Manufacturing Hub Delivery Model
Cairns, Townsville, Rockhampton
Foreword

Supporting the growth of regional manufacturers is a priority of the Queensland Government. $30 million will be invested into regional Manufacturing Hubs in Cairns, Townsville and Rockhampton to support and grow local manufacturers to become more productive, increase international competitiveness and access emerging and diversified growth opportunities.

Manufacturing is Queensland’s sixth-largest employing industry with more than 170,000 people employed as at June 2018, with 86 per cent employed full-time. Manufacturing has consistently contributed around $20 billion per year over the last decade to the Queensland economy.

Manufacturing in Queensland is diverse. The top five employing sub-sectors in terms of percentage of jobs are: food product manufacturing (24.8 per cent), machinery and equipment manufacturing (13.3 per cent), transport equipment manufacturing (8.4 per cent), fabricated metal product manufacturing (8.4 per cent); and furniture and other manufacturing (8.0 per cent).

Regionally, manufacturing creates a significant amount of employment—both directly and indirectly. As of June 2018, 21,000 people were directly employed in manufacturing in the three regional localities of Cairns, Townsville and Central Queensland alone. These local manufacturing jobs are integral to the backbone of the regional economy in these areas.

The Hub Delivery Model has been developed following consultation with local businesses, local governments, unions and educational institutions. It has also benefited from the expert input from members of the Manufacturing Ministerial Committee.

Consultation indicated that while the hubs need to be connected and share strategic objectives, each hub should have its own ‘unique flavour’ and capitalise on each region’s strengths and opportunities to drive innovation, growth and jobs.

The hubs will support regional industry partners accelerate the growth of several existing specialised industries and create a powerful and influential collective of local businesses, governments, economic development agencies and educational institutions to set a path for the strong growth of regional manufacturing. The hubs will establish key industry sub-sector areas to focus on in the initial stages of the hubs, expanding support and services to other sub-sectors over time.

Regional manufacturing currently does and has the potential to contribute even more significantly to the local and Queensland economies. By investing in the hubs, the Queensland Government is providing the catalyst to deliver world-leading technologies, processes and practices to regional manufacturers, and attract increased private sector investment and jobs to our regions.
Located in Cairns, Townsville and Rockhampton, $30 million will be invested over three years to transform regional manufacturing as a critical driver of productivity and innovation in the economy.

The establishment and operation of the hubs will be the catalyst to deliver world-leading technologies, processes and practices to regional manufacturers and attract increased private sector investment and jobs to our regions.

The hubs will build productivity, increase international competitiveness and access emerging and diversified growth opportunities in these localities.

While the hubs will be based in the local government areas of Cairns, Townsville and Rockhampton, the hubs’ services will be available to key stakeholders in the broader regions of Far North Queensland, Townsville and Central Queensland.

Each hub will initially establish itself with key focus areas related to the current economic strengths of each region, expanding its focus and services to other sectors over time.

As of the June quarter 2018, the manufacturing sector that accounts for the highest share of total manufacturing employment in Queensland is food product manufacturing, with total employment of around 42,300 people representing almost one-quarter of total manufacturing jobs in the state.

The importance of the food product manufacturing sector to employment opportunities and economic activity within the broader manufacturing industry is reflected in the hub localities.

The latest Census data (2016) shows that food product manufacturing employment accounted for 21.2 per cent of total manufacturing employment in the Cairns local government area (LGA), 25.6 per cent in the Townsville LGA and 46.8 per cent in the Rockhampton LGA.

Regionally, manufacturing creates a significant amount of employment.

As at June 2018, in Cairns, the manufacturing sector employed around 7,200 workers. In Townsville, around 6,100 workers were employed, and in Central Queensland around 7,800 workers were employed. In terms of established small to medium manufacturing enterprises, as at June 2017 there were 970 across Cairns, Townsville and Central Queensland SA4 regions.

The Manufacturing Hubs vision

Regional manufacturing in Queensland

Cairns
Townsville
Rockhampton

$30 million over 3 years

Cairns
Townsville
Rockhampton
Cairns manufacturing opportunities

Population
As at 30 June 2017, the estimated residential population of Cairns LGA was 164,536 people, it is expected to grow to 227,542 people by 2036.
As at 30 June 2017, the estimated residential population in the broader Cairns Statistical Area 4 (SA4) region (which the hub is also expected to support) was 250,611 people, with expected growth to 324,789 people by 2036.

Gross value-add
In the Cairns SA4 region in December 2017, it is estimated that manufacturing contributed around $762 million of gross value-added to the economy. This accounts for five per cent of total Gross Regional Product in the Cairns SA4 regional economy, and also accounts for four per cent of total manufacturing gross value-added in Queensland for this period.

Industry employment and small to medium enterprises
As at June 2018, the Cairns SA4 region manufacturing sector represents 6.2 per cent of all industry employment in the region.
As at June 2017, in the Cairns SA4 region there were 433 manufacturing small to medium enterprises (SMEs).

Current manufacturing sub-sectors
Sectoral analysis of the manufacturing sector in the Cairns local government area in 2016 (Census data, based on place of work) shows that the largest manufacturing sub-sectors are transport equipment manufacturing (26.6 per cent) and food product manufacturing (21.2 per cent).

In June 2017, in the Cairns local government area, there were 293 manufacturing SMEs.

Emerging manufacturing sub-sector opportunities
In Cairns and its surrounds, there are also several, existing industries that are classified as ‘specialised’ in terms of employment and represent potential future employment and economic growth opportunities in the region.
In particular, the Cairns LGA regional economy is highly specialised in terms of employment in the shipbuilding and repairs sector, with a specialisation ratio of 24.25, while the aircraft manufacturing and repair sector is also specialised with a ratio of 4.26. This helps to highlight the importance of these sectors to the region’s economy in terms of employment, as well as their comparative importance to the wider sectoral supply chains throughout the state.

Food product manufacturing is still a large sector and has significant opportunity for expansion owing to its abundance of tropical produce, proximity to Asia Pacific markets and international air routes.

In the Cairns region manufacturing contributed around $762 million of gross value-added to the economy. This accounts for 5 per cent of total Gross Regional Product.
Townsville manufacturing opportunities

Population
As at 30 June 2017, the estimated residential population of Townsville LGA was 193,601 people\(^1\). It is expected to grow to 288,593 people by 2036\(^2\).

In the broader Townsville SAA region (which the hub is also expected to support), the estimated residential population was 236,299 people as of 30 June 2017\(^3\). The region is expected to grow to 333,833 people by 2036\(^4\).

Gross value-add
In the Townsville SAA region in December 2017, it is estimated that manufacturing contributed around $879 million of gross value-added to the economy. This accounts for 5.5 per cent of total Gross Regional Product in the Townsville SAA regional economy, and also accounts for 4.6 per cent of total manufacturing gross value-added in Queensland for this period\(^5\).

Industry employment and SMEs
As at June 2018, in the Townsville SAA region, the manufacturing sector represents 5.7 per cent of all industry employment.

In June 2017, in the Townsville SAA region there were 287 manufacturing SMEs\(^6\).

Current manufacturing sub-sectors
Sectoral analysis of the manufacturing sector in the Townsville local government area in 2016 shows that food product manufacturing is the largest manufacturing sub-sector by employment (25.6 per cent), followed by the primary metal product manufacturing sub-sector (21.1 per cent) with fabricated metal representing (9.7 per cent).

In June 2017, the Townsville local government area had 230 manufacturing SMEs.

Emerging manufacturing sub-sectors opportunities
Over a five-year period (2011 to 2016), employment within the Townsville region has been driven by a number of different sectors throughout the local economy.

A strong industry in terms of both employment and specialisation is defence, as Townsville is home to the Lavarack Barracks. Census data highlights that between 2011 and 2016, the region’s defence sector\(^7\) experienced employment growth of over 1,400 people, highlighting its importance to economic and related supply chain activity within the region.

In addition, there are a number of significant projects in the region that will drive economic activity and job opportunities over the coming years. In the short term, the delivery of the North Queensland Stadium Project is expected to support up to 750 jobs throughout the design and construction stages. In the longer term, the Townsville Port Expansion Project represents a $1.64 billion investment in the region. The ability to attract new and large investment into the region will be a key factor determining the proliferation of future employment and economic growth opportunities.

Food product manufacturing and metal production remain the largest manufacturing sub-sectors by employment.

\[\text{Food product} \quad 25.6\%\]
\[\text{Primary metal and metal product} \quad 21.1\%\]
\[\text{Fabricated metal product} \quad 9.7\%\]

Source: ABS, 2016 Census of Population and Housing, ANZSIC two-digit employment estimates, based on place of work, accessed through ABS TableBuilder

In the Townsville local government area, food product manufacturing is the largest manufacturing sub-sector by employment (25.6 per cent).
Manufacturing employment, sector breakdown, Rockhampton, 2016 (% share of total regional manufacturing employment)

- Food product: 46.8%
- Non-metallic mineral product: 2.2%
- Fabricated metal product: 1.6%
- Transport equipment: 1.4%
- Machinery and equipment: 1.3%
- Primary metal and metal product: 0.8%
- Furniture and other: 0.5%
- Basic chemical and chemical product: 0.3%
- Wood product: 0.2%
- Printing: 0.2%
- Beverage and tobacco product: 0.2%
- Textile, leather, clothing and footwear: 0.2%
- Polymer product and rubber product: 0.2%
- Petroleum and coal product: 0.2%
- Pulp, paper and converted paper product: 0.2%

Source: ABS, 2016 Census of Population and Housing, ANZSIC two-digit employment estimates, based on place of work, accessed through ABS TableBuilder

Rockhampton manufacturing opportunities

Population
As at 30 June 2017, the estimated residential population of Rockhampton LGA was 81,446 people. It is expected to grow to 104,100 people by 2036.

In the broader Central Queensland SA4 region (which the hub is also expected to support), the estimated residential population was 226,025 people as of 30 June 2017, with projected population forecast to be 314,246 people in 2036.

In the Central Queensland region in December 2017, it is estimated that manufacturing contributed around $1.084 billion of gross value-added to the economy.

Gross value-add
In the Central Queensland SA4 region in December 2017, it is estimated that manufacturing contributed around $1.084 billion of gross value-added to the economy.

Industry employment and SMEs
As at June 2018, the Central Queensland SA4 region, the manufacturing sector represents 5.7 per cent of all industry employment.

In June 2017 in the Central Queensland SA4 region there were 250 small to medium manufacturing enterprises.

Current manufacturing sub-sectors
Sectoral analysis of the manufacturing sector in the Rockhampton local government area in 2016 shows that food product manufacturing is the largest manufacturing sub-sector by employment (46.8 per cent), followed by non-metallic mineral product manufacturing (8.9 per cent), fabricated metal product manufacturing (8.7 per cent) and primary metal and metal product (6.7 per cent).

In 2016, 72 per cent of total food manufacturing in the region included 617 workers in meat processing. The sectors that accounted for the next-highest shares were bakery product manufacturing employing 56 people, bread manufacturing employing 52 people, and milk and cream processing employing 52 people.

In the Rockhampton local government area, food manufacturing accounts for almost half of the manufacturing sub-sector by employment.

Food manufacturing accounts for almost half of the manufacturing sub-sector by employment and comprises approximately 30 small to medium businesses in and around Rockhampton and two large businesses.

Although having a smaller share of manufacturing employment, the metal product manufacturers comprise approximately 118 SMEs throughout Rockhampton.

Emerging manufacturing sub-sectors opportunities
In terms of the rail sector, Central Queensland has the largest total number of people employed in the rail sector outside Brisbane (with the bulk of this employment in rail freight transport).

This is linked to coal and the significant resources supply chain in the region.

This presents an opportunity to capitalise on improvements in rail technology and innovation for the rail freight sector.

In addition, the food product manufacturing sector remains the largest sub-sector in Rockhampton employing almost half of the manufacturing workforce.

The fabricated and primary metal product manufacturing sub-sectors account for 8.7 per cent and 6.7 per cent of manufacturing employment respectively.
Developing strong local manufacturing ecosystems

The hubs will bring together the state, industry partners, local businesses, local governments, economic development agencies, and educational institutions, to collaborate and grow regional manufacturing.

Critical to the success of the hubs will be fostering links between key stakeholders in the region with Queensland, Australian and international industry leaders to foster the growth of the existing manufacturing industry, help build stronger communities and attract investment and jobs to the regions.

The hubs will bring on regional industry partners to accelerate the growth of several specialised existing industries. The development of a strong local manufacturing ecosystem will ensure the hubs are driven from within the community, based on local knowledge and insight. The ecosystem will develop over time and position the hubs to be self-sustaining (in whole or in part) into the future.

Linking manufacturers to universities, VET and schools

The hubs will work closely with universities, Vocational Education and Training (VET) and schools to develop a workforce with strong skills in science, technology, engineering and maths (STEM).

It is widely recognised that STEM skills are a vital pre-cursor to advanced manufacturing. By building capability in STEM learning, and working in partnership with industry, VET and universities, the hub will help meet the increasing demand for STEM graduates in this knowledge-intensive industry.

The Annual VET Investment Plan (the VET Plan) provides more than $770 million investment in VET in the 2018–19 financial year. Under the plan, the government remains focused on access to quality, supportive and affordable training that meets the ongoing needs of both individuals and employers. The hub will improve access to these training opportunities, particularly for the manufacturing sector.

The hubs provide a significant opportunity by bringing together industry and researchers in the one place.

The hubs will build stronger relationships between Queensland Government programs such as the Gateway to Industry Schools program, which is part of a statewide industry engagement and workforce development strategy to support the long-term development of a highly skilled workforce in Queensland and promote STEM skills.

The program provides opportunities for industry and the education sector to work together to deliver outcomes for students, local communities and businesses. Students that participate in the program will be exposed to a range of learning experience that will assist them in their career choices and pathways to employment.

The hub will also develop and strengthen appropriate industry and research links, with universities undertaking research and development that is critical to supporting and building local manufacturing capabilities. The hubs provide a significant opportunity by bringing together industry and researchers in the one place at the same time and to potentially work on commercial projects together.
The Cairns Hub

Marine
In Cairns, the shipbuilding and repair sector, located in the Cairns Marine Precinct is committed to growing its capability, particularly for future defence sustainment work in the next decade and a half. In addition, the Queensland Superyacht Strategy 2018–23 represents a significant opportunity to tap into a high-value commercial market.

Opportunities exist for the shipbuilding and repair sector to upskill its staff in specific areas of advanced welding to a defence standard and developing future skilled workforce requirements.

The hub will therefore offer Advanced Welding Training and develop Robotic Capability for blasting, sanding and painting, to assist the sector lift its capability.

Aviation
The Cairns Hub also represents a significant opportunity for the aviation sector as the Cairns airport directly generates about $600 million a year and provides direct and indirect jobs for 6,300 people representing about 22 per cent of the regional economy.

The development of an Advanced Fibre Composites Maintenance and Repair Facility in the Cairns Hub, particularly for small to medium-sized aircraft, will increase workforce skills and assist local businesses specialising in maintenance and repair work.

Another capability that will be developed is making 3D parts for aircraft. 3D printing has potential to drive efficiency in aviation manufacturing of aircraft parts that are low-quantity and high value production. For example, Hawker Pacific is currently expanding their aircraft maintenance hangar to provide heavy maintenance for the Fokker 70/100 fleet within the Oceania region, creating 39 new highly skilled full-time workers. Hawker Pacific will require printing to provide parts for the Fokker 70/100, as well as Embraer aircraft.

Cairns airport generates about $600 million a year and provides jobs for 6,300 people

The marine industry will also be supported by 3D printing to manufacture one-off and specialist manufacturing for the superyacht and defence markets.

Food Manufacturing Incubator

The Far North Queensland (FNQ) Food Incubator is a group of food experts and innovators collaborating to support Far North Queensland early-stage food processors to test, scale-up and commercialise their products.

A Food Manufacturing Incubator will provide facilities for Far North Queensland early-stage food processors to test, scale-up and commercialise their products. The food manufacturing incubator will accelerate growth of SMEs, to take advantage of Cairns’ proximity to Asia-Pacific markets.

In August 2018, the founder of the FNQ Incubator entered into a memorandum of understanding with Singapore food distributor IM Holdings Pty Ltd to provide Cairns-based SMEs with a pathway into Asia. This marks a significant achievement for the region, as IM Holdings has committed to distributing SME food and agribusiness exports from Australia.

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Cairns Hub key initial focus areas
The Townsville Hub

Advanced metal production manufacturing through Industry 4.0 and the Internet of Things

The feedback from local businesses gathered during the consultation sessions in 2018 strongly suggested that regional expertise and capability is required so local businesses can manufacture and service advanced products locally. Townsville’s primary metal product manufacturing sub-sector and fabricated metal production are the second and third largest manufacturing sectors by employment. To assist these sub-sectors stay globally competitive, the Townsville Hub will bring Industry 4.0 and the Internet of Things to the region and transform North Queensland small to medium businesses, so they can move into advanced manufacturing.

The Internet of Things makes it possible to integrate an entire network of manufacturing processes (including smart machines, robots, warehousing systems and production facilities) which can autonomously organise themselves. This enables flexible production to meet individual customer requirements and provides enormous potential for the design of better, smarter products.

The hub will assist in developing this capability and assist local businesses to bid for national and international work project work.

The hub will call for industry leadership to assist Townsville’s SMEs improve efficiencies in their businesses models, improve supply chain capability, demonstrate the latest state of the art technology, and assist with workforce development and training.

The hub will also partner with Tec-NQ which is an innovative senior secondary school and registered training organisation in Townsville, providing a range of industry-supported training and educational programs. The Pathways in Technology (P-TECH) Program, offers students an industry supported pathway in a STEM related field. The hub will strengthen relationships between industry partners and students, assisting students to make informed decisions about their future careers and pathways into advanced manufacturing.

Food transformation through advanced manufacturing

Based on global and domestic data, 30 per cent of food produced is never eaten and is lost at various stages along the supply chain. The facility will mean that locally grown fruits and vegetables can be manufactured locally and turned into a value-added product.

The Centre of Excellence will create advanced manufacturing jobs for food stabilisation and transformation technologies, as well as training for new entrants and the existing industry in project management, logistics, marketing, horticulture, transport and logistics, nutrition and food safety.

The hub will initially assist in driving collaboration between key stakeholders such as local, state, and federal governments, peak bodies, CSIRO, TAFE and universities to develop a business case for attraction of private and public investment in January 2019.

A separate Queensland Made election commitment allocated $5 million to support a North Australia Defence Maintenance and Logistics Hub to address the defence needs of the Lavarack Barracks, the Singapore-Australia Defence Agreement, and the US Navy 7th Fleet biofuels opportunity. The Manufacturing Hub and the Defence Maintenance and Logistics Hub will work closely together to support industry capability and ongoing manufacturing supply jobs. Advanced Welding Training will also be delivered through the Townsville Hub using augmented reality welding simulators. This will increase capability for future defence work.
The Rockhampton Hub

Rail Manufacturing and Technology

The Rockhampton Hub, in partnership with local industry and The Centre for Railway Engineering in Central Queensland University (CQ University), will drive innovation in the rail freight sector.

An Economic Contribution Analysis prepared by Ernst and Young in 2015 found that across the whole of regional Queensland, Aurizon’s operations contribute to 6,100 direct and indirect jobs, and to more than $2 billion of output for Queensland’s regional economy. Aurizon maintains a presence in Rockhampton with approximately 650 employees, an administrative building, railway yards, track maintenance depots, a technology and telecoms depot and rail yards. Key operations in Rockhampton include:

• a Network Control Centre and teams at the Munro Street office building
• maintenance depots which are bases for teams involved with ongoing maintenance on the Central Queensland Coal Network, including work on the track, ballast, overhead electrical systems and signalling
• construction depots which are the bases for teams involved in asset renewal projects and building new track infrastructure; and
• the Stanwell Depot (outside Rockhampton) employs traincrew and operations staff.

Local suppliers also support its maintenance and asset renewal programs, including sleepers and rail components from regional Queensland businesses. In addition, locomotive and rollingstock maintenance work is conducted by suppliers in Ipswich and Maryborough.

The hub will:

• bring together industry participants involved in train operations, rail infrastructure and suppliers to the rail industry (e.g. local businesses that maintain and repair wagons). Rail operators across Central Queensland will be invited to participate alongside significant suppliers to develop capability throughout the supply chain
• develop improvements in rail technology and innovation, using advanced manufacturing processes
• contribute to improved industry outcomes, through industry participants having a role in the local reference group
• through the vocational education and training sector and Central Queensland University, industry outcomes will be aligned with educational and training qualifications to ensure that employees in the rail industry have continuing career paths. This could involve, for example, the development of one or more certificates or degrees in rail operations or rail technology
• promote better management of rail assets through advanced connectivity of sensors and systems, and related opportunities of The Internet of Things.

Advanced technologies for metal production

To assist Rockhampton’s metal production manufacturing sub-sector remain competitive, the Rockhampton Hub will bring the best technologies, processes and practices to the region, and assist with the transition to advanced manufacturing. This will position local businesses to manufacture and service advanced products locally. Advanced Welding Training will also be delivered through the Rockhampton Hub using augmented reality welding simulators.

Food product innovation

The Rockhampton Hub will also focus on innovative food product manufacturing as it makes up 46.8 per cent of the manufacturing sector by employment in the Rockhampton local government area. 72 per cent of this is attributed to employment in meat processing.

In recognition of the important contribution of meat processing to the manufacturing sector, meat processors are represented on the Ministerial Manufacturing Committee (MMC), chaired by the Minister for State Development, Manufacturing, Infrastructure and Planning.

The MMC, also called the Queensland Beef Processing Strategy to place downward pressure on processing costs and to ensure the sector can capitalise on emerging product opportunities that will protect and grow regional jobs.

The hub will:

• align industry outcomes through coordinated engagement with food processors on local and regional issues
• assist with the transition to increased integration of mechanisation and automation and sophisticated processing and packaging to deliver shelf ready products. This is expected to create new career opportunities and new training and skills requirements including data analytics and food science and technology
• provide professional development and skills pathways for career progression and mentoring and leadership courses.

The hub will call for industry leadership to assist food producers across all sub-sectors with improving efficiencies in their businesses models, demonstrate the latest state of the art technology, and assist with workforce development and training.
How will the hubs assist business?

While focusing initially on a smaller number of initial key focus areas, the hubs will provide access to a range of tailored programs that service the breadth of manufacturing in each region. Local manufacturing businesses will be able to access streamlined advice and assistance to targeted manufacturing programs including:

**Business development programs**

- Benchmarking
- Working one-on-one with a consultant
- LEAN manufacturing workshops
- Basic business management, digital technology and marketing workshops
- Assistance with grants writing
- Business-to-business mentoring, business coaching, Mentoring for Growth
- Improving supply chain capability
- Sustainability seminars
- Assistance to increase access to national and international markets including attending trade shows/missions

**Skills development and training programs**

- Advanced welding
- Additive manufacturing, laser cutting etc
- Coordinated access to existing and emerging trade and professional skills
- Improved access between business and research
- Technology and demonstration days from advanced manufacturers
- Industry 4.0 seminars
- Virtual and physical tours of advanced manufacturing businesses
- Hosting of international experts in advanced manufacturing
- Events and workshops on advanced manufacturing, automation, robotics, Internet of Things

**Awareness of advanced manufacturing**

These programs will be measured and reviewed periodically to ensure they are meeting the needs of local industry. The programs will be modified to best reflect changing local manufacturing needs.

**Hub benefits**

Being part of the hub will offer significant tangible and transformational benefits for regional manufacturing businesses including:

- a benchmarking service and access to one-on-one consultants to assist businesses to become more productive, access new markets and grow
- saving time for business and helping manufacturers focus more on developing their product
- assistance to help bring products to market
- showcasing regional manufacturers
- workforce Development and Training for businesses and employees
- business mentoring and coaching
- tailored programs to support businesses to diversify
- developing important pathways to and from schools and universities, to assist in retaining and developing the regional workforce with strong STEM skills
- growing SMEs to drive growth in regional areas and job creation through Queensland
- bringing together business and research to improve local manufacturing capabilities.

The hubs will also support local businesses to access federal government funding, such as potential funding offered through the Advanced Manufacturing Growth Centre. In addition, the hubs will work closely with the Advanced Manufacturing Growth Centre to implement their programs in the regions.
Case Study

One benefit of the hubs will be to provide a mentoring service and to connect businesses to ‘those in the know’, particularly connecting businesses with leading firms who have automated and/or are using robotics.

The hub will also provide demonstration equipment and where possible, manufacturers can ‘try before they buy’ prior to investing in expensive equipment.

Some equipment may also be available for use by SMEs, to use for commercial projects.

One of the most significant barriers to businesses adopting advanced manufacturing is access to trusted advice, particularly in relation to new technology and the cost and time required. The hub will provide significant benefit to regional businesses through connection to leading firms and global supply chains, to accelerate adoption of advanced robotic capability and Industry 4.0 techniques. The engagement will be facilitated by the dedicated Hub Coordinators.

Through information sharing and learning, businesses involved with the hubs will improve their capability, and create value through their own learnings, for wider leverage or collaboration. This will in turn, have a transformative effect across the broader regional landscape, lifting industry capability and driving competitiveness.

Hub locations

The hubs will be physically located in (but be a separate entity to) TAFE in Cairns and Townsville, and the Central Queensland University in Rockhampton.

Establishing the hubs in VET facilities will leverage existing relationships between industry and the VET sector and provides an effective solution for industry to access common use equipment and workshop areas.

The hubs will also work closely with James Cook University to support and grow local manufacturing particularly in Cairns and Townsville, and the Central Queensland University in Cairns and Townsville. Universities will play a critical role in:

- providing quality and relevant undergraduates and postgraduates
- developing short courses relating to Industry 4.0 and advanced manufacturing capability
- aligning research programs with regional manufacturing needs

It will also be important for the hubs to collaborate with other universities (e.g. Queensland University of Technology, Griffith University and The University of Queensland) to leverage research and development, support potential grant applications to the federal government, and to improve business to research links.

Hub staffing

Each hub will be staffed by a Hub Coordinator, a Skills Development and Training Officer and a Project Support Officer.

The Hub Coordinator

The Hub Coordinator will be responsible for overall coordination of the activities of the hub, bringing together industry partners, local businesses, local governments, economic development agencies, and educational institutions, to lead growth of regional manufacturing.

The coordinator’s role will include industry liaison, business development, linking to skills development and training programs, and assisting manufacturers to access relevant Queensland and Australian Government programs.

The Skills Development and Training Officer

The Skills Development and Training Officer will provide fast-tracked assistance to skills audits and flexible, short training courses and qualifications that can assist in meeting the existing and evolving needs of industry.

This position will also assist local manufacturers to access the training services of the tertiary education and training sector relevant to businesses.

The Project Support Officer

The Project Support Officer will provide administration support to the hub including supporting delivery of the services provided by the hub.

Hub governance

The hubs will be overseen by the Minister for State Development, Manufacturing, Infrastructure and Planning.

The Manufacturing Ministerial Committee will identify future opportunities for the hubs, particularly in terms of skills development and training, and through its regional representation. The Hub Coordinators will report to the MMC on a regular basis.

A central oversight committee will be established which will be chaired by DSDMIP and will be responsible for the strategic direction of the hubs. Membership will include TAFE, universities, state government agencies, federal agencies, unions and industry peak bodies. The central oversight committee will approve projects relating to key focus areas and expenditure where relevant, upon recommendations from the local reference groups. In addition, a member from each local reference group (see below) will be represented on the oversight committee.

The local reference groups will be a critical driver of the local ecosystems

To ensure local needs are identified and met, a local reference group will be formed in each of the three regions and chaired by the Hub Coordinators. The local reference groups will include members from DSDMIP, local businesses, TAFE, universities, federal and state agencies and local governments, unions and industry peak bodies. The local reference groups will represent their respective regions and be a critical driver of the local ecosystems, particularly in identifying opportunities to develop and operate the hubs past the initial three-year period.

The Hub Coordinators will operationally report directly to the department’s Regional Directors in the respective DSDMIP regional offices and report to members of the local reference group, the central oversight committee and the Manufacturing Ministerial Committee (MMC) on a regular basis.

Nominations for the local reference groups and central oversight committee will be called after the hubs have opened (expected in late 2018), as well as the establishment of the Terms of Reference. The governance and reporting structure is illustrated on page 22.
Future sustainability

The hubs will build a strong and collaborative regional ecosystem with industry partners to accelerate the growth of several, specialised existing industries. Targeted advice and industry support and services, will develop the intellectual capital of the local ecosystem, and position the hubs to be self-sustaining into the future.

As part of the Hub Coordinators’ role and as the ecosystem develops over the next three years, each of the hubs will identify and build additional programs and networks that will open up other opportunities to develop and operate the hubs past the initial three-year period. This may include identifying and supporting local and regional research and industry organisations to become strategic partners with local industry to provide capital or in-kind contributions over time.

For example, in Cairns as additional small-scale food producers enter the ecosystem and the Food Manufacturing Incubator, they will find new customers, improve business processes and be able to explore Asia Pacific markets. The Food Manufacturing Incubator will also provide opportunities for new start-ups and for businesses to diversify their products. This will grow the Far North region’s profile and create opportunities to be self-sustaining.

In addition, James Cook University in Townsville has capability to design and prototype products. Capability includes software development, electronic design and 3D printing (including carbon fibre). In addition, an opportunity exists for the hub to partner with James Cook University to leverage the Bachelor of Engineering (Electronic Systems and the Internet of Things).

In Rockhampton, CQ University may offer opportunities to develop the ecosystem, particularly in developing opportunities with The Centre for Railway Engineering and industry participants involved in the rail freight sector.

These opportunities will be investigated by the Hub Coordinators as the hub evolves. Annual program reviews will be undertaken to ensure each hub is meeting its objectives, and to monitor future opportunities for the sustainability of the hubs. Each individual hub program review will inform an independent hub program evaluation, undertaken at the end of the three years and inform options for the program to continue.
References cited in this document

1. Limited life funding of three years will be invested by the Queensland Government
2. Queensland Statistical Area SA4 boundaries as defined by the Australian Bureau of Statistics
3. Queensland Statistical Area, SA4 June 2018
5. 2016 Census data, Australian New Zealand Standard Industrial Classification (ANZSIC) two-digit sectors (based on place of work), local government areas
6. ABS, #3218.0, Regional Population Growth, Australia, various editions
8. ABS, #3218.0, Regional Population Growth, Australia, various editions
10. REMPLAN, REMPLAN Economy Database, based on SA4 regional boundaries, December 2017
12. Australian Bureau of Statistics LGA business counts June 2017
13. Employment specialisation is measured by comparing an industry's share of total employment in a particular regional economy with the corresponding industry share of total employment for the overall Queensland economy for a given time period. It is commonly expressed as a ratio, where an industry recording a ratio above 1.2 is considered “specialised” in terms of employment, indicating its comparative importance. The ratio of 1.2 used to classify employment specialisation is consistent with regional economic development literature.
14. ABS, #3218.0, Regional Population Growth, Australia, various editions
16. ABS, #3218.0, Regional Population Growth, Australia, various editions
18. REMPLAN, REMPLAN Economy Database, based on SA4 regional boundaries, December 2017
20. Australian Bureau of Statistics LGA business counts June 2017
21. Defined at the ANZSIC four-digit level
22. ABS, #3218.0, Regional Population Growth, Australia, various editions
24. ABS, #3218.0, Regional Population Growth, Australia, various editions
26. REMPLAN, REMPLAN Economy Database, based on SA4 regional boundaries, December 2017
27. Australian Bureau of Statistics SA4 Business Counts June 2017
28. Remplan Economy Business Analysis Module March 2018
29. Queensland’s peak horticultural body
30. CQ University plays a dual-sector role after merging with TAFE on 1 July 2014