

Western Australian

Technology & Industry

Advisory Council

Annual Activity Report

July 2007 – June 2008



**Technology and
Industry Advisory
Council**



Annual Activity Report

July 2007 – June 2008



Hon. Francis Logan MLA
Minister for Energy; Resources; Industry and Enterprise
10th Floor
216 St George's Terrace
PERTH WA 6000

Dear Minister

On behalf of the Council I am pleased to submit the Annual Activity Report for the Western Australian Technology and Industry Advisory Council (TIAC) for the year ending 30 June 2008, for your information, and subsequent presentation to Parliament in accordance with Section 26(1) and Section 26(2) of the Industry and Technology Development Act 1998.

Council has also reported through the Department of Industry and Resources' Annual Report and Financial Statement in accordance with Section 26(3) of the Industry and Technology Development Act 1998 in compliance with Section 62 of the Financial Administration and Audit Act 1985.

Yours sincerely

Professor Michael V. Henderson
CHAIRMAN

1 July 2008

On behalf of Council members:

Prof Lyn Beazley
Mr Todd Gogol
Mr Brett Mattes
Dr Fiona Pixley

Ms Sharon Brown
Prof Linda Kristjanson
Mr Rob Meecham
Mr David Singleton

Ms Lynda Dorrington
Mr David Lee
Mr Max Noble
Mr Stuart Smith

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Part 1

1.1. Introduction

The Western Australian Technology and Industry Advisory Council (TIAC) was created by legislation in 1987 (Technology Development Amendment Act - No. 32 of 1987) and was continued under Section 20 of the Industry and Technology Development Act 1998.

TIAC was preceded by the Technology Review Group 1978-1983, and the Science, Industry and Technology Council (SITCO) 1983-1987.

Council is made up of representatives from various sectors of the State's economy who, in terms of the relevant Act, use their varied background and experience, to provide independent policy advice to the Minister so as to make a significant contribution to the development of strategies relating to the State's economic development.

Members of the Council are appointed, by the Minister, under Section 22 of the Industry and Technology Development Act 1998 so as to be representative of the interests of the people of the State. A list of members is provided in Section 1.13.

TIAC reports through the Minister to Parliament under Section 26(1) and Section 26(2) of the Industry and Technology Act 1998.

TIAC reports under the Financial Administration and Audit Act 1985 through the Department of Industry and Resources under Section 26(3) of the Industry and Technology Development Act 1998.

1.2. Objectives of the Industry and Technology Development Act 1998

The objectives of the Industry and Technology Development Act 1998 (Section 3) are to:

- (a) promote and foster the growth and development of industry, trade, science, technology and research in the State;
- (b) improve the efficiency of State industry and its ability to compete internationally;
- (c) encourage the establishment of new industry in the State;
- (d) encourage the broadening of the industrial base of the State; and
- (e) promote an environment which supports the development of industry, science and technology and the emergence of internationally competitive industries in the State.

1.3. Functions of the Western Australian Technology and Industry Advisory Council

The Council, under Section 21 of the Act is required to:

- (a) provide advice to the Minister, at the initiative of the Council or at the request of the Minister, on any matter relating to the objects of the Industry and Technology Development Act 1998; and
- (b) carry out, collaborate in or procure research, studies or investigations on any matter relating to the objects of the Act, including matters relating to the:
 - (i) role of industry, science and technology in the policies of Government;
 - (ii) social and economic impact of industrial and technological change;
 - (iii) employment and training needs and opportunities relating to industrial, scientific and technological activities in the State;
 - (iv) adequacy of, priorities among and co-ordination of, scientific, industrial and technological activities in the State;
 - (v) methods of stimulating desirable industrial and technological advances in the State;
 - (vi) application of industrial, scientific and technological advances to the services of the Government; and
 - (vii) promotion of public awareness and understanding of development in industry, science and technology.

1.4. The ICT Industry Development Forum

The Western Australian Information and Communications Technology Industry Development Forum (ICT Forum) was established as a committee of TIAC by the Minister for State Development in June 2004 under Section 23(14) and 25 of the Industry and Technology Development Act 1998 (ITD Act 1998) for a term of 3 years. This term concluded as at 30 June 2007.

1.5. TIAC Membership

In 2007 the Minister for Industry and Enterprise appointed Professor Michael V. Henderson as Chair of TIAC, following the retirement of the previous Chair, Mr John Thompson. At this time, the Minister appointed eight new Council members:

Professor Lyn Beazley	Dr Fiona Pixley	Ms Lynda Dorrington
Mr Todd Gogol	Professor Linda Kristjanson	Mr David Lee
Mr Brett Mattes	Mr Max Noble	

Three TIAC members were reappointed:

Ms Sharon Brown	Mr Rob Meecham	Mr David Singleton
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As per the Industry and Technology Development Act 1998, the Director General of the Department of Industry and Resources was retained as a Council member. Dr Jim Limerick represented the Department of Industry and Resources until March 2008, when Mr Stuart Smith, as Acting Director General was appointed to the Council.

1.6. 2007 / 2008 Strategic Plan

In 2007 the new Council undertook a strategic planning process to identify short, medium and long term activities for 2008 and beyond.

The outcome of this process was to define TIAC's mandate as:

To make a significant contribution to public policy debate on matters relating to the economic development of Western Australia and to do this through:

- 1. The provision of independent advice to the Minister;*
- 2. anticipating trends and development in the global economy; and*
- 3. the presentation of reports and events which are a catalyst to stimulate debate and thinking on WA's economic future in order to create sustainable benefits for all Western Australians.*

1.7. Activity Plan

The strategic planning discussed at 1.6 resulted in the development of four major projects to be pursued in 2008/2009:

- **Skills and Labour Forum**
The forum will bring together key stakeholders to discuss issues related to the provision of skills and labour in Western Australia. A key objective of the forum is the identification of the core issues impacting on skills and labour supply in Western Australia and a discussion of how these issues can be addressed.
- **Skills for the Future**
The objective of the report is to provide a perspective on the Western Australian and global economy (post 2015) and its workforce needs, based on an analysis of current global economic trends and developments. The report will then consider the implications for labour demand, both current and predicted, and the interventions required for the State to be able to provide a workforce which ensures local industry is regionally and globally competitive.
- **Innovation Debate Series**
This series of 4-6 lunch time debates are proposed to ignite interest in innovation, promote Western Australian, national and international success stories, raise awareness of barriers effecting innovation and provide an opportunity for industry and other relevant stakeholders to advise policy makers on potential strategies. It will also provide an opportunity to challenge current thinking and promote learning from national and international experience on key economic, technological and social issues which will act as a catalyst to stimulate public policy debate in Western Australia.

- Building on the Western Australian Boom: The Drivers and Shapers of Indonesia's Economic Development in the 21st Century.

The objective of this report is to obtain an understanding of the strategic drivers of Indonesia's economic development in order to identify barriers to, and opportunities for, increased trade between Western Australia and Indonesia. The research will endeavour to build a closer understanding of the factors underpinning economic growth in Indonesia, and areas of potential synergy with WA in order to maximise Western Australia's sustainable economic prosperity through interaction with its nearest neighbour.

1.8. Financial Provisions

The expenses of Council are provided for under Section 15 of the Industry and Technology Development Act 1998 via the Western Australian Industry and Technology Development Account.

TIAC was allocated a total budget for 2007 - 2008 of \$ 843,000 (plus superannuation costs).

1.9. Members' Remuneration

Council members' remuneration and allowances were determined under Section 24 of the Technology and Industry Development Act 1998 resulting in:

(a) Chairperson's Salary	\$40,000.00 (per annum)
(b) Member's Salary – Non-Public Sector	
Council Meetings	\$13,400.00 (per annum)
Other Meetings	Nil
(c) Member's Sitting Fee – Public Sector	
Council Meetings	Nil
Other Meetings	Nil

TIAC has sat for 7 Council meetings and held 48 sub-committee and operations meetings for the planning and development of projects.

1.10. Executive Staff

Three full time staff positions are provided to Council to manage the Council's activities and projects. These positions are filled by three officers seconded from the Department of Industry and Resources. Full time occupancy rates for these positions in 2007 / 2008 are indicated in the table below:

	Permanent	Temporary	Vacant	Turnover*
	%	%	%	
Executive Officer / Manager	0	83	17	3
Senior Policy Officer	60	0	40	1
Administrative Officer	48.1	48.1	3.8	6

*Number of officers who occupied the position during the year.

1.11. Financial Statement

TIAC reports under the Financial Administration and Audit Act 1985 through the Department of Industry and Resources' Annual Report and Financial Statements.

1.12. Outlook for 2008-2009

As provided at 1.7 Council has embarked on a program of four major projects for 2008 – 2009. Coupled with this is Council's ongoing research into issues facing Western Australian industry. TIAC has established five sub-committees looking into the areas of:

- Information and Communications Technology
- Biotechnology
- Clean Energy
- Marine and Defence
- Innovation

Initially, the sub-committees will be responsible for providing a briefing to the full Council on the major issues currently facing these industries. Information gained by this process will be used by TIAC in determining its future research projects and advice to the Minister.

1.13. Council Membership

Prof. Michael V. Henderson

TIAC Chairman

Executive Chairman

Sandover Pinder

Professor Lyn Beazley

Chief Scientist WA

Mr Brett Mattes

Chairman

WA Chemistry Centre

Chief Executive Officer - Star Energy

Ms Sharon Brown

Director of Business Development

Change Corporation

Mr Rob Meecham

A/Director

Australian Centre for Energy & Process Training

Challenger TAFE

Ms Lynda Dorrington

Executive Director

FORM

Mr Max Noble

Managing Director

Illiac

Mr Todd Gogol

Executive Assistant IT

Australian Manufacturing Workers Union

Dr Fiona Pixley

Senior Lecturer

School of Medicine and Pharmacology

The University of Western Australia

Professor Linda Kristjanson

Proc-Vice Chancellor R&D

Curtin University of Technology

Mr David Singleton

Chief Executive Officer

Poseidon Nickel

Mr David Lee

External Affairs Advisor

Chevron Australia Pty Ltd

Mr Stuart Smith

Acting Director General

Department of Industry and Resources



Part 2

Indicators of Relevance

2.1 Indicators of Relevance

TIAC was reviewed in 2004 with the resulting report being tabled as Parliamentary Paper No. 2810 on 22 September 2004. The review's conclusion on TIAC's effectiveness were as follows:

- (i) TIAC has been effective in its activities of provision of advice and in raising public awareness and is not constrained in carrying out these roles by the current ITD Act.
- (ii) The activities of TIAC are essential for promoting policy debate and assisting in policy formation. TIAC has strongly informed policy development.
- (iii) TIAC has demonstrated its flexibility in responding to Ministerial requests to develop and implement three-year programs targeting specific industry sectors.
- (iv) TIAC should have specific appropriation identified within the responsible Department budget including forward estimates.

Other indicators of relevance that are monitored by TIAC include:

- (a) Publications of TIAC linked to its functions as per the ITD Act 1998;
- (b) Outcomes of TIAC's reports;
- (d) TIAC website statistics.

Details of this monitoring are given in Section 2.2, 2.3 and 2.4 respectively.

2.2 Publications of TIAC Linked to Function

The table below links TIAC's reports to its Primary and Secondary Functions:

- Primary Functions are those as set out as the “Objects” of the Industry & Technology Development Act 1998, Part 1, (3). (See 1.2, Pg 2 of this document).
- Secondary Functions are those as set out at part (b) of the “Functions of Council”, Industry & Technology Development Act 1998, Part 6, (21) (1). (See 1.3, Pg 2 of this document).

Publication Title	Linkage to Function	Date
Support for West Australian Software Industry	PF5, SF5	July 1988
New Challenges & Opportunities	PF5, SF7	July 1988
Technology Parks	PF1, PF5	July 1988
Intelligent Buildings: What role for the WA Government?	SF6	Sept 1988
US State Government Policies Designed to Encourage the Commercialisation of New Ideas: Some Recommendations for WA	PF1, PF3, SF5	Sept 1988
WA Software Industry (Second Report)	PF5, SF5	Oct 1988
An Industrial Science Policy for Western Australia: Some Seed Ideas	PF5, SF1	Oct 1988
Towards a West Australian Science Policy for the 1990's	PF5, SF1	Nov 1988
Inquiry into Venture Capital in Western Australia	PF1, PF3, SF5	March 1989
The Case for a New Branch of Manufacturing to Provide <u>Smart</u> Equipment for the Mining Industry	PF2	March 1990
The Export Debate	PF5	May 1990
Tomorrow's People in Science & Technology	SF1	March 1991
Bentley Technology Precinct: An Exploratory Study	PF1	Sept 1992
The Western Australian Technology School of the Future: A Feasibility Study	SF3, SF5	Oct 1992
Capturing Opportunities in Asia with Western Australian Science & Technology	PF5	Nov 1992
Telecommuting 2000: Making the Future Work for Western Australia	PF2, SF5	Dec 1992
Telework 2000: Making the Future Work for Western Australia	PF2, SF5	July 1993
R&D and the State's Economic Development: What is the best fit?	PF1, SF4	April 1994
Medical Research Infrastructure Funding in Western Australia	PF1, SF4	April 1995
Towards an Information Infrastructure Policy for Western Australia – the Business Aspect	PF2, SF1	Feb 1996
Financing Options for Regional Infrastructure in Western Australia	PF1, PF4	Nov 1996
Telecommunications Deregulation – Is Western Australia Prepared?	SF7	Dec 1996

2.2 Publications of TIAC Linked to Function (Cont'd)

Publication Title	Linkage to Function	Date
Western Australia's Minerals and Energy Expertise: How can it be optimised? – Defining the Issues – A Background Paper	PF5, SF3	Sept 1997
Research & Development: Role of the State Government in attracting External Funding	PF1, SF1	May 1998
From Mines to Minds: Western Australia in the Global Information Economy	PF1, PF2, PF5, SF1, SF5	Feb 1999
Western Australia's Minerals and Energy Expertise: How can it be optimised? – <i>Growing the R&D Sector</i>	PF1, PF5, SF3	June 1999
Technology, Skills and the Changing Nature of Work	PF5, SF1, SF3	April 2000
Drivers and Shapers of Economic Development in Western Australia in the 21st Century	ALL PF, ALL SF	Sept 2000
Export of Western Australian Education and Training: Constraints and Opportunities	PF2	Oct 2000
Biotechnology West: Strengths, Weaknesses and Opportunities	PF4, PF5, SF5	Dec 2000
Directions for Industry Policy in Western Australia within the Global Knowledge Economy	SF1	Mar 2002
The Organisation of Knowledge: Optimising the Role of Universities in a Western Australian Knowledge Hub	PF1, PF2, PF5	Jun 2002
Creating Western Australia's Knowledge Infrastructure: Towards Global Competitiveness and High-Value Employment	PF2	Jun 2003
Enabling a Connected Community: Developing Broadband Infrastructure and Services in Metropolitan Western Australia (ICT Industry Development Forum)	PF2, PF5	Sept 2003
Initiating and Supporting Major Economic Infrastructure for State Development: Defining the Issues	PF1, PF2, PF3, PF5	May 2004
Initiating and Supporting Major Economic Infrastructure for State Development: Opportunities for Government	PF2, PF3, PF5, SF1	Sept 2004
Trade in Western Australian Health Industry Services: Directions for Development	PF1, PF2, PF5, SF1, SF4	Nov 2004
Enabling Growth: The Contribution of ICT to the Western Australian Economy (ICT Industry Development Forum)	PF1, PF2, PF3, SF1, SF2, SF4, SF5, SF10	Feb 2006
Big Pipes: Connecting Western Australia to the Global Knowledge Economy (ICT Industry Development Forum)	PF1, PF2, PF3, SF1, SF2, SF4, SF5, SF7, SF10	April 2006
A Snapshot of Export Activity in Western Australia's SME Sector	PF1, PF2, SF2	July 2006
Building on the Western Australian Boom: Drivers and Shapers of India's Economic Development in the 21 st Century	ALL PF; ALL SF	Feb 2007
Building on the Western Australian Boom: Drivers and Shapers of China's Economic Development in the 21 st Century	ALL PF; ALL SF	Feb 2007

2.3 Outcomes of TIAC Reports

Report Title	Date	Possible Indicator of Relevance - Date
<i>Towards a West Australian Science Policy for the 1990s</i>	1988	Launch of a State Science and Technology Policy (1997).
<i>Inquiry into Venture Capital in Western Australia</i>	1989	Part of Industry Policy (2004).
<i>Bentley Technology Precinct: An Exploratory Study</i>	1989	Precinct Plan implemented (2004).
<i>The Western Australian Technology School of the Future: A Feasibility Study</i>	1992	Part of ALP election promise (2001). Part of Perth Modern Development (2004).
<i>Tomorrow's People in Science and Technology</i>	1991	Issues and elements contributed to the formation of the Science Council and contained in OSI projects (2001).
<i>R&D and the State's Economic Development: What is the best fit?</i>	1994	
<i>Research and Development: Role of the State Government in attracting External Funding</i>	1998	
<i>Medical Research Infrastructure Funding in Western Australia</i>	1995	Funding implemented (1997).
<i>Towards and Information Infrastructure Policy for Western Australia – the Business Aspect</i>	1996	Issues relating to ICT and Telecommunications Policy included as part of Industry Policy (2004).
<i>Telecommunications Deregulation – Is Western Australia Prepared?</i>	1996	Proposed development of ICT Strategy and Telecommunications Strategy (2004).
<i>From Mines to Minds: Western Australia in the Global Information Economy</i>	1999	
<i>Western Australia's Minerals and Energy Expertise: How can it be optimised? – Defining the Issues – A Background Paper</i>	1997	One of the proposed Research Institutes under the OSI plan (2003-2004).
<i>Western Australia's Minerals and Energy Expertise: How can it be optimised? – Growing the R&D Sector</i>	1999	
<i>Drivers and Shapers of Economic Development in Western Australia in the 21st Century</i>	2000	Quoted in Innovate WA Policy – ALP (2001). Climate Change and Sustainable Development now acknowledged as a mainstream issue of significance (2006-2007)
<i>Export of Western Australian Education and Training: Constraints and Opportunities</i>	2000	Part of Industry Policy (2004).
<i>Biotechnology West: Strengths, Weaknesses and Opportunities</i>	2000	Part of Coalition election promise (2001). Part of DoIR work programme – development of Biotechnology Strategy (2004). WA Biotechnology Industry Development Strategy launched (2006). WA Biotechnology Industry Directory launched (2007).
<i>Directions for Industry Policy in Western Australia within the Global Knowledge Economy</i>	2002	Industry Policy Statement launched 2004.
<i>The Organisation of Knowledge: Optimising the Role of Universities in a Western Australian Knowledge Hub</i>	2002	Elements and issues contributed to OSI Research Institutes plan (2004).
<i>Creating Western Australia's Knowledge Infrastructure: Towards Global Competitiveness and High-Value Employment</i>	2003	Issues and elements to contribute to the Government's Knowledge Economy Strategy (2004).

2.3 Outcomes of TIAC Reports (Cont'd)

Report Title	Date	Possible Indicator of Relevance
<i>Enabling a Connected Community: Developing Broadband Infrastructure and Services in Metropolitan Western Australia (ICT Industry Development Forum)</i>	2003	Federal Government budget provides \$50m for metro broadband subsidy to disadvantaged (2005). State Infrastructure refers to Telecommunications as part of infrastructure. Chair of ICT Forum appointed as member of Taskforce (2005). State Government announces the State-wide Broadband Network Strategy intended to provide reliable, high-speed and affordable broadband access to all Western Australians (2006).
<p>1. <i>Initiating and Supporting Major Economic Infrastructure for State Development: Defining the Issues</i></p> <p>2. <i>Initiating and Supporting Major Economic Infrastructure for State Development: Opportunities for Government</i></p>	2004 2004	<p>Business Council takes up issue of Federal Government involvement in infrastructure development (2004).</p> <p>State Government creates Cabinet Taskforce to oversee major infrastructure projects (2005). State Government established Commonwealth-State Relationship Taskforce.</p> <p>The State Treasurer established Infrastructure Taskforce (2004). Terms of Reference and timeframe for development of State Infrastructure Strategy released (2005). Strategy Green Paper released (2006).</p>
TIAC's <i>Towards a Knowledge Economy</i> theme of reports	1999-2004	State Cabinet endorses coordinated development of a Western Australian Knowledge Economy (2004).
<i>Trade in Western Australian Health Industry Services: Directions for Development</i>	2004	State Government (via DOIR) begins to progress a number of the report's recommendations including: (i) Establishing a Western Australian Health Services Industry Association (ii) Release of a Western Australian Health Industry Capability Directory, database and web site (2007).
<i>Enabling Growth: The Contribution of ICT to the Western Australian Economy (ICT Industry Development Forum)</i>	2006	Tasmanian Government's Economic Development Department seeks support of the ICT Forum to develop a similar report for Tasmania (2006).
<i>Big Pipes: Connecting Western Australia to the Global Knowledge Economy (ICT Industry Development Forum)</i>	2006	State Government announces the State-wide Broadband Network Strategy. Under the strategy, this money will be pooled together and offered as a 10-year, \$1 billion contract to facilitate the installation of the State-wide broadband network by the private sector (2006).
<i>Building on the Western Australian Boom: Drivers and Shapers of India's Economic Development in the 21st Century</i>	2007	Australia and India agree to conduct a joint study into the merits of a free trade agreement (FTA) between the two countries, with the study expected to be completed by early 2009.
<i>Building on the Western Australian Boom: Drivers and Shapers of China's Economic Development in the 21st Century</i>	2007	The State Government (via DoIR) increases its human resources focusing on facilitating trade with China.

2.4 Website Statistics for TIAC (2007 - 2008)

- During 2007 -2008 there were 101,164 visits to TIAC’s website.
- TIACs reports were accessed 8,684 times
- Including Australia, visits to the TIAC website originated from the following 107 countries:

Antigua and Barbuda	Guatemala	Poland
Argentina	Guyana	Polynesia (French)
Armenia	Honduras	Portugal
Aruba	Hong Kong	Qatar
Austria	Hungary	Romania
Bangladesh	Iceland	Russian Federation
Belgium	India	Saudi Arabia
Bhutan	Indonesia	Singapore
Bolivia	Ireland	Slovak Republic
Bosnia-Herzegovina	Israel	Solomon Islands
Brazil	Italy	South Africa
Brunei Darussalam	Japan	South Korea
Bulgaria	Jordan	Spain
Cambodia	Kenya	Sweden
Canada	Latvia	Switzerland
Chile	Lebanon	Taiwan
China	Lithuania	Tanzania
Christmas Island	Luxembourg	Thailand
Colombia	Malawi	Tonga
Congo	Malaysia	Trinidad and Tobago
Croatia	Maldives	Turkey
Cyprus	Mauritius	Tuvalu
Czech Republic	Mexico	Uganda
Denmark	Moldova	Ukraine
Dominican Republic	Morocco	United Arab Emirates
Egypt	Mozambique	United Kingdom
Estonia	Myanmar	United States
Fiji	Netherlands	Uruguay
Finland	New Zealand	Venezuela
France	Norway	Vietnam
Georgia	Pakistan	Yugoslavia
Germany	Papua New Guinea	Zimbabwe
Ghana	Paraguay	
Gibraltar	Peru	
Greece	Philippines	

