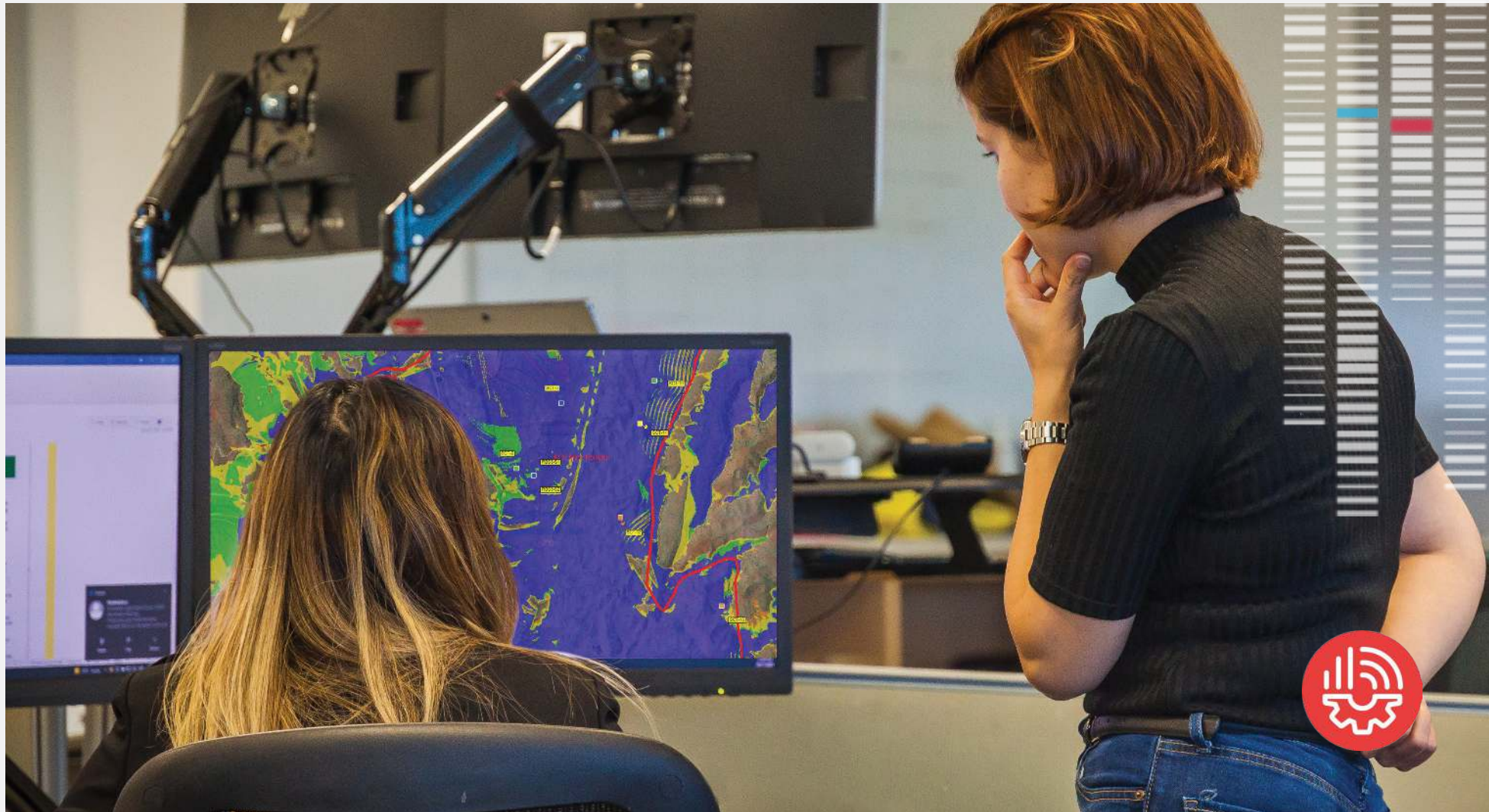




## Private 4G & 5G

Latest generation 4G and 5G connectivity designed and delivered to support business critical industrial communications and network access.



# Why Private 4G/5G?

The current wave of transformation in industry is being classed as the fourth industrial revolution. As the rate of digitally connected 'everything' grows at unprecedented rates, the capability of connectivity solutions to support the growth has also rapidly increased.

Latest generation Private 4G/5G solutions are critical to support:



## CONTROL

Autonomy and remote operations to deliver step-change opportunities for efficiency. Overcome resource constraints, optimise in near real-time



## INSIGHT

Connecting all the 'Things' delivers more insight than ever before to monitor and understand operations in real-time from anywhere



## SAFETY

Safer workplaces that focus on positive worker wellbeing and uses technology to remove risk



## FUTURE-READINESS

Technology investment not just for today, but to create a foundation to support a digitally driven, high performance organisation

# Enabling Uncompromised Performance

“30% increase in productivity by switching to Automated Vehicles”

**Iron Ore Miner, Western Australia**

“Our equipment will create over half-a-million data points per second by 2023”

**Komatsu, 2020**

“We saw an immediate 2,000% decrease in connection events switching from Wi-Fi to LTE”

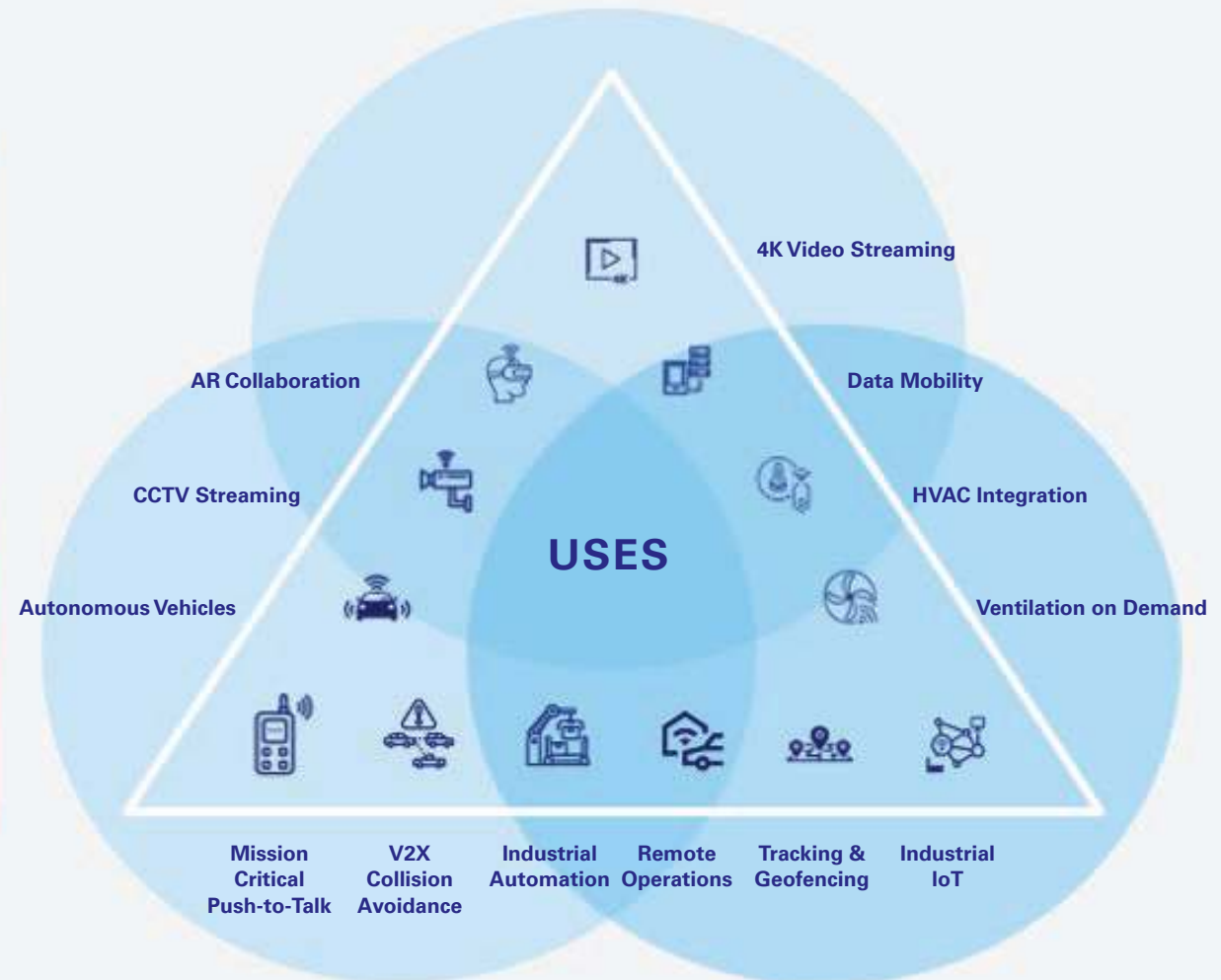
**Iron Ore Operations, Western Australia**



# The Use Cases For 4G/5G

## ENHANCED MOBILE BROADBAND

Non-Critical  
Critical



## ULTRA-RELIABLE, LOW LATENCY COMMUNICATIONS

## INTERNET OF THINGS

# Fully Featured

Aqura's Private 4G/5G platform is a feature rich solution that will accommodate your organisation's needs today and tomorrow.

Enjoy the peace of mind knowing that you can easily scale or add functionality, all aligned to the global 3GPP standard.

## 4G | 5G CORE

- Private 4G LTE native
- Private 5G enabled
- Flexible deployments
- Carrier-grade platform
- Deploy and Scale easily

## AUSTRALIAN HOSTED & SUPPORTED

- Security certified specialists
- Data sovereignty compliant
- Full site survivability
- Enterprise-grade security

## INDUSTRIAL IOT ENABLED

- IIoT Enabled
- NB-IoT or CAT-M1
- Drive operational insight

## SIP INTEGRATION

- Enhance worker mobility
- Native client functionality
- Extend into the field

## 5G FOR TOMORROW

Aqura's platform is enabled for 4G or 5G. Deploy a Private 4G LTE network today and upgrade as 5G devices increase in availability.

## PUSH TO TALK

Already integrated into the core, your PTT communications can not only be enriched but also prioritised for mission critical operations.

## MANAGED SERVICES

Rely on our ISO27001 accredited managed service support with multiple tiers and SLAs to suite your business requirements.

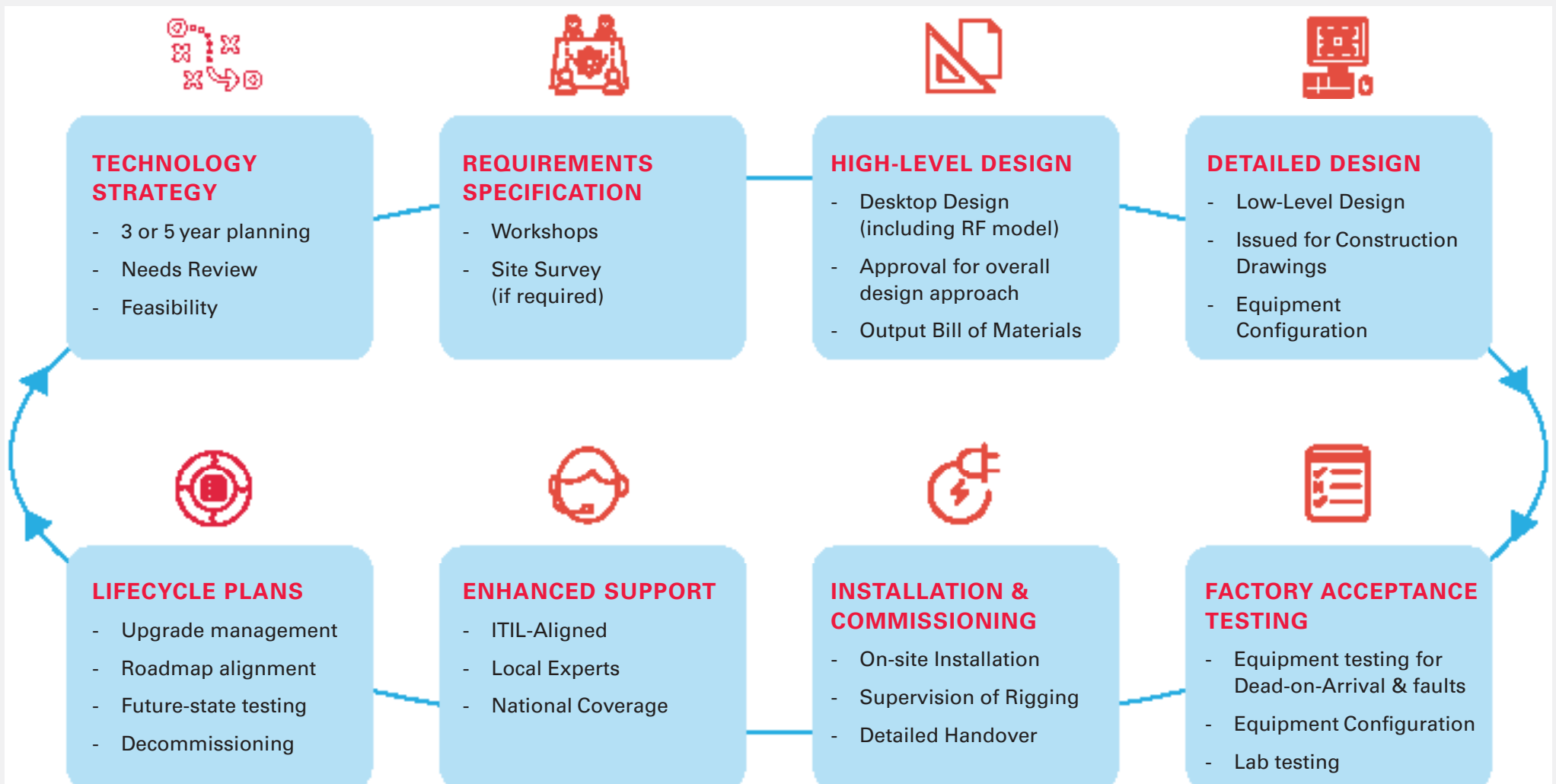
## MOBILE SOLUTIONS

We can deliver readily deployable, mobile Private 4G & 5G solutions that address the needs of exploration, site build and temporary comms.



# Full Service Experience – Idea to End of Life

Our team are highly experienced in not only delivering solutions, but we have extensive experience in pre-project activity to support business and technology case development. Our work focuses on supporting you select the right technology mix which supports business case development and minimises outcome risk.



# Application Integration

We can enable integration of various systems and processes through a Private 4G/5G networks, from device to hand-off on your OT/IT networks.

Corporate Data	Public Internet	Minestar
Modular Mining <ul style="list-style-type: none"><li>- Modular Dispatch</li><li>- Modular Minecare</li></ul>	AHS (Autonomous Haulage System)	ADS (Autonomous Drilling System)
CAES (Computer Aided Earthmoving System)	Aquila (Drill visualisation)	Phindows (Drill & Blast)
Wi-Fi hotspot over LTE backhaul	CCTV	Bore Field Telemetry
IP Voice	VoLTE	SAP
Push-to-Video	GNSS RTK corrections	Asset tracking
Mission-Critical Push-to-Talk (MCPTT)	Slope Monitoring: <ul style="list-style-type: none"><li>- Autoslope</li><li>- Trimble4D</li></ul>	<ul style="list-style-type: none"><li>- Industrial IoT</li><li>- NB-IoT</li><li>- CAT-M1</li></ul>

# Mining

Private 4G/5G perfectly suits the distributed operations of mine sites and the requirement to always be connected to support safety, optimisation and monitoring systems whether on surface, or underground.





# Energy

Private 4G/5G is now the standard for edge connectivity across energy operations to support enhanced safety, optimised operations and near-real time control over energy operations.



# Specifications

ITEM	SPECIFICATION
Modes of operation	Distributed or stand-alone
Resilience	Local redundant core (optional) Distributed HSS (distributed model only) Local traffic resilience with loss of WAN connection
QoS	Supported through PCRF Prioritisation of users and specific data flows
Local Gateways	Supported
Supported RANs	RAN agnostic (Aqura can evaluate RANs not yet tested with our solution prior to deployment) Additional RANs can be added without disruption to the service
IOT	NB-IoT and CAT-M1 supported
MC-PTT	Supported (optional and device dependent)
SIP Interface	Included – provides integration of mobile handset to enterprise PBX
IPv4 / IPv6 Support	IPv4 and IPv6 supported
5G Mode	Supported – NSA and SA
3GPP Compliance	Compliant to Release 15 and Rel 16
Logging	Full device and user action logging
UE Mobility	S1 and X2 handover supported
NMS	Functionality provided

# Support

We don't just design and deliver the best Private Networks, we also back your network with qualified and highly experienced support.

- Australian-based NOC
- ITIL aligned
- Tiered plans to suit
- Fully certified with leading vendors represented

	<b>STANDARD</b>	<b>ENHANCED</b>	<b>ELITE</b>	<b>ELITE PLUS</b>
<b>NOC Hours<sup>1</sup></b>	08:30 - 17:00 Mon-Fri	08:30 - 17:00 Mon-Fri	07:00 - 21:00 Mon-Fri	07:00 - 21:00 Mon-Fri
<b>Phone Support</b>	Yes	Yes	Yes	Yes
<b>Email Support</b>	Yes	Yes	Yes	Yes
<b>Level 2,3 Support</b>	Yes	Yes	Yes	Yes
<b>24x7 Critical Incident Support (Out of Hours)</b>	-	Yes	Yes	Yes
<b>Reporting</b>	-	-	Yes	Yes
<b>Extended NOC Hours</b>	-	-	Yes	Yes
<b>VIP Phone Number</b>	-	-	-	Yes
<b>Level 1 Support</b>	-	-	-	Yes

<sup>1</sup> Excluding public holidays



## ABOUT AQURA TECHNOLOGIES

Aqura Technologies offers a broad suite of communications solutions which are significant enablers of high performance in modern, digitally driven enterprises.

The organisation is known for innovation, whether it is our technology approaches such as Private 4G and 5G and Industrial IoT, or our commercial approaches which now offer in-house developed technology solutions via flexible as-a-Service models.

Aqura delivers its services across Australia from offices in Perth, Melbourne and Brisbane.

Aqura is a standalone company in the Telstra Purple family of businesses.

Contact: 1300 58 57 58



### Industrial Wireless

High-speed, secure 4G & 5G and Wi-Fi



### Complete Access Network

User-centric access to entertainment, Internet and communications



### Industrial IoT

Unified management and integration of connected sensors and 'things'

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