

In confidence

Office of the Minister of Police Cabinet Government Administration and Expenditure Committee

Next Generation Critical Communications; Approval of Public Safety Network Implementation Business Case

Proposal

1 This paper seeks Cabinet's agreement to the implementation business case for the Next Generation Critical Communications (NGCC) Public Safety Network Solution for the use of emergency services, and approval of the required investment for implementation.

Relation to government priorities

2 This paper is in line with the Government's commitment to laying the foundations for a better future [CAB-20-MIN-0525]. It also aligns with the Strategy for a Digital Public Service (2020) that provides foundational investments to enable cross-agency integrated services.

Executive summary

- Over the past twenty years, the requirement to refresh emergency services communications technology and infrastructure, known as the Public Safety Network (PSN), has been deferred. This network is now deemed end of life and must be replaced.
- 4 Beyond 2025 existing emergency services communications networks will have degraded to an extent that the likelihood of failure presents an unacceptable risk.
- 5 In May 2018 Cabinet confirmed the NGCC Programme Business Case (PBC) to replace Emergency Services' critical communications capability [CAB-18-0200 refers]. The PBC proposed an indicative investment of \$840.000 million to \$1,050.000 million over ten years with the costings to be refined during the Detailed Business Case.
- 6 In April 2020 Cabinet approved the NGCC Detailed Business Case 2020. [GOV-20-MIN-0002 and CAB-20-MIN-0155.26 refers] A summary of previous Cabinet approvals for this programme of work is set out in Appendix A.

The 2020 Detailed Business Case has been updated in response to feedback that it was not resilient enough for the New Zealand environment

7 Market engagement in response to a request for proposals and learnings from international emergency services identified that the 2019 Detailed Business Case (DBC) approach was not feasible (refer Appendix B). It was not resilient enough for emergency services in New Zealand given our seismic and climate change risks. s9(2)(g)(t) To meet the required resilience level, the recommended PSN solution comprises Digital Land Mobile Radio (LMR) as the foundational "network of last resort" owned by the Crown. The PSN would be supported by prioritised Cellular Services utilising two major commercial cellular networks, and continuation of the existing Personal Alerting service. This will meet our

emergency services requirements.

8

UDGET SENSITIVE

- 9 All four participating emergency services agencies (New Zealand Police, Fire and Emergency New Zealand, St John New Zealand, and Wellington Free Ambulance) support the updated PSN business case.
- 10 The recommended approach supports the direction of emergency services, including:
 - a. increased inter-operability between agencies to better perform at both single incident and significant emergency events;
 - improved technology which meets the existing needs of Emergency Services and enhances performance and safety including; secure and encrypted communication; greater access to remote communities; and the ability to share data and communicate with cellular technologies;
 - c. more cost-effective management of services through a more centralised model, allowing the emergency services agencies to better focus on core policing services;
 - d. the ability to enhance and extend the network to accommodate additional capacity and other Government entities.

The proposed PSN solution suite addresses the resilience risks and requires additional investment of \$527 million operating and \$449 million capital

- 11 The PSN solution has a whole of life cost of \$1,392.038 million operating expenditure and \$325.829 million capital expenditure over 24 years as estimated in the Implementation Business Case. The system will require \$1,327.234 million operating for ten financial years to 2030/31, steady-state investment of \$168.224 million per annum from FY2030/31 and out-years; and capital injection of \$449.399 million.
- 12 This investment can be partially funded through existing funding sources, which comprise a tagged contingency of \$511.214 million, Agency contributions of \$212.844 million, and existing appropriation from Budget 2020 of \$75.307 million. However, the shift from an as-a-service model in the DBC to a Build-Operate-Transfer model which, capitalises assets and therefore requires depreciation and capital charge funding, has increased the upfront funding required compared to the DBC.
- 13 The DBC was not fully funded with the tagged operating contingency recognising that future phases of the investment sought future funding requests. The Implementation Business Case funding request covers all unfunded phases of the DBC.
- 14 I am therefore seeking new funding of \$527.869 million operating and \$449.399 million capital, for which this paper seeks approval.
- 15 The PSN investment over the first 10 years will fund the build and operationalisation of new network capability, and provide new devices to



emergency services officers, stations and vehicles to enable transition to the new networks.

- 16 s9(2)(ba)(i)
- 17 The high-level design work on the PSN is already underway. Approval of total funding is now required to sign contracts for materials and resources to begin implementation immediately to ensure emergency services are transitioned to a new network by 2025.
- 18 There are significant risks associated with delaying implementation of this programme of work ^{\$9(2)(b)(ii)}

The Public Safety Network Replacement Programme will address New Zealand's obsolete emergency services communications network

19 The case for change outlined in the DBC (refer fig.1 below) remains compelling. The communications network which supports emergency services is obsolete. Increasingly, replacement parts are no longer manufactured, and existing infrastructure (towers, foundations, and radio equipment) is at significant risk of failure.

Figure 1: Case for Change for Emergency Services in New Zealand

Emergency services in New Zealand



20 Doing nothing is not an option – the LMR assets have had their life extended beyond all anticipated timeframes. Remedial actions have been in place since the system was deemed "end of life" in 2009 and are now exhausted.

COMMERCIAL IN CONFIDENCE

21 ^{\$9(2)(b)(ii)}

Unreliable communications are endangering operations and lives

- 22 Analogue network replacement components and radios are no longer manufactured, making repair increasingly difficult and expensive. Already obsolete, this technology will be unsustainable from 2025 (some additional time may be possible through re-tasking of assets during the transition period as the area covered by the incumbent network decreases).
- 23 \$9(2)(c)
- 24 Current coverage, especially in rural areas, is insufficient for emergency response needs.
- 25 Commercial communications services are run on a business critical, not mission critical, basis. In a disaster event these systems may partially or wholly fail as experienced in the Christchurch and Kaikōura earthquakes.

Inability to utilise modern communications is hindering the delivery of services to the public

- 26 In emergency situations, communications equal safety. Responders' ability to provide information and call for assistance in escalating situations directly affects the safety of the public and responders.
- 27 The current network provides limited interoperability. Responding to large scale emergency events is made more complex by multiple networks providing critical voice and messaging services.
- 28 Data rich environmental and situational information, as well as automated updating of response information (such as GPS-enabled mobile duress and fall detection alarms) are unable to be widely used with the current toolset.
- 29 There are also recruitment and retention impacts. The new generation of responders have grown up in a world enabled by data and attracting and retaining them requires modern tools.

There were five options assessed against the criteria presented in the DBC

30 The recommended option (Option 2 in table 1 below) has been assessed as the most cost-effective solution to deliver agency requirements. Option 0 is assessed to carry unacceptable service failure risk from 2025 onward, Option 3 and 4 are assessed to be not resilient enough to earthquake and climate risks.

Criteria	Option 0: Analog LMR	Option 1: LMR evolution	Option 2: Cellular evolution	Option 3: Dual network PTT	Option 4: All cellular
IO1: reliable & secure comms access	Does not meet	Meets	Meets	Meets	Meets

000	OLI	OFHOLINE	

IO2: meet health & safety requirements	Does not meet	Meets	Meets	Meets	Meets
IO3: provide sustainable communications	Does not meet	Meets	Meets	Meets	Meets
IO4: govern communications capability	Does not meet	Meets	Meets	Meets	Meets
CSF1: strategic fit & business needs	Does not meet	Partially meets	Meets	Meets	Meets
CSF2: value for money	Does not meet	Partially meets	Meets	Does not meet	Does not meet
CSF3: supplier capability & capacity	Does not meet	Meets	Meets	Does not meet	Does not meet
CSF4: potential affordability	Does not meet	Meets	Meets	Does not meet	Does not meet
CSF5: potential achievability	Does not meet	Meets	Meets	Does not meet	Does not meet
Result	Status quo	2nd	ImBC preferred	3rd= (DBC preferred)	3rd=

Table 1: Options analysis summary

Options Analysis

Further detail of each option is outlined below:

Option 0: Analogue LMR (Do Nothing)

- 31 There have been five market assessments completed to replace the LMR network between 2006-2017. None of these have been supported, except for a limited development for secure communications for Auckland, Wellington and Christchurch CBDs in 2012.
- 32 The state of the technology and supporting infrastructure of the LMR network as outlined in the ImBC, and in para 21 in this Cabinet paper, demonstrates the fragile nature of the current network. Remedial actions have been in place since 2009 and are now exhausted. The remaining store of back up terminals and handsets cannot be replaced as the technology is no longer produced.
- 33 Should the decision be to defer the network refresh, the technical assessment is the risk of failure of the network will grow significantly from 2025. A future market assessment will likely result in a more expensive solution, and given the five previous market interactions, the risk of vendor fatigue is growing.
- 34 With technical support no longer fully available from 2026, there is the growing risk of complete network failure and ability to recover the network. In this instance emergency services will have very limited ability to respond to events, significantly impacting the safety of emergency services front line staff and the public.
- 35 Whilst savings are achieved in the short term, in the long term this option would result in the following:

BUDGET SENSITIVE

- Serieue rick of a complete failure of the network that is not recoverable
- Serious risk of a complete failure of the network that is not recoverable, jeopardising the lives and safety of officers and members of the public.
- \$9(2)(b)(ii)
- Not delivering priority cellular will result in a continuation of current state where emergency services rely solely on the commercial mobile networks in a non-resilient manner for their data, video and voice services and cannot access the cellular network in time of network congestion, making it difficult to communicate and transmit critical information.
- Once the current personal alerting contract expires in 2024 there will be no ability to call out 14,000 volunteers to emergencies in an immediate manner, significantly compromising both St John and Fire and Emergency's ability to respond to emergencies.
- 36 Cost to implement the Network at later date is assessed at 30-50% above the existing investment. This is based on:
 - a. Running costs for the current network;
 - b. The costings received from the PSN RFI of 2012 and again in 2017 were c.\$200m and \$900m respectively;
 - c. Costings assessed from similar overseas builds are significantly higher than the proposed NZ build, with two similar projects in New South Wales and Tasmania each costed at approximately twice the New Zealand build. The s9(2)(b)(ii) supplier bid for the New Zealand PSN programme was more the \$1bn above the accepted bid;
 - d. Premium to attract vendors given halted procurement;
 - e. Significant additional cost for new procurement and process and negotiations.

Option 1: LMR evolution – descoping priority cellular

- 37 This option involves just building the LMR network and descoping the priority cellular solution. This would reduce the required investment ^{\$9(2)(b)(ii)}
- 38 The impact of not delivering priority cellular is a continuation of current state. Without priority access when networks are congested, emergency services have limited ability to access data, video and other rich information, making it difficult to communicate and transmit critical information.
- 39 In addition, the agencies require cellular to support transmission of mission critical information s9(2)(c)
- 40 Total operating funding needed would reduce \$9(2)(b)(ii)

- Required new operating funding would reduce
- Priority Cellular is all operating investment with no change in capital and associated capital charge or depreciation costs;

- Agency contribution remains the same with net debt reducing from
 (ii)
- 41 An estimate to deploy cellular at a later date is \$500-\$700m noting:
 - a. \$9(2)(b)(ii)
 - b. we anticipate a significant premium will be required to attract the cellular vendors back through a whole new procurement and negotiation process, given they have previously responded to four previous RFIs with no outcome.

<u>Preferred Option (Option 2): Cellular evolution - PSN LMR replacement, enhanced</u> <u>Priority Cellular and extended Personal Alerting</u>

- 42 This option includes:
 - The nationwide upgrade and replacement of existing Police, Fire and Emergency and St John LMR networks to a fully encrypted, common resilience, modern LMR network suitable for emergency services operations.
 - Enhancement of existing cellular networks to provide mission critical prioritisation, pre-emption and quality of service over the general public with increased resilience to ensure emergency services have the necessary prioritisation of data and video traffic necessary to operate a modern emergency service.
 - Extension of the nationwide personnel alerting contract to ensure the circa 14,000 Fire and Emergency and ambulance volunteers can be called out for emergency responses.
- 43 This option meets all four emergency services agencies key requirements and is supported by the Commissioner of Police and Chief Executives of Fire and Emergency New Zealand, St John and Wellington Free Ambulance.
- 44 Funding required for this option:
 - Total operating costs of \$1327m and \$449m capital injection;
 - Additional cash appropriation of \$527m;
 - Net Crown Debt is \$1488m.
- 45 An additional benefit to the Crown of implementing Option 2 is that other government agencies, which are currently considering new investment to improve or replace existing communication networks, could access, and join this network at marginal cost, negating the need for multiple full scale, separate network investments in the coming years. NGCC has held preliminary discussions with agencies including the National Emergency Management Agency, Ministry of Health, Ministry for Primary Industries and New Zealand Defence Force who have all expressed interest in potentially being part of this network.

46 Globally, emergency services are deploying digital LMR as a secure foundational voice network and utilising Priority Cellular to communicate important time critical information.

IDGET GENGITIVE

47 The ability to leverage the enhanced cellular capability is best demonstrated by Firstnet in the United States which provides services to over 3 million first responders. They have developed numerous cellular applications that demonstrate the benefits cellular capability has for emergency services operations and the members of the public they serve. FirstNet in the USA is a global leader in cellular-led deployment but still underpins this model with LMR.

<u>Option 3: Original DBC preferred option - full nationwide mission critical cellular for</u> primary voice and data with a lower capacity LMR upgrade and extended personal <u>alerting:</u>

48 Upgrading the cellular networks to full mission critical was estimated at s9(2) hence this option was discarded due to significant total cost, with depreciation allowances on top of this.

Option 4: All cellular

- 49 Like Option 3, although only focussed on full mission critical cellular networks, no tenders were received through the RFP, and this option is not viable or affordable due to New Zealand's terrain and climate. This option would require significant government investment, estimates range from ^{\$9(2)(g)(i)} based on:
 - a. challenges with New Zealand's alpine topography
 - b. the UK experience which is £11b to date against a budget of £2b.

NGCC has also assessed a range of alternatives to reduce the investment required.

50 Additional considerations explored by the Programme for Option 2:

Alternative LMR provider

51 The RFP process received two responses for LMR. The other response for an LMR replacement solution was from an international joint venture with a NZbased partner. This was costed at s9(2)(b)(ii) more than the Tait-Kordia consortia bid and was ruled out as not fiscally feasible.

Reducing the contracting period to a lesser term for LMR

52 NGCC has explored contracting this option for a lesser term with the vendors, however, has been assessed as commercially unviable for the vendor, and if it was supported, would likely result in a significant re-pricing.

Descoping cellular and limit the LMR network replacement to key areas

53 This option considered only replacing LMR in major metropolitan centres. This left the existing network in the regions and smaller centres using the existing multiple analogue networks. This would result in regions and smaller centre networks continuing to be subjected to interception by criminal elements and



result in lack of ongoing assurance of service likely resulting in widespread failures after end of life at the end of 2025.

54 With the network at end of life and no longer supported beyond 2025, the risk of failure and the inability to recover the existing network presents an unacceptable risk to continuity of emergency services communications. NGCC has assessed the risk of deploying a part solution as very high.



56 Given the high risk associated with this option, a revised fiscal envelope was not considered.

The proposed Public Safety Network includes three complementary technology solutions

(1) Digital Land Mobile Radio (LMR)

- 57 Digital LMR is a proven, mature, standards based and trusted technology that will form the backbone of the new critical communications platform. The primary purpose of LMR technology is to support push-to-talk (PTT) communications, which enables near instantaneous transmission of voice communications from one user to a group and/or back to base. This technology is used extensively by international emergency services and allows them to both send and receive secure communications while remaining focussed on the event at hand.
- 58 A new nationwide digital LMR network will be built across 447 sites (only 20 of these are greenfield sites) and 12 pairs of redundant core communication nodes across 11 regions for exclusive use by emergency services agencies.
- 59 All network features will be used by all four emergency services (on the same network) and be capable of expansion for other government entities (e.g. National Emergency Management Agency (NEMA), New Zealand Defence Force (NZDF)) at a later date.

(2) Prioritised Cellular Services and Roaming

- 60 Priority Cellular services, enable data-rich interactions provided through existing commercial cellular networks. These services will play an everincreasing and evolving role in the Emergency Services communication landscape and is a key aspect of the PSN strategy.
- 61 Emergency services will be provided with priority access to New Zealand's two major commercial cellular networks when the cellular networks become congested by consumers during significant events or major incidents.





62 Roaming will also provide expanded coverage across both major commercial networks with expanded emergency services cellular coverage. This will provide a 5% uplift in coverage (16,500 square kilometres) over approximately 45,000 households nationwide and provides a migration path to 5G. Roaming will increase first responder productivity and effectiveness (in turn resulting in better outcomes for the general public) and enhance cross agency collaboration.

(3) Personal Alerting Network

Г)
C	

- 63 A nationwide paging network, delivered independently of cellular and LMR infrastructure provides a highly available personal alerting service, which is critical for ensuring a call-out response in communities who are reliant on approximately 15,000 volunteers. This solution can also be extended to other government entities who are dependent on paging such as DHBs.
- 64 Personal Alerting allows responders to respond to emergencies where they may not be in coverage of other networks, or where it may not be practical to supply more expensive equipment (such as digital LMR handsets) which would only be used occasionally. This is especially useful in rural areas, where there are small populations spread out over wider areas who may be supported by emergency service volunteers rather than permanent staff.

Benefits of the solution suite

- 65 The proposed solution suite addresses deficiencies and concerns for emergency services. A summary of the benefits is outlined in Appendix D.
- 66 The PSN will have the flexibility to allow the addition of other government entities (e.g. NEMA, NZDF, Customs) in the future with appropriate investment and spectrum. The PSN core infrastructure is being constructed in a way that allows more capacity to be added in the future with a lower level of investment. Government entities engaged with include NEMA, Corrections, Ministry of Primary Industries, NZDF, KiwiRail and Ministry of Health. Agencies are supportive of the Programme and expressed interest in leveraging the network in the future.

Implementation of the Public Safety Network

- The NGCC team are ready to begin development of the PSN in August 2022.
- 68 The programme has multiple levels of governance in place that are responsible for ensuring the investment outcomes for the PSN programme are achieved. The Ministers of Police (lead Minister), Finance and Infrastructure, Digital Economy and Communications, and Emergency Management have oversight for the PSN work programme. The governance structure for NGCC is set out in Appendix E.
- 69 The Commissioner of Police will sign supplier contracts on behalf of the Crown. (refer Appendix F for more detail). Contracts have the endorsement of the Commercial Working Group, comprising of NGCC, Crown Infrastructure

Partners (CIP) and agency commercial and legal representation and subsequent approval by the NGCC independent Executive Governance Board.

70 Further detail on implementation, including the high-level implementation plan, is available in Appendix G.

Key implementation risks and issues

s9(2)(b)(ii)	



Ownership structure of the Land Mobile Radio network protects the Crown's interests

- 78 The LMR network is designed to meet emergency service sector operational outcomes and service levels. The contract reflects vendor expertise in radio network development and holds them accountable for maintaining the service levels. The implementation business case proposes a revised ownership model for LMR network assets (estimated cost to construct the network and introduce this to service \$9(2)(b)(ii) million).
- 79 The contract offered is a Build, Operate, Own, Transfer (BOOT) contract, with warranty conditions. Under this model the Crown retains the financial interest in the assets, which are treated as capital expenditure and it would require depreciation treatment accordingly. The LMR vendor maintains network operation and service levels throughout the life of the contract and for a warranty period at the end of the contract. This means that design and operational risks are being covered by the vendor.
- 80 It is more efficient for the vendor to legally own the assets during the contract term for two reasons: first, the vendor has considerably greater existing resource than NGCC to manage sites and communication assets; and secondly, the contracting structure can be streamlined to allow the vendor to acquire and develop new sites itself without back-to-back arrangements with NGCC for those sites.
- 81 Whilst the legal ownership of these assets sits with the vendor for the term of the contract, at the conclusion or termination of the contract they are returned to the Crown, who can then place the operations with another vendor. Further information on the contract structure for the LMR Services is included in Appendix G.
- 82 The Crown, through NGCC as part of NZ Police, will retain oversight of service performance and network capacity. The assets are dedicated to emergency services for the benefit of the public and cannot be utilised by the vendor to service other customers without NGCC's consent.
- 83 Ongoing beneficial ownership by the Crown results in a longer service life enabling more public sector agencies to be able to consume services and the Crown to enjoy a lower cost of ownership.

84 The BOOT contract shifts responsibility for performance risks to the vendor ensuring that the asset achieves the desired outcomes and service levels with asset ownership risks being retained by the Crown. This has been adopted as a lower risk option to retain security, control and flexibility over the network of last resort. Refer table 2 below.

	During the Contract Term, including renewals	On expiry/termination of Contract Term
Fait Kordia New Zealand TKNZ)	 Build Government Funded Infrastructure Upgrade or integrate to meet required specifications Hold title of the PSN LMR network Must deliver network services to NGCC (and agencies) Must maintain the network in accordance with Operations & Maintenance requirements Cannot use for any other purposes than delivery to agencies Must ensure no capacity used by any other party unless agreed by NGCC 	 No ownership of the network Grants licence to use TKNZ Intellectual Property to NGCC to operate the network
NGCC	 Specific security interest over Government Funded Infrastructure Dedicated use of the network and control over its use Make changes to the network for expansion etc 	 Owns the network Licence to use TKNZ Intellectual Property to operate the network

LMR Ownership Funding Models

85 The funding model for LMR ownership (BOOT contract) means that the Crown would fund all capital needed for the network build, the supplier would be responsible for the build and ongoing operation and maintenance of the network over the contract term, with legal ownership transferring back to the Crown on expiry or termination of the contract. Other funding models were considered but have higher risk. Further detail is available in Appendix I.

Financial Implications

- 86 **The total scale of costs has a whole of life cost of \$1,392 million over a 24 year period:** The Implementation Business Case estimates the programme's whole of life cost to be \$1,392.038 million operating and \$325.829 million capital over a 24 year life cycle with a 6% discount rate applied. Over a 10-year investment horizon, this amounts to \$1,327.234 million operating and \$449.399 million, reaching a steady-state investment of \$168.224 million per annum from FY2030/31 and out-years.
- 87 Key components of cost are for meeting the commitment of the contracts and management of the PSN: The investment is made up of see vendor contracts requiring commitment of see (2)(b)(i) million for the life of the contracts. The additional cost between the whole of life cost and the contract commitments include future go to market operational support beyond the rights of renewal and personnel that are employed to manage the contract and maintain oversight of the PSN services and investment. The contract commitments sought span beyond the 10-year investment period. The capital funding provides capital for the build of the LMR network asset. The operating provides funding to operate and maintain the PSN services on an enduring basis.



- 88 **The drivers for the increase of \$420 million change in the whole of life cost since DBC:** The net investment required by the Crown over 10 years has increased since the DBC increased by \$420.772 million of operating expenditure in the implementation business case, compared to the DBC. This is comprised by:
 - a. A \$365.135 million increase in cost due to the inclusion of depreciation and capital charge, which have been added due to the shift in preferred option from as-a-service (in which all costs are operating) to a Build-Operate-Own-Transfer model (which capitalises the assets and therefore requires depreciation and capital charge).
 - b. \$9(2)(b)(ii)
- 89 Over a 10 year period, the PSN will require \$1,327.234 million operating and \$449.399 million capital to reach a steady state. Existing funding already exists of:



90 These existing sources leave a shortfall of \$527.869 million operating and \$449.399 million capital, which I am seeking as new funding (see table 3 below).
 I am also seeking your agreement to draw down the existing tagged contingency.

s9(2	?)(b)(ii)

Legislative Implications

91 Although there are no legislative implications identified with this proposal, in the absence of any legislation granting emergency services priority across telco networks the Programme has built in assurances into the contractual,



commercial and SLA arrangements to ensure emergency services get the priority and coverage needed.

NGCC structure and placement

NGCC provides insights, advice, and solutions to evolve multi-agency common critical communications.

- 92 The NGCC is currently a branded business unit within New Zealand Police. The existing LMR network is owned and run by New Zealand Police. As the scope of the Public Safety Network solution has become more refined, it has become clear that the operations of the NGCC are likely to be separate from the core role and function of Police.
- 93 Running a shared technology service across the public sector requires a different skill set and focus to that required for the core purpose of the Police.
- 94 Once the business case is approved, NGCC are seeking to undertake discovery work to consider the future operating model and domicile of NGCC. The main focus of this discovery work will be to ensure best governance and management of the PSN during and post implementation, and to ensure the built asset is appropriately maintained and leveraged across New Zealand.
- 95 This will look to consider if NGCC:
 - remains within New Zealand Police
 - becomes its own entity
 - becomes part of another public or a stand-alone crown entity.
- 96 NGCC is engaging with the Public Service Commission and Treasury to consider the future operating model and institutional arrangements for NGCC following completion of the build of the PSN of the Programme.
- 97 Further considerations include:



b. The Emergency Caller Location Information (ECLI) Programme currently being hosted by MBIE that is now in a BAU state and both NZ Police and MBIE has raised with NGCC the possibility of transitioning ECLI to NGCC, as ECLI is not part of the role and core function of MBIE but also needs to be seen independently to NZ Police.

COMMERCIAL IN CONFIDENCE



UDGET SENSITIVE

Impact Analysis

Regulatory Impact Statement

99 No regulatory impacts have been identified with this proposal. There will be a need for spectrum allocation to support delivery of the investment objectives, and the Programme is already engaging with MBIE on this.

Climate Implications of Policy Assessment

- 100 The Public Safety Network outlined in this paper identifies communications and related infrastructure that would be classed as both at risk, and as a contributor to climate change.
- 101 The Implementation Programme in conjunction with the vendors will need to identify any emission related information, as Police are mandated to report on significant climate related emissions through the Carbon Neutral Government Programme (CNGP), including taking into consideration the overall impact due to the energy profile of the source country (i.e. non-renewable generation vs. renewable).

Population Implications

102 This proposal will improve the emergency services response for those living and visiting in rural areas with the introduction of cellular roaming and enhanced radio coverage for St John Ambulance.

Human Rights

- 103 The Programme is looking to take a risk-based approach to Human Rights Due Diligence (HRDD) in Telecom Transactions where applicable. In particular, the Programme will examine the presence of vulnerable groups in its specific context. These are groups within a society who may experience political, social or economic marginalisation that makes them particularly vulnerable to adverse impacts linked to business activities.
- 104 Lifecycle impacts are also a consideration during the project. This relates to human rights implications as there is potential for ecosystem degradation in relation to the network build as well as in the procurement of other materials required.

Consultation

105 The following agencies have been consulted on this paper and are broadly supportive of the proposed solution: The Treasury, The Department of Prime Minister and Cabinet, The Department of Internal Affairs, Ministry of Business, Innovation and Employment, The Public Service Commission, The Ministry of Health, The Ministry of Defence, New Zealand Defence Force, Ministry for Primary Industries, Department of Conservation, The National Emergency Management Agency, Ministry of Justice, Department of Corrections, Oranga Tamariki, New Zealand Security Intelligence Service, Government Communications Security Bureau, Crown Law Office, Serious Fraud Office, New Zealand Customs Service, The Office of the Privacy Commissioner.

Communications

106 Following approval of the Implementation Business Case, NGCC will:

- Initiate the contract approval process supported by communication of the vendor selection via a media release by the Minister of Police, simultaneously released on the NGCC website along with supporting key messages and Q&A.
- Work with agency communication leads to support any internal communications to staff.
- Provide support to the vendors (if required) for any public announcements from their organisations to ensure any communications are well planned and synchronised appropriately.

Proactive Release

107 This paper will be proactively released with any appropriate redactions within 30 days following Cabinet approval.

Recommendations

The Minister of Police recommends that the Committee:

Previous Cabinet decisions

- 1 note in May 2018 Cabinet confirmed the NGCC Programme Business Case (PBC) to replace Emergency Services' critical communications capability [CAB-18-0200 refers], which proposed an indicative investment of \$840.000 million to \$1,050.000 million over ten years to be refined during the DBC;
- 2 **note** that Cabinet in April 2020 approved the NGCC Detailed Business Case and operating funding of \$57.874 million for financial years 2020/21 to 2024/25, appropriated to Vote Police, for the NGCC Programme [GOV-20-MIN-0002 and CAB-20-MIN-0155.26 refers], and:
 - a. **agreed** to establish tagged contingency of up to the amounts as follows in Vote Police to provide for NGCC: Replacing Emergency Services Critical Communications:

	\$m - increase/(decrease)					
	2019/20	2020/21	2021/22	2022/23	2023/24	
Next Generation Critical Communications (NGCC): Replacing Emergency Services Critical Communications –	-	6.510	68.456	94.411	63.894	

	OLNOTIVE	

Tagged Operating Contingency					
Total Operating	-	6.510	68.456	94.411	63.894
	2024/25	2025/26	2026/27	2027/28	2028/29 & Outyears
Next Generation Critical Communications (NGCC): Replacing Emergency Services Critical Communications – Tagged Operating Contingency	67.220	52.472	32.435	30.718	38.295
Total Operating	67.220	52.472	32.435	30.718	38.295

- b. authorised the Minister of Police and the Minister of Finance jointly to draw down up to \$4.000 million from the NGCC: Replacing Emergency Services Critical Communications operating contingency prior to Cabinet approval of an implementation business case, subject to their satisfaction that costs are unavoidable; and
- c. **agreed** that further drawdowns from the NGCC: Replacing Emergency Services Critical Communications contingency are subject to Cabinet approval of an implementation business case.

Implementation Business Case

- 3 **note** that following extensive market engagement the Implementation Business Case has updated its preferred option for implementation from Dual Network PTT to Cellular Evolution, on the basis that the former is insufficiently resilient to earthquake and climate risks, coupled with insufficient supplier capability to deliver the cellular network enhancements required to position cellular as the primary PSN network;
- 4 **note** the recommended option **(Option 2 Cellular Evolution)** has been assessed as the most cost-effective solution to deliver agency requirements.
- 5 **note** five options in total were assessed against the criteria presented in the DBC. The options below are not preferred for the following reasons:
 - a. **Do nothing (Option 0)** carries unacceptable service failure risk from 2025 onwards. Furthermore, the requirement to invest in the future is not removed and will most likely increase as a result deferring the network refresh.
 - b. LMR evolution & descoping Priority Cellular (Option 1) limits agencies' ability to leverage commercial mobile networks to evolve and modernise operational practices through the use of rich data, video and voice services that are not available via a LMR network. Cellular technologies are now used every day internationally by Emergency Services to send data and video containing for example patient information and situational awareness, to enable better outcomes for the public and Emergency Services first responders.



Investing in cellular services now provides an affordable platform that Emergency Services can rely on, to leverage this technology. Deferring investment in cellular risks escalation in costs, inhibits the operational effectiveness of the agencies, and their ability to access to cellular services in the future.

- c. Original DBC Preferred Option: Mission critical cellular for primary voice and data with a lower capacity LMR upgrade and extended personal alerting (Option 3) cellular networks are insufficiently resilient to earthquake and climate risks, estimated costs to upgrade the cellular network for emergency services requirements at 3bn \$6bn, are cost prohibitive.
- d. **All Cellular (Option 4)** no RFP responses received for full mission critical cellular networks. New Zealand's terrain and climate make this option unviable and unaffordable.

A full analysis of the options considered is outlined in the Implementation Business Case (ImBC).

- 6 **note** that **Option 2 Cellular Evolution** proposed in the ImBC still meets the original case for change and investment objectives outlined in the DBC, is deemed the highest value-for-money option, and comprises of proven and affordable technology currently available within the market;
- 7 note the significant risks associated with delaying implementation of this programme of work ^{\$9(2)(b)(ii)}
- 8 **approve** one of the following options for the Next Generation Critical Communications (NGCC) Public Safety Network Implementation Business Case:

EITHER

a. OPTION 0: Do Nothing

OR

b. OPTION 1: LMR evolution and deprioritising cellular evolution

OR

- c. OPTION 2: (Preferred Option) Cellular evolution
- OR
- d. OPTION 3: Mission Critical Cellular with a lower capacity LMR upgrade and extended personal alerting

OR

e. OPTION 4: All cellular

Investment required for the proposed solution suite

9 **note** that the proposed Implementation Business Case solution estimates a required investment of \$1,327.234 million operating for ten financial years to



2030/31, steady-state investment of \$168.224 million per annum from FY2030/31 and out-years; and capital injection of \$449.399 million;

10 **note** that funding is proposed to come from a mix of existing and new sources as below:

			\$m		
	2021/22	2022/23	2023/24	2024/25	2025/26
Existing Sources Tagged contingency Agency Baselines Already appropriated funding	- - 29.988		s9(2)(b)(ii)	
New Funding Sought Budget 2023 & Operating Impact Operating Impact only Multi-year capital allowance	-				
· · · ·	2026/27	2027/28	2028/29	2029/30	2030/31 Outyear
Existing Sources Tagged contingency Agency Baselines Already appropriated funding			s9(2)(b)(ii)		
New Funding Sought Budget 2023 and Operating Impact Operating Impact only Multi-year capital allowance					

New Funding Required

- 11 **note** that \$527.869 million operating and \$449.399 million capital is sought to deliver the Implementation Business Case solution;
- 12 **agree** to increase spending to provide for initiative NGCC: Replacing Critical Communications, with the following impacts on the operating balance and net debt:

		\$m – i	ncrease/(dec	rease)	
	2021/22	2022/23	2023/24	2024/25	2025/26
Operating Balance and Net Debt Impact Operating Balance Only Impact	-		s9(2)(b)(ii)	
Net Debt Only Impact	-				
No Impact	-	_			
Total	-				
	2026/27	2027/28	2028/29	2029/30	2030/31 & Outyears
Operating Balance and Net Debt Impact			s9(2)(b)(ii)	1	1

DUDGET GENGITIVE

Operating Balance Only Impact		s9(2)(b)(ii)	
Net Debt Only Impact			
No Impact			
Total			

- 13 **note** that while no additional operating funding is required until 2025/26, operating costs will increase beyond the forecast period and continue into outyears;
- 14 **agree** that the \$146.578 million of operating expenses incurred in the 2025/26 and 2026/27 financial years, in recommendations 10 and 12 above, be charged as a pre-commitment against the Budget 2023 operating allowance;
- 15 **note** that the future increases in operating costs will have a direct impact on the fiscal position;
- 16 **agree** that the department capital injections described in the Net Debt Only Impact line in recommendations 12 above be charged as a pre-commitment against the multi-year capital allowance;

Tagged contingency rephasing, drawdown and repurposing

17 **note** that following a range of Joint Minister decisions between 23 February 2021 and 11 April 2022 (BR/21/19, BR/21/107, and BR/22/30 refers), the balance remaining of the NGCC: Replacing Emergency Services Critical Communications operating contingency is as follows;

	\$m - increase/(decrease)				
	2019/20	2020/21	2021/22	2022/23	2023/24
Next Generation Critical Communications (NGCC): Replacing Emergency Services Critical Communications – Tagged Operating Contingency	-	-	61.618	87.972	63.894
Total Operating	-	-	61.618	87.972	63.894
	2024/25	2025/26	2026/27	2027/28	2028/29 & Outyears
Next Generation Critical Communications (NGCC): Replacing Emergency Services Critical Communications – Tagged Operating Contingency	67.220	52.472	32.435	30.718	38.295
Total Operating	67.220	52.472	32.435	30.718	38.295

18 **approve** the below fiscally neutral rephasing of the "Next Generation Critical Communications (NGCC): Replacing Emergency Services Critical



Communications" operating contingency to reflect the updated investment required following completion of the Implementation Business Case;

	\$m - increase/(decrease)				
	2019/20	2020/21	2021/22	2022/23	2023/24
Next Generation Critical Communications (NGCC): Replacing Emergency Services Critical Communications – Tagged Operating Contingency	-	-	-	s9(2)(b)(ii)
Total Operating	-	-	-		
	2024/25	2025/26	2026/27	2027/28	2028/29 & Outyears
Next Generation Critical					
Communications (NGCC): Replacing Emergency Services Critical Communications – Tagged Operating Contingency			s9(2)(b)(ii))	
Total Operating					

19 **agree** that, as the further work described in recommendation 2c above has been satisfactorily completed, draw down of the below amounts can proceed;

	\$m - increase/(decrease)				
	2021/22	2022/23	2023/24	2024/25	2025/26
Next Generation Critical Communications					
(NGCC): Replacing Emergency Services Critical Communications – Tagged Operating Contingency	-		s9(2	2)(b)(ii)	
Total Operating	-				
	2026/27	2027/28	2028/29	2029/30	2030/31
Next Generation Critical Communications					
(NGCC): Replacing Emergency Services Critical Communications – Tagged Operating Contingency			s9(2)(b)(ii)		
Total Operating					

20 **agree** that the expenses incurred under recommendation 19 above be charged against the NGCC: Replacing Emergency Services Critical Communications operating contingency described in recommendation 2 above, leaving a balance in the contingency of \$166.372 million;



- 23 **agree** to replace the criteria of the NGCC: Replacing Emergency Services Critical Communications operating contingency with the conditions described in recommendation 22 above;
- 24 **note** that following the adjustments detailed in recommendation 19 above, as well as the previous adjustments in recommendations 2, 17 and 18, the remaining balances and indicative phasing of the operating contingencies described in recommendation 2 above will be;

	\$m - increase/(decrease)				
	2021/22	2022/23	2023/24	2024/25	2025/26
Next Generation Critical Communications (NGCC):					
Replacing Emergency Services Critical Communications – Tagged Operating Contingency	-		s9(2	?)(b)(ii)	
Total Operating	-				
	2026/27	2027/28	2028/29	2029/30	2030/31 & Outyears
Next Generation Critical Communications (NGCC): Replacing Emergency					
Services Critical Communications – Tagged Operating Contingency			s9(2)(b)(ii)		
Total Operating					

Appropriation Changes

25 **approve** the following changes to appropriations with a corresponding impact on the operating balance and net debt:

		\$m - ir	ncrease/(dec	rease)	
	2021/22	2022/23	2023/24	2024/25	2025/26
Vote Police					
Minister of Police Multi-Category Expenses and	-		s9(2)(b)(ii)	
Capital Expenditure:					
Policing Services (MCA)					



Departmental Output Expense: Primary Response Management (funded by revenue Crown) New Zealand Police:			s9(2	?)(b)(ii)	
Total Operating	-				
Total Capital	-				
	2026/27	2027/28	2028/29	2029/30	2030/31 & Outyears
Vote Police Minister of Police Multi-Category Expenses and Capital Expenditure:					
Policing Services (MCA) Departmental Output Expense:			s9(2)(b)(ii)		
Primary Response Management (funded by revenue Crown)					
New Zealand Police: Capital Injection					
Total Operating					
Total Capital					

- 26 **agree** that the proposed changes to appropriations for 2022/23 above be included in the 2022/23 Supplementary Estimates and that, in the interim, the increases be met from Imprest Supply;
- agree that the expenses incurred in recommendation 25 above be;
 - a. charged as a pre-commitment against Budget 2023 as set out in the Operating Balance and Net Debt Impact line of the table in recommendation 12 above and treated as per recommendations 13 to 15; and
 - b. charged against the NGCC: Replacing Emergency Services Critical Communications tagged operating contingency as described in recommendation 19 above;
- 28 **agree** that the capital expenditure incurred under recommendation 25 above be charged against the multi-year capital allowance;

Authorisations for next steps

- 29 **authorise** the Commissioner of Police to sign the supplier contracts on behalf of the Crown for the procurement of the services within the Public Safety Network including for the construction and operation of a Land Mobile Radio network with associated radios equipment, Priority Cellular services and Personal Alerting construction and operational services;
- 30 **authorise** the Commissioner of Police to commit up to ^{s9(2)(b)(ii)} million in public money in relation to the contracts associated with the decision in



recommendation 12 above for the procurement and implementation of the Public Safety Network solution suite; and

31 **authorise** the Minister of Finance and Minister of Police to jointly adjust appropriations to deal with any accounting implications of the above investment as they are required.

Authorised for lodgement Hon Chris Hipkins Minister of Police

Appendix A: Summary of previous government approvals

- In May 2018 Cabinet confirmed the NGCC Programme Business Case (PBC) to replace Emergency Services' critical communications capability [CAB-18-0200 refers].
- 2 After this a 2019 Budget Bid was approved to begin development of the Detailed Business Case [CAB-19-MIN-0174.32].
- 3 On 6 April 2020 the Detailed Business Case (DBC) for this investment was approved by Cabinet: The DBC:
 - confirmed the case for change and the Preferred Option (the required solution to address the investment objectives)
 - directed the project to go to market to procure products and services
 - directed the project to finalise project management arrangements in preparation for implementation.
- 4 On 6 April 2020 Cabinet also approved:
 - a. Operating funding of \$57.874 million for financial years 2020/21 to 2024/25, appropriated to Vote Police, for the NGCC Programme [CAB-20-MIN-0155.26 refers] through Budget 2020 of which \$454.411 million for financial years 2019/20 to 2028/29 and outyears of \$38.295 million remains.
 - b. Tagged Contingency funding subject to Cabinet approval of an implementation business case [CAB-20-MIN-0155.26 refers].
- 5 The funding provided from the Tagged Contingency was for the LMR Network build including its operating expenditure, development of new wholesale telecommunications services for domestic roaming and priority in cellular networks, and extending the personal alerting contract, along with some project transition costs.
- 6 The following table provides the history of Cabinet decisions and approvals for this programme.

Decision	Minute/Paper
Funding for the Strategic Assessment, Programme Business Case (PBC) and DBC stages were approved by Cabinet in December 2016	EGI-16-MIN-0347
Cabinet approved the Programme Business Case April 2018	GOV-18-MIN-0015 CAB-18-MIN-0200
Budget 2019 – Initiate Phase – Approved: \$15.000 million	CAB-19-MIN-0174.32
Cabinet approved the DBC April 2020	GOV-20-MIN-0002 CAB-20-MIN-0032
 Budget 2020 – Establish Phase – Bid: \$559.522 million of operating investment. Approved as follows: Approved and appropriated: \$57.873 million 	CAB-20-MIN-0155.26

 Tagged Contingency: \$452.842* million Agencies contribution \$160.9 million (Starting FY 2024/25) 	
November 2021 Joint Ministers approved the draw down of \$4.000 million from the tagged operating contingency.	BR/21/107
Approval of additional unavoidable costs to be drawn down \$15.787 million	BR/22/30

*Note this funding was operating and there is a steady state.

Table 4: Previous Government approvals

-

Appendix B: Journey to the proposed solution suite

1 The initial Detailed Business Case (DBC) included a total cost estimate of \$905 million over 10 years (undiscounted), funded by \$161 million agency contribution and \$744 million government contribution. These costs assumed that the network would be consumed as a service with the vendor funding these initial costs and recovering these through annual charges.

NGCC worked with vendors and international peers to determine the best value for money solution suite available for emergency services.

- 2 Through the RFP process, and learnings from international emergency services peers¹, it became clear that to ensure the solution was resilient enough for emergency services in New Zealand we must account for seismic and climate change perils increasing in frequency and severity. This is demonstrated through the Christchurch and Kaikōura earthquakes, and the increasing impacts of climate change. New Zealand's mountainous and rugged topography is seen as a significant limiting factor to the availability of reliable broadband technologies. A digital LMR based solution can provide the level of resilience required in New Zealand, while also meeting value for money requirements for mission critical voice communications.
- 3 The PSN solution was tendered in 2021 with the proposed investment reflecting the best value for money bids. Alternative bids for the LMR network were over twice that of the solution selected and alternative bids for the initial standalone cellular solution were almost ten times the cost of the solution the Programme selected.
- 4 Market engagement was undertaken in partnership with Crown Infrastructure Partners. This process refined the proposed solution and reshaped the previously proposed option into a fit for purpose solution that is achievable and affordable. Process and probity assurance was undertaken by Audit New Zealand, who confirmed its compliance with required procurement rules and guidelines.

The proposed solution differs from the Detailed Business Case reflecting the maturity of relevant technologies

- 5 The recommended investment has changed from the DBC presented in 2019. The DBC recommended a cellular based solution, supported by Digital LMR, with Digital LMR being replaced by satellite in a future phase. The programme has completed an RFP and solution refinement activities which have shown the solution set recommended in the DBC is not technically mature, is unaffordable and does not meet required resilience needs given New Zealand's geographic environment.
- 6 Commercial cellular networks are built to a business critical, not mission critical standard, and are not sufficiently resilient to meet reliability requirements for the emergency services. Mobile network operators will not expand or upgrade networks without additional funding. Pricing received to make commercial

¹The NGCC Programme engages regularly with international peers including FirstNet US, ESN UK, Australia, The Critical Communications Association (TCCA), Norway, Netherlands, France, Belgium, Germany, and South Korea.



cellular towers resilient is considered unaffordable for this investment. Based on the Hourua RFP response it is estimated that the total cost to harden the commercial networks would be more than ^{\$9(2)} billion.

7 Cellular towers cease to function if their connection to the network is cut. Digital radio towers will continue to connect users within its range. Unlike cellular devices that rely on the tower being connected to the network, LMR devices will still provide a device-to-device communication capability even if the tower fails.

BUDGET SENSITIVE

- 8 A similar programme in the United Kingdom progressing with a cellular technology path has increased in cost from £2 billion to £11 billion, and delivery dates have extended from 2019 to 2026.
- 9 Satellite technologies are not suitable for widescale deployment as an alternative to LMR and/or cellular technologies. Lack of ability to work indoors and battery constraints make this technology unlikely to replace LMR devices as the mainstream communications channel. Opportunities do exist for backhaul and vehicular use and these will be investigated by NGCC as part of development of a Service Catalogue roadmap.
- 10 Some cellular based technologies have not matured as expected since the DBC was written; for example, mission critical push-to-talk over cellular cannot be relied on to provide the level of reliability and robustness that is required for an Emergency Services network of last resort. In addition, over the top (OTT) solutions when combined with QPP capability are providing a valid low-cost alternative, which NGCC will investigate once Priority Cellular services have been delivered.

Public Safety Network Solution Pathway



The solution suite compares favourably with international examples

11 Our solution suite compares favourably with Australia and many European countries who have chosen a dual LMR and Cellular solution to meet emergency services communications requirements.



- 12 The recent State Government awarded emergency services communications tender in Tasmania for an LMR network on an equivalent basis is twice the cost of the solution selected. To provide further comparison, the Emergency Services Network in the UK was initially costed at £2bn for an all-Cellular solution and has thus far incurred a 6-year delay costing a further £11bn.
- 13 The ability to leverage the enhanced cellular capability is best demonstrated by Firstnet in the United States which provides services to over 3 million First Responders. They have developed numerous cellular applications that demonstrate the benefits cellular capability has for emergency services operations and the members of the public they serve.

Appendix C: NGCC Gateway Review

s9(2)(ba)(i)			

Appendix D: Benefits of the solution suite

	Benefit name	Benefit description
B01	Improved network resilience	Reliability of infrastructure improves with modernisation of network and devices. Likelihood of a communications failure in a significant disaster is reduced. Risk of catastrophic network failure is significantly decreased when compared with existing network. Cellular roaming increases resilience of cellular. communications by providing access to both leading domestic mobile networks.
B02	Communications are secure	Operational communications are secure and unable to be intercepted S9(2)(c)). This improves operational safety for responders and protects New Zealanders' private information which is shared over these networks. This includes the securing of private patient information, which lowers the risk of additional harm to the public by better controls around trusted information.
B03	Simplified sharing of operational information	Increased communication of operational information between emergency services responding to the same event, which improves response coordination, responder and public safety. In multi-agency responses, information will be able to be shared directly amongst responders from different agencies.
B04	Increased communications coverage	Coverage will be improved based on analysis of incidents, roads and locations of interest. Emergency services have noted that getting the right coverage is more important than getting the most coverage. Cellular roaming also provides increased geographic and population coverage.
B05	Enabled innovation and improved operational response	Additional features such as device-based GPS location tracking, caller identification and interoperability between emergency services improves safety for frontline responders. Quality of service, Priority and Pre-emption (QPP) on cellular networks provides a higher-grade mobile data, video and voice service than commercial mobile services provide, and holds priority over consumer mobile network users.



Appendix E: Governance arrangements

1 The governance structure below is designed to allow NGCC to co-ordinate centrally as appropriate and ensure that all stakeholder agencies remain aligned and on track. The agency project boards will run the change programmes within each agency and will liaise with each other and the NGCC via the Programme Control Board (PCB). The PCB will report to the Executive Governance Board (EGB) as the formal governance body for the programme. The EGB will provide updates to the Oversight Ministers group regularly or as requested by that group.



Appendix F: Contracts Overview

- 1 The investment contracts require commitment of ^{\$9(2)(b)} million for the life of the contracts. The contract durations span beyond the 10-year investment period.
- 2 The key cost elements of the contract values (noting these are different to the investment period) are:

a.	Land Mobile Radio -	s9(2)(b)(ii)
b.	Priority Cellular -	s9(2)(b)(ii)
C.	Personal Alerting –	s9(2)(b)(ii)

- 3 Included within the overall investment and funded from within baseline over the first ten years are:
 - a. s9(2) for specialist cellular devices for personnel and vehicles;
 - b. Agency transition and programme management forecast cost of ⁵⁹(2)(b);
 - c. Overall programme contingency of \$ \$9(2).

Appendix G: Implementation Approach

- 1 The programme will centralise some common project capabilities to ensure consistency and efficiency across the programme during the implementation phase, and this will be complemented with delivery and change management capability in each of the contributing agencies.
- 2 Where agencies have existing related projects underway, these are being integrated into the detailed implementation plan to ensure all activities are coordinated, interdependencies are well managed, and risks mitigated, for example Depending on materiality this could be considered for integration

Depending on materiality this could be considered for integration into NGCC to help mitigate cross Programme risk.

The LMR network will be built and delivered over 4 years using a regional deployment model.

- 3 The Programme is working with agencies to ensure their own transition activities align and are completed within the vendor's deployment timeframes enabling them to transition to the new LMR service once each regional instance of the network is built.
- If implementation of and transition to the new network is delayed beyond vendor delivery timelines, there may be additional cost pressure funding required to support the existing network for longer until transition is complete. The mitigation in place is that agencies transition plans are being coordinated centrally by the Programme to avoid this risk eventuating.
- 5 The agencies phased transition to the new LMR network, region by region will increasingly reduce reliance and load on the existing network and allow decommissioned equipment to be repurposed to stabilise the existing network sites where required.
- 6 The Programme will also look to engage with landowners and the Department of Conservation early (particularly important for difficult sites) to minimise delays with any required consent processes.

Contract structure for the LMR services

- For the LMR services, an open syndicated contract structure has been approved by the Advisory Services team within MBIE's New Zealand Government Procurement branch. Crown Infrastructure Partners has led the negotiation on behalf of the Crown throughout the procurement process. The agreed contract structure provides sufficient controls and protections throughout the build process and allows for new services and government entities to be onboarded in the future. The priority cellular and personal alerting services will leverage the existing contracts held by the participating agencies.
- 8 The contract does require milestone payments for the mobilisation and progressive completion of the LMR network build. The mobilisation payment and deposit made for the manufacture of radio equipment are to provide surety to the vendor to pre-order equipment. Providing these payments act as a cost shield in that it provides certainty within the pricing and prevents increased subsequent cost claims.

COMMERCIAL IN CONFIDENCE

BUDGEI SENSIIIVE

High level implementation plan



s9((2)(b)(ii)

	Build, Operate, Own, Transfer (BOOT)	Government Grant	As a Service (DBC approach)
Structure	 Crown funds all capital needed for the construction of the asset. Supplier is responsible for the build and ongoing operation and maintenance of the network over the contract term. The supplier will Build, Operate, Own and at the conclusion of the contract, Transfer the asset (BOOT contract structure). All financing components provided by the Crown. Legal ownership is transferred on expiry or termination of the contract. 	 The Crown provides a Grant as a contribution to the construction of the asset and the supplier provides equity funding and service over a contract period. Supplier owns the asset through the term of the contract. If the supplier succeeds to the end of the contract, the asset remains theirs. If they terminate early then the asset is returned to the Crown. NGCC purchases services off the supplier. 	 The supplier funds or arranges funding. Supplier constructs the asset to provide a service and accepts the underlying risks of asset ownership Supplier owns 100% of the asset into perpetuity. NGCC purchases services off the supplier.
Government Accounting Treatment	 Classified as a Service Concession Arrangement (SCA) under PBE IPSAS 32; treated as a Crown Asset as Property, Plant and Equipment PBE IPSAS 17. Operating costs for the service are treated as an expense. 	 Treated as a Crown Asset for the life of the contract as an intangible asset PBE IPSAS 31. Upon succession the asset is retired from the Fixed Asset Register. Operating costs for the service are treated as an expense. 	 The Crown purchases a service with the commitment being an annual consumption and meets the definition of an expense. All asset ownership risks are vested with the vendor with no liability exposure to the Crown.
Economic life of the asset	Asset life of 15 to 20 years with regular lifecycle replacement of assets making the investment enduring. <u>s9(2)(b)(ii)</u>	Contract maximum s9(2) (b)(ii)	 Enduring life with the vendor maintaining service and replenishing the assets throughout the life of the service.
Options analysis and risks	 Assets managed throughout the asset life with lifecycle replacements. Maintain control over the network; with flexibility to make changes with additional investment and accommodate additional agencies. Security and optionality on contract renewal or termination. Retain leverage if supplier increases opex or upgrade costs unexpectedly; on renewal, Crown can choose not to renew, get asset back and go to another party to operate the asset or take on operation itself. Opportunities to extend asset life if asset condition is adequately maintained. 	 High risk for a mission critical network where the Crown agencies are the sole users. Investment limited to the contract period; on termination, the Crown would have no asset or certainty around services. Minimal negotiating leverage on renewal. Probably recapitalisation of assets at end of contract; risk of asset condition reduced toward end of contract. 	 No offers received during the RFP in support of this model. No certainty to enable the construction or service on an enduring basis.

Appendix I: LMR Commercial an	d Ownership models considered	ed
-------------------------------	-------------------------------	----

BUDGET GENGITIVE

Appendix J: NGCC Public Safety Network Implementation Business Case

Attached.