

EXPLANATORY STATEMENT

Prepared by the Australian Communications and Media Authority

Telecommunications (Consumer Protection and Service Standards) Act 1999

TELECOMMUNICATIONS (EMERGENCY CALL SERVICE) AMENDMENT DETERMINATION 2024 (No.1)

Outline

The Australian Communications and Media Authority (the **ACMA**) has made the *Telecommunications (Emergency Call Service) Amendment Determination 2024 (No.1)* (the **Amendment Determination**) under subsection 147(1) of the *Telecommunications (Consumer Protection and Service Standards) Act 1999* (the **Act**) and subsection 33(3) of the *Acts Interpretation Act 1901* (the **AIA**). The Amendment Determination has also been made in accordance with subsection 6(2) of the *Australian Communications and Media Authority (Emergency Call Service Determination) Direction 2024* (the **Direction**).

Subsection 147(1) of the Act provides that the ACMA must make a written determination imposing requirements on carriers, carriage service providers (**CSPs**) and/or emergency call persons in relation to emergency call services (**ECS**). In accordance with subsection 147(1), the ACMA made the *Telecommunications (Emergency Call Service) Determination 2019* (the **ECS Determination**).

Subsection 33(3) of the AIA provides that where an Act confers a power to make an instrument, the power shall be construed as including a power exercisable in the like manner and subject to the like conditions (if any) to repeal, rescind, revoke, amend, or vary any such instrument.

The Minister for Communications (the **Minister**) has the power under subsection 14(1) of the *Australian Communications and Media Authority Act 2005* (**ACMA Act**) to give written directions to the ACMA in relation to the performance of the ACMA's functions and the exercise of its powers. The Direction was given to the ACMA by the Minister under subsection 14(1) of the ACMA Act and commenced on 5 September 2024.

Subsection 6(2) of the Direction requires the ACMA to amend the ECS Determination to give effect to certain objectives. To meet those objectives, the ACMA has made the Amendment Determination to impose requirements on CSPs to:

- identify mobile phones that are unable to access the ECS,
- notify end-users about those mobile phones,
- provide assistance and information to those end-users to access an alternative mobile phone, and
- cease providing services to an end-user's affected mobile phone.

The Direction also requires the ACMA to impose requirements that stop a CSP from providing a service to a prospective customer seeking a service that will use a mobile phone that is unable to access the ECS.

Subsection 5(3) of the Direction provides that the amendments provided for in subsection 6(2) of the Direction are to be determined and commence in full by 1 November 2024. The Amendment Determination will commence on 28 October 2024.

Background

In planning the closure of 3G mobile networks, it was identified that some mobile phones with historical technical limitations would be unable to access the ECS, despite otherwise being able to make non-emergency calls over 4G and 5G networks and therefore appearing to be a fully functional mobile phone.

On 21 August 2024, the Minister directed the ACMA to amend the ECS Determination in response to concerns that certain classes of mobile phones which would otherwise appear to be fully functional, would be unable to access the emergency call service following the shutdown of the 3G mobile network.

Purpose and operation of the Amendment Determination

The Amendment Determination has been made to fulfil the requirements of the Direction.

The purpose of the Amendment Determination is to reduce the risk of an end user using a mobile phone that is unable to access the ECS. This will improve the overall reliability of access to the ECS from mobile phone devices.

The Amendment Determination will amend the ECS Determination to impose new obligations on CSPs and carriers. A CSP that supplies, or will supply, a service that enables end-users to access the ECS on a mobile phone, is required to:

- (a) identify mobile phones that are unable to call the ECS – either on the CSP’s own network or on the networks of other CSPs who provide carriage services to the public;
- (b) notify and advise end-users that services will be disabled on the identified mobile phone that is unable to access the ECS;
- (c) give information to end-users about options for alternative mobile phones that are able to access the ECS; and
- (d) cease providing, or not provide, carriage services to an end-user’s mobile phone that is unable to access the ECS.

An exception to some of the obligations is provided for foreign travellers in Australia who intend to remain in Australia for a period of no longer than 90 days. The exception will apply if a CSP sends a notification to the foreign traveller’s mobile phone notifying the traveller that the mobile phone is not configured to be able to access the ECS.

The Amendment Determination also imposes an obligation on carriers to do everything reasonably necessary to enable a CSP to comply with the CSP’s obligations under the Amendment Determination.

The Amendment Determination is a disallowable legislative instrument under the *Legislation Act 2003* (the LA).

A provision-by-provision description of the instrument is set out in the notes at **Attachment A**.

Statement of Compatibility with Human Rights

Subsection 9(1) of the *Human Rights (Parliamentary Scrutiny) Act 2011* requires the rule-maker in relation to a legislative instrument to which section 42 (disallowance) of the LA applies to cause a statement of compatibility with human rights to be prepared in respect of that legislative instrument.

The statement of compatibility with human rights at **Attachment B** has been prepared to meet that requirement.

Regulation Impact Statement

An Impact Analysis was prepared by the ACMA on *Requirements to identify and manage mobile phones unable to access the Triple Zero (000) Emergency Call Service* on 22 October 2024 and submitted to the Office of Impact Analysis (OIA) for formal 2nd pass assessment, consistent with the Australian Government Guide to Policy Impact Analysis. The OIA reference number is OIA24-07466. A copy of the Impact Analysis is at **Attachment C**.

Public consultation

Before the Amendment Determination was made, the ACMA was satisfied that consultation was undertaken to the extent appropriate and reasonably practicable, in accordance with section 17 of the LA.

On 24 September 2024 the ACMA released a consultation paper attaching a draft version of the *Telecommunications (Emergency Call Service) Amendment Determination 2024 (No.1)* for public comment. The consultation closed on 8 October 2024.

The consultation paper sought information about a CSP's ability to identify whether the mobile phone that a customer proposes to use, or uses, to access the CSP's network is configured to be able to access the emergency call service.

In addition to the consultation paper, the ACMA also facilitated discussions with carriers, Communications Alliance and the Australian Communications Consumer Action Network (ACCAN).

Following the consultation process, the ACMA received 44 submissions from the public, participants in the telecommunications sector, other industry participants, consumer groups and government. Based on the feedback received, there was broad support for the proposed changes to achieve the objective that no end-user or customer is left with a mobile phone that cannot connect to the ECS.

Explanatory Statement to the Telecommunications (Emergency Call Service) Amendment Determination 2024 (No.1)

Submissions opposing aspects of the new requirements centred largely on a preference to block voice services from affected mobile phones only and to allow data and SMS use to continue on those phones. A significant concern raised by CSPs was that, given CSPs do not own or operate networks, they may have no visibility of the network data required to comply with the requirements of the Amendment Determination. Some CSPs noted that they cannot identify whether a mobile phone is capable of accessing the ECS without receiving that information from a carrier, and as such, their compliance with the proposed obligations would depend on receiving information from carriers. Some members of the public also raised concerns about the eWaste impact the Amendment Determination could have on the environment.

The Telecommunications Industry Ombudsman (**TIO**) raised concerns that the Amendment Determination only provides assistance to financially vulnerable customers and does not take into account other types of vulnerable customers, for example, those that are unfamiliar with high tech, the elderly, or people with a disability.

ACCAN raised concerns about the impact of the amendments on consumers, in particular vulnerable customers. Specifically, it suggested that:

- provisions be included to ensure that consumers do not suffer from a lack of connectivity while their devices are being replaced or upgraded;
- provisions about payment assistance policies be amended so that CSPs must give customers experiencing financial hardship a no cost mobile, as opposed to the measure contained in section 70;
- a ‘stop the clock’ provision be inserted to support consumers in the process of replacing their current mobile phone, allowing for administrative factors, personal factors, postage and activation.

The issues raised in submissions, along with editorial feedback from various submissions, together with the requirements of the Direction, have all been considered in making the final Amendment Determination.

Notes to the *Telecommunications (Emergency Call Service) Amendment Determination 2024 (No.1)*

Section 1 Name

This section provides for the instrument to be cited as the *Telecommunications (Emergency Call Service) Amendment Determination 2024 (No. 1)*.

Section 2 Commencement

This section provides for the instrument to commence on 28 October 2024.

Section 3 Authority

This section identifies the provision that authorises the making of the instrument, namely subsection 147(1) of the Act.

Section 4 Amendments

This section provides that the *Telecommunications (Emergency Call Service) Determination 2019 (ECS Determination)* is amended as set out in Schedule 1

Schedule 1 Amendments

Item 1

Item 1 amends the Note under subsection 5(2) of the ECS Determination to insert a new paragraph (d). The paragraph notes that the instrument will include provisions in Part 4 that require carriage service providers to take measures to identify and cease supply of services to mobile phones that are unable to access the ECS. Part 4 has been inserted to meet the objectives set out in subsection 6(2) of the Direction.

Item 2

Item 2 amends section 6 of the ECS Determination to insert definitions for the following terms: *financial hardship customer*, *mobile network*, and *payment assistance policy*. Subsection 6(3) of the Direction provides that, in amending the ECS Determination, the ACMA may define any terms that it considers appropriate or necessary.

Item 3

Item 3 inserts a new Part into the ECS Determination. The new Part sets out requirements for carriers and CSPs in relation to emergency calls made on a mobile phone. The new Part consists of the following new sections:

Explanatory Statement to the Telecommunications (Emergency Call Service) Amendment Determination 2024 (No.1)

Section 61

This section outlines that the Part applies to both carriers and CSPs whose networks are used to supply, or who supply or will supply carriage services that enable end-users to access the ECS on a mobile phone.

Section 62

This section inserts definitions for new terms used in the Part. As set out above, subsection 6(3) of the Direction provides that, in amending the ECS Determination, the ACMA may define any terms that it considers appropriate or necessary.

Section 63

This section requires carriers to do everything reasonably necessary to ensure that a CSP using the carrier's mobile network is able to comply with the CSP's obligations under Part 4. The section was inserted in response to submissions received from CSPs who do not own or operate networks. Those CSPs indicated that, without carrier assistance, they may be unable to comply with the obligations in the Amendment Determination as they may not have visibility of the specific network data required to identify mobile phones being used on their mobile networks. Section 63 will enable those CSPs to comply with their obligations in the Part because carriers will be required to provide those CSPs with the information they would need to identify whether a mobile phone used by an end-user is not configured to be able to access the ECS. The requirement, would, for example, be applicable to sections 64, 66 and 68.

Section 64

This section imposes obligations on CSPs with respect to 'non-current customers'. A current customer is defined in section 62 as a customer of a CSP who is obtaining carriage services from the CSP via a mobile phone. A non-current customer is defined as a person who is not a current customer. This section is intended to capture the category of customers that are not a party to any contractual arrangements with the CSP in connection with a mobile phone. A person may not be a current customer of a CSP, for example, if the person obtains services from the CSP that do not involve use of a mobile phone, such as broadband-only services.

Under this section, CSPs are required to identify whether a non-current customer's mobile phone is able to access the ECS when that non-current customer requests supply of a carriage service. The CSP will be required to identify whether the mobile phone of the non-current customer is configured to be able to access the ECS both on the provider's network, or via 'camp on' to another network when the provider's network is not available.

Section 65

This section applies if a CSP has identified, under section 64, that an end-user's mobile phone is not configured to be able to access the ECS.

Subsection 65(2) provides that those CSPs are not to supply a carriage service to the identified mobile phone and must notify the end-user that the mobile phone is not configured to be able to access the emergency call service.

Notification could be achieved through a range of means, including SMS, telephone call, email, hard copy correspondence or through the inclusion of sufficiently prominent information on a website where a customer or end-user would reasonably go to seek information.

This section also requires the CSP to provide the end-user with information about alternative mobile phones that are available, including low cost or no cost phones that can access the ECS. This does not require a CSP to supply the alternative low cost or no cost mobile phone, although they are not prohibited from doing so. However, at a minimum, the CSP is required to provide the end-user with appropriate information about alternative low cost or no cost mobile phones that can access the ECS. This may involve informing the end-user about retailers that can provide those alternative phones.

Section 66

This section imposes obligations on CSPs in relation to those CSP's current customers if those customers, between the commencement day and 1 November 2024, request the supply of a carriage service from the CSP using a mobile phone. Under section 62, 'requests supply of' has been defined to also include attempts by an end-user's mobile phone to connect to a provider's own network. This might include, for example, when an end-user attempts to make a phone call from that mobile phone.

Under this section CSPs are required to identify whether the mobile phone that is requesting supply of a carriage service is configured to be able to access the ECS both on the provider's network, or via 'camp on' to another network when the provider's network is not available.

Section 67

This section applies if a CSP has identified, under section 66, that an end-user's mobile phone is not configured to be able to access the ECS.

Under section 67, between commencement date and 1 November 2024, a CSP must not supply a carriage service to the identified mobile phone and must notify the end-user that the mobile phone is not configured to be able to access the ECS.

Notification could be achieved through a range of means, including, but not limited to, SMS, telephone call, email, or hard copy correspondence.

This section also requires the CSP to provide the end-user with information about alternative mobile phones that are available, including low cost or no cost phones that can access the ECS. This does not require a CSP to supply the alternative low cost or no cost mobile phone, although they are not prohibited from doing so. However, at a minimum, the CSP is required to provide the end-user with appropriate information about low cost or no cost mobile phones that can access the emergency call service. This may involve advising the end-user about retailers that can provide those alternative phones.

A CSP does not need to comply with paragraphs 67(2)(a) and (c) if, prior to the commencement of Part 4, it has already notified an end-user of the information in paragraph (a) and provided the end-user with the information set out in paragraph (c).

Section 68

This section requires CSPs, on or after 2 November 2024, to use their best endeavours to promptly identify when a mobile phone that is accessing or attempting to access the mobile network, can no longer access the ECS. This section is intended to capture the category of customers that have existing contractual arrangements with the CSP for the use of a carriage service in connection with a mobile phone that, from 2 November 2024 is identified as not being configured to be able to make emergency calls.

For example, after 2 November 2024, industry testing may discover a class of mobile phones that can no longer access the emergency call service. Section 68 requires a CSP to use their best endeavours to identify whether any of its customers use that class of mobile phone.

Section 69

This section applies if, in accordance with section 68, a CSP has identified that an end-user has a mobile phone that can no longer access the ECS. Under this section, those CSPs are required to provide a series of notifications to the end-user that their phone is no longer configured to access the ECS. CSPs are also not to supply a carriage service to that mobile phone after a specified period.

Sections 68 and 69 apply on and after 2 November 2024. This timing reflects that the focus of CSPs and carriers prior to this date is to identify existing customers with affected mobile phones and to immediately cease supplying those customers or end-users with services to those phones. That customer base has been the object of significant communications activities, both directly and indirectly, ahead of the 3G shutdown. As a consequence, the ACMA did not consider that additional notifications of the kind contemplated under section 69 would be of similar benefit to existing customers before 2 November 2024. Sections 68 and 69 are intended to apply to customers and end-users who, in the future, may find themselves with a mobile device which is no longer configured to access the emergency call service.

Subsection 69(2) requires a CSP to send a notification to an end-user within 5 business days of identifying a phone under section 68. The notification must inform the end-user that their mobile phone is not configured to access the emergency call service and carriage services to that phone will cease between 28 and 35 days from that notification.

Subsection (3) provides that the CSP must send two further separate notifications to the customer advising them of the same matters set out in subsection (2).

Subsection (4) requires the CSP to cease supply of carriage services to the mobile phone no earlier than 28 days and no later than 35 days after the first notification in subsection (2) is sent.

Subsection (5) provides that a CSP must also provide information to the end-user about alternative mobile phones that are available, including information about low or no-cost mobile phones that can access the emergency call service. This information can be provided

with the notifications sent under subsection (2) or (3), or in another form. However, the notification under subsection (5) must be provided before the supply of carriage services ceases.

Section 70

This section imposes an obligation on CSPs to ensure that its payment assistance policy sets out at least one method by which financial hardship customers can receive assistance to obtain a low cost or no cost mobile phone that can access the emergency call service using the provider's carriage service and the mobile network of another CSP under 'camp on' arrangements.

Section 71

This section provides an exception to the obligations set out under sections 65, 67 and 69. The exception applies to foreign travellers in Australia. In order to take advantage of the exception, a CSP will need to identify the holder of the affected mobile phone as someone who is not usually based in Australia and whose intention is only to remain in Australia for less than 90 consecutive days. Once identified, the CSP will need to send a notification to the foreign traveller's mobile phone to the effect that the phone is not configured to be able to access the emergency call service.

Where the exception applies, the CSP can, but is not obligated to, provide carriage services to the foreign traveller even if their device is unable to access the emergency call service.

The exception does not guarantee that any foreign traveller with an affected mobile phone will not have their service blocked.

Statement of compatibility with human rights

Prepared by the Australian Communications and Media Authority (ACMA) under subsection 9(1) of the *Human Rights (Parliamentary Scrutiny) Act 2011*

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Subsection 9(1) of the *Human Rights (Parliamentary Scrutiny) Act 2011* requires the rule-maker in relation to a legislative instrument to which section 42 (disallowance) of the *Legislation Act 2003* applies to cause a statement of compatibility with human rights to be prepared in respect of that legislative instrument.

The statement of compatibility set out below has been prepared to meet that requirement.

Overview of the Amendment Determination

The *Telecommunications (Emergency Call Service) Amendment Determination 2024 (No.1)* (the **Amendment Determination**) has been made in accordance with subsection 147(1) of the *Telecommunications (Consumer Protection and Service Standards) Act 1999* (the **Act**) and the *Australian Communications and Media Authority (Emergency Call Service Determination) Direction 2024* (the **Direction**). The Direction was given to the ACMA by the Minister to address technical limitations of some mobile phones following the shutdown of Australia's 3G mobile networks. The limitations will result in some mobile phones being unable to call the emergency call service (ECS) after the networks are closed. This includes some mobile phones that will continue to be capable of making non-emergency calls over 4G and 5G networks.

The Amendment Determination amends the *Telecommunications (Emergency Call Service) Determination 2019* (the **ECS Determination**) to impose new requirements on carriers and carriage service providers (CSPs). The requirements include obligations to identify mobile phones that are unable to access the ECS, to notify end-users about those mobile phones and to provide end-users with information about alternative mobile phones that can access the ECS. CSPs are also required to cease providing services to affected mobile phones.

Human rights implications

The ACMA has assessed whether the Amendment Determination is compatible with human rights, being the rights and freedoms recognised or declared by the international instruments listed in subsection 3(1) of *Human Rights (Parliamentary Scrutiny) Act 2011* as they apply to Australia.

Having considered the likely impact of the Amendment Determination and the nature of the applicable rights and freedoms, the ACMA has formed the view that the Amendment Determination may engage the following rights:

- The right to freedom of expression in Article 19(2) of the *International Covenant on Civil and Political Rights (ICCPR)*, which states:

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2. *Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice.*
- The right to accessibility for people with disabilities in Article 9 of the *Convention on the Rights of Persons with Disabilities (CRPD)*.
 1. *To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas. These measures, which shall include the identification and elimination of obstacles and barriers to accessibility, shall apply to, inter alia:*

...

(b) Information, communications and other services, including electronic services and emergency services.

Right to freedom of expression

The ACMA considers the Amendment Determination could be considered to limit the right to freedom of expression as persons who own particular mobile phones (being phones that are not configured to access the ECS) will no longer be able to use those mobile phones once a CSP ceases supply of carriage services to that phone. The purpose of the Determination is to assist persons who have mobile phones that are not configured to access the ECS to obtain a mobile phone that can access the ECS, so that persons who attempt to access the ECS using a mobile phone after the closure of the 3G networks are able to do so.

Paragraph 65(2)(c), paragraph 67(2)(c), subsection 69(5) and section 70 of the Amendment Determination impose requirements on CSPs to provide information to customers and end-users about alternative low and no cost phones available. All CSPs are also required to update their payment assistance policies to include information about at least one means by which a customer or end-user could receive assistance to obtain a low-cost or no cost mobile phone. These obligations are designed to help all affected customers and end-users to make informed decisions about options for alternative mobile phones that will enable those persons to access carriage services as well as the ECS. Accordingly, the ACMA considers that the Amendment Determination does not cause any undue or unreasonable limitation or interference with the right to freedom of expression.

Rights for persons with disabilities

The ECS Determination promotes the right to accessibility for people with a disability by providing equal access to the emergency call service. This is facilitated through giving people who are deaf, speech or hearing-impaired access to the emergency call service through a dedicated number, 106.

The ECS Determination contains a number of provisions which ensure that emergency calls to the number 106 are handled in the same manner as emergency calls to the number 000 or

112. These measures ensure deaf and speech or hearing-impaired end-users can equally access the ECS. The Amendment Determination does not affect any of these provisions. Consequently, the existing measures to ensure deaf and speech or hearing-impaired end-users can equally access the emergency call service and Emergency Service Organisations (police, fire, ambulance) are still in place.

Conclusion

The instrument is compatible with human rights. To the extent that it limits any human rights, those impacts are reasonable, necessary and proportionate to meet the objectives of the Direction and the Act.

Requirements to identify and manage mobile phones unable to access the Triple Zero (000) Emergency Call Service

Impact analysis

OCTOBER 2024

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Executive Summary

On 28 October 2024, Australia's remaining 3G mobile networks operated by Optus and Telstra will be shut down. This will result in three categories of mobile phones being impacted. This includes:

- phones that only use 3G networks for voice and data – will no longer work.
- phones that use 4G Voice over Long Term Evolution (VoLTE) for voice calls, and 4G for data, but use Circuit Switched Fall Back (CSFB) to 3G networks to make emergency calls to Triple Zero.
- phones that use 4G for data but make all voice calls over 3G networks.

The first category (3G only mobile phones) will no longer work due to the commercial decision of mobile carriers to close 3G networks. The latter two categories may continue to work as normal, except they will no longer be able to connect to Triple Zero.

The need for policy intervention on the 3G Network shutdown arises because under the current Emergency Call Service (ECS) regulatory regime, there are no protections for affected customers to enable them the means to continue to access Triple Zero beyond the network shutdown.

Once 3G networks are shut down by all carriers, customers with affected mobile phones will not be able to make calls to Triple Zero, and there are no mandatory requirements on carriers or carriage service providers for customers to be notified of this or to provide assistance on how to obtain a mobile phone that is capable of making emergency calls.

Without action, a subset of the population will be unaware their mobile phone will not be able to make an emergency call and will be unable to make an emergency call with the risk that this could lead to loss of life or property.

Those most likely to be impacted are elderly customers who use older devices, customers who are not confident with technology and prefer to use older less-complex devices, customers from lower socio-economic backgrounds that are less likely to have updated their mobile phones, and customers experiencing financial hardship unable to afford newer mobile phones.

On 21 August 2024, the Minister for Communications directed the Australian Communications and Media Authority (ACMA) to amend the Telecommunications (Emergency Call Service) Determination 2019 (ECS Determination) to include requirements for telcos to:

- Identify mobile phones unable to access Triple Zero
- Notify customers about the limitations with mobile devices unable to access the emergency call service.
- Not supply carriage services to mobile devices unable to access the emergency call service.

On 24 September 2024, the ACMA published proposed amendments for consultation in line with the Direction inviting feedback from stakeholders by 8 October 2024. The ACMA received approximately 44 submissions from stakeholders to the consultation. Feedback ranged from members of the public largely opposing stopping the supply of carriage services to affected mobile devices (particularly as many end-users have uses for their phones other than to contact triple zero) to technical limitations of CSPs and carriers preventing them from being able to comply with the amended ECS Determination. A significant concern among CSPs is that the obligations of the draft amendments is placed on them, whereas the information and support they need in order to comply needs to be supplied by their carrier.

This impact analysis considers three separate options to address this policy problem:

1. Maintain status quo.
2. Direct regulation – implement the Direction (amend the ECS Determination).
3. Industry co- or self- regulation.

Figure 1:

Based on the analysis outlined further in this Impact Analysis, the recommended outcome is that **Option 2** be implemented, which is in line with the Minister's Direction. While primarily the ACMA is bound to comply with the Minister's Direction, this recommendation is based also on the overall net benefit calculation as compared to Option 1 and Option 3.

Introduction

Background

The Triple Zero emergency call service (**ECS**) is a critical service that plays a fundamental role in the safety of the Australian community. It gives people access—free-of-charge—to contact police, fire or ambulance services in life-threatening or time-critical situations from any fixed or mobile phone (where there is coverage) and most satellite phones in Australia.

On 8 November 2023, the Optus network experienced a nation-wide outage affecting phone and internet services. The outage impacted approximately 10 million Optus customers and 400,000 businesses. The impact was widespread across the community, including impacts to the public safety, banking, transport and healthcare sectors. During the outage Optus landline customers were unable to make calls to Triple Zero, and as the day progressed it became clear that some mobile customers were unable to access Triple Zero.

In March 2024, the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (**Department**) published the Review into the Optus outage of 8 November 2023 – Final Report (**Final Report**). Amongst other matters, the review considered there were gaps in the emergency call service regulatory framework.

Additionally, closure of the TPG Telecom (Vodafone) mobile network in January 2024 and the anticipated shutdown of the Telstra and Optus 3G mobile networks in late October 2024 will result in some mobile phones, as a result of historical technical limitations, being unable to access the emergency call service, despite otherwise being able to make non-emergency calls over 4G and 5G networks.

On 21 August 2024, the Minister for Communications (the **Minister**) directed the Australian Communications and Media Authority (**ACMA**) to amend the Telecommunications (Emergency Call Service) Determination 2019 (**ECS Determination**) to improve reliability of access to the Triple Zero Emergency Call Service in response to the recommendations from the Final Report and the shutdown of the 3G mobile network.

The Australian Communications and Media Authority (Emergency Call Service Determination) Direction 2024 (Direction) requires the ACMA to make necessary amendments to the ECS Determination in two stages. This impact analysis relates to the first stage of the amendments which are set out in subsection 6(2) of the Direction. The remaining amendments to the ECS Determination set out in subsection 6(1) will be considered separately.

The amendments stipulated under subsection 6(2) of the Direction apply only to mobile phones that cannot make an emergency call and disabling the supply of services to those mobile phones. The amendments do not relate to devices that are not a mobile phone, such as medical alert devices. It follows that this Impact Analysis only assesses data relevant to mobile phones.

Regulatory setting

The Department manages the contracts between the Australian Government and the Emergency Call Persons (ECPs)—Telstra for 000/112, and Concentrix for the 106 TTY service for the deaf, hearing and speech-impaired. Emergency service organisations (**ESOs**), Police, Fire and Ambulance are regulated by their respective State or Territory Governments.

The ACMA regulates delivery of the Triple Zero Emergency Call Service through the ECS Determination. The ECS Determination sets rules that apply to carriers, carriage service providers (CSPs) and ECPs to have arrangements in place for dealing with emergency calls. Specifically, under the determination, carriers and CSPs are required to maintain the proper and effective functioning of their networks and facilities in support of consumer access to the Triple Zero service.

The ACMA also regulates carriers and CSPs under an industry code, C536:2020 Emergency Call Service Requirements Code (ECSR Code).

The ECSR Code includes obligations relating to publicising the ECS, prioritisation of emergency calls, addressing non-genuine calls, network management arrangements, communicating operational difficulties and establishing and maintaining contact arrangements.

Technical Standards Framework for Emergency Calling

The ACMA regulates telecommunications customer equipment, which includes mobile devices through:

technical standards made under the *Telecommunications Act 1997 (Telco Act)*; and the *Telecommunications (Labelling Notice for Customer Equipment and Customer Cabling) Instrument 2015 (TLN)*.

The design of the regulatory arrangements under the Act and the TLN includes obligations on manufacturers and importers to test customer equipment to be supplied in Australia, keep compliance records and apply a label to the customer equipment indicating its compliance with mandated technical standards before it can be supplied in Australia.

The current applicable telecommunications technical standards for mobile devices are the *Telecommunications (Mobile Equipment Air Interface) Technical Standard 2022 (Air Interface Standard)* and the *Telecommunications (Customer Equipment Safety) Technical Standard 2018 (Customer Equipment Safety Standard)*.

The Air Interface Standard requires mobile devices to be able to initiate an emergency call in specified scenarios including when there is no SIM card present. These requirements only apply to customer equipment (i.e. mobile devices), and do not place requirements on the carrier's side of the network for successful call completion. The requirements for the carrier side of the network are specified in the ECS Determination.

Voice over Long Term Evolution (VoLTE) is the technology used by 4G mobile phones and carriers to transmit voice calls. Without VoLTE 4G networks only carry data and cannot make voice calls. 3G networks use circuit-switched technology to carry voice calls, with this technology being phased out and no longer included in 4G and 5G networks which are designed to be data only networks.

VoLTE emergency calling requirements were introduced into regulatory arrangements in the 2018 version of the Air Interface Standard. One of the objectives in making the 2018 version of the Air Interface Standard was for there to be requirements addressing emerging wireless technologies that were being deployed in Australia at the time, which included VoLTE. The 2018 Air Interface Standard provided a transition period of up to two years, which enabled manufacturers or importers of mobile devices to continue to comply with the previous standard until April 2020. In practice, this means that all mobile devices imported into Australia for the first time or modified after April 2020 are required to have VoLTE emergency calling capability. Those devices will therefore be able to provide service, including to Triple Zero, over 4G networks. However, older devices may not have this capability.

What is the policy problem?

3G network closure

Australia's three mobile carriers (Optus, Telstra and TPG) have announced the dates for full 3G switch-off, repurposing the spectrum for 4G and 5G technologies:

- Optus will commence a gradual switch-off of 3G from 28 October 2024. 3G in the 2100 MHz band has already ended.
- Telstra will commence a gradual switch-off of 3G from 28 October 2024. 3G in the 2100 MHz band was switched off in March 2019.
- TPG commenced a gradual switch-off of 3G on 15 December 2023 which it completed in January 2024. 3G in the 2100 MHz band was switched off during 2019.

As part of the switch-off, Telstra and Optus have committed to the rollout of 4G networks that replicate the coverage of their 3G networks (or, in Optus' case, to keep 3G on in areas where it cannot replicate coverage). TPG closed its 3G networks in December 2023 but some of their customers are likely to be 'camping on' to Optus and Telstra 3G networks to make emergency calls.¹ They may lose this ability when the Telstra and Optus 3G network close.

Most recently Optus and Telstra have also launched public communications campaigns to alert customers to the shutdown date and the actions they need to take.

Through the switchover process, carriers have identified that there are historical technical limitations of some Australian mobile phones that mean that these phones will be unable to call Triple Zero after the 3G networks are closed. This includes some mobile phones that will be capable of making non-emergency calls over 4G and 5G networks, but not calls to Triple Zero.

It is estimated that 297,000 mobile phone devices (estimation by Telstra, Optus and TPG on 9 October 2024)² will not be able to connect to Triple Zero services when there is no 3G network in operation at all. Of these, 39,000 are 3G-only handsets, leaving 258,000 mobile phones that will be impacted by the proposals in this impact analysis. The 258,000 mobile phones are comprised of approximately 199,000 mobile phones that use 4G VoLTE for voice calls and data but use Circuit Switched Fall Back to 3G networks to make emergency calls, and 59,000 that use 4G for data but make all voice calls over 3G networks.

Network upgrades and shutdowns are not currently regulated by the ACMA. These are decisions made by the carriers. Similarly, carriers are not obliged to advise the ACMA of plans to close a mobile network under the terms of their radiocommunications licences or telecommunications carrier licence conditions. While mobile carriers usually advise the ACMA of their plans to close mobile networks and re-farm their spectrum for use by other generations of technology (for example 3G spectrum repurposed for 4G or 5G), they are not obliged to under the terms of their radiocommunications licences. This means that the timing and consistency of any advice from mobile carriers varies.

The ECS Determination contains specific obligations to give users access to the network to make emergency calls and then to carry those calls on the network. There is, however, no

¹ 3G Network Closure FAQ | TPG Support

² Monthly data provided to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts by industry body the Australian Mobile Telecommunications Association (AMTA)

requirement for a carrier to carry a call on a network if that carrier no longer offers that network service.

Additionally, mobile phone devices are not currently within the scope of the ECS Determination. There are no existing requirements in the ECS Determination on telcos for mobile phone devices to be able to make emergency calls, nor are telcos required to identify and inform customers about devices that are unable to make emergency calls on any available networks.

In effect, under existing regulatory arrangements, once 3G networks are shut-down by all major carriers, customers with affected mobile phones will not be able to make calls to Triple Zero, and there are no mandatory requirements on carriers or carriage service providers for those customers to be notified of this, or provide advice or assistance on how to obtain a mobile phone that is capable of making emergency calls. There is a risk that end users will continue to use a mobile phone and be unaware that it is unable to make an emergency call. When the end user needs to make an emergency call on a mobile phone that is not correctly configured, it will fail which could present a significant risk to life and property. In Australia, in the 23/24 Financial Year, approximately 12,404,540 calls were made to Triple Zero by mobile phones.³ Users of mobile phones that use 3G for voice and data will not be able to connect to a mobile network, and therefore it will be readily apparent that their mobile phone no longer works on the remaining 4G and 5G mobile networks.

Those more likely to be impacted are elderly customers who use older devices, customers who are not confident with technology and prefer to use older less-complex devices, customers from lower socio-economic backgrounds that are less likely to have updated their mobile phone, and customers experiencing financial hardship who are unable to afford newer mobile phones. While the Minister's Direction was issued as part of the Australian Government's response to the Final Report, the issues pertaining to the closure of the 3G networks is separate to the causes of the outage. The outage did, however, highlight some of the technical limitations of some mobile devices.

The overarching goal is that consumers will be able to connect with Triple Zero when they call from any mobile phone in use on Australian mobile networks. This includes the ability to call Triple Zero using what is known as emergency 'camp on' arrangements, which allow a mobile phone to connect to another available network for the purposes of calling Triple Zero if the mobile phone is unable to detect the user's home network (for example due to being outside the network coverage of the home network, or due to an outage in the home network). Emergency camp on is a feature available globally on mobile networks and is technically specified as the mobile phone being in a Limited Service State (LSS).

- To achieve this, the Minister for Communications has directed the ACMA to make amendments to the current ECS Determination to include immediately enforceable rules on providers to:
 - identify mobile phones unable to call Triple Zero—either on the provider's own network or on the networks of other carriage service providers who provide carriage services to the public (under 'camp-on' arrangements).
 - notify customers and advise services will be disabled unless a mobile phone capable of making emergency calls is used.

³ Data provided by the Emergency Call Person to the Australian Communications and Media Authority in accordance with reporting requirements under the ECS Determination.

- give assistance to customers to access alternative mobile phones (with financial hardship assistance to relevant customers).
- stop providing all services to the affected mobile phone.

Arrangements do not currently exist for this to occur. Without action, a subset of the population will likely be unable to access Triple Zero with the risk that this could lead to loss of life or property.

- Quality and accuracy of identified data

The ACMA is using data provided by the Australian Mobile Telecommunications Association (AMTA) to the Australian Government through the Department of Infrastructure, Transport, Regional Development, Communications and the Arts as part of the AMTA 3G Closure Working Group activities. The data is considered accurate as it is reported directly by the mobile carriers Optus, Telstra and TPG Telecom to assist in policy and operational considerations of 3G network closure issues.

Why is government action needed?

Objectives

The objective of government action is to better facilitate end users having access to the Triple Zero (000) Emergency Call Service when they need it.

The shutdown of Telstra and Optus' 3G networks is set to commence around 28 October 2024, and therefore time for action is critical. Telstra has delayed the shutdown of its network from the originally planned 1 July 2024 closure date, and Optus has delayed its network shutdown from the original 1 September 2024 closure date.

The shutdown of 3G networks has demonstrated that there are gaps in the regulatory framework designed to protect Australian end users of mobile phones. While the 3G Network closure has been planned for some time (it was first flagged in 2019),⁴ it only became known in February 2024 that there would be a consequential impact on 4G mobile phones which may not use VoLTE to make any calls, or which rely on 3G circuit switched fall back to make emergency calls. It has been reported (by members of the public and the Telecommunications Industry Ombudsman)⁵ that there has been a lack of communication with customers providing clarity around these technical limitations.

The Minister's decision to direct the ACMA to amend the determination to strengthen obligations on carriers was considered by the Minister as necessary to address the identified policy problems and to make available appropriate support through directly enforceable rules made as soon as possible. If government did not intervene, a high-risk would remain that some end users would be unaware they are unable to access Triple Zero and make an emergency call during life threatening risks.

The Explanatory Statement with respect to Part 6(2) of the Direction states:

“Subsection 6(2) directs ACMA to include requirements for providers to identify mobile phones unable to access Triple Zero, notify the user, provide assistance if necessary to access an alternative mobile phone, and cease providing service to the affected device. Providers will also be required to not provide service to a prospective customer seeking service with an affected mobile phone. This requirement makes clear the responsibility providers have to ensure mobile networks provide access to the emergency call service.”

Enforceable regulation is considered necessary for several reasons, including that it:

- addresses the serious nature of the harms (risk of death or serious injury) involved by supporting direct regulatory intervention and serving specific and general deterrence through strong, immediately available enforcement action.
- enables the ACMA to directly design robust and clear enforceable obligations.
- allows adequate and effective consumer protections to be put in place quickly – noting the closure date of 28 October when consumers with affected mobile phones may no longer be able to access Triple Zero. Enforceable rules provide certainty that these customers will be adequately notified and incentivised to seek an alternative mobile device that can access Triple Zero.
- provides the strongest incentive to achieve the best outcome for the Australian community.

⁴ 3G network switch off | Department of Infrastructure, Transport, Regional Development, Communications and the Arts

⁵ See submission by the TIO to the ACMA's consultation process on amendments to the ECS Determination in relation to the 3G network shutdown

- recognises the essential nature of the Triple Zero Emergency Call Service for Australian end users of mobile phones.

To address these challenges, the ACMA has consulted widely in developing the amendment instrument. Consultation and engagement with industry stakeholders has been integral in understanding and addressing concerns, fostering a collaborative approach to these regulatory changes. Industry was well informed and contributed constructively to the draft amendments. In addition to the public consultation process, industry carriers and bodies met with the ACMA to manage the feasibility of amendments within the confines of the terms of the Ministerial Direction.

This policy change will be considered a success if the more than 297,000 mobile phone devices that will be unable to make an emergency call once all 3G networks in Australia shutdown are replaced with ones that are capable of making emergency calls. The policy assumes that all Australians expect that a mobile phone they use will be able to make an emergency call when required, and it is unacceptable for mobile phones that cannot make an emergency call to operate on Australian mobile networks.

The ACMA expects that there will be a large volume of mobile phones whose users will need to be identified, notified and have services disabled shortly after the shutdown of 3G networks. There are likely to be lower volumes of mobile phones that need to be identified/notified/disabled on an ongoing basis. However, it is assumed that a steady flow of devices that may be unable to make emergency calls may be used by end users that purchase devices that are non-compliant with the Australian technical standards or bring non-compliant devices into Australia (for example through immigration, tourism or international students). Therefore, there is a need for the policy change to remain in effect to provide ongoing protection to end users in Australia.

What policy options have been considered?

The following three options have been considered based on the options available to the ACMA to undertake regulatory intervention with existing powers. Network upgrades and shutdowns are not regulated by the ACMA. These are decisions made by carriers. Carriers are not obliged to advise the ACMA of plans to close a mobile network under legislation, the terms of their radiocommunications licences or telecommunications carrier licence conditions. Therefore, the ACMA does not have powers to delay the closure of 3G networks by carriers, and as such this was not considered further.

The ACMA is aware the Minister has powers to issue carrier licence conditions in certain circumstances. To date no powers have been exercised in relation to 3G network closures.

Option 1 – Status quo

Under this option the government retains the status quo, refraining from amending the current ECS Determination. Decisions about network shutdowns are currently made by carriers. Similarly, carriers are not obliged to advise the ACMA of plans to close a mobile network under the terms of their radiocommunications licences or telecommunications carrier licence conditions.

If the status quo is maintained, mobile carriers and CSPs would continue to use their own discretion to determine the impact of network shutdowns and, based on that assessment, to decide what information to provide their customers, when to provide it, and by what mechanism.

Customers affected by network closures and outages may not be adequately notified of the events and the impact they have on access to Triple Zero. There is an increased likelihood that vulnerable customers who attempt to contact Triple Zero via their mobile device being unable to connect.

No compliance requirements or enforcement options would apply under this option.

Option 2 – Direct Regulation - Implementing the Direction (amend the Emergency Call Service Determination)

Option 2 is to amend the ECS Determination to include necessary obligations on carriers and CSPs to better facilitate end-user mobile phones to make emergency calls. Amending the ECS determination would not only address the problem, but it would level the playing field and result in stronger protection of end users of mobile phones as regulatory requirements will apply to all providers.

The basis for this option is the Minister's decision to issue the Direction to the ACMA. The Direction imposed by the Minister requires the ACMA to amend the ECS Determination, to include requirements for providers to:

- identify mobile phones unable to access the emergency call service.
- notify customers about the limitations with mobile devices unable to access the emergency call service. And
- not supply carriage services to mobile devices unable to access the emergency call service.

These amendments are to be determined and commence in full by 1 November 2024.

- An amended ECS Determination would make clear the responsibility providers have for their mobile networks to provide access to the emergency call service; provide regulatory certainty to the providers; and would reduce the high-risk to users of mobile devices that may otherwise be unaware they are unable to make an emergency call from their mobile phone.
- By implementing Option 2, all obligations will be immediately enforceable which will promote widespread and consistent compliance. It will provide a regulatory response that is coordinated with the timing for closure of the Telstra and Optus 3G networks expected to commence in late October 2024. The Australian public will have confidence that their emergency call made by a mobile phone will be successfully made. Approximately eighty per cent of emergency calls are made by mobile phones.

Option 3: Industry self- or co-regulation

Voluntary actions by providers, supported by an industry guideline or registered code

Under this option, government would rely on providers to voluntarily take active steps to identify and assist customers with mobile phones unable to make an emergency call after all 3G mobile networks are shutdown.

- Success of this approach is dependent on industry uptake of voluntary measures to have the intended impact. There would be no obligations for industry to adopt the measures (although businesses may have an incentive to adopt the measures to avoid future reputational damage. It may be possible for government to encourage or work in cooperation with providers to educate consumers about the impacts of 3G network shutdowns and the potential impact on making emergency calls. As government does not have visibility of the type of mobile phone used by customers of providers, government education could only be broad and not targeted specifically at end users with mobile phones known to be unable to make an emergency call.
- It would be open to providers to develop a guideline to identify the policies and practices that should be undertaken to assist customers. This could be undertaken through the Communications Alliance industry body that develops industry guidelines and codes for the telecommunications industry. However, an industry guideline would normally, depending on its complexity, take six months to be developed. Providers have not voluntarily convened a working group to develop an industry guideline, and as such the development of an appropriate guideline by the end of October 2024 is unlikely to be achieved.

In this case, voluntary measures may potentially penalise those that do participate by way of increased costs both via implementing the changes needed to inform customers and better facilitating customer means to access emergency services. This may act as a disincentive for providers to take a level of action that would be comparable to the outcomes that may be achieved by Option 2.

Industry Code

Under section 118 of the Telco Act, the ACMA can request a body or association that represents a section of the telecommunications industry to develop an industry code that applies to participants in that section of the industry. The ACMA can make such a request if the development of the code is necessary or convenient in order to provide appropriate community safeguards or otherwise deal with the performance or conduct of participants in that section of the industry.

Under this option, the ACMA would request Communications Alliance to amend the *Industry Code C536:2020 Emergency Call Service Requirements* to address the objectives set out in

section 6(2) of the Minister's Direction. The amended code would be determined by Communications Alliance. While the ACMA can provide feedback on the draft code, it cannot dictate the wording of the clauses or definitions. This makes an industry code a less precise instrument for achieving the objectives of government action.

Given the immediacy of action required, with the Optus and Telstra 3G networks to close from 28 October 2024, amending the Code is not the preferred option. Under section 118 of the Telecommunications Act 1997, the ACMA can request an industry body to make an industry code on specific matters. However, section 118 also requires that an industry body must be given at least 120 days to develop the industry code. If the ACMA pursued this option now, an industry code would not be developed until at least mid-February 2025, presenting significant risk to the community that appropriate consumer safeguards are not in place from the commencement of 3G network shutdowns on the Optus and Telstra mobile networks. This would pose an unacceptable risk to the safety of the community during that time.

While an industry code is enforceable, breaches of an industry code require the ACMA to direct a carrier or CSP to comply with the code before it can require compliance with the code. This requires the ACMA to undertake an investigation against the requirements of the code, which can be a time-consuming process, requiring procedural fairness and natural justice considerations. In practice, ensuring compliance against an industry code becomes a twostep process before the ACMA can effectively enforce compliance. This could result in a substantial amount of time passing without appropriate consumer safeguards in place. This can also result in reduced incentive for industry to take action on affected mobile phones and would therefore pose an unacceptable risk to life and property where end users are unable to make emergency calls.

As part of the development of the Ministerial Direction, the Department of Infrastructure, Transport, Regional Development, Communications and the Arts considered industry self-regulation options, but determined they provided insufficient safeguards for user access to Triple Zero. All evidence pointed to the need for provisions that can immediately come into effect to promote compliance that provides assurance of end user access to the ECS, which in turn may ultimately save lives. Industry Codes typically take a minimum of twelve months to be developed through the Communications Alliance industry body. Given the upcoming closure of the Telstra and Optus 3G network in late October 2024, these processes would be unlikely to produce an Industry Code within sufficient timeframes, putting the Australian community at risk. In comparison, option two would amend the existing Telecommunications (Emergency Call Service) Determination 2019 and have immediate regulatory effect requiring compliance by carriers and CSPs.

International Experience

The 3G network shutdown process is at different stages around the globe. Some mobile carriers have already completed their closures, while others continue to offer services.

- **United States** – Major telecom providers like AT&T, T-Mobile and Verizon completed their 3G network shutdowns in February, July and December of 2022 respectively.⁶
- **United Kingdom** – Vodafone shutdown in December 2023, EE in February 2024, Three scheduled for December 2024 and O2 scheduled for December 2025.

⁶ Verizon tells 3G customers to upgrade before they lose service (fierce-network.com)

- **Japan** – KDDI shutdown in March 2022,⁷ Softbank in April 2024 and NTT Docomo scheduled for March 2026.⁸

At a public hearing for the Senate Inquiry into the shutdown of 3G mobile network it was noted that a common theme being seen with international shutdowns centres on building consumer awareness about the implications of the shutdown and the importance of education campaigns and awareness raising.⁹ Providers in the US offered free devices to customers who had not yet transitioned¹⁰ and programs were available to support vulnerable consumers to make that transition (including through funding provided by the Federal Communications Commission).¹¹ These included a Lifeline Program¹² (offering subscribers a discount on qualifying services) and the Emergency Broadband Benefit Program/Affordable Connectivity Program.¹³

The focus across Japan and the United States was industry-led communication.¹⁴ Those shutdowns involved long lead times of engagement from industry, educating their consumers, providing information on multiple websites, and offering free phones (or free phone exchange) when closer to the shutdown. The management of closures were led by industry without government intervention. There was an understanding among industry that consumers would need to be informed of the implications of the closure of the 3G networks.¹⁵

⁷ Sente Inquiry into the shutdown of 3G mobile network public hearing 24/7/2024 - ParlInfo - Rural and Regional Affairs and Transport References Committee : 24/07/2024 : Shutdown of the 3G mobile network (aph.gov.au) – Pg 55

⁸ A Comprehensive Guide to the 3G Shutdown | SafetyCulture; Feature: What is slowing 3G shutdowns... - Mobile World Live

⁹ Sente Inquiry into the shutdown of 3G mobile network public hearing 24/7/2024 - ParlInfo - Rural and Regional Affairs and Transport References Committee : 24/07/2024 : Shutdown of the 3G mobile network (aph.gov.au) – Pg 55

¹⁰ AT&T is giving customers affected by the 3G shutdown a free phone (xda-developers.com); Verizon is sending free 4G flip phones to customers who haven't moved on from 3G - The Verge;

¹¹ Sente Inquiry into the shutdown of 3G mobile network public hearing 24/7/2024 - ParlInfo - Rural and Regional Affairs and Transport References Committee : 24/07/2024 : Shutdown of the 3G mobile network (aph.gov.au)

¹² Lifeline Support for Affordable Communications | Federal Communications Commission (fcc.gov)

¹³ Emergency Broadband Benefit | Federal Communications Commission (fcc.gov)

¹⁴ Sente Inquiry into the shutdown of 3G mobile network public hearing 24/7/2024 - ParlInfo - Rural and Regional Affairs and Transport References Committee : 24/07/2024 : Shutdown of the 3G mobile network (aph.gov.au) – Pg 55

¹⁵ Sente Inquiry into the shutdown of 3G mobile network public hearing 24/7/2024 - ParlInfo - Rural and Regional Affairs and Transport References Committee : 24/07/2024 : Shutdown of the 3G mobile network (aph.gov.au) – Pg 55

What is the likely net benefit of each option?

Overview of the options

The reform options that are set out in the previous section are summarised below with the key differences in the regulatory framework highlighted. The impact of these differences has been examined to gauge the relative benefits and costs of each option.

- Status quo (Option 1) - the government retains the status quo, refraining from amending the current Determination.
- Direct Regulation (amend the Emergency Call Service Determination) (Option 2) – ACMA amend the determination in relation to emergency call services. This Determination is the *Telecommunications (Emergency Call Service) Determination 2019*.
- Industry self- or co-regulation (Option 3) - voluntary actions by providers, supported by an industry guideline or registered code.

The focus of this section shifts towards the net benefits of Option 2 and Option 3 relative to the Status Quo (Option 1). As Option 1 is considered the base case – it is used as the reference point against which the reform options are assessed. As such, costs that arise under option 1 but not under option 2 or option 3 are identified as a benefit of the reform – as an avoided cost.

By assessing the quantifiable costs and benefits of reform Option 2 over a ten-year period, Option 2 is expected to be net beneficial. While Option 3 is assessed, it is not predicted to result in a net benefit. Table 1 summarises the comparison of the quantified costs and benefits for Option 2 and 3 relative to Option 1 (the status quo).

Figure 2: Table 1: Summary of expected benefits relative to the status quo^[1]

	Option 2	Option 3
Total benefits (NPV)	\$67.11 million	-\$36.64 million
Benefit cost ratio	1.445	0.715

Based on 10-year analysis using a 7% discount and providing the results in 2023 values.

Details of these costs and benefits for each option are presented in the next sections.

Option 1 – Status quo

Under this option, the government retains the status quo, refraining from amending the current ECS Determination.

For an economic analysis this option is considered the base case and so becomes the reference point for considering other options. For this reason, the costs and benefits are considered to be zero.

Option 2 - Direct regulation (amend the Emergency Call Service Determination)

Identification of stakeholders and the impacts of the reforms

The following Government stakeholders were identified:

- The ACMA develops and implements the reforms. The ACMA will coordinate communications with providers and with customers.
- The Department of Infrastructure, Transport, Regional Development, Communications and the Arts - No cost to were identified as these are reforms made by the ACMA so consider there will be no impact to the Department.

Figure 3:

The following industry stakeholders were identified:

- Telecommunications Industry Ombudsman (TIO) - TIO may take complaints about matters prescribed by sections 63 and 65 of the amended Determination (e.g. not being notified that their device is affected). As the TIO is funded by industry charges, the costs will be imposed on the industry.
- Carriers.
- Carriage Service Providers.
- Emergency Call Person (Telstra for 000 and 112).

Figure 4:

Two stakeholder groups within the broader public were identified:

- Members of the public that hold affected mobile phones.
- Broader public.

The distribution analysis section considers the distribution of the costs and benefits within these groups in more detail.

A collated summary costs and benefits arising from Option 2 for each stakeholder group is set out in Table 2.

Table 2: Collated summary of costs and benefits arising from Option 2 for each stakeholder group

	Costs	Benefits
Government	Implement reforms <ul style="list-style-type: none"> • Compliance and enforcement • Communicating and educating Industry 	Removes a point of failure in emergency responses
Mobile Carriers	Costs to identify affected phones and communicate with customers. Potential costs to assist financial hardship customers with phone purchases. IT changes and staff training.	Establishes clear rules and obligations in key areas, providing a consistent approach.
Carriage Service Providers (CSPs) ~350 CSPs affected	Costs to identify affected phones and communicate with customers. Potential costs to assist financial hardship customers with phone purchases. IT changes and staff training. Ongoing costs to identify phones that have entered/re-entered usage.	
Members of the public that hold affected mobile phones	Replacement of current phones Time and stress costs associated with communicating with CSPs.	Improved ability to seek emergency services for themselves, family and friends as well as others. Will result in avoided pain and suffering, injury recovery time, reduced health care costs as well as reduced fatalities
Broader public		Maintain public trust in integrity of triple zero. Improved reliability of the phone network to contact emergency services (avoided deaths from delays to emergency responses). Improved response time when someone else calls triple zero resulting in avoided pain and suffering, injury recovery time, reduced health care costs as well as reduced fatalities

As shown in the table above the benefit of an improved response time will fall to:

- Members of the public that hold affected mobile phones.
- their family and friends.
- broader members of the public when an emergency call is made to assist them.

Option 3 – Industry self- or co-regulation

Under this option, government would rely on providers to voluntarily take active steps to identify and assist customers with mobile phones unable to make an emergency call after all 3G mobile networks are shutdown.

Success of this approach is dependent on industry uptake of voluntary measures to have the intended impact. There would be no obligations for industry to adopt the measures (although businesses may have an incentive to adopt the measures to avoid future reputational damage).

Alternatively, the ACMA could request Communications Alliance to amend the *Industry Code C536:2020 Emergency Call Service Requirements* to address the objectives set out in section 6(2) of the Minister’s Direction. The amended code would be determined by Communications Alliance. While the ACMA can provide feedback on the draft code, it cannot dictate the wording of the clauses or definitions. This makes an industry code a less precise instrument for achieving the objectives of government action.

It is difficult to predict the effectiveness of Option 3 – but it is reasonable to assume that agreeing to an industry code and requiring carriage service providers to sign-up and implement the code would substantially delay the implementation of the reform. Based on previous codes, it is estimated that the delay would be around six months.

As outlined in the previous section, the imposition of a voluntary guideline is considered unlikely to achieve the reform objectives, as some carriage service providers are unlikely to implement the reforms. There is a substantial risk that large carriage service providers (particularly those that are also Mobile Network Operators) align with the guideline, while smaller operators do not. As the smaller carriage service providers are often sold as low-cost options the harm (from an inability to contact emergency services) is likely to be imposed disproportionately on low income and disadvantaged members of society.

This disproportionate impact on low income and disadvantaged members of society would undermine Australia’s fundamental principle that emergency services are equally available to all members of the community.

This impact risks creating an emergency call system that is not fully accessible to those on low-cost mobile services.

Key inputs

In quantifying the costs, some key inputs are used, and these are set out in Table 3, below.

Table 3: Input values

Key input	Value	Source
Total phones in Australia	30,874,000	ACMA data

Phones affected at 1/10/2024	516,875	AMTA data
Percent of phones impacted	1.7%	Calculation based on ACMA data
Number of Mobile Network Operators	3	ACMA data
Carriage Service Providers affected	350	ACMA data

Modelled numbers of affected telephones

While considering the policy options, the number of affected telephones has continued to decline.

Under the base case it is anticipated that the number of affected telephones in use will initially decrease rapidly, but then will slow – with a “tail” of affected mobiles remaining in use for some time.

This “tail” of affected mobiles is expected to continue as affected phones either enter or re-enter usage in Australia.

Discussions with the industry indicate that common pathways for affected phones to enter or re-enter usage in Australia include:

- Mobile phones are imported with people immigrating to Australia on a long-term basis - such as students, working holiday, skilled workers etc.
- Mobile phones re-enter the market when an existing user loses or damages their current phone and uses an old telephone.

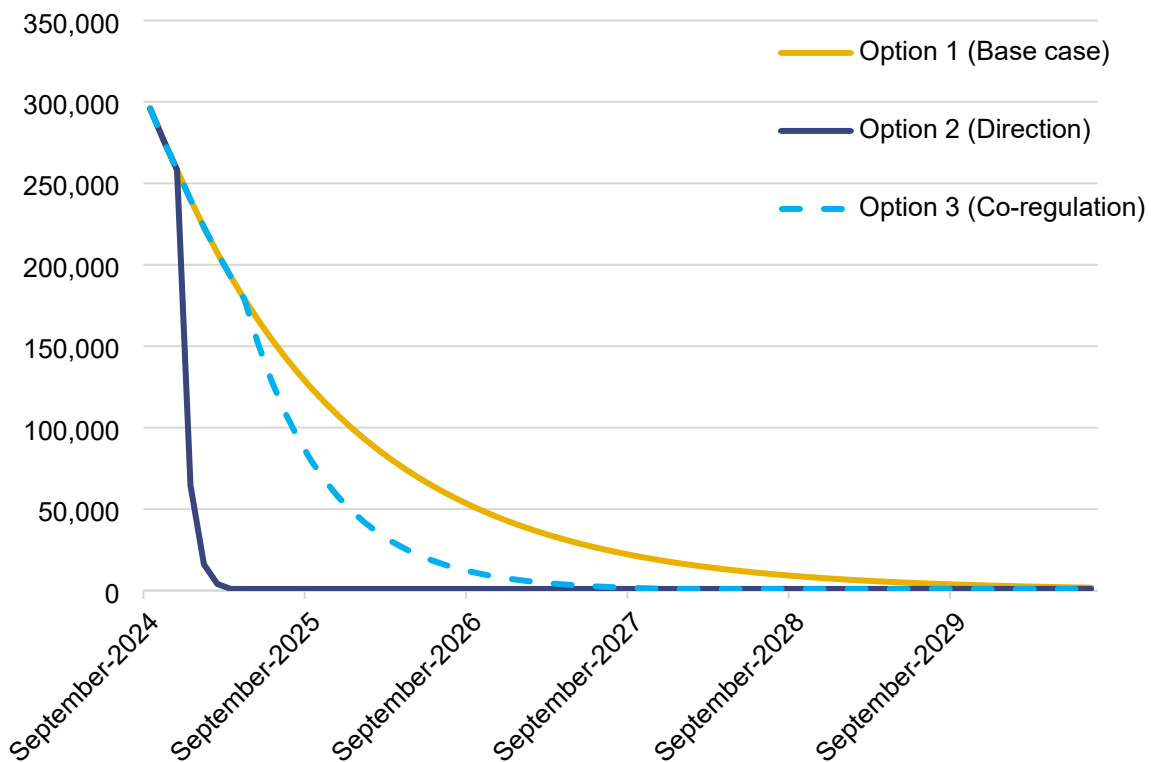
Industry data on the number of affected mobile telephones is consistent with a decline of just over 7% per month and provides key data on the number of mobile telephones in use under the base case.¹⁶ Based on this reduction rate, it is estimated that there will be around 258,000 affected mobile phones at the start of November 2024, when Option 2 would be introduced.

In contrast, the proposed approach used under Option 2 is estimated to result in a 75% reduction in numbers of affected mobile telephones.

The total number of affected mobile telephones in use for each option are set out in Figure 1, below.

¹⁶ The 7% reduction is based industry data for August and September 2024 on the total number of mobile phones impacted by the 3G shut down. It is likely that this overstates the reduction in mobile telephones that would be affected by option 2.

Figure 1: Estimated numbers of affected mobile telephones in use each month.



As the base case is the reference point for the assessment of costs and benefits, the benefits under option 2 and option 3 will arise from the reduced number of affected telephones in use. Under all options it is anticipated a floor of 1,000 affected telephones is expected to be maintained as phones enter and re-enter the market.

Quantification of costs for Option 2

The costs to each of the stakeholder groups are considered in turn below.

Costs to Government

The costs to the ACMA are itemised in Table 4 and are based on similar reforms. These costs are all expected to fall in the first year.

Table 4: Costs to Government (estimated \$2024 values)

Item	Value
Estimated ACMA cost on communicating and educating the amendments	\$70,289
ACMA cost to amend and implement the determination	\$312,395
Estimated ACMA compliance and enforcement cost (Year 1)	\$450,045
Estimated ACMA compliance and enforcement cost (Year 2 onwards)	\$225,000

Costs to the telecommunications industry

Through consultation, the mobile network operators indicated:

- They were still determining the high-level impacts and costs.

- Will need to support front line staff with a strong communication approach.
- Will need to change sales approaches – shops/phone sales / internet sales – may need to include a check of the device for sim only plans.
- The contacting of customers will be as follows:
 - > Identify the impacted phones (network checking for devices)
 - > Notify the customer 4 times (e.g. once a week for 4 weeks).
 - > Cut off the service to that phone 28 days after the first notification (generally between day 29 and 35)

Overall, they expect Operating expenditure will be higher than the Capital expenditure and estimate that the total cost will be around \$3 million per carrier by the time IT changes are included. To be conservative an allowance of \$5 million per carrier was included in the analysis.

Following consultation with industry the costs to carriers are estimated in Table 5. It is noted that all these costs will arise in year 1.

Table 5: Costs to Mobile Network Operators

Item	Value
Prepare processes	\$5,000,000
Total carriers	3
Total cost	\$15,000,000

Following discussions with industry, costs to Carriage Service Providers are split into preparation costs (arising in year 1) and ongoing costs that arise from contacting affected phones periodically over the life of the analysis. The preparation costs are set out in Table 6 and all these costs will predominantly arise in year 1. It is noted that there are 350 Carriage Service Providers, and these vary substantially in size.

Table 6: Preparation costs for Carriage Service Providers

Item	Value
Prepare processes	\$100,000
CSPs affected	350
Preparation cost	\$35,000,000

The ongoing costs for Carriage Service Providers relate to the costs of contacting affected mobile telephone users. This is based on a pattern of up to four text messages over a month period, prior to the telephone being disconnected.

It is estimated that this would take on average 30 minutes per customer, and this checking of phones on the system and contact would be occur four times a year (so every 3 months).

Table 7: Ongoing costs for Carriage Service Providers

Item	Value
Total employment cost (\$/hr)	\$100

Average time per customer	0.50
Identify and contact customers	\$50
CSPs check phones	4 times per year

These costs are combined in Table 8 to give the range of costs for Carriage Service Providers under option 2.

Table 8: Combined costs for Carriage Service Providers over first 18 months

Date	Base case Affected phones	Option 2 Affected phones	CSP preparation costs	CSP variable costs
November-2024	258,212	258,212	\$2,916,667	\$12,910,600
December-2024	239,993	64,553	\$2,916,667	\$0
January-2025	223,059	16,138	\$2,916,667	\$0
February-2025	207,320	4,035	\$2,916,667	\$201,728
March-2025	192,692	1,009	\$2,916,667	\$0
April-2025	179,096	1,000	\$2,916,667	\$0
May-2025	166,459	1,000	\$2,916,667	\$50,000
June-2025	154,714	1,000	\$2,916,667	\$0
July-2025	143,797	1,000	\$2,916,667	\$0
August-2025	133,651	1,000	\$2,916,667	\$50,000
September-2025	124,221	1,000	\$2,916,667	\$0
October-2025	115,456	1,000	\$2,916,667	\$0
November-2025	107,309	1,000		\$50,000
December-2025	99,738	1,000		\$0
January-2026	92,700	1,000		\$0
February-2026	86,159	1,000		\$50,000
March-2026	80,080	1,000		\$0
April-2026	74,430	1,000		\$0

In addition to these costs to industry, the notification and switching off of affected mobile phones is expected to increase the number of complaints to the Telecommunications Industry Ombudsman. As the Ombudsman operates on a cost recovery basis – these costs

will be passed on to industry. Based on other recent changes these costs are estimated at \$312,000 in year 1, with these costs decreasing progressively over time.

Costs to impacted customers.

The key costs imposed on impacted customers are the replacement of handsets and the time required to make the replacement.

The replacement cost of handset is based on a like-for-like replacement which would align with a lower end telephone. Based on a review of available lower end phones from each of the carriers, this analysis used a value of \$250 – based on a lower end phone from a reputable brand (such as Samsung).

Cost of administration time is based on an estimate of 2 hours discussion time and search time and the value of leisure time of \$26.61 per hour.

Value of leisure time was estimated to be 50% of median wage.^[2] The full-time adult average weekly total earnings is reported to be \$1,995.90^[3] giving an hourly employment rate of \$53.22 (based on 37.5 hours per week). These costs arise each month as the affected phones are removed from the network.

Table 9: Costs to customers

Item	Value
Administration time	\$53
Cost to buy a new phone	\$250
Total per customer	\$303

Total costs under option 2

The marginal costs under option 2 for each of the years of consideration are set out in Table 10.

Table 10: Collated costs under option 2

Year	Government	Carriers	CSPs Preparation	CSPs variable costs	Telecommunications Industry Ombudsman	Customers	Total cost
1	\$832,729	\$15,000,000	\$35,000,000	\$13,212,328	\$312,395	\$83,517,366	\$147,874,818
2	\$225,023	\$0	\$0	\$200,000	\$156,198	\$0	\$581,220
3	\$225,023	\$0	\$0	\$200,000	\$78,099	\$0	\$503,121
4	\$225,023	\$0	\$0	\$200,000	\$39,049	\$0	\$464,072
5	\$225,023	\$0	\$0	\$200,000	\$19,525	\$0	\$444,547
6	\$225,023	\$0	\$0	\$200,000	\$9,762	\$0	\$434,785
7	\$225,023	\$0	\$0	\$200,000	\$4,881	\$0	\$429,904
8	\$225,023	\$0	\$0	\$200,000	\$2,441	\$0	\$427,463
9	\$225,023	\$0	\$0	\$200,000	\$1,220	\$0	\$426,243
10	\$225,023	\$0	\$0	\$200,000	\$610	\$0	\$425,633

Quantification of costs under option 3

Industry was not directly asked about the implementation costs of option 3, but it is expected that the costs would be similar to option 2, with the delay in implementation altering the spread and timing of the costs. These costs are set out in Table 11.

Table 11: Collated costs under option 3

Year	Government	Carriers	CSPs Preparation	CSPs variable costs	Telecommunications Industry Ombudsman	Customers	Total cost
1	\$555,153	\$10,000,000	\$17,500,000	\$12,286,014	\$156,198	\$33,824,571	\$74,321,935
2	\$390,088	\$5,000,000	\$17,500,000	\$6,381,248	\$234,296	\$17,568,187	\$47,073,819
3	\$225,023	\$0	\$0	\$907,680	\$117,148	\$2,498,930	\$3,748,780
4	\$225,023	\$0	\$0	\$208,082	\$58,574	\$111,173	\$602,851
5	\$225,023	\$0	\$0	\$200,000	\$29,287	\$0	\$454,310
6	\$225,023	\$0	\$0	\$200,000	\$14,644	\$0	\$439,666
7	\$225,023	\$0	\$0	\$200,000	\$7,322	\$0	\$432,344
8	\$225,023	\$0	\$0	\$200,000	\$3,661	\$0	\$428,683
9	\$225,023	\$0	\$0	\$200,000	\$1,830	\$0	\$426,853
10	\$225,023	\$0	\$0	\$200,000	\$915	\$0	\$425,938

Quantification of benefits

The benefits option 2 arise from costs that would occur under option 1 after the shutdown of 3G network – but are avoided under option 2.

Analysis of emergency calls.

Emergency calls are received by the Emergency Call Person prior to transferring the call to state Police/Fire/Ambulance.

Victoria provides detailed data on triple zero calls as well as ambulance dispatches. For this reason, the analysis is based on Victorian data that has been extrapolated to estimate the impact for the whole of Australia – based on population. As the Australian population is 3.9 times the Victorian population, the number of calls to triple zero and other inputs are all multiplied by this scaling factor.

The analysis focusses only on Ambulance dispatches (so does not consider fire brigade and police) for the following reasons:

- Ambulance services provide detailed data allowing better interpretation of impacts.
- Delays to ambulance services are likely to result in hospitalisations, increased recovery times and deaths. This will be true for some fire or police calls, while other fire and police calls may result in loss of goods only (e.g. house fire with no one in the house, or robbery).
- Analysis of ambulance, fire and police would result in some double or triple counting of incidents.

Table 12: Use of Victorian ambulance data to estimate values for Australia.

Data	Victoria	Australia
Population	6,906,000	26,966,789
Total calls to 000	2,800,000	10,933,537
Triple zero emergency calls answered	1,990,436	7,772,324
Proportion of emergency calls from mobiles	80%	80%
Triple zero emergency calls from mobiles	1,592,349	6,217,859
Code one "lights and sirens" emergency events	388,956	1,518,809

Source: ABS Census data, Ambulance Victoria Annual Report 2022/23

Dispatch Codes

Ambulance dispatches are prioritised and are allocated one of three categories:

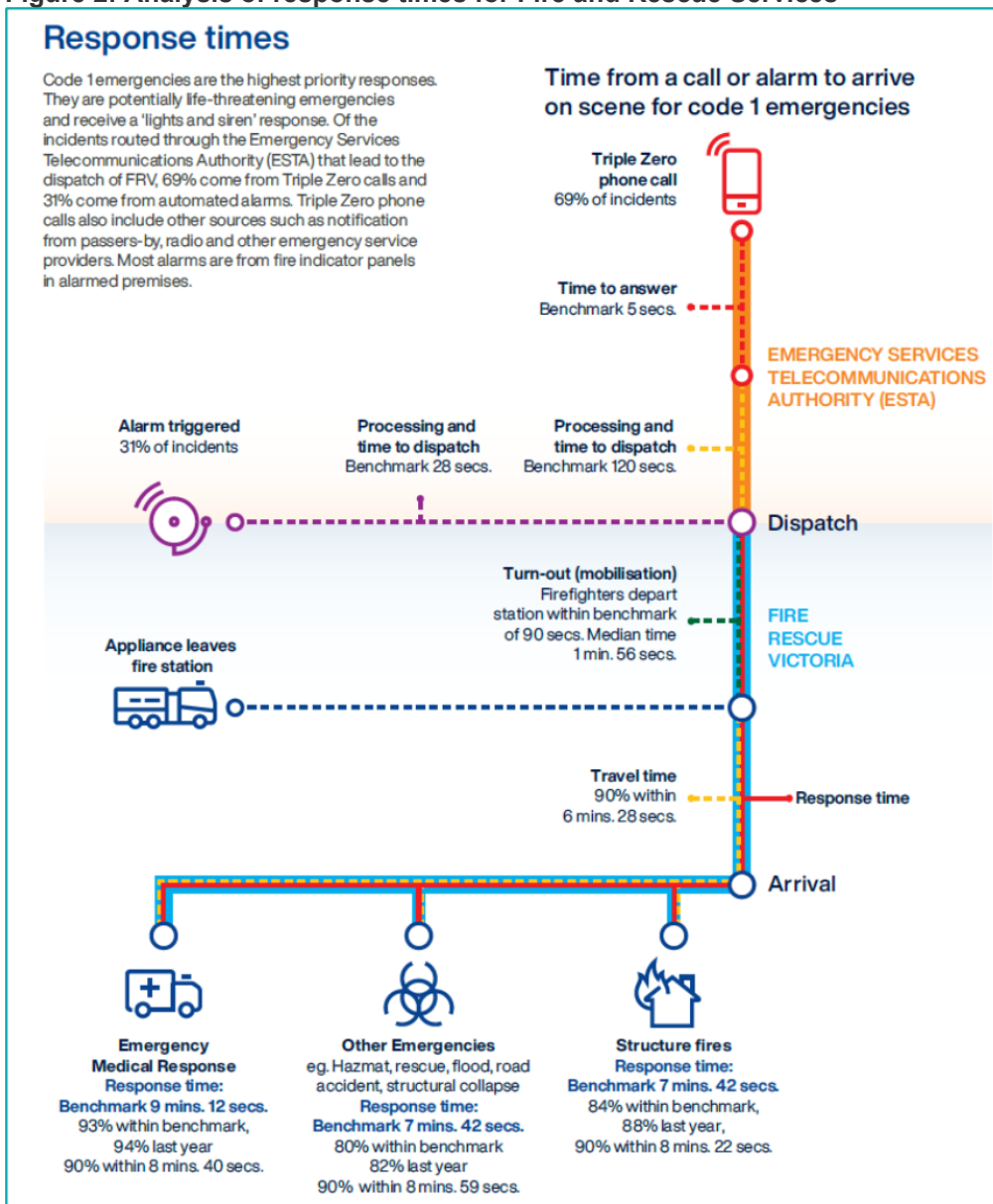
- Code 1 incidents require urgent paramedic and hospital care, based on information available at time of call.
- Code 2 incidents are acute and time sensitive, but do not require a lights and sirens response, based on information available at time of call.
- Code 3 incidents are not urgent but still require an ambulance response, based on information available at time of call.

The impact of delay on Code 1 incidents is important and the emergency services commit substantial resources to reducing the response times to these incidents.

The Victorian Ambulance service also reports Priority 0 – which is a subset of Code 1 incidents. These are described as the most urgent events requiring a time-critical response involving patients with life-threatening conditions. As the other ambulance services do not report this data, the estimate of the relevant number of cases is less reliable.

Figure 2 sets out analysis from the Victorian Fire and Rescue Services of each element of the time from an emergency call to attendance at the scene. It is notable that a number of the steps are measured in seconds.

Figure 2: Analysis of response times for Fire and Rescue Services



Source: Fire and Rescue Victoria 2022-23 Annual Report, www.frv.vic.gov.au/sites/default/files/2024-02/FRV-Annual-Report-2022-23-FINAL-with-ISSN.pdf

Impact of some phones not being able to call triple zero on timings.

The harm the reform seeks to avoid is the presence of mobile phones that are not able to make emergency calls. This could result in a delay in contacting triple zero in an emergency.

The delay in contacting emergency services will vary depending on whether there are other people with unaffected mobile telephones being present when an emergency arises. For this reason, the delay will be largest if self-reporting (i.e. call the ambulance for yourself) or if the person with the affected phone is the only one present.

A good example of a type of incident that is most likely to be impacted are rural (or non-metropolitan) road incidents – where there may not be other people present who can call triple zero if the first person’s phone doesn’t work. There is also detailed data on Code 1 nonmetropolitan road incidents that allows modelling of the impacts.

Estimation of benefits

The benefits will be greatest for incidents that have two characteristics:

- time critical incidents (where time to find a second phone that works may prove fatal).
And
- where the chance of access to a second phone quickly that can ring triple zero is low.

As noted above, there are estimated to be 1,518,809 Code one "lights and sirens" emergency call outs for ambulances in Australia. Of these call outs the number of code 1 non-metropolitan road incidents can be estimated from two sources of data:

- Detailed data on Victorian emergency calls and ambulance activity.^[4]
- Data on Australian ambulance activity.^[5]

The two data sources provide two slightly different estimates of the number of non-metropolitan code 1 road incidents. The proportion of those incidents that would be impacted by affected phones is estimated to be 0.84% by comparing the number of affected phones (258,000) to the total number of mobile telephones in Australia (30.87 million). Table 13 sets out the two estimates of non-metropolitan code 1 road incidents, and the corresponding number of incidents that would be likely to be impacted by affected phones under the base case.

Table 13: Estimate of Australian code 1 road incidents that would be impacted.

	Ambulance code 1 non-metropolitan road incidents	Incidents where the first attendee has an impacted phone
Non-metropolitan code 1 road incidents (Low estimate)	477,471	3,993
Non-metropolitan code 1 road incidents (High estimate)	492,974	4,123

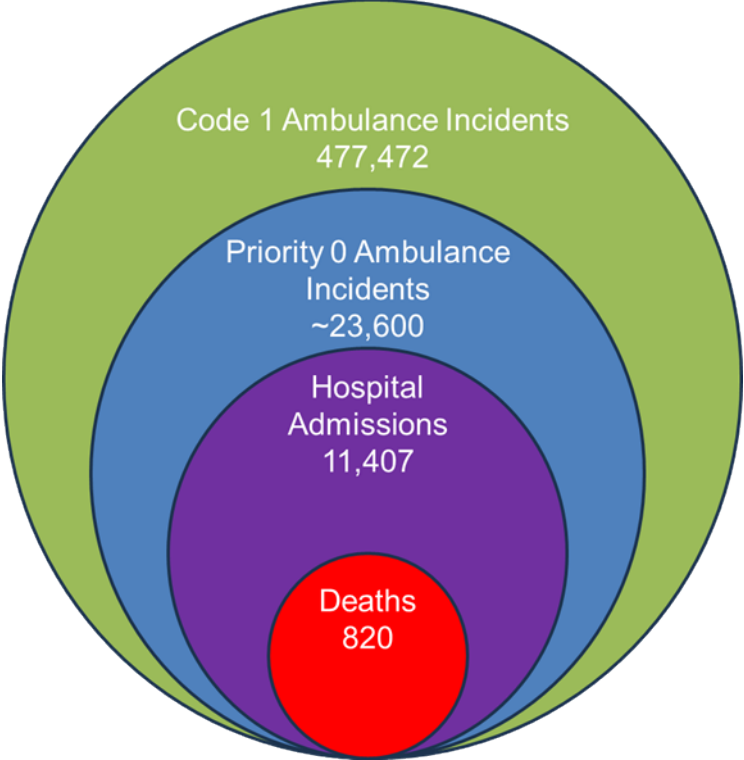
It is foreseeable that a portion of these incidents where an ambulance is not able to be called until another car arrives would result in increased pain and suffering, increased recovery time, increased health care costs as well as increased fatalities.

We have conservatively assumed that a small fraction of these incidents (1%) became fatal 1%. This would result in around 40 additional deaths in the first year.

The reality is that even if a delay does not result in a death, it may make the situation more serious, increasing the health service costs and prolonging recovery time. Figure 3, diagrammatically shows the increasing severity of regional road incidents with the estimated

or reported number for each incident.^[6] This diagram includes an estimate of the Priority 0 Ambulance incidents, which we have noted is unreliable as it relies on multiple extrapolations.

Figure 3: Collated data on increasing severity of non-metropolitan road incidents for Australia in 2022



While 40 additional deaths are substantial, this is plausible given the variations in deaths that arise from year to year as shown in Table 14, below. It is also notable that the number of Priority 0 incidents and hospitalizations arising from regional road accidents that would be impacted by affected phones are both substantially greater than the 40 potential deaths we have used for the calculation.

Table 14: Road fatalities for Australia by year and remoteness index

Year	Major city	Inner regional	Outer regional	Remote	Very remote	Unknown	Grand total	Total outside cities incl. unknown
2014	99	70	80	24	30	847	1,150	1,051
2015	338	317	204	38	43	266	1,206	868
2016	374	339	213	35	62	271	1,294	920
2017	428	415	281	45	36	18	1,223	795
2018	385	356	269	59	57	9	1,135	750
2019	408	379	269	62	55	13	1,186	778
2020	381	350	250	47	59	10	1,097	716
2021	389	355	260	57	52	17	1,130	741
2022	360	333	227	46	33	181	1,180	820
2023	353	397	237	31	23	217	1,258	905

Source: Australian Road Deaths Database – ARDD
www.bitre.gov.au/statistics/safety/fatal_road_crash_database

Australia’s willingness to pay to avoid these deaths can be estimated using the Value of a Statistical Life published by OIA.^[7] The value was estimated at \$2.4 million in October 2023, the value of 40 additional deaths would be around \$215 million to \$222 million.

Importantly, this estimate of the benefit arising from replacing 258,000 affected phones can be considered in terms of the benefit per phone per year and the benefit per phone per month – as shown in Table 15.

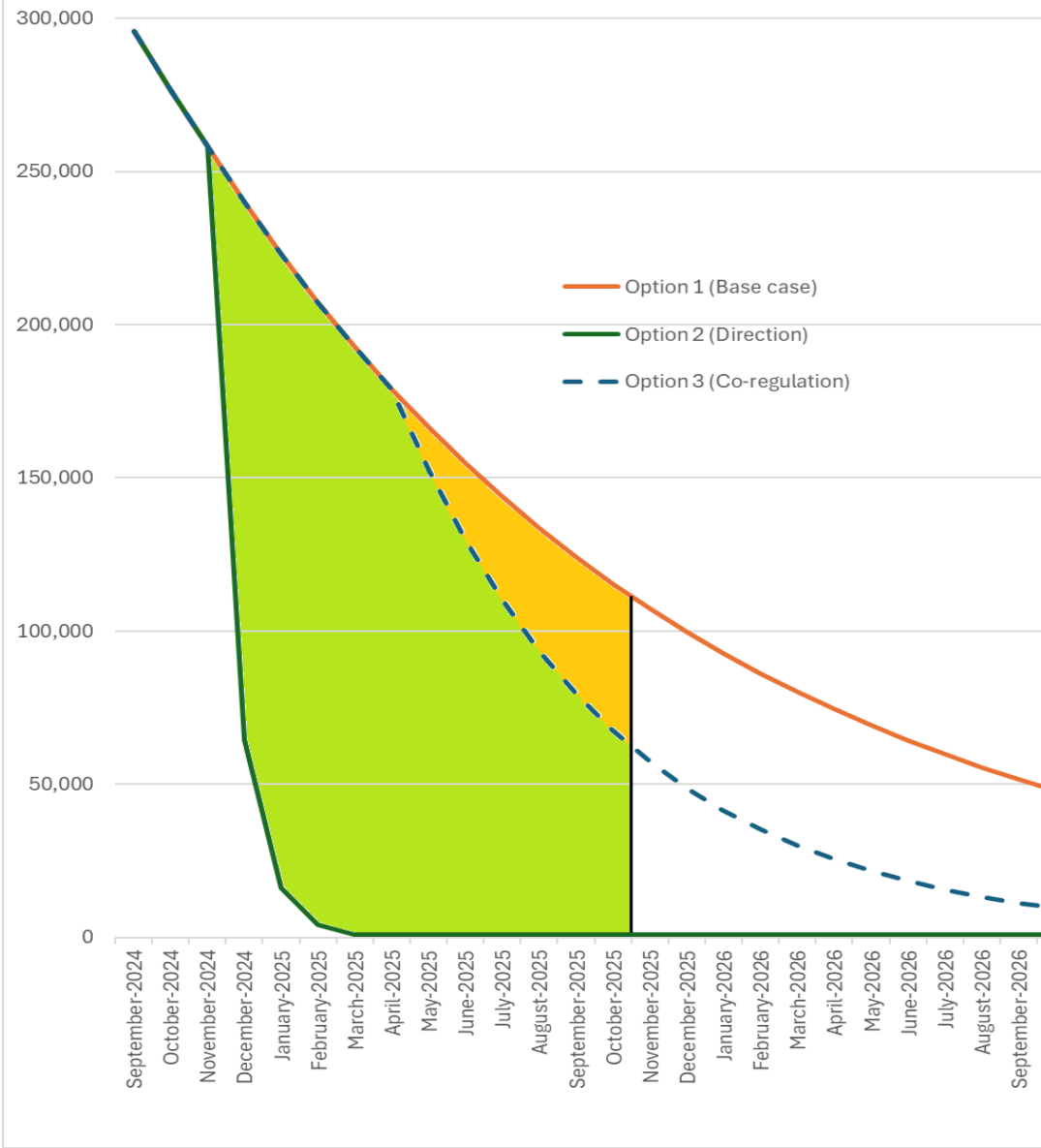
Table 15: Value of the estimated loss of life

Estimate	Number of fatalities per year	Value of lives saved per year	Benefit per phone per year	Benefit per phone per month
Low estimate	39.9	\$215,460,000	\$834.43	\$69.54
High estimate	41.2	\$222,480,000	\$861.62	\$71.80

Using the midpoint of the two estimates for the value per phone per month gives a value of \$70.67. This value is then able to be multiplied by the marginal reduction in affected phones under option 2 and option 3 compared to option 1.

The differential number of affected phones is shown in Figure 4 , below. For the first year of the interventions the differential number of affected phones is represented by the orange shaded area for Option 3, and the green and orange shaded areas for Option 2.

Figure 4: Marginal reduction in affected phones for the first year of the interventions



The total benefits for each year are shown in Table 16.

Table 16: Value of the benefits under options 2 and 3

Year	Option 2 benefit	Option 3 benefit
1	\$126,335,891	\$18,096,562
2	\$61,962,243	\$38,657,058
3	\$25,255,012	\$21,456,023
4	\$10,000,019	\$9,234,589
5	\$3,660,265	\$3,342,164
6	\$1,025,556	\$893,357
7	\$55,398	\$32,059
8	\$0	\$0
9	\$0	\$0
10	\$0	\$0

CBA results

The cost benefit analysis is considered over a ten-year period, as the impact of the affected mobile telephones are assumed to be negligible after that time. The marginal costs and benefits for both option 2 and 3 are set out in Table 17.

These use the cost and quantified benefit estimates and the predicted timing of the decline in the presence of affected phones over time for each reform option compared to option 1 (the base case).

The present value of these costs and benefits are given to allow the comparison of costs and benefits over time. A discount rate of 7% is applied for this calculation and the results are presented in 2024 values.

Table 17: Collated costs and benefits shown in 2024 values.

Year	Option 2			Option 3		
	Total benefit	Total cost	Net benefit	Total benefit	Total cost	Net benefit
1	\$126,335,891	\$147,874,818	-\$21,538,927	\$14,570,533	\$74,321,935	-\$59,751,402
2	\$61,962,243	\$581,220	\$61,381,023	\$39,608,664	\$47,073,819	-\$7,465,155
3	\$25,255,012	\$503,121	\$24,751,890	\$22,802,799	\$3,748,780	\$19,054,019
4	\$10,000,019	\$464,072	\$9,535,947	\$9,988,596	\$602,851	\$9,385,745
5	\$3,660,265	\$444,547	\$3,215,718	\$3,660,265	\$454,310	\$3,205,956
6	\$1,025,556	\$434,785	\$590,771	\$1,025,556	\$439,666	\$585,890
7	\$55,398	\$429,904	-\$374,505	\$55,398	\$432,344	-\$376,946
8	\$0	\$427,463	-\$427,463	\$0	\$428,683	-\$428,683
9	\$0	\$426,243	-\$426,243	\$0	\$426,853	-\$426,853
10	\$0	\$425,633	-\$425,633	\$0	\$425,938	-\$425,938
Present value (7%)	\$218,026,748	\$150,917,678	\$67,109,070	\$91,711,811	\$128,355,179	-\$36,643,368

Using a discount rate of 7%, the net benefits of option 2 are \$67 million – indicating that the benefits of this option are expected to outweigh the costs. In contrast, option 3 is anticipated to result in a net loss of nearly \$37 million, as the benefits are anticipated to be smaller than the costs.

While option 2 shows a net benefit, it is also important to note that there are other unquantified benefits that are expected to arise – such as a reduction in health care costs, and recovery times. Despite the limited range of benefits considered, option 2 shows a benefit cost ratio of 1.45. This indicates that for every \$1 invested, it is expected that it would generate a return of \$1.45.

Sensitivity analysis

A sensitivity analysis was undertaken testing different discount rates – as shown in Table 18 below. The analysis indicates that the results are not sensitive to alternative discount rates, within the likely range.

Table 18: Impact of altering the discount rate

	Option 2			Option 3		
Discount Rate	Total benefit	Total cost	Net benefit	Total benefit	Total cost	Net benefit
4%	\$222,170,153	\$151,323,859	\$70,846,294	\$86,633,606	\$125,615,440	-\$38,981,834
7%	\$218,026,748	\$150,917,678	\$67,109,070	\$83,219,013	\$123,777,827	-\$40,558,813
10%	\$214,218,345	\$150,582,646	\$63,635,699	\$80,096,348	\$122,094,509	-\$41,998,160

Adjusting the value of the benefits.

As set out above, the values of the benefit per phone per month was estimated to be \$70.67 – based on 1% of affected emergency calls becoming fatal. Analysis of this value indicates that option 2 delivers a net benefit if the benefit per phone per month is greater or equal to \$48.92. This indicates that the value of the benefits could reduce by 30% before altering the results. This also indicates that the results are robust the changes in the value of the benefits.

Distribution analysis

The full detail of the cost distribution is shown in Table 10 above, and the total (undiscounted) costs of option 2 are summarised in Table 19 below.

Table 19: Total (undiscounted) costs for option 2

Stakeholder group	Total costs over 10 years	Proportion of costs
Total costs to Government	\$2,857,932	2%
Total costs to industry	\$65,636,508	43%
Total costs to Customers	\$83,517,366	55%

The costs to the industry are likely to be incorporated in the charges to mobile customers, and so will be spread to all mobile telephone customers in Australia.

The costs to customers fall entirely to those with affected phones, except where financial assistance would be provided by the carriage service provider.

The benefits fall to the broader community but will be dispersed to a range of groups. As the mobile phones that are affected by the proposed reform are older and cheaper models, it appears likely that low income and vulnerable members of the community will be overrepresented in the cohort of people holding these phones.

The true beneficiaries of the reform will be people who are in need of emergency services that are contacted by the owner of an affected phone. This group will include the family and friends of the phone owner, but may also be any other member of society, where the owner of the affected phone is the first person at an accident and acts as a “good Samaritan”.

Regulatory Burden estimate

Regulatory Burden Measurement was undertaken in line with Australian Government guidance^[8] identifies the average annual change in regulatory costs is measured against status quo or 'business as usual' costs.

Regulatory Burden Measurement utilises the same information as the cost benefit analysis but focusses only on the costs that fall to businesses (including government-owned corporations), community organisations and individuals.

The costs are also treated differently as they are not discounted and focus on the costs that are additional to "business as usual" costs. For this analysis Option 1 (the base case) equates to the business-as-usual costs. The framework also excludes opportunity costs – although they do not arise in this case.

The Regulatory Burden Measurement framework includes consideration of regulatory compliance costs and provides a simple average of the costs over the first 10 years of the policy intervention.

The framework identifies administrative compliance costs, substantive compliance costs and also delay costs – although delay costs do not arise in this case.

Table 20: Average annual regulatory costs of option 2 (additional to business as usual)

Change in costs (\$ million)	Business	Community organisations	Individuals	Total change in costs
Option 2	\$6.56	\$0	\$8.35	\$14.92

The average annual impact of \$6.56 million for business arises from substantive compliance costs.

The average annual impact of \$8.35 million for individuals arises from a mix of administrative and substantive compliance costs:

- administrative costs relate to 258,000 people spending 2 hours at \$26.61 per hour understanding the requirements and spending time to select and purchase a new mobile telephone.
- substantive costs relate to 258,000 people spending an average \$250 purchasing a new mobile telephone.

^[1] Positive values here are costs and negative values are benefits, relative to the status quo.

^[2] <https://s3.treasury.qld.gov.au/files/estimating-benefits-of-regulatory-reforms.pdf>

^[3] <https://www.abs.gov.au/statistics/labour/earnings-and-working-conditions/average-weekly-earnings-australia/may-2024>

^[4] www.ambulance.vic.gov.au/wp-content/uploads/2023/11/Ambulance%20Victoria%20Annual%20Report%202022-23.pdf

^[5] <https://www.pc.gov.au/ongoing/report-on-government-services/2024/health/ambulance-services>

^[6] Regional road Code 0 incidents estimated based on <https://vahi.vic.gov.au/ambulance-services/life-threatening-incidents-priority-code-0> . Hospitalisations data from <https://www.officeofroadsafety.gov.au/data-hub/serious-injuries-data>

^[7] <https://oia.pmc.gov.au/resources/guidance-assessing-impacts/value-statistical-life>

^[8] <https://oia.pmc.gov.au/resources/guidance-assessing-impacts/regulatory-burden-measurement-framework>

Who was consulted and what did they say?

The ACMA conducted a full public consultation on the draft ECS Determination in accordance with statutory consultation obligations outlined in subsections 147(9) of the TCPSS Act. Under this subsection, before making a written Determination in relation to the provision of emergency call services, the ACMA must consult representatives of carriers; carriage service providers; recognised persons who operate an emergency call service; emergency service organisations; and consumers of standard telephone services. This process included targeted consultation with key members of industry (including carriers and CSPs), government and consumer groups to allow for a wide opportunity for affected stakeholders to give input. Key stakeholders were informed of the publication of the documents and invited to comment on the draft amendments and issues set out in a consultation paper. Public consultation commenced on 24 September 2024, and closed on 8 October 2024.

Section 147(9A) of the TCPSS Act requires the ACMA to consult with the Secretary of the Department of Infrastructure, Transport, Regional Development, Communications and the Arts prior to amending the ECS Determination. The ACMA wrote to the Secretary on 25 September 2024 inviting comments on the public consultation paper and amending instrument. A submission to the consultation was made by the Department's Acting First Assistant Secretary, on 8 October 2024, and raised minor concerns that some of the wording of the draft instrument was not strictly within the terms of the Direction.

The public consultation paper included 24 targeted questions to help inform the ACMA's consideration of the best regulatory option and regulatory amendments to be made.

Summary of stakeholder feedback

The ACMA received forty-four submissions from consumer and industry representatives, government organisations, and members of the public.¹⁷ Stakeholders included:

Consumer group

- Australian Communications Consumer Action Network (ACCAN)

Industry

- TPG Telecom
- Telstra
- Optus
- Woolworths Group
- Medion Australia Pty Ltd
- Numobile
- More Telecom
- Tangerine
- Vocus Group
- Symbio
- Communications Alliance

¹⁷ Proposal to amend the ECS Determination | ACMA

Government

- Department of Infrastructure, Transport, Regional Development, Communications and the Arts
- Telecommunications Industry Ombudsman
- Generally, industry supported the intended objective of the amendments, being that consumers are not left with a mobile phone that cannot connect to Triple Zero. However, a number of concerns were raised about technical and other limitations that would prevent industry from being able to comply with the Determination. Carriage Service Providers were particularly concerned that meeting obligations under the amended Determination would largely be dependent upon getting information from their carriers, which also would mean updating their IT systems to receive that type of information in real-time. The large majority of industry showed a preference to block voice service only and allow data and SMS use to continue.

Individual members of the public were largely opposed to the amendments, with particular concern about disconnection of all services (including non-voice services) to a phone deemed incompatible. Specific issues raised include:

- Mobile phones are used as data only devices by individuals and business alike. The proposed amendments will impact users who have no expectation of using the device to make emergency calls. For example, a courier delivery service that uses phones to scan parcels for delivery. These businesses may not be able to update and integrate new devices prior to the commencement of 2024 Christmas rush.
- People use devices for data only or for secondary uses and they will be disconnected.
- Vulnerable end-users such as people with disability and pensioners will encounter affordability issues with phone replacement – raising concerns that the low cost or no cost phones may not be comparable devices.
- Environmental concerns regarding e-waste following mass disposal of incompatible devices.
- There may be a conflict of interest in having carriers determine which devices need to be blocked, since they stand to benefit from selling replacement devices.
- There needs to be an ‘opt out’ of the blocking of all services, where end-users can acknowledge that their phone cannot make emergency calls and that they have made other arrangements for emergency situations.
- Stopping service to devices being used by vulnerable users (domestic and family violence, financial hardship) will eliminate their access to vital support services.
- CSPs must be prevented from blanket bans on certain handset models without proper investigation.
- Devices that are 4G/5G that currently work and can make VoLTE calls and Emergency Calls may be at risk of being captured under the proposed changes.

The Telecommunications Industry Ombudsman raised concerns that the current instrument only offers assistance to financially vulnerable customers and does not take account of other types of vulnerable customers, for example, those that are unfamiliar with high tech, the elderly, or people with disability. In addition, it was reported through the TIO’s submission to this consultation that the TIO has received complaints that show a level of general confusion among some consumers about which mobile phones are compatible with voice calling on 4G networks.¹⁸

ACCAN raised concerns about the impact of the draft amendments on consumers, in particular vulnerable customers. Specifically, it suggested that:

Figure 5:

¹⁸ Proposal to amend the ECS Determination | ACMA

- provisions be included to ensure that consumers do not suffer from a lack of connectivity while their devices are being replaced or upgraded.
- the provision about payment assistance policy be amended so that providers must give customers experiencing financial hardship a no cost mobile, as opposed to a merely optional provision to give assistance to obtain a low or no cost phone.
- a 'stop the clock' provision be inserted to support consumers in the process of replacing their current mobile phone, allowing for administrative factors, personal factors, postage and activation.

How these submissions were/were not adopted

The ACMA is limited in the amendments that it can make to the ECS Determination and is bound by the terms of the Direction imposed by the Minister. Based on submissions received, any amendments that were deemed to have merit and could be made within the terms of the Direction were incorporated for consideration by the ACMA Authority.

The issues raised in submissions, along with editorial feedback from all submissions, have been considered in shaping the approach to finalise the Determination.

The following table lists the common themes of the submissions that were raised by carriers and CSPs, and whether the ACMA was able to incorporate these concerns in the amendment instrument within the terms of the Direction:

Theme	Explanation	ACMA response
Point at which telcos know they are dealing with an 'affected' mobile phone.	<p>In the timeframe, telcos can only identify affected devices by their Type Allocation Codes (TAC) when they try to connect to the network, not at point of sale of the service.</p> <p>This poses challenges for having different requirements for 'existing customers using affected devices' versus 'new customers proposing to use affected devices', as anticipated by the Direction.</p> <p>Telcos have no capacity in the timeframe, and there is questionable value, in having telcos amend their sales processes to check what device a customer intends to use to obtain their carriage service and stopping it before it begins.</p> <p>Suggested the method of TAC blocking is better for customers because they do not need to reactivate their service by contacting their CSP - they can just put their SIM into a</p>	The ACMA is considering how this can be incorporated into amendments within the Direction terms.

Theme	Explanation	ACMA response
	compatible device, and it will work.	
Which devices get blocked by each carrier	Each carrier does its own testing of devices that it sells. Each carrier therefore has their own blacklist, which they propose to use to determine what to block from day 1.	This can be addressed within terms of direction.
Some preference for only blocking voice and allowing data and SMS use to continue.	<p>Not permissible under terms of the Direction – must not provide carriage services.</p> <p>Likely impact on some businesses who use mobile phones for non-voice activity e.g. scanners where those devices may be caught and will be denied service according to the terms of the determination. Size of that issue is not able to be quantified.</p> <p>Vulnerable consumers – family violence affected, disabled, financial hardship will have access to all forms of communications disabled. Consumers will not be able to use apps etc to contact family or support services.</p>	<p>Cannot address within terms of the direction.</p> <p>Potential for complaints from consumers, including businesses who will need to upgrade devices that were never intended to be used for voice calling.</p>
Concern that consumers being told devices are 'affected' that are not.	<p>A number of submissions from individuals who say they are confident that certain groups of devices will work post shutdown, but the checkers indicate they will not.</p> <p>No way to determine how credible those assertions are noting there is no</p> <ol style="list-style-type: none"> 1. No way a consumer can test it at the moment as there are 3G networks still in operation. 2. It is possible some consumers have individually retrofitted or configured their phones such that they might 	Carriers and CSPs will need to rely on disabling carriage services for specific models of devices, and making allowance for individual devices would not be technical possibly given the TAC blocking proposed to be undertaken by mobile carriers to block carriage services.

Theme	Explanation	ACMA response
	<p>work post-shutdown, albeit the device would not have 'factory settings' configuration.</p>	
<p>Difference in what CSPs can know at a point in time, versus carrier.</p>	<p>Carriers will have the data on what device is trying to connect to the network but not necessarily hold the customer relationship, this will be the responsibility of the carriage service provider that the customer belongs to.</p> <p>CSPs will be dependent upon getting info from their carrier to be able to meet their obligations under the determination.</p> <p>CSP IT changes to support receipt of this info must inevitably follow carrier IT changes to collect and be able to send relevant information.</p>	<p>ACMA considering how relationship between carrier and CSP may be reflected in the Determination.</p>

What is the best option from those considered and how will it be implemented?

Option 1 – Status quo

This is the least preferred option to achieve the policy objective. Customers that have a mobile phone that cannot make an emergency call are unlikely to be adequately notified or assisted to replace their mobile phone with a mobile phone that will enable emergency calls to be made, resulting in significant risk to the Australian community. To the extent that risk manifests, there is an increased likelihood it disproportionately impacts vulnerable customers (particularly those from lower socio-economic backgrounds or on lower incomes) who are less likely to have a newer mobile phone, or to have the financial capability to replace their existing mobile phone with a mobile phone that is able to make emergency calls.

Relying on mobile carriers and CSPs to manage these issues is not considered appropriate, given the high threat to life and property where an end user is unable to make an emergency call. The Australian community reasonably expects that there will be consumer safeguards in place that protect and ensure, to the extent possible, reliable access to emergency services. While the Australian Government protects access to emergency calling through the ECS Determination, the upcoming closure of 3G networks has identified new issues that require further government intervention to protect the community.

Under the Status Quo option, there would be no regulatory requirements to protect the Australian community from mobile phones that cannot make emergency calls. No compliance requirements or enforcement options would apply, which we do not consider this would meet community expectations for ensuring emergency calls are available to all end users.

The status quo would also not satisfy the Ministerial direction, leaving the ACMA non-compliant.

Option 2 – Direct Regulation – Implementing the Direction (amend the ECS Determination)

Amending the ECS Determination is the best option with the highest net benefit of the options considered and is consistent with the Ministerial Direction. This option most effectively and efficiently addresses the identified deficiencies with access to Triple Zero for consumers with mobile phones that are not configured to make emergency calls. It requires that providers appropriately prioritise the identification of mobile devices that are not configured to make emergency calls, notify customers of this risk, and provides reasonable actions to assist consumers to obtain a low cost or free mobile phone that is configured to make emergency calls, prior to disabling services to phones that are not so configured.

The net benefit of this option is estimated at \$67.11 million.

Clear and directly enforceable obligations incentivise compliance, and reduces instances where consumers are unable to access Triple Zero. They also promote consistent practices, enabling the ACMA to monitor and enforce compliance more efficiently. While this might also be the case for Option 3, an industry guideline under Option 3 would be voluntary for

carriers and CSPs to follow, so would not be expected to assist customers to transition to new devices capable of making emergency calls as quickly, reducing the benefits to end-users and increasing the risk of death. An industry code under Option 3 while mandatory, would encourage consistent practices, but would also not be implemented for at least several months after 3G networks shutdown so will also have marginal effectiveness and increased risk.

This option will be implemented through amendments made to the ECS Determination to give effect to the Ministerial Direction made by the Minister for Communications.

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The final decision point under this option will be made by the ACMA at an Authority Meeting scheduled for late October 2024. If the Authority approves this option, the *Telecommunications (Emergency Call Service) Amendment Determination 2024 (No. 1)* will be registered on the Federal Register of Legislation and be made available at www.legislation.gov.au

There are risks to the implementation of this option. However, these risks are outweighed by the overall benefits of the option. Procedurally, the approval and registration of regulatory instruments is a standard process for the ACMA. In the circumstances, given the unusually limited time available to design and consult on the draft instrument, there is an inherent risk that this could result in an unworkable or poorly drafted instrument that does not meet stakeholder needs or expectations, and is not in line with the objectives of the Direction. This risk has been mitigated via engagement with stakeholders before, during and after the formal consultation period to understand the challenges and test ideas.

Implementation of the practical requirements, such as to identify mobile phones not configured to make emergency calls, notification to customers, provision of advice and financial assistance for customers suffering financial hardship to obtain a low cost or free mobile phone, and disabling of services where necessary will be undertaken by providers.

There is high risk that providers are not adequately prepared to meet the new regulatory requirements given the short timeframe for commencement of the requirements on 1 November 2024 to coincide with the expected closure of the Telstra and Optus 3G networks at the end of October 2024. However, given the significant risk posed to the loss of life when customers are unaware that their mobile device cannot make an emergency call, a swift implementation of these regulatory requirements is required to protect the Australian community.

CSPs that resell mobile network services from the three mobile carriers (Optus, Telstra and TPG Telecom) will be reliant on carriers to undertake some of the analysis of devices using the network, and carriers and CSPs will need to establish arrangements for information sharing about customers with mobile phones that are not configured to make an emergency call. It will then be up to each CSP to meet their responsibilities to notify and manage subsequent processes with end users.

Key milestones to implement Option 2 are:

- Tuesday 8 October – public consultation closes (feedback considered, ACMA meets with stakeholders and amendments to draft regulatory instruments made).
- Tuesday 22 October – Second Pass Impact Assessment cleared by The Office of Impact Analysis.
- 23-31 October – Authority consideration of draft instrument and making amendments.
- Friday 1 November – instrument registered on Federal Register of Legislative Instruments at www.legislation.gov.au.

Option 3 – Industry self - or co-regulation

Option 3 is also not preferred given the immediacy of action required.

Providers have not commenced actions to develop an industry guideline, and a guideline would typically take at least six months to develop. Therefore, the ACMA does not consider that a guideline could be developed prior to the late October shutdown of the remaining Telstra and Optus 3G networks.

It is not possible for industry to develop and have registered an Industry Code prior to the shutdown of the remaining Telstra and Optus 3G networks in late October 2024. Under Section 118 of the Telco Act the ACMA may, by written notice, request a body or association to develop an industry code, and the body or association must be provided with at least 120 days to make that industry code. This would mean an industry code process commenced in mid-October 2024 would not be completed until mid-February 2025 at the earliest.

While an industry code is enforceable, breaches of an industry code require the ACMA to direct a carrier or CSP to comply with the code and identify further non-compliance before it can access the full range of its stronger enforcement actions. This may reduce the incentive for industry to take action on affected mobile phones and there will be a significant period within which at-risk end-users may be unaware they have an impacted phone. This would therefore pose an unacceptable risk to life and property where end users are unable to make emergency calls.

Industry self-or co-regulation would also not satisfy the Ministerial direction, leaving the ACMA non-compliant.

How will you evaluate your chosen option against the success metrics?

The ACMA will monitor and evaluate the implementation of amendments to assess whether it achieves the objectives of the Ministerial Direction. In its evaluation, the ACMA will assess the following key questions:

1. Did the amended ECS determination achieve the intended outcome?
2. What were the key activities involved in implementing the chosen option?
3. Were there any other unintended impacts on the amended ECS Determination?
4. How well was the amended ECS Determination implemented? Are there any improvements that could be made to the design or delivery of the instrument?

Intended outcome

The intended beneficiary of this policy is members of the Australian public - the policy assumes that all Australians expect that a mobile phone they use will be able to make an emergency call when required. The intended outcome therefore is for Australians with affected phones to update those phones with one that is capable of contacting Triple Zero. The key success metric of this is the replacement of 297,000 mobile phone devices that will be unable to make an emergency call once all 3G networks in Australia shutdown with ones that are capable of making emergency calls.

Key activities

The 3 key objectives of the ACMA's chosen option are to identify, notify customers, and cease carriage services to mobile phones unable to make emergency calls. To measure these the ACMA will evaluate key metrics relating to the number of mobile phones identified, the number of phones disabled, and the number currently subject to notification processes.

The key metrics that will be evaluated include:

- the number of mobile phones that have been identified as not capable of making an emergency call.
- the number of mobile phone end users that have replaced their mobile phone with a capable mobile phone within the notification period specified in the revised ECS Determination.
- the number of mobile phone services that have been disabled due to end users not responding to, or not taking action to obtain a capable mobile phone.
- the number of mobile phones currently identified that are unable to make an emergency call and are currently subject to identification/notification procedures in the ECS Determination.
- the number of customers that have utilised assistance under the providers payment assistance policy to obtain a free or low-cost capable mobile phone as a replacement.

Unintended impacts

The ACMA will request information from providers about any difficulties that may be experienced with identifying mobile phones that may not have a capability to make emergency calls, to ascertain if there are improvements in processes, information sharing or regulatory arrangements that may assist to meet the policy objectives.

The ACMA will undertake desktop audits to check that providers have updated their payment assistance policies for customers to receive assistance to obtain a low cost or no cost mobile replacement phone that can make emergency calls. The ACMA will consider appropriate compliance action where these policies have not been updated.

How well the amended ECS Determination was implemented

This will be the subject of ongoing evaluation and monitoring through a combination of a measurement of success of reaching the intended outcome and unintended impacts.

The above program of work will be undertaken by the Telecommunications Safeguards and Numbering Branch of the ACMA within existing resource allocations. The ACMA will work with industry to receive reporting against key metrics at intervals of 2 months, 6 months, and 12 months post-implementation. We anticipate major providers will provide relevant information voluntarily, but the ACMA can rely on formal powers in the Telecommunications Act to require providers to give information and data if necessary.

Abbreviations and acronyms

3G	Third generation of mobile telecommunications standards / networks
4G	Fourth generation of mobile telecommunications standards / networks
5G	Fifth generation of mobile telecommunications standards / networks
ACMA	Australian Communications and Media Authority
AMTA	Australian Mobile Telecommunications Association
Carrier	Mobile Carrier or Mobile Network Operator
Comms Alliance	Communications Alliance
CSP	Carriage Service Provider
Department	Department of Infrastructure, Transport, Regional Development, Communications and the Arts
Direction	The Australian Communications and Media Authority (Emergency Call Service Determination) Direction 2024
ECP	Emergency Call Person: The <i>Telecommunications (Emergency Call Person) Determination 1999</i> specifies Telstra as the current emergency call person for Triple Zero (000) and 112, and Australian Communication Exchange Ltd as the current emergency call person for 106.
ECS	Emergency Call Service: As defined in the <i>Telecommunications Act 1997</i> . 'Service for receiving and handling calls to an emergency service number and transferring such calls to an emergency service organisation (police, fire or ambulance) in life threatening or time-critical situations.'
ECS Determination	<i>Telecommunications (Emergency Call Service) Determination 2019</i>
ECSR Code	C536:2020 Emergency Call Service Requirements Code
ESO	Emergency Service Organisation: Police, Fire or Ambulance
LSS	Limited Service State
MNO	Major Network Operator (otherwise known as Carrier)
Telco Act	<i>Telecommunications Act 1997</i>
TCPSS Act	<i>Telecommunications (Consumer Protection and Service Standards) 1999</i>
TIO	Telecommunications Industry Ombudsman
TLN	Telecommunications (Labelling Notice for Customer Equipment and Customer Cabling) Instrument 2015

VoLTE

Voice over Long Term Evolution - Protocol for transmitting voice over data networks.
