ARCIA's Role in a Modern Critical Communications Environment

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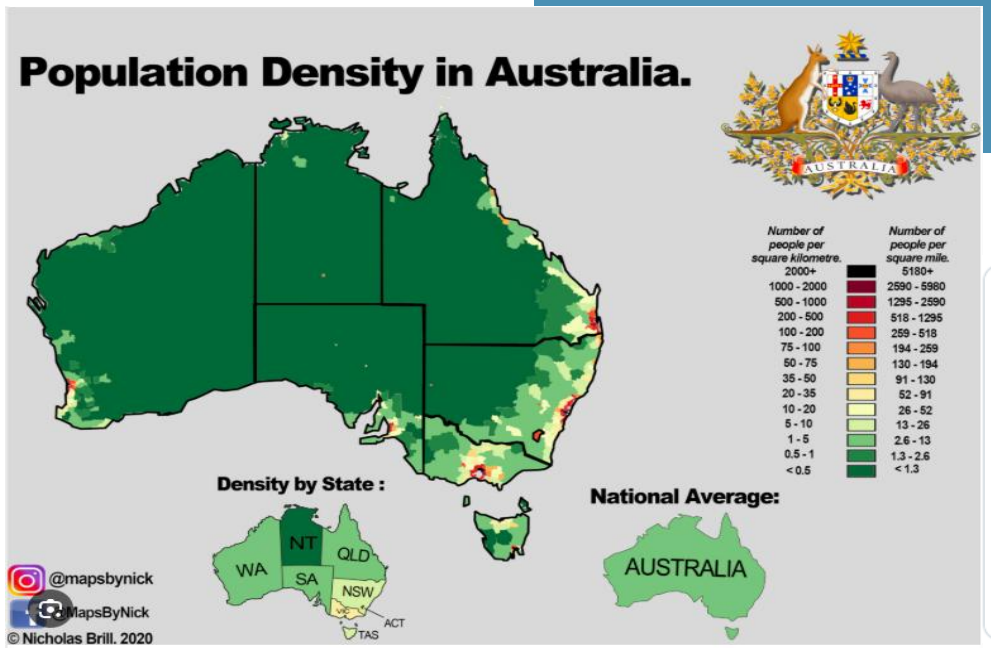
ARCIA

Critical Comms Landscape

- Large Scale P25 networks with hybrid devices switching from LMR to 4/5G and future satellite services
- Critical industries Aviation, Ports, Mining & Transport
- Critical Utilities, Water, Power, Internet, Communications subject to the SOCI Act
- 3GPP standards advancing, with MCX Services and Interworking Frameworks (IWF) becoming mainstream
- Complexity is growing, users demand simplicity

Communications is still a challenge



ABC News
@abcnews

#BREAKING: Police have warned that all telecommunications, including mobile phone coverage, will be lost tonight on the NSW South Coast, between Nowra and Moruya. Hospitals will be among the facilities affected.

5:42 PM · Dec 31, 2019

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P25 LMR State Based Networks

- Australian States operate large scale P25 Trunked Networks, supplemented with P25 conventional
- The coverage challenge is now often solved by using hybrid devices switching from LMR to 4/5G and satellite services
- Public Safety uses all forms of public 4/5G networks for data services
- There is a huge overlay of many other technologies, LMR fireground simplex, paging, mass notification services, drones an endless array of tech used in the field
- Direct-to-Device (D2D) devices could have a huge impact on the ability of agencies to operate across the country
- As Government considers how to move all these services to Mobile Broadband the size of the challenge becomes apparent

Critical Messaging in Australia 2026 – Emergency Responders

There is no public paging networking left in Australia. A snapshot by state:

- NSW - 2 x Government run POCSAG networks for Emergency Services, Government managed smart apps and 4G pagers used in parallel.
- VIC – Dual frequency government run POCSAG network for Emergency Services, Government managed smart app used in parallel.
- QLD – Limited POCSAG paging, Response APP and 4G pagers mainly used
- SA – Government run Flex paging network, SMS and non-government approved Apps
- WA – No paging networks, mostly SMS used
- TAS – Government managed paging network and SMS
- NT – Still some Government Managed POCSAG Networks

Global Public Safety LTE & 5G Subscriptions by Delivery Model: 2025 – 2028 (Millions)

Fully Dedicated Networks

- Safe-Net (National Disaster Safety Communications Network)
- City & District-Wide Band 45 (1.4 GHz) Networks
- Hsinchu City Fire Department Transportable 5G Network
- Royal Thai Police Band 26/n26 (800 MHz) Network
- Provincial-Level Band 26/n26 Safe City Networks
- Portable 5G Systems & CBRS-Enabled Smart City Networks
- GDC (Georgia Department of Corrections)
- Halton-Peel Region & City of Hamilton
- City of Istres Private 5G Network
- UME (Emergency Military Unit) Portable 5G System
- SIRDEE Nationwide Mission-Critical Broadband Network
- Turkish National Police KETUM Program
- Serbian Ministry of Interior eLTE Network
- Private Cellular Solutions for Defense & National Security
- FSO (Federal Protection Service) Dedicated LTE Network
- Abu Dhabi Police & Nedaa Band 28/n28 (700 MHz) Networks
- Qatar Ministry of Interior Band 20/n20 (800 MHz) Network
- Oman Band 20/n20 Public Safety Broadband Network
- Jordan Hybrid TETRA-LTE Communications System
- Kenyan Police Service Custom-Built LTE Network
- Zambia 400 MHz Broadband Trunking System
- Madagascar Safe City Network in Antananarivo
- Mauritania Urban Security Project
- Guyana Police Force E-Government Network
- Mexico City Police Private 5G-Enabled VR Training
- Brazil State-Level Public Safety Broadband Networks
- Uruguay Private LTE Network for Border Surveillance

Hybrid Government-Commercial Networks

- FirstNet (First Responder Network)
- PSBN (Public Safety Broadband Network) Initiative
- Saudi Arabia Mission-Critical Broadband Network
- NAS (Unified National Emergency & Public Safety Network)
- Hong Kong Police NGCS (Next-Generation Communications System)
- Italian Ministry of Interior Public Safety LTE/5G Service
- SWEN (Swedish Emergency Network)
- Germany BOS Broadband Network
- NextGenCom (Next-Generation Mobile Communication)
- VMX (Mission-Critical Communications Renewal)
- MSK (Secure Mobile Broadband Communications)
- EDR 2.0/3.0 5G-Ready PPDR Broadband Network
- Romania Hybrid PPDR Broadband Network
- Secure 450 MHz Network for Government Agencies
- India BB-PPDR (Broadband PPDR) Network
- Sri Lanka Police Emergency Services Communications System

Access Over Commercial Networks

- Verizon & T-Mobile Public Safety Offerings
- Southern Linc Mission-Critical LTE Network
- NEO 2 & Auxylium Programs
- Polkomtel Band 87/n87 (410 MHz) MCX Network
- Føroya Tele KIMA Mission-Critical Communications System
- Nytt Nødnett Broadband Solution
- Telstra LANES
- New Zealand PSN (Public Safety Network)
- Buenos Aires Hybrid TETRA-LTE Solution

Secure MVNO & MOCN

- Japan PSMS (Public Safety Mobile System)
- National PPDR Broadband Communications System
- PSMB (Public Safety Mobile Broadband) Program
- ESN (Emergency Services Network)
- RRF (Radio Network of the Future)
- VIRVE 2 Mission-Critical Broadband Service
- ASTRID BLM (Blue Light Mobile) Service
- RIKS (State Infocommunication Foundation) MVNO Service
- PrioCom & Lyfo Mission-Critical Connectivity Offerings
- Mexican MCX MVNO Service
- Brazilian Federal Government Private Network Project

Sliced 5G Networks

- City of New York
- New York State Police
- BPD (Buffalo Police Department)
- Tampa Police Department
- LAFD (Los Angeles Fire Department)
- Las Vegas Metropolitan Police Department
- Ceiba Health EMS Telestroke Solution
- Edmonton Police Service
- Lishui 5G-Based Natural Disaster Management System
- Beijing, Shenzhen & Guangzhou Public Security Bureaus
- Kaohsiung City Police Smart Patrol Car Solution
- Saint Paul's Hospital 5G-Connected Ambulances
- Sliced Defense & National Security 5G Network
- Madrid City Council Tactical 5G Bubble

Courtesy: https://www.snstelecom.com/public-safety-lte

ARCIA's Role

- Spectrum team renewed emphasis on advocating on all spectrum matters, for all user types
- Private 5G network issues to enable better industry rollout
- Support appropriate allocation of spectrum to all groups for public safety and critical industries
- Support alignment of spectrum with international standards
- Highlight the importance of standards, both the investment in standards and adherence to them
- Events, training, advocation, local manufacturing, collaboration

Thank you