VML:MB
Vicki Lukritz
3810 6221

15 March 2018

Sir/Madam

Notice is hereby given that a Meeting of the **ECONOMIC DEVELOPMENT AND DIGITAL CITY COMMITTEE** is to be held in the **Council Chambers** on the 2nd Floor of the Council Administration Building, 45 Roderick Street, Ipswich commencing at **10.30 am *or 10 minutes after the conclusion of the Planning Development and Heritage Committee, whichever is the earlier*** on **Tuesday, 20 March 2018**.

MEMBERS OF THE ECONOMIC DEVELOPMENT AND DIGITAL CITY COMMITTEE	
Councillor Tully **(Chairperson)** Councillor Wendt (Deputy Mayor) **(Deputy Chairperson)**	Councillor Antoniolli **(Mayor)** Councillor Morrison Councillor Martin Councillor Pahlke

Yours faithfully

ACTING CHIEF EXECUTIVE OFFICER

ECONOMIC DEVELOPMENT AND DIGITAL CITY COMMITTEE AGENDA

10.30 am *or 10 minutes after the conclusion of the Planning, Development and Heritage Committee, whichever is the earlier* on **Tuesday,**

20 March 2018

Council Chambers

Item No.	Item Title	Officer
PRESENTATION	**At the commencement of the meeting Councillor Bromage will be making a 15 minute presentation on the upcoming Queen's Baton Relay**	
1	Event Sponsorship of the 2018 Ipswich Cup	EEO
2	Easymile EZ10 Autonomous Transport Demonstration	SCPM
3	Ipswich and West Moreton Advancing Regional Innovation Program	SCPM
4	Myriad Festival 2018	SCPM
5	Ipswich Gigacity Report	SCPM
6	City of Ipswich Defence Industry Summit 2018	IDEO

** Item includes confidential papers

ECONOMIC DEVELOPMENT AND DIGITAL CITY COMMITTEE NO. 2018(03)

20 MARCH 2018

AGENDA

PRESENTATION

At the commencement of the meeting Councillor Bromage will be making a 15 minute presentation on the upcoming Queen's Baton Relay.

1. EVENT SPONSORSHIP OF THE 2018 IPSWICH CUP

With reference to a report by the Events and Engagement Officer dated 8 March 2018 concerning an application for event sponsorship by Ipswich Turf Club for the 2018 Ipswich Cup being held on 16 June 2018.

RECOMMENDATION

That Council allocate event sponsorship of $20,000.00 and allow Community Assistance of no more than $1,000.00 for the 2018 Ipswich Cup from the 2017-2018 Event Sponsorship Budget and maximise the associated economic, social and promotional opportunities.

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2. EASYMILE EZ10 AUTONOMOUS TRANSPORT DEMONSTRATION

With reference to a report by the Smart City Project Manager dated 8 March 2018 concerning the EasyMile EZ10 Autonomous Transport Demonstration held at Springfield Central.

RECOMMENDATION

A. That the report concerning the EasyMile EZ10 Autonomous Transport Demonstration be received and the contents noted.

B. That the Chief Operating Officer (Economic Development and Marketing), in consultation with the Chairperson of the Economic Development and Digital City Committee, continue discussions with EasyMile to establish their Asia Pacific administration, assembly and distribution centre in Ipswich.

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3. IPSWICH AND WEST MORETON ADVANCING REGIONAL INNOVATION PROGRAM

With reference to a report by the Smart City Project Manager dated 8 March 2018 concerning the Ipswich and West Moreton Advancing Regional Innovation Program.

RECOMMENDATION

A. That the report concerning the Ipswich and West Moreton Advancing Regional Innovation Program be received and the contents noted.

B. That the Chief Operating Officer (Economic Development and Marketing), in consultation with the Chairperson of the Economic Development and Digital City Committee, promote the positive benefits of the Ipswich and West Moreton Advancing Regional Innovation Program to encourage participation by local businesses and the community.

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4. MYRIAD FESTIVAL 2018

With reference to a report by the Smart City Project Manager dated 8 March 2018 concerning Council's attendance at the Myriad Festival being held 16 to 18 May 2018.

RECOMMENDATION

That the report concerning Council's attendance at Myriad Festival 2018 be received and the contents noted.

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5. IPSWICH GIGACITY REPORT

With reference to a report by the Smart City Project Manager dated 8 March 2018 concerning the Ipswich Gigacity Report.

RECOMMENDATION

A. That the report concerning the Ipswich Gigacity Report be received and the contents noted.

B. That the Chief Operating Officer (Economic Development and Marketing), in consultation with the Chairperson of the Economic Development and Digital City Committee, further consider the recommendations of the Ipswich Gigacity Report.

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6. CITY OF IPSWICH DEFENCE INDUSTRY SUMMIT 2018

With reference to a report by the Industry Development and Engagement Officer dated 8 March 2018 concerning the proposed City of Ipswich Defence Industry Summit 2018.

RECOMMENDATION

A. That the report concerning the City of Ipswich Defence Industry Summit 2018 be received and the contents noted.

B. That the Chief Operating Officer (Economic Development and Marketing), in consultation with the Chairperson of the Economic Development and Digital City Committee, continue planning with the City of Ipswich Defence Industry Attraction Committee for the City of Ipswich Defence Industry Summit 2018.

** Item includes confidential papers

and any other items as considered necessary.

Economic Development and Digital City Committee	
Mtg Date: 20.03.18	OAR: Yes
Authorisation: Ben Pole	

8 March 2018

M E M O R A N D U M

TO: CHIEF OPERATING OFFICER (ECONOMIC DEVELOPMENT AND MARKETING)

FROM: EVENTS AND ENGAGEMENT OFFICER

RE: EVENT SPONSORSHIP OF THE 2018 IPSWICH CUP

INTRODUCTION:

This is a report by the Events and Engagement Officer dated 8 March 2018 concerning an application for event sponsorship by Ipswich Turf Club for the 2018 Ipswich Cup being held on 16 June 2018.

BACKGROUND:

The Ipswich Cup in its current form has been run at the Ipswich Turf Club since 1934.

The Ipswich Cup has been recognised by Queensland Racing as having the highest attendance of all meetings of the Queensland Racing Winter Carnival.

In 2017 more than 20,000 spectators attended the event with an estimated 70% coming from within the Ipswich LGA.

Media coverage of the 2016 Ipswich Cup included the Courier Mail, Queensland Times, River 949, Channel 7 and Sky Racing.

In 2017 Council provided $20,000 in event sponsorship and in-kind support (Star Pickets with Caps, Star Picket Rammer, Barrier Mesh and Cable Ties) to Ipswich Turf Club Incorporated for the Ipswich Cup event.

Confirmed sponsors of the 2018 Ipswich Cup include Channel Seven (Naming rights), Sky Racing, Carlton and United Breweries, Schweppes, Sirromet, Queensland Times, Ray White Ipswich and RiverLink.

Using economy.id Event Impact Calculator the estimated economic impact of the Ipswich Cup is $3.5 million.

SPONSORSHIP REQUEST:

Ipswich Turf Club has submitted an Event Sponsorship Application for $20,000.00 to assist with the marketing and logistic costs of the event.

Sponsorship benefits to be negotiated for Council include:

- Race naming rights of the time honored and listed Eye Liner Stakes race
- On-course signage which remains in place across the year
- 100 x guests invited into the exclusive VIP luncheon
- A sponsor's marquee for ICC social club members at discounted rate

The Events and Engagements Officer reviewed the Event Sponsorship Application (Attachment A) and recommends that Council provide $20,000.00 financial support and allow Community Assistance of no more than $1,000.00 to Ipswich Turf Club for the 2018 Ipswich Cup.

BENEFITS TO COMMUNITY AND CUSTOMERS:

The 2018 Ipswich Cup aligns with Advance Ipswich Plan, the Corporate Plan 2012–2017 and the Destination Marketing, Management and Events Plan:

Goal 1 Strategy 6 Key Action 6.2 – Support economic activity based on health, well-being and human services
Goal 1 Strategy 6 Key Action 6.4 – Support tourism opportunities based on heritage assets, events, motor and adventure sports, eco-tourism and nature-based recreation, rural areas and farm-based tourism
Goal 2 Strategy 1 Key Action 1.4 – Develop a strong network of community connectedness and identity, and accessibility to services and facilities that contribute to both social and economic outcomes
Goal 2 Strategy 5 Key Action 5.1 – Implement an integrated open space plan that provides land and facilities to meet the community's active and passive recreation and leisure needs
Goal 3 Strategy 1 Key Action 1.2 – Promote and celebrate the city's identity throughout the community and beyond
Goal 3 Strategy 5 Key Action 5.1 – Implement a Community Events program across the city that includes community and family activities

ATTACHMENT:

Name of Attachment	**Attachment**
Attachment A – Application for Event Sponsorship of the 2018 Ipswich Cup	Attachment A.pdf

<u>RECOMMENDATION</u>:

That Council allocate event sponsorship of $20,000.00 and allow Community Assistance of no more than $1,000.00 for the 2018 Ipswich Cup from the 2017-2018 Event Sponsorship Budget and maximise the associated economic, social and promotional opportunities.

Paula Watkins
EVENTS AND ENGAGEMENT OFFICER

I concur with the recommendations contained in this report.

Ben Pole
CHIEF OPERATING OFFICER
(ECONOMIC DEVELOPMENT AND MARKETING)

Event Sponsorship March 2018
Event Sponsorship Form
Application ES00091 From Ipswich Turf Club

Organisation Details

* indicates a required field

Organisation Name * Ipswich Turf Club

Contact Person * Mr Brett Kitching

Street Address *

Postal Address *

Phone Number *

Must be an Australian phone number

Email * itcgm@ipswichturfclub.com.au

Is your organisation incorporated? *
◉ Yes
○ No

Is your organisation registered for GST? *
◉ Yes
○ No

Does your organisation have an ABN? *
◉ Yes
○ No
Please add ABN below

ABN 39 940 361 195

Information from the Australian Business Register	
ABN	39 940 361 195
Entity name	Ipswich Turf Club Inc
ABN status	Active
Entity type	Co-operative
Goods & Services Tax (GST)	Yes
DGR Endorsed	No
ATO Charity Type	Not endorsed More information
ACNC Registration	No
Tax Concessions	No tax concessions
Main business location	4304 QLD

Information current as at 12:00am today

Must be an ABN

Attach copy of Public Liability Insurance *

Filename: Microsoft Word - ISR Certificate of Currency - RQ and Clubs.pdf

Event Sponsorship March 2018
Event Sponsorship Form
Application ES00091 From Ipswich Turf Club

File size: 30.7 kB

Sponsorship History with Ipswich City Council

* indicates a required field

Has your organisation previously received funding from Ipswich City Council for any event? (If so, please list the most recent and include the event name, date of event and the amount received from Ipswich City Council). *	Spring Cup 2017 - $5,000 plus GST Ipswich Cup 2017 - $20,000 plus GST

Current Event Sponsorship Request

* indicates a required field

Alignment with Program Objectives:

- Alignment with Council's Corporate Plan;
- Community engagement and support;
- Economic benefit and visitor attraction;
- Appropriate exposure for Council and the City of Ipswich;
- Uniqueness of the event;
- Sustainability and growth potential and;
- Partnership development.

Name of Event: *	Channel Seven Ipswich Cup 2018
Start Date: *	16/06/2018 What is the expected start date of the event?
End Date: *	16/06/2018 What is the expected completion date of the event?
Provide a brief description of the event: *	The Ipswich Cup thoroughbred horse racing meeting is the largest social event in Ipswich and is a time honoured race dating back to the nineteenth century. Must be no more than 150 words

Proposed Venue/ Location *	Ipswich Turf Club
Estimated Attendance *	20000
Provide a description of the event, including history and Council involvement. *	The Ipswich Cup is a well-recognised and patronized annual event which takes place during the Winter Racing Carnival. It has been a very long-standing event, having been built up over several years to have now established itself as one of the greatest "party race days" across Australia. The Ipswich Cup has been noted in the Queensland Racing Annual Report as having the highest attendance of all meetings of the Queensland Racing Winter Carnival. The Victorian based Racing and Breeding Magazine named Ipswich Cup Day in the top 20 meetings in the Nation in 2009 – one of only two Queensland meetings and the only meeting at a Provincial Club in the top 20. Having been developed from a small foundation of committee management, the unprecedented growth of this outstanding event has put the Ipswich Turf Club in an enviable position of strength in terms of further developing the structure, objectives and profitability. The growth of the infield marquees is an example of continued development of the event. Council support has been fundamental in assisting the Ipswich Turf Club's small team to ensure this event continues to develop and remain on the racing and social calendar of the community.
Which sponsorship category are you seeking funding from?	◉ Category 1 $10,000+ ○ Category 2 $5,000 to $9,999 ○ Category 3 $4,999 and below
What is the amount of funding you are seeking from Ipswich City Council? *	$20,000 plus GST
What other support are you seeking from Ipswich City Council in products, services, time and other resources? *	Assistance with logistical arrangements and traffic management planning in the lead up to the Ipswich Cup.
Have you approached any other areas of Council with this request, if yes, where? *	No

What are the goals and objectives of the event? *	To conduct the time honoured race meeting and put on display again the wonderful community spirit shown by the people of Ipswich each year at the event. A major aim is to attract the largest attendance at a Queensland race meeting as well as at any provincial club race meeting across Australia.
Who is your target audience? (Provide demographic information and research to support if possible). *	Ipswich social groups are the main target although patrons visit from all states of Australia as well as from overseas. There are six target market groups relating to Ipswich Turf Club including: Younger/festival goers This group comprises of the young, university students, and of business people who enjoy socialising and partying, not necessarily have an interest in horse racing but more than willing to have a party. Females within this market are also skewed towards the fashion of the day. This group is more likely to purchase infield tickets at the Ipswich Cup. Punters The typical punter market comprises of the Average Joe who enjoys horse racing and betting. Not typically interested in the other events (fashion, after party) on racedays. Members Likely to be a member of the Ipswich LGA, although significant increase in patronage will be drawn from outside this radius once the new development has been completed. Corporate This group has a strong link with the local business community and racing product. They predominantly host a function at the Club for the Ipswich Cup meeting and potentially attend one other event. Community Many community supporters will frequent the Club on more than one occasion throughout the year. Smaller business and local sporting groups. May also attend functions run by other groups at the Club. Industry Mixed group of local and State Government, Racing Queensland and other industry bodies including Sky Channel and UBET. They have a large investment in ensuring the racing product succeeds for the betterment of the industry.
List the key benefits this event will bring to the	Since 1866 it has been a tradition of Ipswich to host an Ipswich Cup to bring the community together through

City of Ipswich and the Ipswich community. *	horse racing. The largest attendance and good behaviour of fashionably dressed patrons will again show Ipswich on the national stage in a good light. From a financial point of view it is estimated up to $5M is spent across the Ipswich economy in relation to clothing and accessories, accommodation, hospitality outlets and transport providers.
List the benefits you propose to return to Ipswich City Council. (Describe levels of sponsorship offered, their costs and benefits). *	Race naming rights of the time honoured and listed Eye Liner Stakes race - $10,000. On-course signage which remains in place across the year - $5,000. 100 guests invited into the exclusive VIP luncheon - $15,000. A sponsor's marquee for ICC social club members at discounted rate - $10,000.
How will your organisation be able to assist Ipswich City Council in measuring how effective its sponsorship was? (eg. surveys, reports) *	Sky Channel summaries, media coverage including social media, patron feedback.
Outline the involvement of all other sponsors and government bodies assisting with this event. *	No other Government bodies are involved. Other major sponsors include: Channel Seven (Naming rights) Sky Racing Carlton & United Breweries Schweppes Sirromet Queensland Times Ray White Ipswich RiverLink
How does this event align with Ipswich City Council's Corporate Plan? (Visit www.ipswich.qld.gov.au About Council, Corporate Publications, Corporate Plan - to view a copy) *	This event aligns with the support to strengthen the local economy and grow the community spirit.
How does this event allow for a high level of community engagement through participation? *	The Ipswich Cup has created a sense of local pride in the community to be part of the largest race meeting in Queensland. It is more than a horse race and more than a music concert. The Cup has grown into an event the

community simply must attend - a place to catch up with old friends and make new ones. It is expected over 20,000 patrons will attend this year's social event of the year.

Part if this year's marketing plan is about the experience the community has with the event. This will be driven through the promotions and stories from those that have attended past events. We will also be working with the community to feature in advertising through print and also through social media.

How will this event deliver economic benefit, either in short, medium or long term, to the City of Ipswich? *

Tourism, events and hospitality are key industries and major contributors to the City's economy and the Ipswich Cup is an ideal platform to assist in this long-term promotion.

The racing industry contributes $57.8M of economic value to the Ipswich regional annually. As previously mentioned, the ITC expect an estimate of $5M economic benefits directly aligned with the Ipswich Cup. The Ipswich brand will also be broadcast internationally via the live Sky Racing television channel to further strengthen the benefit to the City.

Outline how will this event attract visitors to Ipswich? *

The Ipswich Cup is a well-recognised and patronized annual event which takes place during the Winter Racing Carnival. It has been a very long-standing event, having been built up over several years to have now established itself as one of the greatest “party race days” across Australia. It is particularly strong with locals, or those that have a link with the area who continue to return to the event as their annual pilgrimage to Ipswich.

How will this event provide positive exposure to the City of Ipswich through attracting media attention or thorugh engagement with community and business networks? *

A strong push to promote the people of the Ipswich is part of this year's theme. We plan to promote the Cup through the stories and experiences patrons have had with the event. Our partnerships with Channel Seven, Queensland Times and River FM will also ensure for a positive media exposure.

We continue to also work with sponsors, including Ray White Ipswich who have been supporting the Cup for the past 24 years.

We will once again partner with RiverLink to include a Fashions on the Field. Part of the partnership will include promotion with local businesses within the RiverLink Shopping Centre through in-store and online promotions.

Detail the extent to which the event is unique regionally, nationally and internationally. *

The event is well-known to be nothing like any other race meeting in Australia. It has all of the elements to attract a local, regional, national and international following.

From an industry perspective, winners from previous Ipswich Cups have been imported from Europe and horses

	travel from all states of Australia and New Zealand to contest the program. From a social perspective, patrons can enjoy both worlds - racing and entertainment with the DJ festival on the infield of particular following for the younger demographic.
How does this event complement other events and/or fill a gap in the City's calendar of events, particularly 'off peak' tourism? *	The event falls in the middle of winter and complements the Willowbank Winternationals Drag Races of the previous week.
How will funding by Ipswich City Council develolp/enhance this event? *	Funding will assist this event to remain profitable and at a level it is currently achieving.
Detail the extent to which your event has the potential to grow into a significant regional event. *	It is currently a significant regional event consistently attracting over 20,000 patrons.
What is the potential ability for your event to become sustainable beyond the first year of Council's funding? *	N/A
List the key personnel involved with the delivery of this event and provide a brief outline of previous experience in organising similar events. *	Committee of ITC - Wayne Patch, Brian North, Liam Tansey, Dan Bowden, Dr Allen Byrnes, Brian Dwyer, Trent Quinn and Brad Bulow - 130 years of combined honorary service. Brett Kitching - General Manager - 14 years' in the position. Steve Harling - Operations Manager - three years of organising Ipswich Cup logistics Claire Power - Communications & Marketing Manager - over 17 years' of specialist experience including working in major events including the Australian Ladies Master Golf Tournament, Queensland Open and Jacobs Creek Open Golf Tournament.
Provide evidence that the event budget and resources are viable and that the event will be delivered as planned. *	The Cup event has decades of historical viability both financially and operationally.

Attachments

* indicates a required field

Attach an event timeline (including important deadlines and key milestones). *

Filename: Key Milestones 2018.pdf
File size: 21.0 kB

Attached a comprehensive budget (including all proposed income and expenditure) *

Filename: Event Budget 2018.pdf
File size: 26.9 kB

Category 1 Applications- Attach high level project plan

Filename: Ipswich Cup 2018 Strategic Marketing Plan-Full Document FINAL.pdf
File size: 647.0 kB
Compulsory information required for funding $10,000+

Category 1 Applications - Attach organisational and management structure

Filename: 2018 Staff Structure.pdf
File size: 53.8 kB
Compulsory information required for funding $10,000+

Budget Details

* indicates a required field

Budget: Income and Expenditure

Income (Description)	$ GST Exclusive	Expenditure (Item Description)	$ GST Exclusive
Hospitality *	$1,000,000.00 *	Hospitality *	$700,000.00 *
Sponsorship	$250,000.00	Logistics	$350,000.00
Gate and other	$250,000.00	Other	$150,000.00
	Total: $1,500,000.00		Total: $1,200,000.00

Total Amount Requested: *

$20,000.00
GST Exclusive. What is the total financial support you are requesting in this application?

Total Project Cost: *

$1,200,000.00
GST Exclusive. What is the total budgeted cost (dollars) of your project?

List items from your expenditure table above that are to be covered by the sponsorship: *

All items

Contributions to this Event by Other Sources/Sponsors:

Applications which include contributions from the applicant organisation and other sources are encouraged. Contributions may be cash, other funding assistance or in-kind e.g. voluntary labour or materials.
Please indicate the type of contributions being made towards this event.

Contributed By	Type of Contribution	$ Amount
Channel 7	CASH	$10,000.00
Sky Racing	CASH	$55,000.00
Schweppes	CASH	$15,000.00
Sirromet	CASH	$20,000.00
Ray White Ipswich	CASH	$8,500.00
Queensland Times	CONTRA	$20,000.00
River FM	CONTRA	$5,000.00
Carlton & United Breweries	CASH	$100,000.00
		Total: $233,500.00

Certification Details

* indicates a required field

Certification:

- I herebey certify that I am authorised to speak on behalf of my organisation.
- I do solemnly and sincerely declare that the information provided is true and correct to the best of my knowledge.

- I understand that if Ipswich City Council approves a sponsorship, I will be required to accept the conditions of the sponsorship in accordance with Ipswich City Council audit requirements.
- I consent to the information contained within this application being disclosed to or by Ipswich City Council for the purpose of assessing, administering and monitoring my current and any future Ipswich City Council grant applications.
- I understand that if Ipswich City Council approves a sponsorship, I will be bound by the contents of my application to carry out my event as I have described and my application will form part of my contractual agreement with Ipswich City Council.

Name: *	Mr Brett Kitching
Position in Organisation: *	General Manager / Club Secretary
Date: *	26/02/2018

Submitting the Application:

You will not be able to submit your application until all of the compulsory questions (marked *) are completed.

NOTE: Please ensure that you have finished your application before you submit. Once you have submitted it, it can no longer be accessed.

Privacy Statement:

Ipswich City Council is collecting your personal information so that we can process your request for a Event Sponsorship. We will not disclose your personal information outside of Council unless we are required by law or you have given your consent. However, in order to perform the above functions, we may need to disclose your personal information to relevant Council Committees. By completing and signing this form and returning it to Council, we will consider that you have given us your consent to manage your personal information in the manner described in Council's Privacy Statement, Personal Information Digest and this collection notice.

Economic Development and Digital City Committee	
Mtg Date: 20.03.18	OAR: YES
Authorisation: Ben Pole	

8 March 2018

M E M O R A N D U M

TO: CHIEF OPERATING OFFICER (ECONOMIC DEVELOPMENT AND MARKETING)

FROM: SMART CITY PROJECT MANAGER

RE: EASYMILE EZ10 AUTONOMOUS TRANSPORT DEMONSTRATION

INTRODUCTION:

This is a report by the Smart City Project Manager dated 8 March 2018 concerning the EasyMile EZ10 Autonomous Transport Demonstration held at Springfield Central.

OVERVIEW:

The Ipswich Smart City Program aims to test and develop opportunities for industry advancement, skills development, community prosperity and liveability. There are a number of initiatives currently active across Council as part of the Smart City Program, including:

- Springfield Central, North Ipswich and Rosewood Pilot Precincts
- Advancing Regional Innovation Program
- Connected City Lighting
- Sensor Network and Public WiFi Network Roll Out
- Smart City Management Platform and Dashboard
- Open Data Program
- Digital Skilling Program
- Remotely Piloted Systems and Solutions
- Cooperative and Automated Vehicle Initiative
- Fire Station 101

In late 2017 Council initiated discussions with one of the world's leading autonomous vehicle technology companies, the French based EasyMile. Since 2014 EasyMile has been producing and supplying smart mobility solutions and autonomous technologies for transporting passengers or logistics on private sites, urban, suburban or rural areas in diverse environments. They currently have driverless transport solutions deployed in 20 countries across Asia Pacific, Middle East, North America and Europe.

Council met with EasyMile's Director General and Head of Asia Pacific to discuss the potential applications for their mobility solutions and the opportunity for them to establish their Asia Pacific administration, assembly and distribution centre in Ipswich. While those discussions continue, it was agreed that Council would partner with EasyMile to deliver a demonstration of the EZ10 Driverless Shuttle.

From Monday 26 February to Saturday 3 March, the EasyMile EZ10 transported approximately 110 people per day between the entrance of John Nugent Way and the entrance of the University of Southern Queensland in Springfield Central.

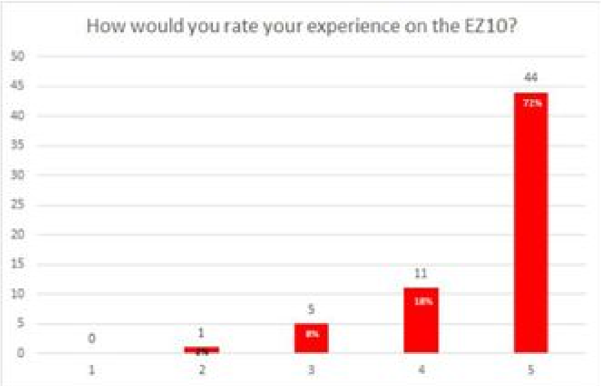
The purpose of the demonstration was to present the driverless vehicle to the public and stakeholders raising the profile of smart transport solutions and generating tangible community interaction with the Ipswich Smart City Program.

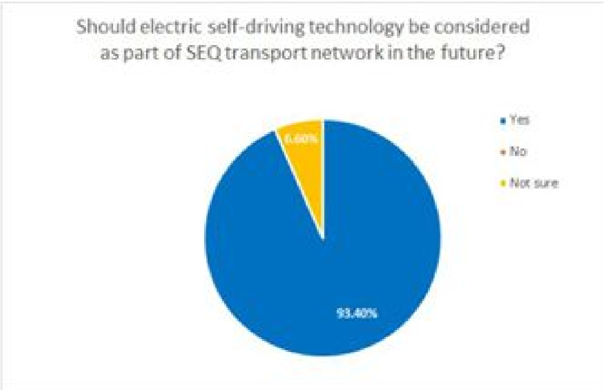
Other partners in the demonstration were TransDev, Telstra, Springfield City Group, University of Southern Queensland, Department of Transport and Main Roads, and the South East Queensland Council of Mayors.

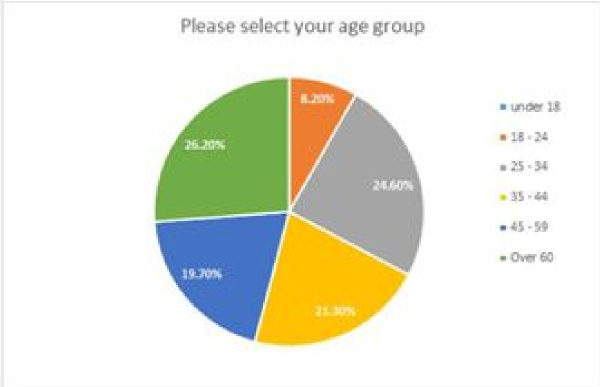
Image 1: EasyMile EZ10 Demonstration Route

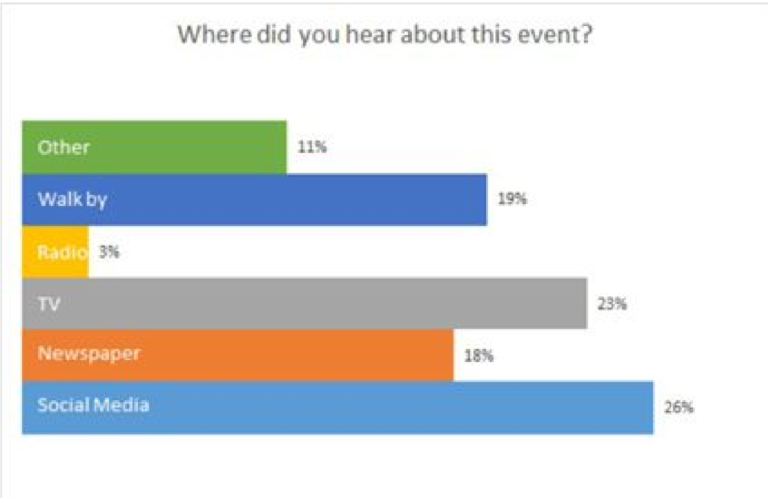
Image 2: EasyMile EZ10 Demonstration

During the six day demonstration Council and TransDev conducted a random survey of participants to gain some insight into their experience and perceptions of connected and autonomous transport, below are the results:









BENEFITS TO COMMUNITY AND CUSTOMERS:

The EasyMile EZ10 Autonomous Transport Demonstration supports the Advance Ipswich Plan and the Ipswich Smart City Program:

Goal 1 Strategy 1 Key Action 2.2 – Implement the Skilling Ipswich Program which covers community skilling, industry sector skills strategies and Indigenous employment, and expands the education and training sector in the city.
Goal 1 Strategy 1 Key Action 2.3 – Ensure state, private and tertiary education facilities match population growth, and provide adequate skills and knowledge to support the local economy and assist people to have rewarding careers.
Goal 1 Strategy 6 Key Actions 6.1 to 6.7 – Support economic activity based on education, research, technology, health, human services, retail, hospitality, tourism, transport, logistics, manufacturing, agriculture, and niche enterprises.
Goal 3 Strategy 2 Key Action 2.5 - Increase the use of on-line and digital communications to deliver and promote services and information to the community.

RECOMMENDATION:

A. That the report concerning the EasyMile EZ10 Autonomous Transport Demonstration be received and the contents noted.

B. That the Chief Operating Officer (Economic Development and Marketing), in consultation with the Chairperson of the Economic Development and Digital City Committee, continue discussions with EasyMile to establish their Asia Pacific administration, assembly and distribution centre in Ipswich.

Zubair Khatree
SMART CITY PROJECT MANAGER

I concur with the recommendation contained in this report.

Ben Pole
CHIEF OPERATING OFFICER
(ECONOMIC DEVELOPMENT AND MARKETING)

Economic Development and Digital City Committee	
Mtg Date:	OAR: YES
Authorisation: Ben Pole	

8 March 2018

M E M O R A N D U M

TO: CHIEF OPERATING OFFICER (ECONOMIC DEVELOPMENT AND MARKETING)

FROM: SMART CITY PROJECT MANAGER

RE: IPSWICH AND WEST MORETON ADVANCING REGIONAL INNOVATION PROGRAM

INTRODUCTION:

This is a report by the Smart City Project Manager dated 8 March 2018 concerning the Ipswich and West Moreton Advancing Regional Innovation Program.

BACKGROUND:

The Ipswich Smart City Program aims to test and develop opportunities for industry advancement, skills development, community prosperity and liveability.

One of the Smart City Program initiatives currently being delivered by Council is the Ipswich and West Moreton Advancing Regional Innovation Program (ARIP). The objective of ARIP is to develop entrepreneurial talent and activity within the region.

ARIP is led by Council, co-funded by the Queensland Government Department of Innovation, Tourism and Industry Development, and delivered by TAFE Queensland South West. Members of the program collaborate on three levels, a Governance Committee, Advisory Members and Delivery Partners. Current program members include Springfield City Group, Little Tokyo Two, Fire Station 101, University of Southern Queensland, Ipswich Chamber of Commerce, Queensland Urban Utilities, Motor Trade Association of Queensland, Llewellyn Motors and Telstra. Stakeholders such as Scenic Rim Regional Council, Somerset Regional Council and Lockyer Valley Regional Council are also involved.

Through the Queensland Government's Advance Queensland initiative, ARIP has attracted \$166,000 in first year funding and can access a further \$334,000 for years two and three dependant on performance and match funding adherence.

Three prototype ARIP activities have already been delivered as hackathons at Fire Station 101, they were the Waterhack17, Digicon17 and Barkathon18.

Council and the ARIP Advisory Committee are in the process of finalising the 2018 program of activities, the objectives and actions are:

- Provide connectivity of entrepreneurial and innovation capability and skills programs delivered to start-ups, businesses, and the community. These are provided through Fire Station 101, Little Tokyo Two, and venues to be determined in neighbouring Council regions. TAFE Queensland will provide a parallel youth program aimed at students in years 8 to 11 based on a problem solving challenge event. The program will promote entrepreneurial thinking and action-based learning through practical business development also providing participants with recognition of prior learning towards Certificate II modules upon completion of the week long program.

- Encourage and establish the collaboration of stakeholders to build innovation capabilities across the regions and work in partnership to achieve common goals; problem solve challenging business issues and working as a cohort. These relationships are being developed through joint regional forums, cohesive Council consultations, and Chambers involvements, knowledge sharing discussions in addition to mentoring events which cater to all sectors from resourcing, manufacturing, industry and agriculture.

- Develop communities of practice by increased access to innovation mentors and experts for the total regional innovation ecosystem including start-ups, small to medium enterprises, industry, researchers, mentors, and investors. Council is currently preparing a schedule of upcoming mentoring, business development workshop and training events to be held at various locations.

- Lead and influence the succession of the program by ensuring activities have broad support and contributions from multiple partners. Council is currently engaging additional partners to further support the program and increase the matched funding stock to secure the prospective three year period.

- Establish the sustainability of the program objective by seeding activities, creating relationships and curricula that will extend beyond the funding commitment for this program. This is being transpired by encouraging entities to work cohesively utilising the ARIP program and funding as a preliminary basis for direction and guidance.

Once information on how local businesses and community can take part in the Ipswich and West Moreton Advancing Regional Innovation Program is finalised, it will be provided and promoted through all available Council and partner channels.

BENEFITS TO COMMUNITY AND CUSTOMERS:

The Ipswich and West Moreton Advancing Regional Innovation Program supports the Advance Ipswich Plan and the Ipswich Smart City Program:

Goal 1 Strategy 1 Key Action 2.2 – Implement the Skilling Ipswich Program which covers community skilling, industry sector skills strategies and Indigenous employment, and expands the education and training sector in the city.
Goal 1 Strategy 1 Key Action 2.3 – Ensure state, private and tertiary education facilities match population growth, and provide adequate skills and knowledge to support the local economy and assist people to have rewarding careers.

Goal 1 Strategy 6 Key Actions 6.1 to 6.7 – Support economic activity based on education, research, technology, health, human services, retail, hospitality, tourism, transport, logistics, manufacturing, agriculture, and niche enterprises.
Goal 3 Strategy 2 Key Action 2.5 - Increase the use of on-line and digital communications to deliver and promote services and information to the community.

<u>RECOMMENDATION</u>:

A. That the report concerning the Ipswich and West Moreton Advancing Regional Innovation Program be received and the contents noted.

B. That the Chief Operating Officer (Economic Development and Marketing), in consultation with the Chairperson of the Economic Development and Digital City Committee, promote the positive benefits of the Ipswich and West Moreton Advancing Regional Innovation Program to encourage participation by local businesses and the community.

Zubair Khatree
SMART CITY PROJECT MANAGER

I concur with the recommendations contained in this report.

Ben Pole
CHIEF OPERATING OFFICER
(ECONOMIC DEVELOPMENT AND MARKETING)

Economic Development and Digital City Committee	
Mtg Date:	OAR: YES
Authorisation: Ben Pole	

8 March 2018

M E M O R A N D U M

TO: CHIEF OPERATING OFFICER (ECONOMIC DEVELOPMENT AND MARKETING)

FROM: SMART CITY PROJECT MANAGER

RE: MYRIAD FESTIVAL 2018

INTRODUCTION:

This is a report by the Smart City Project Manager dated 8 March 2018 concerning Council's attendance at the Myriad Festival being held 16 to 18 May 2018.

BACKGROUND:

Council has been invited by the Queensland Government Department of Innovation, Tourism and Industry Development to exhibit at the Myriad Festival 2018 www.Myriad.Live. By fostering interactions between international communities and across industries, Myriad catalyses innovation and investment opportunities for businesses of all sizes, from startups to scale-ups.

Council will exhibit at Myriad to promote the region's startup success stories, generating connections with potential entrepreneurs and investors to attract them to make Ipswich their preferred startup location or investment option, in turn generating further innovation and business development in the Ipswich region.

Council is leading a delegation of Ipswich success stories as part of the region's presentation. With over 3,000 total attendees and hundreds of businesses, investors, developers and entrepreneurs actively engaged in the Myriad program, this is one of the most significant opportunities of the year for Ipswich to promote its achievements and attract new interest.

Two of the Ipswich startup success stories Council will showcase at Myriad this year are Kate Perry of Wiserr and Tim and Jeremy Butler of Naeus.

Wiserr www.Wiserr.org is based in Ipswich where it originated, it is a website connecting people with the knowledge, skills and experience to those seeking it. Wiserr connects the community, adds value and breaks down barriers of isolation by helping to create meaningful work opportunities. Kate says Council and Fire Station 101 has greatly assisted in the early success of Wiserr, thanks mainly to the quality and accessibility of mentorship, events and the programs being organised and facilitated.

Naeus www.Neaus.com is a new Ipswich business that is the result of a collaboration between brothers Tim and Jeremy, Council and Firestation 101. Naeus is an application powered by community knowledge from local experts and explorers for people to have a more interactive experience on walking trails. Tim says Fire Station 101 has been critical to their success, from the initial hackathon through to events, mentoring and having a body of knowledge to bounce ideas off. Council's assistance on the journey so far has been imperative to success. He says the real value has been in the openness of the Council and helpfulness of the staff. By being able to keep in contact constantly through the development phase.

Council will support up to ten startups as part of its Myriad exhibit in 2018 while promoting many more businesses and opportunities through dedicated collateral and communications.

BENEFITS TO COMMUNITY AND CUSTOMERS:

Council's attendance at Myriad Festival 2018 supports the Advance Ipswich Plan and the Ipswich Smart City Program:

Goal 1 Strategy 6 Key Actions 6.1 to 6.7 – Support economic activity based on education, research, technology, health, human services, retail, hospitality, tourism, transport, logistics, manufacturing, agriculture, and niche enterprises.
Goal 3 Strategy 2 Key Action 2.5 - Increase the use of on-line and digital communications to deliver and promote services and information to the community.

RECOMMENDATION:

That the report concerning Council's attendance at Myriad Festival 2018 be received and the contents noted.

Zubair Khatree
SMART CITY PROJECT MANAGER

I concur with the recommendations contained in this report.

Ben Pole
CHIEF OPERATING OFFICER
(ECONOMIC DEVELOPMENT AND MARKETING)

Economic Development and Digital City Committee	
Mtg Date:	OAR: YES
Authorisation: Ben Pole	

8 March 2018

M E M O R A N D U M

TO: CHIEF OPERATING OFFICER (ECONOMIC DEVELOPMENT AND MARKETING)

FROM: SMART CITY PROJECT MANAGER

RE: IPSWICH GIGACITY REPORT

INTRODUCTION:

This is a report by the Smart City Project Manager dated 8 March 2018 concerning the Ipswich Gigacity Report.

BACKGROUND:

The Ipswich Smart City Program aims to test and develop opportunities for industry advancement, skills development, community prosperity and liveability.

One of the fundamental enablers of a smart city is connectivity. Recently Council collaborated with specialist economics and engineering firm Gravelroad to assess the future demand for Gigabit speed services in Ipswich with a focus on industries which may be attracted to invest in Ipswich if Gigabit services were available.

The emergence of Gigacity initiatives around the globe (Adelaide, Launceston, UK, Europe, Asia and USA) confirms the growing demand for gigabit broadband capacity to support current and emerging businesses and residential demand.

A Gigacity can be defined as having infrastructure and services capable of delivering unlimited download connections at 1 Gigabit per second or more, where users benefit from widespread very high speed connectivity, low latency and reliable performance delivered by robust, future-proof fixed and mobile technologies.

Business users will use gigabit capacity for industrial applications, automated manufacturing, remote access to high speed cloud applications and in time for the delivery of health, education services and other capacity intensive services.

The National Broadband Network intended to bring world class broadband services to Australia, but has so far not raised Australia above its traditional connectivity ranking of around 50 among developed nations. Since 2010 Council has focused on proactively working with NBN Co to streamline and accelerate the NBN roll out and connection process, ensuring our businesses and residents have access to high speed broadband at the earliest opportunity.

NBN Co has been progressively rolling out Fibre to the Premise network infrastructure in the Ipswich City Council area since October 2012. As at December 2017, approximately 39,000 premises can now connect to the National Broadband Network fixed line high speed broadband network, and approximately 30,000 premises are in build-commencement for Fibre to the Curb, Fibre to the Node, Hybrid Fibre Coaxial and Fixed Wireless connections. NBN Co reports that 52% of Ipswich premises with access to a NBN fibre connection have opted to take up the service, this is well above the state average of 41% and the national average of 43%. As of December 2017, Ipswich is home to the greatest amount of NBN continuing build activity in a single council area within Queensland. The projected whole-of-city completion date is 2020. In greenfield areas, Ipswich has approximately 174 completed development stages with activated NBN Fibre to the Premise covering approximately 4,465 new premises. Another 135 new development stages covering 4,700 new premises will have Fibre to the Premises in 2018-2019.

The Ipswich Gigacity Report assessed whether the NBN could meet Gigabit service requirements and whether Gigabit service demand would be with specialized users such as industrial and highly automated commercial organisations, or if this level of connectivity would become a mainstream demand requirement across domestic and business users.

The basic conclusion of the Report is that Gigabit services will soon become a normal requirement of both domestic and commercial high demand users but that the NBN would not meet the demand in many areas of Ipswich.

The Report suggests that for Ipswich to continue its path as a recognised digital city it should review and address its connectivity demand, benefits, delivery and infrastructure options including but not limited to the NBN roll out. There is opportunity for Ipswich to strengthen its industry attraction and investment credentials with strategic high speed connectivity.

Key recommendations for Council intervention to accelerate the introduction of gigabit services include the presentation of Expressions of Interest and Request for Offer opportunities to the market for:

- Gigabit services in NBN FTTP coverage areas
- Replacement and commercialisation of the current Council owned fibre optic cables
- Additional fibre links and construction of new fibre assets

ATTACHMENT:

Name of Attachment	Attachment
Attachment A: Ipswich Gigacity Report	Attachment A

BENEFITS TO COMMUNITY AND CUSTOMERS:

The Ipswich Gigacity Report supports the Advance Ipswich Plan and the Ipswich Smart City Program:

Goal 1 Strategy 6 Key Actions 6.1 to 6.7 – Support economic activity based on education, research, technology, health, human services, retail, hospitality, tourism, transport, logistics, manufacturing, agriculture, and niche enterprises.
Goal 3 Strategy 2 Key Action 2.5 - Increase the use of on-line and digital communications to deliver and promote services and information to the community.

RECOMMENDATION:

A. That the report concerning the Ipswich Gigacity Report be received and the contents noted.

B. That the Chief Operating Officer (Economic Development and Marketing), in consultation with the Chairperson of the Economic Development and Digital City Committee, further consider the recommendations of the Ipswich Gigacity Report.

Zubair Khatree
SMART CITY PROJECT MANAGER

I concur with the recommendations contained in this report.

Ben Pole
CHIEF OPERATING OFFICER
(ECONOMIC DEVELOPMENT AND MARKETING)

GRAVELROAD
thinking beyond consulting

CITY OF IPSWICH AS A GIGACITY

1. CONTENTS

2. EXECUTIVE SUMMARY

Ipswich is a recognised global leader in its development as a digital city and as the digital economy and its demands on critical infrastructure develops everywhere, this report discusses the next step which is the consideration of the concept of a Gigacity where very high-speed communications services offering 1Gb/s or more are available to residential and business users.

For a variety of reasons, it is apparent that these services are not available or likely to be widely available in the short to medium term from the telecommunications industry in Australia.

This document reports on the financial, economic and technical aspects of a Gigacity service and reviews where in the Ipswich region there would be a demand and economic benefit for the region if the service were in place.

The National Broadband Network (NBN) represents a $50Bn investment by the public in a wholesale high speed telecommunications infrastructure required to serve every consumer in Australia. The project was conceived in 2008 by the then federal government on the basis that a largely fibre optic cable network to every home and business premise was a vital economic enabler for the country as we entered the digital age.

Telstra as the largest telecommunications operator was not considered for the role of a national wholesaler as they already held a dominant position in the wholesale and retail sections of the market, and they would have become even more dominant and potentially been able to exercise significant market control in this economically vital new infrastructure.

When the NBN was announced, most infrastructure investment by the telecommunications companies stopped because they did not believe they could or should compete with this level of investment. This has meant that the country has become highly dependent on the NBN meeting the future broadband needs of the residential and business markets. It was believed then that almost every aspect of our home and business life would be enhanced if low cost high speed communications services were available, and that many Retail Service Providers (RSPs) would offer a range of low cost and innovative services to consumers. The focus of the NBN has always been on domestic consumers and not on business who often need much higher communications capacity.

In 2017, the NBN has been building its infrastructure for 8 years and is scheduled to finish in 2020. It is apparent that the NBN will not achieve the type of infrastructure connection that was intended in 2008 for many premises, and in our view is unlikely to be in a position to offer Gigacity services to all cable connected consumers.

However, as this was being written in its final draft, we have learned that the NBN does plan to offer high capacity fibre based services on a wholesale basis through RSPs to consumers, from their FTTP (Fibre to the Premises) infrastructure, and via fibre tail circuits to be built as required for end users that are not fortunate enough to be within FTTP coverage areas. At present trials are being planned with the NBN major Retail Service Providers (RSPs).

Our conclusion is that Gigabit services will be provided by the NBN where their infrastructure allows low cost connection, but that outside FttP areas there is a need to consider alternate delivery methods. We also note that in Launceston, a partnership between the NBN and a local Internet Service Provider (ISP) has announced gigabit services over NBN FTTP infrastructure.

We observe States and local governments coming to the conclusion that where economically justified, they have to intervene in the telecommunications industry to improve the delivery of broadband services, and there are a growing range of telecommunications service providers willing to fill the gaps where needs are not met by the NBN or other service providers. Examples based on our work include regional councils in Queensland and the Victorian and West Australian governments.

Other countries are embracing the Gigacity service requirement, and one of the fastest areas of growth in this respect is New Zealand where there are already many thousands of Gb/s connections in place and the infrastructure to offer the service to many more is in place. In the case of New Zealand, their UFB (Ultra Fast Broadband) programme is exclusively FttP, so gigabit connectivity is largely a matter of product development and the supply of suitable modems.

In our view, there is future value in the provision of Gigacity services (and infrastructure) in the Ipswich region, and the following sections of this document discuss how the region can address the opportunity to maintain its leadership in the digital economy and ensure it continues to provide practical benefits to the community through the use of this technology.

3. INTRODUCTION

The requirements of this document are to:

- Assess the future demand for Gigabit speed services in Ipswich, with references to Gigacity initiatives elsewhere
- Consider the industries that might be attracted to invest in Ipswich if Gigabit services were available. The focus is on ten areas in the Ipswich region where infrastructure could be provided if the demand were demonstrated.
- Discuss the probable direct and indirect economic benefits for the Ipswich region. Our focus is on enhanced business activity, although there is evidence that where Gibabit services are available, there can be strong domestic demand.
- Consider the other economic benefits that could result from changes in the way services are delivered in government, schools, health and other areas of community interest.
- Social benefits – potential for increased employment, from within and outside Ipswich
- Non-benefits – what negative results might arise from the establishment of a Gigacity.
- Barriers to success, ranging from cost to other initiatives and whether the NBN will address the matter at some time
- Competitive advantages for the Ipswich region
- Options to the development of the necessary Gigacity infrastructure

Ipswich has established an international reputation as one of the leading smart digital cities in the world, as currently framed by the InfoCity Plan and the Smart City Program. In 2011, 2012, 2015, 2016, 2017 and 2018 Ipswich gained a position on the list of Smart21 Intelligent Communities worldwide by the Intelligent Community Forum (ICF) in New York. It was subsequently named in the world's Top 7 most Intelligent Communities for 2015 and 2017 respectively.

The emergence of Gigacity initiatives around the globe (Adelaide, Launceston, UK, Europe, Asia and USA) confirms the growing demand for gigabit broadband capacity to support current and emerging businesses and residential demand.

Across the Tasman, three of the fibre based Local Fibre Companies (LFCs) have announced gigabit services for residential and business customers and more will follow. In New Zealand the Ultra-Fast Broadband (UFB) program which is equivalent to the NBN but which has a higher fibre connection rate to premises announced in June 2016 that 87% of new UFB connections were for 100Mb/s services or higher, while 9% of new services are above 200Mb/s. Gigabit services are now available in many parts of the country, delivered over the same UFB fibre optic cables and take-up has been positive with over 3,700 Gb/s services in use in New Zealand to end users, with strong growth since their introduction in 2016.

The NBN has had no plans to offer these levels of service connection in Australia and the current focus on avoiding fibre connections[1] to premises to reduce costs would make any provision of gigabit services to non-fibre connected premises unlikely with current technology.

However we are now aware that the NBN is trialling gigabit services with their two largest RSPs and so expect that in the future, there will be an announcement of wholesale gigabit services in FTTP areas. Outside the FTTP areas, we are also advised that the NBN will run fibre optic 'tails' from FTTP areas to the client premises where this is agreed in advance and the client pays the tail cost.

We therefore conclude that the NBN, on current planning cannot offer widespread Gigabit services in Australia.

Our focus in this report is therefore on areas in the Ipswich region not covered by NBN FTTP coverage, as shown in Figure 1 opposite – yellow shaded areas are the current and planned FTTP coverage for areas of central Ipswich City:

This figure, provided by the NBN in Brisbane, shows coverage via FTTP as yellow shading.

Based on the example in Launceston where gigabit services are already offered, the trials currently underway with the larger RSPs, we believe that Ipswich can plan the introduction of gigabit services from NBN infrastructure via local RSPs.

The suggested approach for this first outcome is described in detail in Section 6.

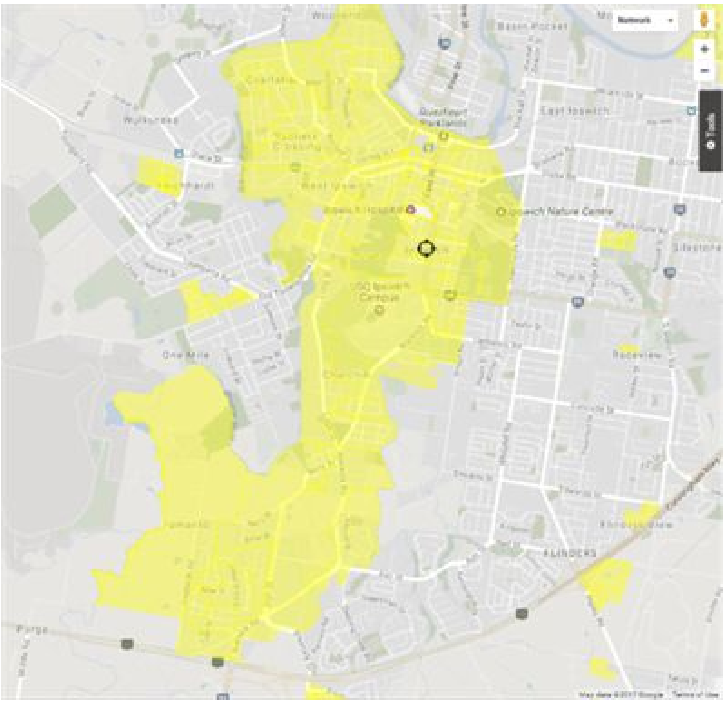


Figure 1 – NBN FTTP Coverage for areas of central Ipswich City

[1] Alternatives to direct fibre connection are: Hybrid Fibre Coax (HFC) using the old cable TV networks, Fibre to the Node (FttN) which uses the old copper cables to the premises for the last few hundred meters to the premises, and Fibre to the Curb (FttC). None of these technologies can match the capacity of direct fibre optic connections.

For reference, we copy some recent Gigacity announcements:

- Beijing Gigacity to cover area of Cambodia or Oklahoma – 2015
- Hydrabad, India's first Gigacity, gets 1Gb/s internet plan – 2017
- Google announced that its Google Fibre broadband internet service has gone live in the Portland, Strathmoor and Newburg neighbourhoods of Louisville - 2017
- NBN chief executive Bill Morrow says comparisons with New Zealand don't work - 2017

Gigabit services are increasingly seen in many locations as important to meet demand growth, especially where business is likely to be dependent on connection speeds of 1Gb/s or more. The NBN infrastructure appears to have imposed limitations on the ultimate connection speed that can be delivered to many users when premises delivery technologies other than FTTP are deployed.

4. GIGABIT DEMAND

A Gigacity can be defined as having infrastructure and services capable of delivering unlimited download connections at 1 Gb/sec or more, where users benefit from widespread very high-speed connectivity, low latency and reliable performance delivered by robust, future-proof fixed and mobile technologies.

The types of user of Gigacity capacity include residential users (for high-end gaming, multiple (family) connections to entertainment services, video conferencing, distance education, and high-level health care, the last two in the future). Business users will use gigabit capacity for industrial applications, automated manufacturing, remote access to high speed cloud applications and in time for the delivery of health, education services and other capacity intensive services.

The global emergence of municipality-based Gigacity projects confirms that these needs are not being met, or that there is a fear that they will not be met in a timely manner by current service providers. In the United States, Google Fiber is now rolling out or planning to roll out hundreds of municipality based fibre networks in partnership with local government, and all provide in excess of 1Gb/s.

The digital intervention in all aspects of life and business continues and moves so rapidly that it is difficult to predict what benefits a Gigacity might bring to Ipswich, although history shows that consumers have an appetite for more bandwidth all the time, and gigabit services are likely to one day be the norm in our view.

We have suggested that the NBN, as a result of infrastructure constraints, may not be able to meet gigabit service requirements and so the review of demand, benefits and delivery options presented in this document is timely for Ipswich and its leading role as a recognised digital city.

This discussion leads to two important questions with respect to Gigabit services:

i) Can the NBN infrastructure rollout in its current form deliver gigabit services delivery if required, and

ii) Will gigabit services demand be with specialized users such as industrial and highly automated commercial organizations, or will this level of connectivity become a mainstream demand requirement across domestic and business users?

Our observation of the New Zealand market is that where these services are available, they are consumed by a variety of users – domestic and commercial.

In that country the gigabit services at present are asynchronous and contended in busy times, but costs at around $200/month are not a deterrent to many users who have a lot of simultaneous users or require high capacity for business purposes.

Figure 2 illustrates the question of infrastructure capability to deliver gigabit services:

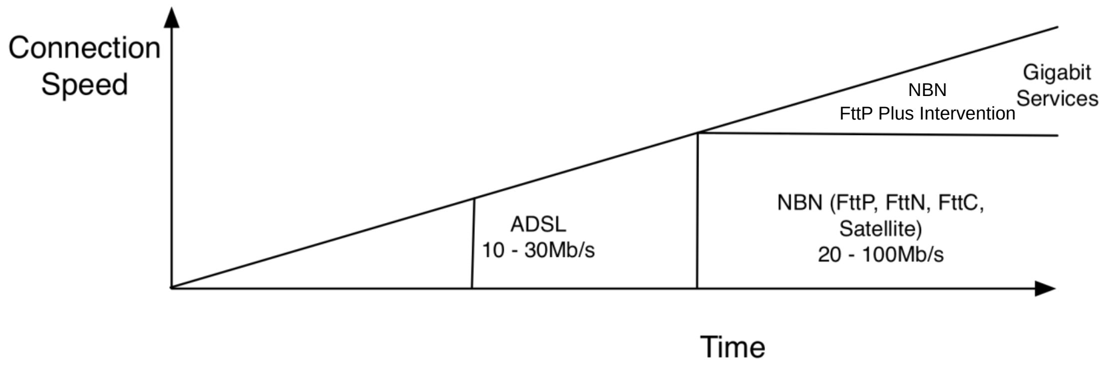


Figure 2 – Will the NBN Deliver Gigabit Services?

Here we suggest that as a result of the range of premises connection technologies employed by the NBN will compromise the delivery of gigabit services as follows:

- Fibre to the Premises (FTTP) – no effective constraint in connection speed, so gigabit services are practical. We have already advised that FTTP coverage areas are capable of gigabit level services and the NBN has supported these services in Launceston and is trialling delivery with RSPs. In New Zealand the UFB discussed earlier is universally FTTP where deployed, and so gigabit services are available as required as a standard product.

- Fibre to the Node (FTTN) – uses existing copper cables from fibre fed cabinets to connect to premises and in our view these aged copper cable will not deliver gigabit services.
- Fibre to the Curb (FTTC) – again uses existing copper cables into premises but over a shorter distance than FTTN and so may deliver higher speed services but is unlikely to reliably deliver gigabit services and may not do so until new technologies become such as G.Fast become embedded .
- Fixed Wireless - used to deliver high speed connectivity where fibre infrastructure will not be used for any of the options above. We believe that due to many factors from likely congestion to rain attenuation and interference signals, this technology will not deliver gigabit services.
- Satellite – we do not believe satellite services can deliver gigabit connections economically.

Table 1 summarizes our views on the NBN ability to deliver gigabit services:

NBN Delivery Technology	Gigabit Services Capability
FTTP	Yes
FTTN	No
FTTC	Perhaps
Fixes Wireless	No
Satellite	No

Table 1 – NBN Gigabit Capability

The next question is whether gigabit services will be required by specialised users, or will become subject to mainstream demand.

CISCO[2] is a global network equipment company and publishes widely used forecasts of internet demand across the world[3] and in summary makes the following growth forecasts for a number of demand categories:

Consumer Internet Traffic Growth pa 2016 – 2020 Asia Pacific Region		
Service Category	*Annual Growth*	*Cumulative Growth by 2020*
Internet Video – Note 1	53 %	838%
Web, email and data – Note 2	20%	248%
Overall growth	27%	330%

Table 2 – Consumer Growth Forecast

Business Internet Traffic Growth pa 2016 – 2020 Asia Pacific Region		
Service Category	*Annual Growth*	*Cumulative Growth by 2020*
Internet – Note 3	20 %	248%
Managed internet – Note 4	10%	61%
Mobile data – Note 5	49%	734%
Overall growth	22%	270%

Table 3 – Business Growth Forecast

Notes

1. Already a rapidly growing area of demand with some Internet Service Providers reporting that up to 80% of their traffic at peak times is video content. In Australia Netflix, Stan and other entertainment services have changed the demand profile for residential demand considerably.

[2] https://www.cisco.com/c/en_au/index.html
[3] https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/complete-white-paper-c11-481360.html

2. Normal internet use is also growing as people rely increasingly on the internet for their personal engagement with the world.
3. General business use of the internet for research, webmail, etc
4. Refers to 'cloud computing' activities where business applications are in remote data servers and need internet access. This area of demand is growing quickly for Small to Medium Enterprises (SMEs) and more slowly for larger corporates as local computer infrastructure comes to end of life and is not replaced as transfer to cloud services grows.
5. Mobile data refers to the use of tablets and smart phones for the conduct of business in the business premises, on the move and at home. Very rapid growth forecast.

In summary, business and residential demand for the internet is forecast to continue to grow rapidly by a factor of about 3 times for both categories of demand by 2020.

While it is difficult to correlate this growth in demand with the capability of the NBN infrastructure discussed earlier and summarised in Table 2, we believe that in many parts of Australia where satellite, fixed radio and most likely FTTN and perhaps FTTC are installed, gigabit services will not be feasible for many users from the NBN.

5. SITUATION REVIEW

5.1 Current State - Australia

The $50Bn NBN initiative by the Australian government, intended to bring world class broadband services to Australia, has not so far raised Australia above its traditional ranking of around 50 among developed nations. We have discussed New Zealand earlier and know that not only does it have a higher fibre connection capability, it has higher takeup of broadband services and higher average speeds.

Refer to the Digital Evolution Index 2017 chart below, figure 2.

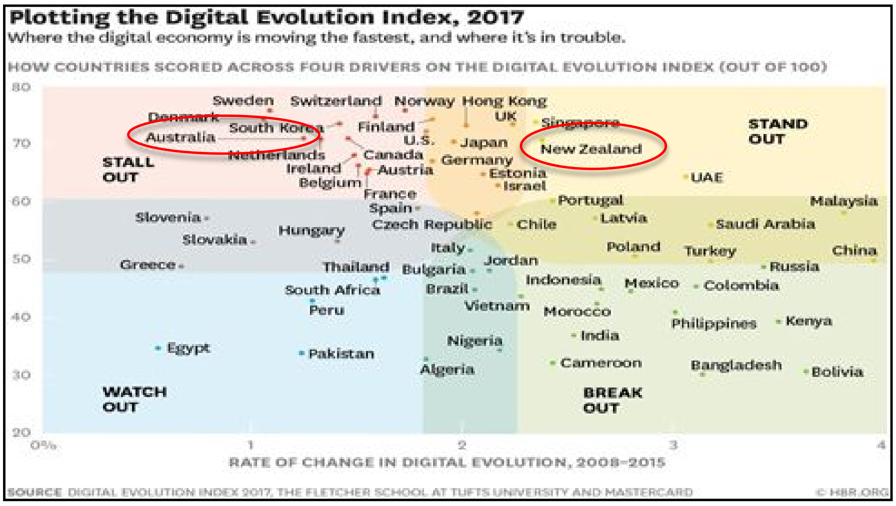


Figure 2 – Australia's and New Zealand's respective places in the Digital Evolution Index 2017

5.2 Current State – Ipswich

"Ipswich is a growing city. The pace of growth and change is unprecedented – state government projections indicate that in the next 17 years the city's population may reach 435,000 people. This population growth brings opportunities, but also challenges for our community and for council."[4]

Aiming to take optimal advantage of these future opportunities, Ipswich City Council has developed two major interlaced programs:

- Advance Ipswich; and
- Ipswich Smart City Program.

[4] Extract from Advance Ipswich

Advance Ipswich

Advance Ipswich, released in 2015 builds on the programs and strategies in the previous i2020 and i2031 Community Plans and provides a renewed and contemporary focus for the future of the city.

The Plan is structured under five themes:

- Strengthening our Local Economy and Building Prosperity (Jobs)
- Managing Growth and Delivering Key Infrastructure
- Caring for Our Community
- Caring for Our Environment
- Listening, Leading and Financial Management.

In order to achieve these, Advance Ipswich is intended to inform and be reflected in many of Ipswich City Council's plans, strategies and community programs. These include:

- Corporate Plan
- Operational Plan
- Budget
- Planning Scheme
- Strategic and Service Delivery Framework
- Customer Service Framework
- Social Infrastructure Plan
- Community and Stakeholder Engagement Guide

Figure 3 below shows future planning for the region in terms of best utilisation of land, infrastructure and natural resources. They include:

- Existing and future residential areas
- Centres
- Major industry and employment areas
- Urban open space areas
- Existing and planned conservation areas
- Rural land
- Special use areas
- Townships

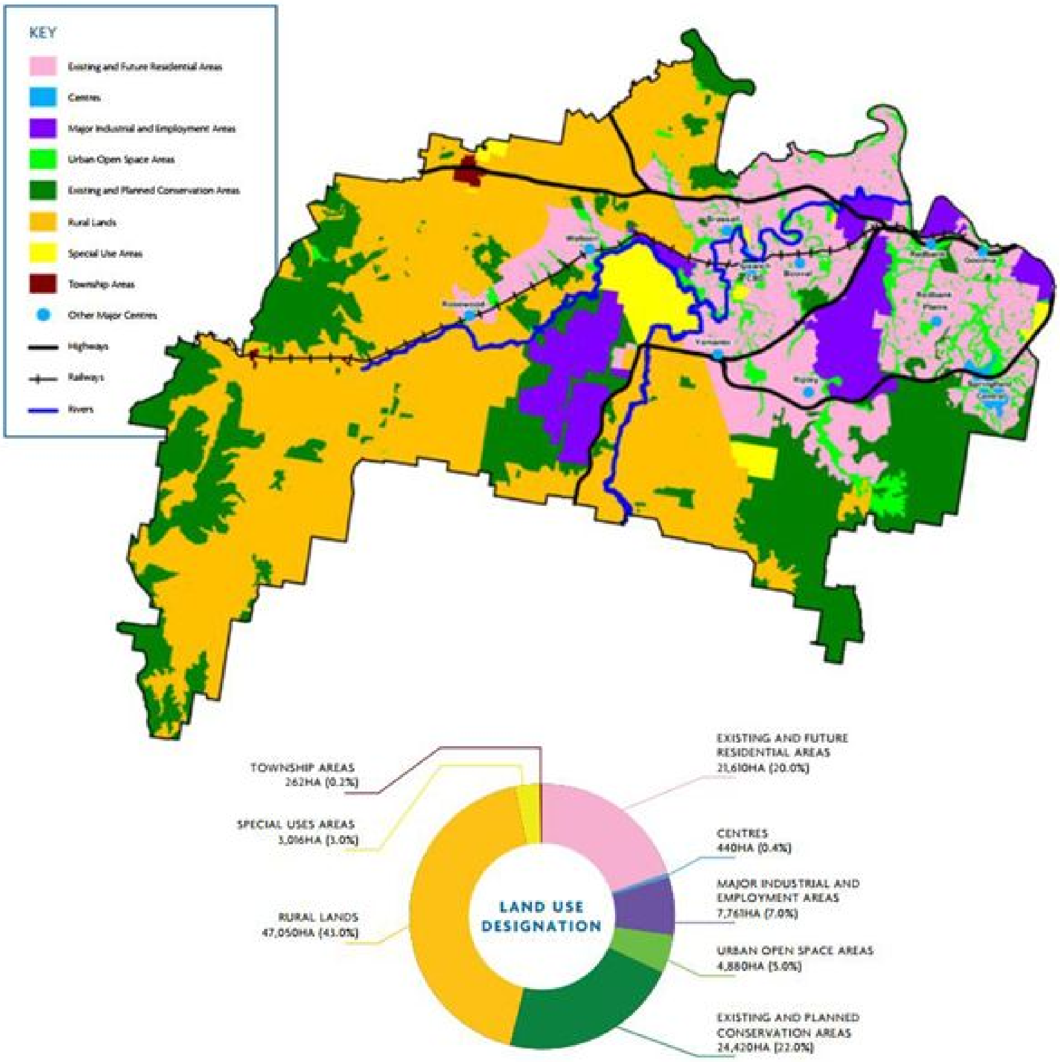


Figure 3: Ipswich Land Use Map

Ipswich Smart City Program

The City of Ipswich is delivering a bold, ambitious plan to become Australia's most liveable and prosperous Smart City. Its vision is to be a truly connected community, full of ideas, energy and innovation.

It aims to position the City for the future. As one of Australia's fastest growing cities, it plans to define its future prosperity with new technology solutions.

The program is actively looking to forge innovative partnerships which will advance its vision for a sustainable City of the future. This will include planned procurement of devices, applications and platforms that will enable the ongoing development of Ipswich as a Smart City.

The Smart City Vision includes the following initiatives:

- Health Living Lab
- North Ipswich Reserve Pilot Project
- Rosewood Pilot Project
- Open data
- Digital Skilling
- Connected City Lighting
- Cooperative and Automated vehicle Initiative

Australia lags similarly developed countries in the planning and delivery of broadband services, and in our view this situation will apply as the demand for gigabit services develops. As a leading digital enablement region in Australia, we suggest that Ipswich consider how it can support the delivery of gigabit services in the region.

6. GIGACITY VALUE – A WORLD VIEW

To determine the likely economic value that gigabit capability might bring to Ipswich, a number of examples of gigabit activities from around the world have been reviewed and their experiences noted.

6.1 New Zealand

The most relevant example of the delivery of gigabit services to domestic and retail users is in New Zealand, discussed earlier, and with the following characteristics:

- The same fibre cable infrastructure used to deliver 'normal' broadband services is also capable of Gigabit service, so economies of scale and widespread availability are the result.
- The gigabit capacity used is a wholesale product meaning that the customer has the choice on many retail service providers.
- Gigabit services are therefore relatively affordable at about $200 per month for asynchronous residential level service management. Business grade synchronous gigabit services are provided on an 'as required' basis and are custom designed and so attract monthly charges in excess of $1,000.

With a large number of retail service providers selling the base level gigabit services, there is widespread awareness of the services and increasing innovation as to how the services are used by residential and business customers.

6.2 United States

In the United States, we see a similar market approach as in New Zealand, with regions developing fibre infrastructure and in this case with Google Fibre as the most common partner. Very high-speed connections are the starting point for Google Fibre and gigabit services are presented at affordable rates for residential users.

An early initiative in 2009 in the US is Chattanooga in Southern Tennessee (population 173,000), one of the first cities where gigabit connectivity became widely available to businesses and the public. The city has described their economic benefits as follows:

- A decrease in unemployment from 7.8% to 4.1%,
- One of the largest wage growths in the US, adding many high-tech jobs paying an average of $69,000 a year,
- Before introducing gigabit services, Chattanooga had practically zero venture capital investment – but in 2014, the city claims $50 Million in investments.

We are unable to validate these claims for Chattanooga but make the point that after 8 years they believe their fibre deployment initiative has had positive results for the city.

Salisbury in North Carolina in the US (population 33,000), launched a 1-gigabit service in 2014 and the Mayor recently made the following statement "With consumer bandwidth consumption doubling every two years, Salisbury businesses and residents will require increasingly higher broadband speeds in order to have the highest quality broadband experience," the city mayor said.

These are two examples of Gigacity activity in the US and the map below shows the locations for activity in this respect across the US, increasingly led by Google Fibre.

Figure 4 – USA cities with gigabit connectivity. (sourced via Google search for 'Cities with Gigabit Internet')

6.3 United Kingdom

Coventry (population 345,000) is one of the best known Gigacity initiatives in the UK and known for its textiles and automotive industry and has always been an engineering city.

Coventry residents such as Jaguar Land Rover, Aston Martin and BMW have stated that the city's ultra-fast broadband capability is increasingly integral to their manufacturing needs, the same digital investment has also helped encourage emerging new economic trends in the city.

The city CEO Martin Reeves recently stated "We've got a growing sector around gaming, around digital health, self-medication, wearable technologies, and much more. By getting the enabling infrastructure in place, we are open then – in terms of where digital could go – to a whole panoply of options for the future.".

York (population 206,000) has a history of railway and confectionary industries, and experienced a long period of economic decline as the rail industry in the UK storm of the railway's long decline, while many of its biggest confectionary employers (including Rowntree's and Terry's) have left for other regions or shores, while Nestle had long since scaled down their presence in the city.

"Through digital, we really positioned ourselves to attract private and public sector investment and to attract and retain good things and good people. Even though we were a second tier city, we positioned ourselves not to be overlooked as opportune for investment and commercial industries.

We wanted to encourage people to decide that York would be a good place to site their business." said Roy Grant, Head of ICT at City of York Council.

A direct result has been 500 new jobs coming to York through insurance company Hiscox.

Aberdeen (population 230,000). Gigacity construction started in 2015, involving the city centre and key commercial districts, totalling some 6,000 companies. By the end of 2017 the fibre route will span 90 kms. As a result of the gigabit infrastructure two new service providers have arrived; Commsworld and Converged Communications Solutions.

To encourage take up the government has implemented a voucher scheme for registered businesses, providing grants of up to £3,000 to connect.

6.4 Australia

There are currently two noted cities in Australia that have launched gigabit capability; Adelaide and Launceston, both utilising quite different infrastructure.

Adelaide (population 1.34 million) launched its $7.6 million GigCity 3 August 2017. The infrastructure provides gigabit connectivity to 13 facilities:

1. Tonsley Innovation Precinct
2. Technology Park
3. Techport maritime Precinct
4. TechInSA
5. St Paul's Creative Centre
6. South Start CoWork
7. Hub Adelaide
8. Science Park
9. Adelaide Smart City Studio
10. SA Film Corporation
11. The Mill
12. Carclew's Fifth Quarter
13. Stretton Centre

All but one are a mix of serviced offices, co-working and/or art space, or incubators. The one exception, Science Park is primarily a medical research facility linked with Flinders University, although is not known what the current take-up of services is at each of these facilities.

They are currently offering their 1Gb synchronous service in the following three packages, shown in table 4.

Business Type	Monthly Data Limit	Cost per Month
Micro-Business < 5 employees	200 Gb (capped)	$49.90
Micro-Business < 5 employees	Unlimited	$99.90
Business	1 TB Guaranteed bandwidth QoS profiles, static IP addresses Available for resale within precinct	$179.90

Table 4 – Adelaide Gigabit Services

There has also been recent media describing Adelaide as a ten-gigabit city. It's 'TenGigabit Adelaide' program is currently at the 'Expression of Interest' stage, aimed at identifying potential service providers / project partners.

Launceston (population 67,000) claims their 'Blue Ocean Gigabit[5]' program to be Australia's first Gigabit City, as it launched 30 May 2017, two months ahead of Adelaide. As it was the launch pad for the original rollout of the NBN, Launceston's gigabit infrastructure is 100% NBN with Fibre to the Premise (FTTP) in the city centre and fixed wireless for the surrounding suburbs.

This is an asynchronous service with connectivity speeds up to 1,000 Mbps (1Gb), available in the following speed and cost options:

Download Speed (Mbps)	Upload Speed (Mbps)	Cost per Month
25	5	$60
100	40	$105
250	100	$165
500	200	$255
1,000	400	$435

Table 5 – Launceston Gigabit Services

They initially estimated that they would require 400 businesses to sign up to make the venture commercially viable, but following further negotiation with NBN, enabling the above figures, they were able to substantially reduce the numbers.

The following comment from the Launceston Launtel web site confirms our view that on NBN FTTP infrastructure is likely to deliver gigabit services:

'Blue Ocean™ Gigabit on the nbn™ is only available to businesses that have an FTTP (fibre to the premise) nbn™ connection.'

[5] https://launtel.net.au/solutions/blue-ocean-gigabit/

6.5 A Gigacity Needs Fibre Optic Cables

In all cases, the delivery of gigabit services requires the use of fibre optic cables to connect into

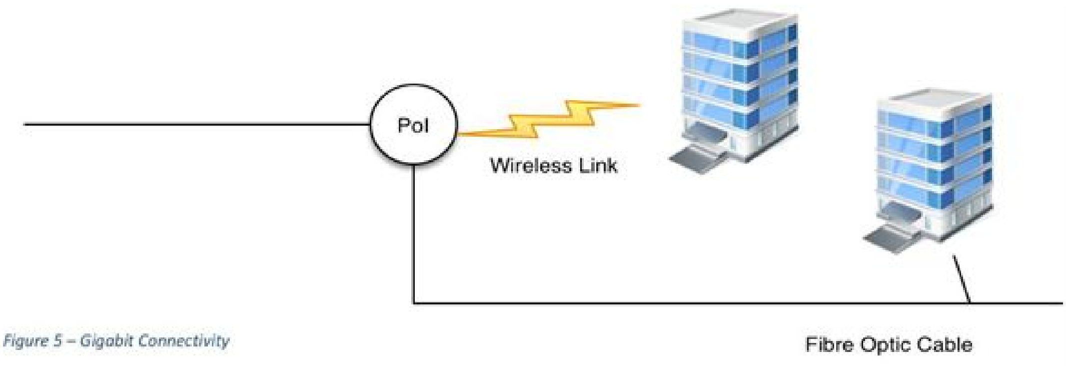


Figure 5 – Gigabit Connectivity

the premises, or increasingly, the use of high speed microwave radio, and shown in figure 5.

Here we have traditional fibre optic connections where the consumer is close to the existing cables, and high-speed wireless links to buildings up to 10km away, providing gigabit services. Recent developments in radio technology make wireless connections cost effective, reliable and fast to deploy. A company operating on the Gold Coast (Channel Wireless[6]) is delivering gigabit services to businesses at the price of 100Mb/s services from other service providers. The wireless range for these services is up to 10km.

Gigabit services are increasingly seen to be important to support digital services of many types, from residential to business and industrial consumers. Many hundreds of Gigacity initiative are evident in most developed countries. In Australia there are early signs of the delivery of gigabit services, and the NBN is now planning to provide wholesale gigabit services to Retail Service Providers.

[6] https://channelwireless.com//

7. GIGACITY OPTIONS FOR IPSWICH

7.1 Council Fibre Optic Cables

For Ipswich to facilitate the delivery of gigabit services it must have access to fibre optic cables, and in fact owns over 20km of cable as shown in figure 6 below.

The cables are old, some are of the multi-mode[7] transmission form which is now outdated, and located in Energy Queensland ducts in many cases. The cables are used for CCTV, traffic signalling and other Council operational purposes.

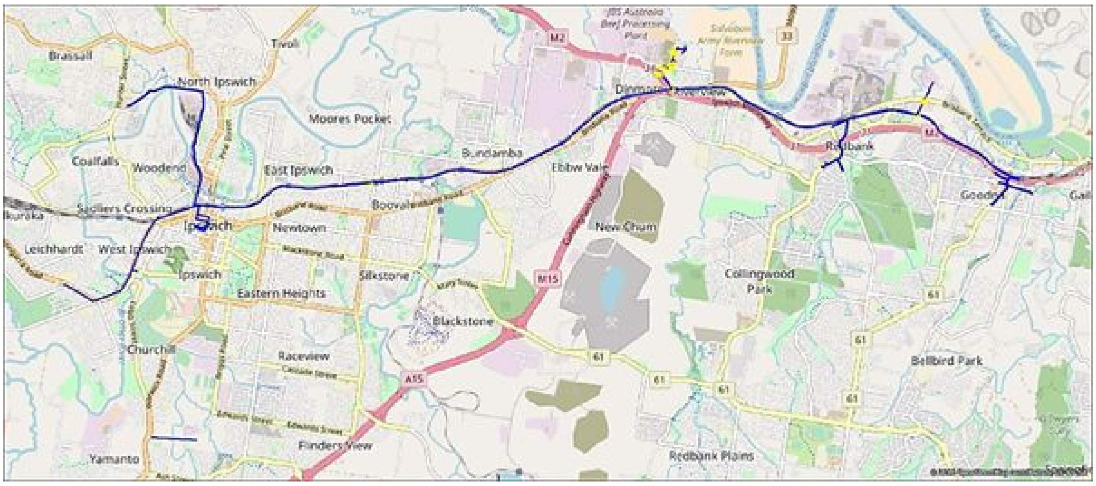


Figure 6 – Ipswich City Fibre Optic Cable Route

Table 6 summarizes the cable route, distances and areas through which the cable passes.

Ipswich City Cable Route	Goodna	Redbank	Riverview	Dinmore	Ebbw Vale	Bundamba	Booval	East Ipswich	Ipswich CBD	Leichhardt	Brassall
Distance along Route	-	3,101	5,525	7,166	8,488	11,017	11,930	13,436	15,158	18,263	21,655
Distance between nodes		3,101	2,424	1,641	1,322	2,529	913	1,506	1,722	3,105	3,392

Table 6 – Ipswich City Fibre Optic Cable Route Distances

While a detailed analysis of the cable condition and route situation (duct, direct buried, in private or public land) is out of scope for this project, we believe the existing cable will be impractical to use for Gigacity services as it stands for the following reasons:

- Some of the cable is multimode cable, limiting transmission capacity and transmission electronics availability.
- Other parts of the cable are aged single mode cable with limited spare capacity.
- There are restrictions placed on the commercial reuse of the cables and cable path where the route is provided by Energy Queensland.

[7] Early form of fibre optic cable and the fibre cores are relatively large allowing multiple transmission modes leading to higher losses and short range – typically less then 1km for high speed transmission (over iGb/s)

We are advised that the Council would befit operationally from the renewal of the cable route and a transition to modern single mode fibre optic cables to increase capacity.

In due course Council will have to prepare a business case to replace this cable route as it becomes unable to meet the operational needs of Council.

In this case, there will be an opportunity for a marginal additional cost to build additional fibre count in the cable, and Points of Interconnect (PoIs) for third party use for the delivery of wholesale gigabit services.

Table 7 suggests the costs of route and cable replacement:

Route Replacement	Goodna	Redbank	Riverview	Dinmore	Ebbw Vale	Bundamba	Booval	East Ipswich	Ipswich CBD	Leichhardt	Brassall	
Distance along Route	-	3,101	5,525	7,166	8,488	11,017	11,930	13,436	15,158	18,263	21,655	
Distance between nodes		3,101	2,424	1,641	1,322	2,529	913	1,506	1,722	3,105	3,392	
Assume $70/m Build Cost		$217,070	$169,680	$114,870	$92,540	$177,030	$63,910	$105,420	$120,540	$217,350	$237,440	$1,515,850

Table 7 – Ipswich City Fibre Optic Cable Route Costs

We have used an average cost of $70/m to provide and lay a 12 core cable along the route but outside the Energy Queensland access corridor.[8] In rural areas the cost can be as low as $30/m and in metro areas of cities the cost can be as high as $1,000/m.

For the purposes of this project, we estimate that to replace the cable for operational purposes, Council will require a budget of approximately $1.5m. To add the necessary electronic equipment to carry Council traffic across the new cable, we estimate this additional cost to be $500,000. Overall replacement cost for the existing Council cable is therefore in the region of $2m.

7.2 Areas of Interest

We now consider the demand for gigabit services and where connections might be made from the current and parallel proposed fibre route discuss in Section 5.5. Appendix 1 summarizes 10 areas where there is new development, and / or strong existing demand for broadband services.

In Table 8 we summarise our recommendations for these areas:

Area / Precinct	Type	Gigacity Value	Recommendation
Ipswich CBD	Business	High	Considerable potential value in reinvigorating the Ipswich CBD. We believe that with the introduction of NBN RSP services, this area will achieve gigabit services delivery in the next 12-18 months. An active program to develop this opportunity as quickly as possible is recommended. It will be desirable that there is RSP competition to manage retail pricing, and ideally this would be a local ISP and one or more national RSPs.

[8] Adding additional fibres is about 50c/m per fibre. This means over the cable route we are adding about $20,000 per fibre. To go to a 48 fibre cable would add about $380,000 to the costs in table 7

Area / Precinct	Type	Gigacity Value	Recommendation
Springfield Lakes	Business/Residential	High	Strong interest in developing a business case to bring diversity of providers into the area. The concept of delivering gigabit services to offices via gigabit radio is appealing and it is likely that Springfield Lakes would welcome a business case for fibre and radio distribution services.
Ripley Valley	Residential	Low	Already fibre served, largely residential. Low priority
Citiswich Business Park	Industrial	High	Low connection costs to the Council fibre route – recommend a business case to extend the City Council fibre route to the Business Park and Motorway Estate.. This could involve a Request for Proposal along with the potential to commercialise the renewed Council fibre route.
Redbank Motorway Estate	Industrial	High	
Amberley Aerospace	Industrial	Low	Military interest limited. There has been a potential to establish an adjacent industrial complex for companies supporting the approx. $1Bn being invested in the aerospace facility. However, this development is slow to develop and we do not recommend connection to this site while this is the situation.
Swanbank Enterprise Park	Industrial	Low	High connection cost. Low priority
Carole Park Industrial Estate	Industrial	Moderate	3.4km to the Council fibre route – potential for inclusion with Citiswich and Redbank – to be based on an overall business case.
Wulkuraka Industrial Estate	Industrial	Moderate	
Ebenezer-Willowbank Regional Industrial Area	Industrial	Low	Too early to judge size and future value

Table 8 – Ipswich Region Demand Areas

We summarise our recommendations as follows:

1. Ipswich City – press for NBN delivered gigabit services via one or more RSPs.

2. Springfield Lakes – investigate the business opportunity for extending the fibre owned by the Council into the area and for the delivery of gigabit services via wireless connections. This may be a viable option because of the size and technology dependence of many organisations in the area. This would be best started with the following steps:
    a. Meet with Springfield Land Corporation to discuss a partnership for the cable tail link and use of their pits and pipes.

   b. One option would be to offer to pay a lease for the use of their pits and pipes, and a share in the cost of the tail section, and the result is that the overall demand aggregation across the Ipswich region increases the attractiveness for a service provider.
   c. The third action would be to jointly map high speed demand in the area to help an intending service provider understand the potential value of this part of the region.

3. <u>Citiswich Business Park and Redbank Motorway Estate</u> – Business case with Springfield Lakes may provide for demand aggregation that supports the marginal cost of commercialisation of the current Council fibre route as discussed in this Section 6.

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7.3 Business Model Options

Figure 7 sets out a business model approach that may assist in the development of gigabit services to the recommended areas in table 8:

The first steps are to prepare business cases for Council to replace/upgrade its current fibre assets as shown in figure 6 earlier, and to assess the market value of the provision of gigabit services in five areas identified in table 8 - Springfield Lakes, Citiswich, Redbank, Carol Park and Wilkuraka.

The combined value of these business cases includes the capital cost to replace the current Council fibre route (a capital contribution to the project) and the return on investment for the gigabit services to be delivered to the five areas that we do not believe will receive high speed broadband services from the NBN.

We suggest this business model will operate in two phases – one to test market interest as a Request for Proposal (RFP) and if one or more viable responses is received, to move to a Request for Tender where a successful respondent will be chosen to build the new Council cable route and to connect the five areas and offer (preferably) wholesale gigabit services.

This approach allows for a relatively fast Phase 1 (RFP) to reach a 'go' / 'no go' understanding,

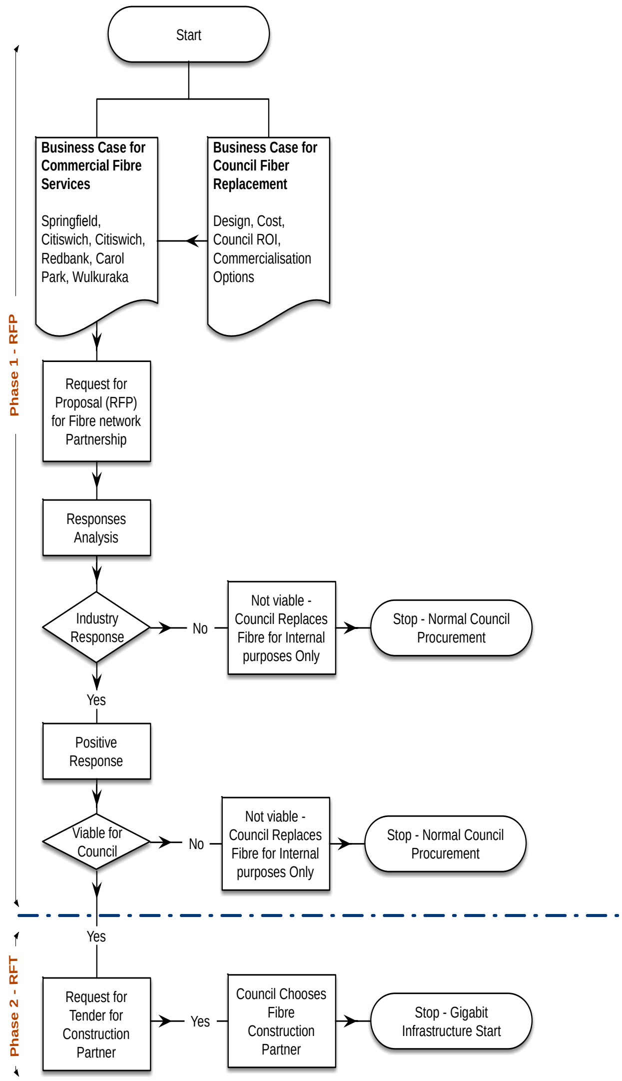

Figure 7

If the response from the industry is 'no', Council reverts to normal practice to replace its fibre assets to sustain operational requirements.

If there is competitive interest in building and operating the Council and local area fibre networks, Council can then decide to go to a formal Request for Tender process to refine the requirements and costs.

Our approach is that Council will pay no more than the cost to replace/upgrade its current fibre assets for operational purposes, and that the marginal cost of adding more fibres for commercial purposes helps materially to reduce the cost to establish commercial Gigacity services in key areas of Ipswich.

At a more detailed level, this approach brings a number of business model options for consideration:

1. Council pays for and owns its own fibres and provides an Indefeasible Right of Use (IRU) to one or more wholesale or retail service providers. Council operates and maintains its fibres alongside the commercial operator, and provides the same service to its commercial user of the IRU rights. This is a ‘Full Own and Operate’ option.
2. Council pays for its fibres and then pays an ongoing management and maintenance fee for the operation and maintenance of the cable, to provide the same service levels as would apply to a /gigacity service provider. This is a ‘Partial Own and Management Outsource’ option.
3. Council does not pay for or own its fibres, but commits to a long-term services lease arrangement with the company operating the cable. This is a ‘Services Lease’ option that does not require a capital contribution from Council.

8. Conclusions and Recommendations

8.1 Conclusions

1. We believe that gigabit services will become a normal requirement of both domestic and commercial high demand users. Research on international demand and initiatives to meet this demand in many developed countries confirms that gigabit services will become mainstream broadband services.

2. The NBN has a range of distribution technologies that will not deliver gigabit services and large parts of the Ipswich City Council area are unlikely to receive these services via the NBN as a result. It is significant that the NBN is planning the delivery of gigabit services where it has Fibre to the Premises (FTTP) cable systems. In Ipswich city there are likely to be large areas with FTTP capability (figure 1).

3. Fibre optic cable and high capacity radio are able to deliver gigabit services to premises, and Ipswich owns over 20km of fibre optic cable (figure 6) which if it were upgraded for normal operational reasons, could form the basis for gigabit delivery infrastructure to many of the areas identified (Section 6.2 and appendix 1) that may benefit economically from access to modern fibre assets.

4. Other than the NBN FTTP delivery of gigabit services to the Ipswich city urban areas, private fibre optic cables, as discussed above are vital to the delivery of gigabit services in other parts of the Ipswich region.

5. Along with growing intervention for gigabit services in many parts of Australia, there is a growing acceptance in the telecommunications industry that high speed broadband infrastructure construction will not be the role of only the NBN. This means more companies are coming to market to build fibre optic and radio systems to meet demands for high speed connectivity that cannot be met by the NBN.

8.2 Recommendations

The Ipswich City Council should consider the following intervention options to accelerate the introduction of gigabit services:

1. Actively form relationships with ISPs to accelerate the introduction of gigabit services in the NBN FTTP coverage areas. This can be formalized via an Expression of Interest (EOI) process based largely on this document.

2. Prepare two business cases, for the replacement and commercialization of the current Council owned fibre optic cables used for operational purposes:
    a. Replacement Business Case – to provide new single mode fibres, electronics and outside the Energy Queensland cable routes. We are aware that new digital services are planned for the region and so current capacity requirements may grow considerably, adding to the need to replace older cables and transmission technology. This cost – estimated to be in the region of $2m - would be justified on current and future operational needs.
    b. Gigacity Business Case – based on the marginal cost of adding fibres to the cable required in the Council business case in a. above, this offers a low cost start for a commercial fibre optic asset that would provide gigabit services in the areas in Ipswich that are forecast to provide an adequate Return on Investment (ROI). For each of the five areas identified in table 8 (Springfield Lakes, Citiswitch, Redbank, Carole Park and Wulkuraka), the link costs to reach these areas and distribution costs would be the responsibility of the successful respondent to the proposed RFT discussed in Section 6.4.

3. Prepare a Request for Offer (RFP) document that sets out the terms – described here in high level terms in recommendation 2 – that Council proposes for the establishment of fibre optic assets and applicable Wholesale / Retail partners that can deliver gigabit services.

4. Review the RFP responses and determine the cost and risk for Council to move to the next stage – the tender process for the construction of new Council fibre optic assets.

5. Prepare a Request for Tender (RFT) document that describes in detail the Council requirements for its own fibre optic cable replacement, and the deployment of additional fibre optic assets for the delivery of gigabit services to selected areas in Ipswich that support the delivery of commercial gigabit services.

9. APPENDIX 1 – GIGACITY DEMAND AREAS IN THE IPSWICH REGION

The following areas of industrial and residential development have been interviewed about Gigacity services and the results of these discussions are summarised in the following pages. Several points to note that were common across most of the sites:

- There is little understanding of gigabit services and why they would be important, for many we spoke with
- There is still an assumption that the NBN is expected to meet all future broadband needs, although most are aware of criticism of the NBN services
- Providing a link from the Council fibre route to any of these areas creates a non-resilient path for the gigabit services, meaning that there would be a single point of failure in service delivery.
- Some precincts have a strong industrial focus, and are still developing their land and value proposition for the sale of land and lease of buildings.

Ipswich CBD

The Ipswich CBD has the greatest need of new gigabit services to support the transformation project illustrated above. The development of gigabit delivery services infrastructure is best achieved as a marginal cost addition of ducts owned by Council as the transformation project proceeds. We recommend identifying one or two Points of Interconnect (PoIs) from which wireless links can be directed to buildings in the CBD and surrounding areas.

We refer to figure 5 in the body of the report and have interest from Channel Wireless[9] who are interested in assessing whether Ipswich could be their next delivery platform for Gigabit services outside the Gold Coast where they started business early in 2017. If there was sufficient demand from business clients within a 5-7km line of sight range of a roof top PoIs in Ipswich, there may be a relatively fast one vendor solution for gigabit services in the Ipswich CBD.

Key factors are:

- Low cost backhaul capacity to Brisbane. There are Queensland Rail, Telstra and Optus fibre optic cables available in the city area.
- Roof top availability for radio links to business clients in the CBD.
- The number of potential business clients in the coverage area.

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[9] https://channelwireless.com//

Springfield

Owner/Operator: Springfield Land Corporation

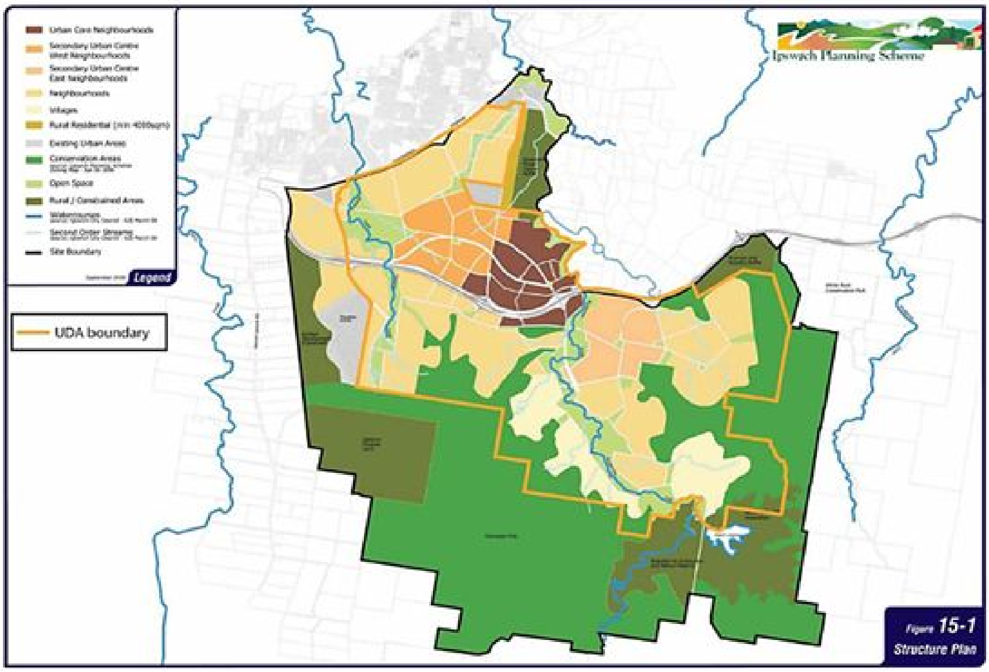
Representative(s) interviewed: Richard Eden, General Manager Education and Smart City

Site details: Well equipped with high speed services, primarily from Telstra. Richard Eden positive about an alternative fibre feed into the area to promote competition. Willing to cooperate in the next level of analysis – demand assessment, cable routes and costs.

Current on-site operators: Telstra, Optus, all the main Internet Service Providers (ISPs)

Springfield Lakes is modern, attracting significant businesses to the area and has a positive growth momentum. They are interested in extending high speed services through the area and would welcome a review of the potential to install wireless services to corporate clients as an alternative to current service providers. A fibre cable extension from the cable route in figure 6 would be of interest if a positive business can be prepared working with the land corporation. In this context, there is the same interest in a rapid deployment of gigabit services as there might be for the Ipswich CBD.

Ripley Valley



Owner/Operator: Sekisui House

Representative(s)interviewed:
Frank Galvin & Taku Hashimoto, Development Managers – Development & Communities

Site details:

- Urban core - 10,000 homes
- Total area - 100 km^2
  - 50,000 homes

Current on-site operators:

Currently only residential development / commercial centre under development

No. Sites remaining for development: N/A

Current connectivity:

- Opticom – North - West sector – bordering Cunningham highway
- NBN – balance of site

We do not recommend the Ripley Valley for further analysis for gigabit services because demand is largely residential, and the cable route from the core cable route discussed in Section 5.5 is 15.2 km, with a fibre optic route cost of approximately $1m. We note that Opticom and the NBN are there as service providers, so do not see this area as having priority.

Citiswich Business Park

Owner/Operator: Walker Corporation

Representative(s) interviewed: Todd Martindale & Adam Heather, Development managers

Site details:

- 350ha total area over 7 stages
- Currently 20% occupied

Current on-site operators:

- Australian Pharmaceutical Industries (API)
- Caltex
- OneSteel
- Capral Aluminium
- Hoepners Transport
- The Reject Shop
- CostCo (2018)

No. Sites remaining for development:

- 29 lots remaining in stages 1 & 2
- The number in the remaining stages is subject to occupier size requirements
- Stages 1-6 to be completed in 6-8 years
- Stage 7 (yet to be decided)

Current connectivity:

- Unsure. Occupier responsibility. NBN pit and pipe deployed. Believes ADSL or NBN
- AARNet fibre runs along western boundary along Ashburn Rd to the TAFE
- Adjacent to ICC fibre route

In our view, the Citiswich City Park is a viable area of industrial demand that already has large clients likely to place value on very high-speed services.

The developer has not set a strategy for high speed connectivity and leaves owner occupiers to make their own arrangements. We recommend an approach to install duct routes through the precinct and so make fibre connectivity low cost for owners and occupiers.

This site is close to Ebbw on the current route of the Council fibre and so link costs will be low.

Redbank Motorway Estate

Owner/Operator: Goodman

Representative(s) interviewed: David Parker, manager project Delivery and Infrastructure

Site details: 62 ha / 95,000 M^2 developable area

Current on-site operators:

- DB SCHENKER
- TNT
- NORTHLINE
- Tyres4U

No. Sites remaining for development:

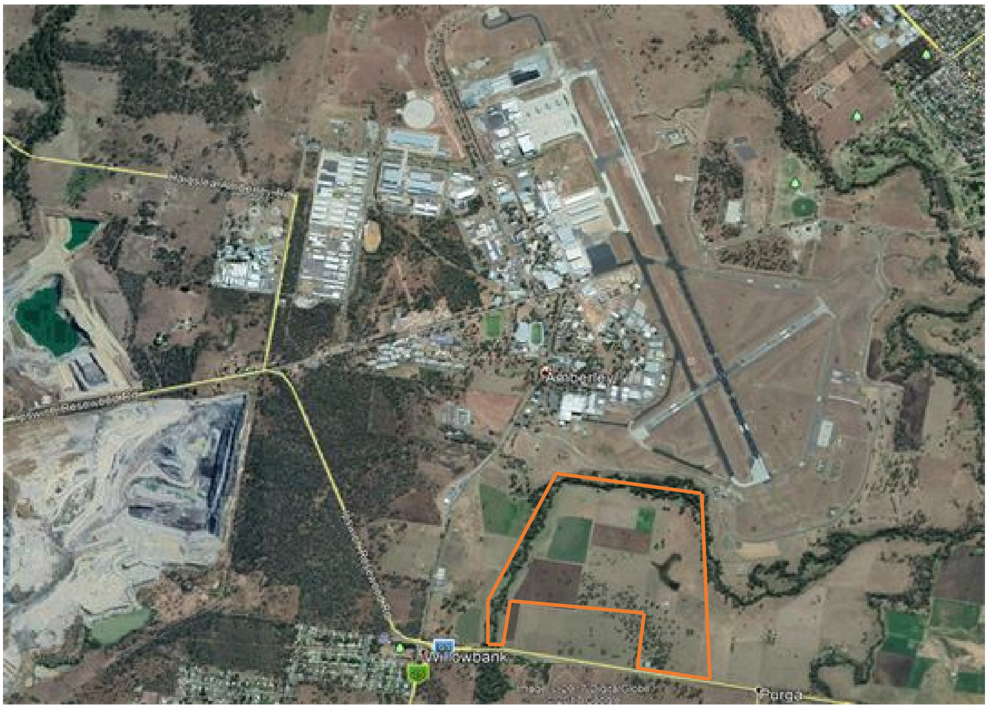
- Stage 1 – lots 1,2 & 5
- Stage 2 – 13 lots (35ha)

Current connectivity:

- NBN - Tyres4U
  - Due to insufficient capability
- Telstra fibre – DB SCHENKER, NORTHLINE
- Optus fibre – TNT (national SLA)
- Adjacent to ICC fibre route

Another area that would have attractive customers for high speed service providers, and is already close to the Council existing fibre route, so linking costs would be low.

Amberley Aerospace Precinct



Owner/Operator:

- Defense Force (RAAF)
- Economic Development Queensland – land as shown with red border

Representative(s) interviewed: Alex Plusnin, Senior Development Manager & Simon Beesley, Manager – Sales and Maintenance

Site details: Site is flood prone and lies behind Defence Force land. EDQ believe it is unlikely that the land will be developed.

Current on-site operators: On base – TAE Aerospace / RUAG Australia

No. Sites remaining for development: 5 lots

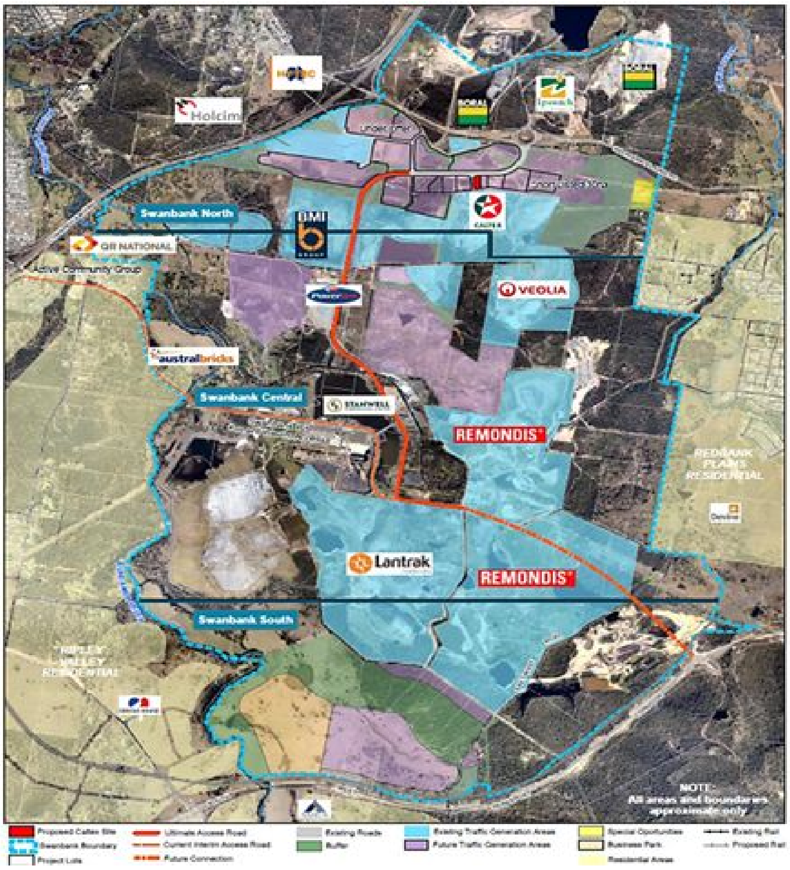
Current connectivity:

- Nil
- Within 5 km of ICC fibre route

This precinct is expected to have $1Bn spent in Defence industry expenditure in the next 5 years. We do not believe the defence force will be a valuable customer for public gigabit services due to their high level security requirements for communications services.

The bigger opportunity is the planned industrial precinct adjacent to the RAAF site, where civilian contractors will be located. However, the development of the adjacent business park appears to be slowing and until it is confirmed and demand can be estimated, we do not recommend further consideration of this precinct.

Swanbank Enterprise Park



Owner/Operator: AVID property Group

Representative(s) interviewed: Matthew Richards, Capital Transactions Manager

Site details:

- AVID aiming to sell off Swanbank North and Central lots in the next 3-5 years
- Will concentrate on residential development of Swanbank South adjacent to Ripley Valley

Current on-site operators:

- Holcim (15ha)
- CS Energy (20ha)
- Remondis (250ha)
- Veolia (60ha)
- Austral & PGH (40ha)
- Energex & Powerlink (20ha)
- Hytec (2 ha)
- Boral (2 ha)

No. Sites remaining for development: Subject to operator requirements

Current connectivity: Unknown

Over 5km from the Council fibre route, a link to the Council fibre route will cost approximately $400,000. We do not recommend this precinct as a priority.

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Carole Park Industrial Estate (Incl. Synergy Park)

Owner/Operator: Previously Economic Development Queensland – now sold out

Representative(s) interviewed: Alex Plusnin, Senior Development Manager & Simon Beesley, Manager – Sales and Maintenance

Site details:

Current on-site operators:

- James Hardie
- Visy Board
- Century Yuasa
- Paradise Food Industries
- Sunny Queen Eggs
- George Weston & Sons
- Cummins Brisbane
- Sun Engineering (Qld)
- Industrial Galvanisers
- Total steel
- Alphapharm
- Reece plumbing

No. Sites remaining for development: Nil – Possible future transformation

Current connectivity:

- Unknown
- Within 3km of ICC fibre route

Wulkuraka Industrial Estate

Owner/Operator: Previously Economic Development Queensland – 2 lots to go (under negotiation)

Representative(s) interviewed: Alex Plusnin, Senior Development Manager & Simon Beesley, Manager – Sales and Maintenance

Site details: Refer map

Current on-site operators:
- Note names in the above image, plus

- Baiada Poultry
- J&P Richardson Industrial

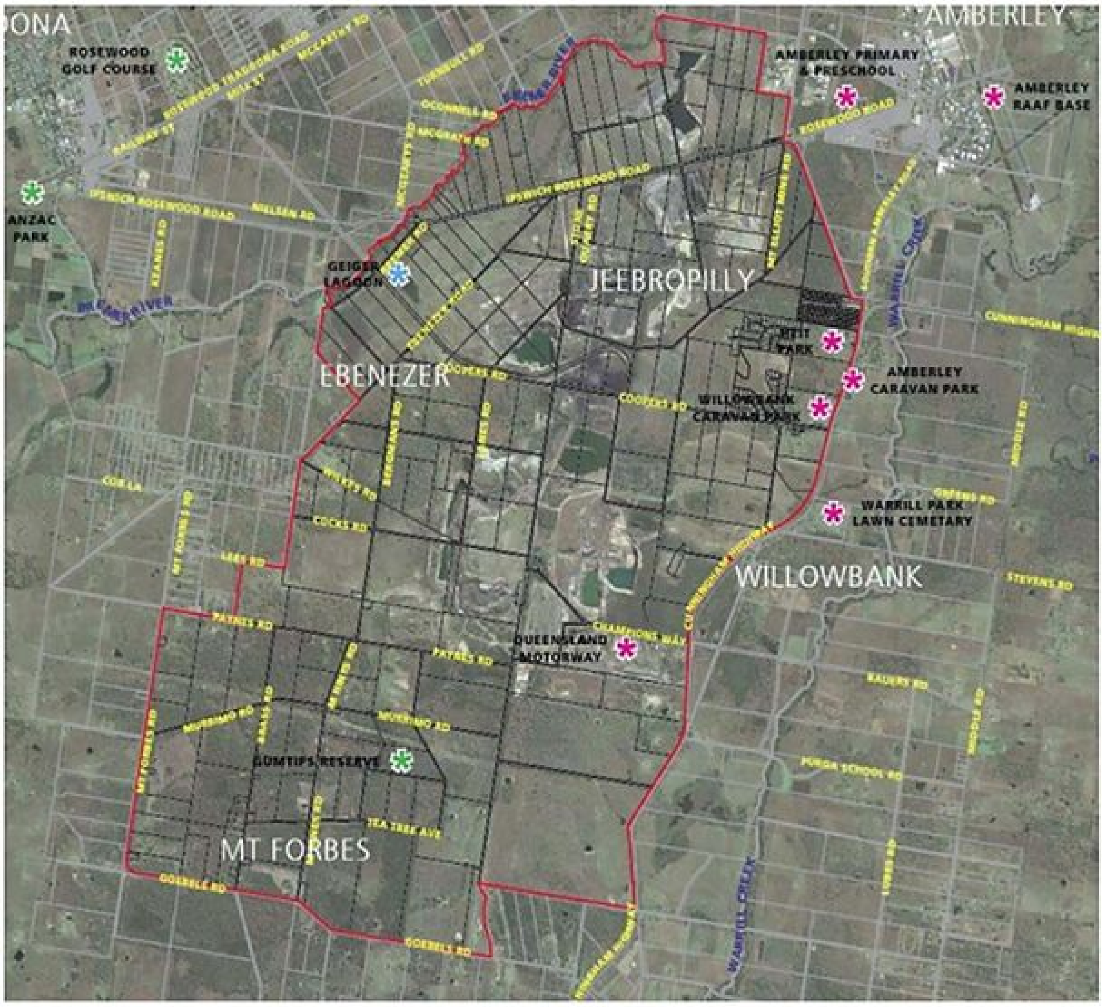
No. Sites remaining for development: 2

Current connectivity:

- Unknown
- Within 1.5 km from ICC fibre route

GRAVELROAD
thinking beyond consulting

Ebenezer-Willowbank Regional Industrial Area



Owner/Operator: Various private owners ICC and EDQ

Representative(s) interviewed: Alex Plusnin, Senior Development Manager & Simon Beesley, Manager – Sales and Maintenance

Site details: Undefined at this stage

Current on-site operators: Various, no industrial/business focus as yet

No. Sites remaining for development: N/A

Current connectivity: Nil

Economic Development and Digital City Committee	
Mtg Date: 08.03.18	OAR: YES
Authorisation: Ben Pole	

8 March 2018

M E M O R A N D U M

TO: CHIEF OPERATING OFFICER (ECONOMIC DEVELOPMENT AND MARKETING)

FROM: INDUSTRY DEVELOPMENT AND ENGAGEMENT OFFICER

RE: CITY OF IPSWICH DEFENCE INDUSTRY SUMMIT 2018

INTRODUCTION:

This is a report by the Industry Development and Engagement Officer dated 8 March 2018 concerning the proposed City of Ipswich Defence Industry Summit 2018.

OVERVIEW:

Council's Office of Economic Development is committed to influencing four strategic priorities:

- Local Business Growth
- Business and Investment Attraction
- Industry Development
- Advocacy and Promotion

This report relates to the third of these priorities, Industry Development. Council provides leadership in advancing the key industries of the region, those with the greatest economic and workforce impact or opportunity. Ipswich aims to be recognised as a national hub for these key industries with superior capabilities, infrastructure, value and supply chain.

The Ipswich Defence industry is worth $800 million in total sales, $600 million in exports and it accounts for 20 per cent of Queensland's total defence employment.

At the heart of the Ipswich Defence industry is RAAF Base Amberley. In 2016-2017, the Australian Defence Force directly contributed over 5,500 jobs, $350 million in workforce investment, $31 million in recurrent operational expenses and an estimated $183 million in capital projects within the Ipswich region and economy.

In 2016 the Commonwealth released an Integrated Investment Program as part of the *Defence White Paper* which provided the blueprint for the investment of $195 billion in the Defence industry over the next decade and the RAAF Base Amberley is expected to almost double its operations over the next five years. Ipswich has an unparalleled opportunity to take advantage of this once in a generation investment, bettering the region and those defence people, organisations and assets located in Ipswich.

In addition, the Defence industry has direct impact on other key industries such as Advanced Manufacturing. The *South East Queensland Regional Plan* recognises Ipswich as an area of regional economic significance for Defence and Aerospace.

Backing this industry led ecosystem, Council has drafted a Defence Industry Strategy and established the City of Ipswich Defence Industry Attraction Committee (CIDIAC) featuring representatives from Council, State Government, Australian Defence Force, Universities and Industry.

Guided by the CIDIAC, Council is implementing key initiatives to accelerate defence industry growth of the region, with a focus on:

- The City's support to RAAF expansion in the region, retention of the Primes, and attraction of new Defence projects in the region
- Positioning the City as an advocate for Defence, Defence Industry and communities in the region
- Helping to build capabilities of Ipswich SMEs to be Defence-ready to access projects in Defence Integrated Logistics, Infrastructure, Sustainment, other supply chain opportunities in Australia and exporting to global value chains
- Build a longer term strategic approach to facilitate jobs and up-skill contemporary workforce through integration of local defence, community, industry and research partnerships

One of the first new initiatives to be progressed is a proposed annual City of Ipswich Defence Industry Summit with the inaugural event planned for 31 August 2018. The one day Summit will be of national significance and focus on bringing all levels of government and industry to Ipswich in dialogue on Defence industry strategies, projects and opportunities.

The Summit will feature keynote addresses, presentations and panel sessions from industry leaders and government. The agenda will also highlight supply chain and workforce opportunities providing Ipswich Defence stakeholders with unparalleled profiling and access to business development prospects.

Organisers of the annual ADM Congress which attracts 350 senior level Defence industry delegates each year have expressed an interest in partnering with Council on the successful delivery of the City of Ipswich Defence Industry Summit 2018, recognising that Ipswich has the opportunity to further establish itself as a region of national significance in Defence.

Once information on how local the Ipswich defence industry can take part in the City of Ipswich Defence Industry Summit 2018 is finalised, it will be provided and promoted through all available Council and partner channels.

<u>BENEFITS TO COMMUNITY AND CUSTOMERS</u>:

The Defence Industry Strategy and the Summit align with the Advance Ipswich Plan and Economic Development Plan:
Goal 1 Strategy 1 Key Action 1.2: Develop export links to support long term competitiveness in the Ipswich economy.
Goal 1 Strategy 5: Support the growth and operation of RAAF Base Amberley and related aerospace and defence industries.
Goal 1 Strategy 6 Key Action 6.8: Research, monitor and review market and investment trends to identify opportunities for new business activities.
Goal 3 Strategy 1 Key Action 1.3: Strengthen Council's branding of Ipswich to align with our identity and changing communities.

RECOMMENDATION:

A. That the report concerning the City of Ipswich Defence Industry Summit 2018 be received and the contents noted.

B. That the Chief Operating Officer (Economic Development and Marketing), in consultation with the Chairperson of the Economic Development and Digital City Committee, continue planning with the City of Ipswich Defence Industry Attraction Committee for the City of Ipswich Defence Industry Summit 2018.

Tamanna Monem
INDUSTRY DEVELOPMENT AND ENGAGEMENT OFFICER

I concur with the recommendations contained in this report.

Ben Pole
CHIEF OPERATING OFFICER
(ECONOMIC DEVELOPMENT AND MARKETING)