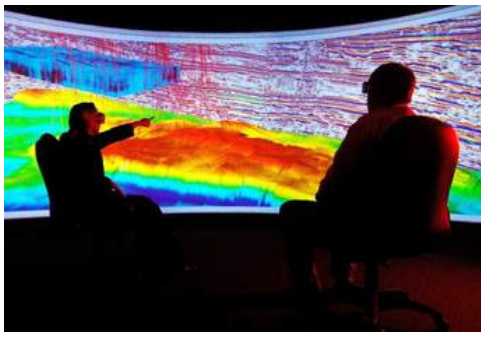
QUANTUM

CROSS-SECTOR TECHNOLOGY EXCHANGE

Atomic Sky

QUANTUMTX QUEENSLAND 2020



QUANTUM TECHNOLOGY EXCHANGE facilitates small and medium sized Australian technology businesses to bridge the Space, Mining, Energy, Agriculture and Defence industries. The circular nature of these opportunities is a catalyse for significant growth in all industries.

By incubating SME's and new ventures we collaboratively strengthen across sector startup ecosystems whilst supporting larger organisations that develop strategic sectors.

QTX focus on converging technology streams that are essential to both the global space sector and that extend Australia's existing competitive advantage. Building pathways for SMEs with existing strengths cross cutting technologies such as AI, Robotics, Automation, Remote Operations, Simulation, Digital Communications and Data Sciences.

"Australia's mining equipment, technology and services sector has a long history of supplying innovative resources sector solutions. Capabilities in digital automation, data analytics, robotics, and remote operations are widely recognised for their applicability across multiple industries. The QuantumTX program plays to Australia's strengths in technology application and provides access to global pathways through collaboration and investment in innovators."

Adrian Beer: CEO, METS Ignited

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QUANTUMTX QUEENSLAND 2020 COHORT

METS Ignited Australia and the Queensland Government commissioned Atomic Sky to operate its QuantumTX business accelerator for Scale-Up companies and SMEs strengthening the METS sector across Queensland. The 14 Program Participants selected for the QTX Queensland 2020 program have potential global competitive advantage with existing innovative products that can solve common supply chain challenges across multiple industries.

2CENSOR

Telemetry and customised sensors improve abrasive wear asset management. 2Censor manufactures abrasive wear sensors that predict pipe and wear plate erosion and failure. Their continuous and automated monitoring of assets including pipe segments, chutes and bins. Using electronic telemetry with customised sensing probes and analysis software. By providing an early warning before asset failure, 2Censor's solution reduces downtime, environmental risk, labour costs and minimises known time to failure by connecting the whole system – sensor probes, transmitter, base station, and 2Censor dashboard.

AUSTRALIAN DROID AND ROBOT

Robotics and automation solutions to improve mining safety. Australian Droid and Robot offers numerous products and services based on their extensive experience in remotely operated vehicles, from remote inspection of inaccessible areas to the design and construction of specialised ground and aerial robots. ADR can use their existing fleet or design, build and operate custom vehicles for their clients' needs be it the inspection of a seized raise bore, the remote laser scanning of an inaccessible area or projects requiring remote data collection.

ADVANCED INFRARED RESOURCES AUSTRALIA

Eliminating premature failures through automated infrared fault detection. Advanced Infrared Resources Australia is focused on developing automated solutions in machine monitoring derived from Infrared Inspections of machinery. Having already developed and tested equivalent methodologies with hand-held cameras, accumulating an extensive image and corresponding data library relating to failure modes and severity standards on almost all types of mining machinery, we are looking forward to providing automated models to industry.

BIA5

Remote ground vehicles with AI supporting improved emergency management. BIA5 specialise in the design, manufacture, supply, and support of electronic systems for mining, military and law enforcement agencies. Providing field robotic solutions that offer a remote presence to improve safety in high risk situations. With exceptional off-road capability and an adaptable platform allowing the integration of modular payloads ensures a unique solution to combat critical incidents protecting personnel and productivity.

COUNTRYWIDE METALS

Automated and Robotic livestock management for effective mining ecosystems. Countrywide Metals provide a range of autonomous and robotic animal management technologies to improve sustainability, productivity and economic prosperity through animal management technologies. They provide mining companies with efficient and cost-effective cattle and farm management solutions for agricultural land use.

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EMB SAFETY HELMET

Revolutionising safety wearables to reduce accidents at worksites.
EMB Computerized Safety Helmet uses a number of different technologies such as proximity tracking and fencing, fatigue management warning systems as well as different types of alarms all installed within the helmet. By using these features in the helmet, EMB aims to reduce the risk of accidents and potential fatalities caused by poor visibility, blind spot areas and human error whilst operating machinery and carrying out day to day duties.

INTOV8

Enterprise data warehousing, production accounting and performance management systems. Intov8's software solutions have been developed by miners for miners. Intov8's unique blend of real-world experience mining and deep understanding of software systems provide the world's largest mining companies with an integrated suite of products that solve their most challenging problems. The POLR suite integrates with all onsite systems facilitating contextual, business-wide insights for rapid decision making and short interval control. By implementing a single source of the truth Intov8 clients gain a complete view of their operations. Features include production accounting, performance management, fleet management, key business metrics, planning and execution, logistics, and more. POLR Sale2Sail is the complete pit to port solution.

JESI

Comprehensive enterprise software platform to effectively manage remote workforces.
JESI is a global, location-based software solution that enables an organisation to control the risks associated with a mobile workforce operating remotely across multiple geographic locations, a real-time overview of where people are, where they have been and where they are going in order to deploy responses and rapid communication to reduce accidents, injuries and delays. JESI is used for: journey management, lone workers, working from home, working on-site, health checks, and digital risk assessments.

MHO INFRASTRUCTURE

Photo recognition based product segregation on conveyor belts. MHO Infrastructure utilises Materials Handling Optimisation through conveyor belt material identification technologies. MHO works in every part of the life cycle of a materials handling operation from FEL to decommissioning. Their field-based experience and technical know-how delivers outcomes that are measured by improvements in system availability, throughput, flexibility and reduced costs.

OREFOX

Using AI to increase success in mineral exploration. OreFox utilises AI and machine learning to save time and leverage data better, allowing clients to make more discoveries faster. The OreFox Prospector System is a data-driven, deterministic system, inspired by greenfields exploration work, in areas of low data density, using a supervised deep-learning algorithm that compares the data of Australian economic gold & copper deposits against the data of areas to be explored. The system looks for correlations in data, previously hidden patterns, clusters and relationships across massive datasets. The system can find up to 16 million unique signatures for each deposit and can search 1600 square kilometres at a time.

REAL SERIOUS GAMES

Create XR experiences that enthral, engage, influence, and inspire. Real Serious Games designs and develops Extended Reality (XR) products, solutions and experiences for their customers' training, education, communication, engagement and planning purposes, helping them be cutting edge and competitive in realising their business goals. By applying a holistic, outcomes-focused approach and combining technical expertise with an understanding of human behaviour, Real Serious Games create accurate, seamless, and intuitive interactions with technology for real-world application. By inventing new worlds of possibility in Extended Reality (XR) applications, we are committed to creating a better future, through technology.

SENSAWEB

Real-time radiation and environmental monitoring. SensaWeb provides complete end-to-end real time monitoring solutions for any organisation who needs to monitor and report on their radiation and x-ray regulatory requirements. The solutions cover all aspects of the monitoring, management, reporting and notification process and covers multiple sensor types (eg ionising radiation, audiometric, soil moisture, temp, stress and strain, work-site safety monitoring). Remote monitoring of high radioactive environments is enabled by augmenting robotic platforms with their radiation detection devices. Winners of the IoT Alliance Australia's award for IoT innovation of the Year in 2019.

UNIVERSAL FIELD ROBOTS

UFR accelerates robotics automation implementation with mine proven UFR autonomy. The UFR automation solution has, a short implementation time, decreased risk of failure, and low overall cost because UFR specialises in mobile mining equipment automation, has a proven robotics platform and is experienced in collaborating for success. UFR has a growing range of mining solutions using advanced UFR autonomy robotics, ruggedly integrated into trusted Caterpillar machines. UFR can develop tailored application solutions to deliver benefits with safety, cost and business continuity. Universal Field Robots were the Australian Technologies Competition Mining Technologies Winner in 2019.

ZEMEK ENGINEERING

Mobile mining plant component innovations, metals and advanced polymers. ZEMEK uses design innovation to decrease wear and increase the life of mining components in rope shovels, draglines and excavators. Positioned at the forefront of mining equipment component design, we draw on our vast operational and replacement part experience to optimise component designs and material selections, utilising both traditional metals and advanced polymers. ZEMEK has also developed Wearite Polymer bushings to eliminate the need for grease in excavator links, rope shovel dipper-hoist rope connection systems and dipper door arms. Wearite reduces downtime and environmental contamination caused by lube line failures, improves handling safety for fitters, and prolongs the life of mating components.

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"The Fugro ROC is a real-time robotic command & control centre operating over satellite communications. Working with Quantum Technology Exchange empowering pathways for startup & SME technology companies to engage with us in solutions for the subsea, resources & space sectors."

Sam Forbes: Fugro, GM Remote & Autonomous Operations

"I am delighted to be supporting QuantumTX in accelerating and advancing SMEs across industries. A stronger multi-industry service sector is a key enabler to advance our industry for improving efforts in sustainable productivity."

Jacqui Coombes. CEO, AMIRA (The Australian Mineral Industries Research Association).

"Small & medium businesses can play an important role in scaling the Australian space industry. Australia has great capability in key existing sectors such as resources, energy, communications, medicine and more and it is these businesses that now have an opportunity to adapt those proven solutions to the needs of the emerging space sector. We encourage programs like QuantumTX, to play a role in creating those connections and opportunities across sectors whilst helping build capability."

Karl Rodrigues, Executive Director of International and National Engagement at Australian Space Agency

"Mining, energy, resources and technology are crucial industries for jobs growth in Queensland. The Queensland Government is collaborating with METS Ignited, leading business mentors and industry experts to deliver an advanced business accelerator, Quantum Technology Exchange (QuantumTX). The 12-week intensive program is designed to help Queensland businesses accelerate their innovative products and services and realise their full commercial potential. We understand the huge benefits supporting commercialisation of local innovation will have for our economy and the potential for these innovations to service other key markets such as defence, construction and space sectors."

Kate Jones, Queensland Government. Minister for State Development, Tourism and Innovation

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"We created QuantumTX to stimulate collaboration between SME's in multiple sectors, which both opens opportunities for high growth Australian technology companies and creates new jobs as they scale internationally. It is fantastic that so many exceptional organisations and industry champions share the same vision."

Peter Rossdeutscher: Quantum Technology Exchange Founder

NERA National Energy Resources Australia
AUSTMINE Smart Mining
Quantum Technology Exchange
Atomic Sky
METS IGNITED
IMVELO Innovating Ecosystems
Queensland Robotics
TailingsTeQ Alliance Australia
Robotics Australia Group
Startup Toowoomba
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