Brisbane’s Innovation Ecosystem
A Snapshot: November 2012
A Collaboration between the Innovative Regions Centre and Regional Development Australia Australia Brisbane

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Acknowledgements & Disclaimers

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1. The Australian Innovation Atlas

1. While various organisations are mapping their own data, there is currently no mechanism nor tool in place to enable the coordination of those mapping activities nor the integration of the data mapped.

2. In addition, there is a vast quantity of Innovation Activity data which is not being used (ie converted into business intelligence).

3. The Australian Innovation Atlas is an initiative of the Innovative Regions Centre of Enterprise Connect.

4. The Atlas aims to provide a national framework for the coordination of multiple, independent innovation-activity visualisation projects, and a mechanism for mashing that data across agencies, across regions and across sectors.

5. The role of the Australian Innovation Atlas is to provide a tool for the interactive visualisation of Australia’s Innovation Landscape.

6. The Strategy for building the Atlas includes the development of Partnerships and Collaborations which enable the mapping to be undertaken for specific agencies, specific regions and specific sectors.

7. This Snapshot of the Brisbane Innovation Ecosystem represents a Collaboration between the Innovative Regions Centre of Enterprise Connect and the Brisbane Committee of Regional Development Australia. The Snapshot is the first stage in the development of the Brisbane Region Component of the Australian Innovation Atlas.

8. This Partnership is one of a number of other collaborations which are being used to help drive the development of the Atlas, including the collaboration between Enterprise Connect and CSIRO involving the development of an Atlas Prototype.
The Role of the Snapshot

1. The nature and extent of the Innovation Capabilities, Activities, Services and Achievements of Brisbane is not well documented on a Regional basis.

2. The Role of this Snapshot is to provide an awareness of various elements of the Brisbane Innovation Ecosystem.

3. Awareness will lead to a better understanding of the City’s innovation capabilities. This in turn will enable the identification of opportunities to take advantage of those capabilities.

4. The Snapshot does not constitute a definitive description of the Brisbane Innovation Ecosystem, a major task which is well beyond the objectives of this Report.

5. In addition, while the Innovation Achievements of the Brisbane Region are extensive, this Snapshot does not attempt to showcase Brisbane’s Innovators and their Innovations. That is a matter for a separate project.
The Innovation Imperative

What is Innovation?
It is NOT Creativity
It is NOT Invention
It is NOT Research and Development

Innovation is taking a good idea, and converting it into something useful.

Why is Innovation Important for Enterprises and for Regions?
Â Innovation: Increases Revenues and/or Reduces Costs
Â Innovation: principal source of sustainable competitive advantage
Â Innovation: fundamental to survival and sustainable growth
Â Innovation is not a choice – it is an Imperative
    ï for Businesses
    ï and for Regions
What is an Innovative Region?

1. An Innovative Region is a region which
   - Exhibits high levels of creativity, research and development and entrepreneurship
   - provides a business environment which encourages and enables business innovation
   - is characterised by a strong base of individuals and firms developing new or improved products, services and systems
   - Values, encourages, nurtures and celebrates business innovation

2. An Innovative Region is a region which has a business sector which is better prepared to more effectively manage the incidence and impact of rapid disruptive changes.

3. An Innovative Region is a Region with an Unfair Competitive Advantage over Regions which are not Innovative (Enervative Regions).

4. An Innovative Region is a region which is:
   - A Creative Region
   - An Entrepreneurial Region
   - An Internationally Connected Region
   - An Internationally Collaborative Region
The Challenge: Sustaining an Innovative Region

1. The Brisbane Region is an Innovative Region.

2. Brisbane has world-famous Innovators and Innovations

3. Key Questions:
   - But what is the “ecosystem” that has enabled those Innovators to emerge?
   - Is this ecosystem sufficiently robust and growing to enable continuous innovation?
   - And, is the Brisbane Innovation Ecosystem sustainable?
   - What do we have?
   - How can we make better use of what we have?
   - What do we not need but do not have?
   - How do we get it?
   - How can we help build a stronger Innovation Ecosystem?
   - How can we facilitate the acceleration of the growth of that ecosystem?

Need: a better understanding of the Brisbane Innovation Ecosystem
Core Elements of the Brisbane Innovation Ecosystem

- Brisbane’s Innovation Anchors
- Industry Sector Critical Demand Mass
- Research & Development Infrastructure
- Connections
- Collaborations
- Commercialisation Services
- Innovation-Friendly Government
- Innovation-Enabling Services
Brisbane’s Innovation Anchors

1. Growth and sustainability of Business Innovation within a Region is heavily dependent upon the existence, growth and sustainability of a core of institutions generating skills, ideas, research, technologies and opportunities to utilise those ideas and technologies.

2. These institutions include:
   - Unified City Government
   - Research-Intensive Hospitals
   - International Airports
   - Knowledge Banks: Libraries, Museums, Art Galleries
   - Skills Development Institutes
   - Universities

3. These institutions constitute a Region’s “Innovation Anchors”

4. Brisbane has diversity of Innovation Anchors
   - Australia’s Largest City Council – committed to Innovation
   - Australia’s Growth Airport – Brisbane Airport
   - 8 Strong Research Intensive Hospitals
   - 4 International Standard Universities
   - 7 Research and Commercialisation Precincts
   - Diversity of International Standard Knowledge Banks
INNOVATION ANCHORS

1. AusIndustry
2. Australian Catholic University
3. Botanic Gardens
4. Brisbane Airport Corporation
5. Brisbane City Council
6. Brisbane Technology Park
7. Department of Science
8. Ecociences Precinct
9. Enterprise Connect
10. Gallery of Modern Art
11. Greenslopes Private Hospital
12. Griffith University (GU)
13. Health and Food Sciences Precinct
14. Mater Private Hospital
15. Prince Charles Hospital
16. Princess Alexandra Hospital
17. Queensland Art Gallery
18. Queensland Biosciences Precinct
19. Queensland Centre for Advanced Technologies
20. Queensland Children’s Hospital
21. Queensland College of Art (GU)
22. Queensland Conservatorium (GU)
23. Queensland Museum
24. Queensland Performing Arts Centre
25. Queensland University of Technology
26. Royal Brisbane and Women’s Hospital
27. Science Centre (Queensland Museum)
28. St Andrew’s War Memorial Hospital
29. State Library of Queensland
30. The Wesley Hospital
31. University of Queensland
Brisbane’s Innovation Precincts

1. Aviation Innovation Precinct
   - Brisbane Airport: 420 businesses & 17,000 people
   - Da Vinci Aerospace Precinct

2. Creative Industries Precincts
   - Kelvin Grove
   - South Bank
   - The Valley: Games and Fashion

3. Ecosciences Precinct
   - Boggo Road

4. Food Sciences Precinct
   - Coopers Plains

5. Health Precincts
   - Herston
   - Prince Charles Hospital
   - Princess Alexandra Hospital Precinct
   - Mater Health Precinct

6. ICT Precinct – Milton

7. Mining Technology Precincts
   - Pullenvale
   - St Lucia

8. Technology Parks
   - Brisbane Innovation Park
   - Brisbane Technology Park
INNOVATION PRECINCTS

1. Brisbane Innovation Park
2. Princess Alexandra Hospital Precinct
3. Mater Health Precinct
4. Brisbane Technology Park
5. Creative Industries Precinct
6. Da Vinci Aerospace Precinct
7. Ecosciences Precinct
8. Games Valley
9. Health and Food Sciences Precinct
10. Herston Medical Precinct
11. ICT Precinct
12. Mining Technologies Precinct
13. Queensland Bioscience Precinct
14. South Bank Arts Precinct
15. Fashion Cluster
Brisbane’s University Infrastructure

Â Extensive University Infrastructure
- Brisbane-Based Universities
- Other Universities with a Greater Brisbane Campus
- Other SEQ-Based Universities
- Other University Infrastructure

Â Brisbane-Based Universities
- Griffith University
- Queensland University of Technology
- University of Queensland
- Combined 20,000 Graduates annually and additional 10,000 Overseas Students
- 30,000 Overseas Students

Â Other Universities with a Greater Brisbane Campus
- Australian Catholic University
- Central Queensland University
- James Cook University
- University of Southern Queensland

Â Other SEQ-Based Universities
- Bond University
- University of Sunshine Coast

Â Other University Infrastructure
- AARNET (Australia’s Academic & Research Network)
- CEED (Cooperative Enterprise for Education Development)
- EIDOS Institute
UNIVERSITY INFRASTRUCTURE

1. AARNET
2. Australian Catholic University, Banyo
3. CEED
4. EDO5
5. Griffith University, Gold Coast
6. Griffith University, Logan
7. Griffith University, Mt Gravatt
8. Griffith University, Nathan
9. Griffith University, South Bank
10. James Cook University (CQ)
11. Queensland University of Technology, Caboolture
12. Queensland University of Technology, Gardens Point
13. Queensland University of Technology, Kelvin Grove
14. Southern Cross University, Coolangatta
15. University of Queensland, Alumni Centre
16. University of Queensland, Business School
17. University of Queensland, Herston
18. University of Queensland, St Lucia
19. University of Sunshine Coast, Sippy Downs
20. University of Sunshine Coast, Springfield
Brisbane’s Research Infrastructure

• Brisbane has a high density of Research Infrastructure

• This Infrastructure includes
   Business-specific Research Centres & Laboratories
   Industry-based Research Centres & Laboratories
   University-based Research Centres, Laboratories and Specialised Equipment & Facilities
   CSIRO Precincts and Centres
   Cooperative Research Centres
   Australian Research Centres of Excellence
   Collaborative Centres involving Research, Industry and Government

• Key Sectors hosting Research Infrastructure:
   Aviation and Aerospace
   Bio-engineering & Nanotechnology
   Biopharmaceuticals
   Clean Technology
   Creative Industries, including Design, Fashion and Games
   Defence Industries
   Environmental Management
   Food & Fibre Sciences
   Health & Medical, including Natural Medicines
   Information & Communication Technology
   Infrastructure Management
   Mining & Energy
   Neuroscience
   Robotics
Australian Research Council Centres of Excellence

- Brisbane’s Universities host a significant number of ARC Centres of Excellence.

- These Centres are “prestigious foci of expertise through which high-quality researchers maintain and develop Australia's international standing in research areas of national priority.

- Through ARC Centres of Excellence, a high level of collaboration occurs between universities and other organisations in Australia and overseas.

- The Objectives of ARC Centres of Excellence are:
  - undertake highly innovative and potentially transformational research that aims to achieve international standing in the fields of research envisaged and leads to a significant advancement of capabilities and knowledge;
  - link existing Australian research strengths and build critical mass with new capacity for interdisciplinary, collaborative approaches to address the most challenging and significant research problems;
  - develop relationships and build new networks with major national and international centres and research programs to help strengthen research, achieve global competitiveness and gain recognition for Australian research;
  - build Australia’s human capacity in a range of research areas by attracting and retaining, from within Australia and abroad, researchers of high international standing as well as the most promising research students;
  - provide high-quality postgraduate and postdoctoral training environments for the next generation of researchers;
  - offer Australian researchers opportunities to work on large-scale problems over longer periods of time; and
  - establish Centres of such repute in the wider community that they will serve as points of interaction among higher education institutions, governments, industry and the private sector generally.
ARC Centres of Excellence

1. Aerospace Automation
2. Bioinformatics
3. Complex Dynamic Systems and Control
4. Complex Dynamic Systems and Control
5. Creative Industries and Innovation
6. Design in Light Metals
7. Free Radical Chemistry and Biotechnology
8. Functional Nanomaterials
9. Integrative Legume Research
10. Mathematics and Statistics of Complex Systems
11. Policing and Security
12. Quantum Atom Optics
13. Quantum Computer Technology
14. Research Network in Enterprise Information
15. Research Network in Spatially Integrated Social Science
**The CSIRO**

CSIRO, the Commonwealth Scientific and Industrial Research Organisation, is Australia's national science agency and one of the largest and most diverse research agencies in the world.

Brisbane accommodates a strong CSIRO presence:

<table>
<thead>
<tr>
<th><strong>CSIRO Food &amp; Nutritional Sciences</strong> within the Health and Food Sciences Precinct at Coopers Plains is focused on the improvement of seafood, meat and horticulture products.</th>
<th><strong>The Ecosciences Precinct</strong> (at Dutton Park) supports CSIRO's ongoing commitment to research and development in promoting industry profitability, managing Australia's unique ecosystems, adapting to climate change, ensuring biosecurity and improving human health.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The <strong>Queensland Centre for Advanced Technologies</strong> (QCAT) at Pullenvale is a joint venture between CSIRO and the Queensland Government. It is a multi-divisional research site where innovative solutions for the mining, manufacturing and energy sectors are produced.</td>
<td>The <strong>Queensland Bioscience Precinct</strong> at St Lucia is Australia's largest research facility dedicated to human, animal and plant biotechnological research. Housing more than 700 researchers, it brings together scientists from multiple CSIRO business units and the University of Queensland's Institute for Molecular Bioscience (IMB).</td>
</tr>
</tbody>
</table>
CSIRO RESEARCH CENTRES

1. Ecociences Precinct
2. Health & Food Sciences Precinct
3. Queensland Bioscience Precinct
4. Queensland Centre for Advanced Technologies
Cooperative Research Centres

• The Cooperative Research Centres (CRC) program is an Australian Government Initiative administered by the Department of Industry, Innovation, Science, Research and Tertiary Education.

• The CRC program supports end user driven research collaborations to address major challenges facing Australia. CRCs pursue solutions to these challenges that are innovative, of high impact and capable of being effectively deployed by the end users.

• The CRC program supports collaboration between researchers, industries, communities and governments to solve major challenges facing Australia, many of which are global challenges.

• CRCs commonly have dozens of participating organisations including universities and research institutions, businesses ranging from multinational corporations to small and medium enterprises, governments at national, state and local levels, international partners, not-for-profit organisations and industry and community associations.

• The CRC program encourages participation from all sectors and disciplines, including the humanities and social sciences.

• Since the program commenced in 1991, 190 CRCs have been funded. The Australian Government has committed more than $3.4 billion in CRC program funding. Participants in CRCs have committed a further $10.9 billion in cash and in-kind contributions.

• In 2011-12, 38 CRCs were active. Of those, Brisbane Universities provided the Hub for at least 6, and the Brisbane Universities, Queensland Government and Brisbane-based Industry provided Partners in 28 other CRCs. (Note that since then changes have and are occurring in the establishment and closure of CRCs.)
Cooperative Research Centres* (with Brisbane Participants)
* as at 2011-2012

<table>
<thead>
<tr>
<th>CRC</th>
<th>Hub</th>
<th>Brisbane Partner(s)</th>
<th>CRC</th>
<th>Hub</th>
<th>Brisbane Partner(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aust Seafood</td>
<td>Adelaide</td>
<td>USC, QG</td>
<td>ATSI Health</td>
<td>VIC</td>
<td>UQ; QIMR</td>
</tr>
<tr>
<td>Cotton Catchment</td>
<td>Narrabri</td>
<td>QG; QG</td>
<td>Biomarker Translation</td>
<td>VIC</td>
<td>UQ; QG</td>
</tr>
<tr>
<td>Beef Genetics</td>
<td>Armidale</td>
<td>QG</td>
<td>Cancer Therapeutics</td>
<td>VIC</td>
<td>SA</td>
</tr>
<tr>
<td>Plant Biosecurity</td>
<td>Canberra</td>
<td>UQ; QG</td>
<td>Contamination</td>
<td>SA</td>
<td>Canberra</td>
</tr>
<tr>
<td>Invasive Animals</td>
<td>Canberra</td>
<td>UQ; QG</td>
<td>Greenhouse Gas</td>
<td>Canberra</td>
<td>Brisbane</td>
</tr>
<tr>
<td>Poultry</td>
<td>Armidale</td>
<td>QG; Industry</td>
<td>Infrastructure Asset</td>
<td>Brisbane</td>
<td>VIC</td>
</tr>
<tr>
<td>Mining</td>
<td>Brisbane</td>
<td>UQ; QUT; Industry</td>
<td>Rail Innovation</td>
<td>VIC</td>
<td>VIC</td>
</tr>
<tr>
<td>Resource Extraction</td>
<td>Perth</td>
<td>UQ; QUT; Industry</td>
<td>Spatial Information</td>
<td>VIC</td>
<td>VIC</td>
</tr>
<tr>
<td>Hydrometallurgy</td>
<td>Melbourne</td>
<td>UQ; AIC</td>
<td>Environmental Biotech</td>
<td>QLD</td>
<td>GU</td>
</tr>
<tr>
<td>CAST</td>
<td>VIC</td>
<td>UQ; QUT</td>
<td>eWater</td>
<td>QLD</td>
<td>UQ</td>
</tr>
<tr>
<td>Advanced Automotive</td>
<td>VIC</td>
<td>QG; Industry</td>
<td>Oral Health</td>
<td>QLD</td>
<td>GU</td>
</tr>
<tr>
<td>Composite Structures</td>
<td>VIC</td>
<td>UQ; QUT; Industry</td>
<td>Smart Services</td>
<td>QLD</td>
<td>QG</td>
</tr>
<tr>
<td>Polymers</td>
<td>VIC</td>
<td>QG; Industry</td>
<td>Wound Management</td>
<td>QLD</td>
<td>UQ; QUT; Industry</td>
</tr>
<tr>
<td>Bushfires</td>
<td>VIC</td>
<td>UQ; QUT; Industry;</td>
<td>Young &amp; Well</td>
<td>QLD</td>
<td>Industry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Industry</td>
<td></td>
<td></td>
<td>QUT; Industry</td>
</tr>
</tbody>
</table>
Cooperative Research Centres: Brisbane Hubs and Nodes

1. Advanced Automotive Technology (Melbourne Hub)
2. Biomarker Translation (Melbourne Hub)
3. CAST
4. Integrated Engineering Asset Management
5. Interaction Design - Australasia
6. Mining
7. National Plant Biosecurity (Canberra Hub)
8. Optimising Resource Extraction
9. Polymers (Melbourne Hub)
10. Rail Innovation
11. Smart Services (Sydney Hub)
12. Spatial Information (Melbourne Hub)
13. Sugar Industry Innovation
Medical Research & Innovation Infrastructure

Research hubs and research programs are provided by Brisbane’s extensive concentration of public and private hospitals including:

- Greenslopes Private Hospital
- Mater Private Hospital
- Prince Charles Hospital
- Princess Alexandra Hospital
- Queensland Children’s Hospital
- Royal Brisbane and Women’s Hospital
- St Andrew’s War Memorial Hospital
- The Wesley Hospital

These are hubs for extensive training, research and translational programs.

Internationally renown specialist Research Centres include:

- Mater Medical Research Institute
- Queensland Institute for Medical Research
- UQ Diamantina Institute

Specialist Health Research Facilities include

- Queensland Compound Library
- Queensland Health’s Clinical Skills Development Service
MEDICAL RESEARCH NODES

1. Greenslopes Private Hospital
2. Mater Private Hospital
3. Mater Medical Research Institute
4. Prince Charles Hospital
5. Princess Alexandra Hospital
6. Queensland Children's Hospital
7. Queensland Health
8. Queensland Institute for Medical Research
9. Royal Brisbane and Women's Hospital
10. St Andrews War Memorial Hospital
11. The Wesley Hospital
12. Queensland Compound Library

INSET: BRISBANE'S CBD
Mining Sector Research Infrastructure

Â Brisbane is recognised as an international centre of excellence in the field of mining technology and services (MTS). Nearly 200 mining companies are currently based in Greater Brisbane. This forms a cluster that represents almost two thirds of the sector in Queensland, servicing the demands of much of Australia and many parts of the world.

Â The majority of the MTS firms in Brisbane are small to medium enterprises with a specialised skills base. This highly developed industry cluster consists of producers and service providers in the areas of: mining engineering; mining equipment manufacturing; mine and resource management (including coal and water); commodity transportation; remote positioning; environmentally-sensitive mining/drilling; geotech exploration; and health and safety initiatives.

Â However, Brisbane is also a base (and sometimes HQ) for some of the largest international companies. The world’s leading mining software company, Ventyx (previously Mincom), is headquartered in Brisbane.

“Brisbane is a prime location for innovation. The city is the corporate headquarters for our coal, aluminium, alumina and bauxite operations in Australia, as well as technology, innovation and business functions. We have a key research partnership with the Julius Kruttschnitt Mineral Research Centre at The University of Queensland as well as a relationship with UQ Business School.” John McGagh, Head of Innovation, Rio Tinto Ltd, Brisbane Economic Development Plan 2012-2013
Mining Research Infrastructure

MINING SECTOR RESEARCH CENTRES

CENTRE FOR COAL SEAM GAS

GEOTHERMAL ENERGY CENTRE OF EXCELLENCE

WH BRYAN MINING & GEOLOGY RESEARCH CENTRE

CENTRE FOR COAL ENERGY TECHNOLOGY

BAOSTEEL AUSTRALIA JOINT R&D CENTRE

ARC COE IN DESIGN

SUSTAINABLE MINERALS INSTITUTE

INTernational Mining for Development Centre

AUSTRALIAN CENTRE FOR MINERALS EXTENSION & RESEARCH

MINERALS INDUSTRY HEALTH AND SAFETY CENTRE

CENTRE FOR WATER IN THE MINERALS INDUSTRY

CENTRE FOR MINED LAND REHABILITATION

CSIRO QUEENSLAND CENTRE FOR ADVANCED TECHNOLOGIES

RIO TINTO RESEARCH CENTRE FRONTIER CORPORATE

RIO TINTO CENTRE FOR ADVANCED MINERAL SORTING

RIO TINTO TECHNOLOGY & INNOVATION

JULIUS KRUTTSCHNITT MINERAL RESEARCH CENTRE

AN AUSTRALIAN GOVERNMENT INITIATIVE

Shaping Business, Transforming Industry
Sustainable Minerals Institute
National and International Mining Industry Hub

With more than 170 mining companies based in Brisbane, the City has emerged as Australia’s national and international mining industry hub. Major Mining Companies with offices in Brisbane include:

- Anglocoal
- Ausenco: Brisbane HQ: providers of world-class engineering, project management and operations solutions to the global resources and energy sectors; over 2,300 personnel across 20 countries.
- Conymet Duratray International Group
- Bechtel – specialists in engineering, construction and project management. Privately owned with headquarters in San Francisco, Bechtel has 52,700 employees across the globe. Bechtel’s Mining and Minerals business unit is headquartered in Brisbane.
- BHP Billiton-Mitsubishi Alliance
- Downer EDI Mining – a division of the Downer EDI Group and an Australian top-100 company listed on the Australian stock exchange (ASX) which has assets of $3 billion, annual turnover of $5.6 million and over 24,000 employees.
- GE Mining Global
- Groundprobe
- Peabody Pacific
- Rio Tinto Aluminium: in 2008 the company moved all its research and development activities from Melbourne to Brisbane.
- Vale: the world’s second largest mining company: Brisbane providing Global Coal Division HQ.
- Ventyx: with its headquarters in Brisbane, Ventyx is the leading software and specialist-services provider in the global mining industry.
- Xstrata: world’s largest seaborne exporter of thermal coal and significant producer of premium quality coking and semi-soft coal
- Major Mining Industry Associations located in Brisbane include:
International Mining Enterprise representation

COMPANIES
1. Anglo American Australia
2. Applied Mining Technologies (off map)
3. BHP Billiton Mitsubishi Alliance
4. Geotek Solutions (off map)
5. MineWare
6. Newcrest Mining
7. Peabody Pacific
8. Rio Tinto Alcan
9. Rio Tinto Energy
10. Rio Tinto Technology and Innovation
11. Santos
12. Talisman Energy
13. X-Strata Coal (Head Office)
Mining Industry Development Organisations

As a result of Brisbane’s emergence as Australia’s national and international mining sector hub, a number of industry organisations have located their Head Quarters or offices in the City.

These include:
- Association of Mining and Exploration Companies (Office)
- Mining and Energy Services Council of Australia (Head Office)
- Queensland Exploration Council (Head Office)
- Queensland Resources Council (Head Office)

Mining Industry Skills Development organisations have also invested in Brisbane, including:
- Energy Skills Queensland
- Kinetic Group
- Myne Start Underground Training Complex

The Geological Survey of Queensland (GSQ), as part of the Department of Natural Resources and Mines, provides geo-science and resource information to improve the understanding of the geology and minerals and energy resource potential of Queensland, and promotes the geoscientific data and exploration potential to attract investment.

Resources Technology Innovation Centre. A Centre of Enterprise Connect (an Australian Government Initiative), the RTIC aims to assist improve the productivity of businesses that receive a substantial proportion of their revenue directly or indirectly from mining companies. Business Advisers from the Centre are located at the Enterprise Connect Office at Brisbane Technology Park.
Mining Industry Development Organisations

KEY ORGANISATIONS

1. Association of Mining and Exploration Companies
2. Energy Skills Queensland
3. Geological Survey of Queensland
4. Kinetic Group
5. Mining & Energy Services Council of Australia
6. Myne Start Underground Training Complex
7. Queensland Exploration Council
8. Queensland Resources Council
9. Resources Technology Innovation Centre (RTIC)
The Resources Technology Innovation Centre Network

Cities:
1. Mackay
2. Brisbane
3. Sydney
4. Melbourne
5. Adelaide
6. Perth
Regional Innovation requires business access to enabling technologies including:

- Artificial Intelligence
- Biotechnology
- Engineering
- Information & Communications
- Nanotechnology
- Robotics and Automation

Brisbane’s Business Enterprises, Education & Skills Institutions are building the City’s capabilities in all these areas.

The City has an extensive Vocational Skills Infrastructure including both Government and Private Sector Providers.

In particular, Brisbane’s Universities have taken a key role in the development of an ICT-enabled workforce.

This has resulted in a vibrant flow of ICT-based start-ups and attracted investment in the City by international ICT companies.

This international investment has in turn significantly enhanced the Entrepreneurship and Innovation Capabilities of the City.
Vocational Skills Training Infrastructure

TRAiNING CENTRES

1. Myne Start Underground Training Complex
2. Skills Tech Campus (Acacia Ridge)
3. Skills Tech Australia Campus (Alexandra Hills)
4. Skills Tech Australia Campus (Bracken Ridge)
5. Skills Tech Australia Campus (Eagle Farm)
6. Skills Tech Australia Campus (Mt Gravatt)
7. Skills Tech Australia Campus (Seksbury)
8. Southbank Institute of Technology
9. TAFE - Brisbane North Institute - South Brisbane
10. TAFE - Brisbane North Institute Open Learning
11. TAFE - Brisbane North Institute - Ithaca Campus
12. TAFE - Brisbane North Institute - Redcliffe Campus
13. TAFE - Brisbane North Institute - Caboolture Campus
14. TAFE - Metropolitan South Institute - Browns Plains Campus
15. TAFE - Metropolitan South Institute - Loganlea Campus
16. TAFE - Grovely (Keerpara)
17. TAFE - Metropolitan South Institute - Yeronga Campus
Information and Communications Technologies

FRONTIER COMPANIES
1. Cisco
2. IBM
3. Intel
4. Microsoft
5. SAP
6. SIS
7. Sword Cisneros
8. Technology One
Brisbane’s Entrepreneurship Services

1. The density of Entrepreneurship Services in Brisbane is increasing.
2. These Services include commercial services and informal services.
3. The former include the commercialisation services of Brisbane’s Universities:
   - Griffith Enterprise
   - iLab Incubator (a subsidiary of Uniquest)
   - IMBcom
   - JK Tek
   - QUT Blue Box
   - QUT Creative Enterprise Australia
   - Uniquest
4. Business incubation services include:
   - Microsoft Innovation Centre
   - River City Labs
5. Within the Business Sector there are also companies providing space and facilities for the development of ideas.
6. Through the State Library of Queensland, The Edge provides physical spaces and equipment for people to work on their own projects or to collaborate with others.
7. Start-up Networks include
   - Brisbane Start-up Group, for providers of start-up services; and
   - Silicon Beach, an informal group for people interested in entrepreneurship
BUSINESS INCUBATORS

1. Griffith Research Office
2. iLab Incubator
3. IMBcom
4. JK Tek
5. Microsoft Innovation Centre
6. NICTA
7. QUT Blue Box
8. QUT Creative Enterprise Australia
9. QUT Innovation Space
10. River City Labs
11. The Edge
12. Uniquest
Unquest Connectivity
1. The Australian Government provides an extensive range of Innovation-Enabling Services in Brisbane, principally through the Department of Industry, Innovation, Science, Research and Tertiary Education.

2. In Brisbane, the Department’s Innovation-Enabling Services are delivered through:
   - AusIndustry
   - Enterprise Connect
   - IP Australia

3. Commercialisation Australia Information and Services are available through SEQ-based Case Offices and the Brisbane Office of AusIndustry.

4. The Innovative Regions Centre is represented in Greater Brisbane by an Innovation Facilitator responsible for the North Brisbane-Moreton Bay Region.

5. In addition, CSIRO provides an SME Engagement Centre and Researchers in Business Facilitation Service.

6. Officers from the Australian Research Council operate from the Brisbane Office of AusIndustry
DIISRTE Services in Brisbane

- AusIndustry
- Australian Research Council
- Commercialisation Australia
- IP Australia
- Commonwealth State Advisory Committee on Innovation
- Innovation Regions Centre (Enterprise Connect)
- Enterprise Connect
- CSIRO SME Engagement Centre
- Researchers in Business Facilitator
Location of DIISRTE Service Centres in Brisbane
Innovation Services of Enterprise Connect

1. Enterprise Connect offers comprehensive advice and support to eligible Australian small and medium sized businesses to help them transform and reach their full potential.

2. For eligible businesses, Enterprise Connect Innovation Centres provide:
   - A comprehensive, confidential, independent Business Review at no cost
   - A Tailored Advisory Service Grant for a Business completing a Review;
   - Continuous Improvement Program Service
   - Enterprise Learning and Mentoring Program
   - Technology & Knowledge Connect, a free service linking businesses to experts in relevant technological fields. TKC experts are able to diagnose technology and technical issues and opportunities that need to be addressed in the context of business innovation.
   - Researchers in Business Program which places researchers from universities or public research agencies with businesses to help develop and implement new commercial ideas.
   - Research Students in Business Program

3. Located at Brisbane Technology Park, the Queensland State Centre accommodates:
   - The State Director, Deputy Director and Administration Team
   - Business Advisers for the Manufacturing Sector
   - Business Advisers from Clean Technology Innovation Centre, Creative Industries Innovation Centre, Defence Industry Innovation Centre, Remote Enterprise Centre, Resources Technology Innovation Centre
   - Innovation Facilitator from the Innovative Regions Centre
   - Researchers in Business Facilitator from Technology & Knowledge Connect
Innovative Regions Centre

1. Enterprise Connect’s Innovative Regions Centre provides Innovation Facilitation Services in 10 Regions across Australia:
   - Queensland: North Brisbane-Moreton Bay; Fitzroy –Central Queensland
   - NSW: Central Coast; Lithgow; Wollongong-Illawarra
   - VIC: Central Victorian Goldfields; Greater Geelong
   - TAS: Northern Tasmania
   - SA: Northern Adelaide
   - WA: Freemantle-Kwinana-Mandurah

2. A Regional Approach to SME Innovation enables the innovation needs and capabilities of a specific enterprise to be addressed in terms of the business environment applicable to that business.

3. The Innovation Facilitation Services embrace:
   - Connection of SMEs to Innovation Services
   - Creation of Awareness and Understanding of the SME Innovation Imperative
   - Facilitation of Systematic Innovation within an SME
   - SME – Researcher Collaboration
   - Regional Structural Adjustment

4. Key Initiatives of the Innovative Regions Centre in Brisbane include:
   - Building Connections for:
     - The Business Sector
     - Business Services Providers
     - Brisbane and Moreton Innovation Communities
   - Identification & Facilitation of Business & Research Collaboration Opportunities
   - Strengthening of the Brisbane Innovation Scorecard
   - Mapping of the Brisbane Innovation Ecosystem
   - Development of the Australian Innovation Atlas
Innovative Regions Centre – Facilitator Locations

IRC PROGRAM
1. Canberra, ACT
2. Waurn Ponds, VIC
3. Callaghan, NSW
4. Mawson Lakes, SA
5. Wollongong, NSW
6. Burnie, Tas
7. Eight Mile Plains, Qld
8. Rockhampton, Qld
9. Bentley, WA
10. Bathurst, NSW
Regional Innovation Facilitation Agenda

1. As a result of the establishment of Centre Facilitator for Greater Brisbane, an Innovation Facilitation Agenda has been prepared and being implemented.

2. The role of the Regional Innovation Facilitation Agenda is to provide the Innovative Regions Centre with a systematic approach to facilitating innovation in the Region.

3. In particular, the Agenda provides clearly identifiable action areas where the Innovative Regions Centre can make a difference.

4. Key Result Areas have been identified as providing opportunities within the Region for contributing to the implementation of the National Innovation Agenda.
Making a Difference

Â A Better Connected Region
  ❖ More Connected SMEs
  ❖ More Connected Stakeholders

Â Better Business Intelligence

Â Improved Access to Finance

Â Stronger SME Innovation
  ❖ Better Awareness
  ❖ Improved Capabilities

Â More & Stronger Collaborations

Â Improved Info-structure

Â Restructuring of Economic Base
  ❖ New Industry Development
  ❖ New Services Development
  ❖ New Product Development

Â Stronger Innovation Leadership
Regional Innovation Facilitation Networks

1. Connections and Collaboration are fundamental to the achievement of Innovation at the SME Level and at the Regional Level.

2. The leveraging and strengthening of existing Business Networks has been a priority for the Innovative Regions Centre (IRC) in Brisbane.

3. In addition, the IRC has developed new networks to connect with the Region’s innovation community including the Start-up Sector.

4. These existing and new networks have focused on creating strong connectivity between the IRC and providers of innovation services in:
   - The Australian Government Agencies
   - Queensland Government Agencies
   - Local Government Agencies
   - Business & Industry Organisations
   - Regional, National and International Business & Innovation-Focused Networks
Innovative Regions Centre: Australian Government Connectivity
Innovative Regions Centre: Queensland Government Connectivity
Innovative Regions Centre: Business Sector Connectivity

AIG  AI Group
AAVI  Australian Association of Angel Investors
ACBC  Australia China Business Council
AIC  Australian Institute of Commercialisation
AIICC  Australian Israel Chamber of Commerce
AIIA  Australian Information Industry Association
AIM  Australian Institute of Management
AM  Austmine
ATC  Australia Trade Coast
BBEC  Brisbane Business Enterprise Centre
BDA  Brisbane Development Association
BEDO  Brisbane Economic Development Office
BM  Brisbane Marketing
BSWC  Brisbane SW Chamber
CBEC  Caboolture Business Enterprise Centre
CCC  Queensland Chamber of Commerce
CEDA  Committee for Economic Development of Australia
CEOI  CEO Institute
DCA  Design Council of Australia (Qld)
IDBO  Ipswich Business Development Office
IPE  Ipswich Business Enterprise Centre
IRC  Innovative Regions Centre
ITQ  IT Queensland
LEDO  Logan Economic Development Office
MBCL  Moreton Business Central Link
MBL  Moreton Business Leaders
MEDO  Moreton Economic Development Office
MG  Australian Institute of Management Consultants
NBA  National Baking Association
QMI  QMI Solutions
QRC  Queensland Resources Council
RBOO  Redland Business Development Office
RBSO  Redland Business Enterprise Centre
SEQCC  SEO Indigenous Chamber of Commerce
TEC  The Executive Connection [TEC]
UKTI  United Kingdom Trade & Investment
WCC  Wymum Chamber of Commerce

STAKEHOLDERS

INDUSTRY DEVELOPMENT ASSOC.
BUSINESS DEVELOPMENT ASSOC.
BUSINESS ENTERPRISE CENTRES
ECOOMIC DEVELOPMENT OFFICES

CENTRALITY
HIGH
MEDIUM
LOW

RELATION
WEAK
MEDIUM
STRONG
Innovative Regions Centre: Network Connectivity
Researchers in Business Program

1. Through the Researchers in Business (RIB) Program, Enterprise Connect is supporting the placement of researchers from universities or public research agencies, into firms that wish to develop a new idea with commercial potential.

2. The Program covers:
   - Product Innovation
   - Process Innovation
   - Marketing Innovation
   - Environmental Sustainability

3. The RIB Program has also included specific support for mathematical science based internships.

4. The Research Students in Business Program aims to capitalise on the large pool of students approaching completion of their undergraduate studies or currently undertaking postgraduate studies by applying their skills in industry settings.

5. Within Brisbane, the EC Researchers in Business Facilitator is based at the Brisbane Technology Park, at Eight Mile Plains.

6. In addition, a RIB Facilitator focused on CSIRO Research is based at the Queensland Centre for Advanced Technologies at Pullenvale.
Researchers in Business: Successful Queensland Projects
Regional Development Australia

1. Regional Development Australia (RDA) is a national network of 55 committees made up of local leaders who work with all levels of government, business and community groups to support the development of their regions.

2. This Australian Government Initiative brings together all levels of government to support the development of regional Australia. It is funded by the Australian Government and by state, territory and local governments in some jurisdictions. It is administered by the Department of Regional Australia, Local Government, Arts and Sport.

3. Regional Development Australia (RDA) committee members are local people developing local solutions to local issues. They build partnerships to develop strategies and deliver sustainable infrastructure and services to their regions.

4. They also work with each other to identify issues that cross regions.

5. As the regional development voice of their communities, RDA Committees:
   - consult and engage with communities
   - promote and participate in regional programs and initiatives
   - provide information and advice on their region to all levels of government, and
   - support informed regional planning.

Each RDA committee has developed a Regional Plan which outlines priorities for the region and guides them in strengthening their communities.
RDA Brisbane plays a strong role in promoting Regional Innovation
Continuing strong commitment to Innovation
Innovation Priorities

**Priority 3**
*Developing leadership, innovation and resilience for a changing economy*

- Realise our goals: A Competitive City, A Green City, A Digital City, An Enterprising City

3.1 Partner to conduct business resilience workshops for SMEs
3.2 Participate in the SEQ Regional Development 'Digital Futures Program - Telework Readiness Project'
3.3 Partner with CitySmart to deliver a Green Business Leaders Energy Saving Workshop
3.4 Continue with Skills Queensland Strategic Investment Fund partnership with MSIT and other SEQ RDA's in the delivery of the:
   - Carbon Accounting training program
   - eBusiness Health Check Program and App development
3.5 Arrange and host the CLICK! Digital Expo and document the model as part of the Brisbane Digital Engagement Project
3.6 Support Indigenous enterprise and economic development initiatives including the Indigenous tourism sector
3.7 Partner to investigate the development of a Brisbane innovative business creation and growth campus

**Priority 5**
*Profiling regional competitive strengths and opportunities*

- Realise our goals: A Competitive City, A Digital City, An Enterprising City, A Connected City

5.1 Undertake a multi-year and multi-part investigation aimed at improving Port of Brisbane freight movements comprised of:
   - A situational analysis of current and future intermodal transport needs
   - Research into the feasibility of intermodal separation of transport lines to address future congestion
5.2 Participate in a two year formal benchmarking project to measure the city's performance and competitiveness against internationally recognised indicators:
   - Year 1 tasks:
     - 5.2.1 Partner with key stakeholders to identify the most effective indicator facility
   - Year 2 tasks:
     - 5.2.2 Take appropriate steps to engage with the benchmarking facility
     - 5.2.3 Initiate benchmarking
     - Disseminate results of benchmarking
5.3 Support the development and implementation of Brisbane's Digital Strategy including partnering with BCC and Brisbane Marketing to undertake a Digital Audit of Brisbane's SMEs
5.4 Continue partnership to realise the Brisbane Innovation Scorecard
5.5 Continue partnership to realise the Brisbane Innovation Atlas
Enabling Regional Digital Development
Queensland Government: Innovation-Enabling Services

1. The Queensland Government provides a range of innovation-enabling services through a wide range of Departments and Statutory Authorities.

2. A key driver is the Department of Science, Information Technology, Innovation and the Arts (DSITIA), which in respect of innovation, is responsible for:
   - Supporting and promoting the Queensland ICT Industry;
   - Programs to increase the contribution of creative industries to the wider community
   - Funding and assistance to support regional, industry and business development in Queensland research, development and innovation activities
   - Grants and resources to help businesses innovate
   - Protecting intellectual property through patents, trade marks and designs
   - Information, resources and support for technology and innovation.

3. The Queensland Chief Scientist provides high level, strategic advice to the Premier and Cabinet on the role of science, research and innovation in achieving the State Government’s priorities.

4. The Australian Institute for Commercialisation Innovation Coaching program is a joint initiative with DSITIA. The program, which is part of the Queensland Wide Innovation Network (QWIN), assists SMEs to access a range of innovation services and innovation support programs.

5. Other key organisations contributing to the innovation capabilities of the City include:
   1. The Department of Education, Training and Employment
   2. The State Library of Queensland including The Edge
   3. The Queensland Art Gallery and Gallery of Modern Art
   4. The Queensland Performing Arts Centre
   5. The Queensland Museum and Science Centre
Queensland Government: Innovation Services

SERVICE CENTRES
1. Agriculture, Fisheries and Forestry
2. Australian Institute of Commercialisation (off map)
3. Education, Training & Employment
4. Environment and Heritage
5. Gallery of Modern Art
6. Health Department
7. Natural Resources & Mining
8. Queensland Art Gallery
9. Queensland Performing Arts Centre
10. Science Centre
11. Science, IT, Innovation & Arts
12. Small Business
13. Startup Roundtable
15. State Library
16. QMI Solutions (off map)
17. Queensland Chief Scientist
18. Queensland Museum
19. Queensland Wide Innovation Network
Brisbane City Council’s Innovation Commitment

1. Brisbane City Council has a strong, sustained, commitment to accelerating Business Innovation.

2. The Brisbane Economic Development Plan 2012-31 sets out the priorities and actions required to support Brisbane’s economic development to 2031.

3. A key element of the Plan is accelerating Brisbane’s integration into the rapidly growing digital economy. A Chief Digital Officer has been appointed and is preparing a Digital Strategy aimed at building on Brisbane’s digital industries and capabilities, facilitate take up of digital solutions that enhance the productivity and profitability of local businesses, and attract digital industry forums from around the world.

4. The Plan recognises that “a commitment to innovation is essential to business success. Council will continue to promote innovation and increased collaboration between business and the education sectors to ensure that Brisbane’s strong research capability attracts business investment and strengthens business competitiveness.”

5. The Council also has a strong commitment to Regional Innovation Leadership through the initiation of the Brisbane Innovation Scorecard.
Brisbane Economic Development Plan

Productive Brisbane – priority actions

1. Target resource and related service industry companies to move to Brisbane.

2. Link with overseas agencies and governments to develop business opportunities in Asia, with special focus on opportunities in China and Brisbane’s Sister Cities.

3. Use global networks of Brisbane businesses to expand trade and investment.

4. Appoint a Chief Digital Officer to champion a new digital strategy for Brisbane.

5. Extend wi-fi services throughout the city.

6. Use Council procurement opportunities to attract investment and to grow local business capacity.

7. Facilitate innovation and support the growth of new businesses.
Brisbane Innovation Scorecard

1. The Brisbane Innovation Scorecard is the only city-based annual innovation benchmarking project in the world.

2. The purpose of the Scorecard is to provide a measure of Brisbane’s innovation footprint, to recognise and reward business innovation achievements and to provide a showcase enabling promotion of Brisbane as a City valuing and enabling business innovation.

3. An initiative of Brisbane Marketing, the Scorecard is a collaboration of Brisbane City Council, the University of Queensland Business School, Deloitte Australia, Enterprise Connect, Queensland Government Department of Science and Regional Development Australia [RDA] Brisbane.

4. The Scorecard has been conducted in 2010, 2011 and 2013.

5. In 2011, with funding from Enterprise Connect, a Program of SME Innovation Masterclasses was conducted as part of the Scorecard Project.
Brisbane Innovation Scorecard Leaders

<table>
<thead>
<tr>
<th>2010 Leaders</th>
<th>2011 Leaders</th>
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<tbody>
<tr>
<td>1. Aluminium Boats Australia</td>
<td>11. V-TOL Aerospace</td>
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<td>2. Aquarius Technologies</td>
<td>12. RIO TINTO</td>
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<td>3. Centor Architectural</td>
<td>13. Restaurant Two</td>
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<td>4. Eastall Precision Engineering</td>
<td>14. Electrical &amp; Communications Association</td>
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<td>5. GHD</td>
<td>15. EIDOS Institute</td>
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<td>6. Kaon Consultancy (off map)</td>
<td>16. Aspect Property Group</td>
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<td>7. Prowler Proof</td>
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<td>8. R.F. Technologies Australia</td>
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<td>9. Scott Wilton Consulting</td>
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<td>10. Teyes Bros (off map)</td>
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Australia’s Innovative Growth Region

1. The Brisbane Innovation Ecosystem provides a business environment and infrastructure conducive to Enterprise Innovation.

2. The Brisbane Region:
   ✷ Is a Creative Region
   ✷ Is a Connected Region
   ✷ Is a Collaborative Region
   ✷ Is an Entrepreneurial Region

3. The Brisbane Region is a very Innovative Region
   ...but with plenty of room for improvement.

Just the start of the Story...
This Snapshot aims to provide an introduction to, and overview of, some of Brisbane’s Innovation Capabilities. The Snapshot contains errors and omissions, the next stage is to utilise comments to provide better definition of Brisbane’s Innovation Ecosystem. If you would like to contribute to the telling of the Story of Innovation in Brisbane, contact:

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