



**Telecom Notice of Consultation
CRTC 2016-116**

***Establishment of a regulatory framework for
Next-Generation 9-1-1 in Canada***

**Intervention of the
National Pensioners Federation (NPF)
Council of Senior Citizens' Organizations of B.C. (COSCO)
&
Public Interest Advocacy Centre (PIAC)**

20 May 2016

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Executive Summary

1. The National Pensioners Federation (NPF), Council of Senior Citizens' Organizations of B.C. (COSCO) and Public Interest Advocacy Centre (PIAC) – together “NPF-COSCO-PIAC” – are pleased to provide the Commission with their comments on Telecom Notice of Consultation CRTC 2016-116, *Establishment of a regulatory framework for next-generation 9-1-1 in Canada*. NPF-COSCO-PIAC request to appear at the public hearing scheduled to commence on 16 January 2017.
2. The public safety of Canadians is critical and requires collaboration among public and private stakeholders. NPF-COSCO-PIAC believe the transition to an NG9-1-1 network presents many opportunities, including the ability to meet consumer expectations of 9-1-1 emergency services based on their current use of communications services, including video calls, SMS and IM.
3. Transitioning to an NG9-1-1 network is also an opportunity to ensure that 9-1-1 emergency services are delivered in an equitable and transparent manner on a national basis, and that they are funded accordingly. NPF-COSCO-PIAC respond to the Commission's individual questions in considering a regulatory framework for Next-Generation 9-1-1 by focusing on three overarching positions.
4. **Canada should transition towards one nationally administrated NG9-1-1 telecommunications network.** The current 9-1-1 network, which is managed by multiple ILECs and accessed by CLECs and other TSPs, is neither efficient nor transparent.
5. **Funding of the NG9-1-1 network should be financed from contributions made from all TSPs and administered on a national level.** The way in which current 9-1-1 funds are collected and allocated tends to be opaque and inequitable. A national 9-1-1 fund financed by contributions from TSPs and which publishes annual budgets and reports would be the most efficient, effective and accountable way of funding an NG9-1-1 network.

6. **Strong privacy rules governing an NG9-1-1 network must be established – including opt-in mechanisms and restrictions on sharing of personal information.** The network must strictly safeguard the privacy of individuals communicating with 9-1-1 services—any personal information collected must be used and disclosed solely for the purpose of the emergency call, and stored for future purposes only with the express consent of the caller. At no time should the personal information be used or disclosed by or to third parties. The Commission should also impose strict privacy security requirements, giving consideration to privacy breach notification regimes in place in Canada and other jurisdictions.

7. Finally, there must be regular reporting on aspects of the 9-1-1 and incoming NG9-1-1 network which are not present today—including general, high-level national 9-1-1 statistics (geographic areas with access to NG9-1-1, number of 9-1-1 calls, types of calls, etc.); reliability and maintenance of the 9-1-1 network; and costs and funding. The research and reporting should be primarily undertaken by the national 9-1-1 administrator.

Glossary of Abbreviations

CLEC	Competitive Local Exchange Carrier
CMR	<i>Communications Monitoring Report</i>
E9-1-1	Enhanced 9-1-1
ESInet	Emergency Services IP Network
ESWG	Emergency Services Working Group
FCC	U.S. Federal Communications Commission
ILEC	Incumbent Local Exchange Carrier
IM	Instant Messaging
IoT	Internet of Things
NG9-1-1	Next-Generation 9-1-1
PIPEDA	<i>Personal Information Protection and Electronic Documents Act</i>
PSAP	Public Safety Answering Point
T9-1-1	Text with 9-1-1
TFOPA	FCC Task Force on Optimal PSAP Architecture
TSP	Telecommunications Service Provider
VoIP	Voice Over Internet Protocol

WSP Wireless Service Provider

1. Introduction

1. The National Pensioners Federation (NPF), Council of Senior Citizens' Organizations of B.C. (COSCO) and Public Interest Advocacy Centre (PIAC) – together “**NPF-COSCO-PIAC**” – are pleased to provide the Commission with their comments on Telecom Notice of Consultation CRTC 2016-116, *Establishment of a regulatory framework for next-generation 9-1-1 in Canada*. NPF-COSCO-PIAC request to appear at the public hearing scheduled to commence on 16 January 2017.
2. NPF-COSCO-PIAC intervene in telecommunications proceedings on behalf of Canadian consumers, including the senior Canadians represented by NPF and COSCO, and the public interest at large. NPF-COSCO-PIAC advocate for equitable access, choice and affordability of telecom services, as well as for public interest goals such as public safety, transparency, and accountability of telecommunications service providers.
3. PIAC has regularly intervened in proceedings related to 9-1-1 emergency services, emphasizing public safety, reliability of the 9-1-1 network, and transparency of funding. Effective and reliable emergency services serve the public interest, are critical to the safety of all Canadians and must be prioritized.
4. Transitioning to an NG9-1-1 network presents new opportunities for public safety protections for consumers. Weiser, Hatfield and Bernthal identified several advantages and benefits of an NG9-1-1 network, including: the ability to receive 9-1-1 calls from any device by any mode of communications; seamless transfers of information among PSAPs; faster overall response times and improvements in quality of service; and innovation and technological benefits from an “open, non-proprietary” network.¹

¹ Philip J Weiser, Dale Hatfield & Brad Bernthal, “The Future of 9-1-1: New Technologies and the Need for Reform” (2008) 6 J on Telecom&High Tech L 213 at pp 249-50.

5. While voice communication with emergency services is still relevant and beneficial, the Commission itself stated in its Notice of Consultation that “Canadians are changing the way they communicate and the telecommunications services they use. For example, they are reducing their dependency on wireline voice services in favour of mobile wireless and broadband Internet services... Wireless services are now available to 99% of Canadians, and one in five Canadian households rely solely on mobile wireless services.”²
6. It is therefore imperative that the NG9-1-1 network is funded, operated and maintained in a coordinated and transparent manner. NPF-COSCO-PIAC will respond to the Commission’s individual questions in considering a regulatory framework for Next-Generation 9-1-1 by focusing on three overarching positions:
7. **Canada should transition towards one nationally administrated NG9-1-1 telecommunications network.** The current 9-1-1 network, which is managed by multiple ILECs and accessed by CLECs and other TSPs, is neither efficient nor transparent.
8. **Funding of the NG9-1-1 network should be financed from contributions made from all TSPs and administered on a national level.** The way in which current 9-1-1 funds are collected and allocated tends to be opaque and inequitable. Only wireline telephone customers see specific 9-1-1 charges on their bills, and the ways in which 9-1-1 funds are allocated by ILECs are undisclosed. A national 9-1-1 fund financed by contributions from TSPs and which publishes annual budgets and reports would be the most efficient and effective way of funding an NG9-1-1 network.
9. **Strong privacy rules governing an NG9-1-1 network must be established – including opt-in mechanisms and restrictions on sharing of personal information.** While an NG9-1-1 network may allow Canadians to share more information and data, including photos, videos and electronic records, the

² Telecom Notice of Consultation CRTC 2016-116 at para 25.

Commission must ensure that Canadians' privacy rights are protected. Notably, express consent should be required for any retention, use or disclosure of data obtained from 9-1-1 correspondence for future emergency calls. Furthermore, use or disclosure of personal information by or to third parties for any other purpose should be prohibited.

10. NPF-COSCO-PIAC are pleased to answer in detail the relevant Commission questions below.

2. NG9-1-1 Services (Q1-Q2)

2.1 *Methods of communication and information to support*

11. NPF-COSCO-PIAC's general view is that the NG9-1-1 network should support the methods of communications and information which consumers regularly use and generally expect to be available.

12. The Commission's *Communications Monitoring Report* has noted that more Canadian households now subscribe to wireless telephone service only than wireline service only,³ but the CMR also shows that more Canadians are also subscribing to mobile broadband ("data") plans in particular. In fact, 66% of Canadian households now have a smartphone⁴ and the number of mobile broadband subscribers grew by 13.5% from 13.2 million to 19.3 million between 2011 and 2014 only,⁵ meaning more Canadians are also browsing the Internet and accessing online applications over their mobile phones and tablets. The CMR also reports that Canadian wireless subscribers send about 510 million SMS and MMS messages per day.⁶

³ CRTC, *Communications Monitoring Report* (October 2015), online: <http://www.crtc.gc.ca/eng/publications/reports/PolicyMonitoring/2015/cmr.pdf> at p 9.

⁴ *Ibid*, Figure 5.5.9.

⁵ *Ibid*, Table 5.5.11.

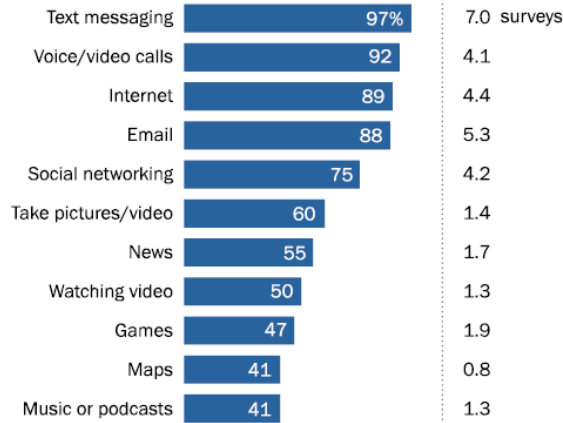
⁶ *Ibid*, Table 5.5.4.

13. A 2015 report⁷ by the Pew Research Center in the U.S. also found that the top features used by American smartphone owners in one week were: text messaging (97%), voice or video calls (92%), using the Internet (89%) and accessing e-mail (88%).

Text Messaging, Voice/Video Calls, Internet, Email Rank Among Most Popular Smartphone Features

% of smartphone owners who used the following features on their phone at least once over the course of 14 surveys spanning a one-week period

Average number of surveys (max 14) in which they reported using these features



Pew Research Center American Trends Panel experience sampling survey, November 10-16 2014.

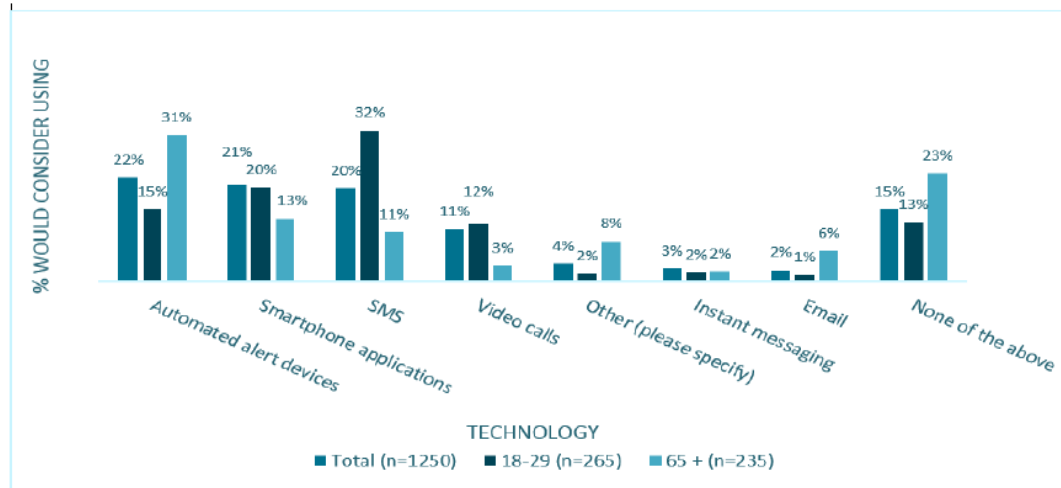
Respondents were contacted twice a day over the course of one week (14 total surveys) and asked how they had used their phone in the preceding hour (besides completing the survey). Only those respondents who completed 10 or more surveys over the course of the study period are included in this analysis.

PEW RESEARCH CENTER

Source: Pew Research Center (2015)

⁷ Pew Research Center, *U.S. Smartphone Use in 2015* (April 2015), online: <<http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/>> at p 33.

14. The Australian Government’s recent review of the national Triple Zero (000) operator also found strong interest for alternative ways of contacting emergency services, although respondents still largely preferred voice calls.⁸



Source: Department of Communications Review of National Triple Zero Operator (2015)

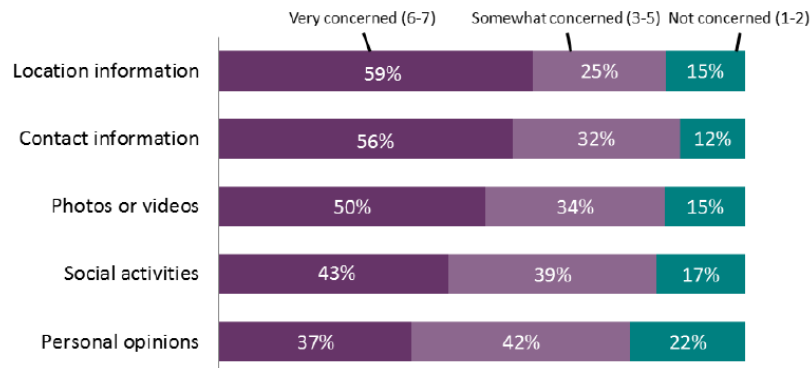
15. NPF-COSCO-PIAC note that younger respondents tended to have much higher preferences for other methods of communicating with emergency services, notably via SMS and smartphone applications.
16. Therefore, NPF-COSCO-PIAC believe an NG9-1-1 network should generally have the capability to support the types of features and applications widely used by consumers – including text messaging, instant messaging and video calls – made over Canadian networks. At this time, NPF-COSCO-PIAC submit that Commission should focus first on video calls and then SMS and instant messaging. In NPF-COSCO-PIAC’s view, video calls would be the most accessible to all consumers, including consumers with disabilities and those who

⁸ Australian Government Department of Communications, *Review of the National Triple Zero (000) Operator* (August 2015), online: Communications.gov.au <<https://www.communications.gov.au/publications/review-national-triple-zero-000-operator>> at paras 6-8.

are hard-of-hearing or deaf in particular. Text and instant messages should also be supported but should at this time focus on hard-of-hearing or deaf persons.

17. While the NG9-1-1 network could be designed to support social media forms of communication, for privacy reasons NPF-COSCO-PIAC submit that social media platforms should not be used to communicate with emergency services. Communications and posts made on these platforms are typically considered public rather than private communications, and are also difficult to verify. This is particularly concerning where communications, such as for emergency services, may involve extremely sensitive information. The Office of the Privacy Commissioner of Canada’s 2014 survey of Canadians found, for instance, that 84% of respondents were concerned about posting their location information online, 88% their contact information, and 84% photos or videos.⁹

Concern about Posting Personal Information Online



Q: Many Internet services, such as social media sites, blogs, or websites, allow people to post information about themselves. How concerned are you about posting the following types of personal information online?

Phoenix SPI for OPC; November 2014

Base: Internet users; n=1,272
Not applicable removed; DK: 1% or less

Source: Office of the Privacy Commissioner of Canada (2014)

⁹ Office of the Privacy Commissioner of Canada, *2014 Survey of Canadians on Privacy* (December 2014), online: <https://www.priv.gc.ca/information/por-rop/2015/por_2014_12_e.asp>, Figure 22.

18. Furthermore, although the Canadian Privacy Commissioner has, to a certain extent, jurisdiction over online services, there still remain significant privacy issues, particularly in regards to data which may pass through foreign jurisdictions.
19. Therefore, while emergency responders may be free to respond to communications they may become aware of on social media platforms, NPF-COSCO-PIAC believe that specific calls to emergency services should continue to be made to a specific number or application (such as 9-1-1) via secure, private connections.
20. Finally, while telematics and the IoT devices could be supported by an NG9-1-1 network, it is important that these communications are only enabled by opt-in consent from the consumers.

2.2 *Time frame*

21. In NPF-COSCO-PIAC's view, the short-term priority is to ensure that emergency services are accessible to all Canadians—including ensuring that hard-of-hearing and deaf Canadians in particular are able to access and use Text with 9-1-1 services effectively—across the country. This goal should be achieved as soon as is possible.
22. Subsequently, NPF-COSCO-PIAC believe the NG9-1-1 regulatory framework should focus on enabling video calls and SMS and IM messaging with the 9-1-1 service. These forms of communication must be private, secure and reliable. Therefore, the determined time frame should take these elements into account, whether the Commission decides it be short-term or mid-term.

3. NG9-1-1 Architecture and Responsibilities (Q3-Q5)

23. In NPF-COSCO-PIAC's view, Canada should migrate towards one national NG9-1-1 network with one centralized administrator. The current series of interconnected networks is inefficient and difficult to coordinate. Furthermore, any new WSP or VoIP provider is required to ensure it has the contracts in place, at times with several ILECs, in order to properly route 9-1-1 calls.
24. The most recent practices and research published thus far have tended to focus on NG9-1-1 networks which are operated on national or regional bases distinct from the call delivery function carried out by TSPs. The European Union has funded projects such as the NEXt generation Emergency Services (NEXES) and GERYON projects in order to develop IP Multimedia Subsystem inter-networking emergency service platforms.¹⁰
25. The most recent FCC Task Force on Optimal PSAP Architecture's (TFOPA) 2016 report¹¹ envisions the "NG9-1-1 Core Services" on the ESInet to be centralized and distinct from the "originating point" (via a telecommunications service) of 9-1-1 emergency communications. In fact, the report notes that with an NG9-1-1 network, 9-1-1 calls can be made not merely from voice telephony but through various forms of communication from a number of originating points. The originating point of emergency calls or requests would no longer necessarily be based on a type of service provider but on an "Originating Service Environment" as a whole.¹²

¹⁰ See: NEXt generation Emergency Services, "The NEXES Concept," online: Nexes.eu <<http://nexas.eu/the-nexas-concept/>> (accessed 17 May 2016); GERYON Next Generation Technology Independent Interoperability of Emergency Services, "Project Details," online: SEC-GERYON.eu <<http://www.sec-geryon.eu/Project.html>> (accessed 17 May 2016); and European Commission Horizon 2020, "Emergency: I'm sure you're all receiving me!" (2015), online: EC.Europa.eu <<https://ec.europa.eu/programmes/horizon2020/en/news/emergency-i%E2%80%99m-sure-you%E2%80%99re-all-receiving-me>>.

¹¹ Federal Communications Commission Task Force on Optimal PSAP Architecture, *Final Report* (2016), DA-16-179, online: FCC.gov <https://apps.fcc.gov/edocs_public/attachmatch/DA-16-179A2.pdf>.

¹² *Ibid* at p 23.



NG9-1-1 Roles and Relationships

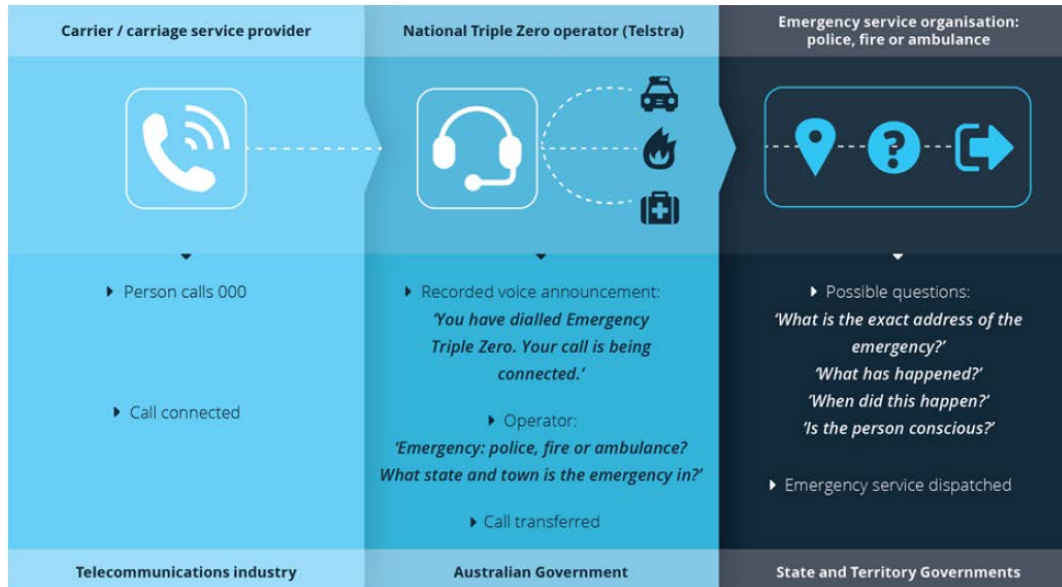


Source: FCC TFOPA Report, Figures 3-2 and 3-3 (2016)

26. Weiser, Hatfield and Bernthal too, although having focused more on state-wide or regional networks in 2008, conceptualized a unified NG9-1-1 network separate from the “call delivery” function carried out by TSPs because the network would allow the delivery 9-1-1 communications to originate from any device as well as the transfer of information between PSAPs.¹³

¹³ Philip J Weiser, Dale Hatfield & Brad Bernthal, “The Future of 9-1-1: New Technologies and the Need for Reform” (2008) 6 J on Telecom&High Tech L 213 at pp 248-9.

27. Australian emergency services already use a national 000 operator managed by the Australian government and operated by Telstra which transfers calls to the appropriate local emergency service organization call centres (police, fire or ambulance).¹⁴



Source: Department of Communications Review of National Triple Zero Operator Discussion Paper (2014)

28. In Canada, it would likely be unrealistic to maintain an entirely distinct NG9-1-1 network separate from the current ILEC-based 9-1-1 networks. NPF-COSCO-PIAC surmise that the NG9-1-1 network will to a large extent utilize ILEC

¹⁴ Australian Government Department of Communications, *Review of the National Triple Zero (000) Operator* (August 2015), online: Communications.gov.au <<https://www.communications.gov.au/publications/review-national-triple-zero-000-operator>> at pp 15-6; and Australian Government Department of Communications, *Review of the National Triple Zero (000) Operator: Discussion Paper* (July 2014), online: Communications.gov.au <<https://www.communications.gov.au/have-your-say/triple-zero-000-review>> at p 7.

operated IP-based networks. This is also important to take into account as the Commission considers broadband deployment in rural and remote Canadian communities—ensuring that the development of an NG9-1-1 network forms part of this deployment.

29. However, NPF-COSCO-PIAC do believe the Commission may consider where feasible that the NG9-1-1 network need not be restricted to ILEC networks only but be relatively technologically neutral.
30. Moreover, the current framework, in which ILECs collect 9-1-1 fees and are individually responsible for maintaining their 9-1-1 networks is neither efficient nor transparent. A national network with a national administrator can implement national standards and direct funding to ILECs or other TSPs for those areas the administrator deems requires maintenance or upgrades. The national administrator could also coordinate with the federal and local governments in order to ensure that NG9-1-1 services are delivered in an efficient and reliable manner.
31. Therefore, although an NG9-1-1 network may utilize infrastructure deployed and owned by ILECs or other TSPs, it would be more appropriate to create a national 9-1-1 administrator which would manage and allocate funding for the operation of the network.

4. Transition Steps and Timelines (Q6-Q8)

4.1 Transition steps

32. NPF-COSCO-PIAC reserve the right to further address the issue of implementation as more information, particularly regarding the installation of NG9-1-1 network components, is provided on the public record.

33. Generally, NPF-COSCO-PIAC believe that PSAPs should be transitioned to the new NG9-1-1 network as it is deployed while maintaining the legacy network until reliable emergency services are accessible to all telecommunications customers.
34. NPF-COSCO-PIAC note the high-level transition plan proposed by TELUS in its response to the Commission's request for information,¹⁵ and generally agree with that proposal at this time. Next-generation infrastructure would continue to be implemented while maintaining the legacy 9-1-1 network relied on by PSAPs. Eventually, most of the routing will have been transitioned to the NG network, allowing legacy-reliant PSAPs to be able to access the NG9-1-1 network until all PSAPs are next-generation enabled.
35. NPF-COSCO-PIAC highlight that at no point should any Canadian subscriber to a communications service not have access to reliable 9-1-1 emergency services, even through the legacy network if required.
36. NPF-COSCO-PIAC also note that the NG9-1-1 transition will also to a large extent depend on the availability of NG infrastructure to Canadian households, particularly in rural and remote areas. Therefore, the Commission should also take NG9-1-1 emergency services into account as it makes its determinations in the Basic Telecommunications Service proceeding.

4.2 Follow-up Commission proceedings

37. NPF-COSCO-PIAC stress that the reliability of the NG9-1-1 network as well as NG9-1-1 features and applications must be paramount. Therefore, similar to the implementation of T9-1-1 service, NPF-COSCO-PIAC expect that the Commission (or by direction, the ESWG) publicly publish transparent reports on the efficiency and reliability of new NG9-1-1 features as they are implemented before completing the transition.

¹⁵ See: CRTC TNC 2016-116 TELUS(CRTC)29Mar16-2.

38. Furthermore, although the Commission declined to introduce mandatory reliability and quality standards in Telecom Regulatory Policy 2016-165, NPF-COSCO-PIAC believe national, uniform standards would be appropriate in implementing a national NG9-1-1 network. This view was echoed by several parties during the TNC 2015-305 consultation.¹⁶

39. The Australian Government's recent review of the Triple Zero operator also found that:

Although alternatives to regulation should be explored, given the critical nature of the Triple Zero service, some level of regulation is likely to be required to provide minimum standards and to ensure community confidence in the Triple Zero service. As far as possible, the legislative framework should be simple, technologically neutral and objectives based to support technological innovation and introduction of new services/capabilities over time.¹⁷

40. Therefore, future follow-up proceedings could address issues such as:

- Reliability of the NG9-1-1 network and applications;
- Funding of the NG9-1-1 network; and

¹⁶ See for instance: Telecom Notice of Consultation CRTC 2015-305, Intervention of Emergency Communications for British Columbia (7 October 2015) at para 20; Telecom Notice of Consultation CRTC 2015-305, Intervention of Shaw Telecom G.P. (7 October 2015) at para 5; and Telecom Notice of Consultation CRTC 2015-305, Intervention of MTS Inc. (7 October 2015) at para 4.

¹⁷ Australian Government Department of Communications, *Review of the National Triple Zero (000) Operator* (August 2015), online: Communications.gov.au <<https://www.communications.gov.au/publications/review-national-triple-zero-000-operator>> at para 232.

- Specific privacy protections concerning the NG9-1-1 network.¹⁸

5. Funding (Q9)

41. As set out by former Commissioner Denton in his 2013 report¹⁹ for the Commission on 9-1-1 emergency services, the current 9-1-1 emergency service ecosystem is funded through several sources, often involving fees imposed on Canadian telecommunications customers. Some provinces, for instance, impose a monthly 9-1-1 levy on wireline telephone customers.²⁰ NPF-COSCO-PIAC submit that a significant level of funding must continue to be derived from various levels of government, particularly in light of the transition to an NG9-1-1 network.
42. However, the scope of this proceeding focuses only on the 9-1-1 fees collected and allocated by 9-1-1 network providers, notably the ILECs. In his report, Commissioner Denton wrote that “the costs and funding of the current system is not, so far as I can tell, tracked in a systematic way at a national level, nor is the information about funding and costs made available to the public and decision-makers in an organized fashion.”²¹ NPF-COSCO-PIAC agree.
43. Currently, only wireline telephone customers see a 9-1-1 line item charge on their monthly bills, while WSPs and other TSPs must pay ILECs a wholesale 9-1-1 subscriber fee. While these 9-1-1 funds are collected by ILECs, the ways in which they are allocated are not transparently disclosed.

¹⁸ NPF-COSCO-PIAC note that the Commission’s 2016-2019 Three-Year Plan includes plans to conduct research on privacy issues with the possibility of a subsequent public consultation. See: CRTC, *CRTC Three-Year Plan 2016-2019*, online: CRTC.gc.ca <<http://www.crtc.gc.ca/eng/backgrnd/plan2016/plan2016.htm>>.

¹⁹ Commissioner Timothy Denton, *A Report on Matters Related to Emergency 9-1-1 Services* (5 July 2013), online: CRTC.gc.ca <<http://www.crtc.gc.ca/eng/publications/reports/rp130705.pdf>> at paras 56-63.

²⁰ *Ibid* at para 63.

²¹ *Ibid* at para 57.

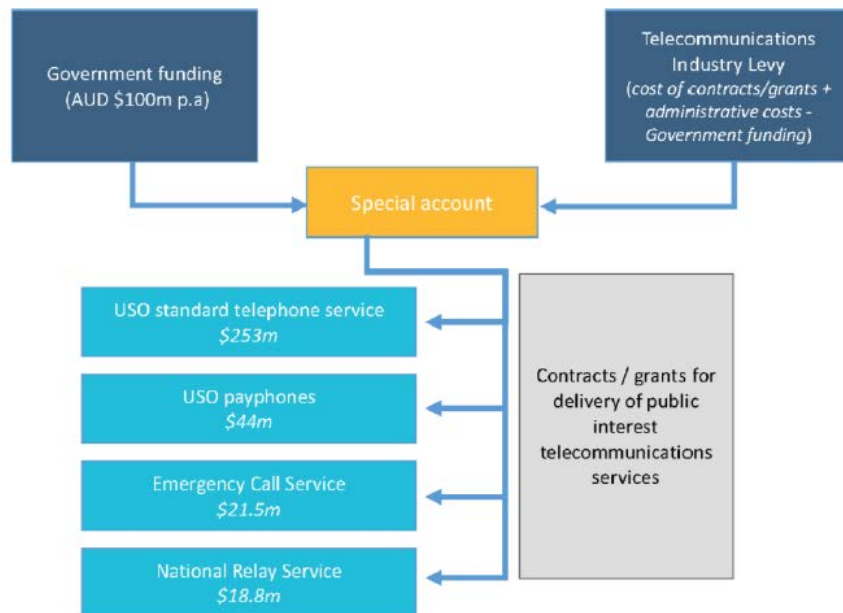
44. In NPF-COSCO-PIAC's view, the current ILEC-based mechanism of funding the 9-1-1 network is inefficient, inequitable and opaque. It is inefficient and inequitable because funding is arbitrarily divided by ILEC territory, while each ILEC territory has vastly different densities in population. This makes for some ILECs having access to a much larger amount of funding than others.
45. The FCC's TFOPA report recommended that 9-1-1 funding mechanism continue to rely on a dedicated 9-1-1 fee expressed as an "end user network connection fee" applied to each telecommunications service.²² These fees would be collected and remitted by TSPs.
46. While NPF-COSCO-PIAC would not be opposed to having the NG9-1-1 network partially funded by the telecommunications industry, the current, opaque ILEC-based funding mechanism no longer makes sense for a national connected NG9-1-1 network. Rather, NPF-COSCO-PIAC propose **one national 9-1-1 fund**, overseen by the national administrator, which would be financed by contributions from Canadian TSPs. The Commission may set thresholds for contribution, similar to that for the National Contribution Fund (NCF) or for the Commissioner for Complaints for Telecommunications Services. Like the NCF, the national administrator would determine how 9-1-1 funds would be allocated and regularly report on these contributions and allocations.
47. Weiser, Hatfield and Bernthal also recognized the value of a higher level 9-1-1 fund, particularly in transitioning to NG9-1-1:

As emphasized in Part III, achieving an enterprise approach to next generation 9-1-1 systems will require the ability to collect funds at higher level [*sic*] in order to make coordinated network design decisions, capture economies of scale, and realize purchasing power. Moreover, our research found that at least three further reasons militate in favor of this approach. In particular, higher level collection promotes: (1)

²² Federal Communications Commission Task Force on Optimal PSAP Architecture, *Final Report* (2016), DA-16-179, online: FCC.gov <https://apps.fcc.gov/edocs_public/attachmatch/DA-16-179A2.pdf> at pp 169-170.

administrative efficiency by reducing costs related to jurisdictional patchworks for service providers; (2) equitable standards of 9-1-1 services across jurisdictions; and (3) heightened accountability with respect to service provider contributions as well as usage of 9-1-1-related funds.²³

48. This type of mechanism would also mirror that already in place in Australia and which has operated efficiently thus far. There, the Department of Communications, but previously the Telecommunications Universal Service Management Agency (TUSMA), administers funding for several public interest services, including National Relay Service, payphones, and Emergency call Service.²⁴ These funds are financed in part by the Telecommunications Industry Levy imposed on TSPs with eligible revenues of \$25 million or more.²⁵



²³ Philip J Weiser, Dale Hatfield & Brad Bernthal, “The Future of 9-1-1: New Technologies and the Need for Reform” (2008) 6 J on Telecom&High Tech L 213 at p 286.

²⁴ Australian Government Department of Communications, *Review of the National Triple Zero (000) Operator* (August 2015), online: Communications.gov.au <<https://www.communications.gov.au/publications/review-national-triple-zero-000-operator>> at para 120.

²⁵ *Ibid.*

Source: Department of Communications Review of National Triple Zero Operator (2015)

49. Telstra, as the national operator of emergency call services (the “Emergency Call Person”) is presently reimbursed annually for delivering emergency services as well as other services which form part of the Universal Service Obligation.²⁶ Telstra’s reimbursement is currently capped at \$22 million per year for its operating costs, and it may apply for additional funding for any necessary upgrades. These proposals were assessed were approved by TUSMA.²⁷
50. In NPF-COSCO-PIAC’s view, a similar approach could be adopted in Canada, where 9-1-1 funds would be collected from TSPs based on service revenues and held in a centralized fund. The national administrator would determine where to allocate the funding, which need not be limited to ILECs only.
51. In the 2014-2015 year, Telstra in Australia sought a reimbursement of \$17.9 million for its emergency call service operating costs.²⁸ In the 2013-2014 year, it was also awarded about \$2.8 million for upgrades to the emergency call service.²⁹
52. In 2011, the FCC estimated that it would cost between \$1.44 billion and \$2.58 billion over ten years to transition to an NG9-1-1 network, depending on the level of PSAP consolidation.³⁰ Although there were recurring and non-recurring costs, this would be about \$144 million to \$258 million per year.

²⁶ *Ibid* at para 235.

²⁷ *Ibid* at paras 121-2.

²⁸ Telecommunications Universal Service Management Agency, *Annual Report 2014-2015* (October 2015), online: Communications.gov.au <<https://www.communications.gov.au/sites/g/files/net301/f/TUSMA%202015%20Annual%20Report%20web.pdf>> at p 19.

²⁹ Australian Government Department of Communications, *Review of the National Triple Zero (000) Operator* (August 2015), online: Communications.gov.au <<https://www.communications.gov.au/publications/review-national-triple-zero-000-operator>> at para 122.

³⁰ See: Federal Communications Commission & Public Safety and Homeland Security Bureau, *White Paper: A Next Generation 911 Cost Study: A Basis for Public Funding Essential to Bringing*

53. There has been no estimate of the cost of an NG9-1-1 transition in Canada to date and current operating costs of the 9-1-1 network are unclear. Moreover, ILEC responses to the Commission's request for information could not provide estimates of their own costs. Many PSAPs were also uncertain of the costs, with some numbers ranging from \$30,000 per year³¹ to \$1 million per year.³²
54. The Commission's Central Funds Administration's 2015 quarterly reports show that Canadian Telecommunications Service Revenues in 2015 were approximately \$45.7 billion.³³ Eliminating the explicit 9-1-1 fee system and imposing a 0.1% annual contribution would still provide about \$45.7 million per year to operate the 9-1-1 network and assist in the transition to an NG9-1-1 network – and this funding would be focused solely on the call delivery aspect of the NG9-1-1 network. In NPF-COSCO-PIAC's view, a national fund based on TSP contributions would be the most transparent and efficient means of funding a national NG9-1-1 network.

6. Confidentiality (Q10)

55. The Commission must approach the issue of consumer privacy carefully in transitioning to an NG9-1-1 network in order to ensure that personal information is not collected, used or disclosed without consent, while also balancing certain consumer expectations of information which would be automatically provided upon making a 9-1-1 call.

a Nationwide Next Generation 911 Network to America's Communications Users and First Responders (September 2011), online: <https://apps.fcc.gov/edocs_public/attachmatch/DOC-309744A1.pdf> at pp 7-9.

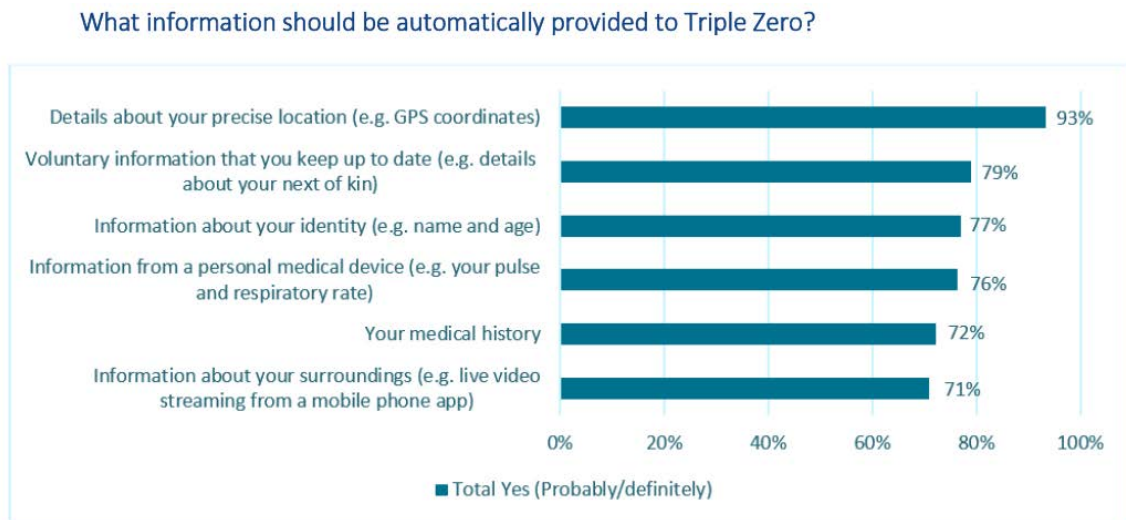
³¹ See, for instance: CRTC TNC 2016-116, Response from East Central 911 Call Answer Society, Answer to Question 8.

³² See, for instance: CRTC TNC 2016-116, Response from New Brunswick Department of Justice and Public Safety (6 May 2016), Appendix 2 at p 6.

³³ CRTC Central Funds Administration, *Quarterly Report* (December 2015), online: CRTC.gc.ca <<http://www.crtc.gc.ca/public/cisc/docs/4quarter2015.pdf>>.

6.1 *Types of information*

56. Australia's recent review of its Triple Zero operator showed that Australian consumers did expect certain information, such as identity, location, and voluntarily updated information, to be automatically provided to emergency call centres.

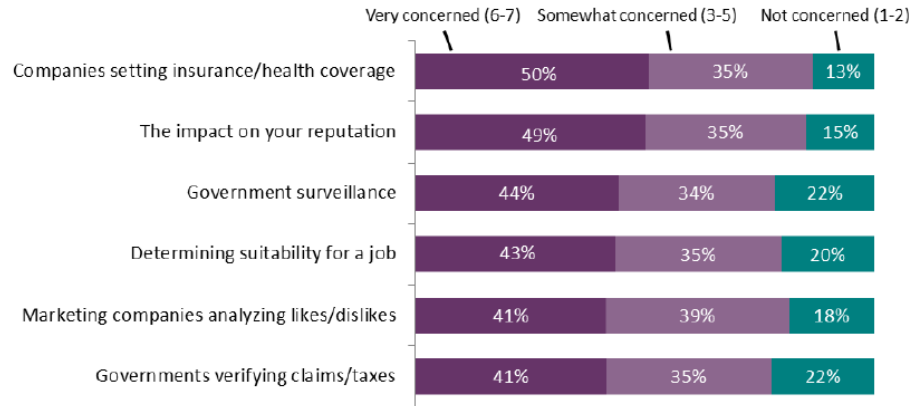


Source: *Department of Communications Review of National Triple Zero Operator (2015)*

57. At the same time, Canadians are already clearly concerned about the privacy of information they provide over the Internet—84% of Canadians are concerned about posting their location information online, 88% their contact information, and 84% photos or videos.³⁴ Furthermore, as shown below, Canadians are concerned about how their personal information could be used. Notably, respondents seemed to express the highest amount of concern about the use of their personal information by companies setting insurance or health coverage.

³⁴ Office of the Privacy Commissioner of Canada, *2014 Survey of Canadians on Privacy* (December 2014), online: <https://www.priv.gc.ca/information/por-rop/2015/por_2014_12_e.asp>, Figure 22.

Concern about How Online Personal Information Might be Used



Q: When you think about the information available about you online, please tell me how concerned you are about each of the following?

Phoenix SPI for OPC; November 2014

Base: Internet users; n=1,272
DK/NR=2%

Source: Office of the Privacy Commissioner of Canada (2014)³⁵

58. Meanwhile, the privacy rules which would apply to various types of personal information in Canada are unclear. Canadian privacy rules are currently made up of a patchwork of federal and provincial privacy legislation governing the public and private sectors each.
59. For instance, the federal *Personal Information Protection and Electronic Documents Act*³⁶ (PIPEDA) requires organizations to obtain consent from individuals for the collection, use or disclosure of their personal information.³⁷ The form of consent required depends on the sensitivity of the information—PIPEDA states that information such as “medical records and income records... is almost always considered to be sensitive.”³⁸ The Office of the Privacy Commissioner of Canada’s 2015 *Guidelines on Privacy and Online Behavioural*

³⁵ *Ibid*, Figure 24.

³⁶ *Personal Information Protection and Electronic Documents Act*, SC 2000, c 5.

³⁷ *Ibid*, Sch 1, clause 4.3.

³⁸ *Ibid*, Sch 1, clause 4.3.4.

*Advertising*³⁹ also note that opt-in consent is generally required when dealing with sensitive information. However, PIPEDA generally only applies to the private sector—to an organization which “collects, uses or discloses in the course of commercial activities,”⁴⁰ which would only partially protect the type of information provided over an NG9-1-1 network to several different parties.

60. Some legislation, notably provincial legislation, requires individual consent for the collection, use and disclosure of “personal health information”⁴¹. However, not all provinces have passed legislation governing personal health information. Moreover, these rules do not necessarily at this time include agencies such as PSAPs. The Ontario *Personal Health Information Protection Act, 2004*, for instance, only applies to the collection of personal health information by a “health information custodian”.⁴² While a “health information custodian” explicitly includes some emergency responders, such as ambulances, and could broadly include “any other person prescribed as a health information custodian if the person has custody or control of personal health information as a result of or in connection with performing prescribed powers, duties or work,”⁴³ the Act does not specify agencies operating within the 9-1-1 network, such as PSAPs or other responders.

³⁹ Office of the Privacy Commissioner of Canada, *Guidelines on Privacy and Online Behavioural Advertising* (December 2015), online: Priv.gc.ca
<https://www.priv.gc.ca/information/guide/2011/gl_ba_1112_e.asp>.

⁴⁰ *Personal Information Protection and Electronic Documents Act*, SC 2000, c 5, s 4(1).

⁴¹ The Ontario *Personal Health Information Protection Act, 2004*, SO 2004, c 3, Sch A, s 4(1) defines “**personal health information**” as identifying information about an individual in oral or recorded form, if the information,

- (a) relates to the physical or mental health of the individual, including information that consists of the health history of the individual’s family,
- (b) relates to the providing of health care to the individual, including the identification of a person as a provider of health care to the individual,
- (c) is a plan of service within the meaning of the Home Care and Community Services Act, 1994 for the individual,
- (d) relates to payments or eligibility for health care, or eligibility for coverage for health care, in respect of the individual,
- (e) relates to the donation by the individual of any body part or bodily substance of the individual or is derived from the testing or examination of any such body part or bodily substance,
- (f) is the individual’s health number, or
- (g) identifies an individual’s substitute decision-maker.

⁴² *Ibid*, s 7(1)(a).

⁴³ See: *Ibid*, ss 3(1).4(v) and 3(1).8.

61. Therefore, the present privacy rules which would apply to personal information collected, used or disclosed over the NG9-1-1 network are unclear. In NPF-COSCO-PIAC's view, the Commission should establish certain bright line privacy rules which would apply to this information.
62. NPF-COSCO-PIAC note there are many past Commission decisions that have required a higher level of privacy protection under section 7(i) of the *Telecommunications Act*,⁴⁴ which states that telecommunications policy should "contribute to the protection of the privacy of persons," than that provided by federal and provincial rules.⁴⁵

6.2 *Opt-in consent*

63. When a consumer contacts 9-1-1 emergency services, they may expect the information they provide to be collected, used and disclosed for the purpose of that call only. NPF-COSCO-PIAC believe that express consent would not be required for information such as identity, location and even medical information which may be provided over that call or request.
64. However, **opt-in consent** should be required for the collection, use and disclosure of that personal information—and often sensitive information—for future emergency service calls or communications. This could be achieved by obtaining consent from the consumer at a time after the call is made or the issue is resolved.
65. This is consistent with past Commission decisions under section 7(i) of the *Telecommunications Act*, as quoted above, all of which have required explicit consent.

⁴⁴ SC 1993, c 38.

⁴⁵ See, for instance: Telecom Decision CRTC 2003-33, as amended by 2003-33-1. The customer confidentiality provisions were revisited and affirmed in Telecom Decision CRTC 2005-15 and Telecom Decision CRTC 2006-15. See also: Telecom Regulatory Policy CRTC 2009-657, in which the Commission limited the use and disclosure of personal information collected for the purposes of Internet traffic management.

66. NPF-COSCO-PIAC is concerned that, as emergency calls are made by the same individual or household over time and particularly with an increasing amount of data which could include images and videos, 9-1-1 services could compile databases or profiles of callers. While in some cases consumers may want certain information retained for future purposes, NPF-COSCO-PIAC strongly believe that current privacy rules and the sensitivity of the information necessitate express consent from consumers in order for this information to be stored and used for future emergency service purposes.

6.3 Prohibition of non-emergency service purposes and third party use

67. It is also imperative that personal information collected, used and disclosed during NG9-1-1 communications be used *solely* for the purpose of providing and improving the delivery of emergency services. NPF-COSCO-PIAC would not be opposed, for instance, to use of the aggregated data by the central 9-1-1 administrator only for research purposes in order to improve the delivery of 9-1-1 emergency services.

68. However, the Commission should prohibit the use or disclosure of this information **for any other purpose by or to third parties**—even at an aggregated or anonymized level. A significant amount of personal information provided over NG9-1-1 communications would likely be considered sensitive information and should in no way be collected, used or disclosed by any TSP or third party.

69. NPF-COSCO-PIAC believe the privacy of a consumer who is likely in a extremely vulnerable situation must be protected.

6.4 Security safeguards

70. Finally, the NG9-1-1 network must securely protect all information provided over the network. NPF-COSCO-PIAC note that PIPEDA mandates that “more

sensitive information should be safeguarded by a higher level of protection.”⁴⁶ Due to the likely extremely sensitive nature of 9-1-1 communications, the personal information provided over these calls should be protected by significant security safeguards.

71. The Commission should have regard to various data breach notification regimes, including recent amendments to PIPEDA passed in the *Digital Privacy Act*.⁴⁷ The current Canadian Privacy Commissioner Guidelines⁴⁸, for instance, prescribe four minimum steps to responding to a privacy breach:

1. Breach containment and preliminary assessment: This includes determining the parties which would need to be notified, initiating an investigation, and assembling a breach response team.
2. Risk evaluation: This includes determining the sensitivity of any personal information involved, whether the information was encrypted or anonymized, the cause and extent of the breach, and foreseeable harm.
3. Notification: This includes notification of individuals affected, as well as the form and time of notification, and notification of other parties such as the police or Privacy Commissioner.
4. Prevention of future breaches: This could include security audits, review of policies and procedures, and review of service delivery partners.

72. These guidelines are mirrored in other jurisdictions such as Australia,⁴⁹ New Zealand⁵⁰ and Hong Kong.⁵¹

⁴⁶ *Personal Information Protection and Electronic Documents Act*, SC 2000, c 5, Sch 1, clause 4.7.2.

⁴⁷ See: *Digital Privacy Act*, SC 2015, c 32, s 10.

⁴⁸ Office of the Privacy Commissioner of Canada, *Guidelines: Key Steps for Organizations in Responding to Privacy Breaches*, online: Priv.gc.ca <https://www.priv.gc.ca/information/guide/2007/gj_070801_02_e.pdf> (accessed 20 May 2016).

⁴⁹ Office of the Australian Information Commissioner, *Data Breach Notification – A Guide to Handling Personal Information Security Breaches* (August 2014), online: OAIC.gov.au

73. The European Union's *Directive on privacy and electronic communications*⁵² and *Regulations on the measures applicable to the notification of personal data breaches*⁵³ also established privacy rules which specifically apply to organizations which provide a “publicly available electronic communications service”—in other words, telecommunications service providers. These rules require service providers to inform the national privacy authority of a breach, and to notify subscribers of a risk of a security breach with information such as the nature of the personal data concerned, the likely consequences of the breach, as well as any costs which could be involved.⁵⁴
74. NPF-COSCO-PIAC believe that similar requirements should apply to the NG9-1-1 telecommunications network.

7. Reporting and Monitoring (Q11)

75. NPF-COSCO-PIAC submit there must be regular reporting on aspects of the 9-1-1 and incoming NG9-1-1 network which are not present today, including:

<<https://www.oaic.gov.au/agencies-and-organisations/guides/data-breach-notification-a-guide-to-handling-personal-information-security-breaches>>.

⁵⁰ Privacy Commissioner, *Key Steps for Agencies in Responding to Privacy Breaches and Privacy Breach Checklist* (2008), online: Privacy.org.nz <<https://www.privacy.org.nz/news-and-publications/guidance-resources/privacy-breach-guidelines-2/>>.

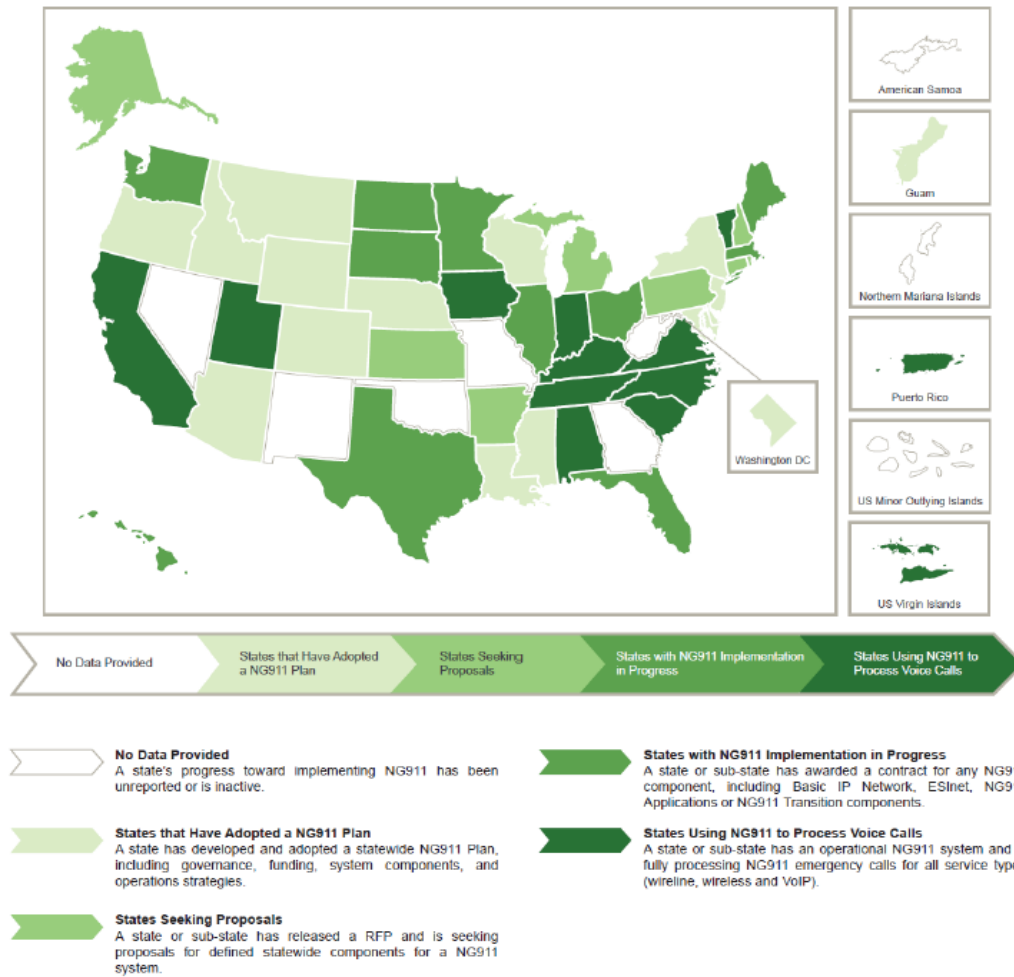
⁵¹ Office of the Privacy Commissioner for Personal Data, Hong Kong, *Guidance on Data Breach Handling and the Giving of Breach Notifications* (October 2015), online: PCPD.org.hk <https://www.pcpd.org.hk/english/resources_centre/publications/files/DataBreachHandling2015_e.pdf>.

⁵² *Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications)*, art 4.

⁵³ *Commission Regulation (EU) No 611/2013 of 24 June 2013 on the measures applicable to the notification of personal data breaches under Directive 2002/58/EC of the European Parliament and of the Council on privacy and electronic communications.*

⁵⁴ European Commission Regulation 611/2013, art 2-3.

- General high-level national statistics *e.g.* geographic areas with access to Basic 911, E911 and NG911; number of 9-1-1 calls per day/week/year; time required to process the call and dispatch responders; and types of emergency responders dispatched;
 - Reliability reports *e.g.* number of outages, duration of outages, etc.
 - Maintenance and upgrades of the network; and
 - Reports on 9-1-1 costs and funding.
76. The following graphic published by the U.S. National 911 Program, for instance, helpfully depicts the level of NG9-1-1 implementation by state.



Source: National 911 Program Review of Nationwide 911 Data Collection (2015)⁵⁵

77. In NPF-COSCO-PIAC’s view, this data should be aggregated and reported by the national 9-1-1 administrator, which can present information which would benefit the public in a transparent manner. Annual or semi-annual reports would be helpful in this respect.

⁵⁵ National 911 Program, *Review of Nationwide 911 Data Collection* (December 2015), online: <[http://www.911.gov/pdf/Review of Nationwide 911 Data Collection 2014 Report Final.pdf](http://www.911.gov/pdf/Review_of_Nationwide_911_Data_Collection_2014_Report_Final.pdf)>, Figure 4.

78. Specific to reporting on the transition to an NG9-1-1 network, NPF-COSCO-PIAC believe progress reports on the installation of NG infrastructure provided semi-annually and made publicly available by the relevant TSPs would be appropriate.

8. Conclusion

79. The public safety of Canadians is critical and requires collaboration among public and private stakeholders. NPF-COSCO-PIAC believe the transition to an NG9-1-1 network presents many opportunities, including the ability to meet consumer expectations of 9-1-1 emergency services based on their current use of communications services. However, 9-1-1 emergency services must at all times be reliable and accessible.
80. Transitioning to an NG9-1-1 network is also an opportunity to ensure that 9-1-1 emergency services are delivered in an equitable and transparent manner on a national basis, and that they are funded accordingly. NPF-COSCO-PIAC propose that an NG9-1-1 telecommunications network should be primarily national in nature with a centralized national 9-1-1 administrator which can collect and allocate 9-1-1 funding.
81. The network must also strictly safeguard the privacy of individuals communicating with 9-1-1 services—any personal information collected must be used and disclosed solely for the purpose of the emergency call, and stored for future purposes only with the express consent of the caller.
82. NPF-COSCO-PIAC believe these positions align with findings made by Weiser, Hatfield and Bernthal regarding consumer 9-1-1 expectations, namely that:
1. Consumers expect consistent 9-1-1 service across municipal, county, and state jurisdictions;
 2. Consumers expect consistent 9-1-1 service across different communications technologies; and

3. Consumers assume that virtually any technology that they utilize will allow them to contact 9-1-1.⁵⁶
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83. NPF-COSCO-PIAC are pleased to participate in this proceeding and to provide these initial recommendations.

*****End of document*****

⁵⁶ Philip J Weiser, Dale Hatfield & Brad Bernthal, “The Future of 9-1-1: New Technologies and the Need for Reform” (2008) 6 J on Telecom&High Tech L 213 at pp 281-2.