

Big Data and AI for Mission Critical Communications (2.0) – Exploring the True Potential in Australia

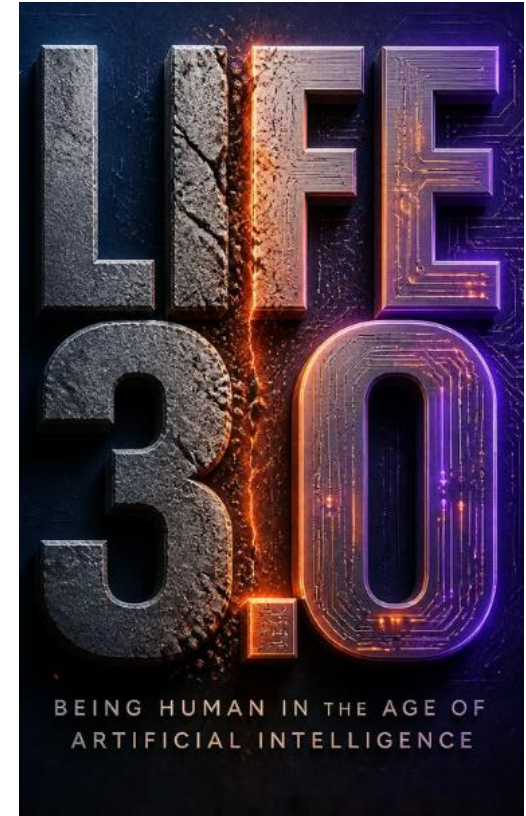


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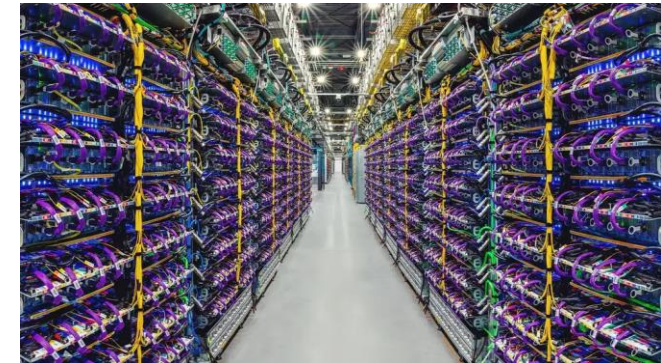
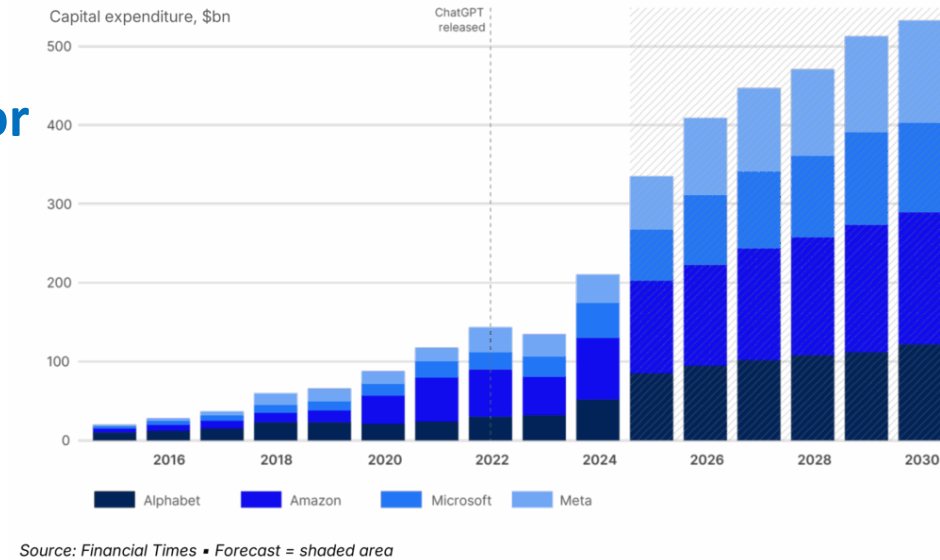
Topics to cover today...

- A **real-time** view of the world of AI, Big Data and **even bigger current issues**.
- **Recap of Big Data for MCC** and the true potential in Australia (6 months on...)
- Why do we still need **to adopt** Big Data & AI in MCC?
- The **on-going issues, complexities and adaptations** of AI in MCC
- **Our continued AI evolution and journey** in the past 6 months alone...
- **What is available now** and how Big data in real-time can transform organizations in Australia
- Leading MCC **AI and Big Data solution/feature sets** that are here to stay
- **What's next?**



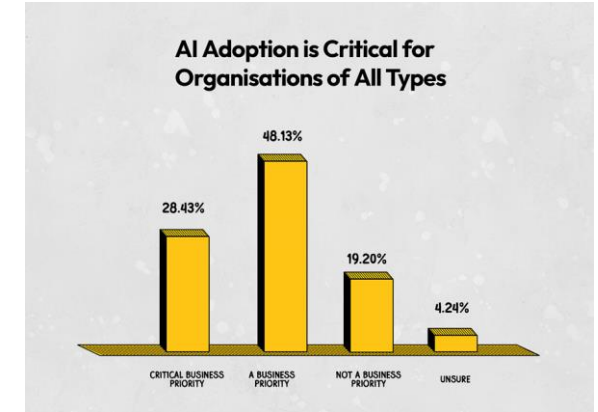
2026 – Outlook for AI and Big Data

- AI farms, Data centres and large-scale Cloud tech. companies **now own 80% of all available stock** and backorders globally **for the next 5 years**.
- As a result, we live in a world currently where COGS for:
 - **SSD storage** has gone up **7-12x in the last 6 months alone**
 - **NAND memory** has gone up 8-14x in the last 3 months
 - **RAID controllers & processors** have gone up 5x in 2026.
 - Industrial grade **GPUs** have gone up 11x since May 2026.
 - **Gov. cloud storage** has gone up 4-6x in 2026.
- **MCC is entering the world of AI** with dedicated funding available for AI projects – 2 years on..
 - On-premise/closed network AI/GPU requests have sky-rocketed
- We, alongside everyone else in this space **have had to adopt and pivot our AI journey**
 - So, what does this mean for MCC in Australia?



The true potential for Australia (Recap from 6 months ago)

- Core transformation from **Voice to Actionable intelligence** across a large continent island - **AI driven data reach is now endless..**
- **Supporting cross-border dataflow and interoperability** between agencies
- **Ability to improve** Public Safety and mission-critical communications by **100x** ~~10x~~/year
 - **Hyper-speed Data-sharing** within and outside state territories
 - **AI Search & Rescue** with Edge AI and Common Operating Picture
 - **Disaster Management** with predictive analytics & autonomous detection
- The advantage of 5G & SATCOM for enhanced AI capabilities.
 - **AI Network slicing** & dedicated **high-speed secure lanes** for emergency services data
 - **Satellite integration** for remote areas and hybrid **use of LEO satellites** is already here
- **24*7 Predictive operations** for Mining & Energy sectors
- Building and developing an **AI-ready work force in Australia** with sovereign data
 - **Data Sovereignty & Real Trust systems** with Australian Human in the Loop
 - **Enhanced Interoperability** at a state, federal and 5-Eyes community level

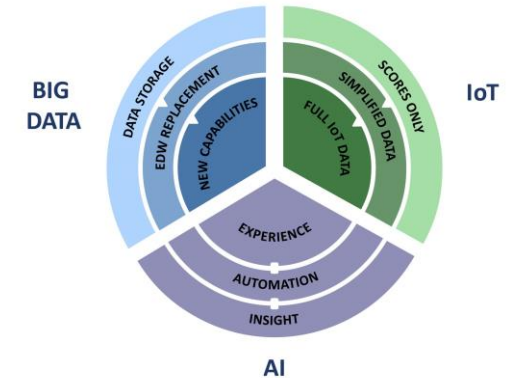


**AUSTRALIA JUST BANNED
AI-GENERATED SONGS FROM
ITS OFFICIAL MUSIC CHARTS**

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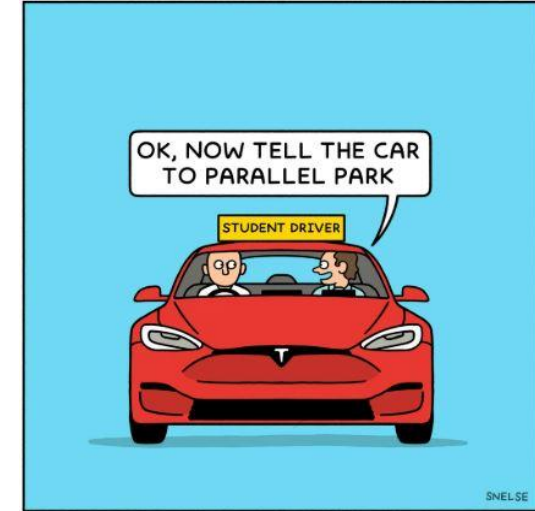
Why do we still need to adopt Big Data & AI in MCC?

- **Legacy voice & data systems are still fragmented and operate in siloes** – Dispatchers, first responders and analysts need to rely on independent systems simultaneously.
- Communication systems that **were never designed to talk to one-another must now inter-operate by a set date in 2027.**
- Immediate need to enable **transition from rule-based automation** to predictive and prescriptive analytics in real-time for almost all critical systems.
- AI assisted intelligence for **real-time monitoring, anomaly detection and decision-making** support is starting to become a baseline requirement.
- Traditional approaches for **big data movement between agencies** is still a major road block and introduces risk, delays, privacy and security implications.
- Automated QA, Training, Simulation, Transcription is becoming increasingly important in MCC control rooms.
- AND now.. **Everyone want everything sent proactively to a single pane of glass in real-time.**



The on-going issues complexities and adaptations to AI

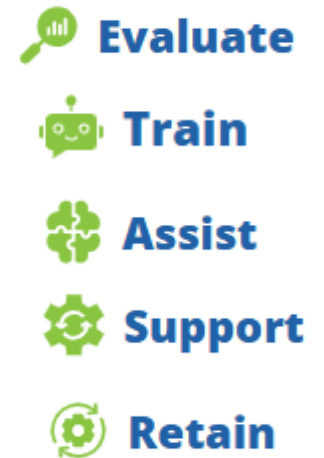
- Most common AI challenges & questions:
 - What does Big data storage cost now and who is paying for it?
 - What does it cost again?
 - How much will it cost next year?
 - New! Can we get an on-premise storage option for our data?
 - Who **owns** the data?
 - ~~Will AI take my job away?~~
 - ~~How can I **trust** AI?~~
 - ~~How do I know if my **personal data** is being stored by AI?~~
 - Is my data **safe & secure**?
- Data integrity and quality in high-noise, multi-modal environments still pose **a constant problem**.
- **Automation bias**, **Operational trust** and Regulatory compliance – the new age of extended unknowns.
- **Network resilience** and **fail-over for AI-powered components** are still being defined.
- Integration with legacy control-room consoles and dispatch systems **are still only now transitioning from analogue to IP/VoIP**.
- AI Cyber Security: **Adversarial attacks** and addressing **evolving risks** in addition to general cyber security & network infrastructure requirements need to be continually addressed.
- The question of '**AI hallucination**' for LLMs needs to still be solved without AI!
- The risk of **over-reliance on AI** and how to tackle it in these early days
- We need data to be **presented automatically** and **in real-time**.



Our AI adoption and journey to-date:



- Our core belief: AI should be still **developed responsibly**, grounded in **research-based practice** and guided by a simple rule: **Do no harm**.
- Our mission: Enabling agencies to **adopt cloud-based AI** capabilities **without overhauling** their **existing infrastructure**
- Investment in our **own AI language model** trained specifically on **Mission-critical & Public Safety data sets**.
 - 98-99% accuracy required at minimum for V&V before releases.
- Provide agencies a **centralized source of truth**: a single clearinghouse for **operational data**, **human interactions** and **actionable insights**.
- **Actionable intelligence** from within Closed AI models based to create **historic patterns** addressing **AI hallucination concerns**
- Ultimately provide humans with **real-time evidence** and **actionable intelligence**
 - We put the **human at the centre of AI**.
- **Introduction of Critical Insights AI Live View**

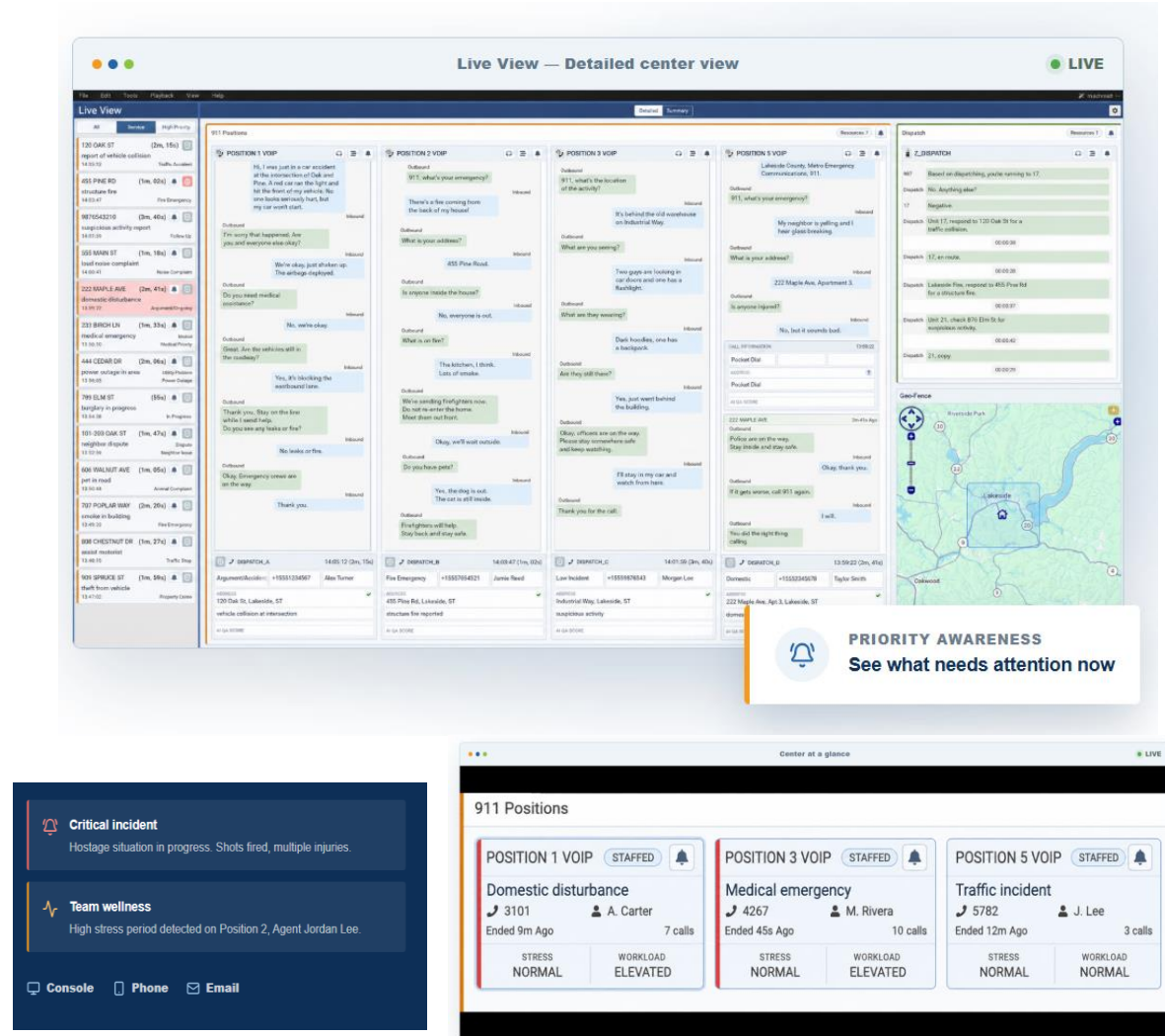


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Live View – Advancing user experience for AI with Big Data



- **Real-time Situational awareness** by connecting phone, radio, dispatch, CAD, maps, QA, workload, stress, and priority alerts **in one 'live summary'**.
- **Supervisor mode** helps 'review' the shift before someone has to explain it.
- **Wellness factor** - Dispatchers can stay aware of a developing incident/sustained high-stress period without watching every channel at every moment.
- **QA scores** arrive while the interaction is still relevant for each call taker.
- Turns the conversation instantly into **usable call information** for training and simulation **on the same day**.
- Real-time Multi-agency **data fusion**: 999 calls, CCTV, IoT sensors, social media feeds

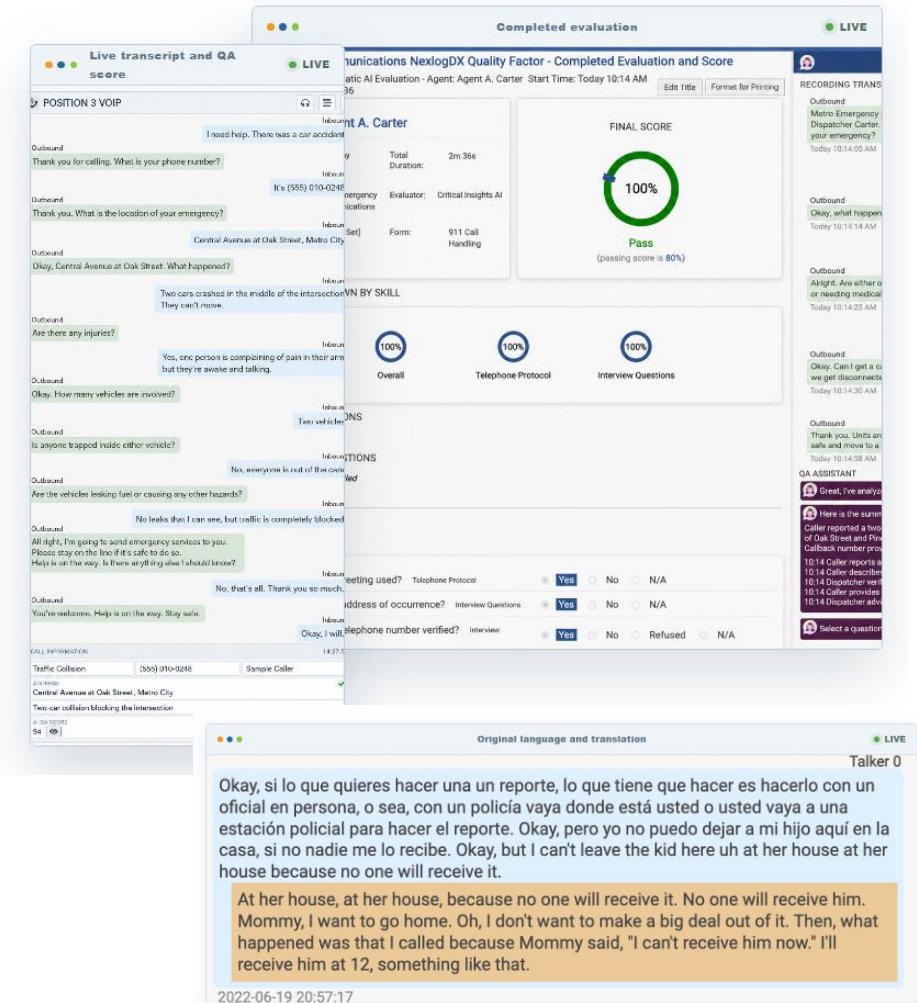


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Live View – Advancing user experience for AI with Big Data



- **Live transcript and instant recall:** Follow 'live' phone and radio communications as a **readable transcript**.
- **Live translation:** Understand the caller without losing the flow of the call
- **Call handler assist:** Turn the conversation into usable call information.
- **Dispatcher mode:** Stay with the call. Live View keeps the context together.
- **Instantaneous actionable feedback:** provide step-by-step analytics for all roles involved
- **Live Confidence scoring:** Purpose built for MCC with customer owned data.
- **Automatic Redaction & PCI compliance*** of both audio and transcripts at the end of each call
- Advanced call-taker coaching through **sentiment** and **compliance** checks



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- [illegible]