

## How PSMB adoption in Australia presents both Government & Industry opportunities for vendor and application diversity

Sydney, May 2023



# PSMB Adoption Creates Opportunities

## **In Australia and elsewhere, traditional Multi-Agency PSNs provide little vendor diversity**

Combination of factors, predominantly:

### **1. Poor procurement practises, such as:**

- i) failure to request or tightly specify open interfaces (“on-ramps and off-ramps”) in many of the core networks
- ii) failure to vet what was ordered was actually delivered or provisioned with compatible and compliant open interfaces (e.g. proprietary location services, ISSI licenses and features available on the interfaces such as “unit calls”)
- iii) a technical and legal mismatch between the traditional suppliers and the procurement agencies internal technical and legal resources (e.g. UK Home Office)

### **2. Lack of local standardisation regimes (and “plug test”) activities:**

- i) impedes Australian industry from affordably developing complementary products by forcing them through expensive foreign certification activities e.g. Australian mobile vendors forced to jump through CAP certification, yet the procurement agencies didn’t test what had been delivered in the core network

### **3. Failure to adopt an open architecture approach in a similar fashion to the IT & 3GPP communities:**

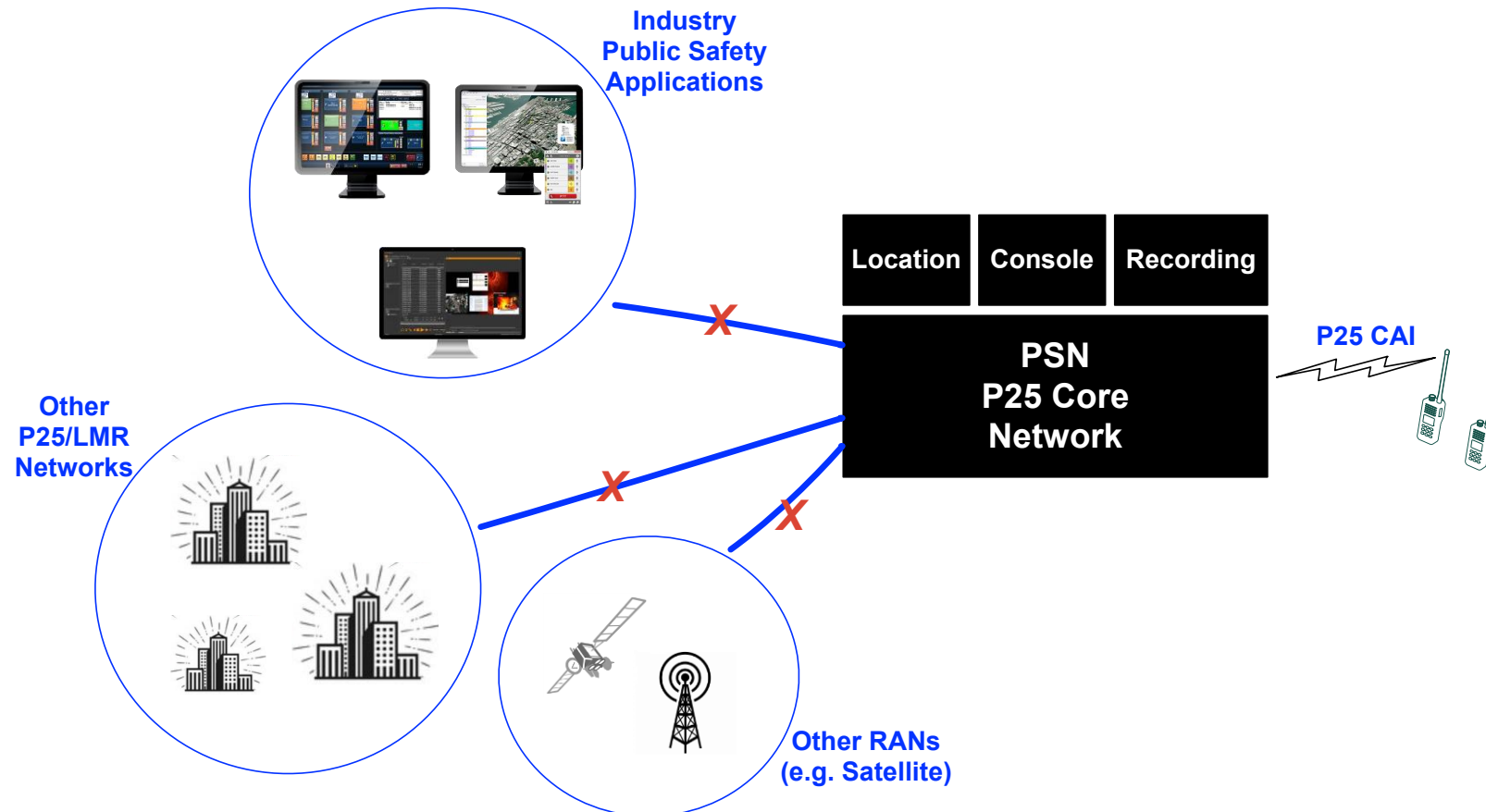
- i) which reinforces the “black box”, monolithic vendor lock-in

# Transition to Hybrid Networks (Reference)

## Transition to Hybrid LMR & MCX Networks Provides Extraordinary Opportunities

Why? Because the transition requires cracking open the “black box” monolithic networks to allow the provision of essential voice and data services across both the traditional domain and MCPTX domain

The interfaces exist (ISSI, CSSI, packet data, locations services) – but they must be provisioned and made available

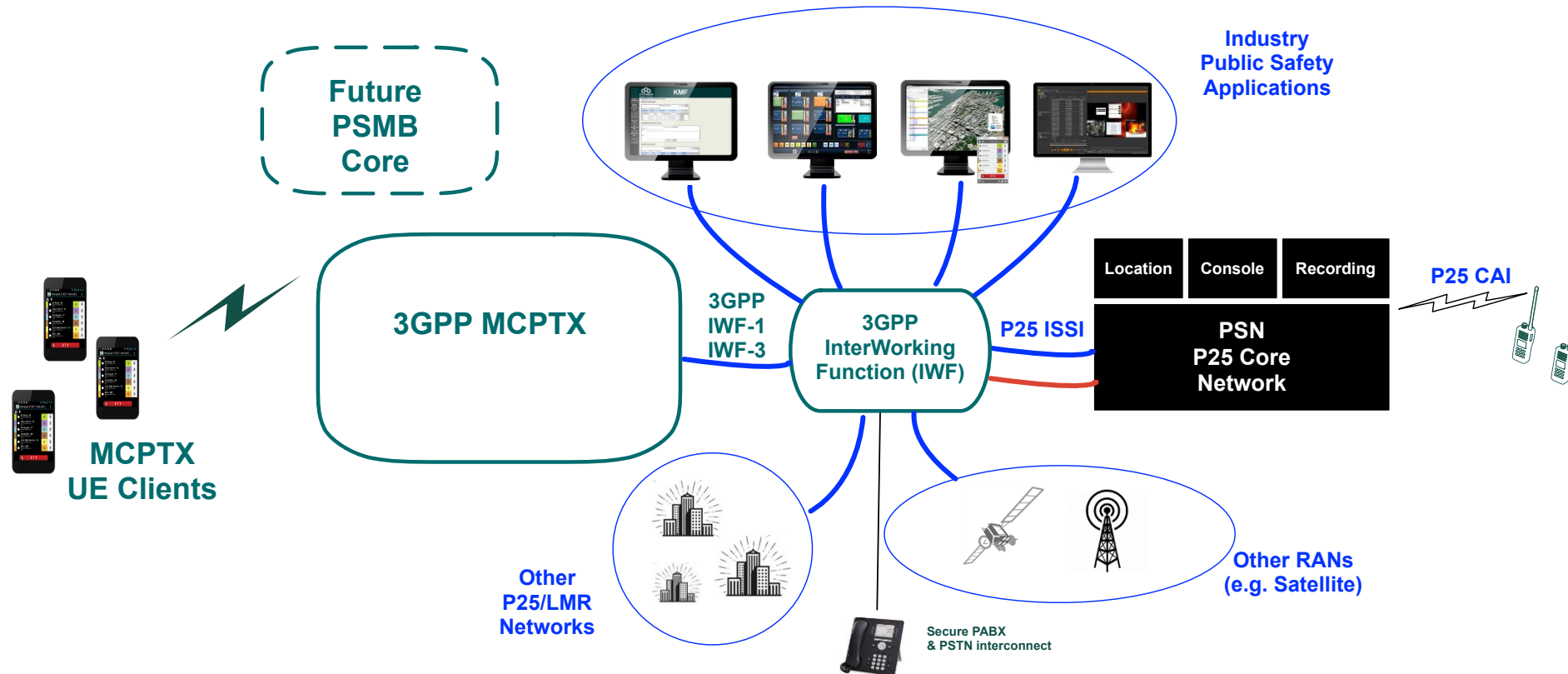


# Transition to Hybrid Networks (Reference)

## Multi-vendor, multi-domain world

Adopting a 3GPP standards based approach to interworking by using an IWF (InterWorking Function) allows voice and data to span both the broadband and narrowband domains

Additionally, it provides **open standards** based "on-ramps and off-ramps" for a wide variety of applications and other network types







## Communications service providers

**4bn+** Subscriptions supported by our mobile networks

**500m+** Fixed broadband lines and ports shipped



## Industry and public sector

**2,200+** Mission-critical customers

**595+** Private wireless customers



## Licensing opportunities

**20,000+** Patent families

**4500+** Patent families declared essential to 5G

Public Safety Mobile Broadband

# Why Australia needs a National PSMB?

- Current LMR networks are **inadequate** to serve the data needs of PSAs
- **Limited real-time info sharing** between PSAs and public
- **Lack of interoperability**, coverage and reliability due to limited/restricted standards adoption
- Commercial networks lack **priority/pre-emption**
- Natural disasters are **increasing in frequency**



Public Safety Mobile Broadband

## Public Safety digital transformation

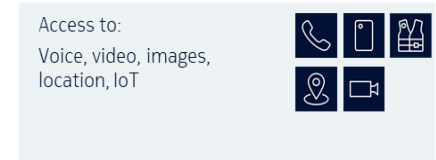
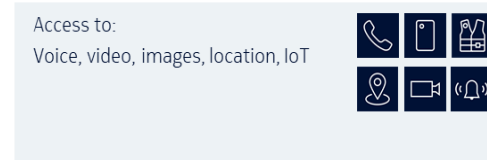
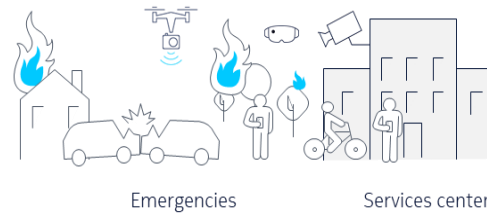
Addressing the gap

Commercial service provider networks  
Multimedia centric, 4G, 5G, IMS

Public safety digital transformed networks

Multimedia centric, 4G, 5G, IMS

Complementing or evolving from P25, TETRA



New, multimedia based actionable information leading to **saving more lives**

Enhanced situational awareness

Accelerate adoption of IoT devices, wearables

Improved group communications experience

Embrace "Intelligent" control rooms with analytics

Interoperability



# Australia's National PSMB

1

## Dedicated National Core

Highly resilient Mobile Carrier Core built and operated to mission critical standards

2

## Access any Network

Support the use of any available mobile network, commercial and government owned

3

## Prioritise Public Safety

Leverage priority and pre-emption standards to ensure service continuity

4

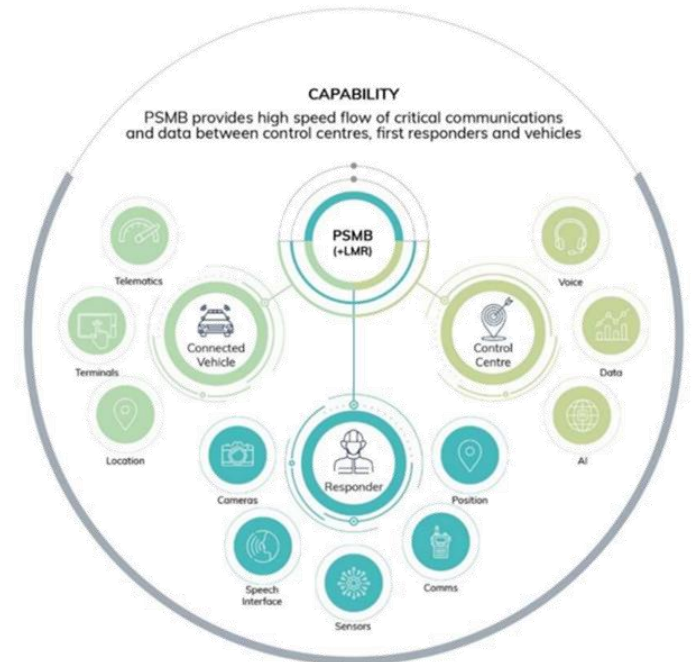
## Interworking with LMR

Use IWF to connect with existing GRN/LMR, delivering seamless voice, location services & duress service continuity

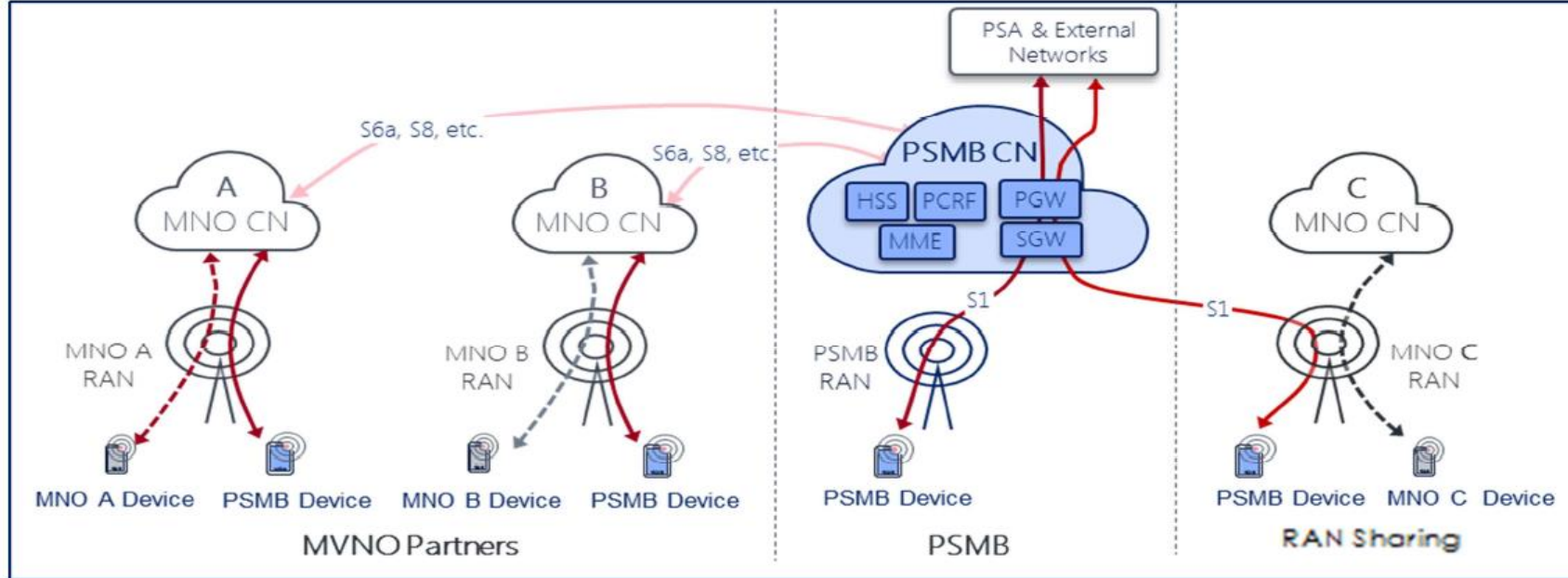
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## Standards Based

Standards interface adoption maximises user choice for devices and network centric applications – creating new opportunities for PSAs and Australian industry



# National PSMB Proof of Concept



The Proof Of Concept successfully demonstrated:

- Interoperability of multi carrier mobile networks with a dedicated PSMB core
- Seamless roaming across multiple commercial carrier networks
- 3GPP standards based interworking with existing government P25 voice networks
- Public Safety feature set needs (quality, priority, pre-emption) in an open standards environment





# Transition to Hybrid Networks (Real World)

## Subscriber Management, Provisioning & Encryption – AT&T FirstNet Examples

The PSMB POC IWF interconnect to the GRN provided primarily confidence that the core technology could deliver – notably voice quality, call setup times, group calls, emergency calls, priority etc.

Real world deployments such as AT&T FirstNet show the complexity of the IWF in terms of:

- Subscriber provisioning & management
- Encryption key management within the IWF and other domains
- OSS/BSS MCX integration
- Northbound management interfaces
- Integration of 3<sup>rd</sup> party applications that span both worlds



# Opportunities & Dividends

## **Cracking open the Black Box Creates Opportunities for Government PSAs**

Instantly provides an order of magnitude more specialist application vendor choices:

- segment vertical console solutions (fire vs policing vs forest (remote/lone worker) solutions)
- Independent DVR solutions (mixed media, video, IoT/logging)
- Location services based mashup solutions (public health, contamination tracking applications)
- Officer fatigue/biometric applications
- Adjunct enforcement solutions (dash/body cams, number plate readers, BOLO apps)

## **Cracking open the Black Box Creates Opportunities for Australian Industry**

Creates a level(er) playing field for new and established market entrants by:

- removing proprietary technical barriers (closed shop arrangements)
- signaling a genuine intent to encourage diversity in locally developed and sourced solutions
- allows direct interaction between PSAs and local solution providers



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