



Australian Government  
Attorney-General's Department

# **National Security Knowledge and Lessons Management Workshop**

Held at the

Australian Emergency Management  
Institute

13th to 17th November 2011

## **Workshop Report**

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## Executive summary

The scale, complexity and number of recent disasters nationally and internationally has heightened the need to consider the management of knowledge and lessons across the broader national security sector. Australia's national security is dependent on the sector's ability to be able to learn from experience, manage the knowledge gained and develop learning organisations that can adapt to deal with current, emerging and unexpected threats.

The National Security Knowledge and Lessons Management workshop, conducted by the Attorney-General's Department, was a four-day workshop to develop a clearer understanding of the themes emerging from operations and the opportunities for enhanced knowledge management across the sector. The intention of the workshop was to provide an opportunity for national security practitioners, industry and community stakeholders to pool their intellectual capacity and experiences. The workshop was divided into two parts – firstly, lessons identified from experiences in an operational context and, secondly, approaches to managing knowledge and lessons. Participants worked together in groups to identify themes from operational experiences as well as to discuss strategies for improving the management of knowledge and lessons.

This report presents the issues and themes which emerged from presentations and the syndicate group discussions across the four days. There were many areas of overlap and commonality of issues identified by presenters and within the syndicate groups. The key issues raised during the workshop for improving the sharing of lessons and management of knowledge across the sector were around barriers in organisation culture, in particular the need:

- for appropriate leadership and high-level governance structures to drive an agenda for change;
- to establish national standards/guidelines to enable greater cross-jurisdictional consistency in training, evaluation, communication and language; and
- for strategies for the development of relationships, connections and networks for sharing information and lessons within agencies and across the sector.

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We can't become complacent when the sun is shining. That is our biggest risk now.

Stories are useful for changing people's thinking. Our ancestors learned through stories. It's how we passed down knowledge over thousands of years... We tell stories so we can remember the past.

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## Background

While the summer of 2008-2009 was considered to be a year of unprecedented disasters with heatwaves, bushfires and floods, the summer of 2010-2011 brought a new wave of unimaginable devastation both in Australia and internationally. Severe flooding across Queensland, immediately followed by Cyclone Yasi, tested the limits of emergency managers, volunteers and communities around the state with the tragic loss of lives, homes and businesses; disruption to essential services; and profound economic impacts both local and nationally. Overwhelming losses were also experienced during the floods in Victoria and bushfires in Western Australia, further challenging the sector to respond to a series of consecutive events over the summer period. The sheer scale of destruction of the Christchurch, New Zealand earthquakes in February 2011 and the Japanese earthquake and tsunami, followed by the Fukushima nuclear disaster, were a potent reminder of the unpredictable nature of large-scale emergencies and the ever-increasing risks, costs and complexities of major disasters. While there may sometimes be similarities between events, the Queensland floods and cyclone was a lesson in just how differently two events can be experienced, even within the same state and how the required responses to disasters will always be different. The ability to think flexibly and develop creative solutions is essential to the future of emergency management because every event and disaster is different, presenting innumerable and unpredictable variables.

These events have heightened the need to consider knowledge management within the emergency management sector and beyond, with the understanding that devastating events will happen - even if we cannot predict what or where they will be. Australia's national security is dependent on the sector's ability to manage and share knowledge gained from past experiences in order to be able to adapt and respond to both current as well as emerging threats. Both physical and cultural barriers, that limit the effective sharing and management of national security knowledge, need to be identified and proactively addressed if we are to be in a position to effectively prevent, prepare for, respond to and recover from future crises.

The future of emergency management in Australasia is one in which challenges and opportunities abound. We must be responsive to change.

*Note – Quotes from workshop participants have not been attributed to honour the free and open discourse from the workshop. International and academic quotes have been identified to ensure relevant context is maintained. Themes and statements by individuals and groups have*

*not been critiqued to ensure that all ideas are presented in full, prompting open discussion and proposal of options to carry forward.*

## **Introduction**

The National Security Knowledge and Lessons Management workshop was a four-day workshop to consider how organisations deal with knowledge and lessons and to develop a clearer understanding of the barriers to and opportunities for knowledge management across the national security sector.

The workshop was not intended to be a course to teach participants about how to manage knowledge, nor was the intention to debate the terminology surrounding ‘lessons identified’ and ‘lessons learned’, though this was raised several times by participants. Instead, the goal was to focus on the identification and development of capabilities within and across agencies and within the national security sector more broadly. The aim was to find ways to capture and disseminate critical knowledge by drawing on the collective wealth of recent experiences of those participating in the workshop.

It’s not just the lessons we learned but also the process to capture them, our challenges, opportunities and understanding the limits to what we can achieve. It’s challenging because we are crossing agencies and cultures. We need to ensure we learn the right lessons. At higher levels, the issues are interdependent and inextricably linked. In isolation, they can provoke the wrong response. We need to understand the problem we are trying to fix. We need to invest in information and data gathering to understand what we are seeing and why it is happening.

With presentations reflecting a wide spectrum of operational experiences including the Queensland floods and cyclones, the Victorian and West Australian bushfires, counter-terrorism exercises, plague locust response, flu pandemics, defence assistance and community recovery, participants were able to consider the general themes, issues and problems that might be transformed into lessons applicable to the sector more broadly. The full workshop program can be found at Appendix A of this report.

## **Aim**

The workshop aimed to collate lessons identified from recent operations and inform the development of a national approach to the management of national security knowledge and lessons across all hazards.

## Objectives

The objectives for the workshop were to:

- Identify issues and lessons from national security activity over the last 12 months.
- Conduct a thematic analysis to identify national trends, emerging issues and areas requiring further research.
- Explore possible national knowledge and lessons management models in an all-hazards environment.
- Inform a proposal to government regarding best practice and possible approaches to the knowledge management and lessons.

## Workshop participants and location

The workshop was held at the Australian Emergency Management Institute (AEMI) at Mt Macedon in Victoria. For over fifty years the institute has had a pivotal role in bringing together the Australian and international emergency management sector to consider issues of strategic importance to the security of Australian society in the face of both natural and man-made hazards.

Presenters from across Australia and overseas shared their recent experiences in responding to a range of emergencies and implementing organisational strategies to capture and manage lessons learned. Many presenters were also participants in the workshop in order to enable them to further contribute through their involvement in networking opportunities and syndicate group discussions.

A list of organisations represented at the workshop can be found in **Appendix B**.

## Workshop structure

The workshop was divided into two parts. Part one of the workshop (14–15 November 2011) looked at what could be learned from recent operations. There was a focus on case studies and experiences of recent disasters and emergencies and the lessons identified from response, coordination, investigation and recovery activities at the national, jurisdictional, agency and community level. It was an opportunity to share knowledge and compare information from experiences in an operational context. The second day of the workshop (15 November 2011) involved participants working in sector groups to consider the following questions.

- What are the consistent themes and trends facing the sector?
- How can they be realistically addressed in the short to medium term?
- What are the priorities for further research or investigation?

The themes and issues that emerged from these discussions are presented under ‘Lessons identified from operations’ at **Appendix C** of this report.

Part two of the workshop (16–17 November 2011) looked at how we might manage knowledge and lessons more effectively in future. There was some changeover of participants between part one and part two of the workshop.

Following a number of thought provoking presentations, participants divided into six syndicate groups to consider and report on the elements, barriers, enablers, short-term actions and research required to move the sector forward in terms of managing knowledge and lessons. Each syndicate group had discussions around a particular theme which were managed and facilitated by AEMI staff using the ‘expert jigsaw’ technique. The technique operates as a group decision making tool and is comprised of teams of 3-6 people. Members from each group rotate into other groups to share ideas and clarify issues. This technique facilitates an in-depth examination of a multitude of ideas and text in a relatively short period of time. It was a particularly effective technique and resulted in robust outcomes. This process enabled each group to broaden its thinking and integrate ideas from a wider portion of workshop participants. The outcomes of the group discussions are documented in the ‘Managing knowledge and lessons’ section and **Appendix D** of this report.

The workshop also identified a number of focus areas for further research and which are outlined in **Appendix E** of this report.



## Part 1 – Lessons identified and trends

Interoperability doesn't mean we are all the same, but that we can share information and understand each other. This requires a common language, and a similar information system helps for aggregating information so it is accessible and can be interrogated. Horizontal exchange of information between jurisdictions, agencies and capabilities is critical.

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The interoperability continuum is a blueprint for scalable procedures. In any change program, it's vital there is a government strand at the top, supported by SOPs, technology, training and exercises so it can be put into usage. We created a SOP implementation model that can be implemented in multiple agencies that they could report on in terms of readiness. It allows us to track where we are going.

Throughout the workshop, participants raised a broad range of often interrelated issues which were shared across agencies, institutions and sectors. The emerging themes were related to the development of interoperable capabilities between agencies and of resilience at the level of community and organisations. The interdependency of agencies on each other's operations and knowledge, and the opportunities for more effective collaboration, were highlighted and explored by both presenters and participants.

Because the concepts of interoperability and resilience are so broad, and are related to a wide range of other issues, this report presents a summary of the themes raised in presentations and the syndicate activities. Many of these themes overlap. For example, issues such as leadership, culture and communication affect the ways in which organisations manage, share and communicate information; coordinate and collaborate during and between operations; and work with the media.

For more detail regarding the identified themes and trends facing the sector, refer to **Appendix C** - lessons identified from operations.

### 1.1 Communication

Participants explored a range of communication issues, particularly those relating to technology, emerging social media trends, lack of shared terminology and the ways in which agencies communicate with each other and the community. There was general agreement that significant improvements could be made in the emergency management and counter-terrorism sector's capability to share information during operations as well as with a broad range of stakeholders outside of an operational context. The focus here was not on physical communication equipment but rather on inter-organisational and inter-jurisdictional information management and situational awareness.

### **1.1a Inter-agency communications and contingency plans**

Many practitioners had experienced critical failures or breakdowns in communication technology during operations and a lack of compatibility between agencies or jurisdictions. The lack of consistent communication protocols, absence of interoperability between radio systems and loss of mobile phone reception during emergencies had placed the community and responders at risk and created difficulties for command, control and coordination during bushfire, flood and earthquake situations. This issue was exacerbated when working across jurisdictions, even during less time-critical situations such as the locust plague response. There was broad agreement that there was a need to increase resources towards the development of communication contingency plans and to improve interoperability of communications systems.

Mobile phones are extensively used in operations and are a single point of failure as they are often rendered inoperable in disasters/emergencies. Communications contingency plans are needed using other capabilities.

### **1.1b Social media**

Social media was discussed as a complex issue for the sector. On the one hand, the Queensland Police Service had success in using Facebook to communicate important information to a broad segment of the community and to clarify misinformation during the 2010-2011 floods. However, the management of social media during operations raised challenges as well as benefits. It was acknowledged that while social media was a communication tool of choice for a broad section of the community, it could not be relied upon to reach everyone and was only effective if it is used to engage in two-way communication with the community. Experiences in NSW, Queensland and overseas brought to light the resources required not only for posting information, but also for managing responses. Some agencies' experiences with social media indicated that it could be useful as a crowd-sourcing tool to improve situational awareness (eg through geo-coding of posts and photos) and help to understand trends. Other participants raised concerns about the resources required to monitor information posted and the risk that agencies would be left open to coronial criticisms if social media is used for reporting emergencies that are not responded to. The fact that Facebook and Twitter are blocked on many agency servers was also raised as a barrier to making full use of its potential. Generally, it was felt that sound protocols and training were required to effectively manage the push and pull of information on social media.

Social media can be useful but is not the only channel for putting information out there. The police got information out early and rectified misinformation quickly which boosted credibility of both the response and the government as a whole. We are now a victim of our success. But as a member of the public, I don't want to have to go to multiple sites. If it's not coordinated, it's not reaching its potential.

We are developing a portal where agencies pump out Facebook and Twitter but direct it to a single portal.

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If you are only using social media as a one-way push, you'll never get sign up. The reason it worked with Queensland Police was because it was two-way. It hurt but that's where the value was. We used it not only for aggregated information but also concepts like crowd sourcing. The media are already getting information about road closures etc. If we don't manage it, we shouldn't be in the space.

### ***1.1c Language and terminology***

Participants frequently raised the issue of the lack of shared language and terminology between agencies. A common language was seen as particularly critical during operations in a cross-jurisdictional context or for implementing a communications strategy across agencies. Within an emergency management and counter-terrorism context, a shared language was seen to be particularly important in ensuring greater understanding during multi-agency exercises.

We need to get our fire brigades speaking the same language so it's possible to identify trends across sectors. Then we can talk about multi-agency and cross-state trends.

Engagement with the community also raised issues around the need for greater specificity and relevance of risk information. For example, a 'one in one-hundred year' storm or flood did not adequately communicate the level of risk presented by an event and was not generally understood by a broad segment of the community. On the other hand, an overly prescriptive use of language was felt to be exclusive and narrow the potential audience.

Language needs to be centred on what people would use and recognise, particularly if it involves members of the public. Creating new terminology excludes people.

## **1.2 Coordination and collaboration**

There was a general consensus that greater coordination and collaboration would bring benefits to the emergency management and counter-terrorism sector. Participants expressed a willingness and desire to collaborate across agencies on lessons and felt that the opportunity to come together in a workshop was critical to cultivating good relationships and networks outside the pressure of an operational environment. Many of the issues surrounding

how agencies coordinate and collaborate with each other were also related to the leadership style and culture of the sector and individual organisations.

### **1.2a Relationship development and management**

The experiences of the New Zealand Police in dealing with the Christchurch earthquakes highlighted the value of pre-existing relationships during an intensely stressful and emotional situation and when coordinating a cross-agency response with international partners. Participants agreed that building trust was an important factor in enabling the sharing of information and data between agencies.

Relationships are under pressure and face confusion in initial phases of an operation. Good relationships formed early and a sense of humour is important to facilitating good work under extraordinary circumstances.

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Don't wait until you are in the situation to develop trust. Practice it before you get there. Whatever is strong under pressure can also be ripped apart. Learn to apologise quickly. Relationships can be undone by poor reactions. Get ready to back people up if they don't have the emotional capacity or skill set to do a job.

Collaboration between agencies was seen as an opportunity to encourage greater creativity in problem solving through the cross-pollination of ideas and knowledge, to share stories and experiences and to build trust.

Some suggested strategies and tools for building trust, enhancing collaboration, cultivating relationships and enabling coordination across sectors and agencies are:

- the establishment of professional networks;
- a national body to capture lessons from across the sector;
- MOUs to facilitate cross-border/jurisdiction mobilisation and operations;
- the development of technological and organisational systems to enable strategic and operational coordination;
- collaboration through the Council of Australian Governments (COAG) and supporting senior officials committees (Australian and New Zealand Counter-Terrorism Committee (ANZCTC), Australian and New Zealand Emergency Management Committee (ANZEMC), Australian Health Protection Committee (AHPC) and National

Biosecurity Committee) in development of national guidelines for sharing knowledge and lessons (refer to section 1.13); and

- joint training and exercising (refer to section 1.4).

Participants also commented that strong relationships and active partnerships between organisations would also allow for more effective pooling of resources.

## **1.3 Culture**

One of the most discussed topics among participants was the range of cultural considerations which inform and shape the way in which the emergency management and counter-terrorism sectors operate, communicate and share information. Organisational, social and political influences were understood to shape how decisions are made, how information is shared and how agencies collaborate with one another across jurisdictions and sectors. Many organisations' cultural practices are so unquestioned and second nature that they are not visible until they are confronted with cultural differences (e.g. when working with other agencies, jurisdictions or international partners or within a community).

### **1.3a Organisational culture**

Issues relating to organisational culture included the way in which agencies relate to each other and their staff. The cultural strengths identified by participants were the resourcefulness of emergency management practitioners and their ability to work in very difficult situations. However, participants also felt that there were many entrenched attitudes within the sector which made change difficult and which impact on agencies' capability to be a nimble and adaptive organisation. Gaining emotional buy-in from stakeholders was seen as critical to enabling meaningful change.

A lack of openness and trust in exchanging information and data between agencies was seen as a barrier to sharing knowledge and lessons across the sector, particularly if these lessons might be perceived to be negative. This problem was seen to be exacerbated when working with organisations with high-security requirements where information and knowledge is even less likely to be exchanged openly.

We have put more of an emphasis on openness and trying to figure out how to apply this to the lessons learned community. What is the balance between openness and yet having a secure environment where people can share information?

We launched a Real Time Performance Monitoring Team made up of experienced incident management personnel. Building the trust early has been positive. We are now welcomed into the Joint Incident Management Team (IMT). We don't judge. We engage and provide immediate rectification if we can. The IMTs use us as a sounding board. We are more mobile than the IMT so can go to different locations and find that the story at the fire ground is different to that in the IMT and can assist in rectifying that. We take a risk-based approach so we can change something for the next shift, for that fire danger period or for long-term change in procedures.

Throughout the workshop, participants discussed the culture of blame within the sector and felt that the recent trend of coronial inquests and commissions of inquiry had contributed to a fear of making (or admitting) to mistakes under pressure, which further hinders the capacity to learn from these mistakes. The culture of blame permeated many aspects of the sector including information management and evaluation processes, as will be discussed later in this report.

People at the local level are sometimes reluctant to be candid about what went wrong. There are also political sensitivities for elected officials so the tendency is to keep the information internal and work on fixing it. But chances are that that area is not the only one facing those challenges. We don't have a culture of candour and openness.

The tendency to blame others after a major event breeds a culture which is resistant to creativity, innovative thinking and adaptability and reduces the capacity of leaders, managers and practitioners to take informed risks (or break rules) when required. The role of good leadership in influencing the blame culture is discussed in more detail on page 26 of this report.

Some agencies and organisations have begun to explore strategies for building trust and openness. There was a general sense that the sector as a whole would benefit from an emphasis on transforming a culture of blame into a culture of learning. The 'no blame' or 'just culture' is seen as a potential enabler to the effective sharing of knowledge.

Most CEOs have their own mindsets so I have to find different ways of solving a problem. We build adaptive arrangements into lessons learned. We do 3-Generation teams (20, 40 and 60 year old) to encourage a diverse thinking process. Have a graduate team in the next room to get their creative thinking. Bring together 'zero gravity thinkers' who come from outside who can say things without consequences because they aren't part of the organisation and have nothing to lose.

Again, generating creative and innovative outcomes requires trust in employees that they will reach the best decisions if properly supported by management. At a broader level, the culture of blame also relates to political and social expectations that things will never go wrong during

a disaster or emergency. Participants felt this had implications for not only managers but also volunteer leaders upon whom the sector depends.

Expectations are often driven by media and the adversarial nature of inquiries which seek to find blame. When the stories of heroics are over, it turns to stories of blame. The problem is that many of our volunteer leaders are in the spotlight. They didn't put their hands up to get crucified. It can affect local community leaders. The expectation that emergency management can protect the whole community from the forces of nature at all times is unrealistic

### ***1.3b Social issues***

There were a number of issues relating to the expectations and capacity for resilience within Australian communities more broadly. As mentioned above, community expectations were repeatedly highlighted as an issue by participants, though this was also linked to the government's own role in raising expectations through inquiries and hand-outs and in providing the necessary information to support the community in becoming more resilient and responsible.

The level of expectation continues to increase. As the level of support rises, how do we manage the community's expectations and learn to become resilient? Is the government its own worst enemy? We need to give the community the tools. We need to be adaptable to meet the information needs of the community.

A potential area of research identified during group discussions was how communities learn to respond and act without direction—in short, the processes and cultural factors which enable them to be self-organising.

Having the trust of the community was seen as an important factor in any recovery process; however, it was understood that social trust is fragile and easily compromised by leaders whose actions after a disaster may first raise and then fail to live up to expectations.

Broken promises to disaster affected communities by politicians and business leaders build up expectations and hope but destroy trust in the community.

On the other hand, experiences during the Queensland floods and Christchurch earthquakes highlighted the reassuring effect that a defence and police presence can have during a disaster in building public confidence and trust.

We had Australian police in the first couple of days to run 'reassurance patrols'. Every Australian state and territory worked together in Christchurch and did an amazing job. This had a significant impact on public confidence. Everyone had positive contact with a police officer every day.

Even if police or defence responders are not providing specific rescue support, public reassurances and positive interactions were believed to facilitate the response effort and are likely to have a carry on effect after the disaster. This is something that can be built upon to strengthen relations with the community outside of an operational context.

### **1.3c Political**

The response of politicians to a crisis was seen as critical to all aspects of response and recovery stages. A willingness to collaborate across agencies and levels of government was described as critical to the success of the response efforts to the Queensland floods, as was a clear message from politicians in communicating what could and could not be expected of the government and authorities.

What made the arrangements work were personalities, collaboration and a willingness to work together.

In some cases, it was felt that there is a need to proactively manage political involvement during critical stages of a response effort. It was acknowledged that the provision of accurate and timely information to politicians was important and will always be required in major events, and there is a need to actively consider resourcing this, to avoid impacting staffing of the operational crisis response.

Participants also considered the resourcing implications of political responses to inquiries and their role in building expectations about agencies' capacity to realistically implement recommendations.

Sixty-five of the Inquiry's recommendations directly or indirectly impacted on councils. They were accepted by the premier in the media, but there is no funding or support to implement them. There are very high expectations. The range of recommendations cannot realistically be implemented within the allocated timeline and resources.

## **1.4 Training and development**

Participants discussed the role of training and development in addressing a range of cultural and operational issues within the sector. Training was seen as a critical adjunct to encouraging a change in practices and for transforming lessons identified into lessons learned. The establishment of a strategic program to develop commanders and disaster management team members in a cross-agency model was also suggested. There was a general consensus that more targeted and meaningful emergency management training was required for various



level incidents, but also a desire for an improved whole-of-government approach to command, control and coordination training in incident management teams across agencies.

Cross-agency and multi-jurisdictional training was identified as a means for not only raising the skill level within the sector, but also for encouraging collaboration and improving interoperability across agencies (refer to section 1.2). Many presenters highlighted the value of dedicated ‘lessons’ teams within agencies to support the collation, analysis and dissemination of lessons within an organisation and to align this with the relevant training programs. However, this presents resourcing issues for many agencies.

## 1.5 Information management

A number of issues were identified around the management of information. The lack of compatibility between systems was identified as a hindrance to sharing information. Though databases were discussed as a potential tool for storing information and lessons learned, experiences from a variety of agencies suggested that these are generally not effective in engaging users.

Our experience has been that they [databases] serve a limited purpose...The volume of material created more problems than it solved. The context and relevance diminishes with time... With thousands of recommendations, there is rarely the staff or resources to manage them, and many issues could take years to resolve and don't have a start/stop date. Accountability becomes problematic over time. Databases are necessary and useful as a management tool only. Nobody reads databases. We are looking at what the military is doing and found there are blogs where people can share information in real time such as logistical information. We've been considering taking the approach of removing the formality of the system. We have all these formal lessons but that doesn't seem to work for our users. We need to change with the times and figure out what folks are looking for.

There were concerns about how information could be used in relation to a particular agency, highlighting the need to overcome the blame culture so that information can be managed and shared in ways that are meaningful.

Users prefer familiar tools and processes over federally developed systems. There is reluctance to share information with the US federal government because we [FEMA] provide grants, and they are worried about what we might do with that information.

Some agencies such as Victoria Police and the United States Federal Emergency Management Agency (FEMA) had developed alternatives to databases for capturing lessons learned and acting on recommendations. These include executive-level validation panels to ensure organisational commitment to change and identify areas of priority or urgency.

Information management requires both robust processes and tools to be effective. These are outlined in more detail in **Appendix B**. The timeliness and accuracy of information and data is clearly critical. Being able to undertake real-time analysis during disasters and integrate it immediately into the learning loop was seen as a powerful mechanism for embedding learning in operations. The more interactive, dynamic and participative the system is, the more likely it is to engage users and overcome the barriers presented by databases. The capacity to share in a range of formats such as blogs, wikis, photos and videos was seen as valuable. However, a good information management system needs to have clear user requirements and consider preferred user interfaces. Face-to-face interactions are sometimes a preferred mechanism to share and make sense of information over complex IT systems, and many participants felt that the workshop was an important mechanism for exchanging information as well as building relationships.

## 1.6 Recovery

Governments have to learn how to let go, and communities have to learn how to step up and need support in this.

Recovery was routinely acknowledged by participants as a more complex and difficult process than response. Perspectives from the community emphasised the importance of ensuring bureaucratic processes are responsive to the progress of the community in the recovery stage. In some cases, it was felt the government had unrealistic expectations of what could be achieved by a community that was still attending funerals or mourning its dead while, at the same time, being expected to develop business plans or identify priorities for recovery. The political desire “to be seen to be” taking action was referenced several times during the workshop. The media also plays a role in this process, to the detriment of the community.

After the bushfires, it took time to manage the transition between government bodies and community bodies. There are competing interests of the government ‘being seen to get outcomes’ when in fact more time is required. The media pushes for this unrealistically.

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Working with unrealistic government timelines and deadlines had a significant impact on community recovery. Some communities could move faster than others, and some communities need to be resourced for this.

A number of areas for further research and investigation were considered, particularly because of the vast resources dedicated to the recovery process without a clear understanding of how effective they have been for communities.

The inquiries focus is on the initial response, yet we have \$6.6 billion Commonwealth funding going to recovery without any long-term, longitudinal review of this and to see how effective the efforts were for communities.

### ***1.6a Role of response in recovery***

It was acknowledged that there are many models for community recovery and that these need to be better understood by the sector as well as the impact of the response process on recovery itself. This was particularly important in the context of investigative processes that support coronial inquests and commissions of inquiry. Particularly during the bushfires, investigative activities had a direct impact on traumatised communities and their capacity to recover. Some participants also felt there was a lack of definition regarding the lines of difference for agencies involved in response and recovery and those areas of overlapping responsibility required clarification.

Bringing the voice of the community into discussions about how the emergency management sector engages with the recovery process is critical to good decision-making and ensuring that recovery efforts target the community in meaningful ways.

Many people have no idea of how destructive disasters and emergencies can be for the social fabric of a community. Recovery happens in disconnected ways, much of which is done by other people who aren't in this room, especially people working directly with the community.

Given the importance of cultural and social considerations of how a community responds to a disaster, greater community representation at these types of workshops and conferences may be valuable in the future.

## **1.7 Evaluation**

Participants discussed evaluation processes in a variety of contexts including cultural considerations, exercises, training/courses/programs, reporting, and capability development. A perceived culture of blame could create negative perception of reviews and evaluation following events if they are seen to be a mechanism for pointing fingers rather than improving processes. Participants recognised evaluation as important for learning lessons and knowledge management. Participants felt that evaluations should focus on being developmental rather than being judgemental and focus on supporting learning rather than accountability.

However, many agencies felt they lacked the skills and capabilities to undertake good evaluation and identified opportunities for training and development in this area (refer to

section 1.4). Suggestions for improving the evaluation culture across the sector are training for evaluators as well as evaluation coordinators/leads/managers and the development of an evaluators' network or forum that could act as a knowledge hub across agencies and jurisdictions. An agreed national standard for evaluation methods and tools would assist in the development of a shared language and sense of commonality around what evaluation should entail and how it can be used.

The usability of systems and reporting tools is critical to storing, sharing, managing, tracking and discussing lessons. Some agencies reported on lessons learned in the evaluation space and described how they had adapted their systems and processes to make them simpler for users and more meaningful for organisational learning.

We are in the process of updating our evaluation document because we realised it's important to establish steps for designing exercises. But many local people know this better than we do so we are pulling back on the requirements to make it easier for them. We tried to anticipate every eventuality, and we ended up with systems that are too complicated to use so we are making changes to our corrective action mechanisms so that we can encourage people to use them.

Evaluation suggests an audit process. We put evaluation teams into operations to support the commander and the HQ's information requirements. Collection techniques include structured and free flow interviews, surveys and direct observations. Evaluation is far more effective when it's embedded in a continuum in all phases of operations and when it's aligned with the operational tempo.

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We changed the evaluator process to get a better product and changed the form so that people couldn't make recommendations. We want them to focus on identifying the problem. We don't expect them to have the answer to some of these complex issues so we would rather they don't make recommendations because they could be the wrong solution, unachievable or rejected by the organisation. Once they make unrealistic, unachievable recommendations you are stuck with them in your database.

For evaluation to have a broader impact across the sector it was felt that a national gap analysis, identification of priorities and risk assessment are critical components of evaluation systems.

## 1.8 Media

Participants felt managing the relationship with the media during recent disasters offered important lessons in understanding how information is communicated to and received by the public, as well as potentially having an impact on how operations and political outcomes are managed.

If you aren't set up to manage information operations, you'll get slaughtered. Electronic news gathering enables information gathering that leaves us exposed.

It was felt that politicians had an important role to play in managing the media hunger for constant updates and information that may not be critical to gaining situational and operational awareness during a crisis.

Some people became obsessed with figures for meaningless information which wasted time and resources in the collection. As a result, information varied vastly between states.

It was also suggested that elected officials and senior officers may benefit from enhanced media talking points when speaking to the public during an incident. Agencies need to ensure that the right messages are developed for key representatives so that they can be communicated to the public.

Many of the issues identified from operations are not 'lessons' and many cannot be 'learned'. To say things such as 'we will learn all the lessons from this', may be neither accurate nor achievable. The development of more positive points may assist ministers and the like in better managing the media and support ministerial staff in delivering improved briefs and talking points. This could also include media-specific exercises to test the management of media and ministerial responses and/or a change in process for briefing ministers during disasters.

We don't always do ministerial briefings well during disasters in Australia. They don't get detailed information. In the UK, they have a good approach which is to have a fireside chat with secretaries to reflect on the arrangements, responsibilities and the decisions they might need to make.

Engaging early with the media and maintaining productive relationships outside of a crisis was seen as critical to managing the flow of communication with the media and public perceptions. Having a systematic approach to media interaction is critical to ensuring that both the media and the public are receiving information from appropriate sources and to building trust in the message.

During the grounding of Rena on Astrolabe reef, the media wasn't focused on the ship because the rugby was on, and the perception was that the government wasn't doing anything as a result. We should have acknowledged the scale of the event sooner, and all government agencies should have been brought together on day one and got the media involved straight away.

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Everyone is connected to the media in some way. If you don't make a schedule for delivering information, people will look for a pattern that they know. Repeat your messages, and use a familiar face to deliver key messages because it helps build trust. We used Facebook. We went from 4000 to 240,000 friends in a short space of time and became the single point of truth. We were called the myth

busters because we told people what was really happening rather than what they thought was happening.

## 1.9 Legal issues and risk

Participants reported concern about a number of legal issues. It was suggested that concerns about how individuals may be treated and how information provided at a debrief may be used in subsequent inquiries, coronial inquests or court proceedings, inhibited the free and frank disclosure of facts, opinions and doubts regarding the response to an incident or emergency.

The issue of Royal Commissions and inquests was raised as a significant issue for participants throughout the workshop. An area for further investigation is the impact of these inquiries on operational decision making and on community expectations and whether these and other formal reviews are, in fact, leading to better operational practice or merely perpetuating a litigious culture of blame in the sector.

One of the challenges is how to identify lessons after an incident when an inquiry is underway. There are 12 to 18 months after an incident in which officials are hesitant to talk about lessons. How do we deal with that?

Exploring schemes, such as the open disclosure model used in the medical profession and other schemes used in high reliability areas such as air traffic control, may suggest ways to facilitate open disclosure and remove the fear that such disclosures may be used against individuals and agencies. This was suggested as an area for further investigation and/or research.

Participants considered the implications of previous risk management approaches for the current emergency management sector. Decisions that may have been made years ago, to allow the urbanisation of areas prone to fire and flood, may now expose communities to unacceptable hazards. Identifying that although a 'lesson' may be helpful for future decisions, it may be difficult or costly to reverse in areas already caught up by past decisions.

Communities in these areas have a greater need for understanding the implications of this in terms of greater risk exposure and therefore need to have plans in place to be prepared and take active steps to reduce vulnerability, for example, through insurance or mitigation.

## 1.10 Resourcing

### ***1.10a Mitigating and responding to risks***

Related to the issue of legal risk was the fact that agencies are sometimes publicly committed to responding to lessons identified during coronial inquests and inquiries without being resourced to effectively address them.

It's the mega events that create all the problems because we don't operate in that environment every day of the week. We are not geared up to overwhelming events. The reality is that our budgets don't take into account Black Saturday or Yasi.

Many participants felt that there was a clear cost-benefit for mitigation strategies implemented at the preparation phase or before a disaster and that further analysis was required to obtain hard data in this area (ie costing business cases for disaster mitigation).

The capacity to track resources during a major disaster was also raised. Lessons from NZ and Queensland highlighted how easy it is to lose track of things such as helicopters during a chaotic operational situation.

The identification of strategies to pool resources across agencies and jurisdictions was raised as an opportunity to work within the considerable funding constraints facing the sector, though there are obviously some limitations to the extent in which resources can be shared.

### ***1.10b Organisational fatigue***

Participants discussed a number of implications arising from organisational fatigue. Experiences during the Christchurch earthquakes, the floods and cyclone in Queensland and even the swine flu pandemic highlighted how easily an agency's resources can become stretched beyond capacity and how this can limit its ability to respond effectively. These limitations were experienced both at the organisational and individual level. At the organisational level, the effects of a major disaster response had the potential to reduce the capacity of an agency in responding to events in the future.

We have a vastly diverse range of councils with many different issues, interests, capabilities and capacity. They are poorly resourced to build capacity in many critical areas, even where they have legislative responsibilities. Councils are exhausted by the last year's events and are heading into a new storm season.

It was also acknowledged that the work of responding to major disasters was emotionally draining on personnel and volunteers who sometimes received little relief over weeks at a time and were often personally affected by the disaster themselves.

During the Christchurch earthquakes, people worked full time with the families and briefed them every day, using a school auditorium full of families along with embassy staff. It was difficult emotional work which they carried on for weeks.

The exhaustion that comes with the sometimes unrelenting work of disaster response has the capacity to affect decision-making and requires creative strategies to overcome continual problems. Some presenters shared their experiences of how they managed the issue of fatigue and capitalised on all the resources available to them and how they would have done things differently.

During a major disaster, you need to be decisive, creative and innovative to get around blockages. To maintain momentum, you need to look past the 'nos'. You're always building your ability to solve problems in the future. Networks are critical. You need to create a mental database of where resources have been allocated. Keep a list of all the people that are going to be able to help you. Make it long because you'll need backup because everyone is busy. You don't want to overload people and you need to be able to spread the load.

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Many of the SES volunteers affected by disasters are locals. Many lost their houses. They had to take care of themselves so we need that response from the other agencies around Australia. We had just been through the floods. People were too exhausted to work through the event.

## 1.11 Public information and education

Participants discussed many issues around the need to educate the community about risk.

One presenter highlighted an important lesson identified during Cyclone Yasi which relates to the timing of public information messages:

When you have a category 5 cyclone lining up, everybody listens but we don't always speak in one voice. There is contradictory information being put out at this time, and yet people are listening intently and comparing conflicting messages. We can spend lots of money now, but we need to get the message right when they are actually listening. After Larry and Yasi, nobody heard anything. We put out newsletters and radio shows but nobody heard it. People were too traumatised or disrupted to take notice. Before, everyone listens; afterwards, no one hears.

Engaging with the community early and creating realistic expectations about response capabilities is seen as critical to encouraging the public to take responsibility and prepare themselves for disasters. More effective engagement with not-for-profit and community groups was identified as an important strategy for reaching and delivering messages to targeted segments of the community that may have special vulnerabilities or may not be reached through the usual modes of public information.



## 1.12 Leadership and command

Participants and presenters acknowledged that new models of leadership are required to deal with mega events and emerging threats.

At the political level, good leaders have the capacity to shape the community's expectations through effective communication and planning.

I wonder about our accountability to shape the community's expectations. Often the message in a major disaster needs to be that we're not coming. On a catastrophic fire day, do not expect a fire truck. Our leaders have a role to play in shaping our community's thinking in this.

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The public does not expect us to stop every fire or terrorist campaign.

This means sometimes delivering unpopular or difficult messages to the community.

From a community perspective, the emergence of leaders after a disaster is not straightforward and comes with its own challenges. This was a lesson learned during the recovery phase of the Victorian bushfires.

Of the 33 leaders who rose from the disasters, only two had been leaders before. It takes time for leaders to emerge because they have other issues to take care of.

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In each of the stages of prevention, response and recovery, different leadership styles are needed. Rarely can one person go across all three.

Participants also felt that good leadership within agencies plays an important role in supporting their staff to get the best out of them before, during and after a disaster. Empowerment and trust are critical to this process.

Leadership can mean the people who follow give permission to be placed in danger by their leader. They do so because there is trust.

Leaders need to be empowered to act without bureaucracy that impedes the decision making process.

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The culture, values and beliefs of an organisation are communicated by senior management. Have they developed a can-do attitude in their staff? Have they empowered staff to be creative and innovative when they encounter problems?

## 1.13 Governance

High-level buy-in for cultural change and the development of more interactive and collaborative relationships within the emergency management and counter-terrorism sector is essential to creating the conditions for sharing lessons and knowledge more productively.

National collaboration through the ANZCTC, ANZEMC, AHPC, National Biosecurity Committee and COAG and/or the establishment of a national body were suggested as possible strategies to enhance an all-hazards approach, drive the agenda and ensure the consistency of national guidelines (refer to section 1.2).

## Part 2 Managing lessons and knowledge

Presentations during Part Two of the workshop focused on strategies, processes and tools employed by various organisations nationally and internationally to manage knowledge and lessons. These included validation panels, the evaluation of operations and the establishment of lessons teams as well as industry and academic perspectives on knowledge management.

The workshop highlighted a number of significant issues with the concept of and language around 'lessons learned'.

The term 'lessons learned' is not well understood, often misused and brings with it significant perception and expectation management problems. Many of the issues that emerge during and after an operation are not 'lessons' and cannot be 'learned'. Wicked problems such as information management during crises are never likely to be solved or 'learned'.

Statements to the public such as 'we need to learn all the lessons from this...' can create negative perceptions of what is generally competent performance by emergency management agencies and often consistent with international best practice. The term can also create expectations that on a catastrophic day all aspects of operations will run smoothly. Whilst hindsight is twenty-twenty, operational commanders will still have to do their best to see through the smoke and rubble in an attempt to make sense of confused and dynamic situations. Huge advances in equipment and process have been achieved to assist with situational awareness but like many of these issues the best we can hope for is incremental improvements. Commander's decisions will be judged the day after by the media and potentially re-examined months after by reviews, both with the benefit of hindsight. Lessons will be identified and some may be learned but learning a lesson from the last flood does not necessarily mean we are better prepared for the next flood and may mean we are actually worse off in dealing with the next bush fire or terrorist threat.

Participants agreed that the term 'lessons learned' is no longer useful. Lessons learned refers to an end point when it is in fact the process that is undertaken which is important. There is often pressure to quickly produce documents or 'lessons' post an event to prove that such

events will never be allowed to occur again. Such lessons' primary purpose is public reassurance or a need to be seen to be doing something rather than examining and solving the underlying causes of the problems encountered.

The workshop identified that the concepts of managing knowledge and developing learning organisations are likely to be much more effective in producing national security capability that can deal with both current as well as emerging dynamic threats. How do we take the experience of the past, and share knowledge internationally, to develop organisations and individuals that are flexible and responsive enough to adapt and innovate to deal more effectively with the future is the challenge.

Many previous attempts at developing a lessons learned function both in Australia and internationally have focussed on a technical solution involving a database that can be accessed by personnel from within the sector. However it is important to note that it is the actual process of learning that is important, not the document/database entry that is produced<sup>1</sup>. The past is littered with examples of reports of lessons identified but not learned. The fact that lessons are documented and stored does not infer that anything has in fact or will subsequently be learned.

Any proposed national lessons function will need to consider several issues, the first being its ownership. Each organisation (government, non-government or industry) and level of government will need to be fully engaged in this process. This raises questions of trust between organisations and jurisdictions and about the level of information sharing that will take place, who will have access to that information, how any potential lessons would be published (event, organisation or jurisdiction specific) and who would have responsibility for resolution of issues, particularly those of a multi-agency nature. These questions raise issues which are influenced by complex organisational cultures and behaviours. Previous international models that have been proposed have also considered liability issues as part of any lessons dissemination system.

There also needs to be careful consideration as to who would conduct any analysis of findings raised by events. In addition to the trust issues raised above, there would be a need for sufficient subject matter expertise as well as academic rigour to ensure that any outcomes were sufficiently robust, credible and balance organisational and ideological biases analysts may have<sup>1</sup>.

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<sup>1</sup> Birkland, T. (2009) 'Disasters, lessons learned, and fantasy documents', *Journal of Contingencies and Crisis Management*, Volume 17, No 3, pp. 146-156.

The resources required to provide the appropriate analysis and dissemination alone should not be underestimated. If any knowledge and lessons management function is to be fully integrated into the national security landscape it must be sufficiently resourced as once engagement is lost with the stakeholders it will be extremely difficult to regain.

In terms of capability development, consideration needs to be given to the best level at which to operate a lessons function. Organisations that have integrated learning processes embedded into their standard operating procedures are more likely to provide conditions that encourage improvisation, flexibility and learning. As more levels of participation are introduced into any potential lessons management model, the levels of complexity around trust, organisational culture and potential barriers to learning increase.

A lessons learned function cannot be passive<sup>2</sup>; it must be integrated into an organisation's learning processes. There is a separation between policy and practice; policy changes do not necessarily become part of organisational practice if attitude and behavioural changes are unsustained<sup>3</sup>. Thus, understanding, promoting and nurturing organisational learning is crucial.

National security is complex and there is a need to ensure that any lessons functions do not oversimplify or produce mono-causal explanations of possible problems in what is, in fact a complex network of inter-relationships<sup>4</sup>. Thus, an effective evaluation framework will be an essential element of a national knowledge and lessons management system.

Any knowledge and lessons management function should be forward looking; the learning process must extend beyond what has been experienced to what can be imagined, and assist in developing best practice by deriving foresight from hindsight<sup>5</sup>.

## 2.1 Leadership and organisational culture

David Parsons of Sydney Water provided an insightful discussion into the ways that stories are used to share or bring knowledge into the organisation. Stories can be used by leaders to explore cultural beliefs within an organisation as well as to reflect on experiences that have

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<sup>2</sup> Borell, J. and Eriksson, K. (2008) 'Improving emergency response capability: an approach for strengthening learning from emergency response evaluations', *International Journal of Emergency Management*, Vol. 5, Nos 3/4, pp. 324-337.

<sup>3</sup> Elliott, D. (2009) 'The failure of organizational learning from crisis – a matter of life and death?', *Journal of Contingencies and Crisis Management*, Vol. 17, No 3, pp. 157-167.

<sup>4</sup> Birkland, T. (2009) 'Disasters, lessons learned, and fantasy documents', *Journal of Contingencies and Crisis Management*, Volume 17, No 3, pp. 146-156.

<sup>5</sup> Crichton, M., Ramsay, C. and Kelly, T. (2009) 'Enhancing organisational resilience through emergency planning: Lessons from cross-sectoral lessons', *Journal of Contingencies and Crisis Management*, Vol. 17, No 1, pp. 24-37.

contributed to empowered decision-making. They are powerful tools for making information memorable and transforming it into knowledge that can be called upon during decision-making.

Whether at the political, organisational or community level, adaptable and innovative leaders set up the conditions for creative responses to problems. Parsons advocated the development of 'standard thinking guidelines' rather than standard operating procedures to provide staff in his organisation with a framework for making decisions without tying them to rigid options that lead to fixed solutions.

Many of the great disasters have been solved by adaptive responses. Moving from SOPs to 'standard thinking guidelines' is one approach. Persecution of decision-making under pressure makes it difficult.

The need for leaders to respond with flexibility challenges the command and control model for decision-making in operations and raises complexities regarding the aforementioned effects of fears of litigation and blame for leaders.

Many of Australia's managing director's talk about the need to trust contractors, staff and the community. Trust relates to rule breaking. When things go bad, we need our staff to break rules and know the difference between rules that can be broken or bent and rules that can't be broken. It's based on trust and empowerment.

Parsons argued that part of good decision-making under pressure about understands which goals can be sacrificed to achieve a critical outcome during an emergency. This kind of 'rule-breaking' and goal sacrifice requires the trust of employees and a culture of empowerment that does not come naturally in organisations and needs to be cultivated through good leadership.

## **2.2 Syndicate group discussions**

On the final day of the workshop, participants were asked to consider the following themes as they related to managing lessons:

- governance
- culture
- external national sharing
- internal capability development
- evaluation of operations and
- tools.

Syndicate groups were asked to reflect on the elements, barriers and enablers to change, potential options and areas requiring further research or investigation.

Participants acknowledged that the issues were complex and inter-related, but there were also many areas of commonality across all presentations. These were:

- Culture: resistance to change, silo thinking, blame culture, lack of trust, need for protective legislation to enable greater openness;
- Leadership: the need for champions at the national and organisational level, high-level governance structures to drive an agenda for change;
- National standards/guidelines: greater cross-jurisdictional consistency in training, evaluation, communication and language (need for shared language, glossary of terms); and
- Relationships: building trust, sharing stories and information, the value of workshops/forums in creating and building on connections.

Many of the syndicate groups spoke about the value of the workshop in creating the necessary linkages required for the improved management of knowledge and lessons across the sector.

A summary of syndicate group discussions are outlined below and presented in **Appendix D – managing knowledge and lessons**.

## 2.3 Governance

The syndicate group agreed that a national committee or body was needed to drive a lessons learned/knowledge management agenda, establish measures of success and form national standards and guidelines. Jurisdictional and organisational independence and the lack of ownership of this process were identified as a hindrance for government to learn lessons and share them across agencies. There is also a blame culture within the sector which prevents information and lessons from being shared freely. A champion or sponsor is required at the national level.

Some options identified for consideration included ministerial briefs, the development of a possible governance framework or the establishment of a lead agency to drive the process and the development of draft framework/guidelines. It was also suggested that more work is required to integrate some aspects of emergency management and counter-terrorism to

enable a true all-hazards response. The workshop itself was seen as a valuable enabler in reaching out and bringing together agencies across the sector.

Suggested areas for future investigation included the need to undertake an environmental scan to identify international guidelines and examples from other sectors (eg occupational health and safety, health and aviation) for enabling disclosure without legal recrimination.

### ***2.3a Culture***

Although a clear definition of culture was difficult for participants to agree upon, there were a number of elements identified that shape organisational and sectoral culture. These include leadership, beliefs and relationships, particularly between federal, state, local government and the community.

A number of barriers to change were identified including fear of change, lack of experience, organisational hierarchies, fear of formal inquiries, conflicting pressures, the lack of framework for measuring success and lack of trust.

The group felt that national leadership and high-level champions were needed to drive cultural change across the sector. Sharing stories (possibly via a 'wiki') was seen as a powerful enabler for communicating successes and key messages and encouraging attitudinal change. Building capability within organisations for implementing change and creating open feedback loops were also identified as ways of countering some of the barriers to change.

Potential options identified were national workshops, joint exercising and networks to encourage greater collaboration and enhance trust between agencies. Starting simply and achieving small wins that could be easily communicated across the sector was seen as a strategy for overcoming cynicism and complacency. Organisational 'pulse checks', evaluating learning organisation status and measuring organisational culture through 360 degree evaluations were also identified as potential actions for initiating cultural change.

Suggested areas for future investigation were to identify how to influence the content of academic programs to develop current and potential future staff, benchmarking successful organisations and understanding best practice in change management.

### ***2.3b Sharing lessons nationally***

The group discussed the value of a systems approach to external national sharing involving people, organisations, systems, training, equipment and doctrine. This requires a dynamic top-down and bottom-up approach with a functional mechanism and scalable framework for

working across local, state/territory, national and international jurisdictions. A shared taxonomy, glossary and a system to categorise lessons into agreed themes were also required for working across the sector. The scope of activities needs to cover the whole spectrum of the prevention, preparedness, response and recovery (PPRR) environment and not merely the response stage.

Barriers identified to managing knowledge and lessons are the scale of the issue and the lack of funding, political will, and the level of agency and stakeholder buy-in. However, existing structures, bodies, and systems were identified as potential enablers. A political need for change in managing lessons has been created through the increasing number of events and recent commissions of inquiry. Identifying a national champion and the establishment of a 'disaster resilience centre of excellence' are also seen as potential strategies for driving change.

Potential options for consideration include the establishment of a baseline glossary, possible governance structures and a literature review on research in the area. The literature review should undertake an analysis of what exists, options for frameworks, a glossary (available definitions) and a snapshot of what has already been done.

### ***2.3c Internal capability development***

The elements of internal capability development identified by the group were a combination of systems, resources, processes and leadership and included:

- clarity of objectives;
- considerations of command and management (including accountabilities, classification and security);
- information management systems, supplies, collective internal training and appropriate recruitment;
- organisational culture;
- a sponsor and/or champion;
- opportunities for external partnerships to enable greater interoperability and connectivity with other agencies; and
- measurements for success.

Barriers to achieving change were identified as biases in organisational culture, resource limitations and the failure of organisations to fully utilise individual skills, experiences and capability. An ageing population was also contributing to a loss of experience and knowledge



within the sector which needs to be captured for the next generation. A lack of leadership with the right attitude to change and the failure to accept and support the outcomes of evaluation processes were also discussed as hindrances to managing knowledge and lessons internally.

The group felt that the outcomes from the workshop might enable new networks and relationships and existing organic learning processes within participating organisations could be mobilised to stimulate change. Bringing new people into the sector with a lack of biased thinking was an opportunity to influence organisational culture for the better. Emergency managers were seen as a resourceful group who were often very effective in making the best of limited resources.

A communication strategy and glossary of terms was needed to improve internal communications, while the need for sharing information in appropriate formats, and in the agreed themes, was also discussed. A robust validation and quality assurance model was also needed if data was to be useful and shareable.

One option identified was an internal environmental scan. The purpose of this would be to assess existing systems and processes, engage management and organisational champions, identify resources and review existing skill sets to identify organisational gaps and areas where specialist expertise is required. Knowledge management processes could be included in organisational induction processes, and networks of external bodies and lessons managers could be established. A training framework and program for managing knowledge and lessons was also identified as a possible option that could be developed and implemented across the sector.

Areas identified for further investigation include analysis of social and professional networks to identify opportunities for improving knowledge flow within organisations and identifying external lessons management capabilities and opportunities.

### ***2.3d Evaluation and review of operations***

The syndicate group agreed that national coordination was required along with appropriate champions and a strategic doctrine within agencies and organisations. A number of tools were identified such as check lists, templates and reporting processes. The development of an evaluation panel of subject matter and process experts and appropriate training for evaluators is a critical issue, along with validation and review of recommendations. The group also identified the need for a communication strategy with shared language and taxonomy.

Organisational cultural factors, a lack of funding and shared language were identified as barriers to developing capacity in the arena of operations, evaluation and review.

Potential options identified included gaining agreement on a national approach across the national security spectrum, establishing an oversight committee, determining methodologies and the required skill sets for evaluators. Workshops were seen as a valuable way of creating the necessary networks of key players across the sector. Strategies for influencing cultural behaviour include the modification of work flows and the creation of the appropriate tools and forums for the exchange of knowledge and lessons.

Areas identified for further investigation include strategies for establishing consistency with legal and international requirements and standards, benchmarking emergency management tools and doctrine, identifying how key players interact and network and integrating coroners' findings and other reviews into knowledge management processes.

### **2.3e Tools**

Some of the tools suggested by the group were observation and lessons collection templates.

The lack of interoperability within the sector and inability to extract common data for analysis were identified as a barrier to good knowledge management, as were a lack of shared language and a common framework for sharing lessons. However, it was acknowledged that there were many commonalities between agencies across the sector and opportunities for leveraging off like-minded organisations.

Potential options identified included the exploration of opportunities for common training to propagate common terminology, and the establishment of a common framework for language and metadata to enable interoperability of observations.

Areas identified for further investigation include the cultural issues of knowledge management in an emergency management context and the identification of sectors where it has been done successfully in Australia and internationally.

## The way forward

Participants agreed that the workshop had achieved its aim and objectives and had been very valuable and timely.

Participants also agreed that the management of national security knowledge and lessons across all-hazards and across the prevention, preparedness, response and recovery spectrum was both desirable and a priority. Further, participants identified that the development of enhanced and consistent approaches to the evaluation of, and learning from, operations was a high priority as the next disaster season approaches.

It was agreed that it was important to maintain the momentum developed by the workshop.

A community of interest was developed to assist with planning and preparation for the workshop. It was agreed that this community of interest should be maintained and enhanced to facilitate ongoing communication between key members of the national security sector working on knowledge and lessons management. A web portal has been established to facilitate information sharing and networking.

The outcomes from the workshop will be used by the Attorney-General's Department to consider needs and possible approaches to national knowledge and lessons management and to develop options for feasible approaches for consideration by the Australian Government and relevant national peak bodies/ committees.

The themes and trends identified at the workshop may assist in the identification of capability gaps and priorities and assist to inform the future allocation of resources.

The workshop considered the key messages from the National Strategy for Disaster Resilience, which emphasises the importance of sharing knowledge and lessons from previous events as a means to promoting innovation and best practice. Participants agreed that the workshop supported the direction of the strategy and that future work in this area should support and align with the implementation of the strategy.

Given the significant jurisdictional commitment to this workshop, it was proposed that the group reconvene within six months (possibly the last week in February 2012) to ensure that the outcomes and key focus areas identified from this workshop are progressed.

## Appendix A – Workshop Program

	Part 1 – Lessons Identified from...			Part 2 – How do we manage lessons and knowledge	
	Sun 13 Nov	Monday 14 November	Tuesday 15 November	Wednesday 16 November	Thursday 17 November
<b>Australian Emergency Management Institute</b> National Security Knowledge and Lessons Management Workshop	<b>Keynote Address</b> Roger Wilkins AO Secretary Attorney-General's Department	<b>Opening</b> Sachi Wimmer Homeland Border Security PM&C <b>QLD Floods</b> Danny Baade QLDPOL <b>QLD Cyclone</b> Wayne Coutts EMQ	<b>Investigation/DVI</b> Paul O'Halloran VICPOL <b>Defence Disaster Response</b> Paul Richards ADF	Keynote Address (by videolink) <b>Kathleen Fox</b> <b>Director</b> <b>National Preparedness</b> FEMA USA	Participant work group analysis of issues, needs and possible approaches
		<b>NSW Floods</b> Mark Morrow NSWSES <b>Command &amp; Control</b> Tony Murphy VIC FSC	<b>Health Pandemic Response</b> Peter Koob DoHA <b>Bushfire Recovery</b> Bill Gale VIC <b>Local Government Response</b> Rolf Fenner LGA	<b>NSW Fire Lessons Approach</b> Glen Mole <b>NSW SES Lessons Approach</b> Heather Stuart <b>Army Lessons Approach</b> Geoff Cooper	Summary of other agencies approaches
		<b>Bushfire Reviews</b> Lee Johnstone AFAC <b>WA Fires</b> Paul Ryan FESA WA <b>Counter-Terrorism Environment</b> Kym Duggan AGD	Participant work group analysis of themes, gaps, needs, priorities and the way forward	<b>ADF Operation Review Process</b> Paul Richards <b>An Industry Approach</b> David Parsons <b>AFAC Knowledge Management</b> Jill Edwards	Plenary Summarise and Collate Outcomes Closing Address
		<b>Coord of National Response</b> Cam Darby EMA <b>WOG Coordination</b> Adrian Pate QLD Premiers <b>Locusts Plague Response</b> Tony Callan DAFF <b>UK Perspectives on Lessons</b> Michael Hallows OESC	<b>Part 1 Closing Address</b>  <b>Part 1 Departure 4:30 pm</b>  <b>Part 2 Arrive 5.30pm</b>	<b>Knowledge Management</b> Dr Maxwell Winchester Victoria University <b>NZ Process</b> Darroch Todd	
		<b>NZ- Experience - Christchurch</b> Sam Hoyle NZ Police <b>NZ- Experience - Christchurch</b> Steve Brazier NZ PM&C	<b>Part 2 Opening</b>	<b>Knowledge Environment</b> AEMI	

**Appendix B – list of participants**

Adrian Pate	Department of the Premier and Cabinet Queensland	Manager
Andrew Blades	Department of Transport Victoria	Principal Consultant
Anthony Callan	Department of Agriculture, Fisheries and Forestry Biosecurity Emergency Management Unit	Senior Project Officer
Anthony Smith	Department of Transport and Main Roads Queensland	Principal Officer Exercise Management
Bettina Collins	Attorney-General's Department - Emergency Management Policy Branch	Assistant Director
Cameron Scott	Australian Emergency Management Institute	Manager Professional Education
Carl Godfrey	Attorney-General's Department - Disaster Resilience Policy	Graduate
Carolyn Cole-Sinclair	Ambulance Victoria	Team Manager
Chris Collett	Attorney-General's Department - Emergency Management Policy Branch	Assistant Secretary
Craig Huxley	Queensland Police Service	Principal Policy Adviser
Danny Baade	Queensland Police Service	Superintendent
Campbell Darby	Attorney-General's Department – Emergency Management Australia	Director General
Darroch Todd	New Zealand Police	Inspector
David Parsons	Sydney Water - Emergency Management and Security	Manager
David Patterson	Country Fire Authority	Business Continuity Manager
David Reid	Attorney-General's Department - National Security Capability Development Division	Assistant Director
Deryck Taylor	Emergency Management Queensland	Area Director
Edward Bennet	Emergency Management Queensland	Regional Director
Geoffrey Cooper	Army Land Warfare Development Centre	Senior Analyst
Glen Mole	Fire and Rescue New South Wales	Lessons Learned Centre Data Officer
Gregory Howard	Attorney-General's Department - National Security Capability Development Division	Manager
Heather Crawley	Attorney-General's Department - Australian Emergency Management Institute	Manager
Heather Stuart	New South Wales State Emergency Service	Manager Lessons Learned
Jay Caldwell	Department of Prime Minister and Cabinet	Senior Advisor
Jill Edwards	Australasian Fire and Emergency Service Authorities Council (AFAC)	Manager Strategy

Joanne Gielen	Attorney-General's Department - National Security Exercises Section	Senior Capability Coordinator
Joel Williams	Attorney-General's Department - National Security Planning and Review	Graduate
Joseph Buffone	Office of the Emergency Services Commissioner Victoria	Deputy Emergency Services Commissioner
Kevin Pettit	Country Fire Authority Victoria	Operational Manager
Kym Duggan	Attorney-General's Department - National Security Capability Development Division	First Assistant Secretary
Lyn Gannan	Victoria Police	Specialist Response Division
Mark Cuthbert	Attorney-General's Department - National Security Review and Planning	Assistant Director
Mark Searcy	Metropolitan Fire Service South Australia	District Officer
Mark Thomason	Country Fire Service Australia	Operational Officer
Martin Embery	Country Fire Authority Victoria	Planning Officer
Maurice Tauletta	Queensland Rail	Rail Security Exercise Coordinator
Melissa McPhee	Border Protection Command	Manager
Michael Dickinson	Local Government Association of Queensland	Senior Policy Advisor
Michael Eburn	Australian National University	Senior Research
Michael Howard	Attorney-General's Department - National Security Review and Planning	Director
Michael Pahlow	Attorney-General's Department - Counter-Terrorism Capability Development	Assistant Secretary
Michael Shepherd	Metropolitan Fire Service South Australia	Manager – Emergency Management
Michael Tafe	Department of Primary Industries Victoria - Emergency and Security Planning Division	Manager, Emergency Solutions
Monique Kardos	Defence Science and Technology Organisation - Land Operations Division	Senior Human Scientist
Nicholas Hodge	Australian Federal Police	Planning Manager
Param Dogra	Attorney-General's Department - National Security Planning and Review	Senior Capability Coordinator
Paul Margetts	Victoria Police	Inspectorate
Paul O'Halloran	Victoria Police	Detective Inspector
Paul Richards	Australian Defence Force - Joint Operations Command	Directorate of Operational Evaluation
Paul Ryan	Fire and Emergency Services Authority of Western Australia	District Manager
Peter Henningsen	Emergency Management Queensland - Operations Performance	Executive Manager
Peter Koob	Department of Health and Ageing - Office of Health Protection	Director
Robert Flett	Office of the Emergency Services Commissioner Victoria	Senior Reviews and Project Liaison

		Officer
Robert Horridge	Western Australia Police	Senior Policy Officer
Robert Lee	Attorney-General's Department - National Emergency Management Programs	Director
Robert Stevenson	State Emergency Service South Australia	State Emergency Management Planning Officer
Rodney Young	Telstra Corporation Limited	Emergency Response Manager
Rolf Fenner	Australian Local Government Association	Senior Policy Advisor
Rowena Richardson	Emergency Management Queensland	Director
Sachi Wimmer	Department of Prime Minister and Cabinet	Acting National Security Advisor
Sam Hoyle	New Zealand Police	Superintendent
Samantha Andrews	Department of Transport and Main Roads Queensland	Senior Advisor
Scott Holmes	Department of Defence - Army	Operational Officer
Scott Milne	Australian Maritime Safety Authority - Emergency Management Division	Response Manager
Stephen Carter	St John Ambulance Australia	National First Aid Services Manager
Stephen Zsombok	Ambulance Service Queensland	Acting Assistant Commissioner
Steve Brazier	New Zealand Department of Prime Minister and Cabinet - Security and Risk Group	Director
Susan Pritchard	State Emergency Service New South Wales	Research Analyst
Warren Ladgrove	Victoria Police	Senior Sergeant
Wayne Coutts	Emergency Management Queensland	Regional Director
William Gale	Kinglake Ranges Community Recovery Committee	Chair

## Appendix C –lessons identified from Operations

Acronym List for Appendix C			
CT	Counter-terrorism	MOU	Memorandum of understanding
DMT	Disaster management team	NFPOs	Not for profit organisations
EM	Emergency management	NGO	Non-government organisations
EMIS	Emergency management information system	SMEs	Subject matter experts
IMT	Incident management team	WoG	Whole-of-government

The following table is a summary of the lessons and other information gathered during the first two days of the Lessons and Knowledge Management workshop. It represents the synthesis of the broad spectrum of information obtained during the syndicate activities and from the presentations from practitioners:

Major theme: COMMUNICATION		
<i>Sub theme:</i>	<i>Identified issues or realistic actions:</i>	<i>Research:</i>
<b>Social media</b>	Find strategies for managing quantity/quality of information available here	Explore the barriers to agencies using social media
	Push information out, pull information in	Anticipating social media and other communications trends
	Use as a strategy for communicating with community and enabling expectation management	
<b>Contingency plans</b>	Redundancy to combat system failures	



<b>Interagency communication</b>	Interagency exercises and training	
	Develop WoG communication strategy (eg shared briefings, portal for talking points, assist in briefing inputs across agencies, increase 'playtime' in non-competitive interactions [formal or informal], develop greater EMIS compatibility	
	Joint communications plans	
	Encourage forums, meetings, networking	
<b>Language/terminology</b>	Standardise terminology for observations/evaluations/recommendations/analysis etc	
<b>Major theme: COORDINATION AND COLLABORATION</b>		
<b>Sub theme:</b>	<b>Identified issues or realistic actions:</b>	<b>Research:</b>
<b>Relationship development and management</b>	Strengthen regional engagement (NZ)	
	Partnering of organisations/entities and pooling of resources/tools	
	Establish evaluator network to allow continuity and sharing	
	National body/committee to capture and share lessons learned from across the sector	
	Establish agreement of top capability gaps at the state/national level	
	Australia-wide MOUs to facilitate cross-border/jurisdiction mobilisation and operation	
	Improve engagement with NGO sectors	
	Shared and agreed roles/responsibilities and rules of engagement	
	Professional network (connectivity to the right	

	people)	
	Mechanisms to seamlessly share information to enable development and maintenance of a common operating picture	
	A means of connecting strategic and operational coordination systems	
<b>Major theme: CULTURE</b>		
<b>ORGANISATIONAL CULTURE</b>		
<b>Sub theme:</b>	<b>Identified Issues or Realistic Actions:</b>	<b>Research:</b>
<b>Trust/openness</b>	Reluctance to share lessons that might be perceived as negative (lack of openness/trust)	Strategies to overcome trust barriers
	Policy (security) barriers to information sharing between agencies	
<b>Blame</b>	Fear of mistakes under pressure (inquests, coronials, inquiries) when working in a high stress operational environment (blame culture)	
<b>Resistance to change</b>	Mechanisms to develop open relationships between agencies that extend beyond the individual/personal level	
	Overcoming resistance to change that stems from entrenched attitudes/beliefs	
<b>Emotional buy-in</b>		
<b>SOCIAL</b>		
<b>Sub theme:</b>	<b>Identified issues or realistic actions:</b>	<b>Research:</b>
<b>Expectations</b>	Culture of dependence on handouts and EM services during and after disasters	Investigate how communities act without guidance
	Managing expectations of public	

Resilience	Creating awareness of risk and responsibility	
	Fostering resilient community	
POLITICAL		
Sub theme:	Identified issues or realistic actions:	Research:
Interference	Politicians 'being seen' in operational environments or during crises	
Expectations	Unrealistic expectations of data and information during and after crisis	
Major theme: TRAINING AND DEVELOPMENT		
Sub theme:	Identified issues or realistic actions:	Research:
	Establish strategic program to develop commanders and disaster management team (DMT) members in a cross-agency model	
	Targeted and meaningful EM training for level 1, 2 and 3 incidents	
	Consistent applications of training standards for EM personnel across all agencies (eg AIIMS and interoperability) means protocol interoperability across agencies (ie common certification for all EM managers)	
	Improved training and development of command, control and coordination in IMTs (training, test and evaluation) across agencies (WoG command training)	
	Permanent dedicated lessons teams in agencies	
	Cross agency/cross jurisdiction collaborative training exercises	
Major theme: INFORMATION MANAGEMENT		

In general:		
	Disparate systems (processes and tools) in place to store and manage (potentially incompatible) across agencies – want shared tools	Real time analysis during disasters to enable immediate learning loop (relevant to the areas of capture, analysis and dissemination)
	Databases not used by intended users	
	Training in systems and processes involved in information management	Potential for integration of CT and EM information
	Better understanding of user requirements	
	Information classification and how to manage this	
	Ownership of information (vs. custodianship)	
	Interaction between information capture mediums in terms of compatibility and user friendliness	
	Forecasting trends in tool use and preferences (may be cost or characteristic based)	
	Resources and funding are required to facilitate information management tools and processes (eg. staff, equipment, etc)	
	Processes (eg. how things are done)	
Sub theme:	Identified issues or realistic actions:	Research:
Capture	Timely, useful accurate information management	
	'Shareable' and relevant information and processes	
	Sources (depend on the context of the information needs)	
	Methods of capture (depend on what information is needed and what sources there are)	
	Adequate to meet the needs/reporting requirements	
	Participative processes (interactive)	
	Intelligence gathering	

Analysis	Sourcing / identifying analytical experts	
	Academic/operational SMEs	
	Tailored analysis	
	Qualitative vs. quantitative	
	Validation of information/intelligence	
Management	Classification impacts how information is managed (access)	
	Retrieval of information	
	Stored in well-structured, user friendly way	
	Appropriate search capability (eg by word/theme/capability/etc)	
	Consistent framework across agencies and jurisdictions	
Dissemination	Engaging users	
	Classification/access	
	Synthesis of relevant information and a format to suit the audience needs	
	Tracking the use of the information	
	Validating the utility of the information	
Tools (eg blogs, wikis, social networks and media, IT and other equipment, portals, databases, video, photos, etc)		
Capture	Quantitative and qualitative information	
	User friendly	
	Training in the use of equipment/tools	
	Adequate to meet/user requirements	
	Interaction between information capture mediums (compatibility, user friendliness)	
	Facilitate interaction	

Analysis	To support human analysts	
	Training in tool use	
	Standardisation across agencies	
Management	Classification impacts how information is stored/moved (access)	
	Search capacity and capability (ease of use)	
	Meeting user requirements	
Dissemination	AEMI Knowledge Environment	
	Identifying preferred interfaces for obtaining information (leverage off these), such as face-to-face, social media, repositories, etc	
	Templates for ensuring consistent format (explicit requirements for users)	
Major theme: RECOVERY		
Sub theme:	Identified issues or realistic actions:	Research:
	Changes to tax and charity laws to assist distribution of post-disaster funds	
	Clarify roles and processes for oversight of recovery and agencies involved in recovery and developing collaborative procedures/policies on integrated response to community needs	
	Adapting bureaucratic processes to suit the progress of the community in the recovery phase (eg timelines)	Research models of community recovery
	Distinguish lines of difference for agencies involved in both response and recovery (and identify areas of overlap)	Clarification of response vs. recovery
	Consider the implications of investigation processes on recovery	Impact of response on long term recovery

Major theme: EVALUATION		
Sub theme:	Identified issues or realistic actions:	Research:
	Develop user-friendly and engaging repositories for storing, sharing, managing, tracking and discussing lessons (identified or learned) and methods	
	Establish an evaluators network/forum (could be part of/leverage off the above) eg a knowledge hub	
	Development of agreed national standard for evaluation methods and tools, and ensure buy-in	
	Shifting negative perceptions of evaluation that have resulted from the entrenched 'culture of blame'	
	Understanding of evaluation from various perspectives: exercises, training, courses, programs, capabilities, etc	
	Reporting outcomes and managing reporting must be in a useable format	
	Established process for monitoring, tracking and managing outcomes	
	Training and development of evaluators (in terms of the overall evaluation capability) and evaluation coordinators/leads/managers	
	Strategies to retain corporate evaluation (and other) expertise	
	Establish evaluation culture as well as a capability within and across agencies	
	Link evaluation outcomes to national gap analysis, priority identification and risk assessment	
Major theme: MEDIA		

<b><i>Sub theme:</i></b>	<b><i>Identified issues or realistic actions:</i></b>	<b><i>Research:</i></b>
	<p>Managing political and media thirst for information (particularly during crisis)</p> <p>Strong, clear public messaging from politicians (eg. managing expectations and public perceptions of what the available level of information means)</p> <p>Ministers/ministerial staff: training in managing media and preparing and delivering public messages (even when they are difficult or unpopular)</p> <p>Ministerial staff training in briefing and developing talking points for ministers</p> <p>Need media specific exercises to test management of media and ministerial responses</p> <p>Using media and social media as a source of data/information</p> <p>Developing and maintaining productive relationships with the media (long term, not only during crises)</p>	
<b>Major theme: LEGAL</b>		
<b><i>Sub theme:</i></b>	<b><i>Identified issues or realistic actions:</i></b>	<b><i>Research:</i></b>
	<p>Implications of old legislative decisions on the current EM context (eg land use planning)</p>	
		<p>What are the implications of royal commissions and inquests on operational decision making and overall operational effectiveness, as well as community expectations, ie are the outcomes of inquiries and other formal reviews leading to better operational practice?</p>



	<p>Pre-activity – legislation/policy</p> <p>During activities - practice/operations/situation awareness</p> <p>Post activities – Coronials/royal commissions &gt;litigious</p>	<p>Understand the contradiction/gaps/overlap in legislation relating to EM across jurisdictions</p> <p>Explore legislative models for enabling open disclosure (eg the medical field)</p> <p>Relationship between findings emerging from/likely to come from coronial inquests/reviews and the lack of resourcing to have previously addressed these</p>
<b>Major theme: RESOURCING</b>		
<b>Sub theme:</b>	<b>Identified Issues or Realistic Actions:</b>	<b>Research:</b>
	<p>Resourcing the sustainment of change resulting from recommendations (arising from inquiries, coronials, reviews, etc)</p> <p>Cost-benefit analysis of disaster response vs. mitigation strategies implemented at the preparation phase or before (i.e. costing business cases for disaster mitigation)</p> <p>Funding constraints</p>	
	<p>More effective partnering and pooling of resources between agencies</p> <p>Keeping track of resources during disasters (eg helicopters, cars, etc)</p> <p>Managing organisational fatigue during major disasters – this relates also to external support (pooled resources) and business continuity (eg during concurrent disasters when all staff/volunteers in an agency/jurisdiction are affected)</p>	<p>Explore strategies for pooling of resources across agencies/jurisdictions</p>

Major theme: PUBLIC INFORMATION / EDUCATION		
Sub theme:	Identified Issues or Realistic Actions:	Research:
	Expectation management – realism about response capabilities	
	Tapping into AEMI work on developing communication strategy resulting from the national strategy on disaster resilience	
	Educating households in terms of their responsibility to plan for disaster management – ongoing campaigns	Investigate more effective methods
	Use of the NFPOs and community groups for reaching and delivering messages to targeted groups	
	Communicating risk	
	Capitalising on the early engagement of communities (before the disaster hits)	
Major theme: LEADERSHIP AND COMMAND		
Sub theme:	Identified Issues or Realistic Actions:	Research:
	Mentoring programs to develop new leaders and capture organisational knowledge (succession planning)	
	Making decisions under pressure is impacted by the current culture	
	Situational leadership – adaptability needs to be developed	How to train adaptable leaders
	Importance of trust relationships between leaders and their people – enhanced through exercises and	

	training	
	Expectation management in terms of public and politician expectations of leaders in crises	
	Preparation for leaders to be the public face of the disaster response effort	
	Sponsorship and championing change	
Major theme: GOVERNANCE		
Sub theme:	Identified Issues or Realistic Actions:	Research:
	Gaining high-level buy-in	
	High level collaboration of (eg) NCTC, NEMC, AHPC, NBC,COAG etc to enhance the all-hazards approach	
	Potential for a national body to oversee and drive the agenda and ensure the consistency of national guidelines	

## Appendix D –managing knowledge and lessons

GOVERNANCE	
<i>Elements</i>	<ul style="list-style-type: none"> <li>• national committee as single overseeing body eg COAG-SCPEM (national Security Body)</li> <li>• need to form national standards/guidelines to drive agenda</li> <li>• measures of success</li> </ul>
<i>Barriers</i>	<ul style="list-style-type: none"> <li>• jurisdictional/organisational independence</li> <li>• government need to learn lessons and pass them on</li> <li>• ‘covering your back’ attitude</li> <li>• existing investment in current process</li> <li>• NCTC/NEMC ownership</li> </ul>
<i>Enablers</i>	<ul style="list-style-type: none"> <li>• a champion/sponsor at national level</li> <li>• this workshop</li> <li>• being made a priority by committees</li> <li>• existing investments demonstrating outcomes</li> <li>• engagement of non-government organisations and industry – should have representation on national committee</li> </ul>
<i>Potential options</i>	<ul style="list-style-type: none"> <li>• developing a business case for governance framework</li> <li>• identify lead agency to drive</li> <li>• reconvene this group</li> <li>• develop draft framework/guidelines in interim</li> </ul>
<i>Areas for further research</i>	<ul style="list-style-type: none"> <li>• environmental scan</li> <li>• international guidelines</li> <li>• examples from industry etc - (medical, OH&amp;S, aviation)</li> </ul>
CULTURE	
<i>Elements</i>	<ul style="list-style-type: none"> <li>• leadership</li> </ul>

	<ul style="list-style-type: none"> <li>• belief</li> <li>• relationships</li> <li>• federal/state/local government and the community</li> </ul>
<i>Barriers</i>	<ul style="list-style-type: none"> <li>• no drivers for lessons learned</li> <li>• fear of change (loss of jobs/family/etc)</li> <li>• lack of experience</li> <li>• hierarchies</li> <li>• lack of resources</li> <li>• group think</li> <li>• blame culture</li> <li>• lack of trust</li> <li>• ‘nothing ever changes’, cynicism</li> <li>• organisational maturity – risk averse, operationally focused</li> <li>• no perceived benefits/no way to measure success</li> <li>• cover your back culture</li> <li>• legal issues (fear of formal enquiries)</li> <li>• not enough time, “it’s all too hard” - conflicting pressures.</li> </ul>
<i>Enablers</i>	<ul style="list-style-type: none"> <li>• sponsorship (highest level) national leadership</li> <li>• stories</li> <li>• performance</li> <li>• accountability framework to measure</li> <li>• relationships/trust (organisational transparency) internally and across agencies</li> <li>• communication</li> <li>• what’s in it for me? Save dollars!</li> <li>• utilise competitiveness (participate or perish)</li> <li>• “walk the talk” modelling behaviour</li> <li>• attitudinal change – it’s not necessarily too hard.</li> <li>• protective legislation</li> <li>• publishing successes</li> </ul>

	<ul style="list-style-type: none"> <li>• feedback loops so people see it's made a difference.</li> <li>• capability within the organisation for change methodology</li> </ul>
<i>Potential options</i>	<ul style="list-style-type: none"> <li>• national workshop/s &amp; joint exercises</li> <li>• network KM/LL</li> <li>• GovDex or similar capability to share/inform</li> <li>• influencing people through their workflow</li> <li>• pulse check on organisation. evaluating learning organisation readiness.</li> <li>• measuring organisational culture - 360 evaluations.</li> <li>• identify and establish sponsors &amp; champions</li> <li>• start simple - small wins.</li> <li>• share stories via "Wiki"/other</li> <li>• best practice of other organisations. What do others do that works?</li> </ul>
<i>Areas for further research</i>	<ul style="list-style-type: none"> <li>• influence content of academic programs to prepare new people for incorporation into culture</li> <li>• benchmark successful organisations</li> <li>• best practice in change management</li> </ul>
<b>EXTERNAL NATIONAL SHARING</b>	
<i>Elements</i>	<ul style="list-style-type: none"> <li>• systems approach – people, organisation, systems, training, equipment and doctrine.</li> <li>• dynamic top-down and bottom-up.</li> <li>• functional mechanism/scalable framework (local/ state/national/international)</li> <li>• taxonomy/glossary/metadata</li> <li>• scope – whole of spectrum PPRR environment, NOT merely response</li> </ul>
<i>Barriers</i>	<ul style="list-style-type: none"> <li>• scale, funding, political will, agency, buy-in</li> </ul>
<i>Enablers</i>	<ul style="list-style-type: none"> <li>• use of existing structures (existing bodies, structures and systems)</li> <li>• political need (commissions of inquiry/increasing events)</li> <li>• consistency of work completed by other stakeholders</li> </ul>

	<ul style="list-style-type: none"> <li>• champion and implementer</li> <li>• Disaster Resilience Centre of Excellence</li> </ul>
<i>Potential options</i>	<ul style="list-style-type: none"> <li>• high-level governance</li> <li>• SCPEM/NEMC</li> <li>• literature review</li> <li>• baseline glossary</li> </ul>
<i>Areas for further research</i>	<ul style="list-style-type: none"> <li>• literature review – nodes analysis (what exists), options for frameworks (what is out there) and glossary (available definitions), review of past research and analysis (what has already been done)</li> </ul>
<b>INTERNAL CAPABILITY DEVELOPMENT</b>	
<i>Elements</i>	<ul style="list-style-type: none"> <li>• clarity of objectives; command and management – governance (including accountabilities, classification, sensitivity and security); personnel – individual training, recruitment etc; major systems – info management; support; supplies; facilities that can support information management, including physical security; collective training (internally); tools; organisational culture; sponsor and champion; demonstrate cost benefit; opportunities for external partnerships (interoperability) – connectivity with other agencies; measurements for success</li> </ul>
<i>Barriers</i>	<ul style="list-style-type: none"> <li>• organisational culture (biases); organisations don't generally maximise/utilise full value of a person's skills, experience and capability</li> <li>• attitudes and psychology of individuals</li> <li>• resource limitations (financial/staff)</li> <li>• leadership existing attitudes</li> <li>• ageing population – potential loss of experience</li> <li>• failure to accept and support outputs of evaluation processes</li> </ul>
<i>Enablers</i>	<ul style="list-style-type: none"> <li>• tools and systems</li> <li>• outcomes from this workshop</li> <li>• networks and relationships</li> <li>• organic learning processes within own organisations</li> </ul>

	<ul style="list-style-type: none"> <li>• new people and unbiased thinking (opportunity to influence culture)</li> <li>• communications strategies</li> <li>• language – glossary of terms</li> <li>• metadata schemas – know what format to share information in</li> <li>• robust validation and QA model</li> <li>• Emergency Managers are resourceful</li> </ul>
<i>Potential options</i>	<ul style="list-style-type: none"> <li>• environmental scan within own organisation: <ul style="list-style-type: none"> <li>• assess the environment, including appetite for this</li> <li>• existing systems, processes or like mind people</li> <li>• review existing skills sets</li> </ul> </li> <li>• engage management and find an organisational sponsor</li> <li>• describe what a lessons/knowledge management system may look like within your organisation</li> <li>• identify available resources</li> <li>• identify specialist expertise for future recruitment</li> <li>• suck the brains of the oldies</li> <li>• include KM processes in organisational induction</li> <li>• establish relationships and network with external bodies, organisations or lessons managers</li> <li>• establish a training framework and programme (possibly common to others as well)</li> </ul>
<i>Areas for further research</i>	<ul style="list-style-type: none"> <li>• social/professional network analysis (nodes within organisation) to identify opportunities to improve knowledge flow within the organisation</li> <li>• identify external lessons management capabilities and opportunities</li> </ul>
<b>OPERATION, EVALUATION AND REVIEW</b>	
<i>Elements</i>	<ul style="list-style-type: none"> <li>• national oversight committee</li> <li>• sponsors and champions within agencies/NGOs etc</li> <li>• strategic level doctrine</li> <li>• objectives – scope parameters</li> <li>• methodology (eg third party review, how are we going to do this)</li> <li>• tool – aide memoire, check list, templates, reporting process</li> </ul>



	<ul style="list-style-type: none"> <li>• by type of event</li> <li>• national data analysis and management</li> <li>• scalability</li> <li>• structure</li> <li>• panel of “evaluators” including: subject matter experts, process experts</li> <li>• training of evaluators – conducting evaluations, managing evaluations, analysis</li> <li>• buy in/acceptance</li> <li>• validation/moderation, review of recommendations</li> <li>• communication strategy – language, taxonomy</li> </ul>
<i>Barriers &amp; enablers</i>	<ul style="list-style-type: none"> <li>• communication Strategy – benefit plan (E)</li> <li>• timings of debriefs (B&amp;E)</li> <li>• structure/framework (B&amp;E)</li> <li>• organisational culture/maturity (B&amp;E)</li> <li>• objectives – clarity (B&amp;E)</li> <li>• bias, Cover your back (B)</li> <li>• training of evaluators (E)</li> <li>• secondary/concurrent investigations or reviews (B)</li> <li>• funding (B)</li> <li>• language, taxonomy (B)</li> <li>• leadership (B&amp;E)</li> <li>• cross jurisdictional (B)</li> </ul>
<i>Potential options</i>	<ul style="list-style-type: none"> <li>• gain agreement on a national approach across the EM spectrum; key stakeholders</li> <li>• establish oversight committee</li> <li>• determine methodology</li> <li>• training – competencies/skill sets (for assessors)</li> <li>• framework</li> <li>• scope</li> <li>• workshops</li> <li>• influence cultural behaviour – modify work flows, tools, forums</li> </ul>

	<ul style="list-style-type: none"> <li>• establish networks of key players across EM</li> <li>• environmental scan</li> </ul>
<i>Areas for further research</i>	<ul style="list-style-type: none"> <li>• consistent with legal and international requirements/standards</li> <li>• bench mark across EM world, tools and doctrine</li> <li>• identify key players and how they interact, network</li> <li>• coroners findings and other reviews</li> </ul>
<b>TOOLS</b>	
<i>Elements</i>	<ul style="list-style-type: none"> <li>• observation/lesson collection templates</li> </ul>
<i>Barriers</i>	<ul style="list-style-type: none"> <li>• interoperability</li> <li>• inability to extract 'common' data to enable analysis</li> <li>• language barriers</li> <li>• lack of common framework</li> </ul>
<i>Enablers</i>	<ul style="list-style-type: none"> <li>• many common elements across existing EM organisations</li> <li>• leverage off like minded organisations</li> </ul>
<i>Potential options</i>	<ul style="list-style-type: none"> <li>• common training: (propagate common terminology and fundamentals of lesson collection that enables interoperability of the observations)</li> <li>• common framework ('language' and meta-data)</li> </ul>
<i>Areas for further research</i>	<ul style="list-style-type: none"> <li>• how has this been done successfully in Australia or internationally?</li> <li>• how to address cultural issues/change in an EM organisational context</li> </ul>

## Appendix E – Collation of research needs

### Research needs identified from part one - Lessons identified from operations

#### Public information

- Literature review examining public information strategies in disasters including:
  - Best practice and barriers to agencies using social media
  - Other public information and communications trends

*No need for dedicated research at this stage as multiple projects examining these issues is underway.*

#### Community

- Literature review examining engaged and resilient communities including:
  - Self-organising actions of communities

*Foundational basis required before further work to better scope gaps*

#### Organisational culture

- Literature review and qualitative research to examine strategies to build and reward trust

#### Political/official inquiries

- Qualitative research to examine whether the outcomes of inquiries and other formal reviews are leading to better operational practice?
  - Relationship between findings emerging from/likely to come from coronial inquests/inquiries and the lack of resourcing to have previously addressed these
  - Models for enabling open discourse and disclosure after events

#### Recovery

- Literature review and qualitative research to examine the impact of response on short and long term recovery

**Resourcing**

- Literature review and qualitative research examining whether current strategies for pooling of resources across agencies/jurisdictions are leading to better outcomes?
  - Barriers—contradictions/gaps/overlap in legislation/policy/procedures across jurisdictions

**Education**

- Literature review and qualitative research examining educational options to aid in the development of innovative, creative, adaptable leaders

**Research needs identified from part two - Managing Knowledge and Lessons****Governance/knowledge management systems**

- How effective are knowledge/lessons management models being used domestically and internationally?
  - environmental scan
  - international guidelines
  - examples from industry etc - (medical, OH&S, aviation)
  - real time analysis during disasters to enable immediate learning loop (relevant to the areas of capture, analysis and dissemination)
  - literature review – Nodes analysis (what exists), options for frameworks (what is out there) and glossary (available definitions), review of past research and analysis (what has already been done)
  - social/professional network analysis (nodes within organisation) to identify opportunities to improve knowledge flow within the organisation
  - benchmark successful organisations
  - best practice in change management
  - enculturation.

**Operational evaluation and review**

- Is the current evaluation framework and methodology leading to better operational practice?
  - Is evaluation consistent with legal and international requirements/standards
  - Benchmark across EM world, tools and doctrine
  - Identify networks and relationships
  - Impact of coroners findings and other review

*Intentionally left blank*

