

Submission

Submission for the Consultation on the Draft Revised Guide to the National Civil Defence Emergency Management Plan 2015

11 September 2015

Guide to the National CDEM Plan 2015 Review
Ministry of Civil Defence & Emergency Management
PO Box 5010
Wellington

To the National CDEM Plan 2015 Review team,

Please accept the following letter and attachments as the McGuinness Institute's submission for the consultation on the Draft Revised Guide to the National Civil Defence Emergency Management Plan 2015.

I would appreciate the opportunity to be heard in support of this submission.

Kind regards,



Wendy McGuinness
Chief Executive

Attached:

- *Lessons From the West African Ebola Outbreak in Relation to New Zealand's Supply Chain Resilience* (also known as the *New Zealand Supply Chain Resilience Report*) (2015)
- *Managing the Business Risk of a Pandemic: Lessons from the past and a checklist for the future* (June 2006)

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About the McGuinness Institute

The McGuinness Institute was founded in 2004. The McGuinness Institute is a non-partisan think tank working towards a sustainable future, contributing strategic foresight through evidence-based research and policy analysis. *Project 2058* is the Institute's flagship project which includes a research programme that aims to explore New Zealand's long-term future. In preparing this submission the Institute draws largely on the McGuinness Institute's overarching project, *Project 2058*, and in particular our work on *Project Pandemic Management*.

Introduction

‘Being prepared’ means different things to different people. Generally preparedness is measured in terms of the length of time a citizen or community expects to survive or thrive in isolation, and in terms of whether the objective of that citizen or community is to return to the status quo (bouncing back) or advance to a better situation (bouncing forward).

This submission is broken up into two parts. Part one briefly outlines a few observations from researching and preparing the attached 2015 report *Lessons From the West African Ebola Outbreak in Relation to New Zealand’s Supply Chain Resilience*.¹ Part two is an extract from the report.

1 Co-authors of *Lessons From the West African Ebola Outbreak in Relation to New Zealand’s Supply Chain Resilience*.

Roger Dennis

Roger Dennis is an independent consultant who specialises in connecting long-term thinking with strategic opportunities. He has worked with large and small organisations around the world to help them understand how to innovate in a fast-changing world. For example, Roger was the co-leader of the Shell Technology Futures programme in 2007. This was a two-year project initiated by the Shell Game Changer team in The Hague to understand how technology would impact society over a twenty-year time frame. Roger has worked alongside the foresight teams in the Singapore Prime Minister’s office, advised corporations in a range of sectors and spearheaded globally recognised transformation programmes. He is a member of the core team of Future Agenda, the world’s largest foresight programme. Roger regularly presents at conferences around the world and in April 2015 he discussed the evolution of cities at the Nobel Laureate Symposium in Hong Kong.

Wendy McGuinness

Wendy McGuinness wrote the report *Implementation of Accrual Accounting in Government Departments* for the New Zealand Treasury in 1988. She founded McGuinness & Associates, a consultancy firm providing services to the public sector during the transition from cash to accrual accounting. From 2003–2004 she was Chair of the NZICA Sustainable Development Reporting Committee and became a fellow chartered accountant (FCA) in 2009. In 2004 she established the Institute in order to contribute to a more integrated discussion on New Zealand’s long-term future.

Rick Boven

Rick Boven is the founder of the boutique consulting firm Stakeholder Strategies. Prior to this he led the New Zealand Institute, a non-partisan think tank. Rick has been a strategic management consultant for more than 30 years and was the founding partner of the Boston Consulting Group in New Zealand. A Chartered Fellow of the Institute of Directors, Rick’s past directorships include ASB Bank and Sovereign Insurance. Rick has worked with leading companies in Australia, New Zealand and the USA in a wide range of industries including financial services, industrial distribution, energy, telecommunications, information technology, transport, manufacturing, and agriculture. He has a PhD in Environment Management from the University of Auckland, a Master of Business Administration from the Australian Graduate School of Management, and a Master of Arts (Psychology) from Victoria University of Wellington. Rick has university teaching experience in psychology, social work, research methodology, business strategy and managing change. He has publications on social welfare, mathematical psychology, educational sociology, strategic management, business ethics and economic development.

PART ONE: Observations

1.1 Informed assumptions about the future

The following are a few assumptions about the course of the future. These frame the observations we have made on the draft Guide, listed in Section 1.2 below.

- **Emotion rules.** How society as a group sees itself will be a key determinant as to how it responds to change. Equality, fairness and trust matter; an investment in societal cohesion is an investment in preparedness whereas failing to make such an investment will set back our preparedness significantly.
- **Publicity and media coverage around political radicalism and radicals' use of terror attacks is likely to increase.** Fear can significantly reduce society's ability to manage a range of risks.
- **Generating clear, consistent messages to inform 'all of society' will become steadily more difficult due to the increasing array of media and world news outlets.** With the rise of citizen journalism there is an increasing potential for a 'good story' to get in the way of the truth of a situation. Good communication is going to become increasingly challenging. Good communication must occur over a sustained period before, during and after a risk event.
- **Not one singular event risk but a number of risks.** A mix of risks, impacting on each other over time, is likely to be the new normal. We need to be prepared for a range of risks happening over the same or a similar time frame.
- **There are limits to preparedness.** A number of countries will not be able to afford to be prepared for all risks at a high level. Choices will need to be made. This is not simply about how prepared we want to be but also what risks we want to be prepared for. These decisions should not be confined to a few public servants, but deserve extensive public engagement. It is easy to believe that the public is not ready or able to discuss challenging issues but our observation is that the public cannot be left out of the decision-making process. When risks occur, it is the public, not just the public sector, which is key to preventing and managing the impact of risk events.

1.2 Observations about the Guide

It was excellent to see the focus on alignment between the *Guide*, the *National Civil Defence Emergency Management Plan* and the *Civil Defence Emergency Management Act 2002*. However, there are still some key concerns which are outlined below and in the attached 2015 report. These are:

- The *Guide* was arguably the most important document we came across, yet it was not given the prominence it deserved. It is a public sector operational document, but it should be a national document (written for business, NGOs and individuals) to enable wider engagement and understanding of expectations and processes.
- The *Guide* should set out how everything fits together, as this is not always apparent. An overarching diagram would help, as well as focussed diagrams of smaller parts – in order that readers might find the answers they need quickly.
- The *Guide* is not easy to understand from an outside perspective. This is not to say that the *Guide* is wrong, but that it could be set out in a less complicated way to make it easier and quicker to read. A good designer could improve the *Guide's* accessibility profoundly by using colour, decision trees and good information design. For example, the flow chart diagrams could be improved significantly to build a narrative throughout the document. Most risks, when they occur, demand an urgent response.

Readers will be looking for specific answers – whereas the *Guide* is currently set up to be read from cover to cover. Perhaps more thought on FAQ under a risk event might help. There still exist a number of areas that remain unclear.

PART TWO: Findings from the 2015 report – Lessons From the West African Ebola Outbreak in Relation to New Zealand’s Supply Chain Resilience

Supply chain resilience is critical in terms of both survival and moving to a more resilient position over time. The attached 2015 report focuses on how a local, national or global emergency would affect New Zealand, with particular attention paid to our supply chain network. The report uses the 2014 West African Ebola outbreak as a case study and details the lessons learned from this epidemic. It then makes observations on supply chain risk and provides recommendations on how to make supply chains more resilient.

2.1 Three Major Recommendations

Overall we found a relatively low level of awareness and preparedness for supply chain impacts of event risks. There was widespread awareness of Ebola and the potential medical risks, along with recognition that there could be level-two and level-three effects but not much systematic effort yet to increase resilience.

When we highlighted the risks for responsible agencies or for businesses, there was recognition of the value of better preparedness but relatively little understanding of what could be done to reduce risk, alongside a sense that many of the risks could only be reduced via actions by others.

Even where supply chain risk preparations were in place, there was a concentration on supplier risk with less emphasis on ensuring ongoing availability of critical infrastructure and essential scarce skills.

A major event could have diffuse and chronic effects on New Zealand businesses, with many impacts from forces outside the control of the businesses. One response might be to conclude that there is nothing that could be done to reduce the impacts of such events. An alternative and better response would be to conclude that the impacts could be reduced, but that would require a coordinated response which might involve central and local governments as well as businesses here in New Zealand and overseas.

What has become clear is that there are many potential sources of event risk and it would not be possible to anticipate accurately what consequences for New Zealand would follow from each possible global-scale event. However, it is possible to understand the kinds of consequences that could affect New Zealand and develop protection against the most likely high-damage risks.

Our major recommendations are as follows:

1. There needs to be a conscious effort to:
 - a) obtain tacit knowledge about New Zealand's supply chain risks;
 - b) increase awareness and resilience management capabilities;
 - c) make all trigger points transparent;
 - d) make the crisis management framework less complicated from the outside looking in;
 - e) draw a distinction between strategies, plans and guides;
 - f) draw a distinction between preparation and response; and
 - g) increase connectedness between central government, local government, businesses and community groups.

2. We need to find more effective instruments/tools to monitor and benchmark progress over time:
 - a) An annual report on emergency risk events outlining what events happened over the previous 12 months, describing New Zealand's response to each event and any lessons learned, could be a cost-effective instrument.
 - b) A supply chain risk matrix that benchmarks risks is a tool that might help identify priorities and develop action points (see Appendix 8 of the 2015 *Lessons From the West African Ebola Outbreak in Relation to New Zealand's Supply Chain Resilience* report).

3. Map and review existing strategies, preparation plans and response plans (for both central and local government). They need to be mapped in order to determine where documents may overlap (and cause confusion) or where gaps exist. The map then needs to be designed to illustrate how they all fit together so that when a disruptive event occurs, roles and responsibilities are clear to not only officials but also ministers and the general public. The content of these documents then needs to be reviewed to ensure they have the ability to respond to:
 - a) a greater variety of events – for example, airborne epidemics that move quickly but usually are less deadly;
 - b) long-term extended emergencies; and
 - c) events that have effects beyond the immediate medical effects – for example, second-level impacts from an outbreak outside of New Zealand.

In addition, we have identified specific recommendations for central government, local government and businesses and other non-government organisations.

2.2 Recommendations for Central Government

Central government is responsible for large-scale event risk management in New Zealand. A case could be made that event risks are increasing and event risk could have serious effects on New Zealand. A false sense of security, hubris and lack of preparedness could combine to make the country more vulnerable than is necessary.

The New Zealand Government takes event risk seriously. The Ministry of Civil Defence and Emergency Management has developed a strategy with four goals that are consistent with the implications of our findings. These goals are:

- to increase community awareness, understanding, preparedness and participation in civil defence emergency management;
- to reduce the risks from hazards to New Zealand;
- to enhance New Zealand's capability to manage civil defence emergencies; and
- to enhance New Zealand's capability to recover from civil defence emergencies.

Reviewing central government's preparedness has not been the primary focus of our research. Instead we have tried to learn lessons from the Ebola outbreak and apply those lessons to the New Zealand context, in particular the nature of supply chain risk. Hence our recommendations for central government do not rely on evidence or assertions about gaps in current preparedness. Rather, they are offered as good practice suggestions for testing current preparedness and contributing to thinking about how New Zealand might become more resilient.

Recommendation 1

Ensure accountability for overall event risk management – including supply chain resiliency and taking account of level-two and level-three effects – is assigned to a single agency or role within government. The responsible agency or role should have access to the authority and resources needed to undertake event risk reduction actions.

Event risk management should not be delegated to a committee. A committee may be a valuable mechanism for understanding event risk and providing advice about how it should be managed, but it cannot easily take action or be held accountable.

Recommendation 2

Develop wider and deeper understanding of event risk for New Zealand.

When we began this project, we found that we had little understanding of supply chain risk and management options, but our understanding developed rapidly as the work progressed. We found that supply chain risk could arise in numerous ways but that there is some commonality among the vulnerabilities, partly because there are a few critical supplies, infrastructures and skills that New Zealand depends on. Food, energy and communications are likely to be among the most important inputs.

Understanding our export and import interdependencies (see Appendix 7 of the 2015 *Lessons From the West African Ebola Outbreak in Relation to New Zealand's Supply Chain Resilience* report) will be one way to obtain tacit knowledge about New Zealand's supply chain risks.

Large-scale damaging events are likely to have effects where one outcome causes another outcome, creating a 'cascade' of effects.

Recommendation 3

Develop competence in event risk mitigation and responses.

Knowing about event risk is not sufficient in itself. It is also important to understand how resilience could be increased by preparations to reduce risks or to increase response effectiveness. However, national-scale event risk management competence is an emerging field. Further, New Zealand's isolation and small scale imply that risk management should be customised to match our special circumstances.

Understanding how other countries are developing event risk management can provide one source of information. Lessons from responses in other circumstances and in other times are likely to be relevant too. For example, plague management during the Middle Ages and responses to the Spanish Flu between 1918 and 1921 provide relevant lessons.

Recommendation 4

Define New Zealand's unique risk profile, event risk appetite and risk management criteria.

Ignoring event risk would be unwise and irresponsible. However, eliminating event risk would be unaffordable and impractical. Any resilience-increasing actions would be taken over time while taking account of the practicalities and costs. That implies a search for the optimal policies. One important goal for government is to ensure a healthy economy. Government has constrained fiscal resources and many competing demands for effort and funds. In normal economic management, that would imply identifying a range of resilience-increasing options that would compete with other spending options based on a benefit–cost ranking. This general approach is known as expected value (EV) maximisation. EV calculations are based on the product of the probability of the event and the cost of the event.

However, when catastrophic outcomes are possible, risk management options are not normally assessed using ordinary EV criteria. The point is well-illustrated by life insurance, where rational citizens make negative EV investments in policies because they are willing to pay more than the EV would imply to remove the risk of an unacceptable outcome.

The decision rule used where catastrophic outcomes are possible is known as ‘minimax’, which is an abbreviation of ‘minimise the maximum loss’. Government’s decision processes should recognise that there may be value for New Zealand in paying more than the EV to avoid even a low probability of some avoidable, unacceptable risks.

An additional complication when quantifying resilience-increasing options is quantification of costs. From a government perspective, the fiscal cost may be relatively straightforward to estimate. However, many costs of government-mandated resilience-increasing investments are likely to be borne by businesses, local governments or civil society. These investments may provide private and externality benefits as well as costs, further complicating the task of deciding what to do.

Despite these difficulties, the responsible agency should form a view about what actions should be taken within New Zealand to increase resilience.

Recommendation 5

Rebrand New Zealand's *National Civil Defence Emergency Management Strategy* as *New Zealand's Resilience Strategy* and review annually.

The vision of the *National Civil Defence Emergency Management Strategy* is a resilient New Zealand; see Appendix 3 of the 2015 *Lessons From the West African Ebola Outbreak in Relation to New Zealand's Supply Chain Resilience* report for more detail. The strategy was revised in 2008 and is unlikely to be revised again until the end of 2018. It is envisaged that it will be published alongside its progress report, incorporating lessons from the Christchurch earthquakes. It was last reviewed in 2013.

It is in effect a resilience strategy for New Zealand. Although this report does not review the current strategy in detail, it does highlight areas for consideration:

- Emergency powers should be clear and concise, outlining who does what and when. Outlining trigger points is critical.

- Businesses need to understand preparations being undertaken by government and the probable responses, ensuring there is some degree of certainty in times of stress. Businesses need to have confidence that essential and important support functions will continue, for example, water, power and petrol. See core infrastructure in Figure 1 on page 9 of the 2015 *Lessons From the West African Ebola Outbreak in Relation to New Zealand's Supply Chain Resilience* report.
- Supply chain risk is a level-two risk. It is a system risk that can only be understood in terms of the system that exists at a particular point in time. Hence, ongoing monitoring of the system is critical. This type of risk does not easily fit within the Civil Defence Emergency Act 2002.
- The strategy should be focused on both short-term and long-term extended emergency events. Event risk thinking should be connected with broader risk-management efforts focused on longer-term, structural risks.
- Central government must be accountable for resilience management overall, but many of the actions required to increase resilience must be taken by other parties. Those actions might be taken voluntarily by organisations that are willing and able to manage their own risks. Alternatively, those actions may be taken because central government requires them by regulation or funds them directly or indirectly.
- A pandemic or other event might require government to exercise emergency powers, including redirecting supply chains, implying interference with normal property rights and individual freedoms. Central government should consider not only the legislative cover for these kinds of intervention but also how they would be effected in practice. That might imply some joint preparedness work with local governments and potentially also with some non-government organisations and businesses.
- The cost of resilience-increasing investments may be reduced by developing the resilience-management competence of others and by encouraging them to manage their own risks.
- Government might also encourage resilience by influencing other influential organisations. For example, the Institute of Directors in New Zealand might encourage its members to lift efforts to increase resilience, and securities regulations could be more specific in requiring inclusion of resilience efforts in reporting requirements.

New Zealand is a small country without high direct leverage internationally. Therefore, if global supply chains are interrupted, New Zealand might find itself well down the queue of customers clamouring for critical supplies. *Forve majeure* interventions by other governments could overrule apparently robust commercial contracts. Therefore, trade policy should include dialogue about privileged supply of critical inputs as well as market access.

In the absence of availability assurance, New Zealand should consider the option of self-sufficiency for some critical inputs. New Zealand already has regulations that require banks to be able to operate critical systems independently from overseas infrastructure. We are also very dependent on software functionality delivered via the Internet, which is in turn dependent on the USA power grid.

It has recently been revealed that at least two countries have the ability to bring down the USA power grid in the event of cyberwar, and the Internet might be interrupted by a 'space weather' event. The

strategy should consider what steps should be taken to reduce New Zealand's vulnerability to these kinds of risks.

It is important to ensure that the strategy ensures that resources required to manage an event are available when they are needed. Global pandemic planning included recognition of the need to have financial resources ready for an event. When the Ebola event unfolded, it turned out that the financial resources specified in WHO's planning were not actually available and could not be secured rapidly. In response:

Dr Chan said that although disease outbreaks would continue to deliver shocks, "never again should the world be caught by surprise, unprepared". The reforms announced included a "dedicated contingency fund to support rapid responses to outbreaks and emergencies". (BBC, 2015)

Central government should ensure that businesses understand the value of preparation. The greater the preparedness of businesses, the more effectively events will be managed, and the more businesses are prepared, the less governments will need to do.

Recommendation 6

Promote resilience understanding and competence within relevant organisations in New Zealand.

Resilience depends partly on risk reduction and partly on responding effectively should an event occur. Both would be improved by having appropriate connections and communications between government and other organisations within New Zealand, including local government authorities. Appendix 3 (b) and (c) of the 2015 *Lessons From the West African Ebola Outbreak in Relation to New Zealand's Supply Chain Resilience* report outlines key documents that should be reviewed to ensure they are up to date with current best practice.

Recommendation 7

Develop relevant connections and dialogue with other organisations in New Zealand and overseas.

The Rockefeller Foundation has developed a programme to create one hundred resilient cities around the world, and Wellington and Christchurch are now in the programme. The size of New Zealand, plus the inclusion of two of our biggest cities, could provide the basis for an interesting conversation with the Rockefeller Foundation to explore the potential for creating a programme to explore how to create a resilient country.

Recommendation 8

Central government should ensure it has the competencies, capabilities and processes to ensure resilience within its own operations.

Capability and resource planning is relatively easy, but plans are not sufficient by themselves. Therefore, resilience-increasing progress should be monitored and reported on to ensure that plans are capable of being converted into actions. Where the stakes are high, it is good practice to have reviewers who are independent of the accountable agency.

Recommendation 9

Establish an independent resilience monitoring and reporting process.

There is a possibility that New Zealand may not have a comprehensive framework in place for collecting data and information on emerging risks or the capability to benchmark, measure, report and review progress towards creating a resilient New Zealand.

Recommendation 10

Work harder at making the framework less complicated when looking from the outside in.

Complicated systems are the enemy of good governance. Section 3 of the 2015 *Lessons From the West African Ebola Outbreak in Relation to New Zealand's Supply Chain Resilience* report – 'Looking from the outside in: how prepared is New Zealand?' – was difficult to write based on the information available in the public arena. The authors needed considerable assistance to gain a basic understanding of how the governance system worked in practice. There are still areas we do not fully understand, for example how the lifeline utilities work in practice, what organisations are included in the list (in addition to the list in Schedule 1, Part A; see Appendix 4 of the 2015 *Lessons From the West African Ebola Outbreak in Relation to New Zealand's Supply Chain Resilience* report), and whether their plans are up-to-date and have been independently reviewed.

We also do not fully understand how the 16 local CDEM group plans work alongside the LTCCPs (the long-term council community plans). To illustrate how complicated the system is at a local level, there are 20 district health boards, 16 local CDEM groups, 16 regions (these do not match the local CDEM groups exactly² and are comprised of 11 regional councils and 5 unitary councils³), 12 city councils, and 54 district/local councils (including the Chatham Islands) – all with a role in crisis management. (Department of Internal Affairs, n.d.; Ministry of Civil Defence & Emergency Management, n.d.; Ministry of Health, 2014; Statistics New Zealand, n.d.).

There are a number of ways to make the framework less complicated but still retain the flexibility to manage complex situations. What follows is a broad list of suggestions to explore how the current framework might be made less complicated. These are considerations rather than specific recommendations, as they would require further research to determine if there is a problem, whether these examples would be cost effective and whether better alternative solutions might exist:

- **Streamline the system (remove unnecessary components in the system).**
For example, would it be more effective and timely if district health boards, local CDEM groups, regional boundaries and regional councils all shared the same boundaries? Should CDEM plans form part of LTCCPs?
- **Illustrate the framework from the outside looking in.**
For example, could a decision graph illustrate the decisions central government makes when a crisis is activated? Could a public alert system be standardised to cover all risks, creating one voice to the public?
- **Highlight the key documents and their roles.**
For example, the Guide is the key 'how to' document; it is the key resource for understanding what happens when a crisis is activated. Therefore, it deserves a higher profile.
- **Specialise.**
Specialisation of skills is a common way to manage complexity. Are there further ways to improve outcomes using specialisation? For example, the director of civil defence emergency

² The 16 local CDEM groups include the Chatham Islands and combine Nelson and Tasman, but the 16 regions exclude the Chatham Islands and treat Nelson and Tasman separately.

³ Please note that Auckland Council is counted solely as a unitary council, while the other unitary councils (excluding the Chatham Islands Council, which is not counted here) are also counted as district or city councils.

management has a great deal of responsibility and control in a crisis, but is there an opportunity for this position to be further strengthened using specialised support?

- **Develop checklists.**

A common way to manage complex situations and generate better outcomes for all is to create a checklist. Obvious places in the framework where checklists may be effective are for those preparing local CDEM group plans, lifeline utilities plans and LTCCPs. To a degree, the *Guide* is one large checklist for officials, but could this tool be used more effectively across the framework?

- **Use terminology consistently.**

Terminology is continuously evolving in the crisis management field and is likely to continue. Definitions and abbreviations can be found in the Guide, but could perhaps be made more accessible by being expanded and updated on the CDEM website. As a general rule, the public service would benefit from drawing a clear distinction between a strategy and a plan, and how they fit altogether; if there is a hierarchy, this needs to be obvious to the reader.

- **Use acronyms and other abbreviations carefully.**

It is very easy for those governing the system on a daily basis to use acronyms and other abbreviations, but this needs to be considered in terms of being transparent and communicating who is advising the minister, making decisions and directing a crisis when such material is in the public arena.

2.3 Recommendations for Local Government

Local governments have special responsibilities because they need to ensure the continued availability of essential infrastructure and services and the flow of goods to the places they are needed.

An uncontrolled Ebola pandemic affecting many other countries, for example, could cause restrictions on movement, financial market shocks and fear, which would have a variety of effects on local businesses and people.

Profit-motivated local businesses might make preparations to protect the businesses themselves, but they might not make the preparations required to ensure that they contribute the functions they normally perform within the economy and society.

While there would be some value for local governments in understanding how such an event might unfold and affect the community, a more fruitful approach for local governments might be to consider how to ensure ongoing supplies of the essentials needed by local populations.

As a thought experiment, consider a situation where New Zealand was unable to export or import as much food as it does today. Supermarkets would be short of food, and food producers would be unable to export. Businesses might be failing, and people might be taking all kinds of actions to look after themselves. It seems likely that in these circumstances central government would want to redirect food supplies. Local governments would have a role to play too, ensuring the flow of food and other essentials to those who need it, helping to organise local labour reallocation and ensuring that skilled people remain available to sustain essential infrastructure.

Having an uncontrolled Ebola or other epidemic outbreak within New Zealand could introduce these effects as well as the need to contain the disease and mobilise a medical response, placing a great deal of strain on local government resources. A local government needing more resources might find itself with less resources than normal and struggle to continue to operate effectively. Are local governments ready to respond if, in addition to these challenges, fuel supplies or communications were interrupted?

Epidemics were a regular feature of pre-industrial cities. Communities had experience of responding to the disruption and widespread death that they brought. One consequence of medical advances and a long period of peace is that most of our communities lack experience in dealing with crises.

When Hurricane Katrina struck New Orleans and the mobile phone networks failed, there was a widespread temporary breakdown of the social order. Modern Western societies without experience or preparation might not always respond to crises as well as traditional societies did.

Local governments can help by ensuring that communities are resilient, well connected and prepared to respond to an event. The Christchurch earthquakes have produced a lot of effort to ensure buildings are resilient but less investment to increase community resilience. The short-term response of the Christchurch community to the earthquake events was very effective, partly because the initial deaths and injuries were sudden and local. However, in the long term there has been widespread frustration, disaffection and depression. Local government and community resilience and preparedness efforts would not prevent these kinds of effects, but they would reduce them.

Recommendation 11

Include event response resilience considerations in community development efforts.

Natural disaster planning usually assumes an acute, local event. Those response plans might not be applicable for managing the effects of a global or offshore event where it is the second-level and third-level effects that impact New Zealand. Local governments should ensure they have the resources and powers required, and the know-how to deploy them. For example, in an epidemic it might be important to control population movement, labour, food supplies and social interactions. These powers were all important during the Middle Ages for the management of plagues. Central government might provide the legislative or regulatory powers but local governments need to be able to use them effectively.

Recommendation 12

Develop event risk response plans that include preparation for global or overseas events that might affect New Zealand.

Many local governments in New Zealand are quite small and may find it difficult to find the resources to develop event risk preparedness of the type we are highlighting. As discussed in Section 3 of the 2015 *Lessons From the West African Ebola Outbreak in Relation to New Zealand's Supply Chain Resilience* report, there have been 16 local CDEM groups formed across New Zealand as committees of elected councillors from each council within regional boundaries. An understanding of the capability and resources of neighbouring councils will be important when disruptive events occur. Relationships with neighbouring councils may be missed if neighbours have been placed in different CDEM groups.

Recommendation 13

Develop connections with other local governments to share response plans and develop preparedness.

There are arguably benefits in councils connecting with other councils that are not neighbours and not in their CDEM groups. For example, urban councils may have more in common than with their neighbours.

Councils that have shared characteristics, such as crops or livestock within their boundaries, may have similar risk profiles and therefore might be able to provide additional support in times of crisis (e.g. transporting livestock to greener pastures in times of drought).

2.4 Recommendations for Businesses and Non-government Organisations

Many businesses already manage risk, including event risk, and they have business continuity strategies and detailed operational plans to respond to disruptions (response plans).

Our interviewers found that leading companies vary in their preparedness, with some having considered not only their own supplier risks but also their suppliers' supplier risks. However, generally these supply-chain-focused risk management efforts are focused on local and business supplier risks and tend to neglect more global event risks and the potential for interruption from sources such as infrastructure failure or lack of critical staff competencies.

Regardless of the effort put into preparing for event risk, it will remain quite likely that the actual event that will threaten a business will be one that has not been specifically prepared for. Nevertheless, preparedness is likely to be valuable by ensuring that the business is ready to respond to unexpected supply interruptions. The resilience-increasing steps taken may benefit the business when responding to a wide range of potential events.

Investing in risk management imposes an immediate and definite cost on a business while providing a possible later return that is difficult to estimate. Risk management is sometimes deferred to allow effort on more immediately valuable opportunities.

Businesses can and should prepare themselves to respond to unexpected event risk by developing their risk management capabilities generally, and by ensuring those capabilities are suited to responding to event risk.

Recommendation 14

Four capabilities should be developed by businesses and other non-government organisations: acuity, navigation, agility and resilience.

1. **Acuity** is the capability to understand potential event risks and to identify when and how those risks might impact the business. Understanding the supply chain and its vulnerabilities helps businesses focus on how event risk might affect them. When a potential risk arises, businesses with highly developed acuity may be able to respond more rapidly, reducing the risk and protecting their competitive positions.
2. **Navigation** is the capability to make good decisions about what to do when an event occurs. Defining the important roles for developing responses and rehearsing event management develops navigation capabilities.
3. **Agility** is the capability to make changes when they are needed. There is little value in having the leadership able to understand the event and how it should be responded to if the rest of the organisation is not ready, willing and able to execute the responses chosen. In particular, organisations should consider what non-standard actions might be required and whether those who need to take those actions will understand the need and act appropriately when normal lines of authority might be broken.

4. **Resilience** is the capability of the organisation to respond to the shocks caused by events. Stand-by supply lines, reserve stocks, multi-skilling and redundant systems are examples of precautions that can be taken by businesses to increase resilience.

In making their preparations, businesses should consider a wide range of interests: their viability as a business; their responsibilities to their customers, employees, shareholders and other stakeholders; and their responsibilities and potential obligations to their wider communities and country. Section 1.3 of the 2015 *Lessons From the West African Ebola Outbreak in Relation to New Zealand's Supply Chain Resilience* report highlights nine steps businesses can use to build resilience into a system.

Recommendation 15

Businesses that supply core infrastructure, and especially those designated as lifeline utilities, should actively pursue relationships with central and local government in order to cushion the impacts of a range of disruptive events.

Core infrastructure is fundamental to the economic and social system working in times of stress. Supply chain risk is often hidden and only becomes apparent when the situation becomes urgent. Taking the time to understand the linkages and alternative options available before an event disrupts a system makes sense. Thinking slowly is better than thinking fast. Businesses are a central part of the solution.

Please see the attached documents that form the rest of this submission.

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