

# Request for Proposal (RFP)

## National Public Safety Mobile Broadband Proof of Concept (PoC)

NSWTA104S

FILE18/20743

RFP Issue Date: 24 October 2018

RFP Closing Date: 05 December 2018

Closing Time: 10.00am Sydney time

# Contents

<b>1.</b>	<b>Overview, Scope and Process</b>	<b>6</b>
1.1.	Executive summary	6
1.2.	Role of the NSW Telco Authority	6
1.3.	Key objectives	7
1.4.	Background	7
1.5.	Project overview	8
1.6.	Key outcomes	10
<b>2.</b>	<b>Statement of Requirements</b>	<b>10</b>
2.1.	RFP response structure	10
2.2.	Response requirements	13
2.3.	Security Posture Requirements	13
2.4.	System Engineering Requirements	14
2.5.	Business Support Systems (BSS) Requirements	15
2.6.	Operational Support System (OSS) Requirements	16
<b>3.</b>	<b>Proposed phases of the POC Environment</b>	<b>16</b>
3.1.	Phase 1: Primary MNO – lab environment	16
3.2.	Phase 2: MVNO with multi carrier roaming – Lab environment	18
3.3.	Phase 3: Progression of the POC to the MNO's Model environment	20
3.4.	Phase 4 – Portable expanded coverage solution	22
<b>4.</b>	<b>RFP Conditions</b>	<b>22</b>
4.1.	Definitions	22
4.2.	RFP preparation	23
4.3.	Assumptions made by Respondent(s)	23
4.4.	Information supplied	24
4.5.	Eligibility to respond	24
4.6.	Financial capability of Respondent	24
4.7.	ABN requirements	24
4.8.	Disclosure of confidential information	24
4.9.	Use of confidential information	24
4.10.	Return of confidential information	24
4.11.	Provisional RFP timetable	25
4.12.	Electronic Responses	25
4.13.	Late Responses	26
4.14.	Extension of Closing Date and Closing Time	26
4.15.	Addenda to RFP	26
4.16.	Discontinuance of RFP process	26
4.17.	Costs of Respondent participating in the RFP	27

4.18.	Exchange of information between Australian government agencies	27
4.19.	NSW Procurement Policy Framework	27
4.20.	Disclosure Information	27
4.21.	Corruption or unethical conduct	27
4.22.	Complaints procedure	28
4.23.	Evaluation process	28
4.24.	Mandatory Evaluation Criteria	28
4.25.	Gradable Evaluation criteria	29
4.26.	Assessments of Responses	29
4.27.	Site inspections and presentations by Respondent	29
4.28.	Acceptance or rejection of Responses	29
4.29.	Post Tender Negotiations	30
4.30.	Ownership of Responses	30
4.31.	No legal relation	30
<b>5.</b>	<b>Summary of RFP Essential Response Requirements</b>	<b>31</b>
<b>6.</b>	<b>Annexures</b>	<b>32</b>
6.1.	Annexure A PSMB National Objectives	32
6.2.	Annexure B PSMB High-Level Requirements	32
6.3.	Annexure C PSMB Test Plan	32
6.4.	Annexure D PSMB Test Environment	32
6.5.	Annexure E Cyber Security Posture for Mission Critical Systems and Services	32
6.6.	Annexure F PSMB Inter-Core test cases	32
6.7.	Annexure G Core HLR response template	32
6.8.	Annexure H RAN HLR response template	32
6.9.	Annexure I MCPTT HLR and Application response template	32
6.10.	Annexure J Network Selection and Roaming Strategy	32
6.11.	Annexure K RAN sharing site options	32
6.12.	Annexure L PSMB QAs	32

# Contact Officer

Respondents should refer requests for information or advice regarding this RFP to:

CONTACT NAME	Mauricio Hughes Gracia
CONTACT POSTAL ADDRESS	Level 14 McKell Building 2-24 Rawson Place Sydney NSW 2000
CONTACT PHONE	02 9219 3115
CONTACT EMAIL ADDRESS	<a href="mailto:ITS2573@finance.nsw.gov.au">ITS2573@finance.nsw.gov.au</a>

Any information given to a Respondent to clarify any aspect of this RFP will also be given to all other Respondents if in the opinion of the Principal it would be unfair not to do so.

## COPYRIGHT

This Request for Proposal document ("RFP") has been prepared by the NSW Telco Authority for and on behalf of the Crown in right of the State of New South Wales. This RFP is protected by Crown copyright.

© State of New South Wales – NSW Telco Authority, for and on behalf of the Crown in right of the State of New South Wales, 2018.

All rights reserved. No part of this RFP may be produced by any process, electronic or otherwise, in any material form or transmitted to any other person or stored electronically in any form, without the prior written permission of the State of New South Wales, except as permitted under the *Copyright Act 1968*.

**REQUEST FOR PROPOSAL**  
**Notice to Respondents**

This Request for Proposal (RFP) is comprised of a main document and four attachments.

The RFP main document has been divided into five sections, each of which contains one or more chapters.

NSW Telco Authority reserves all its rights, including but not limited to its right to cancel or vary this RFP as well as enter negotiations with any of the Respondents at its sole and absolute discretion.

The sections of the RFP, and the attachments, are listed in the following table:

Document	Section	Title	LOCATION
RFP main document	1	Overview, Scope and Process	This document
	2	Statement of Requirements	
	3	Proposed Phases of the POC Environment	
	4	RFP Conditions	
	5	Summary of RFP Essential Response Requirements	
Annexure A	10	PSMB National Objectives	Attached
Annexure B	10	PSMB National High-Level Requirements	Attached
Annexure C	10	PSMB Test Plan	Attached
Annexure D	10	PSMB Test Environment	Attached
Annexure E	10	Cyber Security Posture for Mission Critical Systems and Services	Attached
Annexure F	10	PSMB Inter-core testing	Attached
Annexure G	10	PSMB Core Checklist	Attached
Annexure H	10	PSMB RAN Checklist	Attached
Annexure I	10	PSMB MC Application checklist	Attached
Annexure J	10	Network Selection and Roaming Strategy	Attached
Annexure K	10	RAN sharing site options	Attached
Annexure L	10	PSMB QAs	Attached

It is the Respondent's responsibility to ensure that all pages of all documents have been obtained.

Enquiries regarding the content of this RFP and any other matters concerning the RFP process should be directed to the Contact Officer (email only) nominated on page four of this RFP.

# 1. Overview, Scope and Process

## 1.1. Executive summary

The NSW Telco Authority has recently completed a market investigation (Request for Information (RFI)) to identify the potential service delivery model that could meet the National Public Safety Mobile Broadband (PSMB) objectives and high-level requirements (HLRs). This work was undertaken on behalf of the National Public Safety Mobile Broadband Senior Officials Committee (SOC).

This Request for Proposal (RFP) is a continuation of those investigations and aims to work closely with the broader mobile telecommunications industry to validate some of the industry suggestions and findings from the RFI evaluation.

This RFP is seeking to develop a national Proof-of-Concept (PoC) test environment for a specific delivery model that received broad support as part of the RFI. This specific delivery model was a combination of approaches for different geographical environments, as follows:

- A Mobile Virtual Network Operator (MVNO) model with multi-carrier roaming in metro and regional areas, which will benefit from the overlapping coverage and redundancy of multiple carrier networks and avoid the cost of hardening a single network.
- A Radio Access Network (RAN) sharing model would be used to address areas that require an expansion of existing coverage and would generally apply in rural and remote areas.
- The potential use of deployable base stations in areas beyond the coverage footprints of conventional networks

Note that while the RFI evaluation found broad industry support for this model, there are a number of assumptions and potential implementation issues that need to be addressed before a formal decision on the national PSMB delivery model is made for all Australian States and Territories (Jurisdictions).

This test environment is likely to be developed in phases to both accommodate the different delivery models, potentially different locations and different budget availability of Jurisdictions.

## 1.2. Role of the NSW Telco Authority

- 1.2.1. The NSW Telco Authority is the Principal for this RFP
- 1.2.2. The NSW Telco Authority is a statutory authority responsible for the delivery of operational communications and the management of spectrum assets for NSW Government agencies, including for the mission-critical communications of Public Safety Agencies (PSAs).
- 1.2.3. In this capacity, the NSW Telco Authority is facilitating this market engagement on behalf, and with the participation, of all States and Territories (Jurisdictions).
- 1.2.4. All information received by the NSW Telco Authority will be shared with other jurisdictions, which may also participate in the evaluation of responses.
- 1.2.5. This Request for Proposal in respect of procurement of a particular good or service does not make a commitment to issue an RFP, RFT or Expression of Interest (EOI) in the future. Similarly, it does not preclude the release of any further RFPs, RFTs or EOIs.

### 1.3. Key objectives

1.3.1. The key objectives of this POC are to:

1. Establish a test environment that can be used as a PoC to validate the specific service delivery model identified through the RFI and confirm items 2. through 6. below.
2. Validate the specific service delivery model is able to meet (where practical), and/or demonstrate a future capability to meet the National PSMB HLRs.
3. Demonstrate that appropriate commercial, governance and collaboration arrangements can be established to manage the multiple stakeholders and parties involved in the complete solution.
4. Demonstrate that the specific service delivery model can flexibly involve multiple jurisdictions, including supporting cross border interoperability and a federated capability.
5. To confirm the necessary security requirements for the specific service delivery model.
6. To confirm that the specific delivery model is able to provide a cost effective PSMB capability for the Jurisdictions over the long term.

1.3.2. The PoC is not intended to be a comprehensive test plan for the national PSMB HLR or all PSMB use cases. The Jurisdictions recognise that it may not be feasible or cost effective to establish the full POC environment that can test all HLRs comprehensively. The test plan in Annexure D of this RFP is focussed on use cases that will test the certain aspects of the specific service delivery model which are considered the highest priority. Other test cases not directly related to the specific service delivery model are considered highly desirable. If some test cases are considered particularly challenging or costly, then Respondents may suggest an alternative approach that is able to demonstrate how those HLRs can be met over the medium to long term.

### 1.4. Background

#### **Commitment by all Australian governments**

- 1.4.1. The Australian Government convened the PSMB SOC to progress work towards a nationally interoperable PSMB capability and report to the Council of Australian Governments (COAG). This group is comprised of senior executives from all Jurisdictions and the Commonwealth.
- 1.4.2. The SOC established the PSMB Functional Working Group (FWG) to provide support and technical advice.

#### **National Objectives and High-Level Requirements**

- 1.4.3. This work of the PSMB SOC and FWG has led to the establishment of PSMB National Objectives and PSMB National HLRs, which will form the foundations of a federated PSMB service delivery model. Copies of this material is provided in Annexures A and B.

1.4.4. This material identifies the minimum requirements expected for a genuine public-safety grade PSMB service delivery model in Australia that can reliably support PSAs' mission-critical communication needs. The National Objectives and HLRs:

- have been developed with reference to the operating environment for PSAs in Australia,
- take account of international precedents,
- are aimed at informing the broader industry and stakeholders of the key elements of a PSMB service delivery model that can support the mobile data requirements for PSAs including: video, imaging, access to data bases, geo-location and real-time situation reports,
- includes mission critical push to talk and is expected to evolve to include other MCx service types

## **1.5. Project overview**

1.5.1. In this RFP, the NSW Telco Authority is seeking a market response to establish a POC test environment to validate the specific service delivery model(s) identified in the previous PSMB RFI.

1.5.2. The POC is also intending to test services that are not currently available, and are expected to come on stream with 3GPPP release 13 and 14, such as mission critical Push to Talk, mission critical video, group calls, dynamic group call management and others. These services will require absolute certainty for both user access and pre-emption including the Quality of Service relating to those features. Accordingly, they are predicated upon having dedicated spectrum. This POC will test those features and those services within this delivery model.

1.5.3. The solution broadly supported by industry is based on the combination of MVNO and RAN sharing delivery models to address broad geographical differences in Australia, and current limitations of commercial networks.

- A MVNO with multi-carrier roaming was supported to address urban and regional areas. This model was supported due to identified benefits from the overlapping coverage, natural redundancy and availability achieved via the existing Mobile Network Operators (MNOs).
- A RAN sharing model was supported to address remote and rural areas where commercial networks may not have the required coverage or redundancy.

1.5.4. The delivery model is assumed to be based on a national State and Territories' owned LTE Evolved Packet Core (EPC) that will control the data and voice requirements of emergency services and authorised personnel (i.e. PSMB users). The POC will specifically test the integration of dedicated PSMB spectrum which is intrinsic to the delivery model.

1.5.5. A dedicated PSMB EPC is required to in achieve the necessary security and control for public safety operational communications including end to end encryption of public safety's data and voice transmission.



- 1.5.6. This entails the PSMB owned EPC connected to the primary telco service provider's RAN, including that provider also using its RAN to transmit the PSMB spectrum for the exclusive use of PSMB users. The EPC will also potentially connect to other State and Territories' owned RAN infrastructure (under RAN sharing arrangements) and using the dedicated PSMB spectrum.
- 1.5.7. PSMB users will therefore roam from the State and Territories' owned RAN infrastructure (if and where available) and through the home providers coverage footprint where dedicated PSMB coverage is unavailable and should also be capable of roaming through visitor networks' coverage footprints.
- 1.5.8. The delivery model presumes an end to end Delivery authority that is contracted to provide overall Systems Integration, operation and to be responsible for availability of the functionality within HLR's.
- 1.5.9. There is also a desire to explore some innovative portable coverage solutions in the PoC that are suitable for providing PSAs with additional coverage to meet the bespoke requirements of PSAs. These solutions may also be used in rapid responses to network outages.
- 1.5.10. It is recognised that this combination of delivery models and capability may be suited to a consortium-based approach. The NSW Telco Authority would support such an approach, but with a preference for a Delivery Authority to have overall responsibility for contract execution and delivery of the PoC.
- 1.5.11. It is noted that there are established precedents in Australia and internationally for each of the delivery models being proposed for testing. These established precedents provide a level of confidence in the technical ability of existing (Mobile Network Operators (MNOs) to implement these solutions.
- 1.5.12. It is important to note that most of the Australian States and Territories have committed to be involved in some capacity with the PoC. However, each Jurisdiction is likely to have different timings to approve the budgets for the full scope of the PoC. Accordingly, the Jurisdictions have expressed a preference for a phased approach to the PoC implementation.
- 1.5.13. There is an expectation that a phased approach may naturally align with the different components of the full delivery model, and that the PoC environment will evolve to achieve the full PoC scope. This is discussed further below at section 2.1
- 1.5.14. Bell Labs was engaged by the Jurisdictions to develop the POC test plan (Annexure C) and the recommended test environment for the PoC (Annexure D). It is mandatory that the successful Respondent(s) complete the required test plan for each of the POC phases. The test plan is aligned with a sub-set of the National Objectives and HLRs. That sub-set has been identified as being most appropriate for confirming the validity of the specific delivery model.
- 1.5.15. The proposed PoC test environment has been developed to provide guidance to the Respondents as to the scope and architecture expected to gain a high level of confidence

in the test plan outcomes. This test environment is intended to be aligned with the delivery model identified by industry. This architecture is attached in Annexure D. A response that meets this architecture will be considered to be a “Conforming response”.

- 1.5.16. Given the dynamic nature of technology development it is acknowledged that the specified delivery models are based on the current market view, which may evolve. Non-conforming alternatives may be considered where significantly compelling benefits can be identified over the Annexure D architecture. These benefits should make reference to the evaluation criteria listed at section 4.25. A service and technology roadmap should be provided by respondents to inform this alternative.
- 1.5.17. The execution of the formal test plan should be conducted by the Respondent(s) in collaboration with the respective national Functional Working Group representatives. In addition to this separate testing activities may be undertaken in the model and/or production environment on an unsupported basis by the PSAs. The very nature of these test activities will be to simulate the unplanned nature of emergency response operations. The respondents will only be advised after the testing has been completed.
- 1.5.18. A formal agreement between the Commonwealth and the Jurisdictions on dedicated spectrum for PSMB has not been reached at the time of this RFP. However, respondents should respond on the assumption that dedicated spectrum would be made available to support the preferred delivery model.
- 1.5.19. It is appreciated that incorporating dedicate spectrum into the delivery models can be accomplished in different ways. The Authority is willing to consider alternate approaches to incorporating spectrum into the specific service delivery models.

## **1.6. Key outcomes**

- 1.6.1. The key outcomes expected from this RFP are:
  1. The successful Respondent/s will conduct a PoC for a nationally federated PSMB capability able to demonstrate compliance with the agreed HLRs,
  2. That the PoC may be conducted in phases to accommodate the different budget approval processes of the Jurisdictions, and the different geographical environments the PoC will be conducted in,
  3. Validation of the PSMB delivery models recommended by industry as being the most effective in achieving the National PSMB Objectives and HLRs, and
  4. To inform the development of the national PSMB roadmap.

## **2. Statement of Requirements**

### **2.1. RFP response structure**

- 2.1.1. It is recognised that a phased approach to achieving the full scope of the PoC, is likely to have some benefits. These include:

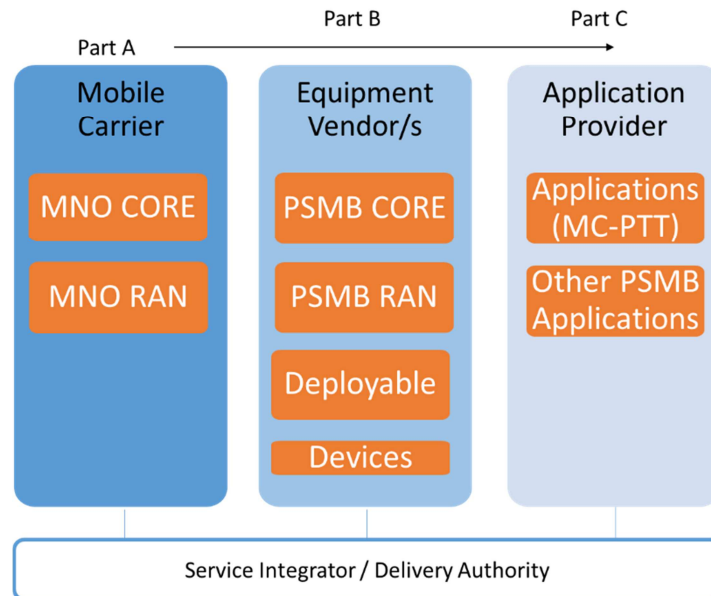
- providing a level of flexibility to accommodate the multi-jurisdictional nature of the respective budget approvals. This is due to the different timing required for budget approvals for different Jurisdictions.
- to potentially conduct the PoC over different geographical locations to gain broader national involvement.

2.1.2. Responses to this RFP should be developed to align with the proposed phases listed below. Respondents may propose an alternative phasing if it can be demonstrated that similar flexibility for jurisdictions can be achieved.

This phasing is summarized in the table below, which also identified the preferred geographical location for the phase. Further detail on the phases is provided at section 3.1.

<b>POC Operational Phases</b>	<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>	<b>Phase 4</b>	<b>Test region (1)</b>
<b>Test elements</b> PSMB RAN+Core + primary MNO	Lab environment	n/a	n/a	n/a	n/a
<b>Test elements</b> PSMB RAN+Core + primary MNO + Multi-carrier roaming	n/a	Lab environment	Model Environment	Production Environment	Urban
<b>Test elements</b> Network sharing to extend coverage <sup>(2)</sup>	n/a	n/a	Model Environment	Production Environment	Regional
<b>Test elements</b> BYOC/Deployable solutions to extend coverage	n/a	Lab environment	Model Environment	Production Environment	Remote

Respondents are asked to indicate their intention to respond to which part and/or combination of parts under the PSMB Eco-system as follows:



**Part A** - This option is only open to Australian Mobile Network Operator(s) (MNO) with a carrier licence or under a nominated carrier declaration. It is expected that this may require a consortium of MNO's to enable access to more than one mobile carriers existing mobile network infrastructure. The offer may include all of the additional equipment required to conduct the POC, as detailed in Parts B and C. However, each part should be included as separable components.

**Part B** - The supply, installation, commissioning and support of only the additional equipment items required to enable the POC. The additional equipment to be considered include a dedicated PSMB Evolved Packet Core, PSMB RAN, requirements and response template for the PSMB Core and PSMB RAN is attached as Annexures G and H. These requirements and templates are provided as a guide to respondents only. Respondents are asked to indicate what they believe are the specifications required to successfully meet the HLR's and complete the test plan.

**Part C** - The supply, installation commissioning and support of only the mobile applications that may be used as part of the POC. A suggested requirements checklist is also attached as Annexure I for the mandatory MCPTT application, and other suggested Public Safety Applications.

- 2.1.3. The NSW Telco Authority reserves the right to accept either the full offer of respondents with an inclusive offer for Parts A, B and C or alternatively have separate agreement(s) for the acquisition of some or all of the equipment offered under parts B or C.

- 2.1.4. Respondents to Part A should nominate who the end to end 'Delivery Authority' is in their response. The Delivery Authority should perform the role in accordance with a structured Systems Engineering approach or similar recommended approach.
- 2.1.5. Respondents should clearly identify which components of a PSMB solution are addressed in their proposed approach. If respondents are only replying for parts B or C, then they are asked to comment on the likely impact to the Delivery Authority and include a proposal for the resourcing required to support the integration of their part into the other parts of the POC test environment.

## 2.2. Response requirements

- 2.2.1. Complete responses should:
- provide all information as outlined in the *Essential Response Requirements* (refer to *Summary of Essential Response Requirements* numbered A through CC and summarised at section 5.
  - Complete the response templates shown for the individual POC components at Annexures G,H and I
  - when providing this information, consider the *Key outcomes* (refer to section 1.6) and *Evaluation criteria* (section 4.24-4.25) of this RFP
- 2.2.2. Responses from individual parties and from a consortium of relevant parties, including mobile network operators and equipment vendors, are welcomed.
- 2.2.3. The Respondents are also invited to recommend a preferred governance model that could facilitate the conduct of the PoC. This arrangement may also be used to assist with a future governance model that supports industry engagement between the Jurisdictions and the mobile industry for PSMB services.
- 2.2.4. Respondents may, if they choose, submit an Alternative (non-conforming) proposal. It is recommended that alternative Proposals be submitted in conjunction with a Conforming Proposal. An Alternative Proposal must be clearly marked "Alternative Proposal" and outlining the reasons that the respondent believes that the alternative proposal is superior with reference to the conforming proposal and the evaluation criteria.

## 2.3. Security Posture Requirements

- 2.3.1. Telecommunication networks are today an inseparable part of social interaction and critical national infrastructure. Protecting these networks from malicious attacks, that could potentially disrupt PSMB functionality and services, and ultimately lead to unavailability or loss of integrity or the confidentiality of network services, is thus, a critical aspect that cannot be ignored.

To the extent that a national PSMB network will support a range of operational activities that can be categorised as spanning business critical through to mission critical functions, a PSMB network must embed appropriate security and cybersecurity elements. Such elements must reflect the prevailing security and cybersecurity threat environments, and the ever-changing threat environment. Accordingly, the cyber posture of a national PSMB

network must be demonstrated, and independently assured, as appropriate for the prevailing threat and hazard environment.

The PSMB national objective (6) places an emphasis on Security considerations - *Australia's PSMB capability will have appropriate protective security measures to prevent unauthorised access of information and interference.*

- 2.3.2. To ensure that any legislative, regulatory and standards frameworks (as they relate to security) that will apply to a national PSMB network are uniform and nationally consistent, only national or internationally recognised frameworks will apply. Within that context, a national PSMB network must (at minimum) meet the requirements of the Commonwealth's Protective Security Policy Framework (PSPF).
- 2.3.3. Respondents are required to comply to Annexure E - Cyber Security Posture Statement for Mission Critical Systems and Services.
- 2.3.4. Respondents will be expected to participate in risk workshops during the POC phases with Jurisdiction representatives.

## **2.4. System Engineering Requirements**

The following approach to Systems Engineering is considered desirable for the successful conduct of the POC. However, respondents are invited to propose an alternative framework, that is likely to provide similar project controls, reporting and governance.

- 2.4.1. Respondents are encouraged to deliver against the test plan and POC phases utilising a structured Systems Engineering framework in accordance with ISO/IEC/IEEE 15288:2015 – Systems and Software Engineering – System Lifecycle Processes.
- 2.4.2. Respondents are encouraged to provide a Systems Engineering Management Plan (SEMP) detailing the systems engineering approach and assurance processes in meeting the test plan POC phases. The SEMP describes the complete, integrated technical effort which the respondents will apply to define, control, direct and integrate all engineering activities during the project. The SEMP incorporates all tasks to be conducted as part of that technical effort, including subcontracted tasks.
- 2.4.3. Respondents are encouraged to develop and maintain a Configuration Baseline Document (CBD) to ensure all network setting parameters and configurations for each test case are documented and traceable to all test results and outcomes.
- 2.4.4. Design reviews for each POC phase should form a key component of the design control and management process. Ensuring that all systems are produced and maintained against authorised designs is fundamental to the assurance of the technical integrity of the POC phases. Design reviews will be held with nominations from Jurisdictions.
- 2.4.5. Design Reviews may be subject to the Preliminary Design (PD), Detailed Design (DD), Verification and Validation (V&V) and Test Readiness Review (TRR) stages of the POC phases.
- 2.4.6. A formal Test Readiness Review (TRR) should form the entry criteria to each POC testing phase.

- 2.4.7. Respondents should prepare a Test and Acceptance Plan (TEMP) for each Phase POC for approval by NSW TA or nominated representative.
- 2.4.8. Respondents should provide a Verification Cross Reference Matrix (VCRM) to support the verification and validation of the test plan for each Phase of the POC against the relevant HLR and test cases contained in the test plan.
- 2.4.9. Respondents should establish the appropriate governance framework to manage configuration and network changes amongst all stakeholders for each POC phase.
- 2.4.10. Respondents should provide a Failure reporting, analysis, and corrective action system (FRACAS) system that provides a process for reporting, classifying, analysing failures, and planning corrective actions in response to those failures during the execution of the test plan and POC phases. The FRACAS will record the problems related to a product or process and their associated root causes and failure analyses to assist in identifying and implementing corrective actions.
- 2.4.11. Respondents should document and provide all network tools and testing software that may run on the equipment that can record logfiles of all network activity and levels for analysis to support the objective evidence to support execution of the test plan.
- 2.4.12. Respondents are required to adhere to all relevant Occupational Health and Safety (OH&S) legislative requirements when undertaking any works associated with the POC. System safety activities must be applied throughout the POC phases, with the establishment of a System Safety Management (SSM) system confirmed prior to, or as part of, Design Acceptance. The SSM encompasses the effective management of for example EMC, Safety-in-Design, and that it is continually monitored until decommissioning of the POC.
- 2.4.13. The test report submitted at the conclusion of each POC phase should include all factors that impact it in the POC environment. Such examples include System Conditions, Operating Conditions and Maintenance Conditions.

## **2.5. Business Support Systems (BSS) Requirements**

Full BSS and OSS functionality is not expected to be required for the POC. However there may be some minimum elements required or recommended to complete the full test plan. Respondents should describe the minimum requirements of BSS and OSS network elements and tools required to support the POC phases. Respondents may include commentary on additional options to include some of this functionality if beneficial and cost effective.

- 2.5.1. Respondents should describe their proposed billing strategy and confirm the necessary billing requirements for the specific service delivery model(s).
- 2.5.2. The BSS strategy should consider the Cyber security posture of Annexure E.
- 2.5.3. Respondents are asked to comment as to how this might evolve to a BSS in a PSMB production environment, in particular any design changes that may be required against the delivery model(s) and Cyber Security posture requirements of Annexure E.

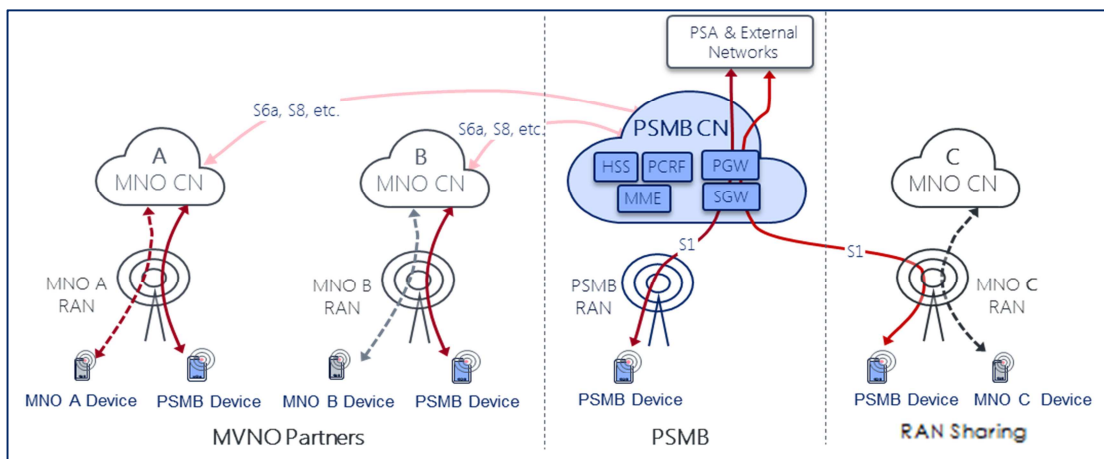
- 2.5.4. Respondents should identify any risks and impacts their billing strategy would have on the proposed service delivery model(s).

## 2.6. Operational Support System (OSS) Requirements

- 2.6.1. Respondents should describe their proposed operational support systems (OSS) strategy to confirm the necessary OSS requirements for the specific service delivery model(s).
- 2.6.2. The OSS strategy should consider the Cyber security posture of Annexure E.
- 2.6.3. Respondents should describe the minimum requirements of network element management and tools required to support the POC phases and how this would evolve to an OSS in a later phase, in particular any design changes that may be required against the delivery model(s) and Cyber Security posture requirements of Annexure E.
- 2.6.4. Respondents should identify any risks and impacts their billing strategy would have on the proposed service delivery model(s).

## 3. Proposed phases of the POC Environment

The following is provided to further describe the scope of the phases that could be implemented under the proposed phased approach in section 2.12 above. The phasing is intended to produce logical milestones for the implementation of the full POC architecture which has been developed by Bell Labs and is attached as Annexure D, and summarised in the diagram below.



### 3.1. Phase 1: Primary MNO – lab environment

- 3.1.1. Phase 1 is to be conducted in a lab environment with a dedicated PSMB Evolved Packet Core (“core”), PSMB RAN, and ‘integrated’ with the lab network of a primary MNO. The high level PSMB core requirements have been provided as guidance, and is attached as Annexure G
- 3.1.2. This phase will be conducted as a gateway, with failure to successfully pass the Phase 1 gateway criteria resulting in the termination of the PoC contract.
- 3.1.3. Respondents will need to confirm via a lab demonstration that the proposed dedicated PSMB core is able to interface with the MNO network core and can support roaming



between the MNO RAN and dedicated PSMB RAN with the associated performance management from the PSMB core

- 3.1.4. Once the lab test environment has been established, the respondent will complete a subset of the full test plan marked (L) for Lab testing. The attached Bell Labs test plan has been marked with categories of tests being either conducted in the Lab (L), Model (M), or Production (P) environment or combinations of each of these.
- 3.1.5. The PSMB Core should be configured to provide some commercial and technical flexibility to accommodate the expansion of the test environment for each Phase.
- 3.1.6. The primary PSMB network should be established assuming the utilisation of dedicated PSMB spectrum. The NSW Telco Authority will be seeking a temporary license in the 850MHz expansion band (5 + 5MHz) or a similar FDD band for this purpose. Respondents are invited to propose alternative arrangements for dedicated spectrum for testing purposes if preferred.
- 3.1.7. It is appreciated that introducing a dedicated PSMB spectrum band into the MVNO model may represent a material change to existing MNO networks. Accordingly, the Jurisdictions are seeking recommendations from the Respondents on the most appropriate way to conduct the PoC outside of the laboratory environment. Consideration may be given to restricting any subsequent model testing to a limited number of sites that are capable of accommodating additional infrastructure.
- 3.1.8. The responses must include a detailed network design for the PoC including a dedicated PSMB Core (including recommended core elements). Respondents are invited to provide different options for the recommended core elements to be included for the PoC. This is sought to provide some flexibility and visibility over the cost of implementing higher levels of features and functionality. Respondents should also highlight what can and cannot be achieved with each option of increasing functionality.
- 3.1.9. The successful demonstration of this lab based testing will be mandatory to proceed to the next stage. Respondents would be entitled to recover reasonable costs incurred in the execution of Phase 1. These costs would need to be agreed prior to commencement.
- 3.1.10. Note that the NSW Telco Authority will provide agreed resourcing for project management, and PSA user support during all stages of the PoC. In addition, the NSW Telco Authority will coordinate engagement with the other Jurisdictions, as the single point of contact for commercial arrangements (including invoicing and payment), project governance and scheduling.
- 3.1.11. Respondents will be required to provide a proposed support process including fault reporting, ticketing and resolution.
- 3.1.12. Respondents will be required to provide a report on the results of the test plan, as it applies to each of the phases. This must include any non-compliance with the HLRs, the steps taken to remedy any non-compliance, and recommendations or finding from the testing.

**Essential response requirements:**

- A. The location, scale and specifications of the equipment to be used for the proposed lab test.
- B. Detailed architecture to be established in the test lab
- C. Proposed EPC elements with different options for increasing functionality. The Responses should contain a detailed EPC development and integration plan showing how various elements of PSMB EPC will integrate with a RAN network and commercial core(s). Respondents are also invited to price the EPC based on a trial basis for the POC only, compared to on an ongoing operational license, including operations, maintenance and support costs.
- D. Schedule, risk register, systems engineering plan and project plan to establish and commission the lab test environment.
- E. A template showing the format for the proposed test plan results report
- F. The proposed schedule and resourcing to complete the applicable elements of the test plan.
- G. A Security Management Plan (SecMP) in accordance with Annexure E.
- H. With reference to Annexure E, respondents are invited to propose security testing that may be possible during the four phases of the POC and to document this in a Security Test Plan.
- I. Respondents are asked to comment on the feasibility of demonstrating a risk management framework to manage security risks. Reference should be made to ISO 31000:2009 Risk Management: Principles and guidelines, ISO/IEC27005-Information technology Security Techniques and HB 167:2006 Security risk management.
- J. The proposed cost to complete Phase 1 both on a stand-alone basis, and if undertaken as part of all subsequent phases.

**3.2. Phase 2: MVNO with multi carrier roaming – Lab environment**

- 3.2.1. Phase 2 seeks to expand the lab environment with the inclusion of a second MNO to enable multi-carrier roaming, with this phase of testing also confined to a Laboratory environment. Deployables will also be integrated to the PSMB Core in Laboratory environment.
- 3.2.2. Phase 2 further introduces inter-Core network testing since it is highly likely multiple PSMB Core networks (MMEs) will be setup nationally and will require inter-redundancy and load sharing. Refer to Annexure F for proposed test cases.
- 3.2.3. Respondents are to describe and demonstrate the device (UE) camping strategy and roaming triggers for multi-carrier roaming
- 3.2.4. The suggested architecture for this delivery model is provided at Annexure D. Responses must include a detailed network design confirming the impact of the additional elements to be incorporated into the test environment for this Phase.
- 3.2.5. Once the additional elements have been incorporated into the lab test environment, the respondent will complete a subset of the full test plan that relate to roaming between networks.

- 3.2.6. A key objective of this phase is to identify whether seamless roaming for PSA users can be achieved between each of the primary MNO, secondary MNO and dedicated PSMB RAN under each scenario.
- 3.2.7. The Respondents should consider how resource management would occur in an active RAN sharing model and the configuration of impacted network elements i.e. Baseband(BBU) and radio (RU).
- 3.2.8. A description will need to be provided on pre-agreed governance arrangements between MNO's over handover protocols. This includes the scenarios of:
- Network attach to the secondary carrier in the absence of any primary network;
  - handover to the secondary MNO when the primary network fails;
  - handover back to the primary MNO after the primary MNO's network becomes available.

Respondents may include further enhancements to the RAN sharing delivery model to achieve optimal outcomes.

**Essential response requirements:**

- K. Description of the changes to network architecture, detailing the impact of the additional elements. This includes an explanation of the RAN sharing arrangements between PSMB dedicated and multiple carrier cores. There is a strong preference for demonstrating higher level integration between core networks to support service continuity when users handover between the PSMB network and carrier's network.
- L. Respondents are asked to provide a view if there is any merit in a dedicated PSMB RAN network/RAN sharing in not only rural/remote areas but also highly congested areas. For rural areas, respondents are invited to explore the pros/cons of passive RAN sharing vs MOCN as the most appropriate configuration. Also to consider the challenges of MOCN in this context
- M. Suggested PoC Project Governance arrangements for both commercial and operational aspects of the PoC. This includes:
- confirming that a single party be accountable for all the PoC deliverables; and
  - governance arrangements for establishing and coordinating handover protocols for network roaming
- N. Schedule, risk register, systems engineering plan and project plan to establish and commission the elements of the service delivery model over the stated test phases.
- O. A detailed list of support services to be offered under the PoC including key resources involved and their experience.

**3.3. Phase 3: Progression of the POC to the MNO's Model environment**

- 3.3.1. The objective of Phase 3 is to progress the full lab environment from phase 2 to the MNO's model environment. It is expected that additional infrastructure will be required to accommodate the full scope of the POC.
- 3.3.2. Respondents are asked to recommend an appropriate scale for this model environment. Respondents are encouraged to include more than one option, to demonstrate the additional cost of increasing the scale of the test environment. This includes conducting the POC in different geographical locations to enable greater participation from the states and territories.
- 3.3.3. For the MVNO component of the model, preference will be given for a dense urban area, that may be exposed to high levels of commercial customer traffic.
- 3.3.4. For the RAN sharing component of the model, preference will be given to the periphery of regional towns that may benefit from increased commercial coverage or capacity.
- 3.3.5. Respondents are asked to propose the optimal approach or approaches to incorporating the dedicated spectrum into their existing network. Optimal in this sense is considered to be the appropriate balance between cost and performance benefits.
- 3.3.6. The Jurisdictions would welcome the opportunity for Respondents to demonstrate active RAN sharing if possible. If this is assessed as being impractical, then passive RAN sharing arrangements are acceptable.

- 3.3.7. Under passive sharing arrangements, jurisdictions would welcome the opportunity to leverage existing state government infrastructure. For example, the NSW Telco Authority is open to using some new regional telecommunications sites that have been established under its Critical Communications Enhancement Program. A list of some of these sites is attached as Annexure K
- 3.3.8. The responses must include the proposed physical location and coverage maps of the model environment. This should include the proposed dimensioning (user numbers and throughput) that are assumed to be supported by the PSMB network.
- 3.3.9. At this stage, Jurisdictions have an expectation that up to 250 PSA users at any one time may be involved in the PoC (this number may be refined as planning progresses).
- 3.3.10. Note that user numbers are likely to be influenced by the availability of handsets/devices. Respondents are invited to propose arrangements for loan devices that could supplement the number of devices available for use in the PoC.
- 3.3.11. Respondents are to document additional risks associated with phase 3 for inclusion in client risk workshop/s. Environment and geographical features of the proposed model location are to be detailed to allow assessment of the relevance of a particular model location to other typical locations. Any model location specific performance risks and possible controls are to be documented for inclusion in the POC risk register.
- 3.3.12. Respondents are to describe their Multi-Vendor Integration (MVI) approach and how they would manage testing of software upgrades or any architecture upgrades in the MNO network.
- 3.3.13. As certain MNO interfaces are required for the PSMB MVNO architecture e.g MB2 for Group Communications, respondents are required to highlight a summary of features/interfaces and dependencies required in the RAN and Core Network in the MNOs environment for implementation.

**Essential response requirements:**

- P. The location and scale of the proposed model/production test environment. This includes the number of base stations involved, how much additional infrastructure is required and the coverage to be achieved
- Q. The proposed approach to incorporating the dedicated spectrum into the PSMB PoC environment. This should include support for why the preferred approach is considered optimal.
- R. Schedule, risk register, systems engineering plan and project plan to establish and commission the proposed infrastructure.
- S. The proposed test plan to confirm acceptance of the test network.
- T. Schedule, systems engineering plan and project plan to conduct the test plan.
- U. Detailed costing for Phase 3 including breakup for hardware, software and resourcing.

### 3.4. Phase 4 – Portable expanded coverage solution

- 3.4.1. PSA's are often required to undertake operations under conditions that are unable to rely upon conventional mobile telecommunications infrastructure. This can include:
- Very remote areas of Australia where the lack of population has limited conventional mobile and radio coverage options
  - In existing coverage areas where networks have been impacted by large natural disasters including floods, fire and storms.
- 3.4.2. For these situation PSA's are seeking rapidly transportable and deployable coverage solutions
- 3.4.3. Phase 4 seeks to separately test some of the more innovative coverage solutions that are becoming available. This may include portable micro-cells, vehicle meshing capabilities and drones.
- 3.4.4. It is likely that a number of Jurisdictions will seek to conduct this phase individually.
- 3.4.5. The Jurisdictions would welcome responses for the most appropriate solutions that may provide portable wide area deployable coverage for first responders and also allow some commercial flexibility to select the preferred approach.

#### Essential response requirements:

- V. Proposed deployable solution or solutions that are recommended for inclusion in the PoC, and the benefits of these solutions.
- W. Architecture demonstrating the proposed solution and integration with the PSMB core.
- X. Schedule, risk register, systems engineering plan and project plan to conduct the test plan.
- Y. Detailed costing for Phase 4 including breakup for hardware, software, and resourcing.

## 4. RFP Conditions

### 4.1. Definitions

- 4.1.1. Unless the context indicates otherwise, the following terms, where used in this RFP shall have the meanings set out below.

“ABN” means an Australian Business Number as provided in the GST law.

“Alternative Proposal” means a non-Conforming Proposal that is intended to offer a different method of meeting the object and intent of the requirement.

“Closing Date” and “Closing Time” mean the Closing Date and Closing Time for receipt of Responses specified in the cover sheet of this RFP.

“Confidential Information” means all Information disclosed by the Principal in connection with this RFP to the Respondent(s), including:

- a) confidential information of the Principal or a third party to whom the Principal owes an obligation of confidentiality;

- b) information derived partly or wholly from the Information including without limitation any calculation, conclusion, summary and computer modelling; and
- c) trade secrets or information which is capable of protection at law or equity as confidential information;

but excluding Information which:

- d) is in or becomes part of the public domain otherwise than through breach of this term or an obligation of confidence owed to the Principal; or
- e) the Respondent(s) can prove was already known to it at the time of disclosure by the Principal or its Representatives (unless such knowledge arose from disclosure of information in breach of an obligation of confidentiality); or
- f) the Respondent(s) acquires from a source other than the Principal where such source is entitled to disclose the Information.

“DFSI” means the NSW Department of Finance, Services and Innovation.

“GST” means a goods and services tax and has the same meaning as in the GST Law.

“GST Law” means any law imposing a GST and includes *A New Tax System (Goods & Services Tax) Act 1999* (Cth) or if that Act does not exist, means any Act imposing, or relating to a GST and any regulation made under those Acts.

“NSW Telco Authority” means the NSW Government Telecommunications Authority.

“Principal” means the party releasing this RFP.

“Services” means the services sought under this RFP, as detailed in the Statement of Requirements.

“Statement of Requirements” means the detailed description of the Goods/Services in section 2 of this RFP.

“Respondent(s)” means the entity/entities submitting a Response to this RFP.

“Response(s)” means the completed Response document(s) submitted to this RFP.

## **4.2. RFP preparation**

4.2.1. Before submitting its Response, a Respondent must:

examine all information relevant to the risks and contingencies and other circumstances having an effect on its Response and satisfy itself:

- a) that the Response, including any costs, if any are indicated, is correct; and
- b) that it is financially and practically viable for it to enter into and perform an agreement, should one be sought at a later stage.

## **4.3. Assumptions made by Respondent(s)**

4.3.1. Where a Respondent has made assumptions in preparing its Response, such assumptions must be set out in a supporting statement and submitted with the Response.

#### **4.4. Information supplied**

- 4.4.1. The information contained in the Statement of Requirements has been provided with due care and is intended only for the Respondent's guidance, but is not guaranteed as being accurate for future needs and expenditure by the Principal.

#### **4.5. Eligibility to respond**

- 4.5.1. Responses must be submitted by a legal entity or, if a joint Response, by legal entities, with the capacity to contract. The Principal will only enter into any agreement (if one is later sought) with such legal entity or entities.
- 4.5.2. The Principal may ask a Respondent to provide evidence of its legal status or capacity to contract. If a respondent is a trust and proposes that its trustees execute any agreement which is later sought in their capacity as trustees, such evidence may include copies of the relevant trust deeds. Any evidence requested is to be provided within 3 working days of the request.

#### **4.6. Financial capability of Respondent**

- 4.6.1. Where the Principal forms the view that the Respondent does not have the appropriate financial capability to perform its obligations under any agreement (if one is later sought with the Respondent), the Principal reserves the right to make acceptance of any Response conditional upon the Respondent entering into a bank, parent company or personal guarantee, or an unconditional performance bond in a form satisfactory to the Principal.

#### **4.7. ABN requirements**

- 4.7.1. The Principal will not enter into an agreement (if one is later sought) with a company that does not have an Australian Business Number and is not registered for GST. Respondent(s) must be registered for GST and state their ABN in their Response.

#### **4.8. Disclosure of confidential information**

- 4.8.1. The Respondent(s) must not disclose the Confidential Information supplied by the Principal to any person or entity.

#### **4.9. Use of confidential information**

- 4.9.1. The Respondent(s) must not use the Principal's Confidential Information except for the purpose of completing its Response to this RFP.

#### **4.10. Return of confidential information**

- 4.10.1. On the Principal's request, the Respondent(s) must immediately deliver to the Principal or destroy all documents or other materials containing or referring to the Confidential Information which are in its possession, power or control, or in the possession, power or control of persons who have received Confidential Information from the Respondent(s).



## 4.11. Provisional RFP timetable

4.11.1. The following activities and timeline is indicative only and may be varied.

Stages	Anticipated Date/Duration
Issue Request for Proposal (RFP)	24 October 2018
Industry RFP briefing	05 November 2018
Return completed RFPs	05 December 2018 (10:00am Sydney time)
All clarifications and evaluation complete	28 January 2019
Finalise negotiations & award contract	11 March 2019

4.11.2. The RFP briefing will be held on the date, time, and place, indicated below. The contact officer will be available at that time to answer any queries regarding this RFP and the tender process generally. Names of persons attending the Tenderer briefing must be provided to the contact officer at least two (2) working days prior to the date.

4.11.3. No more than two (2) persons from each Respondent will be permitted to attend the RFP briefing.

Location: NSW Telco Authority  
McKell Building  
2-24 Rawson Place  
Sydney NSW 2000  
Date: 05 November 2018

Time: 10:00am

4.11.4. Responses (including all supporting information, if any) must be fully received by the Closing Date and Closing Time. Respondents must respond to all parts of this RFP and must not amend any of the questions provided. All information provided in the Response must be in writing and in English. Any costs indicated in the Response price, if provided, must be in Australian dollars.

The Response must be submitted electronically to the electronic box for this RFP via the DFSI Tenders website at <https://tenders.nsw.gov.au/commerce>. (Login in as a system user, locate the web page for this RFP, and follow the on-screen instructions to lodge the Response). The lodgement can only be made by a registered user of the NSW Government eTendering system.

## 4.12. Electronic Responses

- 4.12.1. A Response submitted electronically will be treated in accordance with the *Electronic Transactions Act 2000* (NSW), and given no lesser level of confidentiality, probity and attention than Responses lodged by other means.
- 4.12.2. A Respondent, by electronically lodging a Response, is taken to have accepted conditions shown in the Conditions and rules on the DFSI Tenders website at <https://tenders.nsw.gov.au/commerce>.
- 4.12.3. Electronically submitted Responses may be made corrupt or incomplete, for example by computer viruses. The Principal may decline to consider for acceptance a Response that cannot be effectively evaluated because it is incomplete or corrupt. Respondents must note that:
- to reduce the likelihood of viruses, a Respondent must not include any macros, applets, or executable code or files in a Response.
  - a Respondent should ensure that electronically submitted files are free from viruses by checking the files with an up to date virus-checking program before submission.
- 4.12.4. The Principal will not be responsible in any way for any loss, damage or corruption of electronically submitted Responses.

#### **4.13. Late Responses**

- 4.13.1. Late Responses will not be considered, except where the Principal is satisfied that the integrity and competitiveness of the RFP process has not been compromised. The Principal shall not penalise any Respondent whose Response is received late if the delay is due solely to mishandling by the Principal.

#### **4.14. Extension of Closing Date and Closing Time**

- 4.14.1. The Principal may, in its discretion, extend the Closing Date and Closing Time.

#### **4.15. Addenda to RFP**

- 4.15.1. If, for any reason the Principal, at its sole discretion, requires the RFP to be amended before the Closing Date and Time, an Addendum will be issued. In each case, an Addendum becomes part of the RFP. The Principal, during the Response period may issue Addenda altering the RFP. In such cases, it is the obligation of the Respondent to verify if any Addenda were issued prior to the Closing Date, even if a Response has already been submitted.
- 4.15.2. Respondents must check the DFSI Tenders website at <https://tenders.nsw.gov.au/commerce> and download the Addendum.

#### **4.16. Discontinuance of RFP process**

- 4.16.1. Where the Principal determines in its sole and absolute discretion that awarding a contract would not be in the public interest to proceed with this RFP, the Principal reserves the right to discontinue the RFP process at any point, without making a determination regarding acceptance or rejection of Responses. The Principal reserves the right to discontinue the RFP process at any point.

#### **4.17. Costs of Respondent participating in the RFP**

- 4.17.1. The Principal shall not be, in any circumstances, responsible for any expenses or costs incurred by a Respondent(s) in preparing and submitting a Response.
- 4.17.2. The Respondent acknowledges that the Principal will not be liable to it for any expenses or costs incurred by it because of its participation in this RFP, including where the RFP has been discontinued.

#### **4.18. Exchange of information between Australian government agencies**

- 4.18.1. By lodging a Response, the Respondent will authorise the Principal to make information available, on request, to any Australian government agency. This includes information dealing with the Respondent's performance on any prior contract that has been awarded.
- 4.18.2. The provision of the information by the Principal to any other Australian government agency is agreed by the Respondent to be a communication falling within section 30 of the *Defamation Act 2005* (NSW) and the equivalent provision in corresponding defamation legislation in other Australian jurisdictions, and the Respondent shall have no claim against the Principal and the State of New South Wales in respect of any matter arising out of the provision or receipt of such information, including any claim for loss to the Respondent arising out of the communication.

#### **4.19. NSW Procurement Policy Framework**

- 4.19.1. In submitting its Response, the Respondent signifies agreement to comply with the NSW Procurement Policy Framework which can be found at:

[https://www.procurepoint.nsw.gov.au/system/files/documents/procurement\\_policy\\_framework\\_-\\_july\\_2015\\_0.pdf](https://www.procurepoint.nsw.gov.au/system/files/documents/procurement_policy_framework_-_july_2015_0.pdf)

- 4.19.2. Failure to comply with the NSW Procurement Policy Framework may be taken into account by the Principal when considering the Respondent's Response or any subsequent Response, and may result in the Response being passed over.

#### **4.20. Disclosure Information**

- 4.20.1. Following the Principal's decision, all Respondents will be notified in writing of the outcome of their Responses.
- 4.20.2. Details of this Response and the outcome of the Response process will be disclosed in accordance with the Government Information (Public Access) Act 2009 (NSW) and the Premier's Memorandum 2007-01. An outline of these requirements can be found in

<http://arp.nsw.gov.au/m2007-01-public-disclosure-information-arising-nsw-government-tenders-and-contracts>

#### **4.21. Corruption or unethical conduct**

- 4.21.1. Respondents must comply with the requirements of the DFSI Business Ethics Statement, which is available at the link below and must disclose any conflicts of interests in its RFP Response.

- 4.21.2. If a Respondent, or any of its officers, employees, agents or sub-contractors is found to have:
- offered any inducement or reward to any public servant or employee, agent or subcontractor of the Principal, or any Australian government agency in connection with this RFP or the submitted Response;
  - committed corrupt conduct in the meaning of the *Independent Commission Against Corruption Act 1988* (NSW);
  - a record or alleged record of unethical behaviour; or not complied with the requirements of DFSI Business Ethics Statement available at:  
<http://www.services.nsw.gov.au/about-us/business-ethics>
- this may result in the Response not receiving further consideration.
- 4.21.3. The Principal may, in its discretion, invite a relevant Respondent to provide written comments within a specified time before the Principal excludes the Respondent on this basis.
- 4.21.4. If the Principal becomes aware of improper conflict of interests by a successful Respondent after any agreement which has been later sought and executed, then the Principal reserves the right to terminate that agreement and any customer contract that has been made under it.

## **4.22. Complaints procedure**

- 4.22.1. Should any entity feel that it has been unfairly excluded from the RFP process or unfairly disadvantaged by the Statement of Requirements, it is invited to write to:

Jackie Giles  
Acting Commercial Director  
Department of Finance, Services and Innovation  
Level 14, McKell Building  
2-24 Rawson Place  
Sydney NSW 2000

## **4.23. Evaluation process**

- 4.23.1. Responses will be assessed against the evaluation criteria outlined in this RFP.
- 4.23.2. Respondents are advised to respond clearly to all the evaluation criteria listed in this RFP. Responses that do not include a fully completed Response, in particular those which do not contain sufficient information to permit a proper evaluation to be conducted, or electronic Responses that cannot be effectively evaluated because the file has become corrupt, may be excluded from the RFP process without further consideration at the Principal's discretion.

## **4.24. Mandatory Evaluation Criteria**

- 4.24.1. The following mandatory criteria apply to this procurement must be met by Respondents. Respondents may be approved on one or both NSW Government prequalification schemes.

#	Mandatory Criteria
1	Responses to Part A must include the involvement of a party with a Carrier Licence or nominated carrier declaration as specified under the <i>Telecommunications Act 1997</i> (Cth)
2	Respondents must be approved as an Advanced Supplier on NSW Government ICT services scheme; or  Respondents must be approved as a Prequalified Supplier on the ITS 2573 Operational Telecommunications Equipment, Infrastructure and Services Prequalification Scheme

#### 4.25. Gradable Evaluation criteria

4.25.1. The evaluation criteria for this RFP include but are not limited to those stated below:

1. Relevant experience with 4G (Long Term Evolution (LTE)) deployments and relevant experience in the public safety and/or defence areas
2. Demonstrated understanding of the key technical aspects of PSMB including the risks and approach for the delivery model(s) being tested
3. Proposed solution demonstrates compliance with the national PSMB objectives and HLR in an economically efficient and feasible manner
4. demonstrate the MVNO with multi-carrier roaming and RAN sharing models, and align with the Bell labs test environment specification and test plan
5. Flexibility to work with the various parties in a federated and phased approach
6. Allocation of a highly skilled and experienced team to support the PoC and sufficient commitment of these resources to achieve the deliverables.

#### 4.26. Assessments of Responses

4.26.1. Information supplied by the Respondent in the Response will contribute to the assessment against each criterion.

#### 4.27. Site inspections and presentations by Respondent

4.27.1. The Principal may, during the evaluation of Responses, undertake site inspections of Respondent's or their subcontractor's proposed premises. The Principal, may in its discretion, and as part of the evaluation process, invite any or some of the Respondents to make personal presentations regarding their Response. The Respondent shall make any presentations at its own cost. However, receiving a presentation by a Respondent is in no way represents a commitment by the Principal to accept any aspect of the Response. All information obtained during the course of presentation or site inspection may be taken into consideration in the evaluation of Responses.

#### 4.28. Acceptance or rejection of Responses

4.28.1. If the Principal is not satisfied with the Responses received it may invite fresh Responses based on the same or different criteria.

4.28.2. The Principal may assess an Alternative Proposal against the evaluation criteria;

4.28.3. The Principal expressly reserves the right to accept, in its discretion, either or both of the following;

- Any Alternative Proposal or part of an Alternative Proposal;
- Any other Non-Conforming Proposal or part of a Non-Conforming Proposal (not, in either case, being an Alternative Proposal or part of an Alternative Proposal) that, in the Principal's opinion is substantially a Conforming Proposal.

#### **4.29. Post Tender Negotiations**

4.29.1 Before making an determination as to the acceptance or rejection of Proposals, the Principal may, at its discretion, elect to conduct limited negotiations with preferred respondents, including those who have submitted Alternative Proposals or who have submitted Conforming Proposals, to mutually improve outcomes

4.29.2 If the Principal considers that none of the Proposals are fully acceptable either due to the level of non-conformance or because they do not represent sufficient value for money, but considers that full conformity is achievable, negotiations may be conducted with the respondent/s that submitted the most conforming tender based on the evaluation criteria.

4.29.3 The Principal may at its sole discretion elect to conduct post tender negotiations with more than 1 tenderer in the event that it decides that the closeness of the tenders or timing constraints warrants doing so.

#### **4.30. Ownership of Responses**

4.30.1. All Responses become the property of the Principal on submission. The Principal may make copies of the Responses for any purpose related to this RFP.

#### **4.31. No legal relation**

4.31.1. By lodging a Response, the Respondent acknowledges that:

- except as specifically stated, no contract exists or will arise between the Principal and a Respondent or other person by reason of this RFP or a Response
- the rights, powers and discretions given to the Principal in this RFP are not pursuant to any contract between the Principal and the Respondent but rather are rights, powers and discretions which the Principal has as part of the RFP
- despite the previous paragraph, by lodging a response, the Respondent is bound by the terms of this RFP
- the Principal has no contractual or other legal obligation to the Respondent arising out of RFP with respect to the consideration, the evaluation, the acceptance or the rejection of a Response or the failure to consider, evaluate or accept a Response or any other matter as a consequence of the RFP process
- the Principal is under no obligation to receive, consider or evaluate any Response at all or in any particular way or within a particular time period or to give any reasons for any decision it makes in respect of the response process.

## 5. Summary of RFP Essential Response Requirements

IN addition to the response templates provided at Annexures G, H and I, respondents should address/answer the following as part of their response:

### Responses will need to include:

- A. The location, scale and specifications of the equipment to be used for the proposed lab test. The specifications should be in the format of Annexures G, H and I
- B. Detailed architecture to be established in the test lab
- C. Proposed core elements with different options for increasing functionality. The Responses should contain a detailed core development and integration plan showing how various elements of PSMB core will integrate with a RAN network and commercial core(s).
- D. Schedule, risk register, systems engineering plan and project plan to establish and commission the lab test environment.
- E. A template showing the format for the proposed test plan results report
- F. The proposed schedule and resourcing to complete the applicable elements of the test plan.
- G. A Security Management Plan (SecMP) in accordance with Annexure E.
- H. With reference to Annexure E, respondents are invited to propose security testing that may be possible during the four phases of the POC and to document this in a Security Test Plan.
- I. Respondents are asked to comment on the feasibility of demonstrating a risk management framework to manage security risks. Reference should be made to ISO 31000:2009 Risk Management: Principles and guidelines, ISO/IEC27005-Information Technology Security Techniques and HB 167:2006 Security risk management.
- J. The proposed cost to complete Phase 1 both on a stand-alone basis, and if undertaken as part of all subsequent phases.
- K. Description of the changes to network architecture, detailing the impact of the additional elements. This includes an explanation of the RAN sharing arrangements between PSMB dedicated and multiple carrier cores. There is a strong preference for demonstrating higher level integration between core networks to support service continuity when user's handover between the PSMB network and carrier's network.
- L. Respondents are asked to provide a view if there is any merit in a dedicated PSMB RAN network/RAN sharing in not only rural/remote areas but also highly congested areas. For rural areas, respondents are invited to explore the pros/cons of passive RAN sharing vs MOCN/MORAN as the most appropriate configuration. Also, to consider the challenges of MOCN/MORAN in this context
- M. Suggested PoC Project Governance arrangements for both commercial and operational aspects of the PoC. This includes:
  - confirming that a single party will be accountable for all the PoC deliverables; and
  - governance arrangements for establishing and coordinating handover protocols for network roaming

- N. Schedule, risk register, systems engineering plan and project plan to establish and commission the elements of the service delivery model over the stated test phases.
- O. A detailed list of support services to be offered under the PoC including key resources involved and their experience.
- P. The location and scale of the proposed model/production test environment. This includes the number of base stations involved, how much additional infrastructure is required and the coverage to be achieved
- Q. The proposed approach to incorporating the dedicated spectrum into the PSMB PoC environment. This should include support for why the preferred approach is considered optimal.
- R. Schedule, risk register, systems engineering plan and project plan to establish and commission the proposed infrastructure.
- S. The proposed test plan to confirm acceptance of the test network.
- T. Schedule, systems engineering plan and project plan to conduct the test plan.
- U. Detailed costing for Phase 3 including breakup for hardware, software and resourcing.
- V. Proposed deployable solution or solutions that are recommended for inclusion in the PoC, and the benefits of these solutions.
- W. Architecture demonstrating the proposed solution and integration with the PSMB core.
- X. Schedule, risk register, systems engineering plan and project plan to conduct the test plan.
- Y. Detailed costing for Phase 4 including breakup for hardware, software, and resourcing.

## **6. Annexures**

- 6.1. Annexure A PSMB National Objectives**
- 6.2. Annexure B PSMB High-Level Requirements**
- 6.3. Annexure C PSMB Test Plan**
- 6.4. Annexure D PSMB Test Environment**
- 6.5. Annexure E Cyber Security Posture for Mission Critical Systems and Services**
- 6.6. Annexure F PSMB Inter-Core test cases**
- 6.7. Annexure G Core HLR response template**
- 6.8. Annexure H RAN HLR response template**
- 6.9. Annexure I MCPTT HLR and Application response template**
- 6.10. Annexure J Network Selection and Roaming Strategy**
- 6.11. Annexure K RAN sharing site options**
- 6.12. Annexure L PSMB QAs**