and product development to another 100 businesses. Since its inception in 2000, the Department has provided over $615,000 towards the programme.[841]

Finding 55

Ongoing ICT industry training is often inadequate and haphazard, and is not providing sufficient upskilling for those already employed within the ICT workforce.

(b) Importing ICT Skills

Another source of skilled labour for the ICT industry is immigration. Supplementing shortfalls in the labour market with skilled personnel from overseas is a viable though less than perfect alternative. There are a number of issues that complicate the effectiveness of an immigration programme designed to shore up immediate skill gaps within industry. These include:

- *the complexity of the local market place;*

- *the lack of current information about skills demands;*

- *inconsistent nomenclature;*

---

[837] Submission No. 6 from Australian Information Industry Association, WA Branch, August 2006, p19.

[838] ibid.

[839] ibid.

[840] Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p7.

[841] Submission No. 8 from Department of Industry and Resources, Government of Western Australia, August 2006, p6. This issue is also discussed in Chapter 5.

- *lags involved in immigrant selection; and*

- *the difficulty of having immigration officials with sufficient knowledge and experience to match the capabilities of individual applicants with domestic requirements.*[842]

It is noticeable that even with these impediments, under the General Skilled Migration (GSM) programme the number of visas awarded to prospective migrants with ICT qualification comprises a large percentage of the overall skilled intake. Over the last 'five years, the largest single component of the GSM programme has been information technology or information communications technology occupations'.[843] In 2004-05, '22 per cent of all visas granted in the GSM were in ICT occupations'.[844] In 2003-04 this figure was as high as 33%.[845] Temporary (457) visas are also being used to engage migrant workers in the ICT field.

Finding 56

Permanent and temporary visas are being used to attract migrant workers to the ICT industry.

In support of using the GSM programme as a means of supplementing skills shortfalls within the ICT industry, BHP Billiton has 'emphasised the importance of being able to move key personnel across borders to support the continuity of innovation'.[846] This sentiment is also shared by i3 Aerospace Technologies.

> *The bottom line is that to promote technology innovation and to 'seed' the innovation landscape with experienced technology innovators and entrepreneurs, Australia should welcome and encourage immigration of those with exceptional technical training experience, experience and know how.*[847]

---

[842] Department of Communications, Information Technology and the Arts, *Building Australian ICT Skills, Report of the ICT Skills Foresighting Working Group June 2006*, Commonwealth of Australia, Canberra, 2006, p41.

[843] Kinnaird, B, 'The impact of the Skilled Migration Program on domestic opportunity in information technology', *People and Place*, Vol 12, no. 4, 2005, p67.

[844] ibid.

[845] ibid.

[846] Submission No. 88 from BHP Billiton, p1 in *Pathways to Technological Innovation*, House of Representatives Standing Committee on Science and Innovation, Commonwealth Parliament, Canberra, June 2006, p77.

[847] Submission No. 1 from i3 Aerospace Technologies, p1 in *Pathways to Technological Innovation*, House of Representatives Standing Committee on Science and Innovation, Commonwealth Parliament, Canberra, June 2006, pp77-78.

Backing Australia's Ability included an immigration initiative which largely increased the number of ICT occupations added to the Migration Occupations in Demand List (MODL), thus increasing the number of ICT professionals able to enter Australia under the General Skilled Migration programme. However, due to the general decrease in demand, in December 2003, all ICT specialised occupations were removed from MODL. In December 2005, in response to a national demand as identified by the Department of Employment and Workplace Relations (DEWR), five ICT specialisations (Siebel, Systems, Applications and Products in Data Processing (SAP), E-commerce security, network security and Certified Information Systems Security Professionals) were added to MODL.[848]

Recommendation 30

The Western Australian Government should work with the federal government to increase skilled migration (temporary and permanent) to help fill ICT employment vacancies.

It has been suggested, however, that the GSM has failed to deliver a favourable outcome for the ICT industry. A Monash University national study conducted in 2005 reveals that under the GSM programme there is a serious over supply within the ICT labour market for ICT professionals and, in particular, ICT graduates.[849] Using data obtained from the Australian Bureau of Statistics (ABS) and the Commonwealth Department of Immigration and Multicultural and Indigenous Affairs (DIMIA) over a four year survey period (from 2001/02 to 2004/05), the study found that the 'GSM had worsened an already bad oversupply situation, especially in the graduate market'.[850] The GSM was 'effectively increasing the IT graduate labour supply by nearly 80 per cent, at a time when 30 per cent of Australian IT graduates could not find full time work'.[851] In 2005 the ACS produced a policy statement on migration recommending that the intake of ICT graduates through the GSM should be substantially reduced until:

- *the market can absorb the level of ICT graduates from Australian universities;*

- *the intake to ICT courses stops declining and begins to increase;*

---

[848] Department of Education, Science and Training, *The Australian Government's Innovation Report 2005-06: Backing Australia's Ability: Real Results Real Jobs*, 2006, p69. Available at: http://www.dest.gov.au/sectors/ science_innovation/publications_resources/profiles/innovation_report_2005_06.htm. Accessed on 6 December 2006.

[849] Kinnaird, B, 'The impact of the Skilled Migration Program on domestic opportunity in information technology', *People and Place*, vol 12, no. 4, 2005, p67.

[850] ibid., p68.

[851] ibid., p68.

- *the unemployment rate for ICT professionals falls to levels in line with that of all other professionals in Australia.*[852]

As a consequence of the GSM induced over-supply in the graduate labour market there has been 'plummeting enrolments by Australian students in university-level ICT courses'.[853] The study also suggests that the ICT graduate oversupply has had an impact on the sub-professional ICT labour market. This is reflected in the higher than average unemployment rates, on a national level, for TAFE IT graduates as compared to all other similarly qualified TAFE graduates.[854]

There is some argument as to whether the information contained in the 2005 Monash study pertaining to an over-supply of IT graduate labour is still relevant in Western Australia given the extraordinary growth of the labour market over the last two years. DoIR advised on 16 May 2007 that there is an ICT skill shortage in Western Australia. The disparity between the Australian wide Monash study and the evidence provided to the Committee would suggest the possibility of an over-supply of generalist ICT graduates who are skill deficient in specific ICT areas.

6.3 Telecommunications Infrastructure

The push for more effective, efficient and affordable telecommunication technology within the Western Australian community reflects the rapid national and international move towards a 'global knowledge economy'. The 'unprecedented ability to manipulate, store and transmit large quantities of information at very low cost'[855] has been described as a pre-requisite for inclusion in the 'knowledge economy'.[856] Broadband has been identified as an enabling technology that fulfils the key role in connecting consumers and business to the online economies of knowledge and finance.[857] WAICTIDF advise that 'Broadband provides the connectivity between the globally

---

[852] Australian Computer Society, Policy Statement on Migration, April 2005, p2. Available at www.acs.org.au. Accessed on 30 March 2007.

[853] Kinnaird, B, 'The Impact of the Skilled Migration Program on Domestic Opportunity in Information Technology', *People and Place*, vol 12, no. 4, 2005, p68.

[854] ibid., p70.

[855] Western Australian Technology and Industry Advisory Council, *Developing Broadband Infrastructure and Services in Western Australia*. Available at: http://www.tiac.wa.gov.au/broadband/index.htm#TopOfPage. Accessed on 23 March 2007.

[856] Western Australian Technology and Industry Advisory Council, *Enabling a Connected Community: Developing Broadband Infrastructure and Services in Metropolitan Western Australia*, in conjunction with Western Australian Information and Communications Technology Industry Development Forum, September 2003, p1. Available at: http://www.tiac. wa.gov.au/broadband/index.htm#TopOfPage. Accessed on 23 March 2007.

[857] Department of Communications, Information Technology and the Arts, *Broadband Blueprint*, Commonwealth of Australia, Canberra, 2006, p9.

distributed and highly dynamic value chains that determine the net flow of real jobs and capital within the Knowledge Economy'.[858] WAICTIDF acknowledge that:

> *broadband connectivity will be a key driver of Gross Domestic Product (GDP), jobs and wages growth. Today, it is increasingly understood that broadband technologies will be the roads and railways of the 21st century, generating the next wave of economic expansion and paving the way for productivity gains across global economies in the new century.*[859]

Similarly, ICT ICC advise:

> *Infrastructure, particularly communications, is an enabler for all industries and the ICT Industry particularly needs current technology infrastructure both to support its operations and to support its market. There is no point in developing software and hardware at the leading edge of technology if the local infrastructure can not support it as no local sales will result.*[860]

Before outlining Federal and State approaches to the development of communications infrastructure it is worth considering two important points that impact upon any ICT infrastructure related initiative. The first is that while Australia has a large land mass, its population is relatively small and unevenly distributed. Therefore, and as the Senate report *The Australian Telecommunications Network* states, it is necessary to:

> *provide services to a population concentrated largely in cities separated by long distances, and linking the major cities with high capacity trunk services, while also seeking to reach remote areas with basic services.*[861]

The second point, also noted by the Senate, is that the Australian telecommunications network is undergoing constant change and development[862] and, therefore, any report such as this can only describe it in quite general terms. The Australian telecommunications network consists of carriers and service providers, fixed line customer networks, mobile networks, satellite services and wireless technologies. Not all locations access all components in the network and 'in any one location, there might be an (sic) unique mix of delivery systems operational and which are ever-changing due to technological or competitive developments'.[863]

---

[858]   Submission No. 11 from Western Australian Information and Communications Technology Industry Development Forum, September 2006, p5.

[859]   ibid.

[860]   Submission No. 5 from Information Communication Technology Industry Collaboration Centre of Western Australia, August 2006, p15.

[861]   Environment, Communications, Information Technology and the Arts References Committee, Senate, Parliament of Australia, *The Australian Telecommunications Network*, Commonwealth of Australia, Canberra, August 2004, p1.

[862]   ibid., p1.

[863]   ibid., p9.

(a) Federal Government - Connect Australia

A number of papers have reported on the importance of communications infrastructure in recent years. These include, but are not limited to, *Connecting Australia! Wireless Broadband*,[864] *Competition in Broadband Services*,[865] *The Australian Telecommunications Network*,[866] *Emerging Market Structures in the Communications Sector*,[867] *Australia's Broadband Connectivity*[868] and *Connecting Regional Australia. The Report of the Regional Telecommunications Inquiry*.[869] It is not this Committee's intention to reproduce the evidence and analysis presented in these reports.

In August 2005 with the aim of making telecommunications in Australia 'future proof', Senator, the Hon. Helen Coonan announced the federal communications package *Connect Australia*. This package allocated $1.1 billion to programme funding to address identified gaps in services. A further $2 billion was allocated to the Communications Fund as capital to be invested to provide an 'income stream to fund new technologies in regional areas' as indicated by Government responses to recommendations made in future regional telecommunications reviews conducted by the Regional Telecommunications Independent Review Committee.[870]

The $1.1 billion up-front funding covers a number of projects:

- *Broadband Connect, with $878 million for improved broadband services in regional Australia;*

- *Clever Networks, with $113.4 million to rollout innovative broadband applications to enhance understanding, access to and use of broadband for the delivery of health, education and other essential services in regional Australia;*

---

[864] House of Representatives Standing Committee on Communications, Information Technology and the Arts, *Connecting Australia! Wireless Broadband*, Commonwealth of Australia, Canberra, November 2002.

[865] Environment, Communications, Information Technology and the Arts References Committee, Senate, Parliament of Australia, *Competition in Broadband Services*, Commonwealth of Australia, Canberra, August 2004.

[866] Environment, Communications, Information Technology and the Arts References Committee, Senate, Parliament of Australia, *The Australian Telecommunications Network*, Commonwealth of Australia, Canberra, August 2004.

[867] Australian Competition and Consumer Commission, *Emerging Market Structures in the Communications Sector*, Commonwealth of Australia, Canberra, June 2003.

[868] Broadband Advisory Group, *Australia's Broadband Connectivity. The Broadband Advisory Group's Report to Government*, Commonwealth of Australia, Canberra, 2003.

[869] Department of Communications, Information Technology and the Arts, *Connecting Regional Australia, The Report of the Regional Telecommunication Inquiry*, Commonwealth of Australia, Canberra, 2002.

[870] Senator, the Hon. Helen Coonan, 'Connect Australia. A Plan to Future Proof Telecommunications', *Media Release*, 17 August, 2005. Available at: http://www.minister.dcita.gov.au. Accessed on 5 December 2006; Department of Communications, Information Technology and the Arts, *Fact Sheet: Connect Australia*, nd. Available at: http://www.dcita.gov.au/__data/assets/file/30297/Fact_sheet_Connect_Australia_revised.rtf. Accessed on 5 December 2006.

- *Mobile Connect, with $29.5 million to extend terrestrial mobile coverage and continue satellite handset subsidies for more remote areas; and*

- *Backing Indigenous Ability, with $89.9 million to deliver a comprehensive package addressing community phones, Internet and videoconferencing in remote Indigenous communities, and improve Indigenous radio and television.*[871]

The Department of Communications, Information Technology and the Arts has also included in this fund:

> *Metropolitan Broadband Connect, with $50 million over three years to improve access to broadband services in metropolitan Australia, targeting people unable to access broadband services at prices similar to those available to the majority of metropolitan customers.*[872]

In December 2006 Senator, the Hon. Helen Coonan released the federal government's *Broadband Blueprint*, a national framework for broadband in Australia. *Broadband Blueprint* acknowledges that Australia 'is sometimes labelled by critics as a broadband backwater in terms of take-up and penetration'.[873] However, it argues against this description of the current Australian situation and cites OECD statistics that place Australia at 17th place for the number of broadband subscriptions per 100 inhabitants and above the OECD average for subscribers per 100 inhabitants. While Australians were relatively slow to take up broadband, they are now doing so at a rate that exceeds that of any other OECD country.[874]

While the Australian Government's blueprint presents quite a positive picture, evidence submitted to the Committee suggests that problems remain with the quality of Australian telecommunications infrastructure, the lack of universal access, and our dependence on one or two major communications carriers.

> *Australia must also achieve a national, reliable high speed broadband infrastructure and complementary e-security framework that will put us among the leaders in the OECD in terms of broadband infrastructure and capabilities.*[875]

---

[871]   Department of Communications, Information Technology and the Arts, *Fact Sheet: Connect Australia*, nd. Available at: http://www.dcita.gov.au/__data/assets/ file/30297/Fact_sheet_Connect_Australia_revised.rtf. Accessed on 5 December 2006.

[872]   Department of Communications, Information Technology and the Arts, *Metropolitan Broadband Connect*, nd. Available at: http://www.dcita.gov.au/communications_for_business/funding_programs__and__ support/metropolitan_broadband_connect. Accessed on 5 December 2006.

[873]   Department of Communications, Information Technology and the Arts, *Broadband Blueprint*, Commonwealth of Australia, Canberra, 2006, p27.

[874]   ibid., p27.

[875]   Submission No. 12 from Australian Electrical and Electronic Manufacturers' Association Limited, September 2006, p4.

Successive State Government reports have exposed the poor state of communications infrastructure in Western Australia, particularly in regional areas ... [there is] a lack of infrastructure and thin marketplaces in regional areas.[876]

major impediments to the development of broadband infrastructure in Western Australia are ... [the] lack of available terrestrial access infrastructure, particularly in outlying suburbs and regional Western Australia [and the]lack of coordinated and strategic approach by governments to creating and shaping demand and in planning and regulations to mitigate Western Australia (sic) thin market.[877]

Criticism is also evident in media reports, which helps to reinforce the perception that Australia's telecommunications infrastructure is substandard. For example, it was reported in *The Australian* that:

the Minister [Helen Coonan] has been under growing pressure to find an answer to Australia's slow broadband speed and lack of investment in next-generation fibre-optic networks.[878]

The same report also draws attention to comments by the Acting Opposition communications spokesperson, Lindsay Tanner, who argues that the blueprint lacks substance, that it proposes yet another 'talkfest'. According to Mr Tanner, 'the failure of this maze of programs is common knowledge'.[879] Further negative comments are to be found from prominent members of the business community such as Mr Rupert Murdoch, Chair of News Corporation. In addressing a News Corporation shareholders' meeting in November 2006, Mr Murdoch is quoted as labelling Australia's broadband services as a 'disgrace' and arguing that broadband speeds must improve:

I think it is a disgrace, I think we should be spending - the government with Telstra should be spending - $10 billion or $12 billion on it (so it gets to) every town in Australia - they do it in Japan, they do it in South Korea, we should be able to do it here.[880]

Finding 57

Australia has a grossly sub-standard telecommunications infrastructure especially compared with countries such as Japan and South Korea. Both Telstra and the federal government have promised a great deal in terms of the roll out of fast broadband, but the promises have not been delivered.

---

[876] Submission No. 3 from BroadbandNet Pty Ltd, August 2006, p2.

[877] Submission No. 11 from Western Australian Information and Communications Technology Industry Development Forum, September 2006, pp5-6.

[878] Sainsbury, Michael, 'Paper on internet trashed by Labor', *The Australian*, 8 December 2006, p21.

[879] Tanner, Lindsay, cited in Sainsbury, Michael, 'Paper on internet trashed by Labor', *The Australian*, 8 December 2006, p21.

[880] Murdoch, Rupert, cited in 'Australia's broadband "disgrace"', *The Age*, 15 November 2006.

On 7 March 2007 the Australian Government announced the $162.5 million Australian Broadband Guarantee to replace the Broadband Connect and Metro Broadband Connect programmes. Guidelines were released for the transitional period from 2 April 2007 to 30 June 2007. Guidelines for the full programme are expected to be released in the near future. The first phase of the programme will end on 30 June 2008 from which time funds from the Communications Fund will be available to continue the guarantee.[881] The Australian Broadband Guarantee 'will fill in those broadband blackspots remaining, whether in metropolitan or rural Australia … and enable a smooth transition from the current programs to the Broadband Connect Infrastructure program'.[882] People for whom a 'reasonable level of broadband service' is not available at their home or small business will be eligible to receive a subsidised service.[883]

(b)   Western Australian Government Initiatives

At the state level the Western Australian Technology and Industry Advisory Council said that 'effective broadband networks and services are an integral "knowledge infrastructure" required to foster competitive industries and businesses'.[884] The Hon. Alan Carpenter, Premier and Minister for State Development has acknowledged the need for effective broadband technology at a state level, and has said 'telecommunications infrastructure is integral to economic and social development in Western Australia and access to high-speed broadband is critical'.[885] The Premier also recognised, however, that in Western Australia access to a fast and effective broadband service 'is well below the standard found in many other countries'.[886]

> *This inadequate service is not only putting the brakes on e-commerce in Western Australia, but is also holding back delivery of important services such as skills training, education and health which could benefit significantly through improved broadband services.*[887]

---

[881]   Department of Communications, Information Technology and the Arts, *Australian Broadband Guarantee*, nd. Available at: http://www.dcita.gov.au/__data/assets/pdf_file/59483/CoonanFactSheetABG_.pdf. Accessed on 27 March 2007.

[882]   Department of Communications, Information Technology and the Arts, *Australian Broadband Guarantee - for Providers*, nd. Available at: http://www.dcita.gov.au/ communications_for_business. Accessed on 28 March 2007.

[883]   ibid.

[884]   Western Australian Technology and Industry Advisory Council, *Enabling a Connected Community: Developing Broadband Infrastructure and Services in Metropolitan Western Australia*, in conjunction with Western Australian Information and Communications Technology Industry Development Forum, September 2003, p1. Available at: http://www.tiac.wa.gov.au/broadband/index.htm#TopOfPage. Accessed on 23 March 2007.

[885]   Department of Industry and Resources, *StateWide Broadband Network Strategy*, Government of Western Australia, Perth, November 2006, p1.

[886]   ibid., p1.

[887]   ibid., p1.

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│   Finding 58                                                              │
│                                                                           │
│   The Western Australian Government has acknowledged the need for         │
│   effective broadband technology to be delivered throughout the State     │
│   and has recognised that the State will have a role to play in           │
│   delivering this.                                                        │
│                                                                           │
└─────────────────────────────────────────────────────────────────────────┘
```

(i)   Bright Telecommunications (Bright)

As part of its efforts to develop 'a competitive broadband customer access network for Western Australia' the Western Australian Government established Bright Telecommunications (Bright).[888]   Bright was owned and operated by Western Power as a result of their role in modernising the State's power service. An initial service pilot connected 200 customers in South Perth and Como.[889] This was then expanded for a further 12 months from November 2002. The South Perth/Como project involved the rolling out of low visible aerial optic fibre as part of the underground installation of power lines as per the State Underground Power Project.[890] Evidence presented to the Committee suggests that Bright offered significant potential to the development of improved broadband services in the State. According to ICT ICC, Bright 'could also be seen as a major advantage to our state moving forward' particularly as:

> at all the large new developments that are coming on, like Ellenbrook, and all the new housing areas, what is happening now is that the builders are actually incorporating the cable into the homes when they are built. Whether it was Western Power or the Water Corporation, whoever had the easement - this could cover not only our CBD area but our regional areas as well - they could incorporate that so that when they did their upgrade or maintenance and they opened the easement, they could lay the fibre.[891]

ATUG-WA advised that 'Bright is one of those areas that are incredible communications assets to the state government' and that 'there are a lot of hidden assets in Bright which I do not think even

---

[888]   Western Australian Technology and Industry Advisory Council, *Developing Broadband Infrastructure and Services in Western Australia*, 2003. Available at: http://www.tiac.wa.gov.au/broadband/contents.htm#Top OfPage. Accessed on 20 December 2006.

[889]   Bright Telecommunications, *Bright Facts: About Bright*.   Available at: http://www.brightonline.com. Au/2006/seg_about. Accessed on 20 December 2006.

[890]   Western Australian Technology and Industry Advisory Council, *Developing Broadband Infrastructure and Services in Western Australia*, 2003.   Available at: http://www.tiac.wa.gov.au/broadband/contents.htm# TopOfPage. Accessed on 20 December 2006; Department of Industry and Resources, *Bright Online*, 2003. Available at: http://www.DepartmentofIndustryandResources.wa.gov.au/documents/businessandindustry /Bright-Online.doc. Accessed on 20 December 2006.

[891]   Miss Sharon Brown, Chair, Information and Communications Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence*, 25 October 2006, p3.

some in the telecommunications industry fully understand'.[892] According to ATUG-WA, Bright has:

> *a number of unique assets and services that can significantly expand broadband access (2Mb/s and higher). With a revised mandate (based on the Concept of the WA SuperNet and operating as a structurally separated carrier) Bright can deliver the required Broadband connectivity to the whole of WA and also promote the development of innovative ICT applications.*[893]

In October 2006 the Hon. Fran Logan, Minister for Energy; Resources; Industry and Enterprise advised that:

> *Western Power does not intend to maintain ownership in the future. The Bright business is outside the core activities of energy transmission and distribution. In addition, the business requires substantial capital for growth with higher market risk.*[894]

In a statement released in December 2006 the Hon. Fran Logan stated that Bright was to be sold to Victorian Telco, Silk Telecom, and that this 'would also allow Bright Telecommunications to grow in the hands of a dedicated and experienced telecommunications operator'.[895]

Concerns about the sale of Bright were raised in evidence to the Committee. The basis of this concern was twofold. First, it was felt that Bright 'should not be sold'[896] because it represented a significant telecommunications asset to the State. Second, there was an issue with the associated telecommunications licence that went with the sale:

> *If we want to be serious in this state about providing telecommunications to our regions, we should not be throwing away a licence.*[897]

The valid points raised in the debate concerning the future of Bright are now moot as it has been sold.

(ii)   Development of the Western Australian State Broadband Network

In September 2003 the Western Australian Technology and Industry Advisory Council identified six main areas as being crucial to the development and delivery of high-speed effective broadband services. In the Advisory Council's report, *'Enabling a Connected Community: Developing*

---

[892]   Dr Walter Green, Manager, ATUG-WA, *Transcript of Evidence*, 21 March 2007, p3 and 4.

[893]   Submission No. 7 from ATUG-WA, August 2006, p8.

[894]   Hon. Fran Logan, MLA, Minister for Energy; Resources; Industry and Enterprise, Western Australia, Legislative Assembly, *Parliamentary Debates (Hansard),* Tuesday 24 October 2006, p7546.

[895]   Hon. Fran Logan, MLA, *Media Statement*, 14 December 2006.

[896]   Dr Walter Green, Manager, ATUG-WA, *Transcript of Evidence*, 21 March 2007, p3.

[897]   Miss Sharon Brown, Chair, Information and Communications Technology Industry Collaboration Centre of Western Australia, *Transcript of Evidence*, 25 October 2006, p3.

Broadband Infrastructure and Services in Metropolitan Western Australia', it was pointed out that 'drivers of, and impediments to, the development and take-up of broadband and the dynamic nature of developments in the telecommunications market'[898] need to be considered whilst developing policy to provide improved broadband infrastructure and services. These drivers and impediments were identified by the Advisory Council as being extremely important issues that government must address in order to create realistic objectives. The six main drivers and impediments identified by the Advisory Council were:

- Highlighting the Broadband "Value Proposition";

- Aggregating Demand and Leveraging Government Procurement;

- Streamlining Government Planning and Management Processes;

- Facilitating Competition in Broadband Infrastructure Provision;

- Overcoming the Capacity Limitations of Asymmetric Digital Subscriber Line; and

- Reviewing and Communicating Progress against Strategic Objectives.[899]

The provision of an efficient and effective broadband service in Western Australia is identified as the 'key area requiring priority attention' in the State Communications Policy Paper entitled *WA - A Connected Community*, released in October 2004. The policy paper advises of a number of strategies and initiatives that were developed or in the process of being developed to meet the requirements of five key government objectives. These are Availability, Equity, Skills and Awareness, Applications and Government Infrastructure. All five objectives and associated strategies were formulated and designed to address the key areas of concern identified by the Advisory Council. It is expected that the roll-out, implementation and completion of all strategies would occur over a five to ten year timeframe.[900]

In September 2005 the DoIR released a one year progress report[901] outlining the improvements to telecommunication technologies, including broadband infrastructure and services, that had been achieved since the release of the *WA - A Connected Community* policy paper in October 2004.

---

[898]   Western Australian Technology and Industry Advisory Council, *Enabling a Connected Community: Developing Broadband Infrastructure and Services in Metropolitan Western Australia*, in conjunction with Western Australian Information and Communications Technology Industry Development Forum, September 2003, p3. Available at: http://www.tiac.wa.gov.au/broadband/index.htm#TopOfPage. Accessed on 23 March 2007.

[899]   ibid., pp5-7.

[900]   Department of Industry and Resources, *WA - A Connected Community: State Communications Policy*, Government of Western Australia, Perth, October 2004.

[901]   Department of Industry and Resources, *WA - A Connected Community: State Communications Policy, Year One Progress Report*, Government of Western Australia, Perth, September 2005.

The report states that 'significant improvements are being made in the area of communications services availability (particularly in relation to high-speed internet)'.[902]   The report also provides a progress summary of the various strategies that had been initiated, in particular, that DoIR had spent 12 months working with the Commonwealth, various other state and territory jurisdictions and the Australian Government Association on a number of national broadband strategy plans. These included the Higher Bandwidth Incentive Scheme (HiBIS), the Broadband Demand Aggregation Program, the Co-ordinated Communications Infrastructure Fund and the Metropolitan Broadband Blackspots Program.

In November 2006 the state government announced the release of the StateWide Broadband Network (SBN) strategy to 'enable more Western Australians to access an appropriate, high-speed and affordable broadband service'.[903]   Under the SBN the state government will establish a ten year contract worth $100 million per annum toward the construction of a high-speed broadband network.   Funding for the programme will be supplemented from the comparable aggregate telecommunications spend from government departments.   The aggregated spend 'will be offered to the market so that a private sector solution can be developed to deliver the StateWide Broadband Network'.[904]   It is proposed that:

> By seeking a private sector solution for improved broadband services to benefit Government;(sic) the Business and Community sectors will equally benefit from the additional infrastructure and competitive services provision, across regional and metropolitan WA.[905]

The key component of SBN is that government will fund the creation of an effective and efficient high-speed broadband service and in doing so provide improved access for business and private consumers. The SBN strategy was developed using the Alberta SuperNet model as the main point of reference.   The Alberta SuperNet was designed and built to provide a 'high-speed, high-capacity broadband network linking government offices, schools, health-care facilities and libraries, including approximately 4,200 connections in 429 communities'.[906]   As a result of the Alberta Government providing this new broadband infrastructure 'telecommunications companies and Internet service providers can "piggyback" onto the Alberta SuperNet network, making it possible for service providers to offer high-speed services to areas that, until now, have been too

---

[902]   ibid., p2.

[903]   Department of Industry and Resources, *StateWide Broadband Network Strategy*, Government of Western Australia, Perth, November 2006, p1.

[904]   ibid., p3.

[905]   Department of Industry and Resources, *Business and Industry - SBN*, nd.   Available at: http://www. DepartmentofIndustryandResources.wa.gov.au/businessandindustry/59DF29E968D844B48E2259FOB7FE4 0F.   Accessed on 30 November 2006.

[906]   *Alberta SuperNet-Project*, nd.   Available at: http://www.albertasupernet.ca/The+Project.   Accessed on 29 March 2007.

expensive or difficult to reach'.[907]   Under SBN it is envisaged that a similar 'piggyback' culture will develop within Western Australia.

Finding 59

The Western Australian Government has committed to implementing the State Broadband Network, which will leverage $100 million per annum over 10 years of public sector communications spend to encourage the private sector to roll out high speed broadband across the state.

The Western Australian Government expects the Commonwealth Government 'will be required to continue to play a pivotal funding role in the development of accessible, high-speed and affordable broadband services in regional and remote areas of Western Australia'.[908]

Finding 60

The state government expects the Commonwealth Government will be required to continue to play a pivotal funding role in the development of accessible, high-speed and affordable broadband services in regional and remote areas of Western Australia.

While the Commonwealth Government $1.1 billion Connect Australia package is intended to address identified gaps in services, there is an apparent disagreement between the state and federal governments about whether or not the federal government will be contributing to the State's SBN. The Commonwealth Government indicated in its 'Broadband Blueprint' that the SBN was a state initiative and, therefore, would be state funded. The Blueprint acknowledges that Commonwealth funds have been and will continue to be used to support projects that address the requirements of the State's more remote communities. The Eastern Goldfields Regional Reference site whereby improved broadband technologies were used to integrate regional health and medical services was used as an example of how Commonwealth funds were being utilised.[909]

---

[907]   ibid.

[908]   Department of Industry and Resources, *StateWide Broadband Network Strategy*, Government of Western Australia, Perth, November 2006, p3.

[909]   Department of Communications, Information Technology and the Arts, *Broadband Blueprint*, Commonwealth of Australia, Canberra, 2006, p74.


> **Recommendation 31**
>
> The federal government redirect funds which would otherwise have been spent to support the development of broadband in Western Australia to the Statewide broadband initiative.

6.4   Digital Content Industry as a Potential Niche Industry

(a)   Digital Content Industry

The digital content sector covers a wide range of areas and, as the following Figure 3 illustrates, overlaps with areas not involved in the core production of digital content.[910]

Figure 3: Digital Content Industry
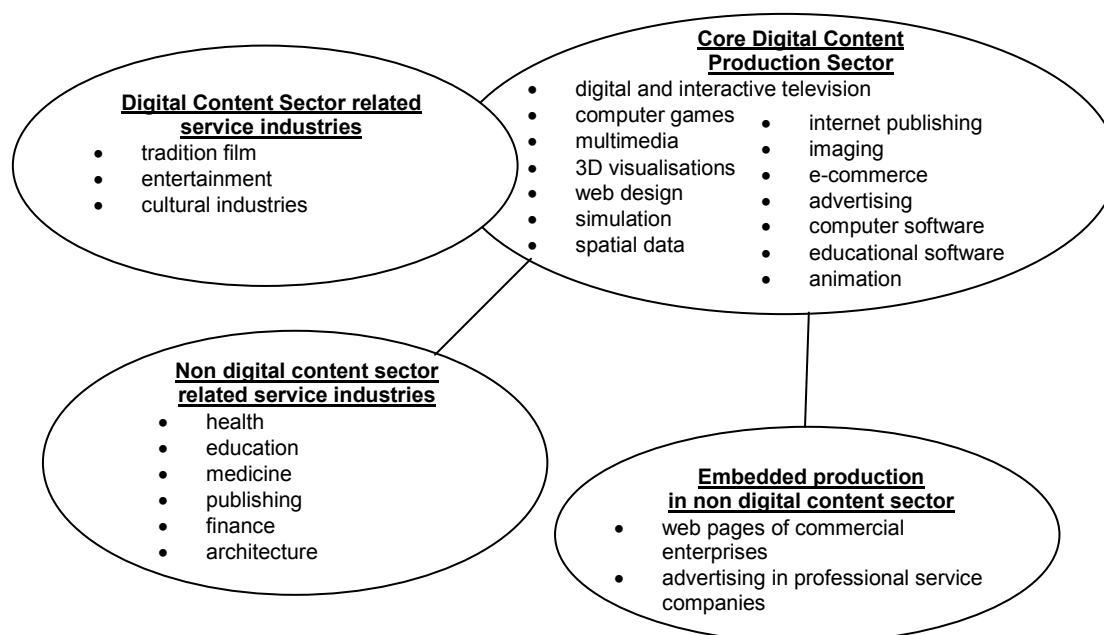
The importance of the digital content industry to Australia is generally acknowledged.

> *Digital content is increasingly the communication mode of choice in the 21st century. The Digital Content Industry is of strategic value to Australia. It is the Digital Content Industry and its capabilities that allow communication with pictures, sounds or new*

---

[910]   Department of Communications, Information Technology and the Arts, *Unlocking the Potential*, Digital Content Industry Action Agenda, Strategic Industry Leaders Group, Report to the Australian Government, November 2005, p1.

realities to happen. Their innovations are essential to our future prosperity as a nation. It is their content that will drive the take-up of technologies across the economy in sectors as diverse as health, defence and training.[911]

Evidence submitted to the Committee suggests that there is potential for Western Australia to develop its digital content industry. Dr Walter Green, ATUG-WA, suggests that developing a digital content industry in Western Australia could add to the broader local ICT industry:

- *in its own right (based on our existing prominent position in mining software) [and]*

- *as an enabler for improving productivity in the current high profile industries such as Mining and Resources, Health and Education.*[912]

The WAICTIDF also sees this two-fold enhancement of the Western Australian economy through developing its digital content industry:

This is an industry that is established, but where entry is still relatively easy because of its dynamic properties and its undoubted pervasiveness into all aspects of commercial and community life. Further, without any formal encouragement, Western Australia appears to have development recognition in the world as a state that develops (and then loses) excellent digital content development people.[913]

Finding 61

Developing infrastructure will allow further development in the digital content industry and assist in the retention of skilled people.

According to the Digital Content Action Agenda Strategic Industry Leaders Group's 2005 Report, *Unlocking the Potential*:

The production of digital content will be one of the major drivers of economic competitiveness in the coming decade and will make a major contribution to ensuring high levels of economic growth, a robust export capacity and a highly skilled workforce.[914]

---

[911]   Department of Communications, Information Technology and the Arts, *Unlocking the Potential*, Digital Content Industry Action Agenda, Strategic Industry Leaders Group, Announcement, 2005, p12.

[912]   Submission No. 7 from ATUG-WA, August 2006, p9.

[913]   Submission No. 11 from Western Australian Information and Communications Technology Industry Development Forum, September 2006, p4.

[914]   Department of Communications, Information Technology and the Arts, *Unlocking the Potential*, Digital Content Industry Action Agenda, Strategic Industry Leaders Group, Report to the Australian Government, November 2005, p1.

Unlocking the Potential argues that the digital content industry is important because apart from its social and cultural benefits:

- *it is economically significant, with estimated worth of $21 billion, almost 3.5 per cent of Australia's GDP, and employs about 300,000 people;*

- *it is a high growth industry, growing faster worldwide than other economic sectors;*

- *the economic multipliers arising from the Digital Content Industry are significant, being higher than for most other categories of economic activity; and*

- *it has major implications for productivity growth in many important industries beyond the core Digital Content Industry itself. Digital content and technology is becoming an important input to other industries and an enabler which helps transform the way they do business.*[915]

Significant sectors of the digital content industry work in isolation from each other and, according to *Unlocking* the *Potential*, the digital content industry has a fractured base and lacks integration in that:

> *it is characterised by a plethora of micro firms which makes it difficult to achieve critical mass and to maximise its potential impact.*[916]

This fragmentation has meant less-than-optimal financial returns on investments and fewer opportunities for innovation. The Digital Content Industry Action Agenda was developed to help bring 'these disparate but related industries together'.[917]

In August 2006 the Australian Trade Commission (Austrade) cut its funding for the TradeStart digital media export programme by 50%, a move which has frustrated the Australian Interactive Media Industry Association (AIMIA).[918] John Butterworth, CEO of AIMIA, advises that in view of the Agenda, this cut in funding was 'both confounding and frustrating' and would 'have serious and immediate ramifications on Australia's Digital Content Industry'.[919] This reduction in funding is particularly significant for companies not based in New South Wales or Victoria. According to Franco Smargarsi of Compass EduMedia in Western Australia:

---

[915]   ibid., p7.

[916]   ibid., p19.

[917]   DCITA, *Unlocking the Potential*. Digital Content Industry Action Agenda, Strategic Industry Leaders Group, Announcement, 2005 p2.

[918]   Rossi, Sandra, 'Government cuts funding for digital media', *Computerworld*, 24 August 2006, p1; Lohman, Tim, 'Austrade cuts digital content industry export funding', *iTnews.com.au*, 22 August 2006, p1.

[919]   Butterworth, John, in Sandra Rossi, 'government cuts funding for digital media', *Computerworld*, 24 August 2006, p1.

Getting into international markets is hard enough at the best of times. Given that the world is going digital you'd think they'd be increasing the resources for helping Aussie content companies sell overseas, not cutting them.[920]

Finding 62

Recent cuts in the TradeStart digital media export programme will have negative implications for the development of Western Australia's digital content industry.

(b)   Digital Content Industry in Western Australia

Growing WAdigital, a July 2005 report prepared by the Australian Digital Content Association Inc. for the Western Australian Department of Industry and Resources, states that:

> *it would seem that Western Australia's contribution to the digital content economy is not recognised as even a blip on the horizon.*[921]

As part of its aim to strengthen the Western Australian ICT sector, the state government developed the three strategic goals of building local capacity, enhancing export opportunities and attracting new investment. *Enabling Growth: The Contribution of ICT to the Western Australian Economy* states that these goals may be achieved by the 'development of a specific sector of the ICT industry'.[922] WAICTIDF advised that because Western Australia exhibits 'competitive advantage in the digital content sector of the ICT industry' this would be one specific sector the Government could nurture.[923]

Finding 63

Western Australia exhibits a competitive advantage in the digital content sector of the ICT industry.

---

[920]   Smargarsi, Franco, in Sandra Rossi, 'Government cuts funding for digital media', *Computerworld*, 24 August 2006, p2.

[921]   Australian Digital Content Association Inc., *Growing WAdigital*, a report for the Western Australian Department of Industry and Resources, July 2005, p3.

[922]   Western Australian Information and Communications Technology Industry Development Forum, *Enabling Growth: The Contribution of ICT to the Western Australian Economy*, with Department of Education and Training, February 2006, p43. Available at: http://www.tiac.wa.gov.au/ictforum/ictcontrib/enabling.html. Accessed on 23 April 2007.

[923]   ibid.

In an effort to map the digital content industry in Western Australia, Tim Mazzarol and his colleagues undertook a project involving a telephone survey administered to 216 businesses identified as being in the digital content sector. This data was supplemented by case study material from 10 businesses identified as 'focal firms'.[924] This research also revealed concentrations in seven key areas, namely spatial sciences, engineering, construction, education and training, creative, media, and medical science. These seven areas were then classified as either digital spatial industries or digital creative industries.[925]

Using specified industry trend data over five years, Mazzarol et al identified and classified businesses according to their annual average growth rate and concentration, as identified in the following table.

Table 1: Business Growth and Concentrations in the Digital Content Industries[926]

GROWTH:*	LOW	HIGH
CONCENTRATIONS:** HIGH	• Design engineers • Electrical engineers	• mining engineers • surveyors • cartographers • naval architects • marine engineers
LOW	• photography & video schools • music publishers • film & TV schools • Data processing	• Combustion engineers • Designers • Planners • Newspapers • Book Publishers • Cartoonists • Writers • Commercial artists • Media information services

* High Growth = those industries with annual average growth > 1
** High concentrations = those industries with location quotients > 1

This study found:

> *The high growth, high concentration sectors reflect the nature of Western Australia's core industries, which are based on mining and resources, property development and construction, and shipbuilding. Each of these sectors makes use of digital content to generate 2-dimensional and 3-dimensional models and related software programs used in*

---

924   Mazzarol, Tim, Raphe Patmore and Natasha van Heemst, 'Mapping Industry Clusters in the Digital Economy - Using Cluster Analysis to Identify Emerging Industries', Refereed Conference Paper, presented at: CRIC Cluster Conference, Beyond Cluster - Current Practices & Future Strategies, Ballarat, June 30-July 1, 2005.

925   ibid., p1.

926   ibid., p8.

design and construction or spatial science applications. By contrast the high growth, low concentration sectors reflect a range of creative industries that comprise digital content focusing more on multimedia, graphics and design. These are potential emerging industries within the state.[927]

The 10 case studies revealed:

> *the strong dependency of the spatial industries cluster to the mining and resources sector, and the key role of the WA Government through its Department of Land Information in controlling digital spatial data. Within the digital creative industries cluster these cases highlighted the lack of local market access for WA firms, as well as a shortage of investment capital for these industries. Most of these firms were very small and operated more via communities of practice than conventional industry supply chains. The need for enhanced industry support schemes targeting management skills development, incubators, marketing and investment attraction were identified from these cases and the industry workshops that followed them.*[928]

Finding 64

There is a need for enhanced digital content industry support schemes targeting management skills development, incubators, marketing and investment attraction.

Enabling Future Prosperity reported on the formation of a cross-agency group involving DoIR, the Department of Education and Training (DET), the Department of Culture and the Arts (DCA), the Film & Television Institute WA and ScreenWest to support the development of the digital content sector in the state.[929] *Enabling Future Prosperity* also advised that over the next three years the Government of Western Australia would 'partner with the Australian Broadcasting Corporation and ScreenWest to implement the Film and Television Production Fund and promote linkages and opportunities for WA digital production technology and content companies'.[930] However, in its evidence to the Committee, DoIR advised that that cross-agency group, which had come from the Department of the Premier and Cabinet, no longer existed. While the initiative had been abandoned too early to tell if it had been productive, DoIR believe that 'it is a pity that we seem to have lost the capacity to work across agencies. I think the creative industries are an important element of the economy that is undervalued'.[931]

---

[927]   ibid., p8.

[928]   ibid., p10.

[929]   Department of Industry and Resources, *Enabling Future Prosperity: The Western Australian Information and Communications Technology Industry Development Strategy,* Government of Western Australia, Perth, 2004, p10.

[930]   ibid., p14.

[931]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p10.

With regards to cross-agency groupings DoIR argued that for such an initiative to be successful it would have to have government support, meaning that:

> it has to have blessing at a ministerial level and it has to have a focus within the director general's performance agreement that it becomes part of core business. If it is not part of core business, it will get ignored, for a range of reasons - one, it is not resourced, and two, it could be open to censure because you are off there not doing your mainstream job. There is not a vision for creative industries by government at the moment. Without that foundation, you cannot expect mid-level public servants to take the initiative, because they will not.[932]

Finding 65

The cross-agency group consisting of the Australian Broadcasting Corporation and ScreenWest to implement the objectives of Film and Television Production Fund has been abandoned.

Recommendation 32

Reestablishment of the digital content cross-agency group to give profile to the industry within government and help generate whole-of-government commitment to expanding the sector.

Recommendation 33

Relevant Ministers need to support a cross-agency group on digital content and implement key performance indicators for Directors General to reflect the development of the digital content industry as a government priority.

In April 2007 DoIR re-stated its *Enabling Future Prosperity* focus on the 'development of Western Australia as a world centre for digital content development'.[933] DoIR stated that:

> The computer games industry in Western Australia is currently small by world standards, but it is creative, innovative and dynamic - offering exciting potential for expansion and growth.[934]

---

[932]   ibid., p10.

[933]   Department of Industry and Resources, *Western Australian Games Capability Directory, WA Games Developers*, Government of Western Australia, Perth, April 2007, p5.

[934]   ibid.

The WAICTIDF argue that the digital content industry has developed 'a significant presence in a relatively brief time span'.[935] Furthermore:

> *Western Australia should not try, and probably now could not, compete in the movie niche dominated by Queensland or in the console games niche now occupied by Victoria. However, the dynamic and changing nature of the industry allows Western Australia to enter emerging niches.*[936]

While the Committee acknowledges WAICTIDF's point of view, it believes that Western Australia needs to be open to maximising any potential opportunity in all areas of the digital content sector. For DoIR, because 'digital content is so broad', to say that Western Australia should find another niche within digital content besides games content is 'a ridiculous statement. It is changing so rapidly. It is like saying you could have a monopoly on the wireless 100 years ago'.[937] At this stage DoIR are unable to advise of any specific niches within digital content that should be developed in Western Australia.

> *We have come across examples where digital content is working with some of our traditional world-class domestic customers, such as mineral projects that do things like 3D imaging and design. It is certainly making inroads in areas such as architecture. We need to do more work on that.*[938]

If there is a direction which the government, private sector and/or universities show can be developed to Western Australia's advantage, whether this is complementary to, or in competition with, the other states, then this should be pursued. The Committee believes that this approach will better allow Western Australia to develop its own digital content sector niche, regardless of what has been developed in other states. An example of the potential that can be generated by government support to this sector is the Western Australian Government's support of Interzone to establish a games development studio in Perth. For Interzone, this was:

> *a great opportunity to have a flagship but also to have the capacity come here. They want to achieve many things in the future; in fact, they employ about five people a week at the moment. They are going through a rapid growth phase during their establishment and one of the things they want to do is to work with the education establishment to build a capacity so that they have an ongoing supply of skilled people to meet their expansion objectives.*[939]

DoIR advised that this initiative:

---

[935]   Submission No. 11 from Western Australian Information and Communications Technology Industry Development Forum, September 2006, p3.

[936]   ibid.

[937]   Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p11.

[938]   ibid.

[939]   Mr Terry Burnage, General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p10.

In essence, it was to build a games and digital content significant capability within Western Australia, because we have been left behind by especially Victoria.[940]

From our perspective, the government's commitment to Interzone was an important signal to the industry to say that the government was interested in this form of development and that was not there before.[941]

To WAICTIDF it seems that Western Australian digital content developers gain their skills in Western Australia, but move to other states and overseas 'because of a perception that there is lack of support at home. That is, Western Australia has a major asset that is being lost'.[942]

Finding 66

There is a perception of a lack of support for digital content developers in Western Australia, which leads to skilled people leaving the state.

The digital content industry faces issues that are commonly faced by SME ICT companies, such as a fragmented base, highly technically skilled people lacking in business skills, insufficient access to capital, and rapid rates of change in the industry, and many of these have been discussed in this report. However, WAICTIDF suggest that such issues 'are not insurmountable' and that rather than lose a potential major asset, a relatively small government intervention could use this asset to leverage ICT content development in this State.[943]

Finding 67

A relatively small government intervention could use the potential in the Western Australian digital content industry as an asset to leverage ICT digital content development in this state.

---

[940] Ms Daniela Mattheys, Manager, ICT and Nanotechnology Industry Development, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p10.

[941] Mr Stephen Grocott, Director/General Manager, Department of Industry and Resources, *Transcript of Evidence,* 16 May 2007, p11.

[942] Submission No. 11 from Western Australian Information and Communications Technology Industry Development Forum, September 2006, p3.

[943] ibid.

Recommendation 34

The state government provide industry assistance and support to help maximise the opportunities for Western Australia's digital content industry.

APPENDIX ONE

SUBMISSIONS RECEIVED

Number	Name	Position	Organisation
1	Brian Davis		Infomatics Pty Ltd
2	Tim McKenna	Senior Consultant/Managing Director	Team Technology (WA) Pty Ltd
3	Jamie Robertson	General Manager	BroadbandNet Pty Ltd
4	Closed Submission		Closed Submission
5	Sharon Brown	Chair	ICT Industry Collaboration Centre
6	Lou Martini	Chair	Australian Information Industry Association WA Branch
7	Walter Green	Director	ATUG - WA
8	Jim Limerick	Director General	Department of Industry and Resources, Government of Western Australia
9	Timothy Marney	Under Treasurer	Department of Treasury & Finance, Government of Western Australia
10	Sven Bluemmel	A/Executive Director	Office of e-Government, Department of the Premier & Cabinet, Government of Western Australia
11	Earl White	Executive Officer	Western Australian Information and Communications Technology Industry Development Forum
12	Angus Robinson	Chief Executive	Australian Electrical and Electronic Manufacturers Association Limited
13	Closed Submission		Closed Submission
14	Stephen Moir	A/Managing Director	Small Business Development Corporation
15	Philip Argy	President	Australian Computer Society Inc.

| 16 | James McAdam | General Manager, Strategy and Policy Services | Australian Information Industry Association Ltd |
| 17 | David Smith | Executive Director, Economic | Department of Treasury and Finance, Government of Western Australia |

APPENDIX TWO

HEARINGS HELD

Date	Name	Position	Organisation
23/08/2006	Stephen Grocott	Director, Innovative Industry	Department of Industry and Resources
	Paul Gale	Senior Project Manager	Department of Industry and Resources
	Sheryl Siekierka	General Manager	Department of Industry and Resources
13/09/2006	Andrew Winterburn	Managing Director	BroadbandNet Pty Ltd
20/09/2006	Geoffrey Harben	Branch Executive Committee Member	Australian Information Industry Association
	Cheryl Robertson	Strategy Consultant	Australian Information Industry Association
	Louis Martini	WA Chair	Australian Information Industry Association
	James McAdam	General Manager	Australian Information Industry Association
25/10/2006	Sharon Brown	Chair	Information and Communications Technology Industry Collaboration Centre of WA
	Jamie Lyford	Legal Adviser	Information and Communications Technology Industry Collaboration Centre of WA
	Valerie Maxville	Research Associate	Information and Communications Technology Industry Collaboration Centre of WA
	Greg Boalch	Director	Information and Communications Technology Industry Collaboration Centre of WA
28/2/07	John Tondut	Acting Executive Director	Office of Government Procurement, Department of Treasury and Finance

28/2/07 (cont.)	Alex Taylor	Director, Strategic Sourcing Reform	Office of Government Procurement, Department of Treasury and Finance
28/2/07	Jo Bryson	Executive Director	Office of e-Government, Department of the Premier and Cabinet
	Sven Bluemmel	Director, Strategy and Policy	Office of e-Government, Department of the Premier and Cabinet
21/3/07	Dr Walter Green	Director	ATUG-WA
16/5/07	Terry Burnage	General Manager	Department of Industry and Resources
	Stephen Grocott	Director/General Manager	Department of Industry and Resources
	Daniela Mattheys	Manager, ICT and Nanotechnology	Department of Industry and Resources
	Julie De Jong	Acting Director, Innovative Industries	Department of Industry and Resources

APPENDIX THREE

BRIEFINGS HELD

Date	Name	Position	Organisation
28/08/06	Michael Coles	Chairman	Western Australian Information Technology and Telecommunications Awards
30/08/06	Mark Jones	Manager	Technology Park, Bentley
	Arnold Stroobach	Chief Executive Officer	Zernike Australia
	Carmel Lyttleton	Project Officer Technology Parks	Department of Industry and Resources
27/09/06	Kevin Fynn	Director	Western Australian Telecommunications Research Institute
17/10/06	Kee Wong	Managing Director	e-Centric innovations
17/10/06	Randall Straw	Executive Director	Multimedia Victoria
	Andrew Ferrington	Director - ICT Investment & Business Development	Multimedia Victoria
19/10/06	Dr Chris Johnson	Head of Department of Computer Science	ANU College of Engineering & Computer Science
	Dr Alistair Rendell		Dept of Computer Science, Faculty of Engineering & Information Technology, ANU
19/10/06	Dr Rod Badger	Deputy Secretary	Australian Government Dept of Communications, Information Technology & the Arts
	Dr Beverly Hart	Chief General Manager Strategic Development & Regional Division	Australian Government Dept of Communications, Information Technology & the Arts
	Lindsay Barton	General Manager ICT Development	Australian Government Dept of Communications, Information Technology & the Arts
	David Grattan	ICT Industry Development Branch	Australian Government Dept of Communications, Information Technology & the Arts

20/10/06	Craig Pennifold	Head, Innovation Division	Australian Government Dept of Industry Tourism & Resources
	Ian Tranter	Manager Business R&D Policy, Innovation Division	Australian Government Dept of Industry Tourism & Resources
	Judith Zielke	General Manager Innovation & Collaboration Branch AusIndustry	Australian Government Dept of Industry Tourism & Resources
	Vicki Techeci	Manager, Program Policy Section Office of Small Business	Australian Government Dept of Industry Tourism & Resources
	Su-Lin Kwa	State Manager Western Australian State Office, AusIndustry	Australian Government Dept of Industry Tourism & Resources
	Bill Peel	Executive General Manager AusIndustry	Australian Government Dept of Industry Tourism & Resources
	Tricia Berman	General Manager Policy Branch	Australian Government Dept of Industry Tourism & Resources
21/11/06	Sheryle Moon	CEO	Australian Information Industry Association, National
	James McAdam	General Manager, Government & Policy	Australian Information Industry Association, WA Branch
	Lou Martini	Chair	Australian Information Industry Association, WA Branch
	Cheryl Robertson	Government Strategist	Australian Information Industry Association, WA Branch
29/11/06	Martin Dougiamas		Moodle Pty Ltd

APPENDIX FOUR

LEGISLATION

List of Legislation (or other relevant information) used in the inquiry.

Legislation	State (or Country)
Commonwealth Authorities and Companies Act 1997	Commonwealth
EMDG Legislation Amendment Act 2006	Commonwealth
Export Finance and Insurance Corporation Act 1991	Commonwealth
Financial Management and Accountability Act 1997	Commonwealth
Public Works Act 1902	Western Australia
State Supply Commission Act 1991	Western Australia