



**TASMANIAN SCIENCE AND TECHNOLOGY
COUNCIL**

INDUSTRY PLAN

APRIL 2004

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Please direct enquiries to:

Chair
Tasmanian Science and Technology Council

GPO Box 646
Hobart Tas 7001
Tel: 03 6233 5888
Fax: 03 6233 5800
Email: industrycouncils@development.tas.gov.au

Foreword

The Science and Technology¹ Industry Plan aims to provide a clear direction for the Tasmanian science and technology sector in the medium to long term.

Ideas and knowledge are critical to our state's future prosperity and where harnessed correctly have the potential to generate high-value jobs into the future. Scientific and technological research underpins the state's potential to compete successfully in an increasingly globalised economy.

This plan is a further step forward from *Tasmania's Science and Technology Policy* (September 2001) and aims to extend the policy's momentum into the implementation stage.

The preparation of this plan has been spearheaded and overseen by the Tasmanian Science and Technology Council. The council is part of the continuing dialogue between industry and government that forms the foundation for effective joint action.

While providing a direction for the future, it is important that the plan be seen as an evolving document. Market conditions, technology and other external factors are constantly changing. As one challenge is met, others arise. Consequently it is important that the plan be reviewed to respond to those changes.

Thanks to all those who have contributed to the formulation of this plan including staff from the Department of Economic Development, particularly Kerrie Jordan, who provided research, technical and secretariat support to the council.



Brian Yates
Chair
Tasmanian Science and Technology Council



Mike Gow
Deputy Chair
Tasmanian Science and Technology Council

¹ Science and technology should be taken to include engineering.

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Introduction

The Tasmanian Science and Technology Council (TSTC) is part of the Tasmanian Government's Industry Council program. The formation of industry councils is a key element of the government's Industry Development Plan, which seeks to bring about improved outcomes in:

- job creation
- investment attraction
- net export growth
- increasing value-adding
- enhancing the state's skills base.

The formation of the Science and Technology Council was also a key strategy flowing from *Tasmania's Science and Technology Policy* (September 2001).

Role of the Tasmanian Science and Technology Council

The TSTC was established as a mechanism for the science and technology sector and government to work in partnership on a strategic approach to industry development and growth of science and technology capability in Tasmania.

The TSTC acts as an advisory body to the Minister for Economic Development on a range of science and technology issues and reports to the Tasmanian Development Board.

Key tasks undertaken by the council include but are not limited to:

- drive and participate in the development of the Science and Technology Industry Plan
- set priorities for implementation
- secure high-level stakeholder commitment to the Science and Technology Industry Plan and implementation processes
- provide advice to government on science and technology issues of relevance to Tasmania.

Science and Technology Industry Plan

Innovation² is a key driver of modern economic development. The Commonwealth Department of Industry, Science and Resources and Industry Canada (Gera, Weir and Ahmad 2001) recently collaborated to produce a survey of the literature examining the theoretical and empirical link between the knowledge-based economy and economic growth. This paper cites a number of OECD and other studies which indicate that high-income and high-productivity countries tend to be intensive in the use of knowledge and technology.

² Innovation can be defined as: “the application in any organisation of ideas new to it, whether they are embodied in products, processes, service, or in the systems of management and marketing through which the organisation operates” (Maguire, Kazlauskas and Weir 1994).



Gera, Weir and Ahmad argue that a consensus has emerged that innovation has a significant effect on output at the level of the firm, industry, [state] and country.

They cite “other cross-country empirical work investigating why growth rates differ [which] also shows that technological differences are the prime cause for differences in GDP per capita. The results also indicate that the potential for catch-up is there, but it is only realised by countries that have a ‘social capability’, e.g. those that manage to mobilize the resources such as investments, education and R&D”.

Science and technology research can provide the knowledge base for innovation that underpins solid and sustainable economic expansion. It is critical that the cycle of innovation be fuelled by new ideas and basic knowledge, and be capable of being transferred and accepted by end users.

This plan addresses these issues, suggesting strategies to achieve a vision for science and technology in Tasmania.

The plan’s development along with the formulation of *Tasmania’s Science and Technology Policy* have involved public participation: a critical component in ensuring that the people of Tasmania have a say in their long-term social, economic and environmental future.

This approach is a hallmark of a vision created for Tasmania, by Tasmanians, during the *Tasmania Together* and *Learning Together* initiatives. These both sought public opinion on a way forward to creating a community to celebrate.

Overwhelmingly, Tasmanians want to live in safe, clean communities, with jobs and prosperity for everyone, and they want the world to be aware of our skills in areas such as the arts, education, science and technology. As well, we want Tasmania to have a world-class education, training and information system which matches the best anywhere.

Tasmania’s Science and Technology Policy and this companion industry plan, along with all the industry council plans, are an important step in helping Tasmanians to achieve practical outcomes of these visions.

The primary focus of the Science and Technology Industry Plan is long-term strategic outcomes that are challenging, but realistic, outlining practical solutions and guiding implementation.

The basis for developing a common vision and plan for science and technology includes:

- the identification of science and technology related impediments to higher productivity and growth
- a review of new growth opportunities in Tasmania for the application of science and technology to create new industries or enhance existing industries
- the identification of gaps in industry capacity to respond to these issues
- the facilitation and strengthening of linkages between public research institutions, universities and industry.

The TSTC recognises the cross sectoral nature of science and technology and the importance of shared knowledge and communication. It will therefore develop strong linkages between itself, all industry councils, Intelligent Island, the Innovations Advisory Board, the Innovation, Science and Technology Unit in the Department of Economic Development and other relevant organisations.



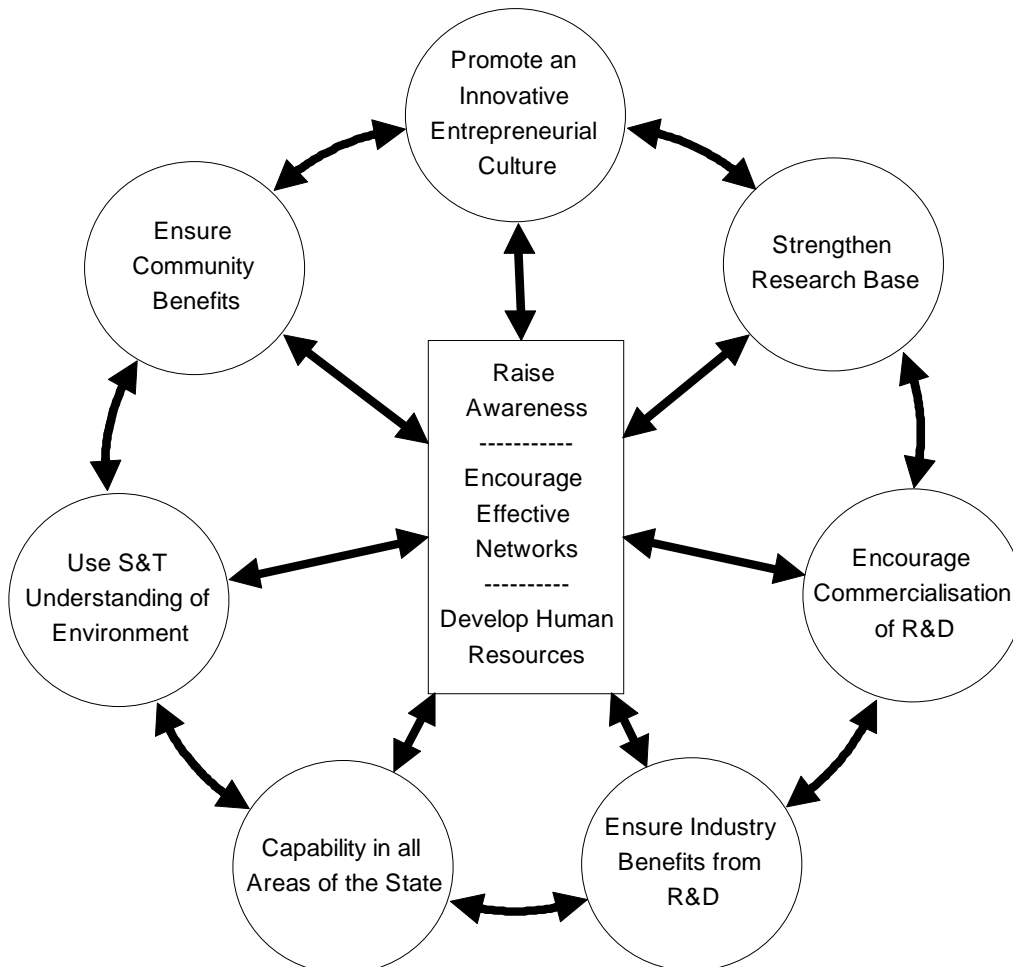
The TSTC also recognises:

- that science and technology is an industry in its own right and provides employment opportunities for a significant number of people
- the development of science and technology capability can help not only to create new knowledge-intensive industries but can also bring about productivity improvements in existing sectors
- science and technology activity can bring about significant benefit to the state.

The council also acknowledges that the science and technology sector in Tasmania operates within a broader national framework in which the Commonwealth plays a key overarching policy role. The Commonwealth has recently set national research priorities and is currently embarking on the implementation phase of this process. A national process, aimed at ‘mapping’ science and innovation activities across the public and private sectors to identify key strengths and weaknesses, is also underway. The sector in Tasmania must now position itself to gain leverage from initiatives being implemented in the national arena, including increased strategic targeting of national funding opportunities.

Key objectives

Key inputs into the formulation of this plan are elements of the objectives set out in *Tasmania’s Science and Technology Policy*.

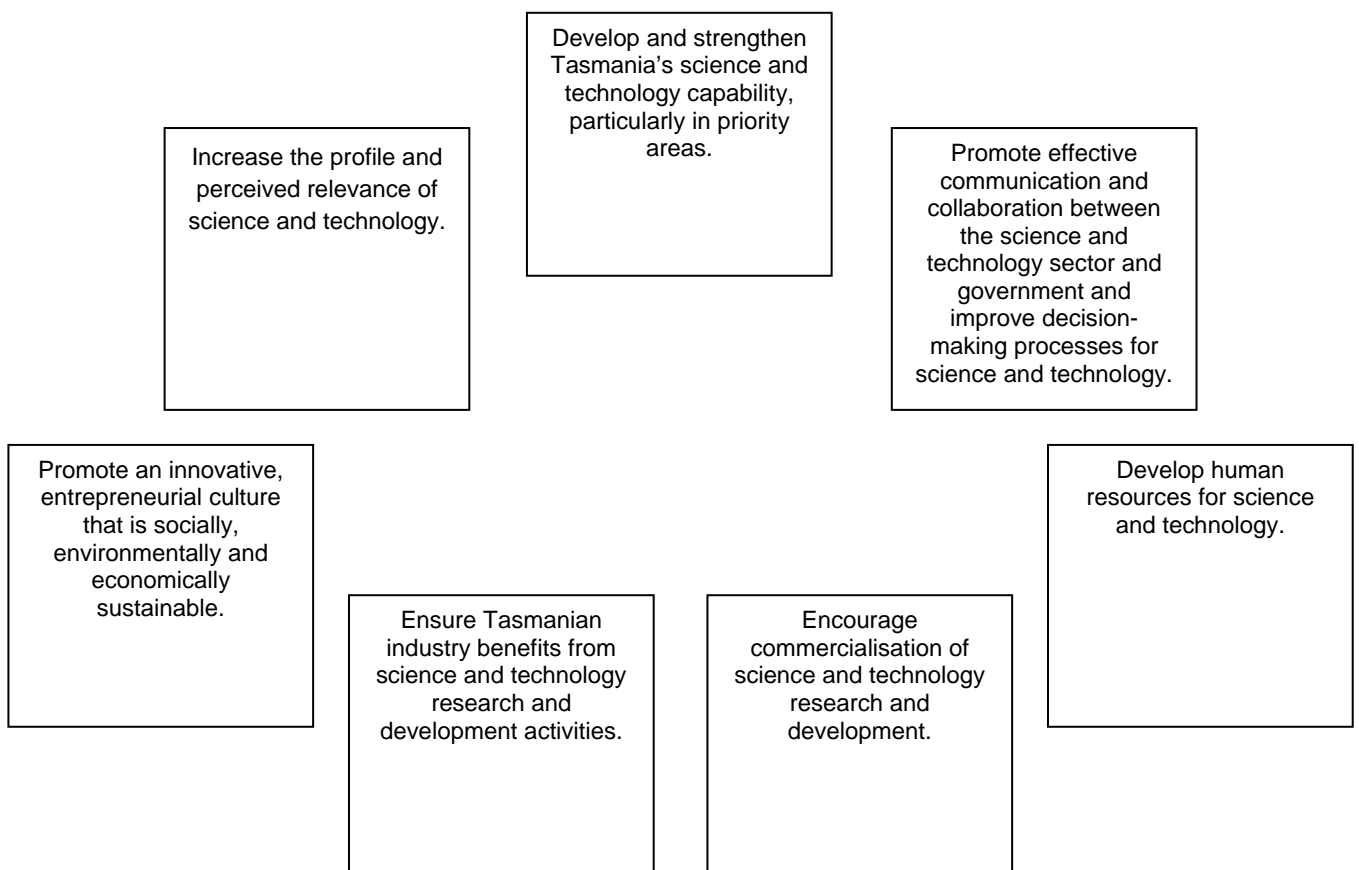




The vision for science and technology

That Tasmania be recognised for the quality of its achievements in science, engineering and technology and the benefits they bring to its people.

The TSTC has identified the following priority strategic objectives flowing from the vision for this industry plan:





Goal 1: To build and maintain competitive advantages in targeted science and technology areas of strategic value to the state.

Objective:

1.1 Develop and strengthen Tasmania’s science and technology capability, particularly in priority areas.

Strategy:

1.1.1 To establish state research priorities and encourage research in these areas.

Task	Suggested activities
1. Establish state research priorities.	a) Determine research strengths and capabilities in Tasmania. b) Devise a consultative process for establishing research priorities.
2. Encourage research activity, particularly in areas of strategic importance.	a) Establish Centres of Excellence in priority research areas. b) Create strategically focussed institutes like TIAR and TAFI that can assist in attracting funding focused on whole industry sectors.
3. Encourage the provision of appropriate research infrastructure.	a) Determine infrastructure needs through liaison with research organisations and develop initiatives to address gaps.
4. Improve the prospects for keeping and expanding the presence of national science organisations in Tasmania.	a) Form a working group to formulate a strategy to address this issue.
5. Encourage philanthropic support for R&D.	a) Support the provision of tax relief or matching support for philanthropic investment in R&D activities.
6. Promote Tasmania as an excellent location for conducting R&D, especially in the priority areas.	a) Develop an information package and marketing strategy.
7. Facilitate the development of science and technology clusters.	a) Identify clustering opportunities based on the outcome of the process to identify the state’s research priorities. b) Identify strategies to stimulate cluster development in identified areas.



Strategy:

1.1.2 To promote the incubation and start-up of science and technology based firms.

Task	Suggested activities
1. Provide support to potential businesses to start-up successfully.	<p>a) Implement a mentoring program.</p> <p>b) Ensure potential businesses have access to structured, supportive incubation services including assistance with the commercialisation of research regardless of their location within the state.</p> <p>c) Further investigate opportunities for science and technology incubation that complement the BITS³/Intelligent Island incubation program for IT firms (In-tellinc)⁴.</p>

Objective :

1.2 Promote effective communication and collaboration between the science and technology sector and government and improve government decision-making processes for science and technology.

Strategy:

1.2.1 To identify opportunities for improving interaction between government and industry.

³ Building on Information Technology Strengths (BITS) is a Commonwealth government-funded program which aims to build the strength and competitiveness of the Australian information industries sector. This involves encouraging stronger commercialisation linkages with R&D organisations and the creation of clusters of innovative IT&T businesses. In particular it seeks to:

- increase the rate of new SME formation in the Australian information industries (especially from R&D organisations)
- foster linkages and networking between participants in the information industries sector
- facilitate the availability and use of leading-edge network technologies by the information industries sector

The BITS initiative has three core elements:

1. Incubator Centres to assist IT&T small to medium enterprises
2. Advanced networks and Test-beds
3. Developing Tasmania as an 'Intelligent Island'.

⁴Intellinc is an Information and Communications Technology (ICT) focussed Incubator program. New ICT businesses are able to grow more rapidly if they have access to intensive business and technology assistance at an early stage of development. Incubators assist new start-up businesses:

- prepare a business plan and undertake market research
- access high quality professional advice and services for commercialising intellectual property
- develop financial and managerial competencies
- establish links with venture capitalists, suppliers and other potential strategic partners, and
- with office space and services.



Task	Suggested activities
<p>1. Improve linkages between the science and technology sector and the state and local governments.</p>	<p>a) Organise regular briefings for the Minister, Tasmanian parliament and Agency Heads (e.g science meets government day).</p> <p>b) Maintain and further develop the partnership between the state government and the University of Tasmania.</p> <p>c) Identify the first point of contact in Government on science and technology issues.</p> <p>d) Improve linkages with local government and community to gain leverage from Federal funding opportunities.</p>
<p>2. Improve linkages between the science and technology sector and the Commonwealth government, science and technology related organisations, R&D corporations and in the international arena.</p>	<p>a) Pursue appropriate strategic partnerships.</p> <p>b) Facilitate a dialogue between the Tasmanian Science and Technology Council and the Federal Office of the Chief Scientist.</p> <p>c) Seek to increase Tasmanian public and private sector representation on national science and technology bodies, particularly by young and/or new scientists and technologists.</p> <p>d) Promote international networking including implementing grants for exchange visits.</p>

Strategy

1.2.2 To improve decision-making within the State Government on science and technology-related issues.

Task	Suggested activities
<p>1. Improve mechanisms for the provision of advice to government on science and technology-related issues.</p>	<p>a) Establish a Tasmanian Office of the Chief Scientist to act as a conduit between the science and technology sector and government, providing advice to government and facilitating implementation of <i>Tasmania's Science and Technology Policy</i> and the Science and Technology Industry Plan.</p> <p>b) Continue to support the Tasmanian Science and Technology Council.</p>



Objective:

1.3 Develop human resources for science and technology.

Strategy:

1.3.1 To strengthen science and technology education in schools and colleges.

Task	Suggested activities
Recruitment of teachers	
1. Improve the prospects of recruiting sufficient appropriately qualified science and technology teachers.	<ul style="list-style-type: none"> a) Attract new science teachers through an expanded and more efficiently tailored scholarship scheme. b) Encourage the State Government to provide financial incentives for science teachers who return to university to get science qualifications. c) Establish alternative pathways between science and technology and teaching. d) Encourage the Department of Education to prioritise science, maths and numeracy professional learning so that new, existing and re-entering teachers are supported.
Training and career development	
2. Facilitate ongoing professional development in contemporary science and technology.	<ul style="list-style-type: none"> a) Encourage the University of Tasmania and other organisations to offer ongoing professional development for teachers (such as short courses or units). b) Support programs linking teachers to current science and technology related research projects. c) Support travelling scholarships for science and technology teachers by providing funding for travel and accommodation for teachers to attend university courses, and by establishing one scholarship per year via the science teachers association. d) Support science and technology teachers' associations to consider the possibility of funding an eminent speaker for annual conferences. e) Encourage mechanisms that support the involvement of science and technology teaching staff in professional association activities, annual conferences and professional learning.



<p>3. Improve linkages between secondary and VET education and industry.</p>	<p>a) Encourage year 11 and 12 students and teachers to take up structured workplace learning/research positions with innovative high-tech firms.</p> <p>b) Expand UTAS School of Agricultural Science's Industry Placement Program to other areas of science and technology and enable teachers to participate in a similar scheme.</p>
<p>Rewards</p>	
<p>4. Improve the recognition and rewards for high achievement in science and technology and science and technology education.</p>	<p>a) Establish a science/technology educator prize of \$10,000 per year.</p> <p>b) Provide support, through the State Government and professional associations, for students selected to attend national and international science and technology events and competitions.</p>
<p>Promotion / raising awareness</p>	
<p>5. Promote science and technology education.</p>	<p>a) Promote science and technology education and online learning opportunities, including University products, in Australian and overseas markets.</p> <p>b) Support an Innovative industry/school/community science education scheme using the New Norfolk project⁵ as the model.</p>
<p>Curriculum and Industry</p>	
<p>6. Ensure science and technology curricula is innovative and relevant to industry needs.</p>	<p>a) Identify industry needs in relation to science and technology curricula.</p> <p>b) Incorporate industry case studies into science and technology curricula.</p>
<p>Infrastructure</p>	
<p>7. Facilitate the provision of appropriate infrastructure for science and technology education in schools and public facilities (eg museums).</p>	<p>a) Identify the infrastructure needs of schools and public facilities.</p>

⁵ The New Norfolk pilot project was a science awareness raising project focused on the issues associated with wood burning. The project was initiated by the Australian Science Teachers Association (ASTA) and New Norfolk High School. Assistance was also provided by the ASTA, the Derwent Valley Council, the Derwent Valley Gazette, Norske-Skog, Airwatch, the New Norfolk Police Station, E-magine, National Science Week and members of the community.



Strategy:

1.3.2 To strengthen the skills base for the science and technology sector.

Task	Suggested activities
1. Facilitate investment in VET in key areas identified as being of strategic value to the state.	a) Set up a working group with other industry councils.
2. Improve the integration of education and training across the VET, university and industry sectors.	a) Ensure industry input into VET and higher education planning.

Strategy:

1.3.3 To improve career paths for those with science and technology research and development capabilities.

Task	Suggested activities
1. Improve career paths in the research sector.	<p>a) Increase the number of State Government-sponsored post-doctoral positions in areas of strategic importance to the state.</p> <p>b) Encourage partnerships between research organisations and Commonwealth Government and/or industry to increase the number of post-doctoral positions in Tasmania.</p> <p>c) Encourage the expansion of long-term research positions for younger scientists to progress into.</p>
2. Facilitate broad based professional development opportunities for scientists and technologists, including skills in entrepreneurship, management and marketing, encouraging remuneration for acquisition of such skills.	a) Improve awareness of, and participation in, training in these areas, including experience overseas where appropriate ⁶ .
3. Investigate options for encouraging career paths that are able to span the private and public sectors.	a) Encourage the State Government and university to recognise work in different sectors to be credited in the career development of employees.

⁶ For example, the Department of Economic Development provides the Commercialisation Ready Program for Tasmanian businesses that aim to commercialise innovation. Participants complete eight intensive one day workshops enabling businesses to develop strategy in intellectual property, marketing, financial forecasting and investment attraction. The Department also coordinates the I-cubed network for innovators, investors and intermediaries, bringing together these disparate groups with the aim of developing opportunities for Tasmanian innovators and entrepreneurs in investment attraction, strategic alliances and consortia formation.



Goal 2: To develop Tasmanian industry using science and technology.

Objective :

2.1 Encourage commercialisation of science and technology research and development in Tasmania.

Strategy:

2.1.1 To identify opportunities and mechanisms for commercialisation of R&D.

Task	Suggested activities
1. Encourage government to work with business to identify commercial possibilities and facilitate commercialisation ⁷ .	<p>a) Encourage the State Government to work with Tasmanian-based research institutions to identify opportunities and facilitate their commercialisation locally.</p> <p>b) Facilitate early market assessment of proposals through funded programs delivered to SMEs.</p> <p>c) Increase the availability of and access to program funded market research.</p> <p>d) Implement a structured and supportive process to commercialise R&D, including facilitating access to lawyers, accountants and other business professionals.</p> <p>e) Facilitate the development of teams with complementary skills to effect commercialisation.</p>

Strategy:

2.1.2 To encourage the commercialisation and diffusion of R&D among Tasmanian businesses.

Task	Suggested Activities
1. Improve technology development and diffusion in Tasmanian micro and small businesses	<p>a) Investigate measures to encourage diffusion in micro and small businesses.</p> <p>b) Investigate ways in which the State Government and AusIndustry can work together to encourage applications to relevant Federal funding programs.</p>

⁷ For example, State government programs such as the Tasmanian Innovations Program and Commonwealth government programs such as Commercialising Emerging Technology (COMET) and R&D Start provide funding for research, development and commercialisation.



Objective:

2.2 Ensure Tasmanian industry benefits from science and technology research, development and extension activities.

Strategy:

2.2.1 To encourage growth across all industry sectors through science and technology-related innovation.

Task	Suggested Activities
1. Improve the uptake and diffusion of science and technology related innovation.	a) Investigate possibilities for strengthening the research and development activities of major private companies in Tasmania. b) Investigate possible mechanisms to support small to medium enterprises and government agencies to conduct or source research and development aimed at improving competitiveness.

Strategy:

2.2.2 To encourage wider industry benefit from State Government research and development activities.

Task	Suggested Activities
1. Encourage more effective mechanisms for technology transfer and commercialisation of intellectual property from the public sector.	a) Devise a process for improved communication between the private and public sectors on possible opportunities for technology transfer and commercialisation.
2. Facilitate an intellectual property regime that encourages innovation, developing practical steps for the commercialisation of intellectual property developed in the public sector.	a) While legislation governing intellectual property rights is within Federal jurisdiction, the Tasmanian Government could play an enhanced role by: <ul style="list-style-type: none"> • promoting IP Australia and the protection for developers • highlighting and educating on the importance of intellectual property rights to public and private sector organisations.



Strategy:

2.2.3 To improve the alignment of research and development activity to industry needs.

Task	Suggested activities
1. Increase the level of services and support provided to research bodies by Tasmanian businesses.	<p>a) Use the TPN⁸ model as a means to leverage increased benefits from other areas of research activity undertaken in Tasmania.</p> <p>b) Encourage Tasmanian businesses to provide field trials for research work.</p>
2. Increase the interaction between the private sector and research organisations.	a) Create a mechanism for Tasmanian businesses to provide ongoing advice to research bodies on industry research priorities (possibly based on the ARAC ⁹ model).

Strategy:

2.2.4 To enhance and build on Tasmania's perceived environmental advantages using science and technology to increase public understanding and to facilitate appropriate sustainable and competitive industries.

⁸ Tasmanian Polar Network: A number of organisations in Tasmania are involved in Antarctic activities. Many of these, world leaders in their fields, have come together as the Tasmanian Polar Network. The TPN offers a unique forum where organisations can share expertise and their efforts to find the best ways to fulfil all types of Antarctic-related needs. The TPN has over fifty members, including private businesses and government organisations. The TPN is the first point of contact for Antarctic expertise in any field.

⁹ ARAC: Agricultural Research Advisory Committees. The Vegetable and Potatoes Agricultural Research and Advisory Committees, are industry driven bodies and members include growers, packer/exporters, processors and agricultural consultants. They have been established to identify research priorities and review research proposals for the Tasmanian vegetable and potato industries. Their four main functions are to:

- collect, collate and prioritise industry issues from a wide range of industry participants
- advise R&D providers of pursue priorities and call for concept development proposals
- review concept development proposals and notify R&D providers and external funding bodies of projects endorsed as meeting industry priorities
- provide a forum for consultation and liaison between the vegetable industry and research, development and extension providers.



Task	Suggested activities
<p>1. Use science and technology to add economic value to Tasmania's responsible 'clean green' image and the industries that rely on this image.</p>	<p>a) Implement a comprehensive quality assurance process, linked with an accreditation and market-branding scheme to back up 'eco-labelling'.</p> <p>b) Implement a mechanism which will facilitate the more accurate estimation of costs and benefits of alternative environmentally sensitive choices for economic development.</p> <p>c) Promote Tasmania as a 'scientifically responsible' state.</p> <p>d) Develop linkages between the Tasmanian Science and Technology Council, the Food Industry Council of Tasmania and the Brand Tasmania Council.</p>
<p>2. Assist Tasmanian industry to grow, with consideration to environmental harmony.</p>	<p>a) Ensure that scientific background reasoning is included in briefing, education and training on environmentally/ecologically sensitive issues.</p> <p>b) Ensure that long-term ecological viability and natural diversity of Tasmanian flora and fauna are considered in the growth of Tasmanian science and technology.</p> <p>c) Support projects and innovation that assist with the management and sustainable development of Tasmania's natural resources.</p> <p>d) Expand the scope of local government area <i>State of the Environment</i> reports.</p> <p>e) Improve the coordination of results of existing environmental research activity in Tasmania.</p> <p>f) Support the coordination of programs for public and private lands which seek continuing improvements in natural resource management through science and technology.</p>
<p>3. Improve community perceptions and understanding of environmental issues relating to economic development.</p>	<p>a) Assist industry in publicising issues, successes and responsible decision-making.</p> <p>b) Facilitate community visits and briefings by scientists and technologists.</p>

Objective:

- 2.3 Promote and facilitate an innovative, entrepreneurial culture that is socially, economically and environmentally sustainable.



Strategy:

2.3.1 To increase the level of innovation in management.

Task	Suggested activities
1. Assist businesses, particularly SMEs, to plan and implement innovative technologies and processes and to manage in an innovative way.	a) Develop case studies and opportunities for managers to gain exposure to science and technology related innovative practices (this could include informal gatherings). b) Facilitate management training that encourages an innovative culture. c) Establish a program for SMEs to improve human resource management, particularly in specialist science and technology areas.

Strategy:

2.3.2 To encourage collaboration across industries to stimulate strategic alliances between firms, institutions and individuals.

Task	Suggested activities
1. Improve the intra and inter-industry linkages of the science and technology sector.	a) Develop productive linkages between the Tasmanian Science and Technology Council and the Tasmanian Innovations Advisory Board. b) Develop linkages between the Tasmanian Science and Technology Council and other industry councils and appropriate private sector organisations. c) Develop effective linkages between science and technology and other industry sectors. d) Compile an R&D directory. e) Organise a state Science and Technology conference involving industry and research players. f) Encourage professional development for researchers to communicate with industry. g) Organise networking breakfasts involving appropriate keynote speakers. h) Promote the concept of industry-funded positions within science and technology research organisations (such as the case of Woolworths sponsoring a chair at UTAS).



<p>2. Facilitate the development of mechanisms for cross industry collaboration.</p>	<p>a) Encourage the continuation and extension of the activities of the Department of Economic Development's Innovation, Science and Technology Unit to include a focus on scientific research and technology.</p> <p>b) Facilitate and assist alliances and promote their potential to industry.</p> <p>c) Continue to support the activities of industry councils and associated industry networking events.</p>
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Strategy:

2.3.3 To promote the development of entrepreneurial skills at all levels of education.

Task	Suggested activities
<p>1. Encourage the integration of entrepreneurial skill development at all levels of education and ensure there is adequate professional development for teachers in this area.</p>	<p>a) Canvas teachers for their support and involvement.</p> <p>b) Continue and enhance statewide competitions for student inventors/innovators.</p> <p>c) Design and deliver professional innovation workshops at secondary education level.</p> <p>d) Continue to support a degree program in entrepreneurship and innovation, linking to the ELC¹⁰ program at college level where appropriate.</p>

¹⁰ ELC: Enterprise Learning Centre: A partnership between Economic Development's Innovation, Science and Technology Unit (IST) and Launceston College established an Enterprise Learning Centre program embedding entrepreneurial studies in the senior secondary curriculum. A successful pilot program at Launceston College was completed in 2001.

The fundamental principle behind the ELC concept is the alignment of educational reform with economic development. In 2002, the ELC program was established in other senior secondary colleges. The IST unit is currently evaluating the outcomes from the program.



Goal 3: To raise community and industry awareness of, and involvement in, science and technology.

Objective:

3.1 Increase the profile and perceived relevance of science and technology.

Strategy:

3.1.1 To establish effective mechanisms for communicating with industry and the community on science and technology.

Task	Suggested activities
1. Develop a science and technology communication strategy.	a) Identify target markets to which science and technology messages need to be communicated. b) Determine approach for each target market
2. Improve the use of community events to showcase and publicise industry, science and technology achievements.	a) Maintain a coherent State Government approach to National Science Week in Tasmania. b) Initiate a Tasmanian Science Festival. c) Use public events such as Agfest, community shows etc. to showcase Tasmanian science and technology excellence. d) Encourage the State Government to hold open days in sections of the State Government conducting research. e) Encourage the State Government to sponsor involvement in national events such as the Science Olympiads. f) Ensure that there is an up-to-date web-based inventory of science and technology based community activities.



<p>3. Develop new or enhance existing science and technology awareness centres and promote their links with industry.</p>	<p>a) Support the creation or development of interactive science and technology awareness centres like the Queen Vic centre in Launceston, the Imaginarium Science Centre in Devonport, and the interstate Scienceworks and Questacon centres.</p> <p>b) Support community interpretation/education centres.</p> <p>c) Initiate a mobile science and technology display centre with strong links to industry.</p> <p>d) Improve awareness of science and technology centres and enhance the linkages between centres, industry and teachers.</p> <p>e) Encourage science and technology awareness centres to form and take advantage of linkages with tourism.</p>
<p>4. Promote through the media, existing and potential research strengths and their linkage with business, innovation, economic growth and community benefits.</p>	<p>a) Build up a portfolio of Tasmanian science and technology success stories. Use a website to provide public access to this material.</p> <p>b) Establish websites to increase Tasmania's visibility in areas of strategic importance eg. like the Antarctic Division's website has in relation to Antarctic science.</p> <p>c) Encourage the State Government to be a trendsetter in the use of science and technology to improve efficiency and effectiveness.</p>
<p>5. Increase the number and variety of local science and technology-related awards and competitions.</p>	<p>a) Investigate further opportunities for professional organisations to be brought together to offer joint scholarships, awards etc.</p> <p>b) Encourage the establishment of a suite of Premier's Prizes for most outstanding science and technology students at the primary and secondary level.</p>
<p>6. Show that there are career paths for science and technology based professions in Tasmania.</p>	<p>a) Take the positive message about science and technology to primary and secondary school students.</p> <p>b) Encourage industry to showcase opportunities for science and technology careers.</p> <p>c) Publicise, particularly to young people, the careers and successes of people working in science and technology.</p>



<p>7. Raise the profile of Tasmanian-based researchers and their work.</p>	<p>a) Create a clearinghouse for science and technology for jobs and funding stories etc..</p> <p>b) Increase the profile of Tasmanian and other researchers by encouraging public forums and media exposure on science and technology.</p> <p>c) Ensure Tasmanians are nominated for local, national and international science and technology awards.</p>
<p>8. Facilitate informed debate into science and technology policy development.</p>	<p>a) Ensure there are clear avenues for public input, including public forums, as an integral part of science and technology policy development processes and conduct such forums regularly.</p> <p>b) Encourage effective communication of science and technology information, informing government policy and programs.</p>



Implementation

Implementation of this plan will require cooperation and collaboration within and between the science and technology sector, wider industry and government.

The council's leadership role will include prioritising issues and recommending responsibility for action in addition to securing high level commitment to the plan and implementation processes.

The implementation process will include the communication of priorities and consultation on responsibilities for action. Periodic evaluation of achievements will also take account of any changes in the external environment.

Membership

Tasmanian Science and Technology Council (April 2003)

Professor Madeleine Ball

Head of School of Human Life Sciences
University of Tasmania
Locked Bag 1320
LAUNCESTON TAS 7248
Ph: 6324 3229
Madeleine.Ball@utas.edu.au

Professor Robert Clark

Director
Tasmanian Institute of Agricultural
Research
University of Tasmania
GPO Box 252-54
HOBART TAS 7001
Ph: 6226 2620
Rob.Clarke@utas.tas.edu.au

Mr John Brodie

Honorary Research Associate
School of Engineering
University of Tasmania
PO Box 232
SANDY BAY TAS 7005
Ph: 6226 2128
John.Brodie@utas.edu.au

Professor Andrew Glenn

Pro-Vice Chancellor (Research)
University of Tasmania
GPO Box 252-51
HOBART TAS 7001
Ph: 6226 2419
Andrew.Glenn@utas.edu.au

Professor Nigel Forteach

Managing Director
Omlas Pty Ltd
27 George Road
TREVALLYN TAS 7250
Ph: 6331 7905
Forteach@tassie.net.au

Ms Meriloy Horsham

Coordinator – Curriculum Support
Office for Curriculum, Leadership and
Learning
Department of Education
GPO Box 199
HOBART TAS 7001
Ph: 6233 7170
meriloy.horsham@education.tas.gov.au

Mr Mike Gow (Deputy Chair)

Executive Director, Chairman of the
Board and Co-owner
Serve-Ag Pty Ltd
PO Box 690
DEVONPORT TAS 7310
Ph: 6427 0800
Mgow@serve-ag.com.au

Mr Grey Leggett

Australian Hop Marketers
313 Macquarie Street
HOBART TAS 7000
Ph: 6220 8802
Grey@ahm.com.au



Mr Pheroze Jungalwalla
Manager, Research and Development
Tassal Ltd
GPO Box 1645
HOBART TAS 7310
Ph: 6211 9611
Jungalwalla@tassal.com.au

Dr Angus McEwan
Senior Science Adviser – Oceanography
Australian Bureau of Meteorology
GPO Box 727
HOBART TAS 7001
Ph: 6221 2090
a.mcewan@bom.com.au

Mrs Sandra Phythian
General Manager
Netcraft Pty Ltd
PO Box 99
MARGATE TAS 7054
Ph: 6267 1111
Manager@ncraft.com.au

Professor Michael Stoddart
ANARE Chief Scientist
Australian Antarctic Division
Channel Highway
KINGSTON TAS 7050
Ph: 6232 3209
Michael.stoddart@aad.gov.au

Mrs Jess Tyler
SciBiz Media
GPO Box 622
HOBART TAS 7001
Ph: 6229 8375
Jtyler@tassie.net.au

Dr Neil Otway
Chief Executive Officer/Principal
Australian Maritime College
PO Box 986
LAUNCESTON TAS 7250
Ph: 6335 4700
N.Otway@corp.amc.edu.au

Dr Jane Sargison
Research Fellow
School of Engineering
University of Tasmania
GPO Box 262-65
HOBART TAS 7001
Ph: 6226 7665
Jane.Sargison@utas.edu.au

Mr Phillip Tompson
Chief Executive
Novaris Pty Ltd
72 Browns Road
KINGSTON TAS 7050
Ph: 6229 7233
Phil@novaris.com.au

Dr John Volkman
Chief Research Scientist
CSIRO Marine Research Division
GPO Box 1538
HOBART TAS 7001
Ph: 6232 5281
John.Volkman@csiro.au

Dr Brian Yates (Chair)
Senior Lecturer
School of Chemistry
University of Tasmania
GPO Box 252-75
HOBART TAS 7001
Ph: 6226 2167
Brian.Yates@utas.edu.au



Appendices

List of acronyms

ARAC	Agricultural Research Advisory Committees
BITS	Building on IT Strengths program
ELC	Enterprise Learning Centres
HECS	Higher Education Contribution Scheme
R&D	Research and Development
SME	Small and medium-sized enterprise
TAFI	Tasmanian Aquaculture and Fisheries Institute
TIAR	Tasmanian Institute of Agricultural Research
TPN	Tasmanian Polar Network
UTAS	University of Tasmania
VET	Vocational Education and Training

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