A report on the People, Groups and Companies involved in Regional Queensland’s startup sector.
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The Regional Queensland Startup Ecosystem Report was commissioned by the Queensland Government in partnership with the Cairns Regional Council, Townsville City Council, Mackay Regional Council, Rockhampton Regional Council, Bundaberg Regional Council, Ipswich City Council and Toowoomba Regional Council.

The Queensland Government is investing, through the Advance Queensland initiative, $180 million over four years to create the knowledge based jobs of the future.

Advance Queensland is a comprehensive suite of programs designed to solve global challenges, seize opportunities in growing markets, attract investment dollars and create the jobs of the future. It will help position the state as an attractive investment destination with a strong innovation and entrepreneurial culture.

In support of Advance Queensland, the Regional Queensland Startup Ecosystem Report provides valuable data about the contribution startups make to regional Queensland economies. The report estimates regional Queensland currently has more than 70 startups, employing approximately 450 people and since January 2010 has raised $10.4 million in funds.


Similar to the South East Queensland Startup Ecosystem Report, this report provides an in-depth insight into the diversity and unique aspects of regional Queensland startup ecosystems and associated infrastructure.

The Regional Queensland Startup Ecosystem Report’s findings indicate regional Queensland has a strong foundation on which to position the state as an attractive investment destination with a strong innovation and entrepreneurial culture.

The importance of the startup ecosystems to the growth and diversification of regional Queensland economies cannot be understated.

Regional Queensland, through the support of this report, is embracing the opportunities to broaden regional economies in which their communities operate and are ready to assist in reskilling and retooling the existing workforce to take advantage of the opportunities available through technology startups.

The Queensland Government will work with regions to understand and build their innovation ecosystem.
SUMMARY

NO. STARTUPS

83+
Estimated number of startups within Regional Queensland (RQ)

NO. FOUNDERS

150+
Estimated number of startup founders within RQ

NO. PEOPLE

~450
Estimated number of RQ startup employees

NO. MEETUPS & EVENTS

71
Estimated number of startup events per annum

NO. COWORKING SPACES

3

NO. SUPPORTING COMPANIES

150+
Estimated number of companies involved in the startup ecosystem

NO. ASSOCIATED PEOPLE

~1,500
Based on the number of technology meetup groups and employees of startups and supporting entities

TOTAL FUNDING RAISED BY STARTUPS

$10.4M
Estimated total amount of funding raised by RQ startups between January 2010 and July 2015. Funding sources include venture capital, angel investment, government grants and awards. Excludes bootstrapping (self funding)

AMOUNT OF STARTUP BOOTSTRAPPING

$20M
Based on global benchmarking, we estimate that it takes $250,000 to get a startup off the ground

MARKET FOCUS: % STARTUPS BY TOP 10

<table>
<thead>
<tr>
<th>Industry</th>
<th>% of Startups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry, Fishing &amp; Hunting</td>
<td>17%</td>
</tr>
<tr>
<td>Arts &amp; Recreation Services</td>
<td>10%</td>
</tr>
<tr>
<td>Information Media &amp; Telecommunications</td>
<td>10%</td>
</tr>
<tr>
<td>Professional, Scientific &amp; Technical Services</td>
<td>10%</td>
</tr>
<tr>
<td>Education &amp; Training</td>
<td>8%</td>
</tr>
<tr>
<td>Entertainment, Tourism &amp; Sport</td>
<td>6%</td>
</tr>
<tr>
<td>Public Administration &amp; Safety</td>
<td>6%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>6%</td>
</tr>
<tr>
<td>Communication</td>
<td>5%</td>
</tr>
<tr>
<td>Construction</td>
<td>4%</td>
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</table>

% OF PEOPLE BY COMMON SKILLS

<table>
<thead>
<tr>
<th>Skill</th>
<th>% of People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
<td>10%</td>
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<tr>
<td>Marketing</td>
<td>8%</td>
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<tr>
<td>Project Management</td>
<td>7%</td>
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<tr>
<td>Management</td>
<td>6%</td>
</tr>
<tr>
<td>Education &amp; Training</td>
<td>5%</td>
</tr>
<tr>
<td>Leadership</td>
<td>5%</td>
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<tr>
<td>Information Technology</td>
<td>5%</td>
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<tr>
<td>Business Development</td>
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<tr>
<td>Stakeholder Management</td>
<td>3%</td>
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<td>Finance</td>
<td>2%</td>
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% OF PEOPLE BY TEAM SIZE

<table>
<thead>
<tr>
<th>Team Size</th>
<th>% of Startups</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>22%</td>
</tr>
<tr>
<td>2-5</td>
<td>50%</td>
</tr>
<tr>
<td>5-10</td>
<td>24%</td>
</tr>
<tr>
<td>11-50</td>
<td>4%</td>
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% OF PEOPLE BY AGE

<table>
<thead>
<tr>
<th>Age Group</th>
<th>% of People</th>
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<tr>
<td>18-24</td>
<td>29%</td>
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<tr>
<td>25-34</td>
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<td>35-44</td>
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<td>45-54</td>
<td>9%</td>
</tr>
<tr>
<td>55+</td>
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FEMALE FOUNDERS

- Female (13%)
- Male (87%)

d) While the report uses the Australia New Zealand Industrial Classification (ANZIC) to classify the “Market Focus” of companies, this does not represent their industry classification, but rather the target market of a startup company - the primary market they are addressing.

e) Based on estimated percentage of people in RQ with “Founder” or “Owner” in their job titles, working in Technology companies identified on Linkedin.

For the purpose of this report, Regional Queensland (RQ) is defined as the following regional areas; Toowoomba; Ipswich; Bundaberg; Rockhampton; Mackay; Townsville; and Cairns. Number of Startup companies founded by calendar year in the “No. Startups formed by year” graph does not equal the total “No. Startups” as the founding dates of some startups within RQ were not identified. Arts & Recreation Services includes digital game studios, developers and tourism.
The report was produced by Boundlss in partnership with the Department of Science, Information Technology, and Innovation (DSITI), Toowoomba Regional Council, Ipswich City Council, Bundaberg Regional Council, Rockhampton Regional Council, Mackay Regional Council, Townsville City Council and the Cairns Regional Council.

This report identified 83 technology startups operating throughout Regional Queensland. Information was gathered through seven regional workshops, interviews with founders and from manual research using data from online media.

The report found an estimated 450 people who are working in and building scalable technology startups. The report identifies $10.4 million in funding over 5 years to 12 regionally based startups, resulting in a funding per capita of $1.15.

MARKET / PRODUCT FOCUS
Of these 83 startups, a wide range of market focus was evident, with particular regional clusters beginning to emerge in agriculture, tourism and professional services. Product and technology types were diverse, ranging from Internet of Things sensors to online meetings to eLearning platforms.

ESTABLISHED TECHNOLOGY
This report also identified 36 established technology companies that are operating in the regions. Whilst these are outside the age range of the scope for this report, a number of these companies have developed industry leading software, have large established client bases and are important local employers. Harnessing the experience of these organisations is important for the development of the regional ecosystem.

REGIONAL SUMMARIES
This report was focused around seven Regional Queensland ecosystems. A summary for each participating region is given below, and a more detailed write up provided within this report.

Toowoomba
Toowoomba's startup ecosystem has started to take shape, stemming from several community driven initiatives. Toowoomba is also home to a number of large established technology companies, particularly in the AgTech space.

Ipswich
Ipswich is very much in the development stages of a startup ecosystem, but ambitious plans to launch a digital incubator will see real traction in this region in the not too distant future.

Bundaberg
Bundaberg has a very small pool of startups and an embryonic ecosystem. However, there are a number of large established technology companies that add weight to the region’s technology output.

Rockhampton
Rockhampton also has a very small pool of startups. Nevertheless, there are a number of large established technology companies operating in the region, particularly in digital rail technology.

Mackay
Mackay has struggled to establish an ecosystem over the past few years, but a number of community driven initiatives are changing this situation. The city held its first Startup Weekend in October 2015.

Townsville
Townsville contributes the largest proportion of GDP out of all seven regions mapped. The flagship company SafetyCulture is one of Australia’s fastest growing tech companies and lends weight to the fact that startups can be wildly successful in regional centres.

Cairns
Cairns was the surprise stand out in this report. Cairns, per capita, has a higher startup density than South East Queensland, with one startup for every 5,300 people.

COMPARATIVE BENCHMARKING
Comparing these regions with nine similar sized regional cities in the USA and Europe that have developed strong technology hubs, we found Regional Queensland has much lower startup formation rates than South East Queensland and is far behind comparable global tech hubs.

TALENT FLOW
The report contains a section on talent flow, as it was a consistent issue raised by all participants. We examine where regionally educated individuals are currently working in technology across the globe.

MEETUPS AND EVENTS
This report found that across Regional Queensland there was a minimal amount of relevant meetups proportional to the population. Some regions suffer from having no technology specific meetup at all, and the majority of others have been launched in the last 12 months. A lack of central collaboration spaces was seen as a key stumbling block to regular interaction, with only three regions having co-working spaces in operation or announced.

AGRICULTURAL TECH
The report identified that Agricultural Technology (AgTech) startups are beginning to emerge across Regional Queensland. All regions showed signs of innovation in AgTech. As this report explains, it seems only natural that Regional Queensland could serve as the epicenter for the development of an innovation ecosystem and entrepreneurial economy around the emerging Australian AgTech sector.

COMMUNITY INSIGHTS
Building, attracting, and retaining talent was seen as a critical factor across all regions. Retaining a critical mass of talent is paramount to the growth of any regional ecosystem. Other identified issues were a lack of networking and collaboration, access to co-working spaces, access to funding and raising awareness of the sector and startups in general.

CONCLUSION
The early stage technology sector in Regional Queensland is in its infancy with a few breakout successes that have managed to overcome regional isolation and sparse support. Nevertheless, the region has a promising level of engagement in some of the most innovative new technologies coming to market, such as autonomous vehicles, drones, advanced internet connected sensors and advanced robotics, for use in industrial and agricultural markets. Being located in rich agricultural land, startups can and are developing innovative solutions for a trillion-dollar market.

THE BOUNDLSS TEAM.
ABOUT

PROJECT AIMS
This project aims to benchmark and quantify the ecosystems around early stage high growth digital technology companies (referred to in this report as startups for short) across Regional Queensland. The report aims to measure Regional Queensland’s comparative strengths, and identify critical issues within each ecosystem. This project is the first of its kind in regional Australia.

SCOPE
This report maps the primary people (founders, angels and other participants), organisations (startups, venture capital firms, co-working spaces, incubators and government agencies), groups (angel and community groups) and events (awards, conferences, and programs) involved in or supporting early-stage technology startups across Regional Queensland.

For the purpose of this project, Regional Queensland (RQ) is defined as the following seven regions:
- Cairns
- Townsville
- Mackay / Whitsunday
- Central Queensland (Rockhampton and Gladstone)
- Wide Bay Burnett (Bundaberg region)
- Darling Downs (Toowoomba region)
- Ipswich

The report only includes those companies and people that have made a tangible contribution to the development of regional high growth startups – whether that be through mentoring, sponsorship, investment, grants or space, etc. A separate report mapping the South East Queensland startup ecosystem was made publicly available in October 2014.

METHODOLOGY
The report was compiled in partnership with the Department of Science, Information Technology and Innovation (DSITI), Toowoomba Regional Council, Ipswich City Council, Bundaberg Regional Council, Rockhampton Regional Council, Mackay Regional Council, Townsville City Council and Cairns Regional Council.

Information was gathered through seven regional workshops with over 100 participants and from interviews with 35 people across the regions. Information on people, events and companies was also gathered using data from online platforms including LinkedIn, AngelList, ASSOB, CrunchBase, Gust, Twitter, Eventbrite, Kickstarter, Pozible and Meetup, and complemented with internet research.

Combining several data sources gives a more comprehensive view than one in which information is taken from any one individual source.

However, no research project can claim to offer definitive, complete coverage. The digital sector is, quite simply, evolving too rapidly. Whilst all attempts have been made to be comprehensive, some critical people and organisations in this growing sector may have been missed.

DEFINITIONS
Startups
Whilst any type of early-stage business can be called a startup, for the purposes of this project the definition used by StartupAus, Google Australia and PwC Australia was adopted: a ‘startup’ is a company primarily focused on developing innovative digital technology and intellectual property (IP) with a high leverage on labour, an innovative scalable business model, capable of rapid growth, and under five and a half years in age.

Digital
The project focused on companies that create value primarily around digital technologies such as developing software products or services, scalable hardware based products and services such as drones, sensors, autonomous vehicle technology, Internet of Things (IoT) technology, and robotics.

Exclusions
Digital technologies are being deployed across all industries and permeate all aspects of our society. The reality is that a large proportion of Australian businesses now have digital technology as a core component of their business. To clarify, this report excludes the following:

Consulting: The project excluded companies engaged with digital technology that have a high reliance on manual labour and produce little to no IP of their own, such as digital design studios, digital marketing, software development houses and computer consulting companies. Technology support, networking, and computer repair businesses were also excluded. Similarly excluded were any other organisations providing IP development as a service purely for other firms.

However, many companies build potentially scalable digital products (e.g. iPhone apps) alongside their consulting services, in which case they have been included.

Established Technology: the report excludes digital technology companies established prior to 2009 from the definition of a ‘startup’. However, in some cases the report mentions companies, investment figures or entity numbers for more mature digital technology companies. In these cases, the report refers to these as Established, Mature or Later stage digital technology companies.

Tech Companies
Data that encapsulates both startups and established technology companies is referred to as digital technology companies, or Tech Companies for short.

Funding & Investment
The report captures information on the money raised by established technology companies and startups to fund company and product development. Startups secure funding in multiple ways: private investment, government grants, crowdfunding, public investment, prizes and loans. The report did not analyse money flowing out of the state into startups in other states or countries. When the report refers to Funding, Investment or Matched Funding it means:

Funding: the report means private or public equity investment in a company in exchange for shares in the company, including convertible notes, options and other financial tools for purchasing shares.

Investment: the report means private or public equity investment in a company in exchange for shares in the company, including convertible notes, options and other financial tools for purchasing shares.

Matched-Funding: a large portion of startup funding in Queensland came from the Australian Government’s Commercialisation Australia (CA) grant program, established in 2009. By matched funding the report refers to the portion provided by the applicant, and the portion provided by the government is referred to as the government grant.

Currencies
All currencies used within this report are in $AUD unless otherwise stated.

STEM Qualifications
For the purpose of this analysis, Science, Technology, Engineering & Mathematics (STEM) qualifications refer to any non-school qualifications at the Postgraduate degree level, Master degree level, Graduate diploma and Graduate certificate level and Bachelor degree level in any of the following fields:
- Natural & Physical Sciences,
- Information Technology,
- Engineering & Related Technologies,
- Agriculture, Environmental & Related Studies, and
- Mathematics.
Uber, the world’s largest taxi company, owns no vehicles. Facebook, the world’s most popular media owner, creates no content. Alibaba, the most valuable retailer, has no inventory. And Airbnb, the world’s largest accommodation provider, owns no real estate.1–2 Tom Goodwin, SVP Strategy & Innovation, Havas Media

For Regional Queensland to grow a vibrant startup ecosystem it is essential to create an environment that is conducive to creating and retaining startups on local soil. Twenty to thirty years ago, almost all tech startups were created in startup ecosystems like Silicon Valley. Today, technology entrepreneurship is a global phenomenon, with startups rapidly emerging all around the world in both major cities and regional centres.7

The democratisation of entrepreneurship has created plentiful opportunity for any region with the right characteristics to create its own sustainable tech ecosystem.

Technology is no longer a vertical industry, as its been understood by everyone for four decades. Technology is now a horizontal, enabling force throughout the whole economy.1–2 John Battelle

ECONOMIC GROWTH

There is no question that software is eating the world, as Marc Andreessen famously wrote.4 Software is now core to producing just about every good or service we consume. It’s embedded in almost every commercial process, and it’s shifting the balance of power in a range of industries.

Information era businesses have become the dominant source of economic growth, significantly automating or altering much of the industrial and service businesses of the previous economic era. In the USA, three technology companies (Apple, Facebook & Google) contribute $1.3T to GDP – higher than the value of the entire ASX. As the saying goes: “The future is already here, it’s just not evenly distributed.”

By providing a baseline of data this report aims to play a role in the creation of more diversified, competitive and healthy regional economic bases that includes technology entrepreneurs.

At least in the United States, net job growth comes from startup companies, especially the kind that explode from a few employees to several thousand. In technology, those winners have a kind that explode from a few employees to several thousand. In technology, those winners have a way of producing more winners. The process reaches critical mass in the web of intertwined companies, resources, advantages, ideas, talent, opportunity, and serendipity that defines a technology cluster.5 Antonio Regalado, MIT

ECONOMIC IMPACT OF TECH

The economic contribution of the internet and digital technologies can be difficult to estimate, particularly given the changes generated by digital disruption within Australian businesses across a variety of industries. In Deloitte’s report The Connected Continent II: How digital technology is transforming the Australian economy (2015), the digital economy in Australia was estimated to have contributed $78.8 billion to GDP in 2013–14, representing 5.1% of total Australian GDP.1

In our previous report we estimated that the economic impact of digital technology on Queensland’s economy in 2025 would be in the order of $96 billion per annum or roughly 24% of the state’s projected $396 billion economy.

According to IBIS World’s white-paper, A Snapshot of Australia’s Digital Future to 2050, 15 different industry sub-sectors face extinction due to factors such as size, international competitiveness, the potential for displacement, and technology.3

For example, within Australia, Uber has created thousands of low-paying jobs for drivers, whilst capturing 10% of the taxi market. In the USA, Uber has created over 300,000 jobs for drivers, plus thousands more high-value jobs, and a company worth $USD 50 billion which will in time spawn hundreds of new startup founders and investors.

Netflix officially launched its Australian service in March 2015, and is seen as the leader in the streaming category, with an estimated 40% market share. Curiously, Netflix is building its presence in Australia with no local employees and is paying no tax.

REGIONAL GROWTH

Looking back over Regional Queensland’s past, the vast majority of regional growth strategies have focused on attracting established companies looking to expand or open new premises. While it is certainly important for regions to attract established businesses, those deals typically create a small finite number of jobs.

What isn’t evident in most regional growth strategies is the organic growth of an entrepreneurial tech cluster. However, sowing the seeds of entrepreneurship can lead to a more rapid and sustainable job growth strategy for the region.

For example, in Queensland it is estimated that approximately 88% of the 90,000 jobs in agriculture are regionally based. These jobs and the economic contribution they provide are the backbone of many rural and regional communities in Queensland. One in sevenQueenslanders are either partially or entirely supported by the Agriculture sector.

AGTECH

Globally, agriculture is in the middle of a digital revolution. The benefits of converging the digital and physical worlds are too valuable to ignore for Regional Queensland. Its proximity to the rapidly expanding Asian middle class offers a startling opportunity for the region to develop a local industry around the emerging global AgTech market.

CLUSTERS

A regional technology cluster represents a geographic concentration of interconnected companies and institutions in a particular field.

Vibrant industry clusters and ecosystems are critical for increasing the productivity of companies, driving innovation, stimulating new business creation and breeding scalable high-growth companies.

The factors that contribute to a flourishing technology ecosystem have been well defined by researchers, policy makers and entrepreneurs: An entrepreneurial culture with a large number of active participants; mentoring from experienced entrepreneurs; a supportive regulatory environment; a culture of collaboration and networking; a steady flow of local university talent; visible successes and role models; risk tolerance; easy access to capital; government policy with a long-term focus; and access to good technical skills.9

Many of these factors are cultural, rather than structural, and in many ways a strong culture comes prior to structural changes (e.g. greater access to capital or supportive regulation). According to PwC’s The Startup Economy:

“Culture is the key to accelerating the growth of a tech community. In the 1970s the tech communities of Silicon Valley and the area around MIT… were similar in size. But by the 1990s Silicon Valley was dominant. The accepted explanation for the difference in growth rates is the open and collaborative culture of the Valley. This same culture is what is driving growth in both Boulder Colorado and Israel.”10

While it hasn’t yet been proven if a thriving ecosystem improves the success rates of each startup individually, it does act as a giant factory, producing large numbers of startups. Produce enough startups and in principle, many of them are likely to be successful. Several of them even wildly successful.11

Clusters also directly support new business formation. Porter argues that working in a cluster allows individuals to more easily identify gaps in the current market offerings, enables efficient access to talent, institutions, partners, etc., and a home-grown exit market (i.e. established members of the cluster are the likely acquirer).12

Regional tech clusters can impact the trajectory of growth in the region and:

• Slow and even reverse migration of tech talent out of the region/state;
• Grow successful local tech companies to become primary job creators;
• Recycle the wealth that is created by re-investing in the region, versus transferring wealth to major cities; and
• Help local successful entrepreneurial and technical talent stay local.

Agriculture sector.
This report estimates the potential economic impact of disruptive digital technologies on regional Queensland’s economy in 2025 could be over ~$34 billion per annum, approximately 25% of gross regional product.
FUND FLOW

The report’s funding data covers the January 2010 to July 2015 period and includes all digital technology companies in RQ with publicly available information. It includes both investments and government grants (where no equity was exchanged).

This report identified 12 digital technology companies that secured funding, raising a total of $10.4 million, which gives an average of $2.1 million per year, or $1.15 per capita.

SafetyCulture (Townsville) alone contributed more than 55% of the total funding raised in RQ.

<table>
<thead>
<tr>
<th>ORGANISATION</th>
<th>REGION</th>
<th>AMOUNT RAISED</th>
<th>YEARS</th>
<th>FUNDING SOURCE</th>
<th>TOTAL FUNDING RAISED – ALL TECH</th>
</tr>
</thead>
<tbody>
<tr>
<td>SafetyCulture</td>
<td>Townsville</td>
<td>$5,700,000</td>
<td>2013, 2014</td>
<td>CA, Blackbird, Angels</td>
<td>$10.4M</td>
</tr>
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<td>JobFit Systems Inti</td>
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<td>JESI Management</td>
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<tr>
<td>MandraIT</td>
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<tr>
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<td>AM Shelfie</td>
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<td>2015</td>
<td>ilab</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL RAISED</strong></td>
<td></td>
<td><strong>$10,356,278</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VENTURE RAISED PER CAPITA 14 15 16**

- Silicon Valley: $4,241
- Israel: $1,83
- USA: $81
- Switzerland: $74
- Norway: $54
- Melbourne Cup Bets: $52
- Australian Bio-tech: $44
- Sweden: $40
- Finland: $28
- Denmark: $16
- France: $15
- Britain: $15
- 2012 Aus Olympic Team: $14
- Ireland: $14
- Netherlands: $14
- Belgium: $12
- New Zealand: $11
- Austria: $8
- Perth (incl govt): $6
- South East Queensland: $5
- Australia: $4
- South East Queensland (Excl Govt): $4
- Perth (excl Govt): $3
- Regional Queensland: $1.2
- Regional Queensland (Excl Govt): $0.8

**TOTAL FUNDING BY REGION**

- Gold Coast: $69 million
- Brisbane: $45 million
- Townsville: $6.7 million
- Sunshine Coast: $5.3 million
- Mackay: $1.4 million
- Cairns: $1.4 million
- Other QLD Region: $83K
- Toowoomba: $20K
- Ipswich: $0
- Bundaberg: $0
- Rockhampton: $0

**TOTAL FUNDING BY LEAD FUND TYPE**

- Venture Capital: $3.8 million
- Government Fund (CA)’: $3.5 million
- Angel Group: $1.9 million
- Unknown (Matched Funding): $1.6 million
- Accelerator: $80K

Funding levels within RQ are well below the norms across Australia for startup investment - between $4 to $6 per capita per year. Furthermore, they are critically below global startup investment rates which range between $30 to over $3,000 per capita per year.

While only 14% of startups in Regional Queensland raised money, the remaining 71 startups will have required bootstrapped investment. We estimate that roughly $20 million in bootstrapped investment has been provided by founders, family and friends to get these remaining startups up and running - based on an average investment of $250,000 per startup. The actual figure is most probably higher than stated.

ilab, an accelerator, has funded four regional startups to participate in its germinate accelerator program. Whilst the dollar amounts are low ($80,000), they provide an important service in incubation and exposure to further capital.

The Advance Queensland announcements in July 2015 were warmly received by regional startup participants. With $76 million aimed at encouraging a new wave of startups, supporting proof-of-concept projects, and attracting co-investment through the Business Development Fund, it is promising to see $24 million directly earmarked for Startup Queensland, to directly increase startup formation and attraction.
“UNLIKE RESOURCES, CREATIVITY IS NON-DEPLETABLE. NOR DOES IT DEGRADE THE ENVIRONMENT. IT THEREFORE UNLOCKS OPPORTUNITIES FOR SUSTAINABLE GROWTH.”

PARK GEUN-HYE, 2013
SOUTH KOREAN PRESIDENT
STARTUP ORGANISATIONS

COMPANIES
Startups founded after 2010, along with key support organisations based in regional Queensland. (Multiple) indicates that the organisation operates across regional borders and in some cases companies are located outside Regional Queensland but have actively contributed to the development of the local ecosystem.

STARTUPS
101 Business Group (productivity) (Rockhampton)
2bit Studios (games) (Cairns)
3D Industries (3D printing) (Toowoomba)
A Few Extra Bucks (marketplace) (Bundaberg)
AgriLabour (marketplace) (Toowoomba)
Airmap 3D (drones + GIS) (Mackay)
AM Shellie (3D printing) (Townsville)
Stealth Startup (communication) (Ipswich)
AUFO (drones + GIS) (Cairns)
BajTech (3D printing) (Townsville)
BetsWithFriends (mobile app) (Cairns)
BitPlex (Productivity) (Rockhampton)
Caked On (other) (Bundaberg)
Carbon Link (hardware) (Rockhampton)
CatchLog (infrastructure) (Cairns)
Clinical Hub (infrastructure) (Ipswich)
Comit Platforms (mobile app) (Townsville)
Didgigo (content creation) (Cairns)
DrinkTracker (mobile app) (Cairns)
Droner (drones) (Cairns)
Dynamic Conversations (education) (Cairns)
Economy Saver (marketplace) (Gladstone)
Eduhealth Plus (hardware) (Ipswich)
EnviroSource (marketplace) (Rockhampton)
Experimental Unicorns (marketplace) (Townsville)
Farmacist (marketplace) (Mackay)
Focus (other) (Cairns)
GamePlan (productivity) (Rockhampton)
Gilmour Space Corp (infrastructure) (Bundaberg)
Global Store Solutions (marketplace) (Toowoomba)
HelloClaims (insurance) (Cairns)
Hummingbird (drones) (Toowoomba)
I Want that Course (marketplace) (Cairns)
iAMConnected (collaboration) (Cairns)
Inspection Apps (mobile app) (Cairns)
InstaConnect (hardware) (Cairns)
INTERACTin (communication) (Gladstone)
Intritec (desktop app) (Bundaberg)
JESI (location) (Townsville)
Job Fit Systems (customer relationship) (Mackay)
Kadence Group (collaboration) (Mackay)
KixFit (mobile app) (Toowoomba)
Konveen (communication) (Cairns)
MandraIT (hardware + web) (Calliope)
Mogtastic (game) (Cairns)
My Footy Boots (marketplace) (Cairns)
My Water Filter (ecommerce) (Ipswich)
NQ UAV (electronics) (Townsville)
Nupath (education) (Cairns)
OrbStudio (game) (Cairns)
OTrain (education) (Toowoomba)
Oz Apps (mobile app) (Townsville)
PakYak (transportation) (Cairns)
Precision Terrain Solutions (electronics) (Toowoomba)
Procedures Online (content creation) (Mackay)
QIT Plus (big data) (Mackay)
Relocations2go (desktop app) (Cairns)
Rent Resume (customer relationship) (Toowoomba)
SafetyCulture (mobile app) (Townsville)
Sakure (desktop app) (Cairns)
Sales VA (marketplace) (Toowoomba)
Sam the Waiter (other) (Cairns)
Scripti (productivity) (Toowoomba)
Second to none Nutrition (ecommerce) (Townsville)
ShareStuff (marketplace) (Cairns)
 ShedProject (infrastructure) (Toowoomba)
Site Specific Software Solutions (mobile app) (Toowoomba)
Skydronics (drones) (Townsville)
SmartHR Solutions (education) (Mackay)
Snipe (productivity) (Cairns)
Strictly Service (marketplace) (Mackay)
Swarm Farm Robotics (robots) (Rockhampton)
TenderHound (collaboration) (Cairns)
ThermaCulture (hardware) (Cairns)
Thought Select (mobile app) (Cairns)
Tourback (other) (Ipswich)
UAView (drones) (Cairns)
Upson Downs (drones) (Rockhampton)
Voista (productivity app) (Cairns)
Why Not Tours (recommendations) (Cairns)
WotsLocal (marketplace) (Townsville)
Wow Factor (video) (Townsville)
XY Mapping (drones) (Fraser Coast)

OTHER TECHNOLOGY COMPANIES
4TEL (big data) (Rockhampton)
Acabis (infrastructure) (Mackay)
AgData (analytics) (Toowoomba)
AgTech Toowoomba (hardware) (Toowoomba)
Almost Anything (software) (Rockhampton)
Beeline Technologies (software) (Toowoomba)
Best Practice Software (infrastructure) (Bundaberg)
BigMate (infrastructure) (Mackay)
BizSpark (Support) (Multiple)
Bold Hues (software) (Cairns)
Circuit Wiz (hardware) (Mackay)
Code Valley (other) (Toowoomba)
Conectix Web Hosting (hosting) (Ipswich)
D2K (other) (Bundaberg)
DEC-MECH (infrastructure) (Townsville)
DHM Software (software) (Toowoomba)
Eden Tech (software) (Toowoomba)
ESRI (big data) (Cairns)
FarmscanAg (hardware) (Toowoomba)
Fierce Ventures (software) (Townsville)
Hortus (hardware) (Bundaberg)
HoverCam (drones) (Cairns)
IBM (software) (Townsville)
Indigo Web (software) (Toowoomba)
Insyte Solutions (software) (Rockhampton)
IT Connexions (software) (Townsville)
Koolivoo (content creation) (Cairns)
LogiCamms (electronics) (Mackay)
Microair (electronics) (Bundaberg)
Minstaff Survey Pty Ltd (drones) (Toowoomba)
NFA (infrastructure) (Townsville)
Northrup Grummond (hardware) (Ipswich)
Oper8 Springfield (software) (Ipswich)
Phoenix (software) (Toowoomba)
PiDataConsulting (software) (Cairns)
Polaris Data Centre (hosting) (Ipswich)
Precedence (software) (Cairns)
Precision Agriculture (customer relationship) (Toowoomba)
Rail Innovation Australia (big data) (Rockhampton)
Real Time Instruments (hardware) (Mackay)
ResFax (big data) (Cairns)
Scan2Convert (productivity) (Bundaberg)
Strategenics (big data) (Toowoomba)
The Bullion Group (other) (Mackay)
TOL Aerospace (aerospace) (Ipswich)
tourstogo.com (software) (Cairns)
WebTraf (hosting) (Bundaberg)

INCUBATION
BlueChilli (seed accelerator) (Sydney)
ilab (seed accelerator) (Brisbane)
QUT Creative Enterprise Australia (Incubation) (Brisbane)

FUNDING
Auswide Bank (bank) (Bundaberg)
Blackbird Ventures (vc) (Sydney)
Commercialisation Australia (Govt Grant) (Ipswich)
Future Now (vc) (Townsville)
Go fund me (crowdfunding) (Mackay)
Iceberg Innovation (vc) (Cairns)
Kickstarter (crowdfunding) (Multiple)
NAB Business Banking (bank) (Bundaberg)
- Launching their own startup

**Co-working & Hackerspaces**
- Canvas Co-Working (co-working) (Toowoomba)
- Hackerspace Toowoomba (Hackerspace)
- Hacking and Coding Club JCU (Hackerspace) (Cairns)
- Mackay Maker Space (Hackerspace) (Mackay)
- Firestation101 Digital Incubator (Ipswich)
- theSpace (co-working) (Cairns)

**Meetups & Events**
- ACRV Robotics Seminar (event) (Mackay)
- AGRI Innovation Conference (event) (Mackay)
- Agriculture Futures Conference (event) (Mackay)
- Australian Computer Society (meetup) (Rockhampton)
- Bundaberg Business Expo (event)
- Bundaberg Digital Boardroom (meetup)
- Bundaberg Digital Enterprise Program (event)
- Cairns Startup & Entrepreneurs Meetup (meetup) (Mackay)
- CoCollaborate (event) (Mackay)
- CoderDojo (event) (Ipswich)
- Crypto Party (event) (Cairns)
- Digital Business Week (event) (Bundaberg)
- Digital World Futures (event) (Toowoomba)
- Dive into digital (event) (Cairns)
- Emerging Entrepreneurs (event) (Cairns)
- FunGIS (event) (Cairns)
- GovHack (event) (Ipswich)
- GovHack FNQ (event) (Cairns)
- ICT Network Meeting (meetup) (Rockhampton)
- Ideas after dark (event) (Cairns)
- ilab Regional Roadshow (event) (Mackay)
- Innovation Awards (event) (Cairns)
- Innovation Festival (event) (Rockhampton)
- Innovations Expo (event) (Townsville)
- Ipswich Digital Expo (event) (Ipswich)
- JCU Robo Club (meetup) (Townsville)
- Mackay IT Network (meetup) (Mackay)
- MakerSpace (event) (Ipswich)
- Meetup Mackay Maker Space (meetup) (Mackay)
- Meetup Mackay Start Up (meetup) (Mackay)
- Mentor Blaze (event) (Multiple)
- Moodle Meet (event) (Bundaberg)
- NQ IT Conference (event) (Townsville)
- Pitch night (meetup) (Cairns)

**Education & Support**
- 1300WebPro (support) (Toowoomba)
- Aus. Industry (Govt) (Multiple)
- Biztopia (support) (Ipswich)
- Bundaberg Regional Council (Govt) (Bundaberg)
- Burnett Heads Business Group (support) (Bundaberg)
- Cairns Regional Council (Govt) (Cairns)
- Capricorn Enterprise (support) (Rockhampton)
- Capricorn ICT Network (support) (Rockhampton)
- Central Queensland University (University) (Multiple)
- ClubTT (support) (Cairns)
- Datazell Systems (Govt) (Rockhampton)
- Department of State Development (Govt) (Multiple)
- Digital Cairns (support) (Cairns)
- Department of Science, Information Technology, and Innovation (Govt) (Multiple)
- e-flux (support) (Bundaberg)
- Entrepreneurs Association (support) (Toowoomba)
- Fox & Buoy Marketing (support) (Mackay)
- Grains Research Development Centre (Govt) (Toowoomba)
- Green Valley Digital (support) (Bundaberg)
- Harlock’s IP Group (support) (Townsville)
- iAssist (support) (Rockhampton)
- Inventions Pathways (support) (Townsville)
- Ipswich City Council (Govt) (Ipswich)
- James Cook University (University) (Multiple)
- Mackay Creatives (support) (Mackay)
- Mackay Regional Council (Govt) (Mackay)
- Managed Solutions (support) (Ipswich)
- Micomm (support) (Rockhampton)
- NBN (support) (Multiple)
- Pioneer Valley Business Group (support) (Mackay)
- Queensland University of Technology (University) (Brisbane)
- Rail Manufacturing CRC (support) (Rockhampton)
- Regional Development Australia (Govt) (Multiple)
- Resource Industry Network (support) (Mackay)
- Rocketclub JCU (education) (Cairns)
- Rockhampton Regional Council (Govt) (Rockhampton)
- Smart City College (education) (Bundaberg)
- Social Motion (support) (Mackay)
- Splash Ads (support) (Bundaberg)
- Startup Mackay (support) (Mackay)
- Startup Toowoomba (support) (Toowoomba)
- Startup Townsville (support) (Townsville)
- TAFE S.W. (education) (Toowoomba)
- TJ Micro (support) (Cairns)
- Toowoomba Regional Council (Govt) (Toowoomba)
- Townsville City Council (Govt) (Townsville)
- UniSA (University) (Adelaide)
- University of Queensland (Brisbane)
- UTAS (university) (Hobart)
- Wide Bay Kids Community Inc. (education) (Bundaberg)
- Wide Reach Social Media (support) (Bundaberg)

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*Note many of these groups and events are not directly focused on startups, but rather support activities around digital technology. They are included as an indication of the level of interest in digital technology, and are often feeders to people taking the leap into joining or launching their own startup.*
The map below shows an overview of all tech startups located in Regional Queensland. They have been positioned based on the latitude and longitude of their headquarters, and are sized by current staff level estimates owing to a lack of market cap data.
## REGIONAL COMPARISON

The table below offers benchmarked summary statistics for each of the seven regions participating in this report.

<table>
<thead>
<tr>
<th>REGION</th>
<th>NO. STARTUPS</th>
<th>NO. ESTABLISHED TECH</th>
<th>TOTAL FUNDING</th>
<th>COWORKING SPACES</th>
<th>TOTAL EMPLOYED IN STARTUPS</th>
<th>POPULATION</th>
<th>STARTUP DENSITY(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toowoomba</td>
<td>12</td>
<td>6</td>
<td>$20K</td>
<td>1</td>
<td>60+</td>
<td>162K</td>
<td>1/16K</td>
</tr>
<tr>
<td>Ipswich</td>
<td>5</td>
<td>6</td>
<td>$0</td>
<td>1(^b)</td>
<td>20+</td>
<td>190K</td>
<td>1/38K</td>
</tr>
<tr>
<td>Bundaberg</td>
<td>4</td>
<td>6</td>
<td>$0</td>
<td>-</td>
<td>15+</td>
<td>95K</td>
<td>1/24K</td>
</tr>
<tr>
<td>Rockhampton</td>
<td>7</td>
<td>2</td>
<td>$0</td>
<td>-</td>
<td>15+</td>
<td>85K</td>
<td>1/12K</td>
</tr>
<tr>
<td>Mackay</td>
<td>8</td>
<td>6</td>
<td>$1.4M</td>
<td>-</td>
<td>20+</td>
<td>123K</td>
<td>1/15K</td>
</tr>
<tr>
<td>Townsville</td>
<td>12</td>
<td>4</td>
<td>$6.7M</td>
<td>-</td>
<td>80+</td>
<td>190K</td>
<td>1/16K</td>
</tr>
<tr>
<td>Cairns</td>
<td>31</td>
<td>6</td>
<td>$1.4M</td>
<td>1</td>
<td>120+</td>
<td>159K</td>
<td>1/5K</td>
</tr>
<tr>
<td>Regional Queensland Summary(^*)</td>
<td>83</td>
<td>36</td>
<td>$10.4M</td>
<td>3</td>
<td>~450</td>
<td>1.8M</td>
<td>1/20K</td>
</tr>
</tbody>
</table>

\(^a\)Number of Regional Queensland Startups is greater than the total of the seven regions (79) as we identified several startups just outside the regions.

\(^b\) Startup Density refers to the number of people per startup. Boulder, Colorado for example, has a Startup Density of 1 startup per 235 people.

\(^b\) The Ipswich Fire Station101 Digital Incubator was announced in November 2015 and is not yet open.
Toowoomba startups [white], established tech companies [yellow] and related companies [pink], along with their founders and employees [red]. Links show professional relationships via LinkedIn.

SALESVA

SalesVA is a one-year-old productivity startup. They provide an online productivity tool that enables sales professionals to cut Customer Relationship Management (CRM) administration time, enabling sales teams to be more productive. A team of virtual CRM assistants handles the necessary administrative requirements, provide post appointment follow-up assistance and send training podcasts following each appointment. SalesVA integrates with all major CRM packages.

OTRAIN

oTrain is a four-year-old online training startup. They provide the infrastructure and backend support to enable people to build and create and maintain an online training presence. With five products, 10 staff and a growing global client list, oTrain is on track to disrupt global training.
TOOWOOMBA

TECH ECOSYSTEM SUMMARY

As Queensland’s largest inland city, Toowoomba is the hub of the fertile Darling Downs region that has resulted in a city with extensive manufacturing, education, health, retail and professional services. Toowoomba offers easy access to Brisbane and the Gold and Sunshine Coasts. The recent opening of the Brisbane West Wellcamp Airport is the first major greenfield public airport development in Australia since Melbourne Airport opened in 1970. It is also the only privately funded major airport in the country.

Still in its relative tech ecosystem infancy, a number of grass roots community driven activities have boosted community engagement and participation throughout the startup ecosystem. With the Canvas co-working space opening in August 2015, a local Hackerspace opened in 2013, having held the first Startup Weekend in 2014, GovHack program, and the regular Startup Toowoomba organised tech specific meetups, the outlook is bright if current initiatives are maintained and supported by all members of the tech community.

Toowoomba has the added benefit of having the headquarters of the University of Southern Queensland, resulting in strong STEM talent flow into the region. Its relative proximity to Brisbane was identified as a core enabler for future growth.

It is estimated that the 12 startups operating out of Toowoomba were employing 60+ people. A selection of notable persons identified are as follows; David Masefield (Founder, Co-Working, Meetup), Leanne Griffin (meetup), Shane Ridley (Founder), Chris Mills (Established Tech Founder), Emma Monro (Founder), Joy Taylor (Co-Working), Tim Neale (Established Tech Founder) and Natasha Wells (Founder).

Established technology companies and supporting entities that play an important role in the Toowoomba ecosystem include; Precision Agriculture (AgTech), Stratogenics (Big Data), ilab (Incubator), FarmscanAg (AgTech), and AgData (Australia’s largest agricultural software company). Harnessing the experience of these established organisations to grow and expand the ecosystem is a natural path. Developing a strong agricultural base is also a natural path for Toowoomba to develop regional expertise.

The following technology related events and meetups were identified, and are presented according to their importance to the ecosystem: Toowoomba Startup Group Open, Toowoomba Startup Group Meetup, Startup Weekend GovHack and AgWorld.

ISSUES AND ACTIONS

Toowoomba participants clearly identified that the lack of consistency with the National Broadband Network (NBN) was a major inhibitor to growth with sporadic rollout missing key sectors of the region. The lack of an established Angel network in the region meant founders had to look to Brisbane for funding. Participants also identified issues with attracting talent to move.

### TECH ECOSYSTEM SUMMARY

<table>
<thead>
<tr>
<th>Population</th>
<th>Gross Regional Product</th>
<th>Total Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>162K</td>
<td>$8.1B</td>
<td>$20K</td>
</tr>
</tbody>
</table>

### ISSUES TOP 5

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration &amp; Networking</td>
<td>31%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>31%</td>
</tr>
<tr>
<td>Funding</td>
<td>13%</td>
</tr>
<tr>
<td>Raise Awareness</td>
<td>13%</td>
</tr>
<tr>
<td>Education</td>
<td>13%</td>
</tr>
</tbody>
</table>

### ACTIONS TOP 5

<table>
<thead>
<tr>
<th>Action</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hub / Coworking Space</td>
<td>38%</td>
</tr>
<tr>
<td>Collaboration &amp; Networking</td>
<td>19%</td>
</tr>
<tr>
<td>Govt Incentive - Accelerators</td>
<td>19%</td>
</tr>
<tr>
<td>Highlight Success Stories</td>
<td>13%</td>
</tr>
<tr>
<td>Education Program</td>
<td>6%</td>
</tr>
</tbody>
</table>

### STARTUPS

- 3D Industries (3D Printing)
- AgriLabour (marketplace)
- Global Store Solutions (marketplace)
- Hummingbird (drones)
- KixFit (mobile app)
- oTrain (education)
- Precision Terrain Solutions (AgTech)
- Rent Resume (rental)
- SalesVA (productivity)
- Scripti (education)
- ShedProject (marketplace)
- Site Specific Software Solutions (mobile app)
Ipswich is delivering Australia’s first fully funded start-up incubator and accelerator. ICC is currently building the FireStation101 venue in the Ipswich CBD and has started engaging the start-up community in preparation for a March 2016 launch.

EduHealth Plus is a for-profit social enterprise that is dedicated to delivering innovative evidence-based preventative health interventions and better solutions to social problems and unmet community needs. EduHealth Plus released the world’s first nutrition pedometer in spring of 2015 and has secured a pending patent for the hardware.
Ipswich is one of the fastest growing cities in Australia, with population growth rates (23% since 2007) outpacing the majority of Queensland. Recently Ipswich was named as one of the Top 7 most intelligent global communities for 2015 by the Intelligent Community Forum (ICF) in New York, in part due to its digital training programs in the community and its acceleration of the NBN rollout.

However, the startup ecosystem in Ipswich is still at its very beginning, with a number of initiatives recently announced seeking to change this situation. Ambitious plans to build a new Digital Incubator modelled on the well known Chicago entrepreneurial hub 1871, have recently been announced with strong industry and government support. Proactive support from the Ipswich City Council in facilitating this project represents a bold move to claim a piece of Queensland’s digital future.

While Ipswich is well connected to Brisbane, the local university’s strong and growing reputation in technology needs to translate into attracting established talent to stay in the region. Masterplanned communities like Springfield Lakes have been ambitiously designed to facilitate the capture of young technologically savvy individuals to the region. An established technology base of aerospace companies offers distinct possibilities, yet no aerospace startups were identified in our research. This is possibly due to the relationships required to engage with the Department of Defence (RAAF Amberley).

It is estimated that Startups operating out of Ipswich were employing over 20 people in total. A selection of notable persons identified in a centrality ranking are as follows; Matthew Schultz (Local Govt), Paul Pisasale (Mayor), Peta Ellis (meetup), Anna Daniels (Founder), David McCallum (Founder), Andrew Whannell (Founder), Simon Victory (Founder) and Jamin Andrews (Founder).

Ipswich has a lack of tech related meetups, with its proximity to Brisbane being both a help and a hindrance in the matter. Despite still being in its infancy, the Startup Ipswich Meetup group already has more than 45 members. For future growth it is important to leverage this and continue to support and facilitate its continuation.

It is noted that Ipswich’s close proximity to Brisbane may influence the data collected, as there is evidence of Ipswich residents who are founders or involved in startups based in Brisbane and other parts of South East Queensland.

Supporting entities that play an important role in the Ipswich ecosystem include; Polaris Data Centre, Conetix Web Hosting, Ipswich City Council and University of Southern Queensland (USQ). USQ campuses in Ipswich and Springfield provide a large flow of talent into the region. Harnessing this and convincing talent to stay and found companies was viewed as a major issue facing the growth of the local ecosystem.

ISSUES AND ACTIONS

Ipswich participants identified that attracting and retaining local STEM talent was a priority issue hampering the ecosystem owing to the proximity to Brisbane. A lack of clear pathways for local startup funding was evident. The lack of local mentors in the area for tech startups was also seen as an inhibiting factor.
Intritec is a software development company that has been providing customised FileMaker solutions for businesses for 5 years. Intritec has developed a number of flagship products such as Packit, a customised management system for large fruit and vegetable processing factories and TrackEd, an application built specifically for schools to help collate and track student progress and provide software to help schools make use of big data. Intritec specialises in innovative systems that bridge the divide between traditional logistical problems and modern mobile based solutions.

Best Practice Software is an established technology company employing over 85 people with 50 staff at its headquarters in Bundaberg, and other staff located in Sydney, Brisbane and Hamilton (NZ). It develops, markets and supports quality software products for Australasian medical practices.

Bp Clinical is an SQL application that is designed to improve efficiencies within the medical practice. Bp Management is a billing and appointment book module that syncs with the Clinical software application. Bp SMS automates doctors appointment reminders.
BUNDABERG

TECH ECOSYSTEM SUMMARY

Bundaberg is situated approximately four hours drive or a 45-minute flight north of Brisbane. Major industry clusters include healthcare, agriculture, construction and manufacturing, along with major campuses of Central Queensland University and Institute of Technical and Further Education (TAFE). The city’s population is approximately 100,000 people.

The Bundaberg startup ecosystem is at an embryonic stage. As of July 2015, there are no startup specific meetups. Previous efforts to launch a Bundaberg technology expo were merged to a wider business expo in light of low demand. The Bundaberg Digital Boardroom, and supporting “Switched on Bundaberg” initiative, provide a forum for businesses to highlight the importance of high quality broadband access and promoting digital productivity throughout the region. Bundaberg Regional Council has also been proactive in driving digital engagement and in hosting numerous technology related events and forums.

These initiatives have not had a particular focus on promoting the regional startup culture, and there is currently no central space available for startups to co-work, network and collaborate.

Of pressing concern is that of Central Queensland University closing its ICT course in Bundaberg. Research suggests that almost every successful tech cluster has a local technical university to organically generate and retain talent within the region.18 It is extremely difficult to import enough talent to fuel a rapidly growing tech cluster.

It is estimated that the 4 startups operating out of Bundaberg were employing 15+ people. A selection of notable persons identified in a centrality ranking are as follows; Phil Baker (Founder), Andrew Beckenhauer (Local Govt), Matthew Drane (Founder), Jack Millbank (Established AgTech), Frank Pyefinch (Established Founder), Ann Moffat (Education), and Ben Taylor (Education).

There is a strong base of established technology companies operating out of the Bundaberg region. Best Practice Software, founded by Frank Pyefinch is one of Australia’s largest medical software organisations with over 50 employees alone in Bundaberg. Hortus, founded by Jack Millbank, is an innovative AgTech company employing over 25 people in the region. Matthew Drane is an accomplished serial entrepreneur, and his businesses in the technology industry based in Bundaberg have created an estimated 100+ jobs.

Other supporting entities include Wide Bay Volunteers (Education), Bundaberg Regional Council (Local Govt), AusIndustry (Federal Govt), WebTraf (Software), and Central Queensland University.

ISSUES & ACTIONS

Bundaberg participants identified that raising awareness of technology startups was a critical factor to increase participation in the startup sector. It was perceived that a lack of understanding of technology in the region was driving talent away. The low number of students studying technology related subjects in the region, combined with the pull of mature startup ecosystems in major cities, presents a challenge for retaining regional talent. Participants identified the lack of local STEM talent as a critical issue preventing the establishment of a strong startup ecosystem. Poor NBN coverage was also impacting the speed of uptake of new technology and therefore turning potential entrepreneurs away.

Participants suggested that highlighting the success stories of established tech companies, in conjunction with a collaborative, entrepreneurial culture, would drive significant interest in the region and the startup sector. A central resource for funding options for tech companies was seen as a quick win that would bring immediate value.

Startups

A Few Extra Bucks (marketplace)
Caked On (marketplace)
Gilmour Space Corp (aerospace)
Intritec (software)

Population

95K

2.0% of Queensland

Gross Regional Product

$4.4B

1.6% of Queensland

Total Funding

$0K

0% of Regional Queensland

Startups by Market Focus: Top 4 Markets

- Agriculture
- Accommodation & Food
- Transport
- Education

Issues Top 5

- Raise Awareness 22%
- Education 20%
- Infrastructure 18%
- Funding 18%
- Talent & Skills 12%

Actions Top 5

- Govt Incentive - Infrastructure 24%
- Education Program 13%
- Highlight Success Stories 13%
- Form Leadership Group 11%
- Collaboration & Networking 11%
ROCKHAMPTON

Rockhampton startups and their founders [white], established tech companies [blue], and related companies [red]. Links show relationships via LinkedIn.

SWARMFARM ROBOTICS

Startup

Innovative grain and cattle farmer Andrew Bate is passionate about developing robotic farming technology that ensures future generations of farmers have a vibrant, economic, and sustainable future in the cropping industry. Mr. Bate’s AgBot9 development company, SwarmFarm Robotics has partnered with the Queensland University of Technology and the University of Sydney’s Australian Centre for Field Robotics to develop swarms of agbots conducting plant and soil maintenance and improvement tasks such as bug and weed removal, at any hour of the day or night and in any weather conditions.

CARBON LINK

Startup

Carbon Link enables farmers to put carbon on their bottom line and improve sustainability. Carbon Link has completed the first large scale accurate measurement of soil carbon in the world, down to one metre. This Internet of Things sensor technology is 100 times more accurate than conventional methods. Carbon Link is a leader in carbon farming markets providing; sensor technology to measure carbon stocks; training and guidance to implement practices that restore the landscape and store carbon; and support with implementing carbon trading.
ROCKHAMPTON

TECH ECOSYSTEM SUMMARY

Rockhampton hosts a significant number of government, community and major business administrative offices for Central Queensland. Rockhampton is often referred to as the beef capital of Australia. Rockhampton has the added benefit of having the headquarters of the Central Queensland University (CQU), resulting in strong STEM talent flow into the region. The CQU School of Engineering and Technology has over 90 staff and nearly 1,000 students currently enrolled.

The Rockhampton Startup ecosystem is at an embryonic stage. As of July 2015 there are no startup specific meetups. A wider ICT group does have informal meetings, but this lacks a startup specific focus. Rockhampton has a small but dispersed group of tech startups, with little interaction between them. There is no central space available to co-work, network and collaborate however the local council has established an innovative library space that can be further utilised.

There is a small network of angel investors with an interest to invest in local tech talent, but they lack the formal structure to facilitate this. They also raised the issue of not enough dealflow to warrant local investment.

It is estimated that the 7 startups operating out of Rockhampton were employing 15+ people. A selection of notable persons identified in a centrality ranking are as follows; Terry McCosker (Founder), Derel Wurst (Established Founder) Andrew Bate (Founder), Richard Chappell (Founder), Mick Scott (Founder), Chris Harris (angel), Jason Foss (Support) and Christine Bell (Founder).

There is a base of established technology companies operating out of the Rockhampton region. 4Tel founded by Derel Wurst, specialises in the fields of train control systems, large radio and satellite systems, SCADA networks, IP networking, and software for real-time command and control networks. Insyte Solutions develops industry leading software for rail innovation across Australia. Rail Innovation Australia is commercialising new technologies and educational solutions for the railway industry via customer-driven cooperative business ventures. A number of other professional web design and marketing agencies are indirectly contributing to the ecosystem.

With Rockhampton being the beef capital of Australia, it was surprising not to find any software related to the beef industry, however, outside the immediate region, MandraT in Calliope, Queensland developed iHerd, a livestock management app with over 40,000 global users.

ISSUES & ACTIONS

Participants identified STEM talent flow leaving the region to seek opportunity in capital cities as a major issue. Participants identified a lack of networking and collaboration as being major hurdles for an ecosystem to take root. The lack of NBN was a large impediment, with some areas lacking basic ADSL2 services. A common theme was a lack of local government support for the sector. It was perceived that the local government needed to do more to facilitate networking events, yet global comparisons point to community driven models as those with the most success.

Participants expressed the most interest in the creation of a local angel group to connect angel investors to entrepreneurs. The generation of a local tech directory to better discover local talent was seen as a vital initiative to boost connectivity, and a quick win that would drive immediate value.
Mackay startups (yellow), established tech companies (white), entrepreneurs (pink), along with their founders and employees (blue). Links show professional relationships via Linkedin.

Strictly Service helps people connect with trusted mechanics and compare the price of car services online. It connects car owners to multiple vehicle service workshops simultaneously, enabling workshops to display accurate real time pricing and availability for 1000’s of vehicles, and giving car owners the ability to receive quotes or book a service from multiple preferred workshops knowing the service requirements, service duration, service price and workshop availability.

JobFit Systems developed an online database that objectively compares worker capabilities to job demands. It assists employers, health providers and consultants make decisions about job placement, suitable duties, programs, health surveillance and risk management strategies. A recipient of Commercialisation Australia funding in 2012, and Queensland Government Business & Industry Transformation Incentive Funding, the startup’s standardised tools and processes aim to provide a ‘one-stop-shop’ for the holistic management of a worker’s health and wellness at their place of work.
MACKAY TECH ECOSYSTEM SUMMARY

Mackay is widely recognised as the Sugar Capital of Australia, producing a third of all sugar in Australia. Mackay is also the gateway to the Bowen Basin coal mining reserves of Central Queensland. It is the single largest coal reserve in Australia, with 34 operational coal mines extracting more than 100 million tonnes annually.

With the recent (2015) launch of a community group Startup Mackay; the town held its first Startup Weekend in October 2015 and ilab’s Mentor Blaze in September 2015, the ecosystem is beginning to take root. Regular meetups have been lacking in the past, but a series of regular tech specific networking sessions have been run throughout 2015. The Mackay IT Network also organises regular meetups but these lack a specific startup focus. A lack of a shared space or Coworking hub means people are dispersed across the city and meetups don’t yet have a set venue.

It is estimated that startups operating out of Mackay were employing 20+ people. A selection of notable persons identified in a centrality ranking are as follows; Jodie Stanley (Startup Mackay), Dennis Murphy (Startup Mackay), Darren Cooke (Founder), Chris Madsen (Founder), John Williams (State Govt), Jenny Legge (Founder), Nicholas Flor (Founder), Ben Wearmouth (Support) and Mick Storch (Founder).

Established technology companies and supporting entities that play an important role in the Mackay Ecosystem include; Big Mate (GPS), Acubis (Wireless), LogiCamms, Circuit Wiz (software), Real Time Instruments (sensors), Central Queensland University (education) and Resource Industry Network (support).

The following technology related events and meetups were identified, and are presented according to their importance to the ecosystem: Startup Mackay Meetup, ilab roadshow, AGRI innovation conference and Mackay Maker Space Meetup.

ISSUES & ACTIONS

A major issue highlighted by participants was the lack of established networks, mentors and educators to help build the ecosystem from the ground up. Participants stated that the lack of a collaborative space to work from and hold central events had resulted in a number of silos developing. A lack of available local talent was also seen as a hurdle for growing large local startups without having to move to a capital city, and this was compounded by the mining industry drawing talent away from local startups.

Participants highlighted a major desired action was the set up of a local hub in the CBD to enable collaboration and networking. The identification of a local angel investor network was also seen as a priority action to localise investments. Securing a Startup Weekend and Mentor Blaze was seen as a core enabler to the establishment of a grassroots ecosystem.

POPULATION

123K
2.6% of Queensland

GROSS REGIONAL PRODUCT

$8.7B
3.1% of Queensland

TOTAL FUNDING

$1.4M
1.4% of Regional Queensland

STARTUPS

8

Airmap3D (drones)
Farmacist (marketplace)
Job Fit Systems (software)
Kadence Group (collaboration)
Procedures Online & 4P Systems (productivity)
QIT Plus (big data)
SmartHR Solutions (education)
Strictly Service (marketplace)

TECH ECOSYSTEM SUMMARY

STARTUPS BY MARKET FOCUS: TOP 5 MARKETS

PUBLIC ADMINISTRATION
AGRICULTURE
ARTS & RECREATION
MINING & ENERGY
INFORMATION MEDIA

ISSUES TOP 5

Collaboration & Networking 23%
Infrastructure 23%
Talent & Skills 20%
Raise Awareness 17%
Funding 10%

ACTIONS TOP 5

Local Angel / VC Group 30%
Hub / Coworking Space 23%
Startup Apprentice 20%
Collaboration & Networking 10%
Communication Hub 10%

STARTUPS

Airmap3D (drones)
Farmacist (marketplace)
Job Fit Systems (software)
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3.1% of Queensland

TOTAL FUNDING

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1.4% of Regional Queensland
JESI
Startup

JESI is a web based multi-platform journey management software solution that enables organisations to control the risks associated with a mobile workforce. JESI incorporates automated reminders and emergency alerts, all from the convenience of your mobile and other telecommunication devices.

JESI provides peace of mind that if emergency assistance is required, an incident response team would be alerted in a short period of time. JESI has a rapidly growing team, with four staff in Townsville, one in Houston and a team of three in Brisbane.

NQ UAV
Startup

NQ UAV is Townsville’s first drone business. They provide complete service for companies, research bodies or government organisations wishing to utilise unmanned aerial vehicles (UAV). NQ UAV provides all the necessary project management, approvals, pilots, craft and data processing for either simple or complex UAV applications. NQ UAV offers drone development services to cover everything from research, sourcing, procurement, modification and integration of unmanned systems for new and innovative UAV applications. This includes after-market upgrades and modifications as well as building spares and/or replacements.
TOWNSVILLE

STARTUPS

12

AM Shelfie (3D Printing)
BajTech (3D Printing)
Comit Platforms (Mobile App)
Experimental Unicorns (Software)
JESI (Mobile App)
NQ UAV (Drones)
OzApps (Mobile App)
SafetyCulture (Mobile App)
Second to none Nutrition (eCommerce)
Skydronics (Drones)
WotsLocal (Marketplace)
Wow Factor (Mobile App)

TECH ECOSYSTEM SUMMARY

Townsville hosts a significant number of government, community and major business offices, and its economy has displayed strong and stable performance over the past decade. It has a diverse industry base in which no one sector contributes more than 17.6% to GRP.

Still in its relative infancy, a number of community driven activities have boosted community engagement and participation throughout the startup ecosystem. Townsville Startups Meetup has over 130 members, and have run 10 events over the past year, including a Startup Weekend, a Mentor Blaze session, and guest talks from Steve Baxter (River City Labs) and Wayne Gerard (Red Eye Apps). Townsville has the added benefit of having the headquarters of James Cook University (JCU), the second oldest university in Queensland and recognised in the top 4% of universities worldwide. In particular, the eResearch Centre is leading the way in mining open tropical data, web collaboration, sensor networking, high performance computing, and software development.

It is estimated that the 12 startups operating out of Townsville were employing 80+ people. A selection of notable persons identified in a centrality ranking are as follows; Luke Anear (Founder), Joe Hoolahan (Founder), John Williams (State Govt) Ian Atkinson (University), Richard Szazima (meetup), Stuart King (Founder), David Beitey (Founder), David Cole (Founder), Greg Bruce (Local Govt) and Jayant Varma (Founder).

Established technology companies and supporting entities that play an important role in the Townsville ecosystem include; Code Valley (Established Tech), Sister City Partners (Funding), DEC-MECH (Established Tech), Blackbird Ventures (Funding), NFA Innovation (Established Tech), Department of Science, Information Technology and Innovation (State Govt), Townsville ICT Business Network (Support), James Cook University (Education), CSIRO (Support) and Startup Townsville (Support).

The following technology related events and meetups were identified, and are presented according to their importance to the ecosystem; Townsville Startup Meetup, Startup Weekend, Mentor Blaze, RoboCup, Townsville ICT Business Network, NQ IT Conference and Startup Apprentice.

ISSUES & ACTIONS

Townsville participants expressed a major issue with the lack of funding options available in the local area, with the majority of funding coming from major cities. Access to talent was a large impediment to the growth of the ecosystem, with talent attraction proving especially difficult. Increasing collaboration and networking was especially hard without a central venue for the startup community to co-exist. The poor local perception of technology and lack of education of the community was seen as a hurdle to future success.

Participants outlined that the NBN rollout was a critical factor to the success of local companies, and being one of the first regional cities to get NBN coverage was a drawcard for tech talent. The creation of a local angel network was seen as key to increase the number of tech startups in the region. The identification and opening of a co-working hub was a vital action that was needed to build the ecosystem.

ISSUES TOP 5

- Talent & Skills 23%
- Funding 23%
- Collaboration & Networking 18%
- Raise Awareness 18%
- Culture 18%

ACTIONS TOP 5

- Local Angel / VC Group 33%
- Hub / Coworking Space 24%
- Education Program 22%
- Brand / Culture 18%
- Collaboration & Networking 4%
Cairns startups [white], established tech companies [pink], related companies [red], along with their founders and employees [blue]. Links show professional relationships via LinkedIn.

**INSPECTION APPS**

Startup

Inspection Apps is a Multi-Award winning software product that provides a software solution for business, government, councils, real estate, building inspectors, mining, OH&S inspectors and many more.

Inspection Apps provides cloud-based inspection management software, which replicates paper-based checklists, and helps users to use iPhones, iPads or iPad Minis to record inspection data, capture defects and take photographs. Inspection Apps allows users to have multiple inspection types within the one app, and each inspection type can have a unique combination of checklist questions.

**KONVEEN**

Startup

Konveen is an enterprise meeting platform that brings consistency and structure to the way organisations plan and document their meetings. Konveen aims to prevent unproductive meetings by helping employees achieve their goals sooner by giving them the framework to run better meetings. Konveen offers a consistent and measurable approach to running and recording meetings, leading to less wasted time, and actionable insights into the cost and outcomes of meetings. Konveen was a recipient of funding from Cairns Regional Council as winners of a pitch competition in 2014.
TECH ECOSYSTEM SUMMARY

Cairns and the Great Barrier Reef are a unique environment, renowned nationally and internationally as a premier tourism destination. The region attracts more than 2 million domestic and international visitors each year, contributing over $2.6 billion dollars to the local economy. As a result, Cairns has a large transient population that adds to the complexity of the establishment of a robust tech ecosystem.

Cairns is emerging as a strong digital technology hub. Cairns has a higher density of startups per capita than South East Queensland. Yet local startups haven’t raised anywhere near as much money. Most technology startups are based out of the CBD, and a number benefit from support from centres like theSpace co-working hub. The startup scene in Cairns spans multiple sectors, including education and agriculture. A number of tourism and construction startups exist in Cairns, alongside a growing professional services sector. The Cairns Regional Investment Group is currently developing a network of angel investors with a focus on Cairns and regional opportunities.

It is estimated that the 31 startups operating out of Cairns were employing 120+ people. A selection of notable persons identified in a centrality ranking are as follows; Troy Haines (Coworking), Damian Zammit (Coworking), Steven Hambleton (Founder), Andrew Joy (Founder), Daniel Lundh (Founder), Nathaniel Armer (Founder), John Milkota (Funding), Matthew Hanson (Founder), Daryl Postgate (Founder), Matt McKinley (Founder), Robert Buhrke (Funding) and Roy Wybrow (University).

Established technology companies and supporting entities that play an important role in the Cairns ecosystem include; ResPax (Software), Koolivoo (Software), Iceberg Innovation (Funding), Cairns Regional Investment Group (Funding), James Cook University (Education), Digital Cairns (Support), Dive into Digital (Support) and PiDataConsulting (App Development).

The following technology related events and meetups were identified, and are presented according to their importance to the ecosystem: Cairns Startup & Entrepreneurs Meetup, Startup Weekend, Mentor Blaze, Dive into Digital, Startup Lab, Silicon Beach Cairns, Pitch Night and FunGIS.

ISSUES & ACTIONS

Cairns participants expressed a major issue with the lack of a large physical space being a hurdle for startups, in addition to a low risk appetite among entrepreneurs, legislators and investors. The attraction of talent to the region was also seen as a problem, and retaining talent in an area with a large transient population was seen as a major barrier to the growth of the ecosystem.

Participants suggested that the development of a local tech campus including coworking spaces supported by levels of government would provide the infrastructure needed to firmly establish a robust tech ecosystem. The Cairns Innovation Centre, announced in July 2015 and expected to launch in 2017 could address some of these needs.

Engaging early with local graduate software developers was seen as a way to retain local talent. A highly innovative solution was to enter into negotiation with one of Cairns’ seven global sister cities for a seamless flow of tech talent.

ISSUES TOP 5

Infrastructure 29%
Culture 29%
Talent & Skills 16%
Raise Awareness 11%
Funding 10%

ACTIONS TOP 5

Hub / Coworking Space 25%
Brand / Culture 21.67%
Startup Apprentice 16.67%
Govt Provide Supportive Role 13.33%
Education Program 10%
This diagram compares the progressive distribution of startups by estimated staff size between Regional Queensland, South East Queensland (as of 2014) and Tallinn, Estonia (home of Skype). The diagram shows people ‘interested’ in entrepreneurship, those that actually found Startups, and through to growing and mature technology companies.

Developing high growth technology companies is a high risk endeavour with only a small proportion of companies achieving the growth required to move to the next stage. Approximately 90% of bootstrapped or angel-funded companies fail, and between 30% to 40% of venture backed companies fail. Even fewer technology companies grow beyond $1 billion in revenue, or reach a $1 billion valuation - less than 0.1% for either.  

**Potential Founders**

- **20%**
  Portion of people interested in entrepreneurship who start a company.
This diagram examines Startup Density (the number of people in a region per startup), and Angel Density (the number of people in a region per angel investor). Note that smaller ratios are better, such as Bend Oregon which has approximately 1 angel investor per 5,000 people, compared to the Regional Queensland Average which is approximately 1 angel investor per 150,000 people. The diagram compares the seven regions in this report with nine comparatively sized regional cities in the US and Europe that have developed strong technology hubs.

In 2015, entrepreneurs in smaller cities across the world have plenty of opportunity thanks to advances in technology that weren’t readily available five years ago. The proliferation of open-source tools and cloud computing has made it possible to start a fast-growth company from virtually anywhere. In today’s economy, innovation is critical and operating within a cluster shortens the time required to identify, resource, and realise areas of need and opportunity. \(^{23}\)
Estonia is the 132nd smallest country in the world by land mass yet it produces more startups per head of population than any other country in Europe. It has a population the size of Copenhagen but has one of the world’s most advanced e-governments.

Within Estonia all children are taught to code until 16. In 2000, its government deemed internet access a basic human right and free Wi-Fi became the norm throughout the land.

It was the first country to offer voting for general elections online and most Estonians file their taxes within minutes on their mobile phones. Their health records are stored in a digital cloud. Estonia is said to have the world’s most digitised government.

In August 2003, six people from Estonia, Sweden and Denmark launched a new product in Tallinn. On its first day, 10,000 people downloaded it. A few months later, it had a million users. Ten years later, it is used by 300 million people around the world. The product is called Skype.

It is difficult to overestimate the snowball effect Skype has had on Tallinn. “You need a local success story to legitimise creating startups as a viable business,” said Taavet Hinrikus, founder of TransferWise, a currency-exchange service.

Skype also provided many young Estonian programmers and software developers with share options from the start — which meant that when Skype was sold to eBay in 2005 for $USD 2.5 billion, many gained seed capital to start on their own companies. According to Sten Tamkivi, early employee with Skype, 36 people from Skype have since founded their own business since leaving the company, most notable TransferWise, currently valued at over $USD 1 billion.

Oulu was selected in the list of Fortune’s ‘7 Best New Global Cities for Startups’ in 2012. The Oulu region creates the most innovations per capita in Finland based on statistics from the Foundation for Finnish Inventions.

In total, there are about 400 internationally scalable startup-companies founded in the Oulu region. The years 1995-2010 were extremely successful for sowing the seeds of a startup ecosystem in Oulu as Nokia invested heavily into the region through R&D investments to create a truly world-class engineering talent pool.
Well known as a global tech hub, in 2010, Boulder had six times more high-tech startups per capita than the nation’s average, according to an August 2013 study by the Kauffman Foundation and twice as many per capita as runner-up San Jose-Sunnyvale in California. This vibrant culture has given Boulder a prosperous economy. Without the help of oil, natural gas, or any monolithic industry, Boulder ranks among the top 20 most productive metro areas in the USA in terms of GDP. It is the home to three startup incubators including Techstars, and a healthy angel investor and venture capital community.29

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<thead>
<tr>
<th>BOULDER, COLORADO</th>
<th>BEND, OREGON</th>
<th>EINDHOVEN, NETHERLANDS</th>
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<td>Population: 105,000</td>
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A real world example of kickstarting a cluster is underway in Bend, Oregon. Dino Vendetti, a former Bay Partners general partner (a venture capital firm), moved up to Bend on a mission to consciously engineer an entrepreneurial cluster in a regional city to spur economic development and job creation.

Steve Blank eloquently summarises Dino’s strategy to encourage and engineer entrepreneurial density:30
- Leverage the local university to produce STEM talent and in particular computer science
- Lobby for direct flights to major markets
- Develop local early stage risk capital
- Invest in connection via local entrepreneur events and startup schools
- Harness local business community support

Eindhoven is hands-down the most inventive city in the world based on one of the most commonly used metrics for mapping the geography of innovation: “patent intensity.”

Eindhoven produces patents at the rate of 22 for every 10,000 residents, which far outpaces the second place for most inventive city, San Diego (8.9 patents per 10,000 residents).31

Its High Tech Campus houses more than 10,000 researchers, developers, and engineers from around 125 companies, all working to develop new technologies and products. Its most popular startup accelerator, the Startupbootcamp, is the biggest in Europe with a fund size of €100 million.31
A continued theme arising from regional workshops and interviews was the issue of talent flow: talent acquisition, talent retention and talent inflow *(rated as the number one issue in four of the seven regions).*

**TALENT RETENTION & ACQUISITION**
Regional Queensland is currently suffering from a chicken and egg challenge. Without a critical mass of established and startup technology companies, there is little draw for talent to move there, and without enough talent moving into the region, it is hard to build scalable tech companies.

Research suggests that almost every successful global tech cluster has a local technical university. This provides a continued source of local technical talent and research. It’s extremely difficult to import enough talent to fuel a rapidly growing tech cluster, so a university is critical to organically generate and retain talent within the region. STEM degrees are particularly critical as they train the pool of technical talent needed to drive the formation of local technology clusters.

Queensland holds roughly 20% of the jobs in Australia, but only 13% (12,000) of the Software and Applications Programmers, with 40% (35,000) of Australia’s programming talent being found in New South Wales. There are currently 88,200 Software and Applications Programmers employed across Australia.

Internationally, the Australian Consulate-General in San Francisco has estimated that more than 22,000 Australians are currently working in tech centres along the west coast of the US.

Whilst this figure can be portrayed as alarming and severely impacting the growth of the local tech ecosystems, it is worth noting that the exodus of Australian tech talent is also being trained and learning from some of the best organisations and entrepreneurs globally.

The key is to get them to eventually return and start businesses in Australia.

Attracting talent to move back into the region after a time away may represent the very best chance of building a sustainable regional startup ecosystem.

**UNIVERSITY TALENT**
Based on 2014 figures on all students at higher education institutions, Queensland has approximately 50,000 students studying a STEM degree, 18% of the Australian STEM student numbers (consistent with Queensland’s portion of the Australian population).

Of these 50,000 Queensland students, the three major regional Universities, had 15,256 (29%) students enrolled in STEM degrees, or 5% of Australia’s STEM total in 2014.

Drilling down further, these same three universities produce roughly 40% of Queensland’s ICT graduates, 32% of Engineering graduates and 22% of Natural and Physical Science graduates.

Yet the figures do not add up when we compare startup formation rates, venture capital fund flow, and total number employed in the industry.

While STEM graduates from RQ universities are high compared to national figures, this has not led to a comparably high number of technology companies being formed. This leads to the assumption that local STEM graduates are leaving Regional Queensland for capital cities or are international students returning home.

The analysis of the location of STEM graduates on page 36 of the report seems to support this assumption.

The 2011 Australian Census reported that 47% of all workers who studied information technology courses work in other occupations. These span a range of positions including advertisers, marketers, engineers, accountants, bookkeepers and other professionals.

Modelling by PwC shows that if Australia were to develop a STEM workforce in line with other leading STEM countries, it would generate, in present value terms, an additional $57.4 billion in GDP over the next 20 years.

---

**STEM**
The importance of STEM disciplines for the future economic and social well-being of Regional Queensland cannot be underestimated.

International research indicates that 75% of the fastest growing occupations require STEM skills and knowledge and yet, Australia trains fewer people with IT skills today than it did 10 years ago. IT enrolments have dropped about 55% in that time.

The 2011 Australian Census reported that 47% of all workers who studied information technology courses work in other occupations. These span a range of positions including advertisers, marketers, engineers, accountants, bookkeepers and other professionals.

Modelling by PwC shows that if Australia were to develop a STEM workforce in line with other leading STEM countries, it would generate, in present value terms, an additional $57.4 billion in GDP over the next 20 years.

---

**STATE PORTIONS OF AUS STEM STUDENTS**

<table>
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<tr>
<th>State</th>
<th>Portion</th>
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<tbody>
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<td>Victoria</td>
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<tr>
<td>New South Wales</td>
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</tr>
<tr>
<td>Queensland</td>
<td>18%</td>
</tr>
<tr>
<td>Western Australia</td>
<td>12%</td>
</tr>
<tr>
<td>South Australia</td>
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<tr>
<td>Tasmania</td>
<td>2%</td>
</tr>
<tr>
<td>Northern Territory</td>
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**RQ UNI. PORTION OF ALL QLD’S CURRENT STEM STUDENTS**

<table>
<thead>
<tr>
<th>University</th>
<th>Engineering &amp; Related Technologies</th>
<th>Information Technology</th>
<th>Agriculture, Environmental &amp; Related Studies</th>
<th>Natural &amp; Physical Sciences</th>
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<tr>
<td>Central Queensland University</td>
<td>0%</td>
<td>5%</td>
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<tr>
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<tr>
<td>University of Southern Queensland</td>
<td>0%</td>
<td>5%</td>
<td>10%</td>
<td>15%</td>
</tr>
</tbody>
</table>

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*The three major regional universities are:*  
James Cook University (JCU)  
Central Queensland University (CQU)  
University of Southern Queensland (USQ)
“STARTUPS BEGET STARTUPS. PEOPLE WHO WORK FOR STARTUPS START THEIR OWN. PEOPLE WHO GET RICH FROM STARTUPS FUND NEW ONES.

I SUSPECT THIS KIND OF ORGANIC GROWTH IS THE ONLY WAY TO PRODUCE A STARTUP HUB, BECAUSE IT’S THE ONLY WAY TO GROW THE EXPERTISE YOU NEED.”

PAUL GRAHAM
FOUNDER, YCOMBINATOR
To track the flow of technology talent leaving Regional Queensland, we used LinkedIn to identify the current location of individuals that had studied a STEM degree at one of the three regional universities in Queensland.
STEM Graduates From

- James Cook University (~8k)
- University of Central Queensland (~4k)
- University of Southern Queensland (~2k)
**Meetup Groups & Community Events**

Our research identified approximately 16 meetup or community groups across Regional Queensland related to startups, technology and entrepreneurship. These are informal groups that generally meet on a monthly basis. By way of comparison we identified a total of 110 startup related meetup groups in South East Queensland in the 2009 to 2014 period.

A common theme emanating from participants in the project was that a lack of networking and collaboration opportunities was a major inhibitor to the growth of a local ecosystem, with many silos developing as a result.

Any regional entrepreneurial community must be active and involved in supporting the growth of new startups in the region. Part of this activity must include events geared towards entrepreneurial education to help build local entrepreneurial expertise.

Local events like ilab’s Mentor Blaze and Startup Weekend help train and motivate entrepreneurs. Other important community events, including networking sessions, informal meetups, and events like Hackathons and RoboCups help entrepreneurs connect with each other and develop new collaborations.

---

**Meetup Groups**

16+

Estimated number of regular startup related Meetup Groups.

---

**Startup Weekends**

6

Number of Startup Weekends across Regional Queensland.

---

**Events**

55+

Estimated number of startup related events per annum.

---

**Meetup Groups & Community Events**

Toowoomba, Cairns, Tablelands, Townsville

Startup Weekends are 54-hour events where tech talent come together to share ideas, form teams, build products and launch startups. Startup Weekends have been held in Toowoomba, Townsville, Cairns (x2), Atherton Tablelands (Cairns) and Mackay.

Startup Weekends were perceived by participants involved in this project as critical events to help establish and build tech ecosystems.

“The amount of interest that’s been generated as a result of just doing that one weekend is astounding. There’s a lot more people who are now interested in tapping into it, not just from a startup perspective, but also from the business development and the mentoring and the investment side of the ecosystem.”

John Williams, DSITI, Townsville

**Rowes Bay Sensory Sprint Day**

Townsville

The Rowes Bay Sensor Network Sprint sees four teams tackle separate physical environments at the Rowes Bay Sustainability Education Centre.

The JCU Robo Club teamed up with JCU eResearch and the Townsville City Council to form this challenge.

Four teams are assigned a separate environment, with each expected to develop an Internet of Things (IoT) solution to monitor that environment. Teams must develop a solution that gathers data, pushes it to the web, processes it, and aesthetically displays the results to a web page, all within one day.
### CENTRALITY

#### METHODOLOGY

Network centrality is a measure of the density of a person or organisation’s interconnectedness with a network and its relationships. It is a strong factor in entrepreneurial success.

As part of the project, we held seven workshops, one in each region, with 100+ key members of the ecosystem. Participants were asked to map the local community and vote on the key people, organisations and events in the ecosystem. The two columns above, labelled Votes, display the community votes ranked accordingly across the seven regions.

In addition, the relationships between people within the startup ecosystem on LinkedIn were aggregated and analysed using an algorithm to calculate a network centrality score for all the nodes in the network. There are several measures of centrality. This report uses a common measure of network centrality - Eigenvector - to identify the top 30 people and organisations.

---

#### PEOPLE

30 Most Central People Ranked by >

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<tr>
<th>Rank</th>
<th>Votes</th>
<th>Eigenvector</th>
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<tbody>
<tr>
<td>1</td>
<td>Chris Harris (Rockhampton)</td>
<td>John Williams</td>
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<td>2</td>
<td>Luke Anear (Townsville)</td>
<td>Roy Wybrow</td>
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<td>3</td>
<td>Joe Hoolahan (Townsville)</td>
<td>Andrew Joy</td>
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<td>Andrew Beckenauer (Bundaberg)</td>
<td>Ian Atkinson</td>
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<tr>
<td>5</td>
<td>Richard Chappell (Rockhampton)</td>
<td>Anna Daniel</td>
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<td>6</td>
<td>Neil McPhillips (Bundaberg)</td>
<td>Derel Wust</td>
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<td>Warwick Powell (Brisbane)</td>
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<td>Matthew Schultz (Ipswich)</td>
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<td>Greg Bruce</td>
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<td>Greg Bruce (Townsville)</td>
<td>Benjamin Taylor</td>
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<td>Bronwyn Voice</td>
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<td>Joe Hoolahan</td>
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<td>Jack Millbank (Bundaberg)</td>
<td>Damian Zammit</td>
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<td>21</td>
<td>Paul Pisasale (Ipswich)</td>
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<td>Robert Buhrke (Cairns)</td>
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<td>Paul Wyatt</td>
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<td>30</td>
<td>Richard Sazima (Townsville)</td>
<td>Joy Taylor</td>
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#### ORGANISATIONS & EVENTS

30 Most Central Organisations & Events Ranked by >

<table>
<thead>
<tr>
<th>Votes</th>
<th>Eigenvector</th>
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<tbody>
<tr>
<td>theSpace (Cairns)</td>
<td>Code Valley</td>
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<tr>
<td>CQU (Rockhampton)</td>
<td>SafetyCulture</td>
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<tr>
<td>JCU (Townsville)</td>
<td>IBM Australia</td>
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<tr>
<td>Best Practice Software (Bundaberg)</td>
<td>2bit Studios</td>
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<tr>
<td>Fire Station101 (Ipswich)</td>
<td>Osmotion</td>
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<td>Sister City Partners (Townsville)</td>
<td>JESI</td>
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<tr>
<td>2bit Studios (Cairns)</td>
<td>I Want that Course</td>
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<tr>
<td>Carbon Link (Rockhampton)</td>
<td>CatchLog</td>
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<td>Iceberg Innovation (Cairns)</td>
<td>Experimental Unicorns</td>
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<td>Microair (Bundaberg)</td>
<td>Oz Apps</td>
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<td>Wide Bay Volunteers (Bundaberg)</td>
<td>SaferData</td>
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<td>iLab (Brisbane)</td>
<td>LogiCamms</td>
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<td>Koolivoo (Cairns)</td>
<td>ESRI</td>
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<td>BigMate (Mackay)</td>
<td>D2K</td>
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<td>Gilmour Space Corp (Bundaberg)</td>
<td>Thales</td>
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<td>Kadence Group (Mackay)</td>
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<td>Startup Toowoomba (Toowoomba)</td>
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<td>Startup Townsville (Townsville)</td>
<td>Department of Health</td>
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<td>Dive into Digital (Cairns)</td>
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<td>Commercialisation Australia</td>
<td>Best Practice Software</td>
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<td>ThermaCulture (Cairns)</td>
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<tr>
<td>Strictly Service (Mackay)</td>
<td>Microair</td>
</tr>
</tbody>
</table>
MARKET FOCUS

TARGET MARKET OF STARTUPS COMPARED TO TOP 20 QUEENSLAND INDUSTRIES

- Construction
- Mining
- Ownership of Dwellings
- Health Care and Social Assistance
- Manufacturing
- Finance and Insurance Services
- Public Administration and Safety
- Professional, Scientific and Technical Services
- Transport, Postal and Warehousing
- Retail Trade
- Education and Training
- Wholesale Trade
- Electricity, Gas, Water and Waste Services
- Rental and Real Estate Services
- Agriculture
- Administrative Services
- Accommodation and Food Services
- Other Services
- Communication
- Art and Recreational Services

Percentage of Startups targeting industry 2015
Approx. Percentage of Qld GSP from industry 2013-2014
## TECHNOLOGY STRENGTHS

### NUMBER OF STARTUPS BY TARGET MARKET AND PRODUCT TYPE

<table>
<thead>
<tr>
<th>Target Market and Product Type</th>
<th>AGRICULTURE, FORESTRY, FISHING AND HUNTING</th>
<th>INFORMATION MEDIA AND TELECOMMUNICATIONS</th>
<th>ARTS AND RECREATION SERVICES</th>
<th>EDUCATION AND TRAINING</th>
<th>ENTERTAINMENT, TOURISM &amp; SPORT</th>
<th>PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES</th>
<th>PUBLIC ADMINISTRATION AND SAFETY</th>
<th>RETAIL TRADE</th>
<th>COMMERCE</th>
<th>MANUFACTURING</th>
<th>ACCOMMODATION AND FOOD SERVICES</th>
<th>ADMINISTRATIVE AND SUPPORT SERVICES</th>
<th>ENERGY, MINING &amp; RESOURCES</th>
<th>HEALTH CARE AND SOCIAL ASSISTANCE</th>
<th>TRANSPORT, POSTAL AND WAREHOUSING</th>
<th>HEALTH &amp; MEDICAL</th>
<th>INFRASTRUCTURE &amp; BUILDING</th>
<th>RENTAL, HIRING AND REAL ESTATE SERVICES</th>
<th>TOTAL (COUNT)</th>
<th>TOTAL (%)</th>
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| TOTAL (Count)                  | 13                                       | 8                                      | 8                             | 7                      | 5                             | 8                                            | 5                               | 5             | 4     | 3             | 3             | 2             | 2             | 2             | 2             | 2             | 1             | 1             | 1             | 2             |
| Total (%)                      | 15%                                      | 10%                                     | 8%                            | 6%                     | 10%                           | 6%                                           | 6%                             | 5%            | 4%   | 4%            | 4%            | 2%            | 2%            | 2%            | 2%            | 2%            | 1%            | 1%            | 1%            | 2%            |
Increasing Demand

The global population is projected to reach 9 billion by 2050. The increase in demand for agricultural produce is expected to rise by 70%, with the majority of this coming from the emerging middle class in Asia. Current growth rates in agriculture are simply not sufficient to meet these challenges. 39

Cereal Crop Production (tonnes)

Source: Farming First Green Economy 46

Spotlight - AgTech

No. AgTech Startups

19+

Queensland’s Agriculture Sector

Queensland’s agriculture, fisheries and forestry industries have an estimated production value of $14.7 billion, Queensland’s second biggest export earner. The sector directly employs over 90,000 people and earns over $8.9 billion in exports. 40

More than 90% of Queensland’s footprint is under some form of primary production.

In Queensland, it is estimated that approximately 88% of the jobs in agriculture and 53% of the jobs in food processing industries are regionally based. These jobs and the economic contribution they provide are the backbone of many rural and regional communities in Queensland. An estimated 320,000 Queenslanders are employed across the whole food supply chain. This means that one in seven Queenslanders are either partially or entirely supported by the Agriculture sector. 41

QLD Ag Exports Breakdown

Unless agriculture providers have a distinct export focus, a national problem is that there is very limited scope for growth. The population of Australia simply doesn’t support exponential growth - Jack Millbank, CEO, Hortus

No. AgTech Companies

29+

Digital Farms & Funding

Agriculture is in the middle of a digital revolution. The benefits of converging the digital and physical worlds are too valuable to ignore. In the not-so-distant future, constant connection between people, companies and products, in real-time, will be the norm. 42

A rising tide of Australian and international reports have identified advances in agricultural technology as the key to long-term productivity gains.

According to AgFunder’s AgTech Investing report, 2014 AgTech funding had a record breaking year in the USA with $USD 2.36 billion raised across 264 financing deals. 43 This figure surpassed well-known sectors like fintech ($2.1 billion) and cleantech ($2 billion) and was 40% higher than the entire Australian venture and private equity investments over the same period across all industries. 2015 funding is expected to be $USD 4.1 billion.

From precision agriculture to biotech and drones, venture capitalists are actively investing in companies set on revolutionising how we grow, produce, and distribute food around the world. 44

Source: AgFunder Mid Year Report 44

Global AgTech Funding 2010-2015

Source: AgFunder Mid Year Report 44

<table>
<thead>
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<th>Year</th>
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No. QLD Farms

28,000+

Queensland’s AgTech

Regional Queensland has developed world-class AgTech research capabilities with its universities and city-level clusters of agricultural expertise, such as robotics in Toowoomba, beef in Rockhampton or sugar in Mackay.

Given the overall entrepreneurial AgTech activity in the region and the large number of significant multinational players, Regional Queensland can be a powerful influence in driving the growth of an Australian AgTech ecosystem and is ideally placed to supply growing demand and contribute to global food security.

QLD Ag Tech Types

<table>
<thead>
<tr>
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</thead>
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<tr>
<td>Sensors</td>
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<td>Big Data</td>
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<td>Robotics</td>
<td>1</td>
</tr>
<tr>
<td>Labour Hire</td>
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</table>

Across Regional Queensland, advances in drones, robotics, and the Internet of Things, are helping regional entrepreneurs establish innovative new companies. Cloud computing and big data analysis are being utilised to help make sense of the vast amounts of agricultural data now able to be collected by these sensors.

Organisations such as CSIRO and James Cook University are running a Digital Homestead project near Townsville that aims to evaluate and demonstrate technologies that enable better decision making on farms, leading to improved productivity and profitability.

Nevertheless, there does not exist a strong regional AgTech identity. Various regions claim sole ownership of the “regional” or “tropical” identity and competition between regions and a narrowness of vision (only looking within the immediate region’s borders for beneficial economic opportunities) prevent larger inter-regional projects. Regional collaboration is needed to build a truly global AgTech brand.

It is interesting to note that Sydney based accelerator BlueChilli is partnering with Westpac to encourage local entrepreneurs to develop new ideas and solutions for the agricultural sector, awarding $40,000 to the entrepreneur who develops the “most useful and innovative” digital solution for the bank’s agribusiness customers.

Whilst this program is open to all Australians, there is no such program in Queensland. 45

Notes:

40. Source: AgFunder’s AgTech Investing report.
41. Source: AgFunder Mid Year Report.
42. Source: AgTech Mid Year Report.
43. Source: AgTech Mid Year Report.
44. Source: AgTech Mid Year Report.
45. Source: AgTech Mid Year Report.
**PRECISION FARMING**

Precision agriculture is broadly defined as the group of hardware and software technologies that help farmers improve decision-making with data-driven analytics, including drones, robots and sensors. According to a report from the Boston Consulting Group, the use of precision farming technology will be the major trend reshaping farming worldwide by 2030. Precision farming uses data at the level of the square meter or decimeter, or even of a single plant, to optimise the consumption of inputs and make adjustments to accommodate variable characteristics within and among fields. Its spread will be enabled by the increased use of sensors, software and wireless connectivity on farming implements.

**GLOBAL AGTECH FUNDING 2014**

$2.36B

**PRECISIONAG STARTUP FUNDING 2014**

$276M

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**RQ DRONE COMPANIES**

12+

**DRONES**

A growing ecosystem of Regional Queensland drone operators is already catering to a long list of clients in agriculture, land management, energy, and construction. Commercial drones have leapt far ahead of regulators and are already entrenched in a handful of massive industries. Many are small private companies and startups — although some large companies are beginning to invest in drone technology too.

**QLD SHARE OF DRONE CERTIFICATES**

There are currently 269 registered UAS (Unmanned Aerial Service) Operator Certificate Holders in Australia, with 72 (27%) registered across Queensland. Drone Technology is now proliferating at an extraordinary rate, with capability and performance doubling every 18 months, and price continuing to plummet. Nevertheless, to become a CASA (Civil Aviation Safety Authority) certified holder, the approvals process can take months and costs thousands of dollars, with applicants required to complete about 90% of a conventional private pilot’s course.

**CASE STUDY: DESERT CHANNELS**

Desert Channels Queensland has begun using an unmanned drone helicopter to control the spread of weeds in western Queensland. The drone is vital in the battle to manage massive prickly acacia infestations in areas of Queensland that have previously been inaccessible, as it can deploy more weed spray and pellets on an affected area in five hours than a landholder could in five days.

---

**RQ ROBOTIC COMPANIES**

1+

**ROBOTICS**

The global agricultural industry is quickly moving towards full automation. Agricultural robots automate business processes, meet stringent hygiene and safety regulations, work 24 hours a day, and relieve human workers of physically arduous tasks. Robotics and automation can play a significant role in Regional Queensland meeting projected 2040 agricultural production needs.

WinterGreen research in a 2014 report, projects the global agricultural robot market size to grow from $817 million in 2013 to $16.3 billion by 2020.

**PROJECTED GROWTH AGROBOTIC MARKET**

A few local initiatives are integrating robotics into the Regional Queensland ecosystem. The JCU Robotics club organises regular meetups, and events like RoboCup and Robogals are leading the way in driving up local interest.

“Now, the faraway labourer – or intelligent machine – is available for hire and may be better endowed than the local labourer in skill or price or speed of work, or with the efficiency of organisation, or whatever is required to win the customer.” - McKinsey Compete to Prosper

**CASE STUDY: THERMACULTURE**

ThermaCulture was established in 2015. ThermaCulture uses sensors and electronic devices to regulate temperatures of the subsoil region of horticultural crops to improve crop viability as well as provide a reduced chemical method to combat soil-borne pests. It also has the ability to encourage crop production in non-traditional regions, and to diversify crops in normally crop specific areas.

**CASE STUDY: SWARMFARM ROBOTICS**

Andrew Bate’s AgBot development company, SwarmFarm Robotics, in partnership with QUT has developed the AgBot, a light-weight, driverless buggy that can self navigate around a 4000-hectare wheat farm using low-cost sensors, eradicating small weeds and causing minimal damage to soil.
SPOTLIGHT - SAFETYCULTURE

SafetyCulture is a software development company founded in Townsville. In 2011 the company noticed the penetration of smartphones in everyday life. From that point on Luke Anear, CEO started testing and developing solutions for safety in the workplace, based around a smartphone app platform. The result was iAuditor, the most used safety audit app in the world.

The team has now grown to 48 employees. Over half of those are engineers, supported by a customer support team, a marketing & PR team and a design & user experience team, with offices in Townsville, Sydney and Kansas.

Safety Culture took home the 2015 Best Regional Startup Gong at the national StartupSmart awards. The annual awards recognise the most innovative and fastest growing technology businesses in Australia.

LUKE ON TOWNSVILLE

SafetyCulture is a shining beacon for regional technology startups. CEO Luke Anear offers the following insights from a recent interview:

“Only three years ago it was “We don’t know if we can do this from Townsville. Maybe we’re going to have to go to Sydney, or Silicon Valley.” Now, I know the answer to that. We can do it from here. We have.”

Scaling a global business quickly brings its own challenges. Luke offers some insights into growing his regional team.

“We’re bringing in engineers from Italy, or France, or Sweden and paying for their visas and helping them with accommodation. Townsville, being a regional city has lower accommodation costs, so that’s something that we can help with, but it also has a great lifestyle and climate, so we promote the tropical lifestyle and attract people to it, so I think it’s about using some of those advantages as incentives and using them as strengths”

Luke outlined how important the National Broadband Network was to technology companies based in Townsville.

“To be able to get the high speed internet, where you can build a business is a huge asset to Townsville, and I think going forward it means that they’ve got the infrastructure there to be able to build companies and tech businesses that can reach the world and are not limited by bandwidth.”

As SafetyCulture began to rapidly grow Luke found they needed people with specific key skills that were challenging to find in, or attract to, Townsville. This led SafetyCulture to expand its offices to Sydney and Kansas.

“As we needed more senior people who had families, who were a bit older and had stronger roots in bigger markets like Sydney, you then started to realise it was getting harder to attract those senior people and that’s why we then started on the Sydney team.”

About SafetyCulture

SafetyCulture was initially funded in 2013 by Blackbird Ventures and Commercialisation Australia. A second funding round saw Scott Farquhar, Co-Founder of Atlassian invest in 2014. SafetyCulture’s biggest market is the US with 28.5% of its users based there, followed by the UK with 26%.

John Bruce-Smith, Atlassian’s former chief financial officer, is now CFO on a part-time basis at SafetyCulture. Atlassian’s fourth employee Anton Mazkovoi has joined to head up the Sydney team as VP of Engineering, bringing a wealth of experience from building one of Australia’s most successful tech companies to SafetyCulture.

SafetyCulture now has 500,000+ users, and has racked up over 12 million inspections in 80 countries.

About iAuditor

In 2012, SafetyCulture released iAuditor, the world’s most used app for conducting safety inspections, and in 2014 iAuditor won the international Tabby Awards for best Data Collection App, and best Business App. iAuditor is used in 209 countries and is part of the SafetyCulture safety and quality management system.

iAuditor builds checklists, conducts inspections and files reports from a mobile phone or tablet. The app transforms a typically paper based industry to a digital one, where individuals can do 7-8 times the inspections they used to. Checklists can easily be created with drag and drop editing interface or they can download one of 50,000 templates from the public library.

The iAuditor community now creates, curates and manages the world’s largest collection of inspection checklists.

Using the iAuditor app, a US company with 8,000 wind turbines saves over $USD 1 million a year in inspection costs.

iAuditor was recently promoted across Apple globally and listed in the Next-Gen Apps section of the App Store. It was the main image on the iPhone apps for business page on Apple.com and listed on the iPad apps for business page alongside the likes of Evernote and Box.

Luke Anear, CEO

As SafetyCulture’s Chief executive officer, Luke Anear is responsible for the day to day management of SafetyCulture. He works closely with the software engineering teams and drives product innovation. Luke was a worker’s compensation investigator and practice manager in Sydney until 2002.

About Shared Audit Templates

54,000+

Employees

48

Total Funding

$5.7M

Countries Active

209+

Global Users

500,000+

Daily Inspections

32,000+

Spotlight - SafetyCulture

SPOTLIGHT - SAFETYCULTURE
“ONLY THREE YEARS AGO IT WAS ‘WE DON’T KNOW IF WE CAN DO THIS FROM TOWNSVILLE. MAYBE WE’RE GOING TO HAVE TO GO TO SYDNEY, OR SILICON VALLEY.’

NOW, I KNOW THE ANSWER TO THAT. WE CAN DO IT FROM HERE. WE HAVE.”

LUKE ANEAR
CEO, SAFETYCULTURE
COMMUNITY INSIGHTS

As part of the project, seven regional workshops with 100 participants and 30 interviews were held with key members of each regional ecosystem. Participants were asked to discuss, identify and vote on “which issues were critical to the growth of the regions startup ecosystem”, and discuss the actions which would address these challenges. Votes are weighted proportionately by the relative sizes of each region’s population. The top seven issues in order of total weighted votes from all regions were:

**TOP COMMUNITY ISSUES: RANKED BY WEIGHTED VOTES**

- Talent & Skills 19%
- Collaboration & Networking 18%
- Infrastructure 16%
- Funding 16%
- Raise Awareness 15%
- Culture 10%
- Education 5%

**TALENT AND SKILLS**

Building, attracting, and retaining talent was seen as a critical factor across all regions. Participants in the Ipswich workshop (33% of all votes), Rockhampton (22%) and Townsville (23%) viewed this as the priority issue facing the development of a robust local ecosystem.

The region’s ‘brain drain’ is a pressing factor that surfaced continuously. Retaining a critical mass of talent is of paramount importance to the growth of a regional ecosystem.

Whilst this report does not seek to provide solutions to population growth and greater regional development, it is clear that some regions have incredibly thin STEM talent bases, with the vast majority of local graduates moving away from the region in search of better job opportunities.

Participants in Cairns and Townsville mentioned that attracting talent to the region was increasingly becoming a problem and the wage gap for software engineers in the regions was also a large barrier to recruitment. Rarely were we presented with the idea of talent outflow being a positive occurrence, even if that talent was able to move back at a later date.

**COLLABORATIVE NETWORKS**

Collaboration and networking was the second highest issue raised. Participants in Toowoomba (33%), Mackay (23%) and Rockhampton (19%) viewed this as a priority issue.

Increasing the breadth and depth of collaboration, identifying local mentors, creating local skills directories and providing financial support from both state and local government for key nodes was seen as vital to the continued growth of the ecosystem. Establishing both physical and digital hubs was seen as critical in most regions. Startup Toowoomba, Startup Townsville, theSpace Cairns, Mentor Blaze and Startup Weekend events are superb examples of networks that bring the local community together.

**INFRASTRUCTURE**

For participants within the Cairns (29%), Toowoomba (31%) and Mackay (23%) regions, the most critical infrastructure issue was access to physical space and the isolation that this results in.

With only Cairns and Toowoomba having opened up co-working spaces, participants in other regions lacked a central location to work, meet and network. The sporadic rollout of the NBN was seen as another central issue, with many regions having NBN coverage in residential areas but not in the CBD. Nevertheless, participants in Townsville rated the NBN as being the core enabler to the growth of their startups.

**FUNDING INNOVATION**

Across all regions, access to early-stage funding ranked as a critical challenge for startups. The shortage of funding was particularly pronounced at the angel and early seed investment stage. Participants in Townsville (23%), Ipswich (19%) and Bundaberg (18%) rated this as a high barrier to growth. The lack of formal angel investment groups across the regions has led to the vast majority of startups bootstrapping growth. Analysis from AngelList, the world’s leading angel investment platform returned no active investors in each region, and very few were identified in our workshop interviews. Significant efforts are needed to form local investment groups, starting initially with informal group meetups to educate angels on the benefits of scalable tech companies.

**RAISE AWARENESS**

The fifth priority issue identified across all regions was that of raising community awareness of the tech industry. For regional ecosystems to develop and contribute to regional GDP, there needs to be greater effort to build awareness of what startups are and how they differ from small business.

Participants in Bundaberg (22%), Townsville (18%) and Toowoomba (13%) viewed this as a priority issue. Raising awareness was also seen as a critical factor in attracting investment from local high net worths, of which very few had any understanding of technology. Participants also identified celebrating the success of local startups as a key issue for the growth of the startup ecosystem, and leveraging local influencers and media to spread success stories and generate community understanding and awareness of local tech innovation.

**CULTURE**

Participants from all regions said a culture of entrepreneurship and innovation needs to be developed within each local ecosystem if we are to create globally-relevant technology companies. Specific cultural themes that inhibited innovative entrepreneurship included; lack of an appetite for risk; entrepreneurial spirit; global ambition; resistance to change; business confidence; and, investor understanding of the impacts of technology.

While developing a culture of entrepreneurship and innovation comes in highly on the ranking, in many ways it underpins the challenges faced within all the other issues discussed.

**EDUCATION**

Across all seven regions, education was seen as vital to creating strong ecosystems. Increasing regional participation in STEM courses was seen as a urgent issue. Bundaberg in particular was faced with the problem of having no local graduates in ICT after Central Queensland University dropped the degree from the local campus. Participants highlighted the lack of suitably educated and experienced entrepreneurs in the local region, whilst a strong theme was the lack of coding courses in the current school curriculum. Events like RoboCup and Startup Weekend EDU (Cairns) are trying to bridge this gap. Workshop and interview participants across all regions lamented the low and declining number of Computer Science graduates and identified this as a critical long-term challenge. Access to mentors with experience building global technology companies was also a particular challenge.
## TOP SEVEN COMMUNITY ISSUES BY REGION

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<th>Toowoomba</th>
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## TOP FOURTEEN COMMUNITY ACTIONS BY REGION

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WORKSHOPS
Thank you to the following people for generously providing their time to attend the community workshops:

Aaron Young
Abiy Feleke
Adam Young
Adrien Lang
Amanda Spelta
Amy Turnbull
Andrew Beckenhauer
Andrew Bridges
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Andrew Kliese
Ann Moffatt
Anna Daniels
Ben Taylor
Ben Wearmouth
Bill Hopton
Blake Pettling
Bronwyn Joyce
Cameron Bisley
Carmel Humphries
Chris Bonanno
Chris Bosomworth
Chris Harris
Chris Keegan
Chris Mills
Christine Bell
Christine Doan
Col Greensill
Colin Cole
Colin Strydom
Colleen Cooling
Craig Thamm
Dale Edney
Dale Hollios
Damien Zammit
Dan Willersdorf
Daniel Lundh
Daniel Reeves
Dannielle Walz
Darren Cooke
Darrell Posgate
David Beiter
David Cole
David Finnis
David Fredericks
David Masefield
David McCallum
David Newby
Deborah Mead
Debra Howe
Deirdre Comerford
Dennis Murphy
Derek Wust
Diana Johnston
Dieter Bohn
Donna Kethion
Donna Patane
Dr Terry McCosker
Dylan Furnell
Dzemal Solo
Edwina Pettiford
Elliot Strickland
Elvire Callaghan
Fiona Bishop-Vuipeqa
Fiona Bowden
Fred Goodwin
Garry Watkins
Gemma Ruge
Geoff Farr
Geoff Fleming
Geoff Higgins
Grace Keogh
Graham Keidge
Helen Caruso
Helen Newell
Ian Atkinson
Ian Devenish
Jack Milbank
Jamie Armer
Jane Scowcroft
Jane Whyte
Jarred Townson
Jason Ephraims
Jason Foss
Jason Krensky
Jason Ramm
Jason Rickert
Jason Rozycki
Jason Spence
Jay Danells
Jayne Thorpe
Jo Luck
Joanne Hall
Jodie Stanley
Joe Hoolahan
John Milikota
John Williams
Jordan Murphy
Joy Taylor
Karl Sheedy
Kay Strong
Kellie Bowie
Kieren Jamieson
Kim Kelly
Komal Bandi
Kristy Costelow
Kristal King
Kurt Alexander
Kurt Pudnikis
Kurt Pudnikis
Kyle Jackson
Kyle Radal
Lassara Reinke
Laura Fealy
Leah Harris
Lenee Griffin
Leanne Rudd
Lee Rowlands
Lindon Lawn
Linda Christensen
Lisa New
Luke Brunsman
Madonna Iliffe
Mark Laihr
Mark Matthews
Mark Robinson
Mark Thomas
Marlies Hobbs
Matt Daniels
Matt Drane
Matt Hanson
Matt McKinley
Matt Templeton
Matthew Schultz
Michael Jones
Michael Kaddatz
Michael Kurkowski
Michael McGrath
Michelle Hoban
Mick Storch
Mike Goebel
Nanjappa Ashwath
Naomi Brownless
Natalia Wells
Nathanial Armer
Neil McPhillips
Nick Bennett
Nicole Hambleton
Nicole Rankin
Nigel Wadsworth
Nikki Wright
Noel Kelly
Nola Pontifex
Owen Rippingale
Patrick Logue
Paul Fagg
Paul Stewart
Paul Wyatt
Penny Hall
Peter Bender
Peter Hockings
Peter Peterson
Peter Wilson
Petros Khalesiad
Phil Baker
Phil Brown
Pierre Viljoen
Prashant Murphy
Rhonda Whiteside
Richard Chappell
Rick Palmer
Rob Doyle
Robert Buhrke
Rod Ainsworth
Rod Sercombe
Rose Swardling
Rowena Hardy
Roy Pidgeon
Roy Wybrow
Russell Savage
Samuel Costin
Samuel Pavin
Sarah Palmer
Sarah-Joe Pierce
Scott Allocot
Shamina de Silva
Shane Hannant
Shane Ridley
Shelley Pisani
Simone Dakin
Stephen Cheng
Stephen Clarkson
Stephen Dunnett
Stephen Moore
Stephen Schmidt
Steve Howard
Steve Knight
Steven Hambleton
Stuart Elkins
Stuart King
Susan Milner
Suzi Carson
Symon Pritchett
Tazman Schmidt
Teona Cousin
Terry Hurlock
Thomas Block
Tia Lea Austin
Tim Butler
Tim Neale
Tim Stevenson
Tracie Regan
Trish Mears
Troy Haines
Troy Pettiford
Wayne Stanley
Yale Morgan
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Thank you to the following people for generously providing their time to be interviewed for this report:

Andrew Bate
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David McCallum
Dennis Murphy
Dr Terry McCosker
Garry Ellis
Ian Atkinson
Jack Millbank
Jason Foss
Joe Hoolarson
Johhny Cheng
John Williams
Leanne Griffin
Lukes Anear
Mark Matthews
Mat Drane
Matt Hanson
Matt McKinley
Matthew Schultz
Mick Storch
Paul Wyatt
Phil Baker
Richard Chappell
Roy Wybrow
Shane Ridley
Steven Hambleton
Stuart King
Troy Haines
“TECHNOLOGY IS NO LONGER A VERTICAL INDUSTRY, AS IT’S BEEN UNDERSTOOD BY EVERYONE FOR FOUR DECADES. TECHNOLOGY IS NOW A HORIZONTAL, ENABLING FORCE THROUGHOUT THE WHOLE ECONOMY.”

JOHN BATTELLE
THE ECONOMIST
REFERENCES

19. An Agbot is defined as an Agricultural robot designed to transform Agriculture. (http://www.swarmfarm.com/)
20. Mentor Blaze is a cloud-based (in the cloud), matches aspiring founders with mentors for mentor sessions. (http://www.ilabaccelerator.com/mentorblaze/)
35. PWC, 2014, Funding Australia’s future: innovation & digital technologies. PWC Sydney
37. PWC, 2015, A smart move. PWC STEM report April 2015, PWC Sydney
40. An Agbot is defined as an Agricultural robot designed to transform Agriculture. (http://www.swarmfarm.com/)
51. Population numbers were sourced from the relevant local council.
THE QUEENSLAND GOVERNMENT IS INVESTING, THROUGH THE ADVANCE QUEENSLAND INITIATIVE, $180 MILLION OVER FOUR YEARS TO CREATE THE KNOWLEDGE BASED JOBS OF THE FUTURE.
“UNLESS AGRICULTURE PROVIDERS HAVE A DISTINCT EXPORT FOCUS, A NATIONAL PROBLEM IS THAT THERE IS VERY LIMITED SCOPE FOR GROWTH. THE POPULATION OF AUSTRALIA SIMPLY DOESN’T SUPPORT EXPONENTIAL GROWTH.”

JACK MILLBANK
CEO, HORTUS