Sunshine Coast Region
Regional Innovation Benchmark Research Report 2019

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FOR
Sunshine Coast Regional Innovation Project Team

2019
About SCRIPT

SCRIPT (Sunshine Coast Regional Innovation Project Team) is a 31-partner network who collaborate to grow innovation and business capacity, commencing in 2017 with a $1 million budget to nurture and stimulate entrepreneurial activity and support economic growth.

More information: www.sunshinecoastinnovation.com.au

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The content and findings are that of the researchers and does not necessarily reflect or represent the official views of the University of the Sunshine Coast.
Definitions

Collaboration  Firms that collaborated had engaged in formal or informal collaborative or partnership arrangements with other organisations in the preceding three years.

Competitive advantage  The strategic advantage one business entity has over its rival entities within its competitive industry. Achieving competitive advantage strengthens and positions a business better within the business environment.

Engagement  When ‘engagement’ is used in this report, it is a binary variable (yes/no) that is calculated from other variables to indicate whether a firm reported any activities of a particular type. This can refer to engagement in research and development (R&D) or collaboration.

Full Time Equivalent (FTE)  Full Time Equivalent is a unit that indicates the workload of an employed person.

Firm size categories  Micro firms: 1-4 FTEs; Small firms: 5-19 FTEs; Medium-sized firms: 20-199 FTEs; Large firms: more than 200 FTEs.

Industries  Based on 2006 Australian and New Zealand Industry Classifications (ANZIC)

Innovation  All innovation questions refer to innovation conducted over the three-year period ending December 2018. Firms were asked to consider innovation as occurring when any of the innovation types were introduced to the market. These improvements involved more than aesthetic changes or mere product differentiation.

Innovation breadth  Refers to the implementation of different types of innovation across a range of business functions measured by a number of variables across four categories: products and services, operational processes, organisational or managerial processes and marketing methods.

No-innovation  Firms who did not report innovation in any of the six product, service or process innovation types.

New-to-the-firm innovators  New to the firm innovators reported at least one type of product, service or process innovation that was only new to the firm, and not to the industry.
New-to-industry innovators

New-to-industry innovators reported at least one type of product, service or process innovation that was new to the industry.

Profitability

The degree to which a firm achieves financial gain.

Research and Development (R&D)

The systematic investigation or experimentation involving innovation or technical risk, the outcome of which is new knowledge or improved products, processes, materials, devices or services. R&D activity extends to modifications to existing products/processes.

Significant difference

A result is deemed statistically significant if it is unlikely to have occurred by chance. As used in statistics, ‘significant’ does not mean important or meaningful.

Sources of innovation

The origin of ideas or information for a firm’s innovation activities.

Business support and government assistance

Self-help diagnostic and benchmarking tools, business skills, capacity development: workshops, forums, seminars Specialist business mentoring or coaching, business opportunity development, e.g. export services, connecting businesses, e.g. networking, R&D and investment Grants/financial incentives.

Weighted data

Data collected from survey respondents are adjusted to represent the population from which the sample was drawn measured in terms of location, size and industry.
Executive Summary

Regional innovation is both vital for economic and social prosperity within the greater Sunshine Coast and Noosa region. Investments into activities to develop the region into an innovation hub has a long-term return on investment. Developing a thriving ecosystem in the region where entrepreneurial activity is supported by lead entrepreneurs, mentors, universities, the private sector and local government is not established overnight, nor does it produce instant results.

The region is well-positioned to support innovation-driven business growth\(^1\) based on strong economic performance. Economic indicators show the region contributing $18.55 billion\(^2\) to the Queensland economy. Investments in the regional ecosystem has increased, but how much influence does this investment have on the innovation activities of regional firms?

Purpose of report

This report summarises the findings from the 2018-2019 Regional Innovation Survey conducted by University of the Sunshine Coast on behalf of the Sunshine Coast Regional Innovation Project Team (SCRIPT).

1. It measures firm innovation activity across the Sunshine Coast region. The innovativeness of regional firms in the greater Sunshine Coast region is compared against available innovation data for Queensland and Australian firms from 2014.

2. Five cases of collaborative innovation, undertaken by more than 10 organisations are studied, to determine the benefits and key factors that make such relationships work.

Method

The Regional Innovation Benchmark (RIB) (2019) measures the approaches local businesses take to innovate and the value this generates. To evidence the performance of these firms and commitment it takes to improve outcomes for customers, the RIB has developed:

- Regionally relevant innovation measures, based on the rigorous, internationally recognised innovation measurement framework developed by the Centre of Business Research (CBR), Cambridge University. As innovation is a time-consuming investment process seldom completed within one financial year, and the outcomes are often experienced over a three-year period, this report forms the first basis year of the RIB project. Therefore, regional innovation performance over three years will be used to understand regional innovation dynamics.\(^3\)

- To compile the benchmark provided in this report, valid data was collected from 248 firms in the greater Sunshine Coast region.

- The responses were then added to 2014 innovation data from 1,542 Australian firms to result in a dataset of 1,769 firms, using a survey methodology.

- Case studies were developed based on 15 hours of interviews, and 18 secondary documents.

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Key findings from the benchmark comparisons

- Firms in the Sunshine Coast region report 48% new-to-the-firm innovation, significantly higher than firms in Queensland and the rest of Australia.
- Firms in the greater Sunshine Coast report 15% new-to-the-industry innovations, which is half of what firms in Queensland and the rest of Australia report.
- Sunshine Coast innovators show high levels of awareness of the support available, however less than a third of firms make use of this support.
- Innovators across the country are significantly more likely to use business practices such as business planning, monthly management accounts, board of directors’ meetings, an innovation strategy, and a strong tendency to adopt digital practices.
- While only 29.8% of firms in the greater Sunshine Coast region indicate that they collaborate, like firms in the rest of Australia, collaborators experience benefits such as expanding the range of their products and expertise, developing specialist services to offer to their customers and expanding access to new markets.
- Local innovators report a higher proportion of sales from new products/services introduced compared to Queensland and the rest of Australia.
- Sunshine Coast innovators use knowledge-intensive sources as the basis for innovation, more than their Queensland and Australian counterparts.
- Although small proportion of firms report engaging in Research and Development (R&D), Sunshine Coast small firms (5 to 19 employees) are more likely to make use of R&D than similar sized firms in Queensland and Australia.
• Innovators report improved business performance through improved profits, customer satisfaction, and growth in sales and improvements in labour productivity.

Case Study Findings
The case studies reveal five key factors that matter for collaborative innovation:

• Cultivate trusting, long-term relationship and manage expectations
• Create beneficial relationship for all parties involved
• Ensure parties to the collaboration have complementary capabilities
• Confirm that both parties to the collaboration share similar values with regards to the innovation project
• Communicate openly and be transparent and ready to adapt as innovation requires flexibility.

This report offers insight into the innovation practices of firms within the region. Innovation activities should regularly be monitored to assess the impact of firms’ activities and projects supported by SCRIPT. Measuring further innovation activities in 2020 and 2021 will not only enable the assessment of the return on investment by innovation agencies but will also entrench value for stakeholders. Continued benchmarking is therefore essential for regional innovation projects, not only in the greater Sunshine Coast region, but across Queensland.

Recommendations

• Measure innovation activities in 2020 and 2021 to gain a more in-depth understanding of regional business innovation. The findings of RIB will provide an evidence-based decision-making culture, fostering the reputation of the greater Sunshine Coast;
• Continue to widen access to innovation opportunities for local small to medium enterprises (SMEs), as the capacity to innovate and adapt is crucial within a globalised, connected world;
• Leverage the infrastructure investments in the region through opportunity development, acceleration programs for entrepreneurs, and nurturing public-private innovation initiatives;
• Increase the number of novel innovators, who pursue new-to-the industry and new-to-the-firm innovations, given the potential for social and economic wealth creation;
• Continue to strengthen and develop the regional innovation culture to fit with the growing and expanding ecosystems, attracting, activating and integrating new talent to the Sunshine Coast; and
• Focus on increasing awareness on the benefits of both formal and informal collaboration (access to new markets and product/service expansion) amongst innovators.
• Measure and assess the value and outcomes incubator- and accelerator participants experience 12 to 18 months after the completion of these programs to gain a more realistic view of the outcomes, given the long-term consequences of innovation activities.
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1. Introduction

Innovation is a national priority, with more than AU$1.8 billion of public funds invested to improve innovation performance in Australia. Innovation is evidenced in regions such as Silicon Valley or Boulder, as hotbeds of entrepreneurial activity. These regions, with their networked social, intellectual and economic capital highlight the importance of creating strong regional entrepreneurship ecosystems. The importance of using a specific region’s natural endowments, rather than imitating an ‘idealised view’ of US-based ecosystems have been emphasised repeatedly.4

This research project supports the Advancing Queensland Regional Innovation Program, for the greater Sunshine Coast region. The research has been commissioned by the Sunshine Coast Regional Innovation Project Team (SCRIPT) and assess regional innovation performance, by making use of a regional innovation benchmark survey, and case studies.

SCRIPT consists of 31 regional partners who collaborate to grow innovation and business capacity, commencing in 2017 with a $1million budget to nurture and stimulate entrepreneurial activity and support economic growth. As such SCRIPT invests in local projects that provide regional benefits, address a clear demand, combine and showcases local talent, as well as demonstrate accountability. To bring about the outcomes that they envision, they focus on five priority industries, namely creative industries, health and wellbeing, sustainability and the environment, food and agribusiness and smart cities.

These priority industries offer innovation opportunities, as these industries rely on a knowledge bases which draws on intangible resources such as creativity, skills, data and information, compared to traditional industries. The Sunshine Coast region provides a solid foundation for innovation activities in that it is one of the fastest-growing regions in Queensland, with a A$18.55 billion economy and shows a healthy economic growth rate of 4 percent (2001-2016). The region has also been recognised by the Global Intelligent Community Forum (ICF) as one of the top 7 Intelligent Communities of 2019, based on its smart city strategy being integrated into community and economic development.

This regional innovation benchmark research report aims to provide an evidentiary basis to support the innovation strategy of SCRIPT, supported by Advance Queensland to ensure activities are aligned to the needs of regional firms and increasing the value offered for stakeholders, as well as providing a competitive advantage to regional firms. It is anticipated that the methodology followed in this report, as well as the findings would be beneficial for other regional ecosystems as well.

1.1. Purpose of Regional Innovation Benchmark Research Report

This report presents the results of the Regional Innovation Benchmark (RIB), a year after SCRIPT’s activities began. Benchmarking is aimed at the continuous improvement of performance, by identifying, understanding and adapting best practices of other businesses and regions.

1.2. Rigour in the RIB research report methodology

SCRIPT embarks on the benchmarking process recognising it is an iterative and ongoing process of sharing information, promoting leading and learning, and sharing best practices. To ensure the RIB for 2018-2019 is based on a rigorous, internationally recognised framework, this study draws on the framework developed by the Centre of Business Research (CBR), Cambridge University, which has been used in Australia, New Zealand, the United Kingdom, and other countries. This framework recognises that firms’ innovation activities have long-term consequences, and therefore regional innovation performance is investigated over a period of three years. This approach is endorsed by the OECD (2005) Oslo Manual for innovation.
1.3. What is being measured?

The innovation activities, processes and outcomes of 255 firms in the region were measured using panel surveys. Data was collected from November 2018 to March 2019. The responses were analysed and compared to available innovation data for Queensland and Australian firms from 2014, to find a baseline comparison as a starting point, working with University of Queensland researchers. The innovation activities, processes and outcomes in this report is presented by comparing:

- Innovation types and degrees of innovative activity;
- Breadth of innovative activity;
- Business goals and innovators’ business practices;
- Research and development (R&D) and innovators’ collaboration activities;
- Innovation performance outcomes; and
- Awareness and use of available support to regional firms.

Secondly, five cases of collaborative innovation, undertaken by more than ten organisations are studied to determine the key factors that make such relationships work. The cases were sourced from SCRIPT’s five priority industries:
2. Benchmarking and Sample

2.1. Benchmarking process

The data presented in this report is available to all SCRIPT partners who support and promote innovation, local firms in the greater Sunshine Coast region, including Sunshine Coast and Noosa Shire firms, to other regional firms and economic development agencies, as well as Advance Queensland’s Regional Innovation Program. It is intended to identify current practices and performance to determine how the greater Sunshine Coast Region as an aggregate is performing comparatively, to identify the differences between innovator and non-innovator firms and determine what actions can be undertaken to improve future innovation performance.

Figure 1: Benchmarking process

2.2. Which firms are part of the benchmark?

The data used for this benchmark of the greater Sunshine Coast firms, collected during the period 2018-2019 are from 255 firms, of which 248 responses were valid. Respondent firms included Noosa Shire and Sunshine Coast firms. The data has been weighted using Australian Bureau of Statistics (ABS) weights to fit the region’s size, age and industry profile. The data from Sunshine Coast firms are compared against Australian innovation data, collected for the Department of Science, Information Technology and Innovation (DSITIA) by University of Queensland researchers in 2013-2014. The total dataset consisted of 1,769 firms. Differences are reported as statistically significant at the 95% confidence interval.
2.3.1 Sunshine Coast sample

Respondents to the sample were comprised of:

- 81% owner-managers, consisting of 55% men and 45% women.
- More than two-thirds of responding firms were micro-firms employing five or less people.
- A wide range of firms participated from start-ups of less than four years (26%), to established firms older than 20 years (29%), as shown in Figure 2.
- Most respondents (77%) hold a post-secondary qualification.

![Figure 2: Age intervals of responding firms expressed in percentage terms](image)

Figure 2: Age intervals of responding firms expressed in percentage terms
2.3.2 Firm and respondent industries

The primary activities of firms were categorised in sixteen industries, based on the 2016 ANZIC classification. Most firms were in the retail (14.9%), professional knowledge services (11.8%), health care and social assistance (10.2%) and construction (8.6%) industries as indicated in Figure 3.

![Industries of firms](image)

**Figure 3: Industries of firms expressed as percentage**
2.3.3 Turnover of firms

68% of responding firms had less or equal to $1 million annual turnover, with only 18% of responding firms having indicated a $5 Million annual turnover, as shown in Figure 4.

![Annual turnover](image)

**Figure 4: Annual turnover by firm as percentage**

Respondents’ responses were weighted using ABS weights to ensure sample representativeness.
3. Innovation

The innovation activities within firms can be classified according to four types of innovation, and three variant degrees of novelty (newness).

3.1. Innovation types

*Innovation refers to:*

- **Product/service innovation**: a new or significantly improved manufactured product, or service product, is introduced to the market (product innovation), or
- **Methods innovation**: when a new or significantly improved production, or delivery method, is used commercially (process innovation), and
- **Process innovation**: when changes in knowledge or skills, routines, competence, equipment, or engineering practices are required to develop or make the new product, or to introduce the new process.
- **Business practice innovation**: when new or significantly improved business practices are introduced such as organisational processes, new media or marketing techniques, new Human Resources practices, or technological improvements in the supply chain.

3.2. Innovation Novelty

*The degree of newness was categorised as:*

- **New-to-the-industry**: High degree of novelty, meaning these innovations take longer to be adopted, as customers and staff may be unfamiliar with how it works and its benefits, therefore they need to be educated. New-to-industry innovators reported at least one type of product, service or process innovation that was new to the industry.
- **New-to-the-firm**: Medium degree of novelty, which means customers and other firms may be familiar with the innovation. New-to-the-firm innovators reported at least one type of product, service or process innovation that was new the firm, and not to the industry.
- **No innovation**. Firms who did not report innovation in any of the six product, service or process innovation types.
3.3. Innovation breadth Sunshine Coast firms

Innovation breadth refers to the implementation of different types of innovation across a range of business functions measured by several variables across four categories: products and services, operational processes, organisational or managerial processes and marketing methods.

Sunshine Coast respondents indicated that they innovated across product, service and process categories by implementing new-to-the-firm and new-to-the industry innovations. Generally, innovator firms were more likely to introduce new-to-the-firm innovations of medium novelty, especially new methods (69.5%), and new products or services with social impact (67.9%), as shown in Figure 5. In terms of new-to-the-industry innovations, which is high in novelty, new or significantly improved manufacturing processes (34.9%), new products (34.5%) and new services (34.4%) were the categories Sunshine Coast firms were most to innovate in.

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<th>Innovation activities: product, service and process</th>
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<td>New or significantly improved product(s)</td>
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<td>New to your firm only</td>
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<tr>
<td>New to your firm AND industry</td>
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<td>New method(s) to produce and deliver your service</td>
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<td>New to your firm only</td>
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<td>New or significantly improved manufacturing process(s)</td>
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<td>32.1</td>
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</table>

Figure 5: Innovation breadth: Degree of novelty in product, service and process
Sunshine Coast innovators also made changes to organisational and/or managerial processes, marketing methods and supply chain methods. As indicated in Figure 6 innovators were likely to adopt new-to-the-firm innovations in organisational/managerial processes or business strategies (77.5%), and new methods for organising work responsibilities and other human resource practices (73.6%).

![Innovation activities: Management practices](image)

Figure 6: Innovation breadth: Degree of novelty in managerial processes and techniques

### 3.4. Innovation novelty benchmarked

The innovation activity of firms in the greater Sunshine Coast region are comparable to Queensland overall, and Australia (no statistically significant differences), with 63% of Sunshine Coast firms reporting innovation activities, compared against 68% of Queensland firms and 65% of Australian firms, shown in Figure 7.
Figure 7: Innovation activity compared across Sunshine Coast, Queensland and Australian firms (ex = excluding the prior two regions).

More specifically comparing the novelty of innovation, Sunshine Coast firms show higher levels of new-to-the-firm innovation (48%), compared to Queensland (36%) and firms in the rest of Australia (34%). However, in terms of high novelty innovations with firms introducing new-to-the-industry innovations only 15% of Sunshine Coast firms innovated in this category, compared to 32% of Queensland firms and 31% of Australian firms, as shown in Figure 8.

Figure 8: Novelty of innovation compared in Sunshine Coast, Queensland and Australia
3.5. Innovation novelty by firm size

Comparing firm size and degree of novelty reveal that Sunshine Coast firms of all sizes (micro, small and medium) introduce 46.4% or higher new-to-firm innovations, while medium-sized firms (20-199) tend to be more likely to introduce innovations with higher novelty, as indicated in Figure 9.

![Sunshine Coast firm size and novelty](image)

**Figure 9: Sunshine Coast firm size and novelty compared**

Sunshine Coast micro-firms were more likely to innovate (63%), compared to Queensland (54%) and firms in the rest of Australia (51.8%). However, Queensland small firms (39.7%) and small firms in the rest of Australia (39.5%) were more likely to innovate, than Sunshine Coast small firms (28.6%). Yet Sunshine Coast medium-sized firms (8.4%) were more likely to innovate compared to Queensland (6%) and medium-sized firms in the rest of Australia (7.9%).
3.6. Innovation novelty by firm age

Comparing firm age and the degree of novelty the findings show that Sunshine Coast start-up firms (less than 3 years old) were likely to introduce new-to-the-firm innovations (51.1%), with only 2.2% of start-ups introducing new-to-the-industry innovations. As firms age, the degree of novelty in terms of new-to-firm and new-to-the industry innovations increase considering firms older than 3 years, until 10 years in existence. However innovative activity seems to decline in firms 11 years and older, as shown in Figure 11. This declining pattern of innovation novelty by firm age holds for firms in Queensland and the rest of Australia.
3.7. Innovation novelty by annual turnover

Most firms in the sample were micro firms, therefore have a turnover of less than $500 000, therefore as shown in Figure 12 are most innovators, and this is higher on the Sunshine Coast, compared to firms in Queensland and the rest of Australia.

Figure 12: Innovation novelty compared by annual turnover for Sunshine Coast, Queensland and Australian firms (excluding the prior two regions)
3.8. How innovations were developed

Firms were asked to indicate if innovations were developed mainly within their business group, adopted after development by other businesses or institutions, or in collaboration with others.

As shown in Figure 13, most firms adopt innovations after it had been developed by other businesses or organisations, with Queensland firms the highest in this category at 91.4%, compared to 87.9% for Sunshine Coast firms, and 86.3% for firms in the rest of Australia. Firms were more likely to develop innovations within their own business or business group, compared to developing innovations in collaboration with others, across all regions.

Figure 13: Innovation development across Sunshine Coast, Queensland and Australian firms
3.9. Sources of innovation

Firms were asked to indicate their sources of innovation, divided into internal and external sources, as ideas for innovations can come from employees internally, or through suggestions from customers, suppliers, or knowledge generated outside the firm.

Clients or customers and competitors are widely recognised sources of innovation among Australian innovators. Similarly, suppliers are also a valuable source, but Sunshine Coast firms are significantly more likely to use suppliers as a source, compared to Queensland and other Australian firms.

Sunshine Coast innovators were significantly more likely to use knowledge-based sources as the basis for innovation such as universities, professional trade conferences, patent disclosures and government and research institutes, compared to Queensland and Australian firms.

![Figure 14: Sources of innovation among innovators, measured on 5-point scale in order of importance](image)

**Sources of innovation among innovators**

- Suppliers
- Clients or customers
- Competitors
- Professional conferences or journals
- Financiers
- Government or research institutes
- Trade associations, Chambers
- Patents disclosures
- Universities

**Aus (ex)**

**QLD**

**SC**

Figure 14: Sources of innovation among innovators, measured on 5-point scale in order of importance
4. Business goals and antecedents of innovation

4.1. Motivation for starting a business

Firms were asked to indicate their main motives for starting a business, ranging from unemployment, wanting to run their own firms, having a new idea or wealth ambitions.

Innovators across all regions indicated having a new idea as a key motive to start a business, especially among Queensland firms (79.2%). Unemployment was the second most highly rated motive, especially among Queensland innovators (76.7%). Comparatively Sunshine Coast innovators were significantly more likely to have wealth ambitions (87.2%) as a motive.

Figure 16: Comparing innovators and non-innovators motivation to start a business across all regions.
Sunshine Coast innovators were significantly more likely to have wealth ambitions (87.2%) as a motive (see Figure 17), compared to Queensland innovators (71.2%) and firms in the rest of Australia (61.8%) (excluding these regions).

![Figure 17: Wealth ambitions of innovators and non-innovators across SC, QLD and ROA](image)

4.2. Personal business goals

Firm owners/managers were asked to rate the relative importance of their personal goals for the firm on a 5-point scale in relation to the freedom to set and pursue their own objectives, creating a lasting legacy, contributing to the well-being of stakeholders, learning and growing through the business, increasing their personal and family wealth, and increasing the value of the business for capital gains.

Innovators and non-innovators across all regions regarded the freedom to set and pursue their own objectives as very important. Innovators in the Sunshine Coast and other regions regarded learning and growing through the business as an important business goal, as well as increasing personal or family wealth. Queensland innovators regarded creating a legacy as a key personal goal.
Innovators across all regions pursue innovation to increase stakeholder wellbeing. This motivation of innovators is aligned with the triple-bottom-line approach to innovation; where innovation is founded on the pursuit of value creation for all stakeholders, benefiting the owner, firm (employees), customers and the greater community.

Figure 18: Relative importance of personal goals for the business compared across Sunshine Coast, Queensland and Australian firms
4.3. Business practices

Sunshine Coast innovators are significantly more likely to use contemporary business practices such as business planning, monthly management accounts, board of directors’ meetings, an innovation strategy, as well as a using a social media strategy, than non-innovators. Specifically using a social media strategy, a website providing information, and an e-commerce enabled website, was more prevalent among innovators than non-innovators.

Figure 19: Business practices of innovators and non-innovators across the three regions

Figure 19 shows that Sunshine Coast innovators are significantly more likely to have an e-commerce enabled website (84%), compared to Queensland (75%) and firms in the rest of Australia (72%). Queensland innovators were most likely to use formal mechanisms such as board-of-director meetings (92.6%), innovation strategy (89%), and a social media strategy (86.6%).
Adopting these business practices were positively associated with firm motives of wanting to implement a new concept, having wealth ambitions, and growth intentions. These innovator firms were more likely to create six or more full-time positions as they grew their firms.

4.4. Business Exit

Sunshine Coast innovators are more likely to have considered business exit in the next five years, comparatively (see Figure 20). Sunshine Coast innovators consider exiting their firms by acquisition by another business, transferring ownership to other family members or winding down the business.

Figure 20: Comparison of innovators likelihood to exit the business within the next five years across the regions.
5. Fundamentals of innovation

5.1. Research and Development (R&D)

Across all regions, few firms engage in Research and Development (R&D), with most Australian firms indicating they were not involved in R&D activities.

For firms that are engaged in R&D activities, the proportion of engagement was higher among innovators, than non-innovators, for example 34.9% of Sunshine Coast innovators, 23.1% of Australian firms, and 22.8% of Queensland innovators indicated that they were engaged in R&D activities, as depicted in Figure 21.

Figure 21: Comparison of R&D engagement across all regions
Although a small proportion of firms report engaging in Research and Development (R&D), Sunshine Coast firms employing more than six staff are more likely to make use of R&D than similar sized firms in Queensland and Australia.

Figure 22: Comparison of the percentage of staff time engaged in R&D for different sized firms across Sunshine Coast, Queensland and Australian innovator firms.
5.2. Collaboration

Research has shown the benefits of establishing collaboration to generate more innovations\(^5\) is likely to improve productivity, economic growth and quality of life improvements. Collaboration can take on formal or informal arrangements and offer benefits such as acquiring and sharing knowledge, learning new competencies, and sharing risks and costs, however firms who collaborate may need to give up a level of control and accept that collaboratively innovating may result in more consultation, therefore it can be slower\(^6\).

As shown in Figure 23, only 29.8% of Sunshine Coast innovators indicate that they collaborate with other firms, compared to 26.9% of Queensland innovators and 29.3% of Australian firms.

![Figure 23: Comparison of collaboration among Sunshine Coast, Queensland and Australian firms](image)


Australian innovators who collaborate find they experience benefits such as expanding the range of their products and expertise (24.4%), developing specialist services to offer to their customers (21.1%), assisting management and staff development (15.5%) and expanding access to new markets (14.8%), as shown in Figure 24.

Figure 24: Comparison of collaboration benefits obtained among innovators

5.3. Competitive advantage

Firms were asked to rate different sources of competitive advantage on a 5-point scale in terms of their importance. Figure 25 provides an overview of the differences between innovators and non-innovators comparing Sunshine Coast firms with firms in Queensland and the rest of Australia, based on an advantage that was considered significant.
Most firms viewed product and service quality as a crucial advantage, and this view was shared by both innovators and non-innovators.

Figure 25: Comparison of sources of competitive advantage on 5-point scale

Reputation was crucial among innovator firms across all regions, as well as offering speedy service and the right type of products and services. In general, the sources of competitive advantage do not differ significantly between innovator and non-innovator firms.
5.4. Changes in employees from innovation

Sunshine Coast firms were asked to indicate the changes they expect in their work force by considering the number of full-time positions created over the last year, the full-time positions they expect to create in the next five years and the staff they lost in the last year. Firms were categorised by the degree of novelty of the innovation activities they are involved in, shown in Figure 26.

![Changes in work force](image)

Figure 26: Work force changes and expectations among Sunshine Coast firms

Considering the full-time positions created and staff lost over the past year, the results indicate volatility, with firms often not able to retain employees. Firms who introduce new-to-the-industry innovations create more full-time positions, while firms who introduce new-to-the-firm innovations are also considered as job creators. Over the longer-term firms who introduce new-to-the-firm and new-to-the industry innovations have the expectations to create more positions, compared to non-innovator firms.
6. Innovation outcomes and productivity

Firms’ satisfaction with their achievement of performance outcomes were measured in terms of changes to sales from new products or services introduced, profit improvements, growth, productivity, and customer and market metrics.

Generally, innovators were more likely to prioritise profit measures, seek growth in assets and focus on improvements in labour and capital productivity. Similarly increasing market share and a strong focus on customer satisfaction was critical to innovators.

6.1. Changes in sales from innovation

Sunshine Coast firms tend to have a higher proportion of sales from new products or services introduced. The proportion of sales from new products or services at 20 percent and higher is statistically significant compared to Queensland and firms in the rest of Australia. This increase in sales from product and service innovation shows Sunshine Coast firms are reaping the benefits of their efforts, and innovators’ accrued benefits were higher than non-innovators.

Figure 27: Comparison of sales from new products or services introduced in percentage of sales intervals benchmarked across three regions
Profit indicators compared were profit per employee, return on assets and profit margin on sales. Overall firms reported a slightly higher than average satisfaction with these indicators. Sunshine Coast innovators were more satisfied with their return on assets and profit margin on sales than non-innovators and other firms, however the difference was not significant.

Figure 28: Comparison profit performance measures across three regions on 5-point scale
Growth in firms is often associated with innovation and entrepreneurial activities. Growth in performance was measured by growth in profits, employees, assets and sales, common to the approach followed by leading scholars. Firms were moderately satisfied with their performance on growth indicators, however innovators tended to have higher growth indicator scores, compared to non-innovators. Sunshine Coast innovators were more satisfied with their growth in sales, and growth in profits compared to their counterparts in other regions.

Figure 29: Comparison growth indicators across three regions on 5-point scale

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Labour and capital productivity are considered societal benefits of innovation,\(^9\) therefore measures related to satisfaction with labour and capital productivity and improvements in these areas were benchmarked. Australian non-innovators, outside Queensland, rated improvements in capital productivity higher compared to other regions and innovator firms, showing this as a priority are for all firms.

Sunshine Coast firms reported slightly higher satisfaction with improvements in labour and capital productivity, compared to firms in other regions, however these differences were not statistically significant.

Figure 30: Comparison productivity improvements across three regions on 5-point scale

All firms (both innovators and non-innovators) across Australia regarded maintaining and increasing customer satisfaction as critical and were satisfied with their performance on this metric. Increasing and maintain market share was important, but not all firms were satisfied with their performance in this area, although innovators were slightly more satisfied with their performance, compared to non-innovators.

![Satisfaction with market and customer metrics](image)

Figure 31: Comparison of market and customer metrics across three regions on 5-point scale
7. Business context and environment

7.1. Awareness and use of support

Various forms of business support are available to small firms, ranging from financial interventions or grants to business support interventions (Mole et al, 2016). Business support include interventions such as business skills, workshops, forums or seminars, and business opportunity development. Other support services provided are networking, mentoring and self-help diagnostics.

Generally, only a small proportion of firms are aware of and access support provided, due to managerial capacity\(^\text{10}\) and owner/manager time devoted to operating and managing firms of this nature. Overall innovators are more likely to be aware of support offered, compared to non-innovators.

Specifically, Sunshine Coast innovators show high levels of awareness of support available, however less than a third of firms make use of this support. Sunshine Coast innovators were most likely to use business opportunity development workshops such as exporting, or skills-focused workshops (30.8%), mentoring (28.2%), networking (27.3%) and grants or financial incentives (24.4%), as firms who are growth-focused are likely to seek out these opportunities.

Figure 32: Comparison of innovator firms’ awareness of innovation support
Sunshine Coast firms were most likely to turn to their accountants, mentors, local council and government sources for support. The most underutilised sources of support are co-working hubs and incubators and accelerators, likely due to their limited capacity to serve a large small business population.

![Ways Sunshine Coast firms access support](image)

Figure 33: Ways in which Sunshine Coast firms access support, expressed in percentages

The findings suggest that the support is available and benefits thereof can be communicated to local firms through their accountants and reputable mentor networks.
8. Case studies: Collaborative innovation

Five cases of collaborative innovation were studied through interviews and secondary data to determine the collaboration styles and outcomes of these relationships. One case study was conducted for each of SCRIPT’s five priority industries, namely Creative Industries, Health and Well-being, Food and Agribusiness, Sustainability and Smart Cities, were identified.

The case studies chosen needed to demonstrate regional benefit to the Sunshine Coast and be aligned to SCRIPT’s goals of collaboration and long-term sustainability of the innovation project.

Two of the cases focus on SCRIPT-funded projects, supported by Advance Queensland, namely The Refinery and Australian Health Accelerator. These two cases represent an innovative service, in the form of an incubator and accelerator program, aimed to support and benefit program participants developing their own business through start-up and accelerated growth. Therefore, the real long-term benefits to participants will likely only be evident in the next 18 months to three years.

The three other cases focus on product, service and process innovations aimed to generate benefits for both parties involved and will also likely benefit other stakeholders in these firms’ networks.

- Food and Agribusiness collaboration between Boneafide Broth Co and Luvaberry War-on-Waste originated from a shared problem and shared values and resulted in several product innovations.
- Sustainability collaboration between University of the Sunshine Coast and Veolia focuses on ensuring the University becomes carbon-neutral, assisted through Veolia’s leading environmental engineering knowledge, resulting in the construction of an Australian first thermal battery.
- Smart City collaboration between the Urban Institute and Sunshine Coast Council’s Smart City team represents a software platform innovation, which brings smart city data together, from various sources to improve waste management, transport and parking, irrigation and water quality, safety and other services to residents.
Table 1: The five cases are summarised as follows, and more information is available in the Regional Innovation Benchmark Report:

<table>
<thead>
<tr>
<th>Industry</th>
<th>Firms involved</th>
<th>Partners</th>
<th>Activity</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Industries</td>
<td>The Refinery</td>
<td>Creative Spaces Innovation Centre Sunshine Coast University, Peregrine Digital Hub, Regional Arts Development Fund, Arts Qld, SCRIPT, Advance Qld</td>
<td>Incubator for creative industry start-ups</td>
<td>1st creative industry incubator locally; Full suite of support services; 15 new creative start-ups graduated (2019)</td>
</tr>
<tr>
<td>Health and well-being</td>
<td>Innovation Centre Sunshine Coast, Quantum Innovation Fund</td>
<td>Entrepreneurs’ Program Australian Government, Sunshine Coast Health Institute, USC, SCRIPT, Advance Qld</td>
<td>Australian Health Accelerator</td>
<td>9 ventures graduated (2019); 24 new jobs (FTEs) created from Aug 2018-May 2019; Increased traction – new leads, customers and revenue; Firms’ performance improved</td>
</tr>
<tr>
<td>Food and Agribusiness</td>
<td>Boneafide Broth Co and Luvaberry, War on Waste</td>
<td>Joint product development, two new products developed and tested collaboratively</td>
<td>New range of products developed; Wider range of products to markets; More effective utilisation of equipment; Reliable supplier</td>
<td></td>
</tr>
<tr>
<td>Sustainability</td>
<td>University of the Sunshine Coast, Veolia</td>
<td>Joint effort to reduce CO₂ emissions through construction of Australian 1st water battery, solar powered, using ultra-filtrated lake water recovery plant</td>
<td>More than 40% electricity consumption reduction; 100 000 tonnes of CO₂ saved; $100 000 million utility savings for USC over 20 years; Environmentally friendly refrigerant gas; International showcase – reputational benefits</td>
<td></td>
</tr>
<tr>
<td>Smart Cities</td>
<td>Urban Institute Sunshine Coast Council Smart Cities Team</td>
<td>Smart Regional Management Platform which integrates and presents environmental data, transport and parking, free WiFi, Waste and smart lighting real-time</td>
<td>Improvements in waste management, transport and parking, irrigation and water quality, safety and other services to residents; Council staff can improve response times with better data</td>
<td></td>
</tr>
</tbody>
</table>
As collaborative innovation is challenging and less than 30 per cent of firms engage in this activity (see Section 5.2), it is worth considering how the firms and organisations represented in the case studies above were able to collaborate and generate such significant benefits from their collaborative efforts.

Common themes that emerged from the thematic analysis through within-case and cross-case comparison revealed the following five common factors across the five cases:

**Trusting, long-term relationships**
All interviewees were consistent in emphasising the nature of the business relationship between them as trusting and most firms and organisations had established personal relationship, even if the relationship for the incubator and accelerator programs were recently formalised. Ensuring that the expectations of both parties are well-managed is critical and this is generally achieved through frequent communication and by sharing honest feedback, with both parties valuing this feedback, even though it might not be positive and then to be responsive to that feedback.

**Beneficial outcomes for all parties involved**
As shown in Table 1 firms and organisations involved in collaborative innovation projects strongly valued the beneficial outcomes from product, service and process innovations jointly developed, tested and implemented. The benefits that accrue from collaborative innovation activities not only encompass economic benefits, but also relational and knowledge transfer benefits.

**Complementary capabilities**
Each firm brings its own strengths and capabilities to the collaborative innovation project and it is critical that the capabilities of the two or more firms involved are complementary, enabling the parties to achieve more together, than they would have separately. In this way “both contribute valuable insights to the innovation effort.” If both parties are invested in the innovation project, they are more likely to contribute time and resources, and ensure successful completion of the innovation project.
Value alignment

The values and principles which guide the conduct and relationships of the firms collaborating on an innovation align, as both parties aspire to achieve similar goals. The innovation project they co-create is a manifestation of the values they aspire to, for example following a zero-waste philosophy, generating and using clean energy, improving service delivery or business development.

Open communication and flexibility

Most interviewees emphasised the importance of open communication and maintaining flexibility to ensure the innovation project’s goals were achieved. Both small firms and larger organisations emphasised that open communication is critical, although small firms were less formal in their approach: “not... having contracts... have the same agenda” while larger organisations tend to use more formal mechanisms such as open book financials to ensure openness and transparency. As innovation projects rarely go according to plan, it is critical that both parties accept that the relationship, and envisaged outcomes may change, and that flexibility is critical to ensure that the project achieves the original vision.

While collaboration might be challenging for firms, the evidence presented by these cases, as well as established research\textsuperscript{11} demonstrate the value of collaboration in the innovation process. Working together on innovation projects however is not simple and requires trusting relationship to be cultivated between individuals and organisations, supported by value alignment, transparency and flexibility.

9. Conclusion and Recommendations

The Regional Innovation Benchmark report focused on measuring regional innovation across the Sunshine Coast region, including Noosa.

- The innovation activity of firms in the greater Sunshine Coast region was benchmarked against available innovation data for Queensland and Australian firms from 2014, to assess the strengths within the region and identify priorities for action.
- Given the importance of collaboration, five case studies of more than 10 organisations who collaborated on innovation projects were analysed and the benefits of these collaborations were outlined, as well as five key factors that make such relationships work.

The survey findings indicate that Sunshine Coast firms show a high proportion of new-to-the-firm innovators, using knowledge-based innovation sources to develop these innovations. These innovators benefit from their activities in that a high proportion generate increased sales (more than 20 per cent of sales) from new product and service innovations. Additionally, these firms report improved profit, growth and productivity outcomes.

Priorities for action can be identified from the survey data. The findings reveal that Sunshine Coast firms show relatively low levels of new-to-the industry innovations, and low utilisation of business support provided. The adoption of digital, and innovation best practice can be improved, as well as encouraging collaborative innovation.

The case studies confirm that five key factors that matter for collaborative innovation include:

- Cultivate trusting, long-term relationships and managing expectations
- Create beneficial relationship for all parties involved
- Ensure parties to the collaboration have complementary capabilities
- Confirm that both parties to the collaboration share similar values with regards to the innovation project
- Communicate openly and be transparent and ready to adapt as innovation requires flexibility.
Based on the findings, it is recommended that:

- Regional innovation activity should be measured in 2020 and 2021, given the long-term outcomes of regional business innovation. The findings of RIB provide an evidence-based decision-making culture, fostering the reputation of the greater Sunshine Coast;
- Innovation opportunities for local small to medium enterprises (SMEs) should be widened, as the capacity to innovate and adapt is crucial within a globalised, connected world;
- Leverage the infrastructure investments in the region through opportunity development, acceleration programs for entrepreneurs, and nurturing public-private innovation initiatives;
- Increase the number of novel innovators, who pursue new-to-the industry and new-to-the-firm innovations, given the potential for social and economic wealth creation;
- Continue to strengthen and develop the regional innovation culture to fit with the growing and expanding ecosystems, attracting, activating and integrating new talent to the Sunshine Coast; and
- Focus on increasing awareness on the benefits of both formal and informal collaboration (access to new markets and product/service expansion) amongst innovators.
- Measure and assess the value and outcomes incubator- and accelerator participants experience 12 to 18 months after the completion of these programs to gain a more realistic view of the outcomes, given the long-term consequences of innovation activities.
10. Appendix

10.1. Method

10.1.1 Sample

Qualtrics business panel and entrepreneur panel data was used to identify a stratified sample (based on the Australian Bureau of statistics (ABS)) targeting firms in the greater Sunshine Coast and Noosa Shire regions to ensure representativeness, using postal codes to ensure regional targeting. In addition, responses were supplemented with local firms, which SCRIPT encouraged to complete the survey.

10.1.2 Survey and response rate

The survey was conducted from November 2018 to March 2019, as it was pilot tested locally first, and then Qualtrics was commissioned in February 2019 to collect the additional data. The survey was distributed online using the panel, reaching more than 765 firms. The owner/manager or senior executive within each firm was asked to complete the questionnaire online. The response rate was 38 per cent. Of the 255 responses received, only 248 was valid and therefore used to represent the Sunshine Coast regional data. Sunshine Coast data was weighted to limit response bias, meaning that responses from firms of different sizes, and industries were weighted in proportion to their presence in the general population of Australian firms. The 248 valid Sunshine Coast responses were then added to the 2014 DSITIA-University of Queensland innovation dataset of 1,542 Australian firms to result in a dataset of 1,769 firms.

10.1.3 Survey instrument

The questionnaire was developed by the Centre for Business Research (CBR) at Cambridge University. Findings and data gathered through this survey has been widely used for publication in reputable journals. Eighty per cent of the questionnaire has been used by CBR, UQ and Auckland University (NZ) in the past and has been proven to be reliable. The remaining part was developed to address the research objectives of this project, aligned to the goals of SCRIPT and Advance Queensland.

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The existing CBR questionnaire was adapted in three ways. First, language and terms were changed after a pilot study done in the region. Second, issues that are crucial to SCRIPT’s performance goals and the Advance Queensland regional innovation program were incorporated into the questionnaire. Finally, questions were included to address the research objectives. The questionnaire contained 30 questions, which can generate more than 400 variables addressing the general characteristics of the firm, innovation, competition and collaboration, finance and managerial practices. The questionnaire took 20 to 25 minutes to complete. Responses were collected by USC and Qualtrics and respondents were guaranteed anonymity and confidentiality, as per the ethics approval of this project: A181147).

10.1.4 Level of analysis

This research focuses on firm behaviour related to innovation and the outcomes thereof, thus all analyses were undertaken at the organizational level of analysis. Results reported are generalized to regional firms (industry, firm size, age). Firms have the ability to adapt and change their behaviour, which is well-established in the literature.\textsuperscript{14} This report however draws on data collected at a point in time and is based on the ‘representative firm’ where models are specified. In all other cases, descriptive statistics in the form of occurrences or means are reported. These aggregated data satisfy the requirements of the reporting that this study informs.

10.1.5 Critical assumptions and limitations

As with all research projects, there are a number of delimitations relevant to the reported results. First, the data collected for the Sunshine Coast, Noosa and Moreton Bay regions related only to 2018-2019 and no further data has been collected. For this first year innovation performance is benchmarked against Queensland 2014 data, as there is no recent available, comparable database of national innovation data. Therefore, the survey and report focus only on the available data for comparison purposes. Second, findings are reported based on the data of responding firms, and therefore it may be that innovation activity is higher or lower than reported, but as there are no other wide-spread, representative databases available it is not possible to make further comparisons. Third, as data were collected from the Sunshine Coast, Noosa and Moreton Bay regions, no mining firms were included in the data. These results should be interpreted against this background. Finally, the questionnaire is based on

self-reported data, similar to what is used internationally. Although consistency checks were performed, as elaborated on next, no secondary data items are available to confront the veracity of these responses.

11. Statistical Techniques

11.1. Data cleaning

Online surveys were used, thus respondents entered data directly into a database, when answering the questions. Initial statistical checks were undertaken to ensure there were not irregularities in the data, for example if a question only has 5 response option in terms of rating the importance of competitive advantage, any response with a 6 or higher indicates an error, and the data are cleaned accordingly. Data cleaning involves identifying and removing errors from the data to improve the quality of the data prior to analysis. Data were first screened using descriptive statistics, maximum and minimum values and potential outliers. Where values do not conform to expected values, these are checked and corrected if possible, or recoded as missing data, if problematic. Respondents who have stopped their business operations, or where a single owner/manager indicated that they employ one million staff with no management accounts were removed from the dataset.

11.2. Additional notes to definitions and variables

Innovation categories

The innovation categories were coded to reflect the approach used by CBR. This approach dealt with different interpretations of the question asking respondents to rate their innovation as either ‘new-to-firm’ or ‘new-to-firm-and-industry’. One group chose both options if they had ‘new to firm and industry’ innovations, while the second group only chose the relevant option. Therefore, data were coded as follows:

Firms were asked to respond ‘yes’ or ‘no’ as to whether they had introduced any new innovations in any of the six innovation types during the last three years. These innovations could either be ‘new to the firm’ or ‘new to the firm and industry’. Therefore, for each of the six different types of innovations above, respondents gave one of four possible combinations of answers to the following two questions:

➢ Innovation new to your firm but not to your industry?
➢ Innovation new to your firm and to your industry?

The four combinations were:

- no/no – coded as ‘no innovators’ because they did not report any innovation;
o  yes/no – coded as ‘non-novel innovators or new-to-firm’ innovators because their innovation, while new to their firms, were not new to the industry; and
o  no/yes or yes/yes – coded as ‘novel innovators or new-to-industry’ innovators because their innovations were new to the industry.

As a result, for each innovation type as defined above, firms were coded one of three possible mutually exclusive options: no-innovation, new-to-firm (non-novel) innovators, or new-to-industry (novel) innovators. Note, however, that the innovation levels are not mutually exclusive as firms could have developed more than one type of innovation.

Innovator/innovation active

The ABS define innovation as ‘the introduction of any new or significantly improved goods or services, the introduction of new operational processes (the methods of producing or delivering goods or services) or the implementation of new organisational/managerial processes. Firms were considered ‘innovators’ if they had introduced at least one of these types of innovation during the period reported.

Firm size

The firm size variable was constructed using information on the number of full-time equivalent (FTE) employees. This was calculated by combining the number of full-time staff and the number of part-time staff multiplied by an approximate 0.5 part-time workload. Using the number of FTE employees calculated, firms were divided into the following categories: 1-4 FTEs (micro firm); 5-19 FTEs (small firm); 20-199 FTE (medium-sized firm); and 200+ (large firm).

11.3. Quantitative data analysis

Data analysis techniques were chosen based on appropriateness to the data and violations of parametric data assumptions. Descriptive statistics such as mean, standard deviation and standard errors were presented where data are continuous. Where data are not continuous, frequency and count data are presented. The implications for interpretation of data based on the construction of the variables are discussed where appropriate throughout the results section in this document. The data were analysed using the SPSS statistical package (Field, 2009). Descriptive statistics and frequency analysis were used as well as chi-square and t-tests to determine differences between groups.
References


