Hi Tech Precinct – Business Case

Regional Development Australia

Final Report
August 2016
Contents

Executive summary ........................................................................................................ 6
What problems is the business case addressing? ......................................................... 6
What benefits is the business case aiming to deliver? .................................................. 6
What does the precinct look like? ................................................................................. 6
What are the economic and financial outcomes? ......................................................... 7
Was is the recommended governance model? .............................................................. 8
Are there any other recommendations? ........................................................................ 8

1. Problem definition .................................................................................................... 9
1.1 Background ............................................................................................................. 9
1.2 Problem analysis .................................................................................................... 9
1.3 Timing considerations ............................................................................................. 16
1.4 Consideration of the broader context .................................................................... 16

2. Benefits ..................................................................................................................... 17
2.1 Benefits to be delivered .......................................................................................... 17
2.2 Importance of the benefits to government .............................................................. 18
2.3 Evidence of benefit delivery .................................................................................. 21
2.4 Interdependencies .................................................................................................. 25

3. Strategic response .................................................................................................... 26
3.1 Method and criteria .................................................................................................. 26
3.2 Strategic options analysis ....................................................................................... 26
3.3 Recommended strategic option .............................................................................. 26

4. Project options analysis ............................................................................................ 27
4.1 Project options considered ..................................................................................... 27
4.2 Stakeholder identification and consultation .......................................................... 29
4.3 Land use and site description ............................................................................... 31
4.4 Overall evaluation of socio-economic and environmental impacts .......... 34

5. Recommended solution ............................................................................................. 36
5.1 Details of recommended solution ........................................................................... 36
5.2 Vision and principles ............................................................................................ 38
5.3 Key industries ........................................................................................................ 39
5.4 Market analysis ...................................................................................................... 40
5.5 Services ................................................................................................................ 40
5.6 Initial opportunities .............................................................................................. 41
5.7 Concept drawings and infrastructure .................................................................. 43
5.8 Development scenarios ......................................................................................... 47

6. Financial and economic analysis .............................................................................. 51
6.1 Financial analysis ................................................................................................... 51
6.2 Economic impacts .................................................................................................. 56

7. Risk and Governance .............................................................................................. 60
7.1 Risk analysis .......................................................................................................... 60
7.2 Management and governance model ................................................................... 61

8. Implementation and recommendations .................................................................... 65
8.1 Recommendations .................................................................................................. 65
8.2 Delivery .................................................................................................................. 67

References .................................................................................................................... 68

Appendix A: Investment logic map .......................................................................... 70

Appendix B: Review of economic data and regional economic performance ........ 71
Introduction .................................................................................................................. 71
Regional analysis ......................................................................................................... 71
Competitiveness analysis ........................................................................................... 73

Appendix C: Literature review .................................................................................... 88
Benefits from innovation precincts ............................................................................. 88
Open innovation networks .......................................................................................... 89
Best practice principles ........................................................................................................... 90

Appendix D: Detailed PASCAL analysis .............................................................................. 92
Enhancing regional infrastructure .......................................................................................... 92
Human capital development .................................................................................................. 92
Business development .......................................................................................................... 93
Promoting engagement ......................................................................................................... 94
Interactive Learning and Social Capital Development processes ..................................... 94
Community and cultural development ................................................................................... 95
Promoting sustainability ....................................................................................................... 95

Appendix E: Stakeholder list ............................................................................................... 97
Appendix F: Concept diagrams ............................................................................................ 98

Appendix G: Financial data ................................................................................................ 101
Scenario A ............................................................................................................................ 101
Scenario B ............................................................................................................................ 104
Scenario C ............................................................................................................................ 107

Appendix H: Economic analysis and NPV ........................................................................ 110
Scenario A ............................................................................................................................ 110
Scenario B ............................................................................................................................ 111
Scenario C ............................................................................................................................ 112
List of tables
Table 1 - Framework to assess the region’s primary challenges and opportunities ................................................................. 10
Table 2 - Government benefit analysis ................................................................. 21
Table 3 - Key stakeholder issues ........................................................................... 31
Table 4 - Focus industries .................................................................................... 40
Table 5 - Initial markets ....................................................................................... 40
Table 6 - Summary of economic outcomes ........................................................... 58
Table 7 - Risk analysis ......................................................................................... 61
Table 8 - Best practice checklist .......................................................................... 64
Table 9 - FTEs ........................................................................................................ 110
Table 10 - Output ($m) ......................................................................................... 110
Table 11 - Value added ($m) ................................................................................ 110
Table 12 - FTEs ...................................................................................................... 111
Table 13 - Output ($m) ......................................................................................... 112
Table 14 - Value added ($m) ................................................................................ 112
Table 15 - FTEs ...................................................................................................... 113
Table 16 - Output ($m) ......................................................................................... 113
Table 17 - Value added ($m) ................................................................................ 113

List of figures
Figure 1 - Forces impacting regional Australia ....................................................... 9
Figure 2 - Gippsland competitive analysis ............................................................. 11
Figure 3 - Regional research and innovation map ................................................. 12
Figure 4 - Morwell Tech School’s reach ................................................................. 16
Figure 5 - NBN Roll out and coverage ................................................................. 18
Figure 6 - Sketch plan showing existing assets at the precinct ......................... 28
Figure 7 - Stakeholder map .................................................................................. 29
Figure 8 - Site ownership .................................................................................... 32
Figure 9 - Site zoning ......................................................................................... 32
Figure 10 - Flood and inundation overlays .......................................................... 33
Figure 11 - Cultural heritage area ....................................................................... 34
Figure 12 - Alternative development pathways .................................................. 36
Figure 13 - Systems approach ............................................................................ 37
Figure 14 - The education and innovation precinct model .................................. 37
Figure 15 - Staging and evolution of elements to achieve the long term impact .. 38
Figure 16 - Vision and principles ........................................................................ 38
Figure 17: User Profile, 2016 ............................................................................. 44
Figure 18: User Profile, 2046 ............................................................................ 44
Figure 19 - Stage 1 Concept Masterplan ............................................................... 45
Figure 20 - Iconic and transparent landmark building visible across Lake Kernot .. 46
Figure 21 - Inside spaces for collaboration connect to the landscape ............... 46
Figure 22 - Breakup of areas for a landmark building ........................................ 47
Figure 23 - Scenario B development ................................................................. 48
Figure 24 - Scenario C development ................................................................. 49
Figure 25 - Working capital analysis ................................................................. 52
Figure 26 - Profitability analysis ........................................................................ 52
Figure 27 - Balance sheet analysis ..................................................................... 53
Figure 28: Scenario B – Working capital analysis .............................................. 53
Figure 29: Scenario B – Profitability analysis ..................................................... 54
Figure 30: Scenario B – Balance sheet analysis ............................................... 54
Figure 31: Scenario C - Working capital analysis ........................................... 55
Figure 32: Scenario C – Profitability analysis.................................................. 55
Figure 33: Scenario C – Balance sheet analysis.............................................. 56
Figure 34 – Economic benefits ...................................................................... 57
Figure 35 – Conceptual model......................................................................... 57
Figure 36 – Gantt leading to completion of Stage 1 ....................................... 67
Figure 37 – DRAFT timeline of immediate year ahead ................................. 67
Figure 38 – NPV Analysis ............................................................................. 111
Figure 39 – NPV Analysis............................................................................. 112
Figure 40 – NPV Analysis ............................................................................. 114
**Report statement**

The Hi Tech Precinct – Business Case has been prepared specifically for Regional Development Australia as the client.

The Hi Tech Precinct – Business Case and its contents are not to be referred to, quoted or used by any party in any statement or application, other than by Regional Development Australia without written approval from SED.

The information contained in this document has been gained from anecdotal evidence and research. It has been prepared in good faith and in conjunction with Regional Development Australia. Neither SED, nor its servants, consultants, agents or staff shall be responsible in any way whatsoever to any person in respect to the report, including errors or omission therein, however caused.

**Contact details**

**Ballarat**

19 Albert St, Ballarat Vic 3350

PO Box 2378 BMC, Ballarat Vic 3354

T: +61 3 5331 2565

E: admin@sedadvisory.com

W: www.sedadvisory.com

**Document version**

<table>
<thead>
<tr>
<th>Report Stage</th>
<th>Authors</th>
<th>Date</th>
<th>Reviewers</th>
<th>Review Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 0.1</td>
<td>Tony Irish</td>
<td>30 May 2016</td>
<td>Client</td>
<td>June 2016</td>
</tr>
<tr>
<td>Version 0.2</td>
<td>Tony Irish</td>
<td>June 2016</td>
<td>Elliot Cartledge (eds)</td>
<td>June 2016</td>
</tr>
<tr>
<td>Version 0.3</td>
<td>Tony Irish</td>
<td>Aug 2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Version 0.4</td>
<td>Tony Irish</td>
<td>October 2016</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Executive summary

What problems is the business case addressing?
This business case establishes a comprehensive evidence based for the establishment of an education and innovation precinct in Gippsland. The plan has been developed in response to a range of issues facing the Gippsland region that are multi-faced and complex including:

- A range of global forces are negatively impacting on the region, requiring many industries to change business models or undertake transition
- The region has major competitiveness shortcomings that can be addressed through strategic interventions
- Workforce and skill issues impeding growth and development
- The region has high levels of social disadvantage
- While innovation is being conducted in the region, it is disparate and lacks coordination
- The region does not have the capabilities to support economic growth and industry transition

What benefits is the business case aiming to deliver?
The benefits that will arise from the successful establishment and operation of the precinct include:

- Increase the adoption of technology
- Support industry growth, transition and employment growth
- Build the region's social capital
- Improve connectivity across the region
- Enhance and strengthen existing networks (industry, social, economic, innovation, educational)
- Develop skills and enhance the absorptive capacity of the region

The project aligns to a range of State Government Policy and the benefit creation, as well as the project's ability to address the issues identified are supported through both literature and case studies. The problems and benefits are analysed through a detailed regional competitiveness analysis, literature review and PASCAL analysis.

What does the precinct look like?
This business case develops a vision for the precinct and outlines a detailed roadmap for its development. The business case considers a range of options and includes a detailed analysis of a range of locational issues including site suitability, land use, planning, land capability and infrastructures.

The co-location of the innovation park with the Morwell Technical School is identified as critical – this allows a model to be developed that is collaborative and builds pathways from secondary school, through vocational training, to tertiary and research. Critically, industry is involved at each of these stages. It is the end to end nature of the solution and the precinct's operations from skills based training to industry development research, on the one site that is most exciting and unique. Given the range of development issues facing the region, this end to end approach is not only suitable, but is tailored to the specific needs of the region.

The model has been developed with extensive consultation across Gippsland, across multiple industries and all major stakeholder groups. The business case includes a potential conceptual layout for the site using 3 alternative development scenarios. While these are not definitive designs they do provide evidence that the site is both suitable and capable of supporting the precinct.

The precinct would support a range of industries and services. Critical industries identified include:

- Health
- Food and fibre
- Mechatronics
New energy

Services offered on the site include:
- Education and training;
- Research
- Incubation and start up
- Business tenancy
- Innovation and new product development

Initial opportunities identified for the site include:

1. **Commercial tenancy** - Federation University has been in discussions with potential tenants from the health and food and fibre sectors. In addition, a major international technology company has expressed interest in establishing a data centre on the site.

2. **Research** - AGL/ Monash University have expressed an interest in undertaking battery / new energy research from site. RMIT have expressed interest in establishing the Gippsland Resource and Research Centre at the site. Federation University has opportunities to locate bioorganic fertiliser research and also build on its mechatronics expertise from the site.

3. **Entrepreneurial and start up** - Support for newly formed firms, or for employees who wish to start new businesses will be offered from the site in traditional incubator type environments

**What are the economic and financial outcomes?**

Modelling was undertaken for 3 scenarios:

- **Scenario A** – base case, with initial development of 2,500m2 in years 1 – 3 and then a further 2,500m2 development which comes on stream in 2027 (total floorspace - 5,000m2)

- **Scenario B** – likely case, scenario A plus major tenant coming on the park requiring a further 1,500m2 of space in 2021 (total floorspace – 6,500m2)

- **Scenario C** – optimistic case, scenario B plus Federation University expansion requiring a further 1,500m2 of space in 2024 (total floorspace – 8,000m2)

Under each scenario the capital costs are to be funded in the form of capital grants, with $15m being required for the initial facility of 2,500m2.

The financial modelling shows that the precinct is financially sound provided it is developed in line with expectations. The precinct will require working capital while it is being established of up to $680k. This funding will be required for a minimum of 5 years. Federation University would provide these funds.

Federation University is ideally suited to support the financial development of the site as it has a balance sheet of sufficient size to manage the site's working capital and related requirements (such as plant and equipment acquisition).

There is a correlation between the speed of site activation and financial return, therefore the capability of Federation University to activate the site expediently is highly regarded and reduces financial risk while increasing the speed at which economic returns, in the form of employment creation, are generated.

Although ongoing development will require continued support over the longer term from key stakeholders including the State Government and Latrobe City Council the modelling shows that under all scenarios the facility can produce sufficient cashflow for Federation University to be able to reinvest in the facility. This reduces exposures for Government and reduces the risk that the precinct’s expansion cannot be financially supported. The modelling demonstrates that Federation University would be able to make co-investments into the precinct to support its growth and long term development.

The economic modelling showed that economic impact from the precinct's development would be as follows:
<table>
<thead>
<tr>
<th>Scenario</th>
<th>Scenario A</th>
<th>Scenario B</th>
<th>Scenario C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floorspace (m²)</td>
<td>5,000</td>
<td>6,500</td>
<td>8,000</td>
</tr>
<tr>
<td>NPV ($m) @ 7.5%</td>
<td>350</td>
<td>469</td>
<td>471</td>
</tr>
<tr>
<td>BCR</td>
<td>14.5</td>
<td>15.6</td>
<td>13.2</td>
</tr>
<tr>
<td>Construction FTEs</td>
<td>80</td>
<td>99</td>
<td>119</td>
</tr>
<tr>
<td>Ongoing FTEs</td>
<td>218</td>
<td>278</td>
<td>286</td>
</tr>
<tr>
<td>Valued added Construction ($m)</td>
<td>9.8</td>
<td>12.1</td>
<td>14.6</td>
</tr>
<tr>
<td>Value added Ongoing ($m)</td>
<td>28.7</td>
<td>36.9</td>
<td>37.4</td>
</tr>
<tr>
<td>Output Construction ($m)</td>
<td>37.1</td>
<td>45.8</td>
<td>55.3</td>
</tr>
<tr>
<td>Output Ongoing ($m)</td>
<td>53.3</td>
<td>68.4</td>
<td>69.7</td>
</tr>
</tbody>
</table>

There will be also other economic benefits such as improvements to the regional innovation system, increased regional attractiveness, increased efficiency of infrastructure and improved economic networks.

Over the long term (20 years), using the Ballarat Technology Park as a precedent, annual economic value add could increase to around $141m (2016 $) and FTEs created to 1,280 because of the Gippsland Education and Innovation Precinct being established and successfully developed.

**Was is the recommended governance model?**

A detailed risk analysis and best practice principle checklist has been developed and included in the business case. There are two governance models offered to carry the project forward. Both seek to balance the needs of Federation University which carries most the financial and operational risk, and has the demonstrated capability to manage the project’s development and expansion with the needs of Federation Training, who currently manage large parts of the land on which the precinct would be developed. A collaborative approach is recommended that provides Federation University with land security, and Federation Training with security through recognition of existing rights and future site development rights.

A Precinct Advisory Committee (PAC) is to be established to provide strategic advice on the sites development. Membership of the PAC is to be from industry, Federation University, Federation Training, Technical School, community representation and have an independent chair.

The PAC should immediately establish a charter and have carriage of the next stages of the precinct’s development which are also detailed in the business case.

**Are there any other recommendations?**

The business case includes 10 other recommendations:

1. Precinct master planning approach to land development should be adopted
2. Land and planning issues resolved as a priority
3. Include precinct in Latrobe ‘City Deal’ as part of a long-term funding sources and investment strategy
4. Develop terms of reference and charter for Precinct Advisory Committee
5. Long-term train station and inter-regional connectivity
6. Conference and accommodation
7. Consider a programme for start-ups spawned from coal fired energy production
8. Develop a strong brand strategy
9. Infrastructure Victoria – strategy and submissions
10. Federal Government funding opportunities
1. Problem definition

1.1 Background

Issues such as economic restructuring, climate change, commodity prices and changing demographic profiles are affecting communities across the Gippsland region. These issues are driving significant change in the region’s economy, particularly due to its strong reliance on natural resources. Furthermore, the growing and ageing population presents challenges for housing, support services, health and accessible transportation.

In the medium-to-long term, Gippsland is expected to experience workforce challenges as the local economy transitions away from traditional industries. By way of example, the shift away from industries such as brown coal power generation and paper manufacturing, both significant employers in the region, will continue to impact demand for traditional trades. Furthermore, the region’s ageing population, lower than average educational aspiration and skills shortages in key occupations, will continue to present challenges to local workforce capability and capacity.

Addressing these issues will be key to ensuring the region’s industries increase productivity and remain competitive. This requires the need to develop education opportunities that support the industries and workforce of the future.

1.2 Problem analysis

The issues facing the Gippsland region are multifaceted and complex. Like all regions, a range of complex and interwoven forces from within and outside the region is impacting on industry and society. This section provides details and context to the primary problems this business case seeks to address.

1.2.1 Gippsland is being impacted by global forces

The Gippsland region is subject to a range of forces that impact in quite significant ways, requiring strategies that progress the region’s economic and social development. The following model, developed by the Regional Australia Institute, helps articulate the challenges and also highlights the opportunities facing Gippsland.

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A changing global economy and supply chains constantly requiring new ways to compete</td>
<td>The region is home to industries that compete internationally, including agriculture, forestry, manufacturing and energy production. These industries are subject to international pressures requiring local responses along their supply chains.</td>
</tr>
</tbody>
</table>
### Table 1 – Framework to assess the region's primary challenges and opportunities

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing tensions between resource use and conservation</td>
<td>The region is renowned for its energy production, notably from its coal reserves. Loy Yang is responsible for around 30% of Victoria's power and Hazelwood around 15%, both are expected to close. The energy and related sectors the dominant source of employment in Gippsland. These industries are under increasing cost and community pressures, requiring them to recalibrate operations. Without response, these changes will dramatically impact on the employment and industry growth across Gippsland. New industries can be developed that have greater social licence to operate. Experience in older industries can be leveraged into new, but related ones. For example, regional knowledge and skills pertaining to energy transmission, storage and distribution can support new forms of energy generation.</td>
</tr>
<tr>
<td>Rapidly evolving technology reducing the tyranny of distance but increasing the speed of change</td>
<td>The impact of technologies to reduce the influence of distance increases competition within the region for many goods and services, as these can be now be supplied from outside the region. Contrary to this challenge is that knowledge, particularly tacit knowledge, is sticky to place. Developing a region with a basis in expertise and knowledge difficult to acquire presents regions with a unique opportunity to develop innovative solutions and competitive advantages that allow them to compete internationally. Knowledge can be delivered through new technologies, allowing customers to be accessed quickly and at low cost.</td>
</tr>
<tr>
<td>Unknown factors that cannot be predicted but</td>
<td>Regions have always been subject to shocks; economic, social and environmental. Gippsland has endured fire, Regions that are adaptive, networked and have dense social capital are able to take advantage of changes and opportunities</td>
</tr>
<tr>
<td>must be anticipated and managed</td>
<td>floods and droughts. These are part of the fabric of the region. The high level of economic dependence on natural capital from mining to agriculture means the region is more susceptible to these challenges than most others are.</td>
</tr>
<tr>
<td>Ageing population and more mobile demographics and changing lifestyles are reshaping communities</td>
<td>Ageing of the population and the movement of younger people to cities presents challenges across a range of issues from workforce, skills and the sustainability of community activities. The movement of some people, into the region can challenge established communities and social dynamics, as well as create capacity issues for some services.</td>
</tr>
</tbody>
</table>

### 1.2.2 The competitiveness of the region has clear shortcomings that can be addressed through strategic interventions

Detailed documentation and analysis of the region's economic and social performance is included in Appendix B. This is summarised in Figure 2 below.

The figure is based on the Regional Australia Institute Competitive Index and plots the Gippsland RDA against national rankings (max 60) based on ten thematic areas that contribute to a region's competitiveness.
The figures show that Gippsland's competitiveness ranks poorly against other regions (mean score = 30) in the areas of innovation, business sophistication and technological readiness. The region ranked the second highest in the country in terms of its access and stock of natural resources.

The primary concern with this result is that innovation, business sophistication and technological readiness are critical to industry transition and growth through innovation. Human capital, where the region ranks at mean levels, is also an important factor in supporting innovation and economic growth.

To provide the platform for long-term industry development and economic growth, the region needs to focus on improving these elements.

Another analysis (Appendix B), based on the Gippsland region, shows underperformance against the rest of Victoria in the following areas:

- People with a Certificate III or above, or employed in a skilled occupation by sub-state region (%)
- New business entry rate by sub-state region (%)
- People aged 15-24 years who are earning or learning by sub-state region (%)
- Labour Force Participation Rate
- Ratio of household income for low income households compared to median income households

These metrics indicate the issues underpinning this project, namely lower educational levels, engagement and a generally lower socio economic structure than the rest of Victoria. The analysis also shows that the region has lower raw scores and in many of the metrics is also not improving (or improving at the same rate) as the rest of Victoria. This means the gap between Gippsland and other regions in these key areas is growing; that is the problem is getting worse.

These analyses highlight the problem facing Gippsland; like all other regions, how does it respond to the broader changing economic and social forces?

The critical difference for Gippsland, due to its high dependence on the use of its natural capital to produce economic and social wellbeing, is that the need to develop responses is more acute than for many other regions. This is because much of the industry that utilises the natural resources and capital has to recalibrate due to global forces and broader community demands. This presents significant risk to the region if left unaddressed.

The upside of this situation is that not only will economic challenges be overcome, economic and social opportunities will be created.
The development of a regional education and innovation precinct is part of the solution to overcoming the challenges facing the Gippsland region.

This business case details the broader issues and benefits and presents a model for the development of such a precinct, tailored to the specific needs and demands of the Gippsland region. It articulates how many of the challenges can be met and the opportunities pursued, to increase the economic and social wellbeing of the region's residents, current and future. The model put forward is based on the principles of open innovation networks, focuses on the Gippsland region, has strong partner support, industry engagement and is backed by a robust governance, business and commercial model.

1.2.3  Innovation is being currently undertaken across the region

Figure 3 maps some of the research and innovation activity currently being undertaken or proposed in the Latrobe Valley region. The map shows a number of research institutions (i.e., Federation University, Monash, RMIT) and government departments (i.e., Department of Economic Development, Jobs, Transport and Resources) either active or pursuing opportunities in the region.

Despite this map not capturing all of the research and innovation activity across Gippsland, it demonstrates that such activity is currently occurring at a number of levels. This activity appears to cluster around Morwell and involves stakeholders based outside the region.

This assessment provides two important implications for the business case, which in turn form the basis for the strategic responses presented in Part 3.

First, the precinct presents an opportunity to centralise this research and innovation activity at one location. At present, this activity appears to occur in isolation. As the literature suggests (See Appendix C), superior innovation performance does not happen in isolation, it requires the creation of a local...
system of organisations that are networked together. This leads to the second important implication.

Co-locating businesses and research institutions at the precinct should be complemented by the development of a regional innovation network. A regional innovation network can be both virtual (e.g., an online portal) and physical (e.g., connecting to existing infrastructure throughout Gippsland). The goals of establishing a regional innovation network are to: (1) connect with research and innovation activity in other parts of Gippsland; (2) engage a broader network of stakeholders (inside and outside Gippsland); and (3) support the flow of knowledge throughout the region. It should be noted that a similar physical and virtually networked model will be utilised by the Morwell Tech School to engage with schools throughout the region.

1.2.4 Workforce and skills issues are impeding growth and development

Gippsland’s human capital levels, measured at national levels, highlight some areas that the Gippsland Education and Innovation Precinct can address:

- University qualification levels of 13.9% compared to 22.8% nationally
- Early school leaver rates of 61.4% compared to national averages of 46.1%
- Secondary school attainment levels of 29.5% compared to national averages of 37.4%
- The percentage of the workforce employed as managers and professionals is 28.2% compared to national averages of 32.3%

The precinct, with its end-to-end approach to education, skills development, industry integration and development, will positively impact in these areas. In this light, the precinct supports other initiatives to address skills and workforce related issues. The Gippsland region has recently completed a Workforce Development Plan as part of the State Government’s ‘Latrobe Valley Industry and Employment Roadmap’ program.

This plan aimed to ensure key regional industry sectors have access to an appropriately skilled workforce and remain competitive in the face of structural adjustment by addressing the challenge of capitalising on existing assets (both natural and human) to build thriving communities, supported by a diverse and strong economy.

The plan identified the critical industries within the region (i.e., Energy & Mining, Agribusiness Timber & Forestry, Health Aged Care & Community Services, Building & Construction, Advanced Manufacturing, Hospitality & Tourism and Retail) and established actions in response to key future workforce and capability requirements.

The report identified a number of cross-industry gaps, which include:

- Limited access to a permanent, part-time workforce;
- Low work productivity from some young workers;
- Current training does not sufficiently develop technical and general employability skills, such as customer service and teamwork;
- Recruitment of middle to senior level staff can be difficult;
- Increased rate of subcontracting, reducing learning and development opportunities;
- Ageing workforce and succession planning issues;
- The workforce can improve its cultural competency as it seeks to engage with Asia;
- Skills associated with collaboration, innovation and entrepreneurship need to be strengthened; and
- Management skill-sets need to be addressed/improved.

To address these gaps, a series of cross-industry and industry specific actions have been proposed in the plan. A number of these actions align directly with the vision for the precinct and would integrate into its operations. For example, the plan proposes to address cross-industry gaps by extending the Broadening Horizons program and expanding work placements; the precinct provides an opportunity to centralise industry’s engagement with young people and focus on specific workforce needs. This is in line with other industry-specific actions,
including the development of education and training pathways in the health industry, aligning training with workforce demand, and developing industry networks in advanced manufacturing. The plan also recommends that the precinct has a focus on food and fibre innovation, which has been adopted in the precinct's planning. Furthermore, the plan proposes to develop a dynamic picture of skills needs in the energy and mining sector. This is in line with a workforce research project proposed by RMIT University and provides the precinct with an opportunity to house a variety of the region's research activity.

1.2.5 The region's ability to support economic growth and industry transition is questionable

While there are some pockets of innovative activity being undertaken across the region, there are worrying trends that highlight the need for a concerted and focussed effort to improve the region's innovative capability.

The region's innovative capability is low compared to other Australian regions. Of the 60 RDAs, Gippsland ranks 54th (in the bottom 10%). The number of people employed in science and technology is 12.4%, compared to national averages of 25.9%, the percentage of research and development managers is less than a tenth of the national average, patents created in the region is a third of national averages and the rate of start-up business, at 10.3%, is less than the national average of 13.5%.

The degree to which the region has embraced technology and its ability to respond to technological change are also well below national averages. Employment in technology related industries is around half the national average (4.1% of the workforce) and employment in ICT and electronics industries equates to just two-fifths of the national average, which is 2.2% of the workforce. These industries are important, as they facilitate other industries adopting technology and, partly due to this, are expected to grow and become mainstays in the future. While the low levels present opportunities for growth, they also show the region has a low stock of capability for technology change.

When added to skills and human capital related issues, the results raise concerns not just about the region's ability to innovate, but also to facilitate industry growth and development.

1.2.6 Gippsland region has high levels of social disadvantage

The Gippsland population is expected to grow by 25.4% over the next 15 years (See Appendix I). The region's unemployment rate (currently 7.1%) is also expected to increase in the short-to-medium term as the economy transitions away from key employing industries, such as paper manufacturing and brown coal power generation. Compared to national averages the region already has:

- High long-term unemployment (5.7% of people receiving unemployment benefits for more than six months, compared to 4% national average);
- High levels of welfare support (32.9% of the population, compared to 23.1% national average);
- High rates of early school leavers (people who did not complete year 12 or equivalent) of 61.4% compared to national averages of 46.1%;
- Low levels of the population attending tertiary education or equivalent (2.7% compared to national average of 6.5%);
- Have to travel further to attend primary school and secondary school than national averages.

These issues are at risk of worsening with the expected changes to industry structure over the medium term, impacting the long-term livability of the Gippsland region and further entrenching these structural social issues.
The changing nature of the brown coal sector

Gippsland produces approximately 85% of Victoria’s electricity. The majority of this energy is produced at four coal fired power stations, namely Hazelwood, Loy Yang A and B and Yallourn. These power stations, and the brown coal mines that supply them, are owned and managed by ENGIE, AGL and Energy Australia. Throughout the history of brown coal mining in Victoria, brown coal has been used principally for use as the fuel supply for electricity generation. Other uses, including briquettes and char, have only occupied a small sliver in the marketplace.

The Victorian government, in association with existing and potential industry players, has supported major investment in advancing the use of brown coal for both low emissions power generation and the development of a stream of derivative products. The use of inexpensive, high moisture brown coal for electricity production has underpinned the manufacturing strength of Victoria, but it is accompanied by high CO2 emissions.

The marketplace and community has, therefore, begun a transition away from power generation from coal towards more renewable sources of energy. This transition has created considerable uncertainty for the local industry and unrest around the implications for the workforce, communities and regional economy.

For example, although ENGIE has an operating licence until 2031 for the Hazelwood coalmine, the company recently stated that will close this site in 2017. Further, AGL’s Greenhouse Gas Policy provides the company with a pathway to decarbonisation of its electricity generation by 2050. The policy states that all existing coal-fired power stations in its portfolio will be closed by 2050.

However, the use of brown coal for both low emissions electricity generation and for derivative product development is expected to continue, but will be driven by energy economics and the need for energy security in a policy framework of certainty. The strategic horizon for these projects is unlikely to offer any significant jobs benefit in the immediate term.

This period of economic transition will have a significant impact on Gippsland’s workforce, communities and economy. Certain areas of the workforce (particularly trades) are already experiencing these impacts. The State Government, and other stakeholders, should therefore be addressing these issues by investing in initiatives that support education and innovation with a sense of immediacy.

1.2.7 Morwell Tech School development presents a unique opportunity

The State Government’s Tech Schools initiative is part of the ‘Education State’ agenda where ten centres are to be built throughout the state. The Tech School in Gippsland is expected to be built in Morwell at the Education and Innovation precinct.

It is planned that the Tech School will be operational by January 2018. Once operational, the projected total number of secondary students who will either attend physically or are connected virtually per annum is 7,150. The breakdown of this figure includes:

- 4,900 students from Latrobe schools will physically attend;
- 20% (900) from Baw Baw, South Gippsland and Wellington LGA’s will physically attend; and
- 20% (1,350) will connect virtually from other schools in Gippsland.

Figure 4 below shows the schools in Latrobe City Council and the adjoining LGAs. It also maps the proposed physical reach of the Tech School, broadly aligning with the attendance figures above. The precinct will address similar connectivity issues and should adopt a similar approach to connecting virtually with stakeholders in the more remote areas of Gippsland.
The vision for the Morwell Tech School is to develop an integrated approach to improving educational pathways, aspiration and industry skills in the Latrobe Valley. The strong industrial base of the Gippsland economy requires that the precinct include vocational skills and education as a key element of the region’s innovation system.

The Tech School is, therefore, an important component of the precinct, as it will provide a link between industry and skills and a line of sight from vocational education through to tertiary education opportunities and industry research.

It will utilise leading edge technology, discovery learning, design principles and innovation to equip students with the knowledge, skills and dispositions that will prepare them for successful futures. It will also connect directly and virtually with industry to create opportunities for real world learning.

Co-locating the innovation precinct with the Tech School will enable the benefits of the Tech School to reach further than if it operates in isolation. The co-location will leverage the Tech School and allow benefits to be provided to a wider section of the region's population.

1.3 Timing considerations

Given the expected timeframe to implement a project of this scale (18-24 months), progress on the proposed project should be achieved as a matter of priority, to address these socio-economic and demographic challenges.

The precinct will be a substantial infrastructure development and should be viewed as having the capacity to deliver long-term economic and social benefits to the region.

1.4 Consideration of the broader context

This project will have significant broader implications than the immediate Gippsland region. Federation University has strong linkages to other regions through Victoria, as well as nationally and internationally. The industries that are in Gippsland and are the subject of this business case are competing globally. This precinct will need to be able to provide international standard services that will aid firms located in the site to compete internationally. It is envisaged research carried out on the site will support international initiatives and have global reach.
2. Benefits

2.1 Benefits to be delivered

2.1.1 Skills development and absorptive capacity of the region

Improve the skills profile, rate of skill attainment and education level of the Gippsland Region.

The absorptive capacity of the region will be enhanced through the development of skills and improvement in the educational attainment levels of students. Absorptive capacity refers to the ability of a region to assimilate and manage knowledge to improve innovation performance and competitive advantage. Firms’ ability to absorb new knowledge and manage it, is one of the key drivers of regional innovation and, therefore, regional economic growth. Enhancing Gippsland’s absorptive capacity and, in doing so, building a critical platform on which innovation is undertaken, is one of the key outcomes sought from this project.

A primary objective of the precinct is to develop the skills of the region. The Gippsland Workforce Development Strategy (2016) highlights that the region is deficient in skills across many industries. This project will link industry and educators through the Tech School and tertiary education system and develop critical skills across the region. Industry engagement in the development of the programs is critical in understanding the specific skills and development needs of the region’s industry, now and in the future. This precinct will encourage cross-sectoral engagement and provide pathways for students to industry and higher education.

To develop new industry and adopt new technologies, regions need to be able to understand the need to invest and develop new skills and technologies and, also, how to integrate them into their businesses, thereby supporting innovation efforts.

2.1.2 Economic development including industry growth and transition

Foster the economic development of the region through improvement in human capital and the rate and access to new technologies, processes and techniques and support the transition of existing and growth of new industry through skill development, research, entrepreneurship and innovation.

As much of the industry currently operating across Gippsland uses natural resources as a primary input, and several of these industries are moving away from using natural capital to alternative models of development, the region must adapt to accommodate these shifts. The precinct will support transition by aiding industry to replace natural capital with the alternatives of human and technological capital. This will ensure growth of the region can continue. Skills, education, training, research and technology adoption are key to developing the human and technological capital of the region, replacing and helping to use Gippsland’s natural capital more efficiently. Opportunities for employment will be created by assisting firms develop new business models and approaches.

The precinct will be a key driver of economic development for the region, supporting not just new employment opportunities but also pathways to higher income as industries in the region recalibrate towards increasing sophistication. The research undertaken at the precinct will aid the continuation of growth for industry in Gippsland and assist some industries to develop along alternative pathways. This combination of drivers will generate economic activity in its own right, as greater value add is created throughout the region.

The development of support and services industries such as health and education that help meet the changing demographics and needs of the region’s population will be fostered at the precinct.
2.1.3 Building social capital

_Build bridging capital throughout the region to increase the level and sharing of knowledge, information and ideas._

Bridging and bonding represent the two forms of social capital. Bonding refers to working in a place to improve social outcomes. Bridging capital is more expansive; it seeks to improve social capital by bringing people together. For this precinct, with its ambitions towards open innovation and delivering region-wide benefits, the focus is towards developing bridging capital across Gippsland. This will support innovation, enhance connectivity and communications and bring more remote parts of the region closer to others. Developing the ‘pipelines’ across the region will facilitate the development of innovation networks and allow knowledge and information to flow more readily and without impediment throughout the region.

2.1.4 Connectivity

_Facilitate the communication and interaction of industry, education and government through the construction of a broader innovation network._

The Gippsland region is diverse in geography, activity and skills. The region has a wide range of activities already underway that demonstrate the innovative potential of the region. A key role of the precinct will be to support the region's innovation network and system through linking the various nodes and elements together and providing a place where different participants can meet and innovate.

2.1.5 Leadership

_The precinct will be known for providing economic leadership and cultivate leadership skills through education, research and skills development._

To develop further develop innovative capabilities the region will need leadership. An important role for the precinct will be to act as a centre of leadership on innovation and development throughout the Gippsland region.

2.1.6 Technology adoption

_Increase the amount of technology expenditure and rate of technology adoption throughout the region._

The adoption of new technology is generally regarded as critically important to the economic growth of a region. Demonstrations, case studies and access to new technologies all serve to lift the adoption rate of new technologies in a region. The precinct will play a key role by providing a focal point for these activities to occur. A feature of the precinct will be the home to a pop-up innovation lab and annual innovation festival which will aim to showcase innovation and its benefits to the region, as well as drawing people to the precinct to utilise its core and unique assets.

The model being proposed, also takes advantage of the NBN roll out which is also underway. Figure 5 shows the roll out progress of the fixed wireless and fixed line NBN. Other areas will have satellite coverage.

![Figure 5 - NBN Roll out and coverage](image)

The region's major business centres are well serviced by NBN coverage.

2.2 Importance of the benefits to government

The importance of this project too local, regional, state and federal levels of government is demonstrated by the high level of policy alignment this project has to current State Government policy positions. The key policies and their alignment are shown in Table 2.
<table>
<thead>
<tr>
<th>Title</th>
<th>Overview</th>
<th>Alignment to the project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Innovation statement (Federal)</strong></td>
<td>The Federal Government has disclosed its overall ambitions for the types of innovation it envisions for the long-term well-being of Australia. It states that industry research collaboration is key for its innovation policy so that the national economy can develop more profitable, sustainable and export-focused industries. The government has a strong focus towards research and universities. There is a range of funding opportunities.</td>
<td>Project aligns with research stream and industry / research based partnerships and collaborations.</td>
</tr>
<tr>
<td><strong>Industry and Innovation Fund (Federal)</strong></td>
<td>This is an offer for a total sum of $504.5 million to establish up to ten industry-led industry innovation precincts. Over five years, the funding offers $4 million per year for precincts in areas of competitive advantage and $1.5 million for precincts in areas of emerging opportunities. Their overall outcomes include building quality and industrial scale and to increase profitability for participating Australian firms.</td>
<td>This project would align with the innovation precinct's program.</td>
</tr>
<tr>
<td><strong>Education (State)</strong></td>
<td>The State Government is aiming to make Victoria the Education State by building an education system that produces excellence and reduces the impact of disadvantage. The $747 million Education State funding will allow schools to provide additional programs and resources to meet the needs of their students. Specific goals of the policy include: encouraging lifelong learning; developing happy, healthy and resilient kids; breaking the link (i.e.</td>
<td>Although this funding is directed at schools, the project's alignment with Morwell Tech School will help develop better educational pathways from secondary school into higher and tertiary levels of education.</td>
</tr>
</tbody>
</table>
| **Skills First**                           | Skills First offers real training for real jobs, through:  
- High quality training that students and industry can trust, aligned to industry and workforce needs.  
- A real voice for industry in training.  
- Funding for high needs learners who need additional support to engage with and succeed in education and training.  
- Access to targeted, relevant training for students in regional areas. | Project includes Federation TAFE as key component                                                          |
<p>| <strong>DEDJTR Strategic Plan (2015) (State)</strong>   | Strategic Plan for the Department of Economic Development, Jobs, Transport and Resources - published July, 2015. The document outlines the department's mission to 'lift the living standards and wellbeing of all Victorians by sustainably growing Victoria's economy and employment and by working with the private and public sectors to foster innovation, creativity, productivity, investment and trade'. | Plan supports strengthening collaborations between the research base and business to establish Victoria as an innovative economy. Plan emphasises the importance of education in ensuring more Victorians can have lives of opportunity, contribution and financial security. |
| <strong>Regional Jobs and Infrastructure Fund (State)</strong> | The Regional Jobs and Infrastructure Fund (RJIF) provides $500m for regional development projects. The fund includes three programs aimed at growing jobs, building infrastructure and strengthening communities in regional Victoria. | The objectives of this project align with all three RJIF programs. There is focus on high-growth sectors, including medical and new energy technology; food and fibre; transport, defence |</p>
<table>
<thead>
<tr>
<th>Title</th>
<th>Overview</th>
<th>Alignment to the project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Industries (State)</td>
<td>The Future Industries Fund provides $200m to support high-growth sectors that have potential for extraordinary economic growth - to create jobs and attract investment in Victoria.</td>
<td>Identifies future industry sectors (i.e. medical technologies and pharmaceuticals, new energy technologies, food and fibre) that will provide focus for the precinct.</td>
</tr>
<tr>
<td>Gippsland Regional Strategic Plan 2015-2020 (Regional)</td>
<td>Plan articulates a vision for Gippsland and provides a long-term strategic plan for improving economic, social and environmental outcomes.</td>
<td>Project aligns with the education and community wellbeing strategic theme's objective to boost levels of education attainment.</td>
</tr>
<tr>
<td>RDA Gippsland Business Plan (Regional)</td>
<td>Business plan for Regional Development Australia Gippsland, outlining: (1) its role in providing regional leadership to ensure sustainable economic and social growth; and (2) its strategic priorities.</td>
<td>Plan focuses on improving educational and health outcomes in the Gippsland region.</td>
</tr>
<tr>
<td>Committee for Gippsland Strategic Plan (2015-17) (Regional)</td>
<td>Strategic plan for Committee for Gippsland outlining advocacy priorities for industry growth and policy.</td>
<td>Plan outlines the following priority areas which align with the precinct: Optimising employment and economic outcomes in energy and resources</td>
</tr>
<tr>
<td>Gippsland Workforce Development Plan (draft) (Regional)</td>
<td>This (draft) plan aims to understand Gippsland's workforce skill gaps now and into the future and address future industry workforce needs.</td>
<td>Plan outlines the trajectory of Gippsland industries and the implications for training and employment. Growth industries include 'health, aged care and community services' and 'agriculture, timber and forestry'. Draft industry-specific actions include using the Innovation Precinct as an agribusiness hub.</td>
</tr>
<tr>
<td>Latrobe City Council</td>
<td>This (draft) strategy aims to pursue to position Latrobe City as the</td>
<td>Strategy looks to leverage local engineering capability</td>
</tr>
</tbody>
</table>
Table 2 – Government benefit analysis

2.3 Evidence of benefit delivery
To provide evidence of the benefits of innovation precincts benefit delivery two approaches have been taken.

The first examines the relevant literature on the parks, which contains information as to the evidence of benefits from technology parks. The second is to examine specific case studies which clearly demonstrate the benefits that can arise from innovation precincts.

2.3.1 Literature review summary
A literature review was conducted to examine contemporary thinking on innovation systems and networks, the role of precincts and best practice principles within the context of the strategic options being examined.

The literature holds that:
- Superior innovation performance does not occur in isolation; it requires the creation of a local system of firms that are networked together. Precincts such as the open innovation model proposed play a critical role in supporting this networking function.
- Over time, a precinct will attract firms, technology and people, then will support the accumulation of regional knowledge and capital.
- Attracting a key (‘anchor’) tenant produces benefits for other firms that co-locate in the precinct, particularly smaller firms. Key tenants can enhance and strengthen the regional innovation system, specifically supporting the synergies and interdependencies between government, universities and the business community.
- The concept of open innovation builds on the principle of building a network of firms and a system of regional plumbing through which ideas and knowledge can travel. This happens through encouraging companies to focus on developing ideas externally, creating paths for ideas to go to market in addition to more traditional and closed innovation and commercialisation pathways.
- The role of governance is also important as policy can facilitate connectivity and interaction within the network, as well as aid in the attraction of firms and people.
- In addition to having sound governance and clearly defined vision and principles, best practice literature and case study analysis has also articulated that successful precincts should:
  - Be linked into education and research institutions;
  - Promote a culture of innovation and competitiveness;
  - Have long-term vision and commitment from stakeholders (including government);
  - Secure an ‘anchor’ tenant to support precinct growth and sustainability; and
  - Develop an eco-system linked to value added services (e.g. business services).

2.3.2 Case study analysis
This section reviews examples of successfully developed precincts around the world. The analysis also provides a dissection on the impact each precinct has
had on the respective region’s economy (i.e. job creation, population growth, investment, etc.). Learnings and implications will be drawn from the cases when developing the business case.

**Case study 1 - Ballarat Technology Park (BTP), Ballarat, Victoria**

Overview of the precinct

- Largest regional technology park in Australia
- Opened in 1995 on a 29-hectare site adjacent to Federation University's Mount Helen campus
- Investment $20m (between 2002 - 2009) with around 25,000 sqm
- $180m pa of economic value added
- 74% increase in bachelor degrees between 2001 - 2011
- Currently, there are more than 1,400 employees across 30 businesses located at the BTP, including IBM, State Revenue Office, Emergency Services Telecommunications Authority, Berry Street, Concentrix and Primary Health Care
- A dynamic, supportive environment has been established where technology driven businesses can thrive and prosper
- Enterprises can access skilled graduates through Federation University, as well as link into applied research knowledge
- 66% of regional university students stay in the region to work and live

Key success factors

- The BTP secured a globally recognised anchor tenant (i.e. IBM) early in its inception. This assisted in building the park’s brand and increasing the level of interest from other technology businesses
- The BTP was established with a long-term vision for success
- The BTP secured a long-term commitment from government, decentralising the State Revenue Office at the park
- There is good alignment between Federation University and the BTP, providing research knowledge and qualified graduates (i.e. creation of education pathways)

- Developed earn as you learn models - 4-year undergraduate degree developed specifically for IBM: Bachelor of IT (Professional Practice)

**Case study 2 - Advanced Manufacturing Research Centre, the University of Sheffield (AMRC), Sheffield, UK**

Overview of the precinct

- In the 1970s, Sheffield experienced a period of economic transition resulting is high unemployment and population decline. In the 1990s the government developed an economic strategy which included working with Sheffield's universities to develop the commercial potential of the city's knowledge base and capitalise for growth of new science related clusters
- The AMRC was established in 2001 in collaboration with University of Sheffield and the aerospace giant, Boeing
- The mission was to develop a world class community for research, design, manufacturing and studying in an interactive way to make productive use of technology
- University of Sheffield's training centre is based at the AMRC and offers advanced apprenticeship and degree-level training for companies in the advanced manufacturing sectors
- The AMRC contributed £3 billion to the regional economy in 2011 and 12% of employment share
- Reinvestment is occurring with commitment for a new 1.3 million square metre site. This is expected to create a further 1800 new jobs and contribute £72.4 million to the local economy
- The population in the Sheffield region has been increasing since 2001. Part of this growth can be attributed to the AMRC's success

Key success factors

- There is strong alignment between research conducted by the University of Sheffield and industry. The presence of institutional infrastructure is integral to the success of a successful cluster
● The university has had a long-standing focus on filling vital skills gaps to ensure it is meeting the needs of industry and creating new knowledge in the field of manufacturing.

● The AMRC Training Centre has engaged well with young people, accommodating people from the age of 16 through apprenticeships.

● Development of a national network of partnerships with other technology and manufacturing research centres has enabled AMRC to tap into the latest in manufacturing excellence.

Case study 3 - Research Triangle Park (RTP), Durham, Raleigh and Chapel Hill, North Carolina

Overview of the precinct

● The RTP was founded as a response to North Carolina's socio-economic position in the post-war era and the state's heavy reliance on agriculture.

● The RTP started with its first company, Chemstrand, in 1960.

● Its mission is to foster potential history changing ideas by investing in the fabric of the community.

● It is anchored by three different universities: NC State University, Duke University and UNC-Chapel Hill.

● The RTP now comprises 200 companies and 50,000 employees.

● The RTP has developed and attracted a highly skilled workforce to the region, where 50% of employees are degree qualified, 3% of employees hold an associate degree (equivalent to TAFE) and 29% of employees hold a bachelor's.

● It is estimated that more than $296 million has been spent on research and development annually and has generated around 245 start-ups.

Key success factors

● The RTP originally had a number of factors working against it: the region was not a large metropolitan area; it lacked a strong base of high-tech manufacturing; had a low-skilled and relatively low-education level; and little tradition of entrepreneurial activity. Yet, its access to top universities, local leadership and timing tipped the balance in the RTP's favour.

● The RTP is now thinking in terms of decades, planning for upcoming generations and aiming for enrichment in education and careers so innovators can thrive.

● The RTP has contributed to the economy by developing 'new aged' expertise in micro-electronics, telecommunications, biotech, chemicals, pharmaceuticals and environmental sciences.

Case study 4 - Research Park at Urbana-Champaign (University of Illinois) Urbana-Champaign, Illinois

Overview of the precinct

● The Research Park opened in January 2001 as a technology hub for corporate research and development operations, and start-up companies.

● After three years, the research park featured 35 tenants, 702 employees and five buildings after receiving funding from the State of Illinois to build EnterpriseWorks, which is an incubator for early-stage technology firms, in 2003.

● The population of the metropolitan area for Urbana-Champaign is around 230,000 and is around 2.5 hours' drive to a metropolitan area (Chicago). This is like the proposed site in Gippsland in terms of the region's population size and proximity to metropolitan area.

● With IMPLAN multipliers used, it was believed in 2015 that the research park created 1618 direct jobs, 685 indirect jobs and 623 induced jobs.

● There are now over 1500 employees at the research park, with over 500 student interns and a total of 245 companies/tenants.

Key success factors

● The University of Illinois has incorporated the research park to promote economic development and innovation into its core.
mission. This alignment with the university has been an important key success factor
● The university proudly offers opportunities that are accustomed for them to progress and commercialise new technologies aligned with content that is taught, collaborating researchers with the university faculty and allowing students to experience internship opportunities that are highly regarded
● The research park has reflected modernisation in engineering and agriculture. It has also developed an effervescent, diverse community, producing technological advances which are highly influential

Case Study 5 - South East Melbourne Innovation Partnership South East Melbourne, Victoria

Overview of the precinct
● Visionary plans commenced in 2003 and it has already achieved a number of positive and significant changes to the community regarding business development, employment and population growth.
● The precinct is partnered with the State Government, Monash University, CSIRO, Australian Synchrotron and the local councils of the region
● The Synchrotron generates around $65 million to the economy per year and opened up around 2500 direct and indirect jobs

Key success factors
● The synchrotron is a significant piece of infrastructure which is used for the partnership's research purposes
● The SEMIP measure its success based on the participation of local businesses, interactions amongst businesses, researchers and the community and support by high-level professionals

Case Study 6 - Cambridge Science Park, Cambridge, UK

Overview of the precinct
● The Cambridge Science Park was founded by Trinity College in 1970 and is the oldest science park in the United Kingdom
● The Science Park is a concentration of science and technology related businesses (i.e. accountancy, bio-medical, pharmaceutical, technology, energy, environmental, etc.
● The Science Park has strong links with the nearby University of Cambridge
● The first company moved into the park in 1973 and there are now more than 100 companies in residence
● The Cambridge Science Park has resulted in many technology business spin-offs since the 1970s. This has become known as the ‘Cambridge Phenomenon’

Key success factors
● The Park has successfully leveraged the global reputation of the University of Cambridge
● The Science Park has supported collaboration by developing community spaces. For example, the park includes communal meeting places, conference facilities, gymnasium, childcare and a restaurant
● It has created linkages to the local business community, creating an ‘eco-system’ of support services
● It has multiple functions: research and development; business (incubation, venture capital, entrepreneurship), management (marketing) and infrastructure (land-use, business facilitates, housing)

Case study 7 - Commonwealth Center for Advanced Manufacturing (CCAM), Prince George County, Virginia

Overview of the precinct
● The CCAM was established in 2010 as an applied research centre in the manufacturing sector
● CCAM is collaborating with five of Virginia’s foremost academic institutions, four of which are universities and one a tech school
● CCAM has also partnered with key sectors in Virginia’s economy, including aerospace (i.e. Airbus, Aerojet Rocketdyne), automotive and machining
● Industry members pay an annual fee to be part of the collaborative research community

Key success factors

● Although a relatively new centre, acting as the ‘middleman’ between education institutions and industry appears to be critical to its success
● CCAM is not exclusively aligned to a particular university
● CCAM has been established as a not-for-profit, membership-based scientific, research and educational corporation. Its governance includes a Board of Directors, Industry Operations Board and Technical Advisory Council

2.4 Interdependencies

The success of the proposed development of the Gippsland Education and Innovation Precinct is dependent on:

● The ongoing strong relationship between stakeholders
● Integrating with local industry and industry networks such as Committee for Gippsland
● Working closely with State and Federal Government to aid in the integration of the precinct into the broader innovation and education systems
● Developing pathways through, into and out of the precinct
● Identifying opportunities for other research institutions to use the facilities and skill of the region to deliver research outcomes

● The success of the commercial/leasing strategy in securing new tenants
● Making appropriate international connections
● Engaging local government across the region, but particularly the Latrobe City Council to integrate the precinct into economic development activities
3. Strategic response

3.1 Method and criteria
The following strategic responses have been developed and assessed in consultation with the Project Control Group and key industry stakeholders (outlined in Appendix E). The strategies have been assessed on their ability to address the benefits outlined in Part 2.

3.2 Strategic options analysis
The following strategic options have been identified:

Centralisation of training, education and research
There are several training and education providers operating in the Gippsland region. There is also a breadth of research activity happening throughout the region, often managed by organisations and/or research institutions based outside Gippsland (see Figure 3). This research and innovation activity appears to happen in isolation.

Centralising this activity at an Education and Innovation Precinct will go some way to addressing the problems and benefits identified. These include:

- An Education and Innovation Precinct will support the region in building a reputation for being leaders in regional innovation;
- The co-location of industry and education providers will support the development of education pathways, build aspirations and improve knowledge transfer between stakeholders, leading to the development of programs focused on addressing the workforce needs of industry;
- Co-locating business will support the development of a regional innovation system; and
- Supporting local businesses to innovate and grow will result in economic development, new job creation and investment attraction.

Development of education and innovation network
In conjunction with strategic option one, it is recognised that centralising training, education and research in a region as large as Gippsland will limit connectivity from stakeholders in the more remote areas. Therefore, a broader education and innovation network is required to ensure industry can link into research and knowledge and utilise services provided at a physical location. The development of a network will also allow knowledge and information to flow more readily throughout the region.

This network can be both virtual (i.e. online portal) and/or physical (linking into existing infrastructure such as Trade Training Centres). A similar model will be utilised by the Morwell Tech School to engage with schools throughout the region.

This network can also link into research institutions and organisations based outside the region and even overseas. This would ensure the network has access to cutting edge research and thinking, i.e. linking into the food technology research conducted by CSIRO.

3.3 Recommended strategic option
The recommended strategic option is to:

In conjunction with Federation University and other key stakeholders, develop an innovation and learning precinct that provides pathways to the Morwell Tech School and links to industry and the broader economy. It will provide scope for research, attract skills, capital and people to the region, support start up and entrepreneurial businesses and foster the ongoing development of the broader Gippsland regional innovation system with specific emphasis on development of the existing and future innovation network that extends across the region.
4. Project options analysis

4.1 Project options considered

To develop an Education and Innovation Precinct that fits the specific requirements of the Gippsland Region two particular project options require consideration:

1. Precinct location; and
2. Particular development model to be applied

While these may seem to be mutually exclusive considerations, from a practical perspective both elements impact the other. For example, the suitability of a specific location influences the development model that may be applied.

While the options analysis treats these considerations as independent, the determination of the particular site reflected the symbiotic nature of the location and development model decisions.

4.1.1 Location and development approaches

A proposed site has been identified for the development of the precinct. The integration of the Tech School was a key consideration in site selection.

The Tech School site was selected for the school’s development as it provided the following benefits:\(^1\):

- Availability of space
- Control of land
- Potential for cross-sectoral partnerships
- Future expansion
- Cost of works new or refurbished

- Planning overlays
- Second consideration
- Access
- Site access for busses
- Proximity to allied invalid and relevant industries
- Inspiration of the physical environment

Other factors considered important for the precinct included:

- It has an existing educational facility on site, which is to be expanded to include building the new school;
- The co-location of the precinct with the Tech School is important as it provides the basis for the creation of pathways for students from secondary school to tertiary educations and to industry;
- Proximity to major roads and access points;
- Proximity to Morwell City CBD;
- Natural open space with Kernot Lake and gardens abutting the area;
- Is co-located with Kernot Hall, a major space which could be utilised for a range of activities, including conferences, trade shows and educational opportunities;
- Includes other buildings and infrastructure which can be used in the short and medium term for use as part of the Education and Innovation Precinct;
- Contains parking for 298 cars (nearmap aerial photograph, Jan 2016), more than sufficient to meet short-term demand;
- Major infrastructure is connected to the site, including water supply, stormwater drainage, electricity and telecommunications. Gas infrastructure is available off Princes Drive from the north;
- Is currently located on existing public transport routes;
- A train line abuts the precinct, offering the prospect of the development of a train station at the site and bringing significant

---

\(^1\) Gippsland (Morwell) Tech School, proposal and preliminary business case (unpublished), 2015
connectivity benefits to the site over the medium to longer terms; and
● Has sufficient space for development over the medium term.

Figure 6 – Sketch plan showing existing assets at the precinct

Alternative site options included the PowerWorks site and potential development within the CBD. The PowerWorks site satisfied many of the space, infrastructure and connectivity issues; however, its location away from the proposed Tech School would mean that developing pathways between technical, tertiary, educational institutions and industry would be considerably more difficult than a co-location alternative.

The CBD site alternatives are less well defined. A suitable location that could be developed within a realistic time frame was not evident. Consideration of relocating some functions that are currently conducted on the Tech School site, such as Kernott Hall into the CBD, as part of a broader CBD redevelopment plan over the longer term, presented more realistic development options than developing the Education and Innovation Precinct in the CBD. Should these potential development pathways come to pass, the proposed Tech School site could be developed in the longer term to accommodate a larger and more dynamic Education and Innovation Precinct.

4.1.2 Precinct development approach

The second critical consideration was the development approach to the Precinct. There are three recognised development models:

1. The “anchor plus” model, primarily found in the CBDs of cities, is where large scale mixed-use development is centred around major anchor institutions and a rich base of related firms, entrepreneurs and spin-off companies involved in the commercialisation of innovation.
2. The “re-imagined urban areas” model, often found near or along historic waterfronts, is where industrial or warehouse districts are undergoing a physical and economic transformation. This change is powered, in part, by transit access, a historic building stock, and their proximity to CBDs in high rent cities, which is then supplemented with advanced research institutions and anchor companies.
3. “Urbanised science park,” commonly found in suburban and exurban areas, is where traditionally isolated, sprawling areas of innovation are urbanising through increased density and an infusion of new activities (including retail and restaurants) that are mixed as opposed to separated.

Given the requirement to co-locate, if possible, with the Tech School and Federation University’s interest in developing the precinct, an ‘anchor plus’ model was determined to be the most suitable for this precinct. In addition, the location criteria and availability of suitable land and buildings eliminated the other alternative development approaches.
4.1.3 Conclusion
The Gippsland Education and Innovation Precinct should be developed based on an anchor plus model and co-located at the proposed Tech School site.

4.2 Stakeholder identification and consultation
The full list of stakeholders engaged as part of the development of this business case is provided in Figure 7, which maps the stakeholders engaged. The map shows a spread of stakeholders across Baw Baw, Latrobe City, Wellington and East Gippsland LGAs. Some stakeholders based in Melbourne were also engaged as part of the process.

Table 3 lists and describes the stakeholders which have interest in this project. Consultation with most of the following groups has been undertaken by the Project Control Group and during the development of this business case. The key issues identified by each group are also summarised.

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Impact and interest in the project</th>
<th>Key issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Government</td>
<td>State Government is the current owner of the land.</td>
<td>Precinct aligns with State Government policy and planning for the Gippsland region Aims to address social and economic challenges in the region Focus on education pathways and creation of new employment Aligns with State Governments focus on growth industries (i.e. Food &amp; Fibre)</td>
</tr>
<tr>
<td>Department of Education and Training</td>
<td>Department of Education and Training is represented on the Project Control Group and has assisted in the development of the Business Case.</td>
<td>Ensuring alignment with the Morwell Tech School (connectivity with schools, incorporating curriculum) Development of pathways and positive education outcomes (i.e. addressing education attainment) Further developing the Broadening Horizons program Precinct governance must ensure collaboration with broader region and education institutions</td>
</tr>
<tr>
<td>Federation University</td>
<td>Federation University is a key stakeholder and will manage the precinct's assets.</td>
<td>Development of the university’s brand and reputation in regional areas Development of a sustainable precinct that grows and provides opportunities for reinvestment Building the university’s research capabilities Attracting students into its programs</td>
</tr>
</tbody>
</table>

Figure 7 – Stakeholder map

Table 3 lists and describes the stakeholders which have interest in this project. Consultation with most of the following groups has been undertaken by the Project Control Group and during the development of this business case. The key issues identified by each group are also summarised.
<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Impact and interest in the project</th>
<th>Key issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federation Training</td>
<td>Federation Training is a key stakeholder and are co-located on the proposed precinct site. Federation Training will be the asset manager of the Morwell Tech School. Federation Training is represented on the Project Control Group and has assisted in the development of the Business Case.</td>
<td>Effective delivery (and eventual management) of the Morwell Tech School and how that ties into the precinct Aligning education programs with industry workforce needs Collaborating with other training providers to achieve outcomes for the region (partnerships) Directing graduates to local employment (mainly health &amp; community services)</td>
</tr>
<tr>
<td>Latrobe City Council</td>
<td>Latrobe City Council has a vision for the city of Morwell and the economic development of the municipality and has been an active participant in the development of the project. Latrobe City Council is represented on the Project Control Group and has assisted in the development of the Business Case.</td>
<td>Precinct aligns with Latrobe City's planning in the areas of economic development, conferencing and events and Morwell city planning. Aligning with the Smart Cities agenda Creation of new employment in the municipality Investment attraction Improving the liveability of Latrobe City</td>
</tr>
<tr>
<td>Committee for Gippsland</td>
<td>Committee for Gippsland has a strategic plan (2015-2017) that outlines its priority industry and policy areas. Committee for Gippsland is represented on the Project Control Group and has assisted in the</td>
<td>Precinct aligns with Committee for Gippsland's strategic plan in the areas of business and employment attraction, developing skills and promoting the region's brand Investment attraction Infrastructure development Promoting collaboration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Impact and interest in the project</th>
<th>Key issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gippsland community</td>
<td>The Gippsland community will benefit significantly from this education asset. The Project Control Group will continue to consult with the community during the design and construction phases.</td>
<td>The Gippsland community was not consulted as part of the business case, although there are plans to consult with the community in the next phase of the project.</td>
</tr>
<tr>
<td>Employers</td>
<td>Employers will seek access to appropriately skilled workers, and need to engage with communities to help create the environment that attracts the right people. Employers will also benefit from the entrepreneurial ecosystem developed around the precinct.</td>
<td>Creating access to skilled workers (pathways) Supporting industry-focused research &amp; development and innovation Developing closer ties with universities and government (knowledge sharing, advocacy) Linking into cutting edge research through relationships with research organisations (e.g. CSIRO) Complementing education and research that already exists in Gippsland (e.g. Churchill) Leveraging existing human and natural capital (e.g. brown coal research)</td>
</tr>
<tr>
<td>Schools</td>
<td>Schools will benefit from the precinct by engaging at the Morwell Tech School and developing pathways to learning and employment with industry operating at the precinct. Schools have been consulted as part of the</td>
<td>Building young people's aspirations Building effective pathways for students into employment and further education Engaging with the precinct both physically and virtually (particularly for remote schools) Exposing young people to real world problem solving</td>
</tr>
</tbody>
</table>
### Stakeholder Impact and interest in the project

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Impact and interest in the project</th>
<th>Key issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>Secondary and tertiary students will benefit from exposure to innovative activity undertaken by industry. Students may also seek short-term and long-term employment with businesses co-located at the precinct. Secondary students have been consulted as part of the development of the Business Case.</td>
<td>Creating employment opportunities in the Gippsland region (particularly high-tech careers) Creating opportunities and an environment to start businesses and be innovative Development of their communities Improving the liveability of the Gippsland region</td>
</tr>
</tbody>
</table>

### Table 3 – Key stakeholder issues

#### 4.3 Land use and site description

The preferred site is located at 1 Monash Way, Morwell. The land is approximately 16 hectares in area, comprising a large public hall (Kernot Hall), education training facilities (Federation Training) and restaurant (also managed by Federation Training).

Waterhole Creek traverses the land, in a south to north direction. A large man-made lake (Kernot Lake) is also located on the land, including associated public open space and walking paths. The eastern portion of the land (east of Waterhole Creek) is currently vacant, predominantly flat (low lying) and contains limited established trees. The presence of native grasses on this portion of the land is not known.

To the east of the site is an established residential area, comprising predominantly single storey unit developments, with Bridge Water Drive providing access to the residential area and forming the eastern boundary of the subject land.

Princess Drive (arterial road) forms the northern boundary of the land and provides the primary access to the land. The Gippsland rail line forms the southern boundary. Monash Way (arterial road) forms the western boundary of the site, with a small retail area predominantly comprising convenience restaurants (i.e. take away food premises) adjoining Monash Way to the west.

The site has numerous advantages over alternative sites considered, such as the PowerWorks site, the most important of which is the co-location of the Tech School. This was identified as being critical to provide pathways for:

- Students to further study and links with industry; and
- Industry to education and training providers to influence curriculum and skills development needs

The site consists of two separately transferable lots and some common property made up of access ways, car parking and other infrastructure required to service both lots. The land parcels are used and maintained by two separate landowners, which are Latrobe City Council (Lot 1) and the ministry administering the Tertiary Education Act 1993 (Lot 2) (Figure 8).

- Lot 1 consists of the Kernot Hall, Lake Morwell and surrounds
- Lot 2 consists of buildings and land currently operated by Federation Training.
There are two legal agreements and one covenant registered to the different titles for this land. These have repercussions for the potential future use and development of the land. For instance, one of the legal agreements allows that land and buildings can be used for educational purposes only. The registered covenant restricts new buildings to municipal purposes only. It may be necessary to remove this legal agreement from the land title before any alternative use takes place on the site. Expert legal advice should be sought on what circumstances could require these statutory legal instruments to be removed and what processes are involved.

4.3.1 The Planning Scheme

The control of use and development of the subject site is administered by the Latrobe Planning Scheme. Below is a summary of the existing planning controls and how they affect the land in question.

4.3.2 Zoning

All of the land on the site, excluding Morwell Lake, is zoned Public Use Zone – coloured yellow in Figure 9. Annotated on the map is PUZ2, which represents Public Use Zone – Education, and PUZ6 which represent Public Use Zone – Local Government.
4.3.3 36.01 Public Use Zone

A permit is not required to use land, or to construct a building or construct or carry out works on land for any use with the purpose of public education (PUZ2) or local government (PUZ6), as per the notations relevant to each piece of land on the map above.

- The use must be carried out by or on behalf of the public land manager.
- A permit is required to subdivide land.
- An application for a permit by a person other than the relevant public land manager must be accompanied by the written consent of the public land manager, indicating that the public land manager consents generally or conditionally either:
  - to the application for permit being made, or
  - to the application for permit being made and to the proposed use or development

The existing zoning provides the required controls on the use and development of the land for its current purpose, which is providing education and local government services. The zoning provisions are particularly unrestricted and flexible for land which is used for community services and facilities; however, if the use of land is not associated or consistent with public land uses then a change to the zone may be required. This would be the case if the site was to benefit the private sector or be used for commercial or other reasons which do not provide for public services or facilities.

4.3.4 Overlays

Figure 10 shows the Flood Overlay (FO) and Land Subject to Inundation Overlay (LSIO) which apply to subject land (Sites 1 and 2) as shown below. The watercourse (Waterhole Creek) is also shown.

Hydraulic modelling of the Waterhole Creek flood flows (which traverses the subject land) indicates that stormwater / flood flows affecting the subject land are primarily influenced by the Princes Freeway, rail line and Princess Drive; this infrastructure limits the free passage of flood waters and results in the retardation of flood waters and creation of ‘backwater’ on the subject land. The impact of this can be seen clearly on the above FO and LSIO map provided above.

Additional floodplain and waterway information is available within the Waterhole Creek Flood Study 2007 (copy attached). To obtain more specific flood related information relevant to the proposed use and development of
the subject land, it is recommended that formal flood advice is sought from
the West Gippsland Catchment Management Authority.

It is noted that the construction of stormwater management wetlands is
currently being undertaken on the land immediately south of the Buckleys
Road-Firmins Lane intersection. These works may result in minor alterations
to the behaviour of floodwaters downstream. The Latrobe Planning Scheme
requires that there be no increase in the discharge of floodwaters from the
subject land (i.e. stormwater discharge must be maintained to re-development
flows). It is, therefore, likely that on-site stormwater flood retention would
need to be provided as part of any future development of the land. Further
detailed advice regarding localised stormwater and site drainage
requirements associated with the possible future use and development of the
land should, therefore, be sought from Latrobe City Council’s Infrastructure
Development team.

4.3.5 Cultural Heritage Management Area

A Cultural Heritage Management Area applies to the subject land, the extent
of which is shown in Figure 11. A Cultural Heritage Management Plan (CHMP)
may be required as part of any future land use and development proposal on
the subject land. Independent advice and direction regarding this requirement
should be sought from a cultural heritage consultant or the relevant agency
representatives.

4.4 Overall evaluation of socio-economic and environmental
impacts

This business case has used the framework utilised by the PASCAL
International Observatory for an international project looking at the role and
engagement of universities in regions (the PURE project) as a guide. The
PASCAL framework has been modified to accommodate the specific needs of
this project. PASCAL is a global ‘think-tank’ comprising academics, analysts,
entrepreneurs, business and government.

The framework utilised comprises contribution assessments under eight
themes and example benchmarks, as summarised below:

1. **Enhancing regional infrastructure**: infrastructure planning,
campus investment, knowledge precincts and core public services
2. **Human capital development**: retention of students, regional skills,
labour market demands, involvement of employers and tailored
training programs
3. **Business development:** engagement in investment attraction, graduate entrepreneurship, student placements and staff engagement with business.

4. **Promoting engagement:** strategy and policy for engagement, community involvement in governance, rewarding and valuing engagement.

5. **Interactive learning and social capital development:** involvement in regional governance and regional futures, staff exchanges, learning region strategies, international networks and regional learning culture.

6. **Community development:** healthy cities and health promotion, community-based regeneration, student community action, opening facilities to the community and curriculum-based community and social development support.

7. **Cultural development:** cultural strategy and facilities, participation by the community and fostering regional cultural identities.

8. **Promoting sustainability:** leading responses to the challenges of sustainability, institutional governance and sustainability through the curriculum and education.

A PASCAL analysis was conducted on Federation University to examine the university’s impact on the Gippsland region. In summary, the analysis shows that Federation University is:

- Proactively shaping regional agendas and building capacity for effective regional governance and planning (e.g. supporting regionally-based projects, collaborating with regional councils, serving on regional boards);
- Providing independent research and analysis on regional issues and sharing this knowledge with the broader community;
- A significant education institution and regional employer (i.e. there were 23,187 students enrolled and 558 staff employed in 2012);
- Addressing social and education attainment issues in regional Victoria by becoming one of the national leaders in enrolling and supporting students from low socioeconomic backgrounds;
- Among one of the largest providers of on-campus and distance enabling courses, providing pathways for regional students into university;
- Producing graduates across different fields of study to support business and industry innovation, growth and sustainability;
- Building regional networks through meaningful engagement and programs (e.g. the Gippsland Access and Participation program connecting teachers in remote areas);
- Building social capital through specific programs (e.g. international exchange programs); and
- Adopting and practising sustainable principles and actions.

A detailed PASCAL analysis, presented under each of the eight themes, can be found in Appendix D.
5. **Recommended solution**

5.1 **Details of recommended solution**

This business case focuses on the development of a world-class education and innovation precinct in Gippsland that will:

- Create employment and industry development opportunities
- Connect secondary students and their learning to industry, higher education and tertiary education;
- Support industry research;
- Enhance the role of tertiary education within the region; and
- Foster the development of the region's innovation system and associated networks.

Consideration has been given to integrating a facility for secondary school students which has a focus on the integrated use of technology and automation (Morwell Tech School) with Federation University, Federation Training and industry. Research needs of local industries will be met through developing infrastructure and networks to develop new technologies and support skills and capability development.

The Federation Training site in Morwell offers excellent potential for an integrated approach to education, training, research and innovation, supported by the Department of Education, Federation University and a host of industry partners. New and innovative ideas and practices would be initially sponsored and pursued within existing and new buildings and infrastructure.

5.1.1 **An alternative development pathway for Gippsland**

The issues affecting the Gippsland region will impact on the region's development and levels of economic growth. The likely trajectory, without intervention, is for economic growth and social outcomes to decline, or hold at current levels. If a positive intervention is made, then economic and social outcomes should hold, and improve on current levels over time. These alternative development pathways are represented in Figure 12.

Largely, these scenarios have been recognised and policy responses put into place, such as the $40m Gippsland Region Transition Package announced in the 2016 Victorian State Budget. This project aligns with these policy responses and should help the region move towards a more competitive and positive economic and social development pathway.

5.1.2 **Systems impact**

The Gippsland region's economic system is depicted in Figure 13. This business case has highlighted that the region has problems relating to skills and technology and that these issues present barriers to the region successfully being able to undertake innovation and deliver long-term economic growth.

The precinct aims to act in the first instance at this level by improving the human capital and technological capability of the region. This intervention will flow on and provide wider societal and economic outcomes, improving the competitiveness of the region and delivering wider societal benefits.
5.1.3 Elements

Consistent with the best practice literature, stakeholder consultations, current industry structure and issues and the social structure of the region, the precinct should have five main elements:

1. Federation University as the anchor tenant, offering options for specific research and industry linkages, as well as a shop window into other Federation University tertiary education opportunities;
2. Federation Training having a significant role to work with local industry to identify, develop and deliver training and education outcomes consistent with local industry need;
3. The Tech School, as a core element, providing technical training for the broader Gippsland region and linking to other secondary schools throughout the Gippsland region;
4. Industry presence, through co-location, research and co-working; and

5. For the precinct to work and deliver the benefits necessary, there must be connectivity and pathways throughout, into and out of, the precinct. These pathways and linkages must be built and leveraged.

This model is depicted in Figure 14. It is the intersection of these elements that provides the real opportunity for this precinct to be transformative for the Gippsland region.

5.1.4 Evolution and long-term impact

The outcomes derived from the precinct will be long term in nature. This business case should be seen in this light. Industry transition, developing regional level innovative capabilities and improving human capital require long-term solutions. This precinct is conceptualised within three stages:
1. This business case, which makes the strategic and business case for the establishment of the precinct;

2. The expansion of the precinct, around 2031 to cater for changing needs and growth; and

3. Long term, 2046, where the full benefits will be realised and major growth opportunities are foreseen as new industry has developed, skills and innovative capabilities are established and the region’s innovation network is as dense as it is extensive and far reaching.

**Figure 15 – Staging and evolution of elements to achieve the long term impact**

5.2 Vision and principles

The vision for the precinct is to: Build Gippsland’s reputation for innovation by supporting industry to invest in research and development, while promoting economic and social development through the creation of new business, attracting investment, creating knowledge based employment and adding value to the community.

The underlying operating principles for the precinct are:

- **Open innovation** - The principles of open innovation will be ubiquitous with the precinct and in the manner in which it operates and integrates with the broader region and other research/technology parks nationally and internationally. LILP will be the catalyst for the further development of Gippsland open innovation system.

**Figure 16 – Vision and principles**
By 2041 Gippsland is recognised as having attracted remarkable levels of investment in economic and urban growth through implementation of regional strategies and projects, inspired by the region’s assets and its potential.

Growth has been planned for, and attracted to, six urban centres: Latrobe City as the regional city, Bairnsdale, Leongatha, Sale, Warragul/Drouin and Wonthaggi. This approach has attracted and retained higher than projected population and employment levels as the centres have gained the critical mass to provide higher order services.

Economic growth has been sustained by the region’s traditional strengths in natural resources, energy, agriculture and forestry, manufacturing and tourism. Investment in research and development in these and other industries has spurred on the development of new industries and higher employment rates and resulted in Gippsland having a reputation for innovative technology. Promotion of the region’s nature-based and cultural heritage tourism assets has also attracted new investment in world-class facilities and significant increases in visitor numbers.

Careful planning of both urban and rural areas has added to the region’s valued rural and regional character and protected and replenished its environment. Ecologically sustainable development practices and the facilitation of a healthy lifestyle are now entrenched in planning practices and community values.

The region’s private and public transport connections between towns, ports, markets, Melbourne and interstate operate efficiently to accommodate new demand.

How does this project align to the region’s vision?

This project aims to help the region fulfil its potential. It blends the region's existing and traditional economic strengths while providing a platform for investment in new industry research and development. It supports employment and fosters the development of innovative technology.

The proposed location adds to the urban character and utilises existing transport connections between towns, across the region and to Melbourne.

- **Cross sectoral** - The precinct will cater for a range of strategic industries and recognises industrial diversity as strength of the region and its resilience
- **Commercial** - The precinct will seek to be financially independent and sustainable. Investments will recognise the need to be commercially viable, as well as supporting the vision of the precinct
- **Regional scope** - The precinct will cater for the Gippsland region and support activities across the region
- **Ecosystem** - Adopt a principle that fosters industrial ecosystems, building on strengths throughout industry supply chains
- **Collaboration** - The precinct will engage broadly with industry and stakeholders and provide integrated approach to skills development, education and research. Success will be measured through participation, as well as outcomes

5.3 Key industries

Market analysis and stakeholder engagement focused on industries considered by State Government and the Gippsland Regional Plan as growth sectors that are central to the region’s future economic prosperity. Table 4 provides analysis to validate the need to target these industries.

<table>
<thead>
<tr>
<th>Industry sector</th>
<th>Logic</th>
</tr>
</thead>
<tbody>
<tr>
<td>New energy</td>
<td>Region has competitive advantages in energy generation capability and infrastructure and comparative advantages in natural resources (wind, brown coal) and capital. Energy sector transitioning out of coal fired power generation and focusing research and development efforts at sustainable, environmentally friendly innovations creates opportunities for the precinct. This transition is also posing an immediate threat to the local workforce, requiring a need for the new job creation, which is central to the vision of the precinct.</td>
</tr>
</tbody>
</table>
Industry sector | Logic
--- | ---
There is strong interest from AGL and expressed interest from other energy providers and distributors in being involved in the precinct.

Food and fibre | There is a need for the food and fibre industry to build its perception and inspire young people to consider food and fibre careers. There is a need for this industry to showcase its technological capabilities and requirements and develop industry-wide education pathways. The precinct has a role to play in addressing poor outcomes from existing extension outcomes. There is an opportunity for the precinct to network into research institutions and create linkages into the region's industry. The industry requires support in the creation and incubation of entrepreneurial activity. Some industry players have expressed interest in exploring opportunities for involvement in the precinct, through integrating in the research and development or education and skills development.

Health | Health is a growth sector, with expected increases in the region’s population and ageing demographic profile. Current and future potential research opportunities pertaining to long-term health of the region. The health sector is well entrenched in Gippsland (infrastructure, education programs, recruitment strategies); there is opportunity to centralise some of this activity at the precinct. Interest expressed from health providers for tenancy and skills development training. Opportunity for the precinct to tie into health related education and research currently undertaken at Churchill.

Other | Provide support and related innovation and development services for other industries on an as needs basis. Opportunities to support Council’s / RDA’s / RDV's economic development unit around developing networks and promoting innovation. Opportunities to build upon the region's capability in engineering and focus the precinct on specialised areas such as advanced manufacturing and mechatronics. These capabilities transcend the priority industry sectors. Opportunities to centralise a range of research activity already undertaken throughout the region.

Table 4 - Focus industries

5.4 Market analysis
Table 5 presents a list of markets for the precinct for which operations are expected to be targeted.

<table>
<thead>
<tr>
<th>Market need</th>
<th>Energy</th>
<th>Food &amp; fibre</th>
<th>Health</th>
<th>Mechatronics</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education &amp; training</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>+++</td>
</tr>
<tr>
<td>Research</td>
<td>+++</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Start ups</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Innovation - new product development</td>
<td>++</td>
<td>++</td>
<td></td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Innovation - network &amp; awareness</td>
<td>++</td>
<td>++</td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Business tenancy</td>
<td>+++</td>
<td>++</td>
<td>+++</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Business services / commercialisation</td>
<td>+</td>
<td>++</td>
<td>+++</td>
<td>++</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 - Initial markets

These industry sectors are both consistent with the market / industry analysis and the expected future growth industries in Gippsland.

5.5 Services
To ensure the markets identified are properly serviced, the following represents details of the proposed products and services to be offered through the precinct:
• Facilitate business incubation, development, consolidation and collaboration opportunities;
• Provide access to high quality infrastructures and facilities;
• Mentoring, incubation and start up, including discounted lease rates;
• Identification and sourcing of technology based equipment / innovation activities;
• Encourage industry input, industry access and industry level relevant technologies and equipment;
• Support prototyping of research outcomes and activities;
• Encourage entrepreneurial and pop-up initiatives that help foster and support innovative activity;
• Provision of collaboration tools, conference, meeting rooms and accommodation, including food and beverage;
• Education programs, training and career progression; and
• Provision of shared equipment and extend access of technologies to wider audiences.

5.6 Initial opportunities

Development of the business case has uncovered a number of activities (ongoing or proposed in Gippsland) that could be integrated into the precinct:

5.6.1 Short-to-medium term

Commercial

Commercial operators

Federation University has been in preliminary discussions with potential firms wishing to relocate, or expand onto this site. These firms come from identified sectors (health, food and fibre, advanced manufacture). The interest shown by these firms supports the demand arguments outlined in the business case and as well as reaffirming Federation Universities credentials to develop and grow the precinct.

Digital Centre

Preliminary discussions have been held with a major international technology company who have expressed an interest in operating a digital and data centre from the site. This opportunity requires further scoping by the company, who have expressed a commitment to complete a more in-depth feasibility study mover coming months. This firm could fulfil some anchor tenant roles within the site.

Mechatronics, robotics and automation - Federation Training

In recent years, Federation University and Federation Training have expanded their engineering programs to address critical shortages in automation, robotics and mechatronics. The precinct presents an opportunity to link education providers with industries that are in increasing need for engineering capabilities, such as agriculture (automated dairy, food processing), timber processing and mining and energy.

Industry research

New Energy Technology Research - AGL / Monash research project

AGL, in collaboration with Monash University, has proposed to collaborate with government, research and training providers, unions and community organisations to develop an innovation and technology centre to drive the development of a niche “new energy technology ecosystem”. Although the centre is in the early (conceptual) phases of development, initial discussions have involved locating the centre at the PowerWorks site outside Morwell. This presents an opportunity for precinct stakeholders to collaborate with AGL to either have the centre located at the precinct or integrated into its network.

Research and development of bioorganic fertilisers - Federation University

An opportunity exists to manufacture advanced bioorganic fertilisers at the precinct. The need to maximise the performance of top soils has led to a growing demand for humic compounds to increase fertiliser efficacy and soil bioactivity. Brown coal is a rich source of these compounds and is already being used locally to produce humate products for export.
University has found strong interest by agglomeration and fertiliser manufacturers in a facility that enables the formation and production of these innovations.

**Gippsland Resource and Research Centre - RMIT**

RMIT has submitted a proposal to the State Government for the creation of a transition and support program involving outreach support work and ongoing applied research. The aim of the Gippsland Resource and Research Centre (GRRC) is to assist and enable transition for workers and their households in Gippsland.

It will address the need for targeted support for workers and households affected by industrial decline through the establishment of a ‘one stop’ Resource and Research Centre based in Latrobe City. It will also develop and extend a focused and applied set of projects that will assist in developing Gippsland’s regional innovation system and facilitate the ongoing economic transition in the Latrobe Valley to a sustainable economy.

The proposal suggests the GRRC be located at the Gippsland Trades and Labour Council premises in Morwell. There is an opportunity for the GRRC to be located at the precinct.

**Educational**

**Federation Training expansion**

Federation Training has identified a need to plan for future growth and development across the region. The expansion of their footprint on the Morwell site has been identified, albeit at a preliminary stage, as the preferred site for future expansion.

**Broadening Horizons - Department of Education & Industry**

The Department of Education and Training, in collaboration with industry project partners (i.e. Beacon Foundation, Gippsland Regional Managers’ Forum), has developed a ‘real-life’ workplace learning model aimed at increasing the rate of positive outcomes for young people in Gippsland. The project has provided meaningful, ongoing workplace-linked learning opportunities for the students of many of Gippsland secondary schools.

It should be noted that although Broadening Horizons is a government funded program, it is understood the success and growth of the program in 2014/15 has ensured its sustainability for the near future. The precinct, therefore, presents an opportunity to house the program’s administration as it grows and develops.

**Entrepreneurial**

*Support ‘pop-up’ innovative and entrepreneurial activity*

The precinct will be designed and managed in a way that supports, encourages and connects to innovative and entrepreneurial activity. One way to do this is by supporting ‘pop-up’, or temporary, activities. Pop-ups can inform, educate, inspire, or simply serve a commercial purpose. For example, pop-up activity has become commonplace in the retail and food sectors.

By way of example, Commonwealth Bank recently opened a pop-up Innovation Lab in Melbourne. The Lab was available during May in the city’s CBD (see footage [here](https://www.youtube.com/watch?v=pDYJuGPHOjg)). The goal of the Lab was to inform and inspire its visitors by allowing them to interact with real time data, interpret trends, brainstorm solutions and collaborate in project teams. There is an opportunity to invite the Commonwealth Bank Innovation Lab to pop-up at the precinct.

**5.6.2 Medium-to-long term**

*Improving agricultural extension outcomes - Department of Economic Development, Jobs, Transport and Resources*

The future of Australian agricultural extension has been topical in recent years as government funding has gradually reduced. Industry stakeholders have suggested the old Research, Development & Extension model needs to change
in order to maximise agricultural productivity and profitability. Suggestions have included user-pay systems, improving information flows and increasing the level of farmer involvement in extension. Regardless of this new approach, the precinct has a role to play in improving extension outcomes for research and development in Gippsland’s food and fibre sector.

*Linking into existing research activity*

Opportunities exist for the precinct to link into research activity being undertaken in key industry sectors, i.e. the CSIRO is at the forefront of food technology research in Australia. The precinct will link into this research and support information flows to local food manufacturers. There is also an opportunity for CSIRO to be involved in the precinct and act as its Gippsland base. Other opportunities to tie into research in the food and fibre sector include developing relationships with the Latrobe University AgriBio Centre, Food Innovation Australia Ltd and Dairy Innovation Australia Ltd.

*Promotion of innovation and building innovation awareness across the region*

The precinct will play an important role in building, supporting and developing an innovative culture across the Gippsland region. This is expected to include knowledge transfer, advocating and accessing funding opportunities, education, training and professional development, leadership development, identifying and addressing innovation gaps, engaging in the global innovation community and opening up new markets.

**5.7 Concept drawings and infrastructure**

**5.7.1 Users**

The development of these potential site user profiles reflected consultations. Profiles represent typical users of the precinct now and in the future.

By 2046 the user profile has changed, and so to the dynamics of the region. The nature of the use shows how the precinct may evolve and the changing role the precinct over time.
Figure 17: User Profile, 2016

Name: Jane
Age: 43
Interests: Hiking, watching footy, fishing.
Occupation: Own business

I have my own manufacturing business near Traralgon, making parts for agricultural machinery. The rent on my workshop is high even though it’s not very new because there aren’t any factories around here. Running my own business is hard work, and I’m stressed in the evenings with all the accounts and marketing.

Lots of my staff come straight from school and I spend time and money training them, because none of the colleges around here good training courses. They seem to take lots of sick leave too, or just desperate to move to Melbourne after a few months which really puts the pressure on me.

Figure 18: User Profile, 2046

Name: Mary
Age: 56
Interests: Yoga, reading, community work.
Occupation: School Principal

I’ve been teaching here for 30 years, and since the mines started closing down, people have been struggling. The mines used to offer money and security for school leavers, but nowadays they don’t have many options for jobs. We get complaints about the children playing up after school, but I think that they’re just bored and unsure about their future.

There’s a strong sense of community here, but lots of students are moving to Melbourne once they finish secondary school which is a shame. If there was a reason for them to stay, I’m sure that they would, but there just isn’t any opportunity for them here.

Name: Livi
Age: 24
Interests: Computer games, watching TV.
Occupation: Casual Worker

I’ve had quite a few different jobs, but they’ve been pretty boring and never seem to last that long. At the moment I’m on Government support. Lots of people from my school have moved away, and I don’t really get on that well with my family, so I don’t do that much in the evenings either. I don’t really know what kind of work I’d like to do. My dad used to work at Pfizer, but he got made redundant, and there aren’t many jobs that I have the training to do.

Name: Zena
Age: 33
Interests: Meeting with friends, playing sport, cooking, reading.
Occupation: Researcher

I’m doing a masters at Federation University, and part of my thesis was looking at carbon capture in power plants, I live in Warragul so I drive to the O’Reilly Campus for a few days a week for lectures. When I graduate, I’m planning to move to Melbourne. There’s a science innovation and technology centre there where I want to get a research job and Melbourne has much more going on than Geelong.

Name: Lea
Age: 16
Interests: Computer games, robotics, drawing, animals.
Occupation: Student

I came to the prefect for workshops while I was at school, and I’m learning how big agricultural industries work in a global economy. I rent a hot-desk in the precinct because lots of my clients are overseas – last week I chatted with a new client in India, and ran an online workshop for a logistics company in China. I have a good work-life balance too – I only get my work done where it matters and when I do it.

If I need advice, I know there will be someone who can help me out, and because I’m doing something I love I’m really driven to keep learning and growing. There’s too much to go on here, and I’m doing far too much to keep up with everything.

Name: Mary
Age: 56
Interests: Yoga, reading, community work.
Occupation: School Principal

Our students come back from the precinct full of energy and ideas. It shows them pathways and types of work to do after school, and lets them stay in Geelong even if they want to work in highly skilled and specialised areas.

The sessions run here with different schools from the area, and schools from further afield call in by video conference. The internet lets them visualise and test ideas together and encourages them to be more proactive and creative. Geelong is just the same place, and because they can see and touch the technologies they’re working with, it’s improved the way they interact, network, debate and solve problems.

Name: Livi
Age: 24
Interests: Travel, meeting new people.
Occupation: Casual Worker

I came to the precinct for workshops while I was at school, and I’m learning how big agricultural industries work in a global economy. I rent a hot-desk in the precinct because lots of my clients are overseas – last week I chatted with a new client in India, and ran an online workshop for a logistics company in China. I have a good work-life balance too – I only get my work done where it matters and when I do it.

If I need advice, I know there will be someone who can help me out, and because I’m doing something I love I’m really driven to keep learning and growing. There’s too much to go on here, and I’m doing far too much to keep up with everything.

Name: Zena
Age: 33
Interests: Meeting with friends, playing sport, cooking, reading.
Occupation: Researcher

I live on the precinct in a beautiful apartment. I’ve met lots of people training on the soccer team here, and I even met my partner at a networking event in the conference building. I get the train to Melbourne in less than two hours, and I’m close enough to Morwell to row along the Clyde path into the centre.

I’m doing my PhD on making photovoltaics cheaper and more compact, and do research in a university laboratory here. My supervisor is from a big energy company who collaborates with researchers, manufacturers and installers all over the world. It’s reassuring to know that my research is relevant internationally and helps businesses in Geelong.
5.7.2 Concept plan

The concept plan has been designed to respond to the existing natural resources on the site - Kernot Lake and the Immigration Park. It also integrates the early designs for the technology college. The proposal introduces ‘green fingers’ across the site from the lake to the train line, giving all buildings views of, and a route to, the lake. At this stage, the existing Federation Training Cafe, is integrated into the proposed Stage 1 Innovation Park building.

The main views of the site are from the road that runs between Morwell and Traralgon. People travelling past will look over the lake towards the train line and the buildings on the site. By placing a new building so that it faces the road, the investment on the site is made obvious to those driving past the site, and means that access to the lake and landscape is improved. This element has commercial value Federation University and potential tenants.

Parking is placed at the edges of the site, with shared surface pathways providing drop-off points for delivery and those with different levels of accessibility, as well as allowing for access by the emergency services. This shared surface route will continue to the shopping centre to the east and its associated parking. Most people using the site will be encouraged to walk from the car park to the rest of the site, giving opportunities for chance encounters and conversations, as well as promoting health and wellbeing, which in turn is proven to reduce absenteeism.

Smaller studios and labs are located throughout the site, meaning that visitors and workers pass through and around these innovative spaces on the way to their own workspace.

---

2 This concept plan is not intended to be the final masterplan for the site. This report recommends such a masterplan be developed and that these initial concepts may, or may not be incorporated into the masterplan for the site.

A potential location for a train station is also provided on the site, encouraging the use of public transport, and directly linking the precinct to Traralgon and Morwell, as well as to Melbourne.

This concept plan demonstrates that the site can support the proposed business and operational model outlined in this plan.

Figure 19 – Stage 1 Concept Masterplan
5.7.3 Stage 1

The initial stage of the precinct proposes a new landmark building in the centre of the site, advertising its development to those driving past, or coming to the site to use the Technology College. In addition to rentable office space and laboratories, this building will contain flexible working and breakout space, small business start-up units and a cafe.

The co-location of these varied types of space is key to establishing the collaborative atmosphere that will allow the precinct to thrive. Shared circulation and cafe spaces for all users encourages glimpses of projects other people are working on, as well as providing spaces for them to meet and discuss ideas. The preferred location of the building means that students and staff at the Technology College, and even visitors to Kernot Hall, will pass other facilities on their way there.

The building has a taller, public space looking over the lake towards the north, with the more functional, lettable space towards the south. While it is an iconic building on the site, it also links to the landscape, both physically, with large openings on the ground floor, and in its choice of materials, with timber cladding providing shading from the sun.

Figure 20 – Iconic and transparent landmark building visible across Lake Kernot

Figure 21 – Inside spaces for collaboration connect to the landscape
5.8 Development scenarios

Three development scenarios have been used to demonstrate how the site may evolve and to undertake financial and economic modelling.

The first is a base case model, Scenario A – and has initial development of 2,500m² in years 1 – 3 and then a further 2,500m² development which comes on stream in 2027 (total floorspace - 5,000m²). This option is shown in Figure 19.

Scenario B is a likely case, being scenario A plus major tenant coming on the park requiring 1,500m² of space in 2021 (total floorspace – 6,500m²). This is shown in Figure 23.
The site is well developed over the next 15 years, with a major tenant moving into the site. The additional floorspace is shown over several buildings in Figure 23. Should demand warrant, building height can be increased, but this would incur additional costs; however, the site would provide for further development past 2035. The train station retains primacy on the site, as does the development principles detailed throughout this report.
Scenario C is an optimistic case, being scenario B plus Federation University expansion, requiring a further 1,500m2 of space in 2024 (total floorspace – 8,000m2). The site development could appear as in Figure 24.

Figure 24 – Scenario C development

This option integrates an expanded Federation Training into the precinct.

5.8.1 Development and activation risks
The development of the precinct is a major undertaking and not without risks in both construction / development phases and in activation. Federation University has successfully developed a like precinct in Mt Helen, 10kms from Ballarat’s CBD and is currently undertaking a second development in the CBD.

The experience of the university in undertaking building construction, managing the procurement and legal elements, is an important consideration in reducing construction risk. The university's ability to populate the site, with appropriate tenants, reduces activation and financial risks.

These are not insignificant elements and Federation University's ability to understand and manage significant elements of construction and activation
risk should be recognised as reducing the inherent risk profile of this business case.
6. Financial and economic analysis

6.1 Financial analysis

A financial model has been built for the precinct based on expected revenues and operational expenditures. The framework used for the financial analysis is consistent with the framework used by Federation University in the management of its technology parks at Ballarat Central and Mt Helen.

Three scenarios have been modelled:

- **Scenario A** – base case, with initial development of 2,500m² in years 1 – 3 and then a further 2,500m² development which comes on stream in 2027 (total floorspace - 5,000m²)
- **Scenario B** – likely case, scenario A plus major tenant coming on the park requiring a further 1,500m² of space in 2021 (total floorspace - 6,500m²)
- **Scenario C** – optimistic case, scenario B plus Federation University expansion requiring a further 1,500m² of space in 2024 (total floorspace - 8,000m²)

Detailed financial projections are included in Appendix G.

Analysis is based on the following assumptions:

- Two-year construction period for Tech School, plus 15 years
- Construction costs of $15m for the Education and Innovation Precinct ($10m for buildings, $5m for landscaping)
- Rental areas for stage 1 - 2,500m²
- Additional building commencing in 2026, with completion in 2028, creating another 2,500m² @$10m (building cost only, no additional landscape works) in 2016 $ ($12.8m in 2028)
- Tenancy commences at 50% in year 1, and to capacity by the end of year 4
- Base rate for rental is $200/m²
- CPI - 2.5% over life of forecasts
- Scheduling of the construction as follows:
  - Tech School - 12 months from commencement
  - Education and Innovation Precinct - 18 months from commencement
- Revenues from the following sources:
  - Tenancy
  - Café licence
  - Conference
  - Grant income
- Major items of expenditures comprise:
  - Salary and wages, with an EO plus administrative support and on costs @ 20%
  - Advertising and marketing budget
  - Building and ground maintenance at 1% of building cost and 0.5% of landscape costs
  - Utilities
  - Staff development and training
  - Telecommunications
  - Building and capital assets are depreciated over 20 years
  - No allocation has been made for university overhead allocations; it has been assumed that these will be provided by Federation University
  - Depreciation on buildings at 2.5% pa, and PPE at 10% pa

The financial model is quite straightforward - rental incomes need to exceed operating costs. Capital / building is assumed, funded through capital grants.

The analysis shows that the facility is financially viable based on these parameters; however, it is likely to require working capital support for the period of its development, principally due to the rate of uptake of space within the facility, which has been modelled conservatively both in terms of the rental rate and rental uptake.
6.1.1 Scenario A – Base Case, 5,000m² of development

Figure 25 shows the expected operating cash flows arising from the precinct:

The facility will require working capital support until 2026 (max $680k through 2022). The working capital funds staffing, plant and equipment purchases and other start-up related costs. Until 2020, these outflows are expected to exceed financial inflows. Over the period of the forecast, the precinct should produce healthy cash flows totalling around $1.8m.

A summary of the precinct's operating profitability is shown in Figure 26.

The precinct is expected to produce operating incomes from year 1, which increase as tenants are secured and facilities are utilised for conferencing and hire.

The EBITDA line shows that before accounting for depreciation charges, the precinct enjoys positive profitability, indicating that the underlying business model is sound, and feasible. However, after taking account of depreciation, principally on buildings, the precinct does not cover all costs (EBIT). This should not be taken to be read that the precinct loses money; these depreciation charges are offset by the receipt of the capital grants.

By 2032, the precinct should be generating around $1.3m of operating income, from which around $430k of cash flow should be generated.

Figure 27 shows the precinct's net asset position and land and buildings value.
By 2032, the equity / net assets of the facility are expected to be around $22.7m, of which land and buildings comprise $21m.

6.1.2 **Scenario B – Likely case, major tenant secured, 6,500m² of development**

Figure 28 shows the expected operating cash flows arising from the precinct under this scenario.

The facility will require working capital support until 2026 (max $680k through 2022). The working capital funds staffing, plant and equipment purchases and other start up related costs. Until 2020, these outflows are expected to exceed financial inflows. Over the period of the forecast, the precinct should produce healthy cash flows totalling around $4.5m.

A summary of the precinct’s operating profitability is shown in Figure 29.
The precinct is expected to produce operating incomes from year 1, which increase as tenants are secured and facilities are utilised for conferencing and hire.

The EBITDA line shows that before accounting for depreciation charges, the precinct enjoys positive profitability, indicating that the underlying business model is sound, and feasible. However, after taking account of depreciation, principally on buildings, the precinct does not cover all costs (EBIT). This should not be taken to be read that the precinct loses money; these depreciation charges are offset by the receipt of the capital grants.

By 2032, the precinct should be generating around $1.6m of operating income, from which around $660k of cash flow should be generated.

Figure 30 shows the precinct's net asset position and land and buildings value.

By 2032, the equity / net assets of the facility are expected to around $29.7m, of which land and buildings comprise $25.6m.

6.1.3 Scenario C – Optimistic case, Federation Training expansion, 8,000m² of development

Figure 31 shows the expected operating cash flows arising from the precinct under this scenario.
The facility will require working capital support until 2026 (max $680k through 2022). The working capital funds staffing, plant and equipment purchases and other start up related costs. Until 2020, these outflows are expected to exceed financial inflows. Over the period of the forecast, the precinct should produce healthy cash flows totalling around $6.5m.

A summary of the precinct’s operating profitability is shown in Figure 32.

The precinct is expected to produce operating incomes from year 1, which increase as tenants are secured and facilities are utilised for conferencing and hire.

The EBITDA line shows that before accounting for depreciation charges, the precinct enjoys positive profitability, indicating that the underlying business model is sound, and feasible. However, after taking account of depreciation, principally on buildings, the precinct does not cover all costs (EBIT). This should not be taken to be read that the precinct loses money; these depreciation charges are offset by the receipt of the capital grants.

By 2032, the precinct should be generating around $1.9m of operating income, from which around $880k of cash flow should be generated.

Figure 33 shows the precinct’s net asset position and land and buildings value.
6.1.4 Conclusions – financial analysis

The financial modelling for the precinct is sound. The precinct will require financial support while it is established of up to $680k. This funding will be required for a minimum of 5 years.

Federation University is ideally suited to support the development of the site and has a balance sheet of sufficient size to manage the site’s working capital requirements. There is a correlation between site activation and financial return, therefore the capability of Federation University to activate the site expeditiously is highly regarded.

Although ongoing development will require continued support over the longer term from key stakeholders including the State Government and Latrobe City Council the modelling shows that under all scenarios the facility is able to produce sufficient cashflow for Federation University to be able to reinvest in the facility. This reduces exposures for Government and also reduces the risk that the precinct’s expansion cannot be financially supported. The modelling demonstrates that Federation University would be able to make co-investments into the precinct to support its growth and long term development.

6.2 Economic impacts

To assess the economic impacts of the project, an input output economic model was developed in conjunction with Federation University’s Economic Department. This model was developed to cover:

1. The Gippsland region, as defined by Local Government Areas within Gippsland, which include Bass Coast, Baw Baw, East Gippsland, Latrobe, South Gippsland and Wellington (S); and

2. The remainder of Victoria

The model was built using latest input - output models (ABS Cat 5209.0.55.001 2012/13) as well as Cat 1292.0 - Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (Revision 2.0) (updated 3/11/16) for the industry structure.

The precinct will deliver economic benefits in several important ways, as depicted in Figure 34.
Through its teaching and education function the precinct improves the labour force and life prospects for individuals and contributes to a more productive economy by preparing students for direct entry into the workforce, or for tertiary studies.

The ongoing operations of the precinct contribute significantly to local economic activity. Continuing investment in the precinct’s infrastructure and capital assets will increases local infrastructures and supports the local construction industry.

For a regional institution, such as Federation University and Federation Training, as well as those tenants and organisations operating from the precinct, its ability to draw staff members, researchers, teachers and their families to the region is also a particular feature that has been modelled. The precinct will support and encourage population growth of the region, many of whom are likely to be ‘knowledge workers’.

The precinct will also play an essential role within the region – adding to the population base, producing output, and providing jobs and income for many members of the community. It will provide access to high level and industry specific benefits of technical education and training for local residents, residents from regional, rural and more disadvantaged areas, as well as supplying students who move into the tertiary sector or directly into employment. Many of these benefits will wash through into the local, regional and national economies in the form of higher productivity, participation and growth. The facility also will house research activities that will deliver critical solutions to industry issues and opportunities. The research, properly commercialised, will also support productivity increases in the broader economy.

### 6.2.1 Conceptual approach and model

To capture these economic flows, the approach shown in Figure 35 was developed to determine the precinct’s future economic impact.

![Figure 35 – Conceptual model](image-url)
Primary industry divisions were used for the analysis and the following subdivisions were used to identify specific economic impacts effecting the Gippsland region and remainder of Victoria from changes in the following economic flows:

- Construction (non-residential);
- Vocational training; and
- Scientific research

Economic information to be sourced for construction and ongoing operation phases of the site include:

- Output
- Employment
- Value added
- Regional imports
- Exports (intra and international)
- Other relevant information

### 6.2.2 Model inputs

The following inputs were modelled and procedures applied to the modelling:

1. Construction simulation of $15m was generated, representing the estimated build cost of stage 1 of the precinct, and the results of this simulation were then incorporated into the original input-output table to reflect whatever structural change the construction activity may have caused. This required a rebalance using the construction activity impact results and including the employment that was generated.

2. Final Demand Increase simulations were then applied to this modified structure input-output table as follows:

   - To represent the economic impact of arising from the operations of the precinct, demand was increased to reflect an increase in the scale of operations of Federation University’s Technology Park, including management, administration, café and conferencing, etc. Over the 12 years of operation, the figures vary under alternative scenarios.

     - $0.73m increase in TAFE-VET education sub-sector activity, presenting the expected costs to operate the Tech School on an annual basis. Under Scenario C, this figure was doubled to represent the increase in Federation Training

     - $5.0m for every 2,500m² of floor space increase in scientific research and associated technical services, representing the estimated average expenditures undertaken by tenants of the park

These scenarios were all simulated separately and independent of each other rather than together. Detailed outputs from the economic modelling can be found in Appendix H. This modelling represents the economic benefits from the park operating itself, it does not include the wider economic benefits from would be expected to occur from the parks operations.

### 6.2.3 Model outputs

The economic modelling under the three scenarios shows the following:

<table>
<thead>
<tr>
<th>Scenario A</th>
<th>Scenario B</th>
<th>Scenario C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floorspace (m²)</td>
<td>5,000</td>
<td>6,500</td>
</tr>
<tr>
<td>NPV ($m) @ 7.5%</td>
<td>350</td>
<td>469</td>
</tr>
<tr>
<td>BCR</td>
<td>14.5</td>
<td>15.6</td>
</tr>
<tr>
<td>Construction FTEs</td>
<td>80</td>
<td>99</td>
</tr>
<tr>
<td>Ongoing FTEs</td>
<td>218</td>
<td>278</td>
</tr>
<tr>
<td>Valued added Construction ($m)</td>
<td>9.8</td>
<td>12.1</td>
</tr>
<tr>
<td>Value added Ongoing ($m)</td>
<td>28.7</td>
<td>36.9</td>
</tr>
<tr>
<td>Output Construction ($m)</td>
<td>37.1</td>
<td>45.8</td>
</tr>
<tr>
<td>Output Ongoing ($m)</td>
<td>53.3</td>
<td>68.4</td>
</tr>
</tbody>
</table>

Table 6 – Summary of economic outcomes
The analysis demonstrates that under each development option there are strong economic impacts / returns from the investments made. It also worth noting the relatively higher economic returns that arise from the development of the innovation precinct, which uses higher skilled and paid workers. Scenario B has a relatively higher blend of this type of activity, which is reflected in a high BCR figure arising from high economic impact but from less construction activity.

Scenario C includes the expansion of the TAFE results in higher levels of employment, but as the TAFE is a relatively low yielding economic asset (at least over the period under which this analysis was undertaken), the scenario represents the least economically efficient way to develop the precinct.

The economic modelling reaffirms the development approach of integrating industry, training and tertiary sectors. Under this model the site, once activated, would be expected to have between 700 – 1,500 users during school terms.

6.2.4 Other economic benefits

There are a range of broader economic benefits that would deliver positive economic benefits to the region that would stem from the precinct but have not been included in the economic model. These benefits are sufficiently well recognised in the economic literature as to warrant noting:

- Improvements in the region’s innovation system will lead to improvements in the region’s productivity and therefore economic growth;
- Act to attract people to the region, which lifts economic growth in its own right as well as increasing the stock of local and regional knowledge, particularly if those attracted to the region are knowledge based workers, which also acts to increase levels of economic growth;
- Increasing the efficiency of infrastructure use (which lowers per use costs) as greater numbers of people use existing infrastructures; and

- Increasing the density of networks tends to increase their effectiveness and efficiency which leads to improved economic outcomes

6.2.5 Long term economic outcomes, wider economic benefits

Attempting to predict the long term and wider economic outcomes from a project of this nature is difficult and outside the scope of this report. However, some indicative results can be obtained by comparing the outcomes from other parks in regional Australian locations. The ‘best nearest’ example is the Ballarat Technology Park, also operated by Federation University. The value added of the park has been estimated at $180m and the employment outcomes at 1,400 FTEs. This correlate to 3.8% of Ballarat’s annual economic value added and 3.6% of workforce.

Using these figures as a basis, after 20 years, should this park achieve these economic impacts then the likely economic impact for the region will be in the order of 1,280 FTEs and $141m of economic value added.
### 7. Risk and Governance

#### 7.1 Risk analysis

The following risk analysis has been undertaken in relation to this project:

<table>
<thead>
<tr>
<th>Nature of risk</th>
<th>Inherent risk status</th>
<th>Mitigation techniques &amp; strategy</th>
<th>Residual risk status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Securing access to land</td>
<td>High</td>
<td>Tech Park building is secured Significant other land held by Minister under Tertiary Education Act Latrobe City land to be transferred to University</td>
<td>Med</td>
</tr>
<tr>
<td>Change in key personnel at stakeholders</td>
<td>Med</td>
<td>Governance model provides for multiple party interest at advisory level to reduce these risks Federation University has internal succession planning mechanisms which underpin / mitigate this risk</td>
<td>Med</td>
</tr>
<tr>
<td>Securing commercial tenants / identified opportunities in expected timeframes</td>
<td>Med - Low</td>
<td>Series of near-term opportunities have been identified and assessed Communication and discussions have commenced with some stakeholders Commence marketing and activation activities immediately Develop prospectus and associated marketing materials Fed University experienced in establishment and development of technology precincts</td>
<td>Low</td>
</tr>
<tr>
<td>Construction costs exceed budget and timeframes, adding financial risks to the project</td>
<td>Med</td>
<td>Detailed design and costings completed Managed through procurement processes Contingencies built into the project costing Federation University experienced project manager</td>
<td>Med - Low</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nature of risk</th>
<th>Inherent risk status</th>
<th>Mitigation techniques &amp; strategy</th>
<th>Residual risk status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and project time delays arising due to issues pertaining to development</td>
<td>Med</td>
<td>Major risks identified include flood overlays and potential cultural heritage Expectations that resolving issues should occur while construction is further planned Accepted processes to manage these risks - but potential time exposures</td>
<td>Low</td>
</tr>
<tr>
<td>Precinct is not developed sufficiently for identified opportunities</td>
<td>Low</td>
<td>Building space is available in the short term, with some flexibility in the short - medium term Develop planned and collaborative approach with stakeholders to opportunity realisation</td>
<td>Low</td>
</tr>
<tr>
<td>Tech School activation</td>
<td>Med</td>
<td>Detailed pathways and planning model needs to be more developed</td>
<td>Low</td>
</tr>
<tr>
<td>Governance risks</td>
<td>Med</td>
<td>Federation University has internal mechanisms which underpin / mitigate this risk Fed University experienced in establishment and development of technology precincts Governance model caters for diversity as well as recognising issues of development Broader program of regional transition underway that provides systemic governance support</td>
<td>Low</td>
</tr>
<tr>
<td>Land area is constrained over the long term</td>
<td>Med</td>
<td>There is a risk that the identified parcel of land at 16 hectares is not sufficiently large to support long-term growth of the precinct This business case has identified potential sites for expansion around the preferred site, but also the option for moving the Kernott Hall into the CBD, effectively creating opportunities to free up space on the site</td>
<td>Low</td>
</tr>
</tbody>
</table>
7.2 Management and governance model

7.2.1 Governance framework

There are two elements of governance to be considered in developing the governance role of the Education and Innovation Precinct:

1. Precinct itself; and
2. Broader regional innovation system of which the precinct is a part.

7.2.2 Precinct

The governance of the precinct is fundamental to the success of it delivering its objectives. There have been several critical elements of the governance framework identified. These are as follows:

The precinct is comprised of three separate but integrated elements:

1. Tech School, controlled operated by Federation Training
2. Federation Training’s ongoing operations on the site
3. Broader precinct - controlled and operated by Federation University

The elements must be separately managed and operated as they have different core purposes, but they must be integrated to ensure common purpose and pathways and linkages between them are developed and maintained. This will require a collaborative governance model and approach that ensures the principle that the precinct be developed in a way that supports the broader region is reflected in the governance model.

Federation University has experience and capability in managing and developing technology parks, and is also carrying the majority of the financial and commercial risks associated with the park. The University has a long and stable history with which commercial operators will be comfortable entering into long term commercial agreements, of the sort that underpin a park of this nature such as land, building, tenancy and research programs. These considerations need to be recognised in the governance model and as such the land on which the precinct is established will be need to be under the ultimate management of Federation University. It is unlikely Federation University would agree to taking on the financial and commercial risk associated with the park's development without being ultimately able to manage the development of the site.

This said, Federation Training currently operates training courses from the site and has expressed an intention to further develop programs and courses at the site.

Taking these issues into consideration two governance approaches are put forward for further consideration in the masterplanning process:

1. Existing land titles remain, but with legal instruments introduced to recognise pre-existing rights

Appropriate instruments therefore need to be developed that recognise the existing use and cater for some future development of Federation Training's site footprint. The development of Federation Training's presence on the site further strengthens the business case and reaffirms the proposed precinct model outlined in 5.1.3.

This model recognises Federation University's experience operating and developing technology parks and the risk's they are accepting in the project whilst recognising Federation Training's pre-existing assets and development
desires associated with the site. For the project to be successful, these issues need to both be recognised and co-exist. The proposed approach provides a model that balances these requirements.

2. Land titles are split, providing for Federation University to operate on separate title

Rather than instituting legal instruments over the land, an alternative is to split the land and provide Federation University with separate land title and control over the newly formed land parcel. Federation Training would retain control over the remaining land.

The land that would be retitled would need to be determined as part of the masterplanning process, however this business case has demonstrated that the existing site can adequately cater for this alternative to be pursued with sufficient land available to cater for the growth needs of the University and Federation Training.

Under both models a Precinct Advisory Committee (PAC) will be formed to provide advice on the overall / high level strategic direction of the precinct – which comprises the entire site, including the Innovation park, Tech School and Council owned land. The PAC will not be responsible for operational matters, focusing instead on collaboratively developing the precinct, linking the precinct to industry, assisting in identifying future needs and providing high level networking.

It is recommended that the PAC will be comprised of up to 9 members made up of:

- Independent chair
- Industry - two positions (including representatives from the Park)
- Federation University - one position
- Federation Training - one position
- Technology School – one position
- Latrobe Council - one position
- Community representative - one position
- State Government representative – one position

Terms of reference and charter for Advisory Committee need to be developed as an early stage action.

7.2.3 Regional innovation governance

In addition to the governance and management of the precinct itself, there is a broader governance role around how the broader regional innovation system, of which this precinct will be a vital element, is developed. This is primarily the function of state, regional and local governments.

There is a key role in integrating the precinct into the broader structure and innovation systems of the region. There are two approaches based on where the system is seen in its development. The first is to approach the development as either more catalytic (support of network formation) or the second, which is more interventionist (direct intervention and governance).

The establishment of this precinct would be viewed as interventionist, whereas this business case is predicated on the need for network development and, therefore, the broader governance approach should support this approach once established, specifically setting a favourable legal and institutional environment that aims to stimulate but not govern processes. This broader objective should be undertaken while discharging the three key roles of regional governance as it pertains to innovation development and activation:

1. Setting regional priorities for research based on small units of excellence not necessarily recognised at the national level;
2. Negotiating with central actors to shape central policies for the benefits of their regions; and
3. Building linkages from all elements of the regional science system into innovation, commercialisation and technology transfer.
### 7.2.4 Best practice checklist and evidence

A checklist of key elements has been developed and referenced to this business case based on the best practice review.

<table>
<thead>
<tr>
<th>Best Practice Principle</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear, common and shared purposes and strategic intent for co-location</td>
<td>Reason for establishment and locations decisions spelt out Strategic purpose and areas of impact identified</td>
</tr>
<tr>
<td>Core operating values and principles to inform governance frameworks</td>
<td>Included in this plan Governance model identified and framework established Network and open innovation principles core</td>
</tr>
<tr>
<td>Demonstrated potential for added value, i.e. the expected benefits of co-location</td>
<td>Concept plan establishes long-term framework for long-term value creation Benefits and nature of co-location spelt out in this document Role of the network in facilitating and delivering benefits</td>
</tr>
<tr>
<td>A sustainable precinct must combine investments in innovation stocks (assets) and flows (people, ideas, technologies) and non-traded interactions (facilitate social interaction)</td>
<td>All elements are included from hard / stock assets such as buildings and connectivity, catering for people and movement of / engagement of people with the precinct Social and community elements also addressed via precinct engagement and network model</td>
</tr>
</tbody>
</table>
Public transport infrastructure (linking to broader metropolitan network and precinct wide local network)

<table>
<thead>
<tr>
<th>Best Practice Principle</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public transport infrastructure</td>
<td>Public transport linkages identified and included in concept works</td>
</tr>
<tr>
<td></td>
<td>Long-term train station on site</td>
</tr>
<tr>
<td>Coordinated infrastructure commitment and planning and supportive institutional processes</td>
<td>Governance models cater for institutional processes</td>
</tr>
<tr>
<td></td>
<td>This document spells out role of precinct in broader regional innovation system and of the role institutions have in setting regional innovation agenda</td>
</tr>
<tr>
<td>Mixed use development, residential development within or directly adjacent to employment, denser development around public transport nodes and high amenity, pedestrian friendly environment</td>
<td>Elements are factored into initial precinct plan</td>
</tr>
<tr>
<td></td>
<td>User groups identified and needs factored into planning</td>
</tr>
<tr>
<td>Government as key anchor tenant via hospitals, universities, government offices, etc.</td>
<td>Federation University and Federation Training anchor tenants</td>
</tr>
<tr>
<td></td>
<td>Co-location of future government offices identified as future growth opportunity</td>
</tr>
<tr>
<td>Superior ICT infrastructure</td>
<td>Budget included for this element</td>
</tr>
<tr>
<td>Marketing / investment recruitment campaigns</td>
<td>Budget included for this element</td>
</tr>
</tbody>
</table>

Table 8 – Best practice checklist
8. Implementation and recommendations

8.1 Recommendations

The following recommendations are made in relation to this project proceeding:

8.1.1 Precinct master planning approach to land development should be adopted

Given the long-term nature of the precinct and the land use issues identified in this report, it is recommended that a masterplan is developed that responds to these issues and lays the foundations for the long-term strategic planning and development of the site and the surrounding area. In addition to typical master planning issues, this precinct masterplan should consider in detail:

- Development of Kernot Hall and integration of this facility into the site
- Whether the best co-development model is split the exiting titles or use a legal instrument over the current land
- Long-term development beyond the existing recognised precinct boundaries and consideration of a funding mechanism and the statutory processes required to ensure sufficient land is available for long term expansion
- Integration of the precinct into surrounding land uses, including the logistics precinct, retail and commercial zones, residential areas, public transport and access
- Over the longer term, development of a train station at the site
- Consideration of residential and conference facilities on the site, to increase its attractiveness and to develop alternative income streams
- Public transport routes, access and regional connectivity

Given the long-term nature of the proposed masterplan, it is recommended that the PAC be charged with completing this work, and in doing so reaffirm the development principles outlined in this business case.

8.1.2 Land and planning issues resolved as a priority

This project has recognised a range of land use issues that will need to be addressed for this project to reach its potential. Issues pertaining to existing covenants, flood, land ownership and transfer and cultural heritage, represent risk to this project ranging from delaying commencement, increasing financial costs and adding complexity. It is recommended these issues are addressed at the first possible opportunity to provide project and development certainty.

8.1.3 Include precinct in Latrobe ‘City Deal’ as part of a long-term funding sources and investment strategy

This business case identifies the need for a long-term development strategy that includes the need to address the issue of potential land acquisition for long-term development, or creating additional development opportunities on the existing site by, for example, relocating the Kernot Hall into the CBD as part of the development of this precinct.

Whatever the makeup of the final strategy, it will require the identification of long-term funding sources and a long-term investment strategy to be developed. We recommend that consideration is given to sourcing philanthropic funds, potentially from coal fired operators as part of their exit from the region.

There has been considerable interest in recent times on the role City Deals can play in providing long-term funding solutions for developing cities, such as Traralgon and Morwell. We, therefore, recommend that the region investigate undertaking a City Deal process that includes recognition of the long-term development needs of the precinct, including land acquisition and development of the region’s connectivity, specifically the development of a train station.
8.1.4 Develop terms of reference and charter for Precinct Advisory Committee (PAC)

The role of the PAC is identified as critical in assisting to set the general direction of the precinct, engaging industry and providing advice to its operators (Federation University). This is a vital governance role, particularly given the role the precinct is expected to play in the development of the region’s innovation system and broader industry networks. To enshrine this role, it is recommended that a charter be developed as a priority to guide the role of the PAC and its interaction and expectations with the precinct.

8.1.5 Long-term train station and inter-regional connectivity

The preferred site for the development of the precinct has a train line running parallel to its southern boundary. This line is the main one to and from Melbourne and the east of the region. The location of the precinct next to it presents unique development and connectivity opportunities. Provisions should be made to plan for the establishment of a station at the precinct. Should this occur, development of the precinct and the immediate area would be expected to accelerate, and opportunities for alternative and complementary development would arise.

Land values would increase and their uplift presents as a co-funding opportunity to fund the station. Such a funding model would be consistent with the recommendation to develop a City Deal as outlined above.

8.1.6 Conference and accommodation

Planning for the site over the longer term should encompass considerations for accommodation and conference facilities. This will increase the attractiveness of the site for commercial location, present opportunities for alternative income streams to be developed and support the development of a range of new education and training services, particularly those requiring live-in components such as executive education.

8.1.7 Consider a programme for start-ups spawned from coal fired energy production

Using guidance from overseas experiences (Portland, USA) and the understanding that the coal mining and the coal fired energy generation businesses will change in the foreseeable future, it is recommended that a funding / industry development stream be developed and located at the precinct that supports start-up firms specifically spawned from coal fired generators. Overseas experience could be used to guide the nature of the funding / program support and the likely success factors.

This initiative would directly link the progressive closure of this industry with the economic development of new industries, encourage the establishment of new firms and, therefore, employment opportunities across Gippsland.

8.1.8 Develop a strong brand strategy

One of the recognised key success factors for the establishment of a successful innovation precinct is to establish and develop a strong brand for the site. It is, therefore, recommended that this work is completed at an early stage to support further fund raising, engender community support and aid in marketing of the site to potential tenants.

8.1.9 Infrastructure Victoria – strategy and submissions

The Victorian Government has created a new body, Infrastructure Victoria, to provide advice on future infrastructure development. The document is silent on this type of project, i.e. technology park development, but does refer to strategic transit-orientated development corridors. The development of this site, in conjunction with the train station would, prima facie, fall under this category. Therefore, it is recommended that Infrastructure Victoria is made aware of this project and its potential to support transit orientated development through the Gippsland region.
8.1.10  **Federal Government funding opportunities**

This document details several Federal Government funding opportunities under the recently released innovation policy / statement. The PAC should pursue these opportunities as this project aligns to this policy statement.

8.2  **Delivery**

Construction is scheduled to commence in 2018 should funding be approved, with the building ready for tenancy in 2019. A delivery framework is shown in Figure 36.

![Figure 36 – Gantt leading to completion of Stage 1](image)

8.2.1  **Next steps**

Figure 37 shows the next steps for the development of the precinct. Included in the image are agreed milestone dates for the development and construction of the Morwell Tech School.

![Figure 37 – DRAFT timeline of immediate year ahead](image)
References

Advanced Manufacturing Research Centre Sheffield (2011), background on AMRC. Retrieved from The University of Sheffield Advanced Manufacturing Research Centre: http://www.amrc.co.uk/about/background/

BiGGAR Economics (2015), Economic Impact of the University of Southampton. Retrieved from University of Southampton:

http://www.cambridgesciencepark.co.uk/about/history/


Giuliani, E (2010), ‘Network dynamics in regional clusters: the perspective of an emerging economy’ Papers in Evolutionary Economic Geography 1014, Section of Economic Geography, Utrecht University


Appendix A: Investment logic map
Appendix B: Review of economic data and regional economic performance

Introduction

These analyses provide a data framework to analyse the economic and social performance of the Gippsland region and to compare this performance to other regions across Victoria and Australia.

The analysis provides an evidence based model to identify problem areas within the regional economy and social structure and in doing so support initiatives that address these issues and deliver benefits to the region.

Regional analysis

The regional analysis is modelled from the *Progress in Australian Regions Yearbook 2015*. Data where Gippsland significantly underperforms compared to other regions is highlighted.

<table>
<thead>
<tr>
<th>Data Sets</th>
<th>Latest Year</th>
<th>Earliest Year</th>
<th>Greater Melbourne</th>
<th>Rest of Victoria</th>
<th>Latrobe - Gippsland</th>
<th>Greater Melbourne</th>
<th>Rest of Victoria</th>
<th>Latrobe - Gippsland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth by sub-state region</td>
<td>2013</td>
<td>2007</td>
<td>83.5</td>
<td>81.6</td>
<td>81.4</td>
<td>1.5%</td>
<td>1.2%</td>
<td>1.5%</td>
</tr>
<tr>
<td>People with a vocational or higher education qualification by sub-state region (%)</td>
<td>2013</td>
<td>2007</td>
<td>66.2</td>
<td>59.1</td>
<td>58.7</td>
<td>22.6%</td>
<td>27.0%</td>
<td>23.6%</td>
</tr>
<tr>
<td>Voluntary work (%)</td>
<td>2011</td>
<td>2006</td>
<td>15.8</td>
<td>23.4</td>
<td>22.8</td>
<td>1.3%</td>
<td>-3.7%</td>
<td>-6.6%</td>
</tr>
<tr>
<td>Weekly disposable household income for low and middle income households ($ real)</td>
<td>2011/12</td>
<td>2007/08</td>
<td>495</td>
<td>439</td>
<td>na</td>
<td>9.5%</td>
<td>0.0%</td>
<td>na</td>
</tr>
<tr>
<td>People with a Certificate III or above, or employed in a skilled occupation by sub-state region (%)</td>
<td>2011</td>
<td>2001</td>
<td>63.2</td>
<td>56.7</td>
<td>55.2</td>
<td>19.9%</td>
<td>17.6%</td>
<td>17.2%</td>
</tr>
<tr>
<td>Employment rate (%)</td>
<td>2011</td>
<td>2001</td>
<td>94.5</td>
<td>94.8</td>
<td>94.3</td>
<td>1.2%</td>
<td>2.5%</td>
<td>3.4%</td>
</tr>
<tr>
<td>New business entry rate by sub-state region (%)</td>
<td>2013/14</td>
<td>2012/13</td>
<td>14.8</td>
<td>10.4</td>
<td>9.3</td>
<td>17.5%</td>
<td>14.4%</td>
<td>16.3%</td>
</tr>
<tr>
<td>People aged 15-24 years who are earning or learning by sub-state region (%)</td>
<td>2011</td>
<td>2001</td>
<td>77.5</td>
<td>72.5</td>
<td>69.9</td>
<td>-0.9%</td>
<td>-1.0%</td>
<td>-1.8%</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>2014</td>
<td>2010</td>
<td>6.7</td>
<td>6.3</td>
<td>5.6</td>
<td>31.4%</td>
<td>1.6%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Employed persons</td>
<td>2011</td>
<td>2001</td>
<td>1,927,927</td>
<td>600,186</td>
<td>109,695</td>
<td>22.7%</td>
<td>17.9%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Average duration of unemployment</td>
<td>2014</td>
<td>2004</td>
<td>37.0</td>
<td>39</td>
<td>40</td>
<td>-22.9%</td>
<td>-34.5%</td>
<td>-29.8%</td>
</tr>
</tbody>
</table>
The data analysis from the *Progress in Australian Regions* report shows underperformance against the following key metrics:

- People with a Certificate III or above, or employed in a skilled occupation by sub-state region (%)
- New business entry rate by sub-state region (%)
- People aged 15-24 years who are earning or learning by sub-state region (%)
- Labour Force Participation Rate
- Ratio of household income for low income households to median income households

These metrics indicate the issues underpinning this project, namely lower educational levels, engagement and a generally lower socioeconomic structure than the rest of Victoria. The analysis also shows that the region has lower raw scores and in many of the metrics is either not improving or improving at the same rate as other the rest of Victoria. This means the gap between Gippsland and other regions in these key areas is growing; that is, the problem is getting worse.
Competition analysis

Gippsland Competitive Analysis is based on the Regional Australia Institute Competitiveness Framework and is comprised of the following themes:

Theme 1: Institutions

The institutional environment within a specific region is determined by a combination of Commonwealth, state and local government controls. These institutions play an integral role in creating the legal and administrative framework within which investors and businesses operate and households reside and, therefore, have a strong bearing on competitiveness due to the level of influence on investment decisions. For instance, an investment environment with minimal red tape may increase the incentives to invest in a certain region. Alternatively, a lack of transparency or trustworthiness in the institutional framework may serve to discourage investment.

Theme 2: Infrastructure and essential services

Infrastructure and transport (and, by extension, essential services) are crucial elements in determining the location and type of investment activities and business sectors that can develop in a region. Well-developed infrastructure, particularly dependable electricity and telecommunications systems, are an integral component of business production. Similarly, effective transport systems are vital in allowing regions to move goods and services in a secure and timely fashion. Both of these measures directly influence a region’s competitiveness as they improve the region’s ability to host economic activities through adequate infrastructure and increase the region’s ability to interact with other markets.

Theme 3: Economic fundamentals

Economic conditions determine the quality of the general economic climate in a region. Economic stability is a key factor in ensuring high levels of trust in the market for both consumers and producers. High levels of trust lead to high long-term investment rates (by businesses and households), which are an integral component of competitiveness. Conversely, uncertainty acts as a deterrent to investment, thereby decreasing competitiveness.

Theme 4: Human capital

Human capital is a measure of the capabilities and skills of the workforce in a particular region. Both health and education are major contributors to a region’s level of human capital, as both factors are understood to increase labour efficiency and competitiveness.

Regions of non-metropolitan Australia which have high levels of human capital – that is, a well-educated workforce and a propensity towards lifelong learning – are expected to experience higher levels of economic growth, are more adaptive and innovative and are more resilient to negative outside influences.

Theme 5: Labour market efficiency

Both employment rates and the levels of labour force participation are key inputs into the creation of an efficient labour market. Generally, long-term unemployment indicates the presence of inherent structural problems which may adversely impact competitiveness. Low labour force participation may reflect low education levels in the region, a lack of economic opportunities or an atypical age structure (such as a skew towards retirement age persons).

Theme 6: Technological readiness

Information and communication technologies have historically played a crucial role in creating innovative and more efficient work practices and lifestyles, improving productivity and greatly speeding up commercial processes.
At present, digital innovations are transforming the way businesses operate, from retail services through to manufacturing and primary industries. For non-metropolitan regions to keep pace with metropolitan Australia, businesses and households need access to the latest technologies and the skills to use them. Therefore, technological readiness and a region’s speed in adopting technologies is a vital element in determining a region’s competitiveness and ability to attract investment by both households and businesses.

**Theme 7: Business sophistication**

Business sophistication is determined by two key factors: the quality of a region’s overall business networks; and the quality of individual firms’ operations and strategies. These two elements are inextricably linked and work together to encourage higher efficiency and levels of competitiveness. A region’s level of business sophistication signals to potential investors the region’s current productivity capabilities and its potential for responding to competitive pressures.

**Theme 8: Innovation**

The relationship between innovation and competitiveness becomes increasingly relevant in developed economies in which markets need to be at the forefront of cutting edge products and processes in order to retain competitive advantage.

In the context of non-metropolitan regions of Australia, innovation is indicative of businesses willing to try new approaches to improving productivity and engaging with the enterprise environment, the digital agenda and investing in education and training. A reluctance or inability to innovate significantly reduces the competitiveness of a region.

**Theme 9: Market size**

Market size and proximity to market are important determinants of regional competitiveness for non-metropolitan regions of Australia. Generally, larger markets allow firms to develop and benefit from economies of scale and encourage entrepreneurship and innovation. A small residential population and low numbers of local businesses can reduce economic opportunities and limit business growth.

**Theme 10: Natural resources**

A region’s physical endowment, in terms of both the access to natural resources and the physical attributes of the region such as climate, are hugely influential in determining a region’s competitiveness. Access to natural resources can create economic opportunities through offering inputs to production (such as access to water or good quality soil), and can be used to generate production outputs (such as minerals or extractives).

Similarly, the physical make up of a region can be an important determinant of the region’s ability to connect to external markets. If a region is situated on the coast, it may have access to ports, a viable tourism industry, and be naturally more connected to wider markets than an inland region. In contrast, an area which is difficult to access, such as a mountainous region or a remote community, will have more difficulty exporting goods and, therefore, be at an automatic comparative disadvantage.

**Methodology**

Data has been categorised into the ten thematic areas above and ranked:

- Based on standardised raw scores, with the national average = 100; and
- According to regional rankings 1 to 60, with 1 representing the highest or best ranked region, 60 the worst. The median (30), has been highlighted to show the middle ranking point

The resulting radar profiles show the competitiveness of the Gippsland region, in ten thematic areas against national averages.
The overall ranking shows that:

- In all areas except natural resources, Gippsland scores below the average;
- There are significant deficiencies in the area of innovation, business sophistication and technological readiness – areas critical to supporting economic growth through innovation, the focus of this project; and
- The region ranks number 2 in the country in relation to natural resources. This is both a strength, as these resources can continue to underpin future economic opportunities, and a potential weakness, as it also highlights the local economy’s dependency on the resources and the risks that confront it if large parts of the economy, based around resources, change or require major transformation.

The headline summary analysis underpins the need for this project and highlights the areas where the project can make a significant contribution to the region.
The region ranks below national averages across all categories in relation to infrastructure and essential service access except distance to airports (due to the location of the Latrobe Regional Airport – a significant regional asset)

- Access to health care and GP’s is around national average levels
- Access to technical or further service levels are at national levels
Of particular concern for this project are the very low scores in relation to access to primary, secondary and tertiary education services – these access scores would likely be impacting in a range of other areas, such as skill and education attainment.

Compared to other regions Gippsland's infrastructure and essential services ranks above the overall mean.

This means that although below national averages in many areas, such as access to tertiary education, compared to other regions the region ranks satisfactorily.

These disparities only serve to highlight the differences between city regions and country regions, with city regions having high raw scores, lifting national averages, whereas the ranking data removes this bias.

Region's connectivity infrastructure provides a competitive advantage.
The region is quite consistent with national averages in this category – showing it is not at any particular competitive disadvantage.

The rankings are consistent with the core data, ranking 35 from 60 – the region is not at any particular advantage or disadvantage.
HUMAN CAPITAL

The region ranks considerably less than national averages in the areas of university qualification and secondary school attainment.

Higher than average levels of technical qualification demonstrate the strong industrial and technical nature of industry in Gippsland – the relatively high early leavers may link to this element, demonstrating pathways that exist for many to remain in the education system via vocational and technical training.
LABOUR MARKET EFFICIENCY

- The high level of long-term unemployment and welfare dependency are highlighted in this dimension
- Youth unemployment is also above national averages
- Skilled labour, welfare dependency and long-term unemployment are all well above mean levels
- Overall, the Gippsland region's labour market efficiency ranks below the mean, showing clear room for improvement as it pertains to welfare dependence and long-term unemployed employees.
The region's employment in ICT and electronics sectors is well below national averages and in terms of ranking is below average levels.
- Growth in this industry will be required to support technology growth across the region
- Compared to mean averages, the region ranks well in this area and the competitive advantages the region enjoys should be built on
The business sophistication of the region shows that it is economically diverse but in other areas there are shortcomings, such as access to local finance, the export supply chain and own source income.

This analysis highlights the shortage of financial and development capital within the region.

The region ranks in the bottom quarter of regions as pertains to business sophistication, highlighting the need to develop this capability.

Somewhat worringly, the analysis shows that the region ranks poorly in terms of own source business income, but with only average levels of access to finance.
INNOVATION

- This analysis highlights the shortcomings of the region as pertains to innovation
- The region has shortcomings across all key areas and ranks in the bottom 6th of the country
- This chart in someways supports the need for the innovation precinct as a means to improve the innovation outcomes of the region
Gippsland ranks as 2\textsuperscript{nd} in the country in terms of natural resources.

- The analysis highlights the region’s high levels of natural resources and the sources of its competitive advantages.
- The region ranks well above mean in all areas except Coastal access, which is likely to be a function of where larger towns are located relative to the coast rather than the coast.
- The strength of region’s natural resources also highlights the risks to the region of these resource based industries moving subject to change, decline or transition, such as that being faced by the energy production (coal) industry.
- The response to this issue is to develop other forms of resources and capabilities, such as human and technological capital.
The region’s relatively high population number (compared to national averages) is shown in this analysis.

Overall, the region ranks 35 from 60 in terms of its demographic characteristics.

Lower than average population growth rate and issues with poorer than national scores in terms of population turnover and dependency ratios again highlights underlying demographic issues that will hold the region back in terms of its demographic profile.
INSTITUTIONAL FOUNDATIONS

- The strong levels of local economic development support and presence of major companies are evident in this analysis.
- Volunteer activity, community skills, leadership capacity and local government discretionary expenditure are all in line with national averages.
- The region ranks well at mean levels overall, with the high number of employees working in the public sector a feature of the region compared to others.
Appendix C: Literature review

The following literature review examines contemporary thinking on innovation systems and networks, the role of precincts and best practice principles that should be considered in the development of the Gippsland Education and Innovation Precinct.

Benefits from innovation precincts

The investment logic mapping process (shown in Appendix A) identified high-level challenges, or ‘problems’, faced by the Gippsland region. These were principally social and economic. As part of this process, the benefits of developing the proposed precinct were identified to be in the areas of:

1. Skills development;
2. Economic development;
3. Building social capital;
4. Connectivity;
5. Leadership; and
6. Technology adoption.

Existing literature goes some way to supporting these expected outcomes.

According to De Propris and Crevoisier (2011) creating a local system of firms and ‘inter-networking’ creates socio-economic conditions that lead to superior innovation performance. The notion of networking businesses suggests that firms do not innovate in isolation, but contribute to a broader process of learning, advancement and adoption, which is the real and underlying source of innovation and innovative outcomes.

Innovation precincts\(^4\) provide a place where these processes (i.e. learning, advancement and adoption) can evolve. They provide the systemic plumbing for information, knowledge transfers and other economic benefits to spill over to firms within and networked into a precinct.

The advent of new technologies and business models has meant that economic growth can be spawned, regardless of the history or legacy of past industrial structures, culture and formations. Approaches, often with innovation precincts as central, have meant regions can move on from past learnings and ways of conducting business. Industry not part of a place but added to a place can be developed (Porter, 1990). More recent works in the area of regional innovation systems (e.g. Cooke, 2001) focus not only on the synergies between firms but also the regional innovation infrastructure. One of the critical elements that has enabled this development is the mobility of technology and human capital; however, once established in a place, knowledge (and therefore people), tends to remain and accumulate.

Within this newer paradigm, the role of the innovation precinct begins to take shape; within the broader innovation system the precinct acts as an attractor of firms, technology and people and then, over time, acts to support the accumulation of regional knowledge and capital. Networks are critical to the precinct being able to both attract and support accumulation of regional knowledge; otherwise the benefits would be limited to the precinct itself, rather than dispersed amongst firms that are actively engaged with the precinct and its activities and not just present within its boundaries.

It is accepted that the ability to anchor a precinct with a key tenant produces benefits for all other, particularly smaller, firms that co-locate. Universities have traditionally played this role as they attract talent, expertise and can be the catalysts for social networks and provide support for entrepreneurs and

---

\(^4\) There are a number of models of such precincts in the literature including industrial districts, clusters, innovative milieu and regional innovation systems
start-ups. Private sector firms, when acting with universities, have proven to be successful anchors - for example, IBM at the Ballarat Tech Park. Notably, in Portland’s high tech district, it was the downsizing of a major firm that spawned start-ups. This provides a counterbalance, and a pertinent example for Gippsland to the often-made argument that large firms in a region must always be growing for economic growth to occur; economic growth can occur through multiple avenues.

However, it is not just sufficient for a region to be able to attract firms, it must be able to retain them; they must ‘belong’. Fast tracked approaches have often failed as they neglect to develop sufficient linkages and synergies with the local economy. They end up as ‘cathedrals in the desert’ (Cooke, 2001). To provide the best chance of long-term success, securing anchors must be coupled with the enhancement and strengthening of the regional innovation system, specifically supporting the synergies and interdependencies between government, universities and the business community (De Propris and Crevoisier, 2011).

Taken further, the role of the precinct must be to support the regional competitiveness through assisting to embed skilled labour and capital, help transform codified into tacit knowledge, support dense and local networking, information sharing and create hard and soft infrastructure for innovation (De Propris and Crevoisier, 2011).

Engagement with the broader economy is becoming increasingly critical in a more globalised world. Through the attraction and retention of anchors, such as Federation University, local regions are better able to access and interact with the knowledge that is fed into the local innovation system. The precinct should act as a gatekeeper and pollinate the region with inputs, ideas and innovations (Giblin, 2011).

Open innovation networks

A key characteristic of innovation is that it is widely recognised as a social process, involving the interaction, alliance and cooperation and thus networking of different parties. Innovation processes often have numerous, unconnected sources. It is rarely the result of an individual firm (Freeman, 1991). Open innovation builds on this principle by encouraging companies to focus on developing ideas externally, creating paths for ideas to go to market in addition to more traditional and closed innovation and commercialisation pathways. Creation and sharing of knowledge in networks is essential to make open innovation strategies work (OECD, 2008).

Central to the idea of open innovation is the role of regional culture and human capital. Competition, informal and formal collaboration among companies and with regional universities underscore open innovation systems (Saxenian, 1994). Maintaining global connections is also important. Ensuring quality of place also contributes to attracting and retain retaining knowledge workers. Quality of place encompasses a wide range of aspects including architecture, attractive natural environment, recreational facilities, presence of a diversity people, housing conditions, smart infrastructure, vibrant city life, symbolic capital and original brand (Florida, 2000). For an open innovation network to succeed, both supportive innovation infrastructure and companies that interact with the infrastructure must be present (Porter and Stern, 2001). Networks that bring the two parties together and support smaller firms are, therefore, vital in the operation of an open innovation system.

The role of governance is also important as policy can facilitate connectivity and interaction within the network, as well as aid in the attraction of firms and people. The inclusion of and role played by a regional university within the network is also well documented. At its essence, an open innovation network is an approach to improving regional capabilities in providing the basis for regional and economic growth (Cooke, 2005, 2007). Within the Gippsland region, this means integrating skills, training and education into the broader system of firm growth and development.
Open innovation networks commence with partnerships and policy arrangements that involve government, industry and universities. The Gippsland Education and Innovation Precinct is an example of such an approach. This triple helix model has been successfully used in many other regions to promote innovation and support economic growth.

To be successful, the innovation network must be cognisant of the nuances of the local economy, be appropriately governed, actively develop knowledge infrastructure and build both community and culture. This multi-dimensional approach recognises that firms are embedded in systems of social relations that shape their formation and operations. These networks provide significant advantage to those firms involved, including:

- Exchange of knowledge and know how (often at no cost);
- Rapid ways for individuals to meet and come into contact with others, even when no formal arrangement exists; and
- Power to maintain stable and high quality relationships over time that foster trust and reciprocity.

One of the common features identified in high performing regional economies is the presence of multiple localised networks that are embedded in wider innovation systems, which enhance the diffusion of tacit knowledge and the circulation of contextual skills among co-located firms and institutions (Giuliani, p158).

Perhaps the most important element to retaining firms in a region, once attracted, is to ensure the anchor is embedded in local systems and structures through trust-based relationships. Trust and cooperation are the key to knowledge flows and thus innovation. Network formation and function are vital elements in ensuring trust and cooperation are built.

Networks are also the mechanism through which economic value, in the form of knowledge, moves across, into and out of a region. A precinct, with a proper anchor, such as Federation University, must be able to distribute information more broadly than its physical location, and firms must be able to access such knowledge without necessarily attending the physical location. There needs to be reciprocity between the precinct and the remainder of the region. The network provides the means to achieve this two-way exchange.

The movement of information and ability for a region to maintain long distance interactions across a region is viewed as increasingly critical to its economic development and competitiveness. Indeed, in a world where it is becoming easier and easier to mobilise very different and complementary knowledge from other places, the focus should be on the building of local capacities to access and mobilise external (outside of the region) knowledge (De Propris and Crevoisier, 2011).

**Best practice principles**

Following are a series of best practice principles and critical success factors in innovation and technology precincts identified through the review of literature. In his broad case study analysis on the role of precincts in innovation systems, Cutler (2009) noted that although precincts are unique in some manner, there are a number of best practice principles that have general application. These include:

- Clear, common and shared purposes and strategic intent for co-location;
- Core operating values and principles to inform governance frameworks;
- Demonstrated potential for added value, i.e. the expected benefits of co-location;
- A sustainable precinct must combine investments in innovation stocks (assets) and flows (people, ideas, technologies) and non-traded interactions (facilitate social interaction);
- Market organiser / broker and facilitator of relationships (formal or informal); and
- Mechanisms for ongoing motivation through champions and achievement reports.
In summarising reflections from practitioners driving and developing innovation districts around the world, Katz and Wagner (2014) noted five consistent strategies, including:

1. Build a collaborative leadership network;
2. Set a vision for growth;
3. Pursue talent and technology;
4. Enhance access to capital; and
5. Promote inclusive growth.

Further, Groves (2007) investigated critical success factors of Technology Park Adelaide. They concluded that the following factors should be considered when planning for such precincts:

- Having a strategic plan upfront, a business case and a champion;
- Creating a habitat for knowledge workers/ build a community of creative people;
- Linking/ the presence of research institutions;
- Managed by specialist professionals with specific domain knowledge;
- Provision of value added services: introductions, IP and business planning;
- Master plans address hard and soft infrastructure;
- Promote a culture of innovation and competitiveness (not a sheltered environment); and
- Expect growth to be organic and have strong feedback loops as a means for adjusting plans.

In a recent Economic Development Australia publication, McDougall and Witte highlighted a 2009 report from SGS Economics & Planning on the key policy interventions for promoting employment precincts. The following factors should be considered for the long-term sustainability of precincts:

- Public transport infrastructure (linking to broader metropolitan network and precinct wide local network);
- Coordinated infrastructure commitment and planning and supportive institutional processes;
- Mixed use development, residential development within or directly adjacent to employment, denser development around public transport nodes and high amenity, pedestrian friendly environment;
- Government as key anchor tenant via hospitals, universities, government offices, etc.;
- Superior ICT infrastructure; and
- Marketing / investment recruitment campaigns.
Appendix D: Detailed PASCAL analysis

Following is a detailed PASCAL analysis comprising contribution assessments under the eight themes. Note that analyses of Social Capital and Cultural Development (themes 5 and 6) have been combined due to similarities between the two.

Enhancing regional infrastructure

Federation University has engaged proactively in shaping regional agendas and building capacity for effective regional governance and planning. By way of example, in concert with several regional councils it has engaged in collaborative projects specifically aimed at building human capital and managing capacity of major regional governing bodies and centres. The university has also created innovative programs with schools to raise educational aspirations and add value to regional planning efforts.

Federation University has academic research expertise in a range of disciplines of direct relevance to regional governance and planning. They have a Centre for eCommerce and Communication which has been working with local government bodies in the Great South Coast Region to develop a regional communication strategy that will leverage the economic and social benefits of high speed broadband.

Federation University has participated in regional governance and coordinating bodies such as serving on regional boards, contributing to leadership skills, academic expertise, access to university knowledge and capacity and linkages to national and international networks. The membership bodies that the university is part of include the RDA Committee, Committee for Ballarat and regional development associations. Academic and professional staff members are also involved in forums relevant to their expertise, such as regional planning and workshops. They also play a key role in independent research and analysis, as well as public debate and assisting local communities in the development of sharing an understanding of regional issues. For example, the Horsham Campus Research Precinct and the National Centre for Sustainability are in partnership with Horsham Rural City Council and four other councils in the region for the building of staff capacity, focusing on government sustainability priorities and increasing youth participation in sport.

Federation University's commitment to enhancing regional infrastructure extends to the current business case, where, in partnership with Regional Development Victoria, the aim is to build a Gippsland Education and Innovation Precinct in Gippsland, linked to the proposed Morwell Tech School. The Tech School within the innovation precinct is expected to be operational by early 2018 and aspires to utilise leading edge technology, discovery learning and design principles. The Tech School hopes to innovate and provide students the skills, knowledge and characteristics that will connect them to prospective futures. The precinct includes the Discovery Centre, which will act as the precinct's central hub to meet the needs of schools, local government, TAFE, university and industry partners.

Human capital development

Federation University is a significant education institution and regional employer. In 2012, Federation University had 23,187 students enrolled - 12,446 in higher education and 10,741 in TAFE. At this time, the university also employed 558 staff. It is a regionally headquartered and focused university, focused on closing the gap between regional and metropolitan educational attainment - a significant issue in Gippsland. The 2011 ABS Census shows that the Gippsland region's participation in tertiary study and completion of higher education qualifications is lower than the Victorian average. Furthermore, the proportion of employed people aged 20 to 59 with a bachelor degree or above (15.4%) is significantly lower than the Victorian average (27.5%).
Gippsland also has pockets of socio-economic disadvantage. According to the 2011 ABS Census, Gippsland’s socio-economic index for area (SEIFA) score of 954.7 represented a higher level of disadvantage when compared to the rest of Victoria (1006.7) and Regional Victoria (963.9). It should be noted that Federation University is addressing these issues in regional Victoria by becoming one of the national leaders in enrolling and supporting students from low socioeconomic backgrounds. Further analysis of the socio-demographic profile of Gippsland can be found in Appendix I.

In an encouraging trend, mature aged students represent a high proportion of the student cohort at regional universities, thereby suggesting that pathways to lifelong learning and upskilling are relatively strong.

In recent years, there has been an increased focus from government on science, technology, engineering and mathematics (STEM) based programs. In response, Federation University has been providing STEM based programs in order increase the level interest for future generations of tertiary students. The university also provides school-based programs to get students interested in creative arts, law, business and finance, accounting and sustainability.

In regards to creating pathways and expanding access, Federation University is among the largest providers of on-campus and distance enabling courses that prepare students in university study. Its pathways and expansion of access are implemented through the delivery of a comprehensive number of education programs and support over different regional campuses and study centres. The university is also in partnership with regional schools and TAFE to design educational pathways and design diploma/degree programs. The university has a dual sector partnership initiative with six regional and rural TAFE institutions in Victoria to create innovative models for the enhancement of educational pathways and expansion of access to higher education in the regional areas.

This development of education pathways is central to the vision of the Gippsland Education and Innovation Precinct, particularly through the Morwell Tech School. The Tech School is expected to engage with 7,150 secondary students per annum (both physically and virtually). The Tech School will be an important component of the precinct, as it aims to be the anchor for different opportunities that include employers from different industrial sectors and connect with educators to promote real world learning.

**Business development**

When compared to other regions in Australia, Gippsland has a relatively diverse economy. The top three employing industries in the region are Health Care & Social Assistance, Retail Trade and Construction. When viewed at a Local Government Area level, industries such as Agriculture, Forestry & Fishing and Manufacturing are also key employers. Federation University plays an important role in producing graduates across different fields of study to support business and industry innovation, growth and sustainability. Courses include mining, agriculture, accounting, business, finance, law, international studies and information technology.

Of relevance to Gippsland, the agriculture and mining sectors are facing difficulty in regards to skills and knowledge shortages. Federation University is addressing this by introducing undergraduate engineering programs in mining. It also has significant strengths in conducting research and development of innovative technologies for the efficiency and sustainability of agriculture industries.

Further, the creation of the Ballarat Technology Park at Federation University’s Mount Clear site in 1995 has been hugely successful - attracting large-scale organisations such as IBM, attracting SMEs, stimulating start-ups, creating jobs and retaining young people in the region. This model has been analysed as part of this business case.

Federation University also has a history of engaging with local business and the broader community. For example, university staff are encouraged to
regularly serve on boards or advisory committees of regional chambers of commerce and industry associations.

The university also contributes to the development of local and national business and industry networks. In 2013, Federation University's Centre for Regional Innovation and Competitiveness (CRIC) collaborated with government and industry to coordinate the second round of strategic management for the profitable growth program, designed to boost business profits and competitiveness.

Promoting engagement

The engagement of the community and industry stakeholders is essential to an educational institution's mission and vision. Federation University aligns to the vision of raising educational and career aspirations by providing regional communities with access to a variety of programs designed to inform about career opportunities and aspirations to complete tertiary education. Federation University's outreach program spreads across 50 schools and interacts with students in year levels between 5 and 12. The university also offers programs that partner with regional schools that include head start programs, career exhibitions and programs designed for gifted and talented students. Federation is also partnered in the Indigenous Mentoring Experience Program to engage university students to become mentors and support indigenous high school students to build on skills, opportunities, beliefs and confidence to finish school.

Ensuring the precinct is engaged with the Gippsland community is critical to its success and will encourage a sense of region-wide ownership supporting its ongoing usage and sustainability.

Federation University adopts community engaged learning strategies and provide opportunities in gaining experience as creative practitioners to be beneficial to the community. The university is in partnership with Pinnacle Support Services to run three programs that focus on language, literacy, oral communication and numeracy. It also delivers VET programs to Hopkins Correctional Centre and Langi Kal Kal.

Federation University also offers an engagement program for Gippsland, called Gippsland Access and Participation (GAP). This involves reducing systematic barriers faced by residents of regional and rural areas in Gippsland. The GAP program focuses on connecting teachers in remote areas and addresses the decline in interest in maths and science.

Federation University has a strong sense of place and unique identity across each campus and links to various factors of the community.

Some of the university's past community engagement activities include:

- Organising and participating in the ‘Relay for Life’ with Mt Clear Primary School;
- Engaging in art programs with McCallum Industries’ clients;
- Hosting visitations for Japanese students from Fukui Kosen Secondary School;
- Organising activities in libraries at Bacchus Marsh and Maryborough for Literacy and Numeracy Week; and
- Exhibiting student artwork in the Post Office Gallery in Ballarat during NAIDOC week.

Interactive Learning and Social Capital Development processes

Social capital relates to mutual beneficial social networks being developed through reciprocity and understanding. This cannot happen in isolation and needs to include wider communities to create connections. One-way Federation University has been building social capital is through its exchange programs. The university's Centre for University Partnerships (CUP) has responsibility for offshore and onshore partnered institutions, which supports exchange programs around the world.

Interactive learning is also offered in a classroom environment where teaching utilises technology to deliver or enhance activity. One form of interactive
learning is blended delivery, which involves the combination of face-to-face elements such as lectures and tutorials and online learning elements. One of the objectives is to enhance the flexibility and accessibility of student learning through online provision of course content, resources and activities.

Federation University also offers students a range of leadership opportunities, such as FedUni Senate, executive committee members of clubs and societies, residential advisors, team management of sport and recreation, International Students Committee and mentors and PASS leaders in the Student Futures Program. The university's student senate is a representative student body that addresses issues such as recommending improvements to the campus, learning environments and how the Student Amenities Fee should be spent.

It is important that the precinct's key stakeholders, such as Federation University and Federation Training, are experienced in interactive learning and social capital development processes to accord with the region's pursuit of positive education and social outcomes.

**Community and cultural development**

The impact of regional universities is also measured on community and cultural development. Although community engagement activities have been discussed, Federation University also offers a range of outreach and education activities to contribute to the wellbeing and resilience of regional communities. It provides lifelong learning opportunities for local citizens through public lectures from staff or guest speakers on general interest topics and topics on particular global or regional significance.

Federation University's social welfare qualifications emerged from having a need for more welfare support in rural areas. It seeks to equip students with an enhanced framework for working in regional and rural settings. The program has emphasis on address issues faced by indigenous people. The course is also offered as a Graduate Diploma.

The university runs the Centre of Research for Resilient Communities (CoRRC) which focuses on: Understanding resilience; Community resilience; Health and wellbeing; Ethical leadership for resilient communities; and Resilience at the nature/society interface. Two example projects conducted by CoRRC include:

- the Hazelwood Health Study for the Hazelwood power station, currently undertaken in collaboration with Monash University; and

**Promoting sustainability**

Adopting and practising sustainable principles and actions are now embedded in most organisational and institutional values and policy; the design of buildings, management of operations and for universities - the content and outcomes of curriculum contributing to sustainability aims. Further, there is a focus from government on the environment to build regional capacity and to understand and effectively manage the impacts of climate change.

Federation University has given priority to environmental sustainability. The Deputy Vice-Chancellor (Research) chairs a Sustainability Strategy and oversees development and implementation of the sustainability for the university. This emphasises the regional leadership shown by Federation University as it models sustainable practices and behaviour.

There are several programs and courses that focus on sustainability. Applied research strengths have also been built, addressing the national and international significance of environmental sustainability issues. For example, Federation University has opened two research centres, the Centre for Environmental Management (CEM) and the National Centre for Sustainability (NCS). The university also owns and maintains significant regional assets regarding research and education, which includes the Nanya Station and Euston Conservation Park, which are nationally significant assets. The university manages them for conservation and cultural values, education and research.
The NCS is in partnership with the university, which is a provider of leadership to industry, government and the community. There are several short courses taught at the NCS, including Measuring and Managing Carbon in Your Business and Behaviour Change for Sustainability.
### Appendix E: Stakeholder list

The following table shows the stakeholders engaged as part of the development of this business case.

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard Elkington</td>
<td>Regional Development Australia</td>
<td>Chair</td>
</tr>
<tr>
<td>Tim Weight</td>
<td>Regional Development Australia</td>
<td>Deputy Chair</td>
</tr>
<tr>
<td>Gary Van Driel</td>
<td>Latrobe City Council</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>Jane Burton</td>
<td>Coal Resources Victoria</td>
<td>Regional Director</td>
</tr>
<tr>
<td>Scott McArdle</td>
<td>Department of Economic Development, Jobs, Transport and Resources (Agriculture)</td>
<td>Regional Leader</td>
</tr>
<tr>
<td>Greg Blakeley</td>
<td>Department of Health and Human Services</td>
<td>Regional Director - Health</td>
</tr>
<tr>
<td>Ben Leigh</td>
<td>Latrobe Community Health Service</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>Shane Bullock</td>
<td>Monash School of Rural Health</td>
<td>Director (Associate Professor)</td>
</tr>
<tr>
<td>Jeff Petney</td>
<td>Patties Foods</td>
<td>General Manager People and Organisation</td>
</tr>
<tr>
<td>Paul Ford</td>
<td>Agribusiness Gippsland</td>
<td>Chair</td>
</tr>
<tr>
<td>Ben Gursansky</td>
<td>Murray Goulburn</td>
<td>General Manager - Policy, Industry and Government</td>
</tr>
<tr>
<td>Nicola Watts</td>
<td>East Gippsland Food Cluster</td>
<td>Executive Officer</td>
</tr>
<tr>
<td>Shane Hellwege</td>
<td>National Centre for Dairy Education</td>
<td>Group Manager Industry, People and Capability, Dairy Australia</td>
</tr>
<tr>
<td>Steven Covino</td>
<td>Covino Farms</td>
<td>Chief Financial Officer</td>
</tr>
<tr>
<td>David Spree</td>
<td>AGL</td>
<td>Government and External Affairs Manager</td>
</tr>
<tr>
<td>Roland Davies</td>
<td>AGL</td>
<td>Executive Manager</td>
</tr>
<tr>
<td>Paul Batho</td>
<td>Latrobe Fertilisers</td>
<td>Business Manager</td>
</tr>
<tr>
<td>Harry Ballis</td>
<td>Federation University</td>
<td>Head of Campus</td>
</tr>
<tr>
<td>Sam Franzi</td>
<td>Catholic Education Office</td>
<td>Education Officer - Secondary Learning Pathways</td>
</tr>
<tr>
<td>Mick Murphy</td>
<td>Baw Baw &amp; Latrobe Local Learning and Employment Network</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>Paul Van Breugel</td>
<td>Traralgon College</td>
<td>Principal - Junior Campus</td>
</tr>
<tr>
<td>Jenni Hardy</td>
<td>Federation Training Executive Team and Board of Directors</td>
<td>Executive Director Engagement &amp; Capability</td>
</tr>
<tr>
<td>Stephen Klemke</td>
<td>Traralgon Secondary School St Paul’s Anglican Grammar School</td>
<td>Head of School</td>
</tr>
<tr>
<td>Jacek Jasieniak</td>
<td>Monash University</td>
<td>Associate Professor - Director of Energy Materials and Systems Institute</td>
</tr>
<tr>
<td>Val Prokopiv</td>
<td>Gippsland Trades and Labour Council / PowerWorks Board</td>
<td>President</td>
</tr>
<tr>
<td>Mark Knox</td>
<td>Apprenticeships Group Australia</td>
<td>Chief Executive Officer</td>
</tr>
</tbody>
</table>

Note that young people and teachers from Lowanna College and Traralgon College were also engaged as part of the development of this business case.
Appendix F: Concept diagrams

Site organisation - transversal links to Lake Kernot

Site organisation - managing vehicular access to encourage and pedestrian paths

Site organisation - managing vehicular access to encourage and pedestrian paths

Site organisation - links across the site encourage mixing
Site organisation – maximises views to building, creating brand equity
### Implementation Schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Vision**
- 15 weeks (30 Jun - 28 Oct)

**Master Plan**
- 10 weeks (20 June - 30 Sept)

**Business Plan**
- 20 weeks (23 June - 19 Jan)

**Concept Design**
- 8 weeks (2 Jan - 25 Mar)

**Definitive Design**
- 16 weeks (11 March - 15 May)

**Contract Documentation**
- 30 weeks (31 July - 28 Jan)

**Tender**
- 8 weeks (20 Feb - 28 April)

**Construction**
- 10 weeks (21 April - 30 June)

**Post-occupancy**
- 3 weeks (2 June - 19 June)

**Review**
- 00. feasibility
- 01. planning
- 02. design
- 03. construction
### Appendix G: Financial data

#### Scenario A

**Latrobe Innovation and Learning Precinct**

**Profit & Loss (Projected)**

**July 2017 - June 2032**

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Sales</th>
<th>Direct Costs</th>
<th>Operating Profit</th>
<th>EBITDA</th>
<th>Depreciation</th>
<th>Net Finance Costs</th>
<th>Profit before Income Tax</th>
<th>Net Profit after Tax</th>
<th>Movement in Retained Earnings</th>
<th>Cumulative Retained Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 18 - Jun 19</td>
<td>$11,000,000</td>
<td>$10,008,000</td>
<td>$6,992,000</td>
<td>$6,992,000</td>
<td>$3,000,000</td>
<td>$4,000,000</td>
<td>$10,992,000</td>
<td>$3,992,000</td>
<td>$3,992,000</td>
<td>$137,500,000</td>
</tr>
<tr>
<td>Jul 21 - Jun 22</td>
<td>$22,000,000</td>
<td>$399,952</td>
<td>$21,600,048</td>
<td>$21,600,048</td>
<td>$53,000</td>
<td>$44,000</td>
<td>$21,653,048</td>
<td>$21,123,048</td>
<td>$5,000,000</td>
<td>$280,000,000</td>
</tr>
<tr>
<td>Jul 25 - Jun 26</td>
<td>$38,120,000</td>
<td>$345,432</td>
<td>$37,774,568</td>
<td>$37,774,568</td>
<td>$10,008</td>
<td>$10,000</td>
<td>$37,874,568</td>
<td>$37,374,568</td>
<td>$4,000,000</td>
<td>$318,374,000</td>
</tr>
<tr>
<td>Jul 26 - Jun 27</td>
<td>$40,271,000</td>
<td>$403,424</td>
<td>$39,867,576</td>
<td>$39,867,576</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$39,992,576</td>
<td>$39,552,576</td>
<td>$3,000,000</td>
<td>$321,374,000</td>
</tr>
</tbody>
</table>

*Note: All values in Australian Dollars (AUD)*

---

**Hi Tech Precinct - Business Case**

**August 2016 – Version 0.3**
### Latrobe Innovation and Learning Precinct
#### Balance Sheet (Projected)
**July 2017 - June 2032**

<table>
<thead>
<tr>
<th>Date Range</th>
<th>12,387,204</th>
<th>12,095,840</th>
<th>24,512,787</th>
<th>24,194,011</th>
<th>23,859,520</th>
<th>23,418,309</th>
<th>23,071,462</th>
<th>22,720,644</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 17 - Jun 18</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 18 - Jun 19</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 19 - Jun 20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 20 - Jun 21</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 21 - Jun 22</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 22 - Jun 23</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 23 - Jun 24</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 24 - Jun 25</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 25 - Jun 26</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 26 - Jun 27</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 27 - Jun 28</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 28 - Jun 29</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 29 - Jun 30</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 30 - Jun 31</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 31 - Jun 1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Current Assets
- **Bank Accounts**
  - **Main Bank Account**
    - Total Bank Accounts: 11,058,789
  - **Total Current Assets**: 11,058,789
- **Non Current Assets**
  - **Tangible Assets**
    - **Buildings**: 5,000,000
    - **Accumulated Depreciation**: (67,708)
  - **Property, plant & equipment**: 0
  - **Total Accumulated Depreciation**: (67,708)
  - **Total Tangible Assets**: 4,932,292
  - **Total Non Current Assets**: 4,932,292
  - **Total Assets**: 23,418,309

#### Current Liabilities
- **Bank Accounts**
  - **Main Bank Account**
    - Total Bank Accounts: 11,058,789
- **GST/VAT**
  - **GST/VAT Payable**: 1,367,287
  - **Total GST/VAT**: 1,367,287
  - **Total Current Liabilities**: 1,367,287

#### Liabilities
- **Total Liabilities**: 1,367,287
- **Net Assets**: 14,623,704

#### Capital and Reserves
- **Retained Earnings**
  - **Retained Earnings**: 14,623,704
  - **Total Retained Earnings**: 14,623,704
  - **Total Capital and Reserves**: 14,623,704

#### Equity
- **Total Equity**: 14,623,704

---

**August 2016 – Version 0.3**

---

---
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash Inflow</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grant income</td>
<td>55,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
</tr>
<tr>
<td>Coffee - license</td>
<td>0</td>
<td>27,500</td>
<td>33,000</td>
<td>38,500</td>
<td>44,000</td>
<td>49,500</td>
<td>55,000</td>
<td>56,100</td>
<td>57,200</td>
<td>58,300</td>
<td>59,400</td>
<td>60,500</td>
<td>61,600</td>
<td>62,700</td>
<td>63,800</td>
</tr>
<tr>
<td>Conference income</td>
<td>0</td>
<td>0</td>
<td>27,500</td>
<td>28,600</td>
<td>29,700</td>
<td>30,800</td>
<td>31,900</td>
<td>33,000</td>
<td>34,100</td>
<td>35,200</td>
<td>36,300</td>
<td>37,400</td>
<td>38,500</td>
<td>39,600</td>
<td>40,700</td>
</tr>
<tr>
<td>Rental income</td>
<td>0</td>
<td>279,128</td>
<td>364,829</td>
<td>451,275</td>
<td>506,912</td>
<td>569,732</td>
<td>572,350</td>
<td>575,160</td>
<td>578,188</td>
<td>581,007</td>
<td>587,758</td>
<td>593,967</td>
<td>600,033</td>
<td>614,563</td>
<td>619,200</td>
</tr>
<tr>
<td>Car parking income</td>
<td>0</td>
<td>0</td>
<td>11,000</td>
<td>12,100</td>
<td>13,200</td>
<td>14,300</td>
<td>15,400</td>
<td>16,500</td>
<td>17,600</td>
<td>18,700</td>
<td>19,800</td>
<td>20,900</td>
<td>22,000</td>
<td>23,100</td>
<td>24,200</td>
</tr>
<tr>
<td><strong>Total Sales</strong></td>
<td>16,515,000</td>
<td>445,788</td>
<td>540,329</td>
<td>640,475</td>
<td>785,013</td>
<td>774,332</td>
<td>760,850</td>
<td>790,960</td>
<td>797,080</td>
<td>1,013,207</td>
<td>1,120,763</td>
<td>1,203,133</td>
<td>1,419,563</td>
<td>1,426,900</td>
<td>1,483,900</td>
</tr>
<tr>
<td><strong>Total Cash Inflows</strong></td>
<td>16,515,000</td>
<td>445,788</td>
<td>540,329</td>
<td>640,475</td>
<td>785,013</td>
<td>774,332</td>
<td>760,850</td>
<td>790,960</td>
<td>797,080</td>
<td>1,013,207</td>
<td>1,120,763</td>
<td>1,203,133</td>
<td>1,419,563</td>
<td>1,426,900</td>
<td>1,483,900</td>
</tr>
</tbody>
</table>

**Cash Outflow**

**Costs**

- Staffing costs (incl on costs)
  - 315,780
  - 360,175

- Advertising & marketing
  - 27,500

- Maintenance
  - 0

- Contract & services
  - 0

- Telecommunications
  - 0

- Travel
  - 11,000

- Staff development
  - 3,148

- General administration
  - 500

**Total Costs**

- 394,368

**Gross VAT/PST Paid**

- 198,197

**Non-Current Asset Purchases**

- Buildings
  - 5,000,000

- Property, plant & equipment
  - 1,000,000

**Total Non-Current Asset Purchases**

- 5,000,000

**Total Cash Outflows**

- 5,496,211

**Net Cash Inflow/(Outflow)**

- 11,018,789

**Opening Bank**

- 0

**Closing Bank**

- 11,018,789

**Net Cash Movement**

- 11,018,789

**Closing Bank**

- 11,018,789

---

*Hi Tech Precinct – Business Case*

*Regional Development Australia*

*Latrobe Innovation and Learning Precinct
Cash Flow (Projected)*

*July 2017 - June 2032*
### Scenario B

#### Latrobe Innovation and Learning Precinct

**Profit & Loss (Projected)**

*July 2017 - June 2032*

<table>
<thead>
<tr>
<th>Period</th>
<th>Sales</th>
<th>Operating Profit</th>
<th>Profit before Income Tax</th>
<th>Net Profit after Tax</th>
<th>Movement in Retained Earnings</th>
<th>Cumulative Retained Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 17 - Jun 18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 18 - Jun 19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 19 - Jun 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 20 - Jun 21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 21 - Jun 22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 22 - Jun 23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 23 - Jun 24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 24 - Jun 25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 25 - Jun 26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 26 - Jun 27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 27 - Jun 28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 28 - Jun 29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 29 - Jun 30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 30 - Jun 31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 31 - Jun 32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Sales

- **Grant income**: 50,000
- **Cafe - licence**: 0
- **Conference income**: 0
- **Rental income**: 0
- **Car parking income**: 0
- **Capital grants**: 15,000,000

#### Direct Costs

- **Staffing costs (incl on costs)**: 319,800
- **Advertising & marketing**: 25,000
- **Maintenance**: 0
- **Contract & services**: 10,154
- **Travel**: 10,000
- **Staff development**: 3,198
- **General administration**: 500

#### Total Direct Costs

358,498

#### Sales

- **Sales Gross Profit**: 14,691,502
- **Sales Gross Profit %**: 97.62%

#### Operating Profit

14,691,502

#### EBITDA

14,691,502

#### Depreciation

- **Buildings**: 67,708
- **Property, plant & equipment**: 0

#### Total Depreciation

67,708

#### EBIT

14,623,794

#### Net Finance Costs

0

#### Profit before Income Tax

14,623,794

#### Net Profit after Tax

14,623,794

#### Movement in Retained Earnings

14,623,794

#### Cumulative Retained Earnings

14,623,794

---

**August 2016 - Version 0.3**

---

**Hi Tech Precinct – Business Case**
## Latrobe Innovation and Learning Precinct
### Balance Sheet (Projected)
#### July 2017 - June 2032

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Accounts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Bank Account</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
</tr>
<tr>
<td>Total Bank Accounts</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
<td>11,058,789</td>
</tr>
<tr>
<td><strong>Non Current Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tangible Assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buildings</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Total Non Current Assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Equity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Regional Development Australia

**Hi Tech Precinct – Business Case**

August 2016 – Version 0.3

— 105 —
### Latrobe Innovation and Learning Precinct
#### Cash Flow (Projected)
**July 2017 – June 2032**

#### Cash Inflows
- **Sales**:
  - Grant income: 55,000
  - Cafe - licence: 0
  - Conference income: 0
  - Rental income: 0
  - Car parking income: 0
- **Capital grants**: 15,000,000

#### Total Cash Inflows

#### Cash Outflows
- **Costs**:
  - Staffing costs (incl on costs): 351,780
  - Advertising & marketing: 27,500
  - Maintenance: 0
  - Contract & services: 0
  - Telecommunications: 0
  - Travel: 11,000
  - Staff development: 3,518
  - General administration: 350
- **GST/VAT Paid**:
- **Property, plant & equipment**:
- **Non-Current Asset Purchases**:
  - Buildings: 5,500,000
  - Total Non-Current Asset Purchases: 5,500,000

#### Total Cash Outflows

#### Net Cash Inflows/Outflows

#### Opening Bank
- **Opening Bank**: 0

#### Net Cash Movement
- **Net Cash Movement**: 11,058,789

#### Closing Bank
- **Closing Bank**: 11,058,789
## Scenario C

### Latrobe Innovation and Learning Precinct

#### Profit & Loss (Projected)

**July 2017 - June 2032**

<table>
<thead>
<tr>
<th>Date</th>
<th>Sales</th>
<th>Direct Costs</th>
<th>Operating Profit</th>
<th>EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 17 - Jun 18</td>
<td>107,184,672</td>
<td>26,694,517</td>
<td>26,450,990</td>
<td>26,205,727</td>
</tr>
<tr>
<td>Jul 18 - Jun 19</td>
<td>107,184,672</td>
<td>26,205,727</td>
<td>25,958,494</td>
<td>26,205,727</td>
</tr>
</tbody>
</table>

#### Depreciation

<table>
<thead>
<tr>
<th>Date</th>
<th>Buildings</th>
<th>Property, plant &amp; equipment</th>
<th>Total Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 17 - Jun 18</td>
<td>677,080</td>
<td>1,542,271</td>
<td>2,219,351</td>
</tr>
<tr>
<td>Jul 18 - Jun 19</td>
<td>677,080</td>
<td>1,542,271</td>
<td>2,219,351</td>
</tr>
</tbody>
</table>

#### Net Finance Costs

<table>
<thead>
<tr>
<th>Date</th>
<th>Net Finance Costs</th>
<th>Profit before Income Tax</th>
<th>Net Profit after Tax</th>
<th>Movement in Retained Earnings</th>
<th>Cumulative Retained Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 17 - Jun 18</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jul 18 - Jun 19</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Notes

- **Sales**
  - **Grant income**
  - **Cafe - licence**
  - **Conference income**
  - **Rental income**
  - **Car parking income**
  - **Capital grants**

- **Direct Costs**
  - **Stapling costs (incl on costs)**
  - **Advertising & marketing**
  - **Maintenance**
  - **Contract & services**
  - **Telecommunications**
  - **Travel**
  - **Staff development**

- **General administration**

- **Total Direct Costs**

- **Sales Gross Profit**

- **Sales Gross Profit %**

- **OPERATING PROFIT**

- **EBITDA**

- **Net Finance Costs**

- **Profit before Income Tax**

- **Net Profit after Tax**

- **Movement in Retained Earnings**

- **Cumulative Retained Earnings**

### August 2016 - Version 0.3

— 107 —
### Latrobe Innovation and Learning Precinct
Balance Sheet (Projected)
July 2017 - June 2032

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Total Current Liabilities</th>
<th>Total Non Current Assets</th>
<th>TOTAL ASSETS</th>
<th>Total Bank Accounts</th>
<th>Total Retained Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 17 - Jun 18</td>
<td>25,958,494</td>
<td>38,422,385</td>
<td>64,380,879</td>
<td>11,058,789</td>
<td>3,595,819</td>
</tr>
<tr>
<td>Jul 20 - Jun 21</td>
<td>38,153,366</td>
<td>37,871,447</td>
<td>76,024,813</td>
<td>11,058,789</td>
<td>3,595,819</td>
</tr>
<tr>
<td>Jul 21 - Jun 22</td>
<td>37,485,621</td>
<td>37,196,973</td>
<td>74,682,594</td>
<td>11,058,789</td>
<td>3,595,819</td>
</tr>
<tr>
<td>Jul 23 - Jun 24</td>
<td>36,907,167</td>
<td>36,628,520</td>
<td>73,535,687</td>
<td>11,058,789</td>
<td>3,595,819</td>
</tr>
<tr>
<td>Jul 31 - Jun 32</td>
<td>34,295,783</td>
<td>33,913,238</td>
<td>68,208,021</td>
<td>11,058,789</td>
<td>3,595,819</td>
</tr>
</tbody>
</table>

### Current Assets
- **Bank Accounts**
  - Main Bank Account
  - Other Bank Accounts
- **Non Current Assets**
  - **Tangible Assets**
    - Buildings
  - Accumulated Depreciation
    - Buildings
    - Property, plant & equipment
- **Property, plant & equipment**
- **Total Accumulated Depreciation**

### Total Bank Accounts

### Total Current Liabilities

### Total Non Current Assets

### Total Assets

### Total Bank Accounts

### Total Current Liabilities

### Total Non Current Assets

### Total Assets

### Current Liabilities
- **Bank Accounts**
  - Main Bank Account
  - Other Bank Accounts
- **GST/VAT Payable**
- **Total GST/VAT**
- **Total Current Liabilities**

### TOTAL LIABILITIES

### NET ASSETS

### Capital and Reserves
- **Retained Earnings**
  - **Total Retained Earnings**
- **Total Capital and Reserves**
- **Total Equity**
<table>
<thead>
<tr>
<th>Date Range</th>
<th>Regional Development Australia</th>
<th>Hi Tech Precinct – Business Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 17 - Jun 18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 18 - Jun 19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 19 - Jun 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 20 - Jun 21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 21 - Jun 22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 22 - Jun 23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 23 - Jun 24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 24 - Jun 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 25 - Jun 26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 26 - Jun 27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 27 - Jun 28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 28 - Jun 29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 29 - Jun 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 30 - Jun 31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Cash Inflow

#### Sales

- **Grant income**: 55,000
- **Cafe – licence**: 0
- **Conference income**: 0
- **Rental income**: 0
- **Car parking income**: 0
- **Capital grants**: 0

#### Total Sales

- **16,555,000**

### Cash Outflow

#### Costs

- **Staffing costs (incl on costs)**: 351,780
- **Advertising & marketing**: 27,500
- **Maintenance**: 0
- **Contract & services**: 0
- **Telecommunications**: 0
- **Travel**: 11,000
- **Staff development**: 3,518
- **General administration**: 550

#### Total Costs

- **394,348**

#### GST/VAT Paid

- **(398,137)**

#### Non-Current Asset Purchases

- **Buildings**: 5,500,000
- **Property, plant & equipment**: 275,000

#### Total Non-Current Asset Purchases

- **5,775,000**

#### Total Cash Outflows

- **4,743,588**

#### Net Cash Inflow/(Outflow)

- **11,058,789**

### Opening Bank

- **0**

### Net Cash Movement

- **11,058,789**

### Closing Bank

- **11,058,789**

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Regional Development Australia</th>
<th>Hi Tech Precinct – Business Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 17 - Jun 18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 18 - Jun 19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 19 - Jun 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 20 - Jun 21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 21 - Jun 22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 22 - Jun 23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 23 - Jun 24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 24 - Jun 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 25 - Jun 26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 26 - Jun 27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 27 - Jun 28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 28 - Jun 29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 29 - Jun 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 30 - Jun 31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Closing Bank

- **11,058,789**

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Regional Development Australia</th>
<th>Hi Tech Precinct – Business Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 17 - Jun 18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 18 - Jun 19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 19 - Jun 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 20 - Jun 21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 21 - Jun 22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 22 - Jun 23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 23 - Jun 24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 24 - Jun 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 25 - Jun 26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 26 - Jun 27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 27 - Jun 28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 28 - Jun 29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 29 - Jun 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 30 - Jun 31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Closing Bank

- **11,058,789**
Appendix H: Economic analysis and NPV

Scenario A

Employment outcomes

Using the approach outlined above, the employment outcomes are shown in Table 9.

<table>
<thead>
<tr>
<th></th>
<th>Gippsland</th>
<th>Rest of Victoria</th>
<th>Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
<td>Indirect</td>
<td>Total</td>
</tr>
<tr>
<td>Construction</td>
<td>44.91</td>
<td>1.44</td>
<td>46.36</td>
</tr>
<tr>
<td>Research</td>
<td>84.88</td>
<td>4.56</td>
<td>89.44</td>
</tr>
<tr>
<td>TAFE</td>
<td>5.72</td>
<td>0.08</td>
<td>5.80</td>
</tr>
<tr>
<td>Tertiary</td>
<td>7.76</td>
<td>0.11</td>
<td>7.86</td>
</tr>
<tr>
<td>Total</td>
<td>98.37</td>
<td>4.76</td>
<td>103.13</td>
</tr>
</tbody>
</table>

Table 9 – FTEs

- The construction of the precinct will result in the creation of 46 FTEs in Gippsland and another 34 in the rest of Victoria.
- Once operational, around 98 direct people would expect to be employed at the precinct, but due to the nature of the employment (typically high income), the direct employees’ expenditures have significant flow on employment benefits, creating another 120 FTEs.
- Around 218 FTEs will be created under this scenario, plus 80 construction positions.

Output

Using the approach outlined above, the expected increase in economic output is shown in Table 10.

<table>
<thead>
<tr>
<th></th>
<th>Gippsland</th>
<th>Rest of Victoria</th>
<th>Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
<td>Indirect</td>
<td>Total</td>
</tr>
<tr>
<td>Construction</td>
<td>27.80</td>
<td>0.46</td>
<td>28.26</td>
</tr>
<tr>
<td>Research</td>
<td>84.88</td>
<td>-</td>
<td>84.88</td>
</tr>
<tr>
<td>TAFE</td>
<td>5.72</td>
<td>-</td>
<td>5.72</td>
</tr>
<tr>
<td>Tertiary</td>
<td>7.76</td>
<td>-</td>
<td>7.76</td>
</tr>
<tr>
<td>Total</td>
<td>12.91</td>
<td>0.42</td>
<td>13.33</td>
</tr>
</tbody>
</table>

Table 10 – Output ($m)

- The construction of the precinct will increase output in Gippsland by $28.3m and by another $8.8m in the rest of Victoria.
- Once operational, annual output arising from the precinct will be around $23.3m within Gippsland and another $21.7m in the remainder of the Victoria.
- Expected increased output across the state from the precinct will total $53.3m.

Value added

Using the approach outlined above, the expected increase in economic value added is shown in Table 11.

<table>
<thead>
<tr>
<th></th>
<th>Gippsland</th>
<th>Rest of Victoria</th>
<th>Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
<td>Indirect</td>
<td>Total</td>
</tr>
<tr>
<td>Construction</td>
<td>5.22</td>
<td>0.12</td>
<td>5.34</td>
</tr>
<tr>
<td>Research</td>
<td>12.36</td>
<td>0.41</td>
<td>12.76</td>
</tr>
<tr>
<td>TAFE</td>
<td>0.23</td>
<td>0.01</td>
<td>0.24</td>
</tr>
<tr>
<td>Tertiary</td>
<td>0.32</td>
<td>0.01</td>
<td>0.33</td>
</tr>
<tr>
<td>Total</td>
<td>12.91</td>
<td>0.42</td>
<td>13.33</td>
</tr>
</tbody>
</table>

Table 11 – Value added ($m)

- The construction of the precinct will increase value added created Gippsland by $5.4m and by another $5.3m across the rest of Victoria.
- Once operational, annual value added arising from the precinct will be around $13.4m within Gippsland and another $12.9m in the remainder of the Victoria
- Expected increased annual across the state from the precinct will total $28.6m

**Net Present Value and Benefit Cost Analysis**

Applying CPI of 2.5% and a discount rate of 7.5% to the value added economic contribution arising from the precinct, the NPV for the precinct to the Victorian economy over the 18 years to 2032 is $350m. The annual and cumulative contribution is shown in Figure 38.

**Scenario B**

**Employment outcomes**

Using the approach outlined above, the employment outcomes are shown in Table 9.

<table>
<thead>
<tr>
<th></th>
<th>Gippsland</th>
<th>Rest of Victoria</th>
<th>Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
<td>Indirect</td>
<td>Total</td>
</tr>
<tr>
<td>Construction</td>
<td>55.58</td>
<td>1.79</td>
<td>57.36</td>
</tr>
<tr>
<td>Research</td>
<td>110.35</td>
<td>5.93</td>
<td>116.28</td>
</tr>
<tr>
<td>TAFE</td>
<td>5.72</td>
<td>0.08</td>
<td>5.80</td>
</tr>
<tr>
<td>Tertiary</td>
<td>7.76</td>
<td>0.11</td>
<td>7.88</td>
</tr>
<tr>
<td>Total annual</td>
<td>123.84</td>
<td>6.12</td>
<td>129.96</td>
</tr>
</tbody>
</table>

|                      |            |            |          |            |            |          |
|----------------------|------------|------------|----------|
| Total annual         | 123.84     | 6.12       | 129.96   | 148.45    | 148.45    | 296.90  | 123.84   | 154.57   | 278.40 |

**Table 12 – FTEs**

- The construction of the precinct will result in the creation of 57 FTEs in Gippsland and another 42 in the rest of Victoria
- Once operational, around 123 direct people would expect to be employed at the precinct, but due to the nature of the employment (typically high income), the direct employees’ expenditures have significant flow on employment benefits, creating another 154 FTEs
- Around 278 FTEs will be created under this scenario plus 99 construction positions

**Output**

Using the approach outlined above, the expected increase in economic output is shown in Table 10.

<table>
<thead>
<tr>
<th></th>
<th>Gippsland</th>
<th>Rest of Victoria</th>
<th>Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
<td>Indirect</td>
<td>Total</td>
</tr>
<tr>
<td>Construction</td>
<td>34.40</td>
<td>0.57</td>
<td>34.97</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Research</td>
<td>26.00</td>
<td>1.98</td>
<td>27.98</td>
</tr>
<tr>
<td>TAFE</td>
<td>0.73</td>
<td>0.03</td>
<td>0.76</td>
</tr>
</tbody>
</table>

The benefit cost ratio over the same time period is 14.5
The construction of the precinct will increase output in Gippsland by $35m and by another $10.9m in the rest of Victoria. Once operational, annual output arising from the precinct will be around $29.8m within Gippsland and another $38.6m in the remainder of Victoria. Expected increased output across the state from the precinct will total $68.4m.

**Value added**

Using the approach outlined above, the expected increase in economic value added is shown in Table 11.

<table>
<thead>
<tr>
<th>Gippsland</th>
<th>Rest of Victoria</th>
<th>Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>Indirect</td>
<td>Total</td>
</tr>
<tr>
<td>Construction</td>
<td>6.45</td>
<td>0.15</td>
</tr>
<tr>
<td>Research</td>
<td>16.06</td>
<td>0.53</td>
</tr>
<tr>
<td>TAFE</td>
<td>0.23</td>
<td>0.01</td>
</tr>
<tr>
<td>Tertiary</td>
<td>0.32</td>
<td>0.01</td>
</tr>
<tr>
<td>Total</td>
<td>16.62</td>
<td>0.55</td>
</tr>
</tbody>
</table>

Table 14 – Value added ($m)

- The construction of the precinct will increase value added created Gippsland by $6.7m and by another $6.5m across the rest of Victoria.
- Once operational, annual value added arising from the precinct will be around $17.1m within Gippsland and another $19.7m in the remainder of Victoria.
- Expected increased annual across the state from the precinct will total $36.9m.

**Net Present Value and Benefit Cost Analysis**

Applying CPI of 2.5% and a discount rate of 7.5% to the value added economic contribution arising from the precinct, the NPV for the precinct to the Victorian economy over the 18 years to 2032 is $469m. The annual and cumulative contribution is shown in Figure 39 – NPV Analysis.

The benefit cost ratio over the same time period is 15.6.

**Scenario C**

**Employment outcomes**

Using the approach outlined above, the employment outcomes are shown in Table 9.

<table>
<thead>
<tr>
<th>Gippsland</th>
<th>Rest of Victoria</th>
<th>Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>Indirect</td>
<td>Total</td>
</tr>
<tr>
<td>Construction</td>
<td>67.05</td>
<td>2.16</td>
</tr>
<tr>
<td>Research</td>
<td>110.35</td>
<td>5.93</td>
</tr>
</tbody>
</table>
Table 15 – FTEs

- The construction of the precinct will result in the creation of 25 FTEs in Gippsland and another 18 in the rest of Victoria.
- Once operational, around 35 direct people would expect to be employed at the precinct, but due to the nature of the employment (typically high income), the direct employees’ expenditures have significant flow on employment benefits, creating another 34 FTEs.
- Around 278 FTEs will be created under this scenario plus 99 construction positions.

Output

Using the approach outlined above the expected increase in economic output is shown in Table 10.

Table 16 – Output ($m)

- The construction of the precinct will increase output in Gippsland by $42.9m and by another $41.5m in the rest of Victoria.
- Once operational, annual output arising from the precinct will be around $30.5m within Gippsland and another $39.1m in the remainder of the Victoria.

Table 17 – Value added ($m)

- The construction of the precinct will increase value added created Gippsland by $7.9m and by another $7.8m across the rest of Victoria.
- Once operational, annual value added arising from the precinct will be around $17.4m within Gippsland and another $20m in the remainder of the Victoria.
- Expected increased annual across the state from the precinct will total $37.4m.

Net Present Value and Benefit Cost Analysis

Applying CPI of 2.5% and a discount rate of 7.5% to the value added economic contribution arising from the precinct, the NPV for the precinct to the Victorian economy over the 18 years to 2032 is $471m. The annual and cumulative contribution is shown in Figure 40 – NPV Analysis.

Value added

Using the approach outlined above, the expected increase in economic value added is shown in Table 11.
The benefit cost ratio over the same time period is 13.2.

Figure 40 – NPV Analysis