



Gold Coast Industry 4.0 Business and Investment Profile

“The Gold Coast is in a unique location with all three levels of government working in collaboration to drive industry transformation, industry development and investment”.

The Gold Coast Industry 4.0 Business and Investment Guide was commissioned by:

- Regional Development Australia Gold Coast
- Queensland Government
- City of Gold Coast
- Gold Coast Health and Knowledge Precinct

Developed in collaboration with Better Cities Group and Giles Consulting International

Guide Structure

- The Gold Coast, Australia
- Gold Coast Health and Knowledge Precinct
- Industry 4.0
- Advanced Technologies
- Industry 4.0 on the Gold Coast
- Industry 4.0 Clusters
- Gold Coast Smart City Enablers of Industry 4.0
- Competitive Advantage
- Leading Gold Coast Industry 4.0 organisations
 - PWR
 - MEXX Engineering
 - Datarwe

The Gold Coast, Australia

The Gold Coast is an emerging global city dedicated to business growth, job creation and advanced technology adoption to drive competitiveness and productivity.

Boasting three world-class universities, a Health and Knowledge Precinct, a Cultural Precinct and an unparalleled natural environment, the Gold Coast is perfectly positioned as a destination for all major industries.



Gold Coast Health and Knowledge Precinct

The Gold Coast is home to Asia-Pacific's newest health and innovation hub - the Gold Coast Health and Knowledge Precinct (GCHKP) - a unique global business location for high-tech industry development, research collaboration and jobs of the future.

Backed by \$5 billion in recent health, education and transport infrastructure and equipped with ultra-high-speed fibre Internet, the 200-hectare GCHKP is transforming Australia's leading lifestyle city.

Home to the world-class Griffith University, co-located with the \$1.76 billion Gold Coast University Hospital (GCUH) and the Gold Coast Private Hospital, the GCHKP played host to the 2018 Commonwealth Games Athletes Village, now transformed into a vibrant community in which to live, work and learn.



Industry 4.0 overview

Industry 4.0 describes the automation and digitization of supply chains with reduced need for human intervention.

The term, Industry 4.0 traditionally applied to manufacturing which had been underpinned by human activity to manage and optimise the production of goods. Now the shift combines traditional manufacturing processes with advanced technologies optimising productivity and efficiency gains, enabling businesses to be more competitive.

Industry 4.0 technologies add value by enabling better insight into manufacturing lines, supply chains and resource usage. This insight is being enabled through new technologies such as sensors, big data and analytics, robotics, automated systems, augmented and virtual reality, simulation and cloud computing.

Industry 4.0 sees businesses become increasingly automated and self-monitoring as machines can analyse and communicate with each other, improving the efficiencies in the process. For example, logistics companies are engaging robots within their warehouses to improve efficiencies in distribution, shipping and delivery. This is subsequently freeing up the capacity of employees to focus more on cognitive based tasks enabling business to retrain and upskill workers to take on new responsibilities.

Advanced Technologies

Industry 4.0 involves adoption of the following advanced technologies to automate and digitise improvements to supply chain processes:

- Big data
- Robotics/automation
- Cloud computing
- The internet of things
- 3D printing/additive manufacturing
- Artificial intelligence
- Augmented/virtual reality
- Advanced manufacturing/computer assisted manufacturing
- Advanced design/3D modelling
- Digital twin
- Nanotechnology
- Blockchain
- Machine to machine communications
- Sensor technologies



Gold Coast Industry 4.0 capability highlights

Has significant Industry 4.0 capability across sectors including advanced manufacturing, health and medical technology, space and aerospace, textiles, additive manufacturing, food technology, sport and film



Businesses are leveraging off advances made in one sector for the benefit of another



There are geographical clusters of Industry 4.0 capability using similar technologies such as additive manufacturing and artificial intelligence



Businesses are committed to adopting new advanced technologies to increase productivity



Growing partnerships between universities and industry to adopt Industry 4.0 capability

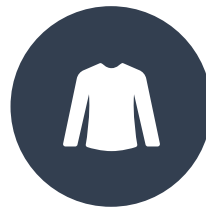
Gold Coast Industry 4.0 Clusters



**HEALTH AI CLUSTER
– SOUTHPORT**



**SPACE AND
AEROSPACE CLUSTER
– NORTHERN GOLD
COAST**



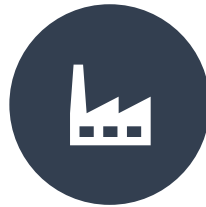
**TEXTILES CLUSTER
- YATALA**



**BREWING CLUSTER
– BURLEIGH**



**MED TECH/BIONICS
(DIGITAL TWIN)
– SOUTHPORT**



**MANUFACTURING
CLUSTER – YATALA**



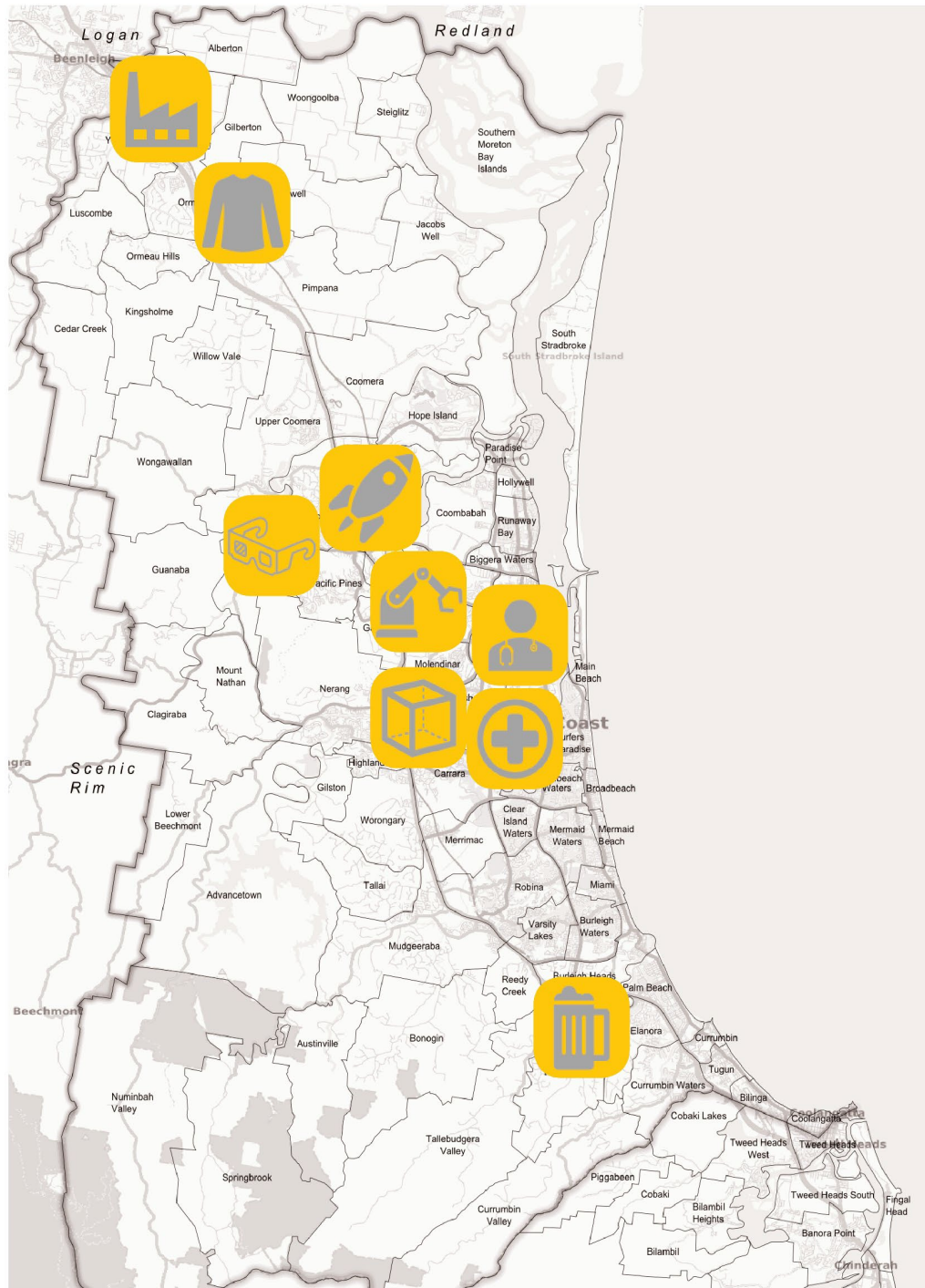
**ADVANCED
MANUFACTURING
– ARUNDEL**



**FILM VISUAL
EFFECTS
– OXFORD**



**ADDITIVE
MANUFACTURING -
SOUTHPORT**



AI Health Cluster –
Southport



Aerospace Cluster –
Northern Gold Coast



Textiles Cluster -
Stapylton



Brewing Cluster –
Burleigh



Med Tech Cluster
(Digital Twin) –
Southport



Manufacturing
Cluster – Yatala



Advanced
Manufacturing Cluster
- Arundel



Film Visual Effects
Cluster –
Oxenford



Additive
Manufacturing Cluster
- Southport



Cluster Locations



Gold Coast Smart City Enablers of Industry 4.0

- 864-core carrier-grade fibre optic network running along the light rail corridor and to be expanded to other key centres in the City.

Delivered by the City of Gold Coast and providing commercial organisations the fastest internet speeds in Australia.

- 5G is the next generation of mobile networks and coverage is currently concentrated along the coastal corridor and up into northern Gold Coast.
- The City of Gold Coast has installed a commercial-grade Low Power Wide Area Network (LPWAN) using the globally-adopted open standard LoRaWAN technology.

The new network enables diversified large-scale Internet of Things (IoT) applications throughout the City making it Australia's largest commercial LoRaWAN network to date.

Competitive Advantages

- A comprehensive “digital city” communications network
- Advanced and collaborative university, TAFE and training sector
- Gold Coast Health and Knowledge Precinct fostering and attracting clusters of Industry 4.0 activity in the areas of medical technology, health AI and additive manufacturing
- A lifestyle city that attracts knowledge workers and industry investment
- World class companies in the areas of space and aerospace, advanced manufacturing and mining
- Collaborative government support from all three levels of government

PWR Advanced Cooling Technology

PWR is based on the northern Gold Coast and is a generational company that originally serviced car radiators.

The company has rapidly evolved and now provides world class cooling solutions by manufacturing high performance aluminum radiators, intercoolers and oil coolers for leading race teams such as F1, NASCAR, V8 Supercars, Deutsche Tourenwagen Masters, Moto GP and World Rally Championship.

PWR is recognised as a world leader when it comes to high performance cooling and the technology it has developed is now also being applied in defense, aerospace and electric vehicle markets that require precision and light weight cooling solutions.

Innovation and technology adoption is fundamental in PWR's success in the field of world class thermal solutions.

Current on-site Industry 4.0 capability includes:

- Robotics/automation
- Multi-axis CNC machining
- Cloud computing
- Computational fluid dynamics
- 3D printing metals and plastics
- Advanced manufacturing
- CT scanning
- Laser cutting
- 3D modelling
- Sensor technology

"We're based on the Gold Coast because the region offers diversity and depth of skilled workers, with a connected freight network that supports the critical logistical timescales to successfully run a global business built on product delivery and service."

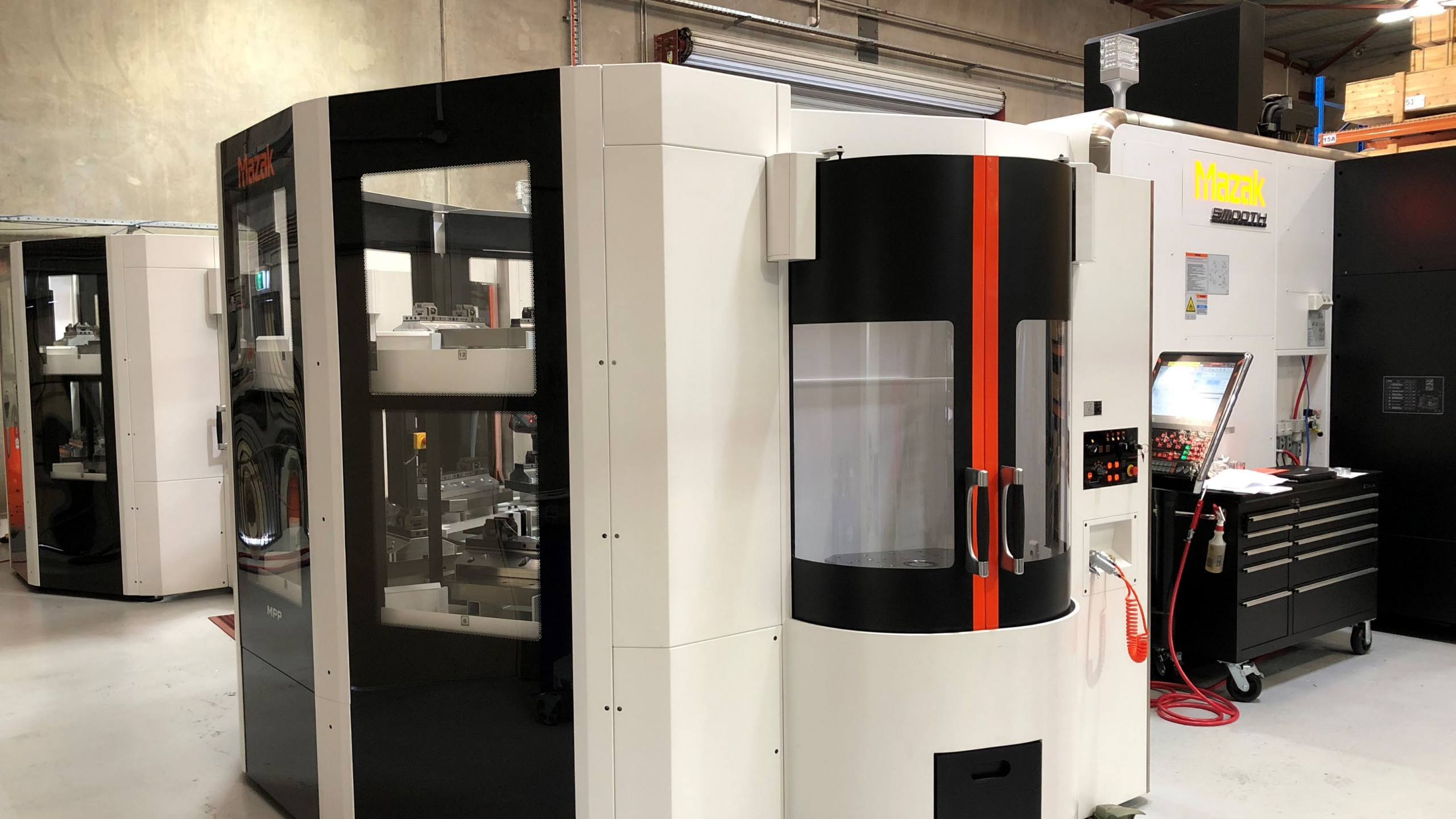
Matthew Bryson, Chief Operating Officer, PWR



TAV
VACUUM FURNACES

TAV
VACUUM FURNACES

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PWR
ADVANCED COOLING TECHNOLOGY

WE KEEP YOU COOL
PWR
RECEPTION
& SALES
←

MEXX Engineering

Mexx Engineering develops autonomous solutions and robotic systems that integrate with existing systems or new processes.

Product development includes automated bottle palletisers, automated bottle bagging and de-bagging systems, robotic weld cells an automated concrete laboratory and robotic paint systems.

MEXX Engineering is a multi award winning company recognised for their commitment to innovation and Industry 4.0 development.

They supply to sectors including the food and beverage, plastics, mining and construction.

Current on-site Industry 4.0 capability includes:

- Robotics/automation
- Cloud computing
- Advanced manufacturing
- 3D modelling
- Bespoke automated manufacturing systems

“We’re based on the Gold Coast because this is an ideal location to attract industry professionals due to the amazing outdoor lifestyle on offer with our world class beaches, beautiful hinterland and warm climate”

Luis De Jesus, Managing Director,
MEXX Engineering







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ENGINEERING

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Datarwe

Datarwe is a data-driven technology company that provides an acute care medical research data platform. Data from real de-identified Intensive Care episodes is collected by the platform and enriched to be research-ready.

The platform enables clinicians and medical researchers to rapidly collaborate in the development and delivery of trusted Artificial Intelligence (AI) clinical diagnostic tools and technologies direct to the patient bedside.

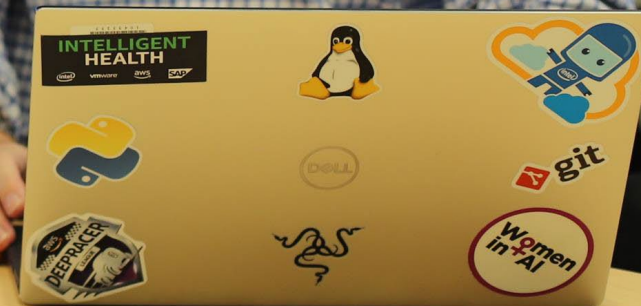
Current on-site Industry 4.0 capability includes:

- Big data analytics
- Artificial Intelligence
- Machine Learning

“We’re based on the Gold Coast because of a multitude of really strong factors which only the Gold Coast could provide. The Gold Coast boasts some of the world’s leading experts in artificial intelligence and robotics providing our team access to an extensive network of innovative researchers, scientists, health and technology experts. Our offices are based in the Gold Coast Health & Knowledge Precinct, co-located with existing entrepreneurs and high-tech start-ups and we have strong relationships with nearby the Gold Coast University Hospital, on of Queensland’s largest research facilities.”

Dr Brent Richards, FRACP FCICM, Advisory Board Member Datarwe/ Gold Coast Hospital and Health Service Medical, Director Critical Care Research, Medical Director of Innovation

Dr Kelvin Ross PhD, Chief Technology Officer.



Gold Coast Industry 4.0 Business and Investment Profile

industry4.0.rdagoldcoast.org.au

Project partners:

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