



**PUBLIC SAFETY  
NETWORK**  
*TE KUPENGA MARUTAU*

# **Public Safety Network Schedule 12. Service Catalogue**



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## 1. Introduction

The Public Safety Network (PSN) programme is an Emergency Services initiative of behalf of Fire and Emergency New Zealand (Fire and Emergency), New Zealand Police (Police), St John New Zealand (St John), and Wellington Free Ambulance (WFA). The PSN programme is tasked with delivering Mission Critical communication services to the Emergency Services sector.

This document should be read in conjunction with the documents set out in this Request for Proposal (RFP).

## 2. Document Purpose

This document is an indicative Service Catalogue issued as part of the PSN RFP.

**This document is not intended to be a definitive artefact or template.**

You are expected to produce your own service catalogue as part of your RFP response. This is the PSN Programme view of what a catalogue could look like to help clarify our expectations. Service IDs are important to enable referencing in the response templates and the price book. Any additional services that you add need to also be added to the appropriate response template and the price book.

You need to review this indicative catalogue and produce your own service catalogue that aligns with your capabilities in response to the PSN procurement objectives.

Our expectations of a service catalogue are that it:

- Can be read and understood without requiring supplier engagement;
- Contains clear information on any dependencies between service items with regards to purchasing, bundling and unbundling;
- Defines associated service levels for each service;
- Contains clear pricing related to service outcomes;
- Details which entities can purchase services e.g. Next Generation Critical Communications (NGCC), Emergency Services Agencies; and
- Will be further refined with successful respondents to ensure that vendors supplying the same services have their catalogue items aligned to allow for review across multiple suppliers.

## 3. Services

Emergency Services agencies will procure from a range of services established by the PSN programme to support their operational functions.

This section presents the PSN programme's thinking for a suggested Service Catalogue. You are required to complete the relevant response template(s) and price book referencing these IDs and service titles. Having read our requirements, you can offer additional relevant services. You can propose your own descriptions, features and pricing units and they do not need to match the ones in this document.

Whilst this procurement is primarily for network services, devices are also included in case there are features or commercial outcomes which can only be delivered through the supply of both network and device services together.

These services are broken up into the five areas of response:

### **Priority Cellular**

Priority Cellular services are comprised of the cellular-based connectivity delivering voice, text and data, Mission Critical enhancements (including quality of service, priority, pre-emption and network roaming), and related supporting elements such as deployables, devices, device management and device certification, as well as transparent network management.

Possible services listed below are split into connection-based, organisation-wide and variable (rate-card) service-types.

#### *Specific to a connection*

PC01	Base plan
PC02	Priority 1 SIM Card
PC03	Priority 2 SIM Card

#### *Specific to an organisation or group within an organisation*

PC04	Application Performance
PC05	Devices
PC06	Device Installation
PC07	Deployables
PC08	Device and Application Management
PC09	Private Network
PC10	Agency Network Connection
PC11	Device Certification
PC12	Transparent Network Management
PC13	Complex Agency Support
PC14	App Store
PC15	Coverage
PC16	Resilience
PC17	Any other services/options not specified above that are proposed in order to deliver the PSN outcomes

#### *Variable charges*

We would expect to see a rate card for the following additional services that are not capable of quantification:

PC18	Overseas calls, international roaming and messaging
PC19	Professional Services

We welcome your suggestions, having reviewed our requirements, on any additional features and/or services that we might wish to consider for inclusion in the catalogue.

## **MC Platform**

Mission Critical services are comprised of the application, infrastructure and related elements required to deliver Mission Critical Push-to-Talk (MCPTT) and Mission Critical Video services across Priority Cellular services. This procurement package also encompasses supporting services such as access from communications centres, recording capability, administration interfaces, interworking capability with LMR, and device certification. Services do not necessarily rely on Priority Cellular services to function, however this is required to reliably deliver the services wirelessly over a wide area.

Services listed below are split into connection-based, organisation-wide and variable (rate-card) service-types.

### *Specific to a connection*

- MC01 Mission Critical Push-to-Talk
- MC02 Mission Critical Video

### *Specific to an organisation or group within an organisation*

- MC03 Voice Control Service (Communications Centre Console)
- MC04 Recorder
- MC05 Configuration management
- MC06 Interworking
- MC07 Device Certification
- MC08 Complex Agency Support
- MC09 Any other charges, not specified above, that are proposed in order to deliver the outcomes that we seek

### *Variable charges*

We would expect to see a rate card for the following additional services that are not capable of quantification:

- MC10 Professional Services
- MC11 Any other charges, not specified above, that are proposed in order to deliver the outcomes that we seek

We welcome your suggestions, having reviewed our requirements, on any additional features and/or services that we might wish to consider for inclusion in the catalogue.

## **LMR Network**

LMR services are comprised of the Land Mobile Radio network and services delivering Push-to-Talk (PTT) voice and messaging as well as related supporting elements such as the Communications Centre console, recorder, narrowband data, deployables, devices, device management and device certification, encryption and transparent network management.

Services listed below are split into connection-based, organisation-wide and variable (rate-card) service-types.

### *Specific to a connection*

- LM01 Base Connection
- LM02 LMR Device
- LM03 Device Installation
- LM04 Any other services/options not specified above that are proposed in order to deliver the PSN outcomes

### *Specific to an organisation or group within an organisation*

- LM05 Interworking
- LM06 Voice Control Service (Communications Centre Console)
- LM07 Recorder
- LM08 Packet Data
- LM09 Device Management
- LM10 Encryption
- LM11 OTAR/OTAP
- LM12 Encryption Key loader device
- LM13 Capacity
- LM14 Device Certification
- LM15 Deployables
- LM16 Transparent Network Management
- LM17 Complex Agency Support
- LM18 Coverage
- LM19 Resilience
- LM20 Uncontended Talk Group
- LM21 Any other charges, not specified above, that are proposed in order to deliver the outcomes that we seek

The initial cost of network establishment including capacity and coverage are not part of a service catalogue, but the variations to this can be ordered through the catalogue over time.

### *Variable charges*

We would expect to see a rate card for the following additional services that are not capable of quantification:

- LM22 Professional Services
- LM23 Any other charges, not specified above, that are proposed in order to deliver the outcomes that we seek

We welcome your suggestions, having reviewed our requirements, on any additional features and/or services that we might wish to consider for inclusion in the catalogue.

## **Personal Alerting**

Personal Alerting services are comprised of a pager-like capability and services delivering messaging as well as related supporting elements such as devices, device certification, transparent network management.

Services listed below are split into connection-based, organisation-wide and variable (rate-card) service-types.

### *Specific to a connection*

- PA01 Base Connection
- PA02 Device

### *Specific to an organisation or group within an organisation*

- PA03 Additional Coverage
- PA04 Device Certification
- PA05 Transparent Network Management
- PA06 Complex Agency Support
- PA07 Any other charges, not specified above, that are proposed in order to deliver the outcomes that we seek

### *Variable charges*

- PA08 Professional Services
- PA09 Any other charges, not specified above, that are proposed in order to deliver the outcomes that we seek

We welcome your suggestions, having reviewed our requirements, on any additional features and/or services that we might wish to consider for inclusion in the catalogue.

## **Aggregation**

Aggregation services are comprised of the overarching project and operational functions to manage PSN services from different service providers across different technology domains to deliver a full outcome to agencies. Services will encompass incident, problem, and change management as well as reporting with related supporting options available such as architectural oversight, transition assistance and release management.

Services listed below are split into connection-based, organisation-wide and variable (rate-card) service-types.

*Specific to a connection*

Nil

*Specific to an organisation or group within an organisation*

AG01 Base plan  
AG02 Other

*Variable charges*

We would expect to see a rate card for the following additional services that are not capable of quantification:

AG03 Professional Services  
AG04 Architectural Oversight of Systems  
AG05 Release Management  
AG06 Agency Transition Services  
AG07 Agency Feasibility Study  
AG08 Advanced Engagement Management Services  
AG09 Any other charges, not specified above, that are proposed in order to deliver the outcomes that we seek

We welcome your suggestions, having reviewed our requirements, on any additional features and/or services that we might wish to consider for inclusion in the catalogue.



### 3.1 Priority Cellular

*Specific to a connection*

**Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing. Some examples are included below.**

<b>ID</b>	PC01
<b>Service Title</b>	Priority Cellular – Base Plan
<b>Description</b>	The provision of a network connection via a SIM card (or ESIM) for catalogue purchased or BYO devices.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Unlimited data, voice and SMS to connections within NZ</li> <li>• Data only option for routers, tablets etc.</li> <li>• Support for MCPTT application with best efforts QoS</li> </ul>
<b>SLAs</b>	SMSL01-04, PCSL01-04
<b>Pricing Unit</b>	Provisioned Connections

<b>ID</b>	PC02
<b>Service Title</b>	Priority Cellular - Priority 1 SIM Card
<b>Description</b>	The provision of a network connection via a SIM card (or ESIM) with Priority 1 access
<b>Features</b>	<p>Same capability as Base Plan plus:</p> <ul style="list-style-type: none"> <li>• Highest available priority access to the network <ul style="list-style-type: none"> <li>○ e.g. Access Control Class = 14 (Reserved for Emergency Services)</li> <li>○ ARP level 1 (or appropriate)</li> </ul> </li> <li>• Able to pre-empt any other connection</li> <li>• Not pre-emption vulnerable</li> <li>• Quality of Service aligned with the 3GPP standards for Mission Critical services</li> <li>• Support for MCPTT services with bearers with appropriate network characteristics</li> <li>• All data treated as MC Data</li> </ul>

	<ul style="list-style-type: none"> <li>National Roaming (can optionally be disabled)</li> </ul>
<b>SLAs</b>	SMSL01-04, PCSL01-05, PCSL07-08
<b>Pricing Unit</b>	Provisioned Connections

<b>ID</b>	PC03
<b>Service Title</b>	Priority Cellular - Priority 2 SIM Card
<b>Description</b>	The provision of a network connection via a SIM card (or ESIM) with Priority 2 access
<b>Features</b>	<p>Same capability as Base Plan plus:</p> <ul style="list-style-type: none"> <li>Second highest available priority access to the network (below Priority 1) <ul style="list-style-type: none"> <li>E.g. Access Control Class = 13 (reserved for Public Utilities).</li> </ul> </li> <li>Able to pre-empt any other connection (apart from Priority 1 connections)</li> <li>Quality of Service aligned with the 3GPP standards for Mission Critical services</li> <li>Support for MCPTT services with bearers with appropriate network characteristics</li> <li>All data treated as MC Data</li> <li>National Roaming (can optionally be disabled)</li> </ul>
<b>SLAs</b>	SMSL01-04, PCSL01-04, PSCL06, PSCL08
<b>Pricing Unit</b>	Provisioned Connections

Organisation or Group Options

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

<b>ID</b>	PC04
<b>Service Title</b>	Priority Cellular - Application Performance
<b>Description</b>	Ability to treat an application throughout the network as Mission Critical Data

<b>Features</b>	<ul style="list-style-type: none"> <li>• Prioritise a particular application through the network by treating it as Mission Critical Data (regardless of whether the end-device connection has purchased a service that supports MC Data).</li> </ul>
<b>SLAs</b>	SMSL01-04, PCSL08
<b>Pricing Unit</b>	Application count

<b>ID</b>	PC05
<b>Service Title</b>	Priority Cellular - Devices
<b>Description</b>	Purchase or lease of a cellular device
<b>Features</b>	<ul style="list-style-type: none"> <li>• Supply of a specific device and/or accessories</li> <li>• Support for maintenance and faults</li> <li>• End-of-life replacement (if purchased as a service)</li> </ul>
<b>SLAs</b>	SMSL01-04, PSCL09
<b>Pricing Unit</b>	Device count

<b>ID</b>	PC06
<b>Service Title</b>	Priority Cellular – Device Installation
<b>Description</b>	Installation of a device
<b>Features</b>	<ul style="list-style-type: none"> <li>• Standard installation options such as into specific vehicle types</li> </ul>
<b>SLAs</b>	SMSL03
<b>Pricing Unit</b>	Per installation

<b>ID</b>	PC07
<b>Service Title</b>	Priority Cellular - Deployables
<b>Description</b>	Provision of a deployable, portable cell site for temporary coverage
<b>Features</b>	<ul style="list-style-type: none"> <li>• Storage and maintenance of physical infrastructure</li> <li>• Ability to deploy at any time</li> <li>• Ability to be powered indefinitely (e.g. through generator regularly serviced with fuel supply)</li> <li>• Options to have backhaul (e.g. fibre, microwave, satellite) and/or function stand alone</li> </ul>

	<ul style="list-style-type: none"> <li>• Different form-factor and performance options</li> <li>• Provides service for all agencies and all public customers</li> <li>• Capable of Access Control Class restrictions</li> </ul>
<b>SLAs</b>	SMSL01-04, PSCL10
<b>Pricing Unit</b>	Deployable count

<b>ID</b>	PC08
<b>Service Title</b>	Priority Cellular – Device and Application Management
<b>Description</b>	Management of devices and applications to set policies and remotely enable/disable.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Control on-boarding and initial configuration</li> <li>• Set security and other policies</li> <li>• Support for ongoing deployment of applications and policies</li> <li>• Push applications and software updates</li> <li>• Manage asset inventory</li> <li>• Remote lock and wipe</li> </ul>
<b>SLAs</b>	SMSL01-04, PCSL11
<b>Pricing Unit</b>	Device count

<b>ID</b>	PC09
<b>Service Title</b>	Priority Cellular – Private network
<b>Description</b>	APN to isolate cellular traffic from the Internet and deliver directly to an agency network.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Private network for agency connections</li> <li>• Ability to apply policy at a network level (e.g. specific QoS level, policy routing)</li> <li>• Ability to control which devices are in the APN and which are not</li> </ul>
<b>SLAs</b>	SMSL01-04
<b>Pricing Unit</b>	Per agency

<b>ID</b>	PC10
<b>Service Title</b>	Priority Cellular – Agency Network Connection
<b>Description</b>	Connection(s) between agency and mobile networks
<b>Features</b>	<ul style="list-style-type: none"> <li>• Provide predictable performance</li> <li>• Options for bandwidth and QoS</li> <li>• Ability to be private (e.g. connect to APN) or essentially part of the Internet (untrusted)</li> <li>• Able to be terminated where required (e.g. agency Data Centre or Comms Centre)</li> <li>• High availability options to a site as well and/or failover between sites</li> </ul>
<b>SLAs</b>	SMSL01-04, PCSL12-13
<b>Pricing Unit</b>	Per connection/bandwidth

<b>ID</b>	PC11
<b>Service Title</b>	Priority Cellular – Device Certification
<b>Description</b>	Initial testing and ongoing maintenance of device support of PSN services
<b>Features</b>	<ul style="list-style-type: none"> <li>• Validation that devices can support Mission Critical data services</li> <li>• Validation that devices can support Mission Critical data and PTT services</li> <li>• Ongoing regression testing when network, device, operating systems or MC PTT changes occur</li> </ul>
<b>SLAs</b>	SMSL03-04, PCSL14
<b>Pricing Unit</b>	Number of device models

<b>ID</b>	PC12
<b>Service Title</b>	Priority Cellular – Transparent Network Management
<b>Description</b>	Visibility of network status in real-time for business users
<b>Features</b>	<ul style="list-style-type: none"> <li>• Presentation via portal</li> <li>• Presentation via API</li> <li>• Notification of planned and unplanned outages</li> </ul>
<b>SLAs</b>	SMSL01-04, PCSL15

<b>Pricing Unit</b>	Per network
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<b>ID</b>	PC13
<b>Service Title</b>	Priority Cellular – Complex Agency Support
<b>Description</b>	Enhanced service management for agencies with complex requirements
<b>Features</b>	<ul style="list-style-type: none"> <li>• As agreed</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	

<b>ID</b>	PC14
<b>Service Title</b>	Priority Cellular - App Store
<b>Description</b>	Applications available to Emergency Services
<b>Features</b>	<ul style="list-style-type: none"> <li>• White-list of apps approved for use on PSN</li> </ul>
<b>SLAs</b>	SMSL01-04, PCSL16
<b>Pricing Unit</b>	Per agency

<b>ID</b>	PC15
<b>Service Title</b>	Priority Cellular - Coverage
<b>Description</b>	Ability to deploy additional sites to add additional coverage
<b>Features</b>	<ul style="list-style-type: none"> <li>• Additional coverage added to the macro cellular network</li> </ul>
<b>SLAs</b>	SMSL03-04
<b>Pricing Unit</b>	Per site

<b>ID</b>	PC16
<b>Service Title</b>	Priority Cellular - Resilience
<b>Description</b>	Ability to add resilience to specific cellular sites
<b>Features</b>	<ul style="list-style-type: none"> <li>• Additional resilience added to agreed sites incorporating additional backhaul and/or power</li> <li>• Option for additional batteries</li> <li>• Option for generator</li> </ul>

	<ul style="list-style-type: none"> <li>• Option for resilient fixed line (e.g. fibre) backhaul</li> <li>• Option for microwave backhaul</li> <li>• Option for satellite backhaul</li> <li>• Option for cellular backhaul</li> </ul>
<b>SLAs</b>	SMSL03-04
<b>Pricing Unit</b>	

<b>ID</b>	PC17
<b>Service Title</b>	Priority Cellular - Other
<b>Description</b>	Any other services/options not specified above that are proposed in order to deliver the PSN outcomes
<b>Features</b>	<ul style="list-style-type: none"> <li>• As agreed</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	

Variable charges

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

<b>ID</b>	PC18
<b>Service Title</b>	Priority Cellular – Overseas calling, international roaming and messaging
<b>Description</b>	A rate card for the above services
<b>Features</b>	<ul style="list-style-type: none"> <li>• As agreed</li> </ul>
<b>SLAs</b>	SMSL01-04
<b>Pricing Unit</b>	

<b>ID</b>	PC19
<b>Service Title</b>	Priority Cellular – Professional Services
<b>Description</b>	A rate card for services such as integration to agency systems
<b>Features</b>	<ul style="list-style-type: none"> <li>• As agreed</li> </ul>

<b>SLAs</b>	
<b>Pricing Unit</b>	



## 3.2 MC Services

### Specific to a connection

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

<b>ID</b>	MC01
<b>Service Title</b>	MC Services – Mission Critical Push-to-Talk
<b>Description</b>	Mission Critical Push-to-Talk service based on 3GPP Mission Critical features delivering a modern critical communications service
<b>Features</b>	<ul style="list-style-type: none"> <li>• Group calling capability</li> <li>• Support for non-voice media such as text, images and files</li> <li>• Client Support for different types of devices (e.g. mobile, desktop, fixed device)</li> <li>• Ability to integrate with device/network services to fully support 3GPP Mission critical services end-to-end</li> <li>• Support across other IP networks including public Wi-Fi and non-priority cellular</li> </ul>
<b>SLAs</b>	SMSL01-04, MCSL01-04
<b>Pricing Unit</b>	Concurrent user count

<b>ID</b>	MC02
<b>Service Title</b>	MC Services – Mission Critical Video
<b>Description</b>	Ability to escalate a MCPTT session to include streaming video
<b>Features</b>	<ul style="list-style-type: none"> <li>• Same features as MCPTT but including video streaming from the ‘talking’ party to other group members that can support video</li> </ul>
<b>SLAs</b>	SMSL01-04, MCSL01-04
<b>Pricing Unit</b>	Concurrent user count

### Organisation or group options

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

<b>ID</b>	MC03
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<b>Service Title</b>	MC Services – Voice Control Service (Communications Centre Console)
<b>Description</b>	Communications Centre console interface to MCPTT (and MCVideo) service
<b>Features</b>	<ul style="list-style-type: none"> <li>• Modern Communications Centre console that supports all features in use by agencies in the MCPTT and/or P25 services including presentation of meta-data about the talking party (e.g. ID, location etc.)</li> <li>• Ability to authenticate real-time with agency user authentication and policy systems</li> <li>• Support for receiving and generating streaming video (MC Services)</li> <li>• Ability to send rich data to a talkgroup (MC Services)</li> <li>• Other features as required to meet requirements and as would be generally expected in a modern Communications Centre console</li> <li>• Fully-featured voice and data control interface to P25</li> </ul>
<b>SLAs</b>	SMSL01-04, MCSL05
<b>Pricing Unit</b>	Concurrent seat count

<b>ID</b>	MC04
<b>Service Title</b>	MC Services – Recorder
<b>Description</b>	Ability to record all interactions for a MCPTT talkgroup
<b>Features</b>	<ul style="list-style-type: none"> <li>• Ability to record all media associated with a talkgroup including voice, text, files attached, video streamed</li> <li>• Record meta-data for interactions including who generated the media, their geo-location etc</li> <li>• Archiving capability</li> <li>• Easy to use retrieval and playback capability</li> </ul>
<b>SLAs</b>	SMSL01-04, MCSL06
<b>Pricing Unit</b>	Storage

<b>ID</b>	MC05
<b>Service Title</b>	MC Services – Configuration Management
<b>Description</b>	Ability to administer talkgroups, users, group membership and other information

<b>Features</b>	<ul style="list-style-type: none"> <li>• Ability for authorised users to view, edit and add talkgroups, users, adjust membership, and assign agreed parameters (such as geo-fencing, multi-agency access) to a talkgroup</li> <li>• Desktop application and web based portable for administration</li> <li>• Ability to authenticate real-time with agency user authentication and policy systems</li> </ul>
<b>SLAs</b>	SMSL01-04, MCSL07
<b>Pricing Unit</b>	Agency administrator count

<b>ID</b>	MC06
<b>Service Title</b>	MC Services – Interworking
<b>Description</b>	Ability to interconnect a MCPTT talkgroup with a LMR talkgroup allowing users on both networks to communicate directly
<b>Features</b>	<ul style="list-style-type: none"> <li>• Alignment (or roadmap to align) with 3GPP Mission Critical Interworking Function and P25</li> <li>• End-to-end support of features including floor-control, messaging and meta-data (as supported by each network)</li> </ul>
<b>SLAs</b>	SMSL01-04, MCSL08-09
<b>Pricing Unit</b>	Per gateway/capacity

<b>ID</b>	MC07
<b>Service Title</b>	MC Services – Device Certification
<b>Description</b>	Initial testing and ongoing maintenance of device support of PSN services
<b>Features</b>	<ul style="list-style-type: none"> <li>• Validation that devices can support Mission Critical data services to agreed levels of performance</li> <li>• Validation that devices can support Mission Critical data to agreed levels of performance and PTT services</li> <li>• Ongoing regression testing when network, device, operating systems or MC PTT changes occur</li> <li>• Validation that devices can support MNO features and spectrum bands relevant for Mission Critical and Priority Cellular services</li> </ul>
<b>SLAs</b>	SMSL01-04, MCSL10
<b>Pricing Unit</b>	Device model count

<b>ID</b>	MC08
<b>Service Title</b>	MC Services – Complex Agency Support
<b>Description</b>	Enhanced service management for agencies with complex requirements
<b>Features</b>	<ul style="list-style-type: none"> <li>• As agreed</li> </ul>
<b>SLAs</b>	
<b>Pricing Unit</b>	Per agency

<b>ID</b>	MC09
<b>Service Title</b>	MC Services – Other
<b>Description</b>	Any other services/options not specified above that are proposed in order to deliver the PSN outcomes
<b>Features</b>	<ul style="list-style-type: none"> <li>• As agreed</li> </ul>
<b>SLAs</b>	
<b>Pricing Unit</b>	

Variable charges

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

<b>ID</b>	MC10
<b>Service Title</b>	MC Services – Professional Services
<b>Description</b>	Professional services to architect, design and implement integration with other technology (agency or service provider) in order to meet the overall outcomes
<b>Features</b>	<ul style="list-style-type: none"> <li>• Integration with existing or new Voice Console</li> <li>• Integration with CAD systems</li> <li>• Integration with ComCen back-up voice and data devices</li> <li>• Integration to other services and devices</li> <li>• Interaction between agency voice systems and new console</li> <li>• Integration with agency messaging systems</li> </ul>

	<ul style="list-style-type: none"> <li>• Integration with agency voice recording and data logging systems</li> <li>• Integration between cellular networks and devices, and MC systems</li> <li>• Integration with existing LMR and new LMR systems</li> </ul>
<b>SLAs</b>	
<b>Pricing Unit</b>	Hourly rate

<b>ID</b>	MC11
<b>Service Title</b>	MC Services – Other
<b>Description</b>	Any other services/options not specified above that are proposed in order to deliver the PSN outcomes
<b>Features</b>	<ul style="list-style-type: none"> <li>• As agreed</li> </ul>
<b>SLAs</b>	
<b>Pricing Unit</b>	

### 3.3 LMR Network

#### Specific to a Connection

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

<b>ID</b>	LM01
<b>Service Title</b>	LMR Network – Base Connection
<b>Description</b>	Connection to Mission Critical LMR service based on P25 technology anywhere in the New Zealand coverage area
<b>Features</b>	<ul style="list-style-type: none"> <li>• Group calling capability</li> <li>• Unit-to-unit calling capability</li> <li>• Unit-to-PSTN calling</li> <li>• Status messaging (short data services)</li> <li>• Supported data and location services</li> <li>• Configuration of talkgroups to meet agency requirements</li> </ul>
<b>SLAs</b>	SMSL01-04, LMSL01-08
<b>Pricing Unit</b>	Provisioned Connections

<b>ID</b>	LM02
<b>Service Title</b>	LMR Network – LMR Device
<b>Description</b>	Device that can connect to the P25 network and use the services it offers anywhere in the New Zealand coverage area or over required distances between devices in off-network mode.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Handheld, in-station, in-vehicle and deployable options</li> <li>• Group calling capability</li> <li>• Unit-to-unit calling capability</li> <li>• Status messaging (short data services)</li> <li>• Supported data and location services</li> <li>• Off-network communication capabilities</li> </ul>

	<ul style="list-style-type: none"> <li>Programming of talkgroups to meet agency requirements</li> </ul>
<b>SLAs</b>	SMSL01-04, LMSL01-09
<b>Pricing Unit</b>	Provisioned Devices

<b>ID</b>	LM03
<b>Service Title</b>	LMR Network – Device Installation
<b>Description</b>	Installation of a device
<b>Features</b>	<ul style="list-style-type: none"> <li>Standard installation options such as into specific vehicle types</li> </ul>
<b>SLAs</b>	SMSL03
<b>Pricing Unit</b>	Per Installation

<b>ID</b>	LM04
<b>Service Title</b>	LMR Network – Other
<b>Description</b>	Any other services/options not specified above that are proposed in order to deliver the PSN outcomes
<b>Features</b>	<ul style="list-style-type: none"> <li>As agreed</li> </ul>
<b>SLAs</b>	<ul style="list-style-type: none"> <li>As agreed</li> </ul>
<b>Pricing Unit</b>	

Organisation or Group Options

**Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.**

<b>ID</b>	LM05
<b>Service Title</b>	LMR Network – Interworking
<b>Description</b>	Ability to interconnect a LMR talkgroup with a MCPTT talkgroup allowing users on both networks to communicate directly
<b>Features</b>	<ul style="list-style-type: none"> <li>Alignment (or roadmap to align) with 3GPP Mission Critical Interworking Function and P25</li> <li>End-to-end support of features including floor-control, messaging and meta-data (as supported by each network)</li> </ul>
<b>SLAs</b>	SMSL01-04, LMSL10-11
<b>Pricing Unit</b>	Gateway/capacity

<b>ID</b>	LM06
<b>Service Title</b>	LMR Network – Voice Control Service (Communications Centre Console)
<b>Description</b>	Communications Centre console interface to LMR, MCPTT (and MC Video) service
<b>Features</b>	<ul style="list-style-type: none"> <li>• Fully-featured voice and data control interface to P25</li> <li>• Modern Communications Centre console that supports all features in use by agencies in the MCPTT and/or P25 services including presentation of meta-data about the talking party (e.g. ID, location etc.)</li> <li>• Ability to authenticate with agency user login details</li> <li>• Support for receiving and generating streaming video (MC Services)</li> <li>• Ability to send rich data to a talkgroup (MC Services)</li> <li>• Other features as required to meet requirements and as would be generally expected in a modern Communications Centre console</li> </ul>
<b>SLAs</b>	SMSL01-04, LMSL12
<b>Pricing Unit</b>	Concurrent seat count

<b>ID</b>	LM07
<b>Service Title</b>	LMR Network – Recorder
<b>Description</b>	Ability to record all interactions for a talkgroup
<b>Features</b>	<ul style="list-style-type: none"> <li>• Ability to record all media associated with a talkgroup including voice, messaging and any data services</li> <li>• Record meta-data for interactions including who generated the media, their geo-location etc.</li> <li>• Archiving capability</li> <li>• Easy to use retrieval and playback capability</li> </ul>
<b>SLAs</b>	SMSL01-04, LMSL13
<b>Pricing Unit</b>	Storage capacity



<b>ID</b>	LM08
<b>Service Title</b>	LMR Network – Packet Data
<b>Description</b>	Ability for an agency to use packet-data services on the P25 network
<b>Features</b>	<ul style="list-style-type: none"> <li>• Ability to use Location, free-text and other narrowband data services on the P25 network</li> </ul>
<b>SLAs</b>	SMSL01-04, LMSL14
<b>Pricing Unit</b>	Per base station

<b>ID</b>	LM09
<b>Service Title</b>	LMR Network – Device Management
<b>Description</b>	Management of devices and applications to set policies and remotely enable/disable
<b>Features</b>	<ul style="list-style-type: none"> <li>• Control on-boarding and initial configuration</li> <li>• Set security and other policies</li> <li>• Push configuration and software updates</li> <li>• Manage asset inventory</li> </ul>
<b>SLAs</b>	SMSL01-04, LMSL15
<b>Pricing Unit</b>	Managed devices count

<b>ID</b>	LM10
<b>Service Title</b>	LMR Network –Encryption
<b>Description</b>	Encrypts traffic sent across the P25 network and use the services it offers anywhere in the New Zealand coverage area. Requires a device and network connection to be in place already
<b>Features</b>	<ul style="list-style-type: none"> <li>• Encryption</li> </ul>
<b>SLAs</b>	SMSL01-04, LMSL01-09
<b>Pricing Unit</b>	Device count

<b>ID</b>	LM11
<b>Service Title</b>	LMR Network – OTAR/OTAP

<b>Features</b>	<ul style="list-style-type: none"> <li>• Authorised access only</li> <li>• Ability to target specific LMR devices</li> <li>• Ability to remotely add/remove encryption keys</li> <li>• Manage and report on currency, status, and fleet management etc.</li> </ul>
<b>SLAs</b>	SMSL01-04, LMSL16
<b>Pricing Unit</b>	Agency device count

<b>ID</b>	LM12
<b>Service Title</b>	LMR Network – Encryption Key Loader Device
<b>Description</b>	Physical device that can be used in the field to change/initialise encryption keys on a connected LMR device
<b>Features</b>	<ul style="list-style-type: none"> <li>• Ability for a non-technical user to update encryption keys on specific devices as required</li> <li>• Authorised users able to create, modify and delete usable keys on a device</li> <li>• Report on LMR devices that the encryption key loader has modified</li> </ul>
<b>SLAs</b>	SMSL01-04, LMSL09
<b>Pricing Unit</b>	Number of devices

<b>ID</b>	LM13
<b>Service Title</b>	LMR Network – Capacity
<b>Description</b>	Ability to add capacity to sites, regions or the entire network
<b>Features</b>	<ul style="list-style-type: none"> <li>• Ability to add capacity as and where required</li> </ul>
<b>SLAs</b>	SMSL01-04
<b>Pricing Unit</b>	Per resource per site

<b>ID</b>	LM14
<b>Service Title</b>	LMR Network – Device Certification
<b>Description</b>	Initial testing and ongoing maintenance of compliance for support of PSN P25 services

<b>Features</b>	<ul style="list-style-type: none"> <li>• Validation that devices can support all required P25 services</li> <li>• Ongoing regression testing when network, or device changes, including firmware and software occur</li> </ul>
<b>SLAs</b>	SMSL03-04, LMSL17
<b>Pricing Unit</b>	Device model count

<b>ID</b>	LM15
<b>Service Title</b>	LMR Network – Deployables
<b>Description</b>	Provision of a deployable, portable P25 site for temporary coverage
<b>Features</b>	<ul style="list-style-type: none"> <li>• Storage and maintenance of physical infrastructure</li> <li>• Ability to deploy at any time</li> <li>• Ability to be powered indefinitely (e.g. through generator regularly serviced with fuel supply)</li> <li>• Options to have backhaul (e.g. fibre, microwave, radio, satellite) and/or function standalone</li> <li>• Different form-factor and performance options</li> </ul>
<b>SLAs</b>	SM01-04, LMSL18
<b>Pricing Unit</b>	Deployable count

<b>ID</b>	LM16
<b>Service Title</b>	LMR Network – Transparent Network Management
<b>Description</b>	Visibility of network status in real-time for business users Refer: <i>Appendix 4.5 Service Guidelines - Transparent Network Management</i>
<b>Features</b>	<ul style="list-style-type: none"> <li>• Presentation via portal</li> <li>• Presentation via API</li> <li>• Notification of planned and unplanned outages</li> </ul>
<b>SLAs</b>	SM01-04, LMSL19
<b>Pricing Unit</b>	Per network

<b>ID</b>	LM17
<b>Service Title</b>	LMR Network – Complex Agency Support

<b>Description</b>	Enhanced service management for agencies with complex requirements
<b>Features</b>	<ul style="list-style-type: none"> <li>As agreed</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	Per agency

<b>ID</b>	LM18
<b>Service Title</b>	LMR Network - Coverage
<b>Description</b>	Ability to deploy additional sites to add additional coverage
<b>Features</b>	<ul style="list-style-type: none"> <li>Additional coverage added to the LMR network</li> </ul>
<b>SLAs</b>	SMSL03-04
<b>Pricing Unit</b>	Per site

<b>ID</b>	LM19
<b>Service Title</b>	LMR Network - Resilience
<b>Description</b>	Ability to add resilience to specific LMR sites
<b>Features</b>	<ul style="list-style-type: none"> <li>Additional resilience added to agreed sites incorporating additional backhaul and/or power</li> <li>Option for additional batteries</li> <li>Option for generator</li> <li>Option for resilient fixed line (e.g. fibre) backhaul</li> <li>Option for microwave backhaul</li> <li>Option for satellite backhaul</li> <li>Option for cellular backhaul</li> <li>Option for LMR backhaul</li> </ul>
<b>SLAs</b>	SMSL03-04
<b>Pricing Unit</b>	

<b>ID</b>	LM20
<b>Service Title</b>	LM24 LMR Network - Uncontended Talkgroup
<b>Description</b>	Configuration of a talkgroup with guaranteed network capacity

<b>Features</b>	<ul style="list-style-type: none"> <li>Ability to allocate radio resources in a specific area to a particular talkgroup</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	

<b>ID</b>	LM21
<b>Service Title</b>	LMR Network - Other
<b>Description</b>	Any other services/options not specified above that are proposed in order to deliver the PSN outcomes
<b>Features</b>	<ul style="list-style-type: none"> <li>As agreed</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	

Variable charges

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

<b>ID</b>	LM22
<b>Service Title</b>	LMR Network – Professional Services
<b>Description</b>	Professional services to architect, design and implement integration with other technology (agency or service provider) in order to meet the overall outcomes.
<b>Features</b>	<ul style="list-style-type: none"> <li>Integration with existing or new console</li> <li>Integration with CAD systems</li> <li>Integration with ComCen back-up voice and data devices</li> <li>Integration to other services and devices</li> <li>Integration with agency messaging systems</li> <li>Integration with agency voice recording and data logging systems</li> <li>Integration with existing LMR and new LMR systems</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	Hourly rate

<b>ID</b>	LM23
<b>Service Title</b>	LMR Network – Other
<b>Description</b>	Any other services/options not specified above that are proposed in order to deliver the PSN outcomes
<b>Features</b>	<ul style="list-style-type: none"> <li>• As agreed</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	

### 3.4 Personal Alerting

#### Specific to a connection

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

<b>ID</b>	PA01
<b>Service Title</b>	Personal Alerting – Base Connection
<b>Description</b>	Connection to Personal Alerting service for turnout/messaging notification and text messaging
<b>Features</b>	<ul style="list-style-type: none"> <li>• Ability to address individual or groups of devices</li> <li>• Ability to integrate to agency systems</li> <li>• Ability to send messages directly via portal</li> </ul>
<b>SLAs</b>	SMSL01-04, PASL01-04
<b>Pricing Unit</b>	Connection count

<b>ID</b>	PA02
<b>Service Title</b>	Personal Alerting – Device
<b>Description</b>	Device that can connect to the Personal Alerting service
<b>Features</b>	<ul style="list-style-type: none"> <li>• Appropriate form factors</li> </ul>
<b>SLAs</b>	SMSL01-04, PASL05
<b>Pricing Unit</b>	Device count

#### Organisation or group options

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

<b>ID</b>	PA03
<b>Service Title</b>	Personal Alerting – Additional Coverage
<b>Description</b>	Ability to deploy additional sites to add additional coverage
<b>Features</b>	<ul style="list-style-type: none"> <li>• Connectivity to main service so a common interface results in messages being broadcast from all sites including those provided under this service</li> </ul>

<b>SLAs</b>	SMSL01-04
<b>Pricing Unit</b>	Per site

<b>ID</b>	PA04
<b>Service Title</b>	Personal Alerting – Device Certification
<b>Description</b>	Initial testing and ongoing maintenance of compliance for support of Personal Alerting services
<b>Features</b>	<ul style="list-style-type: none"> <li>• Validation that devices can support all required services</li> <li>• Ongoing regression testing when network, or device changes, including firmware and software occur</li> </ul>
<b>SLAs</b>	SMSL03-04, PASL06
<b>Pricing Unit</b>	Device model count

<b>ID</b>	PA05
<b>Service Title</b>	Personal Alerting – Transparent Network Management
<b>Description</b>	Visibility of network status in real-time for business users
<b>Features</b>	<ul style="list-style-type: none"> <li>• Presentation via portal</li> <li>• Presentation via API</li> <li>• Notification of planned and unplanned outages</li> </ul>
<b>SLAs</b>	SMSL03-04, PASL07
<b>Pricing Unit</b>	Per network

<b>ID</b>	PA06
<b>Service Title</b>	Personal Alerting – Complex Agency Support
<b>Description</b>	Enhanced service management for agencies with complex requirements
<b>Features</b>	<ul style="list-style-type: none"> <li>• As agreed</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	Per agency

<b>ID</b>	PA07
<b>Service Title</b>	Personal Alerting – Other



<b>Description</b>	Any other services/options not specified above that are proposed in order to deliver the PSN outcomes (including different network connectivity options is appropriate)
<b>Features</b>	<ul style="list-style-type: none"> <li>• Possible options for a two-way mechanism for Personal Alerting</li> <li>• As agreed</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	

Variable charges

**Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.**

<b>ID</b>	PA08
<b>Service Title</b>	Personal Alerting – Professional Services
<b>Description</b>	Professional services to architect, design and implement integration with other technology (agency or service provider) in order to meet the overall outcomes.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Integration with CAD systems</li> <li>• Integration to other services and devices</li> <li>• Integration with agency messaging systems</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	Hourly rate

<b>ID</b>	PA09
<b>Service Title</b>	Personal Alerting – Other
<b>Description</b>	Any other services/options not specified above that are proposed in order to deliver the PSN outcomes
<b>Features</b>	<ul style="list-style-type: none"> <li>• As agreed</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	

### 3.5 Aggregation

#### Specific to a connection

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

Nil

#### Organisation or group options

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

<b>ID</b>	AG01
<b>Service Title</b>	Aggregation – Base Plan
<b>Description</b>	Base aggregation service presenting all PSN services to an agency through a common service management interface. Expected to be volume-based (e.g. seats and/or number of aggregated suppliers)
<b>Features</b>	<ul style="list-style-type: none"><li>• Service desk</li><li>• Incident Management</li><li>• Problem Management</li><li>• Change Management</li><li>• Reporting</li></ul>
<b>SLAs</b>	SMSL01-04
<b>Pricing Unit</b>	Seat count, number of PSN suppliers

<b>ID</b>	AG02
<b>Service Title</b>	Aggregation – Other
<b>Description</b>	Any other services/options not specified above that are proposed in order to deliver the PSN outcomes
<b>Features</b>	<ul style="list-style-type: none"><li>• As agreed</li></ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	

Variable charges

Tables and table contents to be added, edited or removed to reflect the complete definition of the services you are proposing.

We would expect to see a rate card for the following additional services that are not capable of quantification:

<b>ID</b>	AG03
<b>Service Title</b>	Aggregation – Professional Services
<b>Description</b>	Professional services to architect, design and implement integration with other technology (agency or service provider) in order to meet the overall outcomes
<b>Features</b>	<ul style="list-style-type: none"><li>• Integration and Interworking across PSN Services</li><li>• Integration to other services and devices</li></ul>
<b>SLAs</b>	SMSL01-04
<b>Pricing Unit</b>	Hourly rate

<b>ID</b>	AG04
<b>Service Title</b>	Aggregation – Architectural Oversight of Systems
<b>Description</b>	End-to-end technical oversight of PSN services
<b>Features</b>	<ul style="list-style-type: none"><li>• Understand each service technically and how they work together in the eco-system to deliver PSN outcomes</li><li>• Impact analysis</li><li>• Roadmapping and guidance</li></ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	Hourly rate

<b>ID</b>	AG05
<b>Service Title</b>	Aggregation – Release Management
<b>Description</b>	Manage the releases of major PSN system changes and the impacts across the different service providers and their services
<b>Features</b>	<ul style="list-style-type: none"><li>• Co-ordinate interdependencies for architecture and design</li><li>• Co-ordinate end-to-end testing</li></ul>

	<ul style="list-style-type: none"> <li>Co-ordinate dependencies for release of new features into the live environment</li> </ul>
<b>SLAs</b>	SMSL03-4
<b>Pricing Unit</b>	Per release

<b>ID</b>	AG06
<b>Service Title</b>	Aggregation – Agency Transition Services
<b>Description</b>	Manage the transition of agencies to the new network
<b>Features</b>	<ul style="list-style-type: none"> <li>Project management</li> <li>Design</li> <li>Implementation</li> <li>Testing</li> <li>Service Support Readiness</li> <li>Transition</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	Per agency

<b>ID</b>	AG07
<b>Service Title</b>	Aggregation – Agency Feasibility Study
<b>Description</b>	Prepare a feasibility study to assist the agency with planning
<b>Features</b>	<ul style="list-style-type: none"> <li>Impact analysis</li> <li>Report and recommendations</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	

<b>ID</b>	AG08
<b>Service Title</b>	Aggregation – Advanced Engagement Management Services
<b>Description</b>	Assisting the Lead Agency with the co-ordination of all agencies across the network
<b>Features</b>	<ul style="list-style-type: none"> <li>As agreed</li> </ul>

<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	

<b>ID</b>	AG09
<b>Service Title</b>	Aggregation – Other
<b>Description</b>	Any other services/options not specified above that are proposed in order to deliver the PSN outcomes
<b>Features</b>	<ul style="list-style-type: none"> <li>• As agreed</li> </ul>
<b>SLAs</b>	As agreed
<b>Pricing Unit</b>	

## 4. Service Levels

This section presents examples for the PSN programme's thinking on service levels, including where the draft specifications are sourced from. You are required to define your own service levels to meet our requirements, proposing how you will measure and meet these. Availability and performance SLAs for each service are expected at a minimum.

### 4.1 Service Management

This section defines priority levels and relevant response times for incidents, problems, service requests and change requests. The use of these terms here is as per the following:

Incident	An unplanned interruption to a service from this catalogue, or reduction in the quality of a service or a failure of a component that has not yet impacted a service (e.g. failure of one connection of a resilient pair).
Problem	A problem is when multiple occurrences of related incidents are observed, or a workaround is in place to resolve an incident that requires further investigation in order to identify and resolve the root cause.
Service Requests	Varying types of user requests to add, remove or modify a service from this catalogue.
Change Requests	The Change Management process is responsible for controlling the lifecycle of change to all components that are used to deliver the services in this catalogue. This is a change request from the service provider to an agency (either as a response to an incident, problem or project request from the agency, or as part of service maintenance or evolution).

**The following example is provided for the definition of priority, noting that authorised agency users can choose to specify the priority when logging a ticket:**

Priority Code	Priority Level	Description
1	Critical	<ul style="list-style-type: none"> <li>a total failure of the primary functions of a service; or</li> <li>a security breach resulting in non-authorised access to the services</li> </ul>
2	Medium	<ul style="list-style-type: none"> <li>a partial failure or degradation of the primary functions of a service; or</li> <li>critical failures with an acceptable workaround in place</li> </ul>
3	Low	<ul style="list-style-type: none"> <li>non-urgent issues with minor impact (e.g. inconvenience)</li> </ul>

The following SLAs apply to all services:

- **SMSL01 Incidents** are resolved within

Priority Code	Priority Level	Hours/Days	Target Response Time	Target Resolution Time	Update Interval
1	Critical	24x7	Immediate	4 hours	1 hour
2	Medium	24x7	1 hour	8 hours	2 hours
3	Low	8x5	8 business hours	5 business days	1 business day

- **SMSL02 Problems** are resolved within

Priority Code	Priority Level	Hours/Days	Target Response Time	Target Resolution Time	Update Interval
1	Urgent	24x7	4 hours	5 days	1 day
2	Medium	24x7	8 hours	10 days	2 days
3	Low	8x5	8 business hours	20 business days	5 business days

- **SMSL03 Service Requests** are resolved within

Priority Code	Priority Level	Hours/Days	Target Response Time	Target Resolution Time
1	Urgent	24x7	4 hours	4 hours
2	Medium	8x5	4 business hours	8 business hours
3	Low	8x5	8 business hours	10 business days

- **SMSL04 Change Requests** are logged with the following lead times

Priority Code	Priority Level*	Lead Time
1	Urgent	By agreement with agencies
2	Major	12 business days
3	Significant	6 business days
4	Minor	1 business days
5	Informational	Notice only

\*Additional detail can be found in *Appendix 4.5 Service Guidelines - Transparent Network Management*

Note: we have been silent on agreed outage windows at this point, this may be a useful concept to add in for change requests.

## 4.2 Priority Cellular Service Levels

Regions referred to in the table below are to be defined, and feedback is sought from Respondents on the granularity that can be provided for both reporting and from a service level perspective.

Service level specifications and measurement approaches to be added, edited or removed to reflect the complete definition of the services you are proposing.

ID	Service Level
PCSL01	Network available (from an end-user perspective) 99.99% of time (measured regionally rolling 12-month average).  Note: Network availability is intended to represent a usable service for the entire coverage area. So, loss of a capacity site does not impact availability, but loss of a coverage site would. If an alternative network is available, relief could be provided through reduction of incident priority, but availability would still be impacted for the underlying network.
PCSL02	Messaging service is available (from an end-user perspective) 99.999% of the time (measured rolling 12-month average).
PCSL03	99.999% of message attempts are successfully delivered to all intended recipients.
PCSL04	99.9% of messages delivered within 15secs.
PCSL05	99.99% of access requests granted.
PCSL06	99.9% of access requests granted.
PCSL07	99.99% of access requests to alternative cellular provider granted.
PCSL08	Network performance will adhere to the specifications as documented in 3GPP TS 23.203 Rel-12 (and beyond) for all MC services for 99.9% of traffic.
PCSL09	99% of devices will be repaired/replaced in less than 5 business days.
PCSL10	Deployment time to range from pre-planned to no-delay.  No-delay deployments shall be delivered within 2 hours 99% of the time.  Deployables will be operational within 30mins of arriving at destination 99% of the time.
PCSL11	Device Management service will be available 99.99% of the time.
PCSL12	99.99% connection available end-to-end between service provider and agency with effective throughput in line with specification.
PCSL13	99.99% of traffic adheres to configured QoS profiles for latency, jitter and packet loss.
PCSL14	Device certification impact assessment will be undertaken within 1 week of a change in software by the device manufacturer, 1 day for critical security patches.
PCSL15	Transparent Network Management service will be available 99.99% of the time.
PCSL16	App Store will be available 99.99% of the time.



### 4.3 MC Services Service Levels

ID	Service Level
MCSL01	MC Service available (from an end-user perspective) 99.999% of time (measured rolling 12-month average).
MCSL02	The maximum access time (time from PTT press) for MCPTT shall be less than 500ms for 99.9% of all MCPTT voice requests.
MCSL03	The maximum PTT receive time (throughput delay) for MCPTT shall be less than 500ms for 99.9% of all MCPTT voice requests.
MCSL04	The maximum late call entry time for MCPTT shall be less than 500ms for 99.9% of all late call entry requests.
MCSL05	Console Service will be available 99.999% of the time.
MCSL06	Recording Service will be available 99.999% of the time.
MCSL07	Portal and/or API will be available 99.999% of the time.
MCSL08	Gateway Service will be available 99.999% of the time.
MCSL09	99.99% of traffic through the gateway will incur latency of less than 20ms.
MCSL10	Device certification impact assessment will be undertaken within 1 week of a change in software by the device manufacturer, 1 day for critical security patches.

### 4.4 Land Mobile Radio Service Levels

Regions referred to in the table below are to be defined, and feedback is sought from Respondents on the granularity that can be provided for both reporting and from a service level perspective.

ID	Service Level
LMSL01	Network available (from an end-user perspective) 99.99% of time (measured regionally rolling 12-month average).  Note: Network availability is intended to represent a usable service for the entire Coverage Area. The loss of any site impacts availability in the region. If an alternative network is available, relief could be provided through reduction of incident priority, but availability would still be impacted for the underlying network.
LMSL02	Messaging service is available 99.999% of the time (measured rolling 12-month average).
LMSL03	The maximum access time (time from PTT press until go-ahead tone is received) for LMR shall be less than 500ms for 99.9% of all LMR voice requests.
LMSL04	The maximum PTT receive time (mouth to ear delay) for LMR shall be less than 500ms for 99.9% of all LMR voice requests through to all valid recipients.
LMSL05	The maximum late call entry time (time taken from when someone changes to a talkgroup while somebody is already speaking, for them to start hearing that person) for LMR shall be less than 500ms for 99.9% of all late call entry requests.

LMSL06	A LMR voice call shall proceed without been queued for 99.99% of all LMR voice requests. For LMR voice requests that are queued, the maximum queued time shall be less than 1sec for 99.9%.
LMSL07	99.99% of message send attempts successfully delivered to all intended recipients.
LMSL08	99.5% of message send attempts successfully delivered to all intended recipients within 1 sec.
LMSL09	99% of devices will be repaired/replaced in less than 5 business days.
LMSL10	Gateway service will be available 99.999% of the time.
LMSL11	99.99% of traffic through the gateway will incur latency of less than 20ms.
LMSL12	Console service will be available 99.999% of the time.
LMSL13	Recording Service will be available 99.99% of the time.
LMSL14	Packet Data Service will be available 99.99% of the time.
LMSL15	Device Management Service will be available 99.99% of the time.
LMSL16	OTAR/OTAP Service will be available 99.99% of the time.
LMSL17	Device certification impact assessment will be undertaken within 1 week of a change in software by the device manufacturer, 1 day for critical security patches.
LMSL18	Deployment time to range from pre-planned to no-delay. No-delay deployments shall be delivered within 2 hours 99% of the time. Deployables will be operational within 30mins of arriving at destination 99% of the time.
LMSL19	Transparent Network Management Service will be available 99.99% of the time.

## 4.5 Personal Alerting Service Levels

Regions referred to in the table below are to be defined, and feedback is sought from Respondents on the granularity that can be provided for both reporting and from a service level perspective.

ID	Service Level
PASL01	Network available (from an end-user perspective) 99.99% of time (measured regionally rolling 12-month average).  Note: Network availability is intended to represent a usable service for the entire Coverage Area. The loss of any site impacts availability in the region. If an alternative network is available, relief could be provided through reduction of incident priority, but availability would still be impacted for the underlying network.
PASL02	Messaging system is available 99.99% of the time (measured rolling 12-month average).
PASL03	99.999% of message attempts are successfully delivered to all intended recipients.
PASL04	99.9% of messages successfully delivered to all intended recipients within 1 sec.
PASL05	99% of devices will be repaired/replaced in less than 5 business days.
PASL06	Device certification impact assessment will be undertaken within 1 week of a change in software by the device manufacturer, 1 day for critical security patches.
PASL07	Transparent Network Management Service will be available 99.99% of the time.

## 4.6 Aggregation Reporting

As agreed.

## 5. Service Level Measurement Definitions

This section presents examples for our thinking on how to measure and manage the availability and restoration service levels for an example set of key services. You are expected to provide detailed information on how you see measurement and calculation of service levels to occur for all services.

### 5.1 Principles

The following principles have been proposed to help explain how service level calculations are expected to occur in practice:

- If you have LTE *or* LMR and one is 'working correctly' in a given region the overall PSN service is **Available**

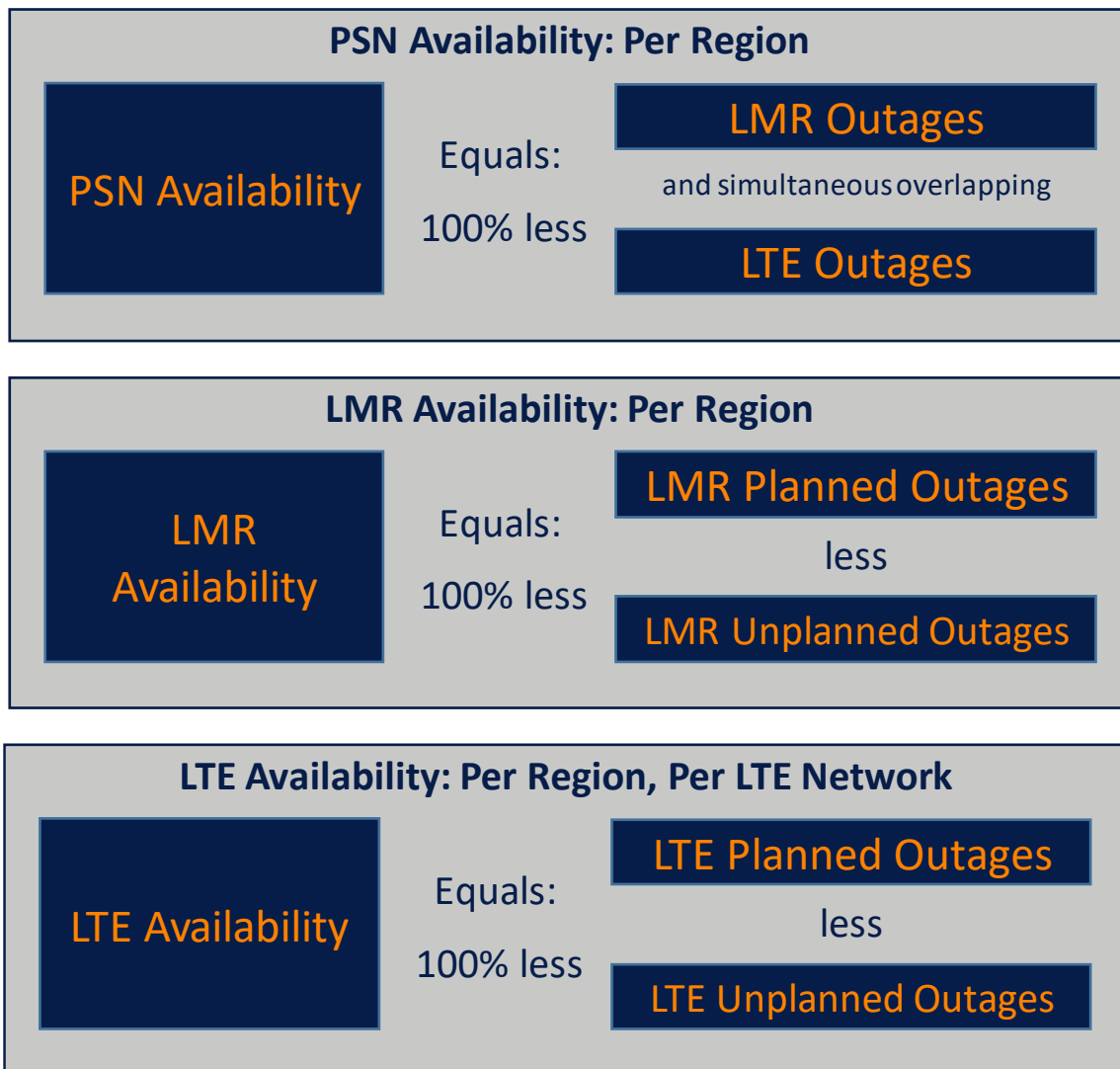
Note: That for this to be the case in practice – the individual must have access to both networks (including appropriate devices) and be able to use either network to perform the communications task required.

- This is how you get 99.999%+ in practice. Where a proposal is for a single technology network, we run with 99.99%
- Aggregator to manage and measure to the 99.999% availability number across the suppliers
- Individual network availability:
  - LMR – available means any user in the Coverage Area can talk to a comms centre
  - LTE – available means a user can access voice, text and data services including all MCx features and bearers
- Availability measurement:
  - Whilst the core and remote sites can be measured separately (with different SLAs) this is not seen as particularly useful when it is the service outcome we are looking for
  - It makes sense to measure regionally for each network on a 12-month rolling period
  - Therefore, a single site being unavailable will impact availability in the region it is located in (unless there is overlapping coverage) for that network. Measurement is per-site and needs to reflect the fact that it is up and performing correctly
  - Planned outages are still outages from an availability perspective (unless they are avoided, e.g. using a Cell on Wheels (COW))
  - Only when they all LMR and LTE services are down in the same location is the service fully unavailable (impacting the aggregator's target)
- Availability measures are supported by restoration commitments. These commitments are essential and expected to be where the focus should be. But it is also the area where we can agree for specific incident types a reduction in restore time through factors. Some can be agreed in advance through principles. Others will need agreement at the time that the user impact is in fact negligible. Examples include such as:
  - Availability of alternative network in the location (e.g. if there is overlapping usable coverage between LTE networks, the restore time can be relaxed for an outage on one of the networks if there is no user impact apart from the roaming time)
  - Availability of alternative network technology in the location (e.g. LTE fails but LMR is in place) could also result in a relaxed restore time, but only with agreement from all impacted agencies
  - Different restore times for different types of sites (e.g. gold, silver, bronze – each cell site will need to be graded). Rural may be lower for practical reasons

- Also could be a lower restore time if there is an alternative in place (either overlapping coverage or a COW in place.) For example, a site goes down – a temporary COW is put in place to restore coverage – now the restore time on the original fault can be relaxed
- Specific demarcation points to be agreed for measurement of SLAs
- MCPTT service is available if it is working correctly and is reachable by any authorised user on any authorised, functioning network
- Personal Alerting – follow the same sort of measurement approach as LMR.

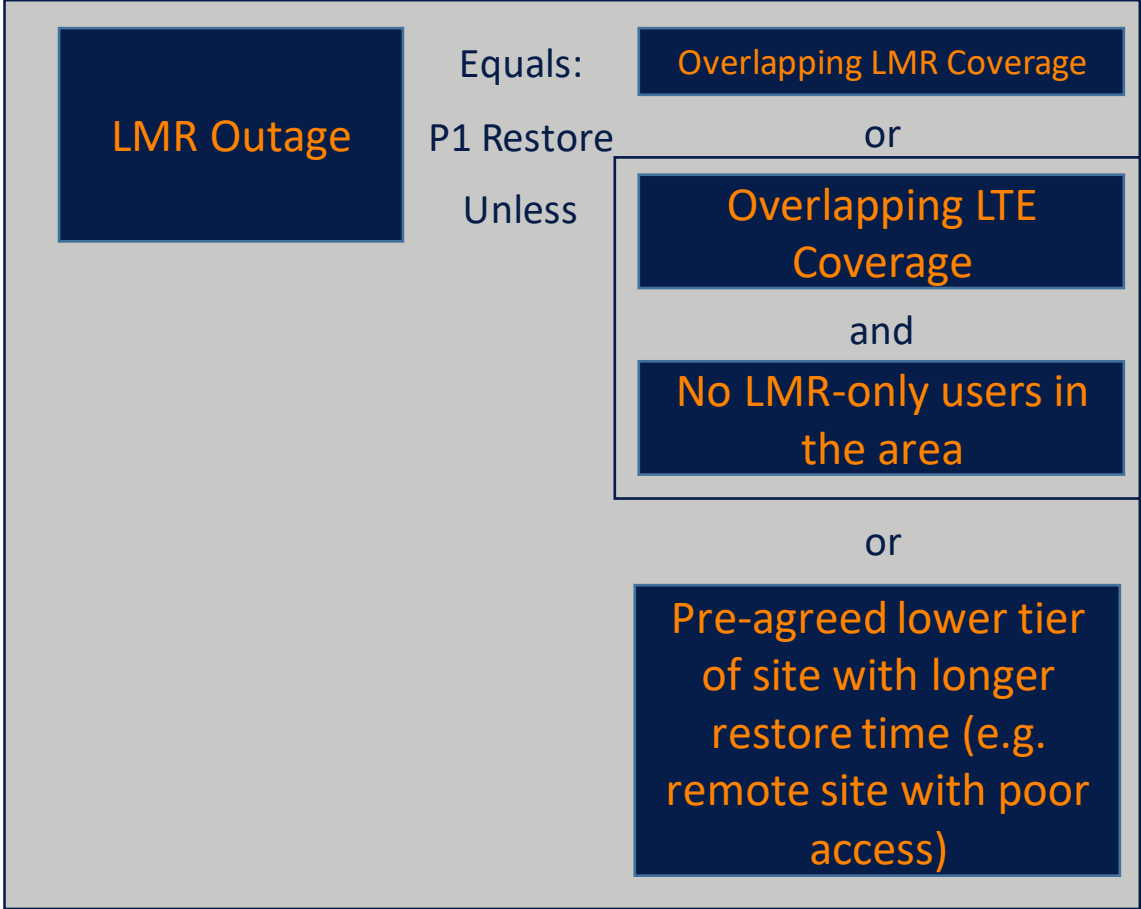
## 5.2 Availability

The following graphic shows how the overall availability (and independent LMR and LTE services) is expected to be calculated:



### 5.3 LMR Fault Restoration

The following graphic shows how LMR fault restoration commitments could be implemented in practice:



## 5.4 LTE Fault Restoration

The following graphic shows how LTE fault restoration commitments could be implemented in practice:

