



**NSW Government
Submission to the Review
of the National Triple Zero
Operator**

Question 1: Community expectations

It is commonly accepted that the community expects the Triple Zero service to be contactable anytime, anywhere, easily, quickly and free of charge.

Are these your expectations of the Triple Zero service now and into the future? Are your expectations currently being met? Why or why not?

NSW strongly agrees that callers need an emergency call service that is “contactable anytime, anywhere, easily, quickly and free of charge”.

It must be very reliable and have the capacity to cope with peak events that generate a sharp rise in the number of emergency calls to be managed.

The consistent challenge to NSW emergency response agencies is the expectation from the general public; especially those who call Triple Zero on Smartphones, that responders will know where they are.

The NSW Police Force (NSWPF) and NSW Ambulance have implemented redundancy arrangements and routing capability to engage several communication centres to ensure that the community is provided with the fastest most effective response.

Triple Zero calls are managed using a virtual queuing arrangement. For example, calls are presented at a local centre for one second and then if no agents are available, the call is automatically routed and answered at one of the three other centres.

NSW agencies have undertaken significant advancements in Call Taker training and education on geographic knowledge to ensure calls are answered seamlessly and transparently in terms of the general public expectations of local knowledge and timeliness.

NSW Ambulance for example, has an expectation of answering all Triple Zero calls 90% of the time within 10 seconds and answers on average 2200 Triple Zero calls per day.

NSW agencies work to ensure the Triple Zero service is the quickest way for emergency services to help the community, however some aspects of current and future expectations are not met:

- The future Triple Zero service must be well publicised, which is currently not the case. All Australian residents and visitors need to know the correct number to call when they encounter an emergency. Rapidly changing technology means better quality information is available to better service the community and meet the community's expectation. Failing to deliver on community expectations, remaining reactive, and falling behind international best practice, will affect public trust in Emergency Service Operators and the Government
- NSW SES is not currently incorporated into Triple Zero, leading to delays in activation of rescue resources especially in flood rescues. The inclusion of NSW SES into the next generation triple zero systems will shorten activation times
- The Emergency Call Service (ECS) is currently a voice only service, disadvantaging those not able to use voice. The ability to relay data or video is a growing community expectation during a critical incident. Triple Zero should be available on any device via any means to improve community outcomes

Two key components are identified in the National Emergency Management Program (NEMP) funded project (*The Development of Emergency Communications Services (Triple Zero) Policy, Framework, and Standards to Address Current and Future Community Expectations*) Strategy Document to be considered by the Australia New Zealand Emergency Management Committee (ANZEMC) and possibly the Law, Crime and

Community Safety Council (LCCSC). This 'NEMP funded project' is based on the community expectation and technology advancements are the key drivers to enhance the ECS.

These components that need to be met to address the challenges arising from these changing community expectations are:

- Ensuring the availability of the Triple Zero service so any person in Australia requiring emergency assistance can use “any device, anywhere, anytime” to contact emergency services thereby delivering improved community outcomes from current state
- Delivering three strategic pillars being: (1) a multi channel approach, (2) interoperable systems and adequate technology and (3) an agile operating model

The NSW RFS currently relies primarily on the receipt of Triple Zero calls through the Fire & Rescue NSW Communication Centres from the National Triple Zero Service provider.

On some occasions, location information is obtained either through the Call Line Identification (CLI) data supplied by Telstra when a person calls from a fixed landline or by the person having a good understanding of how to describe their location. Increasingly there are many occasions, as use of mobile phones to call emergency call centres increases, where accurate details of the caller's location is not available or easily describable. Of the calls made to Triple Zero in NSW, 65% are made from mobile phones.

In 2009 the NSW Coroner returned his finding and made recommendations in relation to the death of a young man. The Coroner's recommendations included the convening of a cross service working party in NSW which, among other things, examined the issue of the need to improve the mobile phone location information (MoLI).

Question 2: Challenges facing the Triple Zero service

Ongoing changes in the communications landscape, and certain expectations in the community regarding the nature of the service, present challenges for the Triple Zero service. These challenges include locating callers, the quality and prioritisation of VoIP calls, extreme call volumes during disasters and non-emergency calls.

What are your views on these challenges and what further steps could be taken to address them? What other challenges need to be considered?

NSW believes the significant challenges facing the emergency services sector are:

- The ongoing presence of other nations' emergency numbers on Australian media, including in movies and TV series

It serves little purpose investing in the best possible technology, functionality and reliability if the public does not know which number to call in an emergency. Approaches by Emergency Services to media outlets encouraging them to publicise Australia's national emergency number during programs that mention another nation's number have generally not been supported.

Consideration should be given to whether the next Triple Zero Operator should fund the development and delivery of promotional and awareness programs that keep Triple Zero 'front of mind' for the Australian community, as a critical public service.

There is clear evidence that the community wants to relay data during a critical incident. Emergency incidents and disasters in other countries, such as the Virginia Tech shootings in 2007, the shootings in Norway in 2011, and Hurricane Sandy in 2012 have shown the

critical importance and community reliance on alternative communication channels (e.g. SMS, social media). A service delivery model that meets the challenge of emerging technological change must be a dynamic, coordinated engagement model that elicits collaboration and innovation.

- Locating callers

With the significant increase in mobile calls to the ECS, the location of caller is not automatically provided to an Emergency Service Organisation (ESO), creating a delay in response.

The NSWPF and NSW Ambulance have adopted the “pull MoLI” process to interrogate a telecommunication network and is geared to move to the “push MoLI” later in 2014, following implementation by Telstra. NSW ESOs have provided advice to the Australian Communications and Media Authority’s (ACMA) Emergency Call Service Advisory Committee (ECSAC) indicating its support for location information (MoLI) to be provided from the handset, giving a more accurate location than the current “pull” or “push” MoLI. NSW would therefore support the implementation of location information provided by the GPS coordinates from the handset. (NSWPF played a key role in the development of the Emergency+ App that allows the caller to easily access the GPS coordinates of their handset and provide these to an ESO).

This process is only a part solution, as this data is only a triangulation of cell towers for the individual mobile phone which may only result in a location in an area of some distance. This would be problematic in a location with only one tower in a rural area. A further enhancement that would resolve the problem would be the ability for the ESO to access the GPS coordinates of a phone which would then allow an exact location of the phone. Whilst location details for “smart phones” can be verbalised if a person calling knows how to access the details and can tell the Triple Zero operator, these same details may not be available if the person does not know how to verbalise a GPS coordinate or is unable to verbalise due to injury or has a language barrier.

- The quality and prioritisation of VoIP calls

NSW has previously raised concerns relating to Voice over Internet Protocol (VoIP) services through ECSAC. These include: that these calls do not have the location or address details of the caller, the CLI details being generally of the service provider or ISP who will be located elsewhere; the failure of Carriers to adopt the number range initially provided to them, which would have assisted ESOs in identifying VoIP calls; the high number of hoax calls received through these services due to the difficulty in identifying who the caller is and their location; and the failure on the part of interconnecting service providers to assist law enforcement in identifying offenders who use services such as Skype to make hoax calls to the ECS. NSW supports the strengthening of regulation to govern VoIP services, to reduce the impact of hoax and unwarranted calls of which they receive a significant number.

For example, between 1 July 2013 and 30 April 2014, NSW Ambulance received 258 non genuine calls from one VoIP telephone number. On many occasions an ambulance responded only to be called off once the call was identified as non-genuine. NSW Ambulance is unable to follow up on these calls and together with NSWPF have been unable to mount any prosecution as the ISP is located off shore. These calls obviously divert call taker time and could have dire consequences if a patient’s condition deteriorates waiting for an ambulance that is responding to a non genuine VoIP call.

Carriers need to ensure they reinforce the correct and legal use of these devices with customers and warn against misuse. Carriers need to improve the location details of the actual phone to enable NSW ESOs to not only locate the device, but to undertake prosecution when the devices are misused.

- Extreme call volumes during disasters

NSW ESOs have surge capacity to handle a large volume of calls and responses in an emergency. All agencies have invested in technology and training to achieve capability to deal with extreme call volumes. NSW is supportive of the approach to promote alternate contact numbers and the use of social media and websites to provide information. NSW ESOs has recorded a 'Recorded Voice Announcement' for Telstra to utilise in high call volume incidents. Further development of the Emergency+ App could support further work in this area to promote alternate contact points.

In addition, within the CAD operating environment, when the level of Grade of Service for inbound calls drops for a period of time, an operational decision can be made to shorten the call length of inbound Triple Zero calls, so that only vital information is obtained from callers before moving onto the next call. This process is called "urgent disconnect" and would be used in an avalanche scenario.

- Non-emergency calls and alternatives to triple zero

The NSWPF promotes 131444 as the alternate to Triple Zero. This promotion has been successful in diverting calls away from Triple Zero. Non-emergency calls to Triple Zero do impede responding to genuine callers. The NSW ESOs are members of the Triple Zero Awareness Working Group, whose aim to promote Triple Zero. This group though is a volunteer group without any promotional funding.

NSW Ambulance has available the 131 233 number to receive non-emergency bookings and has implemented an Inter CAD Emergency Messaging System with the NSWPF and NSW Fire & Rescue so that calls to alert the other services and request assistance are now undertaken by messaging data directly into each services CAD system.

NSW supports an outcome of the review to include a formal, on-going and funded promotion strategy.

Question 3: Other ways of requesting emergency assistance

The only way of contacting Triple Zero is with a voice call and this is likely to remain the primary way of requesting emergency assistance. However, people use a range of other ways to communicate, including SMS, email, instant messaging, video calls and social media.

In addition to voice calls, is it desirable to have other ways of requesting emergency assistance? If so, what ways and what challenges do you foresee?

Technology is providing the impetus to expand Triple Zero beyond the current voice-only service, and there is a community expectation that emergency assistance can be requested in other ways. With this rapidly changing technology environment there is a need for the Emergency Call Person (ECP) and the ESOs to investigate and be prepared for alternate methods of contact.

NSW ESOs are aware of devices such as those introduced by Ford Australia and BMW Australia that automatically alert emergency services to motor vehicle accidents with or without the need for voice contact. These devices can simply send through a GPS coordinate and thus expect a response. The NECWG-A/NZ has, in the past 18 months,

worked closely with Ford and BMW to enable the introduction of their telematics products into the ECS network. This innovation will improve the safety of vehicle owners and assist ESOs in providing an enhanced response.

This innovation, whilst sound in its theory, does have challenges for emergency services due to the lack of data about the incident, including whether people are injured, how many people are involved or any environmental hazards that need to be considered by the responding crews. Other devices that are on the horizon that don't require voice communications are those that monitor someone's health, such as a cardiac monitor. In the future these devices may be able to alert emergency services when someone's heart rate and rhythm are in an unhealthy state and automatically send a response request to the ESO that includes the GPS coordinates of the person.

The Triple Zero operator must be ready to accommodate and make use of new technologies, even if they are used by only a small percentage of the community and promotion of these advances by the Operator must be a fundamental responsibility.

It will be important to have some form of feedback to the caller when other channels are used to contact ESO. This must be real time and be resilient in all circumstances. The system that is considered for any future Triple Zero environment must have an ability to prioritise emergency calls through all channels during times of congestion and when the system is degraded due to emergencies.

Any future model must include the ability to recognise new technologies, adopt new approaches to their use, and innovative solutions to the challenges posed by them. Failure to do so risks losing the public's confidence in the Triple Zero system. It also increases the risk to public safety.

The following points have been extracted from the NEMP funded project report lead by the NSWPF, to highlight the case for change:

- Improvements in mobile and digital technologies mean that for many customers, capturing and transmitting text, images, video and data are common practices and with this comes the expectation that businesses and government services keep pace
- High reliance on voice limits access to emergency services in certain situations. There are many situations where members of the community are unable to use voice, reverting to other means to contact emergency services. For example, during the Virginia Tech University shooting in 2007, dozens of students and staff attempted to send texts to 911 trying to get help, however this capability was not available. In these types of situations transmitting text, images or video would expedite ESO response and increase public safety, in addition to providing evidentiary and other information needs
- Today, Gen X/Y are seeking alternatives to voice communications using emerging technologies which may result in the creation of unreliable communication channels (e.g. inappropriate apps or using Facebook to ask friends to contact emergency services)
- The ECP currently lacks the required infrastructure to meet the needs of diverse community groups. Specifically, there is no capability for foreign languages nor for specific requirements of disability groups. Today, deaf or hearing impaired persons are extremely limited in accessing Triple Zero. These communities greatly benefit from the use of emerging technologies including text and image to communicate in other aspects of their lives

- The ECS has operated by relying on voice communications since its inception in 1961. In contrast, the community is increasingly using data driven emerging technologies for communication. In Australia and globally, making use of new technologies has proven vital to communication with communities during large scale natural disasters
- Technology is rapidly changing with new smart phones and tablet devices being released every year which offer increasing sophistication and capabilities. Moreover the environment of technology is changing allowing organisations to deliver more targeted digital solutions at lower costs. To adopt modern technologies, private sector and government need to have flexible platforms and mechanisms in place to allow for innovation and integration
- Current legislation and regulation have not kept pace with the proliferation of new technologies. For example, there are currently no consistent standards for VoIP and as new communication channels are introduced, consistent standards will be needed to minimise risk to emergency responders and the public
- The ECS is experiencing challenges due to the current voice only telephony and limited data channels. Today, in Australia, it is not possible to automatically identify the location of callers using mobile phones. As calls have shifted from fixed and land line sources to mobile and VoIP technologies, the ECS and emergency responders are losing visibility of caller location, inhibiting emergency response. Enabling these technologies will allow for a greater quality of information to better service the community
- A broader range of channels will increase the ability to locate callers, providing greater situational awareness, enhance reporting and evidentiary needs, ultimately saving time and cost. For example, greater information may lead to increased success of prosecutions, reduced court cost, increased intelligences for agencies and better health outcomes
- Increasing sophistication of technology gives greater access to information (big data) which may allow for better profiling of calls and prediction analytics to optimise response teams and reduce wait times

The National Emergency Communications Working Group-Australia and New Zealand (NECWG-A/NZ), of which the NSWPF is the chair and other NSW ESOs are members, has recently established a committee to explore the introduction of SMS to Triple Zero. The committee incorporates members of ESO, the three major telecommunication carriers and ACMA. Opportunities such as this should continue to be explored in the future to enhance the ECS. All NSW ESOs support this work.

While these alternate contact methods offer enhancement, they do bring with them a number of challenges. NSW acknowledges that the ECP (Telstra) lacks the required infrastructure to meet the opportunities that are available and would also acknowledge that it would have to invest in technology and training to implement such change. NECWG-A/NZ has also identified that ESOs have different technology life cycles and capabilities, which may hinder a national roll-out of alternate contact methods. The change management required to move away from a voice only ECS would need to be well coordinated.

Question 4: Improving information

It is important that emergency service organisations, as well as callers, have the information they need in an emergency. Changes in technology offer opportunities to improve the information available, however, these changes also present some challenges.

What information is essential to emergency service organisations and callers in an emergency and what information is desirable?

NSW ESOs consider two pieces of information are critical in any call: the number to call, and location of the caller.

In an emergency the public needs to know the number to call. This reinforces the need for the constant national promotion of Triple Zero as Australia's national emergency number. Callers also need to know what to expect when their calls are answered, and this needs to be part of the ongoing education of the public. Emergency Service Operators need callers' current location and to know exactly what the emergency is.

Poor location can lead to an adverse outcome and in terms of survivability from many traumatic and clinical events; seconds can matter between surviving and dying. This is no more graphically illustrated than when someone has a cardiac arrest and the only way the person will survive is by being defibrillated by a cardiac defibrillator. In this case seconds do literally count, as every second the heart is without oxygen, cardiac muscle dies and the chance of survival decreases. The easier and quicker it is for ambulance to know the location of the patient the quicker resources can be organised, the quicker the patient can be treated. A further example is flood emergencies, wherein rescue assets may not be the closest if roads are impassable so exact location becomes vital.

NSW supports the position of NECWG-A/NZ and previous responses to AMCA in regards to specific information of which the location of the caller and possible GPS coordinates are the most critical.

The TZAWG has developed a number of initiatives in partnership with the Commonwealth, which are designed to build awareness and improve the effectiveness of the public's engagement with Emergency Service Operators when reporting emergencies. These include an Emergency+ app for smartphones and a Triple Zero computer game for kids.

NSW Ambulance has a system within its dispatch process called "Recommend". Recommend will only work if the address of a location is (in what they describe) as being "geolocated". In other words a location has been interrogated by their mapping database, and they know exactly where it is.

This is the case for most fixed phone lines that have a CLI addressing details attached. For these addresses, NSW Ambulance knows within seconds of the call the exact location of the caller. Knowing this allows us to use the Recommend program, which will find the closest ambulance resource using GPS measurements of the surrounding ambulance vehicles and the GPS of the address. Ambulance vehicles can then be dispatched in many cases in less than a minute. The same should be true of mobile phones. If the GPS coordinates of a mobile phone were delivered to NSW Ambulance then Recommend would be used the same as for addresses with CLI information.

The Emergency Services Operator should embrace ways of determining the location of a caller whatever channel they use to connect. The ongoing development of new standards, policies and regulatory frameworks should support the use of new technologies to locate callers accurately during emergencies.

In respect of the other information highlighted in the discussion paper, such as video and imagery, this would be classed as 'highly desirable'. However, there may be issues with

non-clinical personnel viewing some images. Patient privacy and retention of records will also be a consideration.

Question 5: The role of the national Triple Zero operator

A tender for the national Triple Zero operator is required to be issued by June 2016. The aim of this review is to ensure that the arrangements for the national Triple Zero operator continue to support a world class Triple Zero service into the future.

What criteria should be used to determine the functions of the national operator?

As noted in the NEMP funded project, the success of the ECS can be attributed to: a national approach; one provider for Triple Zero and one provider for 106; and, a strong collaborative approach between governments, ESO, providers and carriers.

NSW ESOs are of the opinion that the future success of the ECS can be guaranteed by enhancing this national collaborative approach.

The Commonwealth Government along with all other levels of government, should commit to the philosophy that a fully functional emergency number and call-taking capability underpin a safe society, and as such, all telecommunications carriers (who profit from the community) should facilitate such a service as a “public good”.

The operator must:

- Have a contractual requirement and associated appropriate funding to develop awareness programs and initiatives
- Have physical and geographical redundancies that provide the highest standard of resilience to the network, including surge capacity
- Provide priority to Triple Zero communications from all channels during periods when infrastructure is compromised due to emergencies
- Always prioritise emergency calls when the system is congested or degraded due to high demand
- Provide a framework to support the secure, robust and resilient next generation system architecture
- Explore the potential of new technologies and communication channels
- Maintain a ‘National approach’ as a first principle for the Triple Zero service
- Drive efficiencies in the call centre operating environment with the early adoption of technology delivering faster more effective connections with Emergency Service Operators
- Provide sufficient capability to adequately manage large surges in call volumes (by whatever means) during significant emergency events
- Ensure that the service is available, anywhere, anytime using any device;
- Provide equal access to persons with a disability
- Have the ability to investigate and prosecute misuse of the Triple Zero service by individuals and organisations

In relation to the comments in Part 4 of the discussion paper, there are no viable options being discussed in any forum that would suggest a move away from the one national provider. Whilst the paper makes note of other models, such as the United States

operation, there is some evidence (from attending the National Emergency Numbering Association (NENA) conference in June this year) that the United States model is inefficient and costly. Many Counties and States are moving to consolidate their Public Safety Answering Points (PSAPs) as a result of this inefficiency and cost.

The current ECS model is effective in the delivery of a voice only service with limited location information. The national operator should be the primary contact point, and the criteria to determine the functions of the national operator post the new tender, must include agility to meet contemporary and emerging technologies and expectations. Proposed criteria should support the vision of any person requiring emergency assistance to use any device, anywhere, anytime to connect to emergency services. Agility therefore is the key and should be built into contract arrangements.

The national operator currently filters out a significant number of contacts that are not transferred to ESOs. This approach supports ESOs in being able to dedicate resources to assisting those in critical need.

There may be scope for review of the first responders under Triple Zero to possibly include for example, the NSW SES, not just NSW F&R, Ambulance NSW or the NSWPF police. The current approach may be confusing to citizens, who contact Triple Zero for all emergencies. However, agencies such as the SES also have dedicated numbers to call for assistance.

The work undertaken by the project team supporting the NEMP funded project identified that the current funding model for the ECS is not sustainable. The current funding model does not provide appropriate drivers or incentives for the national provider to improve their service provision and/or expand their service offering. The advice provided is that it is not within the existing contract.

One of the key findings of the project was that to encourage continual innovation, a transparent and flexible funding model that incorporates blended funding streams is required. The options for future funding should be applicable to all channels that access the ECS. As the project noted:

[An] agreed funding model needs to sustain the present position and the future state, factoring in items such as research and development (R&D) and promotion ensuring the financial model incorporates blended funding streams enabling flexibility between operating and capital expenditure which encourages innovation. A blended model may include contributions from end users, grants, ESOs and industry levy's.

As discussed in the NECWG project consideration should be given to governance arrangements which stated “*The gap in the current ECS environment is the lack of a multi-jurisdictional body that provides ongoing governance to the operating capability to a trusted system and service excellence*”.

The project suggested the following:

- Establish a multi-jurisdictional body that will provide overarching governance to drive consistency in action. Local state and territory leaders will retain primary responsibility for deployment and configuration of Next Generation 000 (NG000) and governance to provide technical and operational expertise with support from commonwealth. The multi-jurisdictional body will be connected to but independent of legislators and regulators
- Develop a business case to establish this body leveraging existing capability and alliances through the National Emergency Communications Working Group (NECWG-ANZ) and the ECSAC

- Ensure the long term governance arrangements require minimal resource overheads to be contributed to the multi-jurisdictional body with membership at appropriately senior level

In terms of funding the project suggested the following:

- Ensure the financial model demonstrates equity and transparency; an agreed funding model needs to sustain the present position and the future state, factoring in items such as research and development (R&D) and promotion. Identify the links to state communication strategy projects and gain agreement at the individual state level
- Ensure the financial model incorporates blended funding streams enabling flexibility between operating and capital expenditure which encourages innovation. A blended model may include contributions from end users, grants, ESOs and industry levy's

The industry levy should be expanded to include all providers of services that enable contact with Triple Zero to contribute to an industry levy, which may also include mobile handset sellers.

Question 6: The role of telecommunications providers

Telecommunications providers have regulatory obligations in relation to Triple Zero, recognising their importance in the delivery of the service. However, it is important to consider whether the regulatory framework remains appropriate given changes in technology and the telecommunications industry, the likely direction of the Triple Zero service, and the Government's commitment to reduce the regulatory burden on industry.

Is the current regulatory and funding framework for the Triple Zero service appropriate now and for the future? If not, what changes should be made and why?

The Department welcomes information from the telecommunications industry, when responding to this question, on how much it costs industry to meet the existing regulatory requirements in relation to the Triple Zero service.

NSW believes that the current approach of including the telecommunication providers in the maintenance and development of the Triple Zero service is effective. This must be supported and has the potential to be enhanced so that the early adoption of technologies can be supported.

Appropriate funding must be available for the ongoing national promotion of Australia's emergency call number and service. Telecommunication providers should be obliged to support the promotion of the Triple Zero service as a public good.

Telecommunication providers must be part of the funding model that sustains the operation of the Triple Zero service into the future. This should include a role in research and development to see the continual improvement of the service.

NSW ESOs are of the opinion that the Telecommunications (Emergency Call Service) Determination 2009 provides adequate governance of the ECS. NSW has previously made submission to the ACMA on changes to the Determination to align the document with current requirements. Some refinement to reflect current capability and a more agile approach to address changing needs in the future is required to ensure it meets the future state of the ECS. An effective governance process will need to be implemented to ensure the Determination is contemporary and reflects the changing technology and community expectation environment.

NSW would support any enhancement to the Integrated Public Number Database (IPND) and has made a previous submission to the review of the IPND. The IPND is a crucial component of the ECS. In any consideration of the telecommunications providers, it should be mandatory that CLI details are correct and that a continual audit and review of these details occur.

A further consideration for the providers is what responsibility they will have if and when new methods of communications to the ECP are implemented for example, texting. Lessons can be learnt from our American colleagues who are discussing this very issue. In December 2012, the United States Federal Communications Commission (FCC) released a proposal to “require all wireless carriers and providers of ‘interconnected’ text messaging applications to support the ability of consumers to send text messages to 9-1-1 in all areas throughout the nation where 9-1-1 Public Safety Answering Points (PSAPs) are also prepared to receive the texts.” The proposal also contained a provision to require carriers “to send automated ‘bounce back’ error messages to consumers attempting to text 9-1-1 when the service is not available.” The proposed FCC rules were based, in part, on a voluntary commitment made by telecommunication providers to offer “text to 9-1-1” services nationwide by 15 May 2014. These carriers also voluntarily agreed to provide automatic “bounce back” notifications when text to 9-1-1 service was not available.

Therefore whilst new innovation is very welcome, the carriers in Australia must shoulder responsibility to ensure reliability of the any new system or device and must ensure full and proper risk assessment have occurred prior to implementation. Lessons can and should be learnt from overseas experience.

Question 7: The role of innovators

Innovative ideas to improve emergency assistance may come from a range of parties such as app developers, device and car manufacturers, research organisations, community service providers and individuals.

What sorts of innovations would most improve the Triple Zero service? How can innovation and third party innovators be supported while ensuring the reliability and integrity of service?

NSW believes that essential modern government services must innovate to remain relevant. For the Triple Zero service to retain public confidence, it must continue to improve and innovate to meet the community’s expectation.

One of the first considerations for innovation is related to the use of an ECP, dealing with questions such as whether technology is available that may improve that service or whether there is there potential for the consolidation of a National Network of emergency call taking centres located in each State or Territory.

There is potential to develop new approaches to technological change that meets important governance standards while, at the same time, supporting agile and innovative environments that produce leading edge solutions to emerging challenges in the Triple Zero service operating environment.

While an agile innovative environment should be supported, an adherence to maintain first principles for the service needs to be preserved. An emergency being reported is the nexus of the service and the most effective, timely process that delivers this should be foremost in the Triple Zero operator’s goals.

The NEMP funded project identifies a number of key innovative strategies that would improve the ECS and community outcomes. Termed Next Generation Triple Zero (NG000),

the report recommends a multi-channel approach through an agile operating model. This can be achieved through an engagement strategy that includes Government, ESOs, community representatives, carriers, vendors and industry all support the vision of NG000 supported through a dynamic, coordinated engagement plan which elicits collaboration and innovation.

The strategy document identified that NG000 must be supported by a robust standards and policy framework, and recommended leveraging NENA and the European Emergency Number Association (EENA) systems architecture and technical requirements in platform design work to achieve this. Both organisations have agreed to provide their standards and frameworks.

NSW supports this approach. Evidence of this currently occurs through the ECSAC and the NECWG-A/NZ. As an example, NECWG-A/NZ has formed a committee that encompasses ESOs, telecommunication carriers and ACMA to address SMS to Triple Zero.

Providing advice and not sending a resource has obvious savings. NSW Ambulance, for example, triages all Triple Zero calls via a program called Medical Priority Dispatch (<http://www.prioritydispatch.net/about>). This system allows NSW Ambulance to quickly sort Triple Zero calls into life threatening, immediate but not life threatening, immediate, within a specified time frame, and those calls that could be referred to a nurse for advice. Any innovation that allows calls to be better and more rapidly triaged into these categories would be welcome.

In terms of the triage process, NSW Ambulance will have to adapt to calls for assistance that do not arrive by voice and how these calls are managed. For example calls that arrive by text will still have to be triaged. There are a number of questions asked to triage the calls into the categories described above. The first question of course is the location followed by other questions about what has happened, details about the patient and the illness or injury and then there is a range of advice we give to callers about treatment such as how to perform CPR or how to assist a mother and/or bystanders with a child birth. This is all given very easily at present by voice, but will be a challenge if only texting is available. Priority Dispatch, the providers of the Medical Priority Dispatch System, have developed an addition to their system that would support this process, however it does not relay the information to NSW Ambulance.

There are other innovations that may impact on long term Triple Zero capability. Devices such as ones that monitor blood pressure and blood glucose levels could in the future be configured to trigger a Triple Zero response for a person with life threatening indicators.

There are also other devices on the market such as Carealert Smart Dialler that automatically dial preprogrammed numbers from a home address if a person wants assistance. These pre-programmed numbers include the ability to dial Triple Zero.

Many of these calls, once responded to, are found to be false alarms and waste time and money. There is nothing stopping these devices being expanded to mobile phones and the same false alarms will occur. Therefore innovators need to consider the ESO in the design of any device to ensure that false alarms are avoided.

Question 8: Cooperation and decision-making

There are a range of parties with interests and responsibilities in relation to Triple Zero. It is important that there are effective cooperation and decision-making arrangements in place amongst these parties so that the service can continue to adapt and respond to issues as they arise in the future.

What things do the current cooperation and decision-making arrangements for Triple Zero do well? What things do they not do well? What changes are needed so the service can better adapt and respond to issues in the future?

NSW believes that the collaborative arrangements in place for established work groups, where Emergency Services, Government agencies and industry partners are represented, have proven successful in delivering positive outcomes for the Triple Zero service. Submissions for grants and in-kind support from member agencies have enabled the development of highly successful initiatives largely through the willingness of Telstra to collaborate. NSW recommends that this responsibility sit with – and be funded by – telecommunications service providers as a whole.

The NSW SES is not part of the Triple Zero system in NSW but is an interested party with significant rescue responsibilities. Current cooperation works well but would be enhanced by inclusion in the next generation system and will work with the NECWG-ANZ to further improve arrangements.

The content of Part 4.4 Cooperation and decision-making component in the discussion papers contains appropriate comment. The current governance of the ECS works well due to the collaborative and cooperative nature of key stakeholders though would be classed as “loose”. At times it takes some time for change/improvement to occur as a result.

NSW supports any formal enhancement to the governance arrangement and would be prepared, and is keen, to be involved in any national governance body.

GLOSSARY:

ACMA:	Australian Communications and Media Authority's
ANZEMC:	Australia New Zealand Emergency Management Committee
CLI:	Caller Line Identity
ECP:	Emergency Call Person
ECS:	The Emergency Call Service
ECSAC:	Emergency Call Service Advisory Committee
EENA:	European Emergency Number Association
ESO:	Emergency Service Organisation
Fire & Rescue NSW:	Fire and Rescue New South Wales
GPS:	Global Positioning System
IPND:	Integrated Public Number Database
LCCSC:	Law, Crime and Community Safety Council
NECWG-A/NZ:	National Emergency Communications Working Group-Australia and New Zealand (NSWPF is the chair)
NEMP:	National Emergency Management Program
NEMP funded project:	<i>The Development of Emergency Communications Services (Triple Zero) Policy, Framework, and Standards to Address Current and Future Community Expectations'</i> Strategy Document
NENA:	National Emergency Numbering Association
NG000:	Next Generation Triple Zero
NSWPF:	New South Wales Police Force
NSW SES:	New South Wales State Emergency Service
PSAPs:	Public Safety Answering Points
NSW RFS:	New South Wales Rural Fire Service
The Determination:	Telecommunications (Emergency Call Service) Determination 2009
TZAWG:	Triple Zero Awareness working group
VoIP:	Voice over Internet Protocol
106:	Secondary emergency call number connecting to a text-based relay service through a TTY (also known as a teletypewriter or textphone) for people who have a hearing or speech impairment.
112:	Secondary emergency call number available from all GSM or GSM derived mobile phones.