

*Australian Innovation Research Centre*

*Toward an*

# Innovation Strategy for Tasmania

AIRC internal working paper December 2007

# Background

- The AIRC was established in 2006 by the University of Tasmania to advance research and learning on innovation.
- The centre focuses on the links between innovation, productivity and economic growth in Tasmania, nationally and internationally.
- Major funding and support
  - University of Tasmania
  - Tasmanian Innovations Advisory Board (TIAB)
  - Tasmania's Department of Economic Development
  - founding sponsors ResMed Foundation, Newcrest Mining Ltd
  - fee for service projects

# Innovation and Tasmania

- **Why innovation matters**
  - Innovation is critical to advancing productivity and productivity underpins economic prosperity
- **An innovation strategy for Tasmania must**
  - fit Tasmania's characteristics and needs
  - leverage Tasmania's existing and potential strengths
  - target the best prospects for growth

# An innovation strategy for Tasmania

- **Objective**
  - Exercise **sufficient** impact to **noticibly** enhance productivity in Tasmania
- **Steps to an innovation strategy**
  - 1 Identify high-impact sectors
  - 2 Analyse factors that have most influence on innovation in those sectors
  - 3 Formulate policy and instruments to advance high-impact innovation-based productivity
- **AIRC role and contribution**
  - academic and intellectual leadership, governance
  - Tasmanian Innovation Census
  - AIRC initiated research – eg sector impacts study, food industry study
  - PhD program
  - extensive high-level networks, access to knowledge and partners

# High-impact sectors

- Objective
  - Identify sectors with the most potential to improve economic performance through innovation-based productivity
- What characterises a high-impact sector?
  - Sectors with sufficient weight in the economy to be important and with existing revealed (or potential) competitive advantage
- Tests for high-impact
  - generate wealth, increased market capitalisation
  - grown faster than average
  - exports more than average
  - generates high wage jobs
  - manifests substantial productivity growth
  - introduces new products or processes faster than other comparable sectors

# High-impact sectors (2)

- **Method**
  - Scan across economy and industry to identify high-impact sectors
  - Drill down into the characteristics and potential of each high-impact candidate
  - Look for other sectors with high-impact potential
    - new/emerging sectors with little track record (eg Striped trumpeter)
    - sectors with latent/unfulfilled potential - eg wine \$20m after 20 yrs vs salmon \$220m+
    - where the future outlook might favour poor past performers - eg potential turnarounds
- **ABS data availability and quality**
  - Not collected
    - eg limited indicators and data across all industries below 2 digit for Tasmania
  - Collected but not published
    - eg half the 4 digit Mfg codes confidential for Tasmania
  - Unreliable
    - eg some estimates are highly variable due to small sample size
  - Comparability over time
    - changes in scope and methodology for some time series
- **AIRC's Tasmanian Innovation Census**
  - Firms > 5 employees (approaching 60% response rate)
- **Other non-ABS sources**
  - Industry bodies and government agencies - Dairy Industry Australia, Abare, DPIW etc

# Some very early results...

- Early results of a high level scan
- Based on some (not all) tests for high-impact
- Note limitations of data
- Scan is only one method to identify high-impact
- Note past performance is not always a barrier to, or guarantee of, future high-impact

## Growth sectors

(ie employment growth **faster than** Australia)

<b>Sector n=213 ANZSIC 3 digit</b>	<b>Growth Tas* %</b>	<b>Growth Aus* %</b>	<b>Tas Share Aus Empl % 2006-07</b>	<b>Tas Empl 2007</b>
Forestry and logging	57.9	11.6	28.9	3,300
Aquaculture	263.3	-3.9	23.1	800
Dairy farming	90.0	-10.3	7.2	1,500
Dairy product mfg	55.7	-13.0	8.0	1,300
Technical services	126.4	101.7	1.6	2,700
Ind'l mach/equip	122.2	-22.4	3.6	1,800
Other transport equip	>500.0	-30.8	2.2	700
Computer services	>1000.0	562.8	0.9	1,300
Other business services	233.0	210.2	1.8	6100
Accommodation	73.2	64.8	3.3	3,600
Other chemicals	470.0	2.3	1.5	500

• Avg 3 yrs to 1987-88 and Avg 3 yrs to 2006-07

6291.0.55.003 - Labour Force, Australia, Detailed, Quarterly, Aug 2007 (Note Tas ests often much less reliable than Aus due to small sample size)

# Large/important sectors

Volume growth (often with significant labour productivity)

<b>Sector n=213 ANZSIC 3 digit</b>	<b>Tas Share Aus Empl %</b>	<b>Tas Empl 2007</b>	<b>Comment</b>
Basic non-ferrous metal products	7.6	2,300	Resilience - 2 largest firms grown volumes (but with less labour)
Pulp, paper paperboard	4.7	1,000	Resilience - 2 largest firms grown volumes (but with less labour)
Sawmilling, timber dress	6.7	1,100	Empl level stable since 1985
Vegetable processing	10.3	1,000	Resilience - 2 largest firms grown volumes (but with less labour)
Other food processing (seafood, confectionary)	5.0	1,400	2 largest firms both increased volumes since mid 1990s
Metal ore mining	3.5	1,600	Volume of copper, gold, iron ore pellets increased 1997 to 2006
Services to Agriculture	3.7	1,000	Growth > Aus from 2006
Call/contact centres	n/av	5,500 <sup>^</sup>	<sup>^</sup> DED review in 2006. Up from ~3,000 in 1999
Tourism*	2.5	12,500	* Accom, café/rest, pubs/clubs. Visitor spend 3.8% of Aust 2005-06

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## New/emerging sectors and sectors with latent potential

- Striped Trumpeter
- Rock lobster aquaculture
- Abalone aquaculture
- Wine
  - Tas produces ~2.3m litres wine (0.2% of 1.1b ltrs Aus) with ~\$20m ex winery value (0.43% of \$4.6b Aus value)
  - After around the same length of time (20 years) Tas produces 19,000 t Atlantic Salmon (1.6% of 1.2m **global** tonnes) and \$220m+ in ex processing value (HOGG, 2006)
- Stonefruit
- Other??

# Next steps

- More detailed study of high-impact sectors
  - results of Tasmania's Innovation Census
  - sector case studies
- Compare patterns of innovation in high-impact sectors with
  - across industry benchmarks
  - low-impact sectors
- Dialogue with industry and key stakeholders on
  - analysis
  - indicative findings
  - area/s of focus