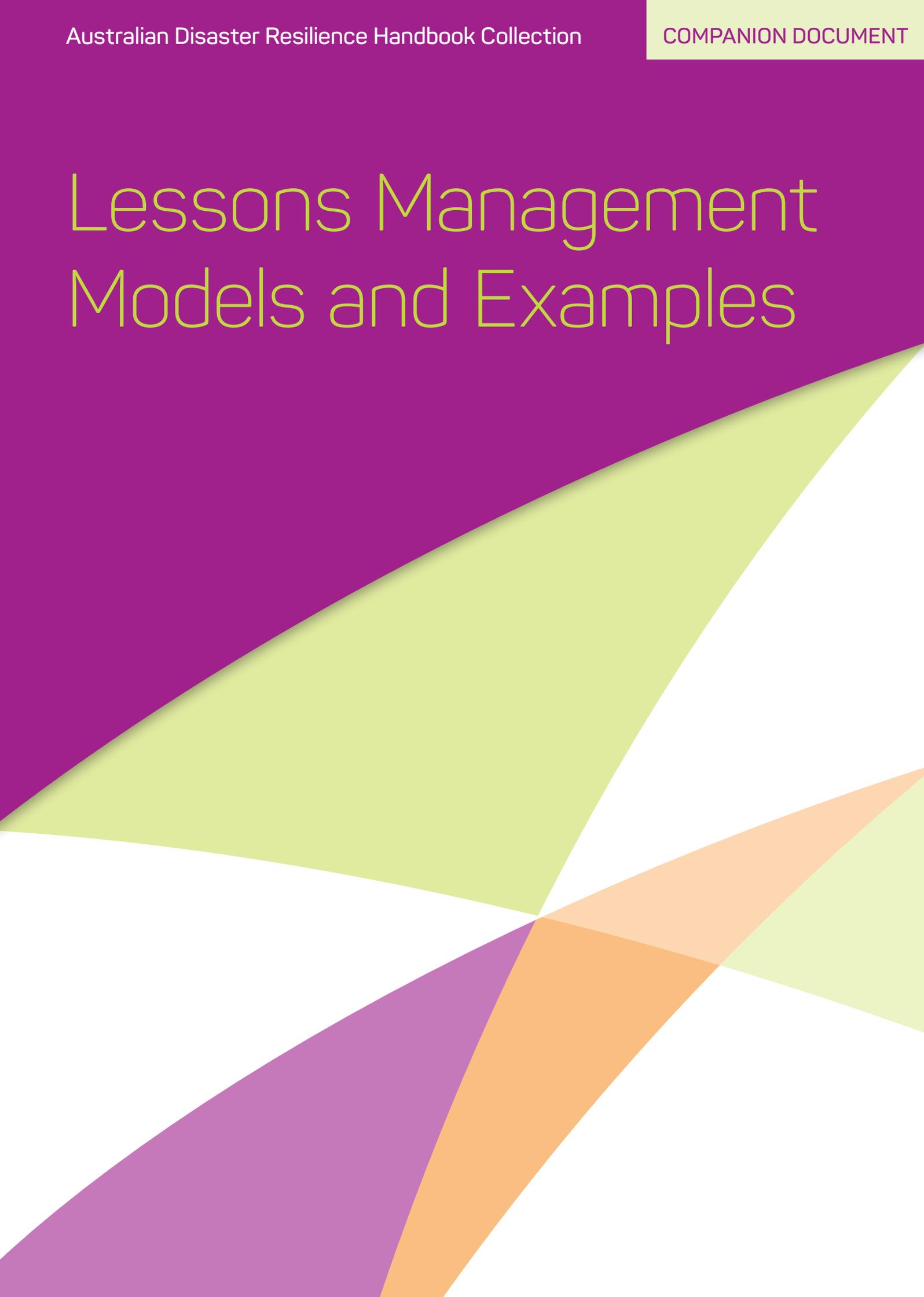


Lessons Management Models and Examples

The background of the cover features a series of overlapping, semi-transparent geometric shapes. A large purple triangle is at the top left. Below it, a light green triangle overlaps the purple one. Further down, an orange triangle overlaps the light green one. At the bottom, a purple triangle overlaps the orange one. The overall effect is a dynamic, layered composition of colors.

This collection of lessons management models and examples accompanies the Lessons Management Handbook (2019) in the Australian Disaster Resilience Handbook Collection. It is available as an online resource on the Australian Disaster Resilience Knowledge Hub: www.knowledge.aidr.org.au/resources/lessons-management-handbook/

The models and examples in this companion document are provided to prompt reflection on ideas and approaches to lessons management in practice.

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1 – Lessons Management maturity matrix

This matrix has been developed to assess the level of maturity of the agency in relation to SACFS lessons management framework

Level of maturity	Basic	Developing	Established	Leading
	Ad hoc use of lessons management process. Not systematically applied.	Some systematic application and commitment. Reactive.	Lesson management applied systematically across the agency.	Using lessons management to identify emerging risks. Proactive.
Governance and strategy				
Structure Doctrine is developed that clarifies roles, responsibilities and reporting requirements.	<input type="checkbox"/> Doctrine for LM is not developed.	<input type="checkbox"/> Doctrine to support LM has been developed.	<input type="checkbox"/> Doctrine for LM is disseminated and understood by those who need to implement or comply.	<input type="checkbox"/> Doctrine has been implemented, reviewed and improved.
Leadership Senior managers promote, reinforce and prioritise LM throughout the agency through supportive behaviour and active engagement.	<input type="checkbox"/> Senior managers do not promote sharing or the use of LM in the organisation. There is little vision or understanding of LM goals.	<input type="checkbox"/> Champions are recruited. Senior managers create organisational awareness of value of LM.	<input type="checkbox"/> LM vision and goals are understood and promoted strongly across the agency by senior managers and champions. They provide staff with support to monitor and progress lessons.	<input type="checkbox"/> Senior managers actively pursue lessons for decision making and prioritise resources for business planning. They reward staff for sharing and use of LM in their work.
Culture There is a just and blame free environment for LM which encourages innovation and embrace mistakes as an opportunity to improve.	<input type="checkbox"/> Inconsistent application of LM. Value is queried.	<input type="checkbox"/> Value of LM is acknowledged but resourcing is limited. Challenging current practices is limited. Individuals don't feel empowered or safe sharing lessons.	<input type="checkbox"/> Some challenging of current practices. Occasional innovative ideas proposed. Value of LM widely acknowledged.	<input type="checkbox"/> Everyone values LM and knows how and where it can contribute to success. Innovative ideas often proposed. Individuals use opportunities and feel safe sharing and using lessons in their work.
Accountability The ability to allocate action to individuals or teams, given priority and monitor the progress of actions and lessons is proactively managed by a responsible group.	<input type="checkbox"/> No group identified to develop lessons and allocate actions. Individuals work on LM.	<input type="checkbox"/> Group identified to lead implementation of lessons and actions. Group is participating in discussions and meetings.	<input type="checkbox"/> Group is allocating tasks, monitoring progress and prioritising resources.	<input type="checkbox"/> LM is part of group's individual workplans. Group promotes the value and proactively manages tasking, monitoring and resourcing LM.
Methodology and standards				
Process A process exists for systematic sourcing, collecting, analysing and sharing data from within and across agencies.	<input type="checkbox"/> Process does not exist. Ad hoc and inconsistent process used.	<input type="checkbox"/> Process exists but not widely disseminated or applied.	<input type="checkbox"/> Process is applied using standard methodology most of the time.	<input type="checkbox"/> Process is embedded across the agency and systematically applied utilising the agreed methodology on a routine basis.

Level of maturity →	Basic	Developing	Established	Leading
↓ Element	Ad hoc use of lessons management process. Not systematically applied.	Some systematic application and commitment. Reactive.	Lesson management applied systematically across the agency.	Using lessons management to identify emerging risks. Proactive.
Engagement and communication				
Engagement and communication Sharing within and across agencies is systematic and broad, resulting in the best information being available to decision makers.	<input type="checkbox"/> Dissemination occurs through enthusiastic individuals who use their networks. Not acknowledged or resourced.	<input type="checkbox"/> Some systematic dissemination occurs to 'end-users' but not linked to organisational processes. Pockets of people 'in the know' but limited engagement. Dissemination is often one-way.	<input type="checkbox"/> Active and widespread engagement in learning activities and application of lessons. Occurs across agencies and occasionally occurs outside of sector.	<input type="checkbox"/> Proactive engagement within and between agency personnel. Widespread participation in integrating lessons into multiple aspects of business. Extensive internal and external engagement.
Capability and planning				
People There are skilled and committed personnel across the agency.	<input type="checkbox"/> Personnel bring prior skills and find own professional development. Limited interest in building LM skills.	<input type="checkbox"/> Personnel have LM in role statements. Limited support for LM by managers. Some interest in building skills.	<input type="checkbox"/> LM practices embedded in many role statements. All have opportunity to build LM skills.	<input type="checkbox"/> Training and exercising program is implemented, reviewed and refined. Training resources are available and reviewed regularly. Agency drives agenda and programs for interagency and national LM forums.
Training and exercising Personnel are trained and skilled via a structured training program and the agency actively participate in interagency and national forums.	<input type="checkbox"/> Training and exercising in LM does not occur, needs are not identified. Agency is unaware of interagency and national LM forums.	<input type="checkbox"/> Training and exercising needs are identified, activities occur on an ad hoc basis and resources are not readily available. Agency is aware of interagency and national LM forums and occasionally attend.	<input type="checkbox"/> Training and exercising needs are documented in a structured program. Activities occur in accordance with the program with resources read and occur and resources are developed and available. Agency regularly participates in interagency and national LM forums.	<input type="checkbox"/> Personnel willing and skilled in LM process. Personnel openly share and use LM skills to continually improve operational efficiency.
Technology Tools are developed and maintained that support collection, storage and sharing of lessons. They are widely used by personnel.	<input type="checkbox"/> No tools developed or they sit on the shelf. Passionate individuals use them but tools disappear when they leave.	<input type="checkbox"/> Products are one-off and tied to a specific project. Experience of their use is often short-lived and organisational memory of utilisation is partial. Utilisation not sustained.	<input type="checkbox"/> Tools in place to monitor, review and evaluate lessons. Products are user friendly, fit for purpose and easily accessible, widely known and actively used.	<input type="checkbox"/> Active engagement in testing and prototyping of tools. Widespread knowledge and use. Tools further developed and there is application beyond the organisation and/or sector

Source: reproduced with permission from South Australia Country Fire Service.

2 – Twelve keys to a collaborative organisational culture

Building collaboration requires strong leadership and depends on trust, communication, and a shared vision and purpose. Collaboration is not a vague aspiration but a measurable value that can be developed through training, not only leaders and high-potential employees, but every employee across the organisation. Doing this requires a strategy.

'Without a strategy and a roadmap that articulates clear goals, employees will have plenty of good intentions, but will fail to act on them.'

Underpinning the strategy are 12 key tenets:

Lead by example. In highly collaborative organisations, leaders use and demonstrate collaboration tools and strategies and encourage employees at all organisational levels to do the same.

Focus on individual and organisational benefits. Highly collaborative organisations communicate to employees about how they will personally benefit from a collaborative environment; how it will improve their lives, make their jobs easier and take the organisation to the next level.

Emphasise behaviour and strategy before technology. Highly collaborative organisations formulate a strategy (the 'why' and 'how' of collaboration for their organisation) before rushing to buy the latest collaboration platform. The technology should support the strategy.

Learn how to get out of the way. Leaders and managers in highly collaborative organisations understand that micromanaging stifles collaboration. Best practices and guidelines are fine, but let employees do their work, their way. Empower employees.

Give employees a voice. In order for someone to feel like they have a voice, they have to have a platform and be acknowledged. This is a simple idea but gets lost quickly at the speed of business.

Integrate collaboration into organisational workflow. Collaboration should not be viewed as another competency that must be incorporated into an employee's skill set. It should be integrated into all aspects of their work.

Create a supportive environment. Collaboration and teamwork should be rewarded. For example, make a percentage of an employee's bonus tied to how well he or she collaborates with others.

Examine behaviours the organisation is rewarding. Highly collaborative organisations focus on metrics that align different business units.

Practice persistence. Collaboration should not be confined to teams, employee levels, or pilot programs. Highly collaborative organisations make collaboration a corporate-wide initiative.

Adapt and evolve. Highly collaborative organisations recognise that collaboration is a perpetual state in their organisations and adapt and evolve as needed.

Recognise that employee collaboration benefits your customers. Happy employees are better performing employees and this translates into more satisfied, happier customers.

Acknowledge that collaboration generally makes the world a better place. Highly collaborative organisations recognise that collaboration lowers stress, increases retention and loyalty, and improves the bottom line.

Source: White Paper from UNC Kenan-Flagler Business School Kip Kelly Director, UNC Executive Development and Alan Schaefer, Founder/CEO Banding People Together.

3 – Examples of communication products

South Australian Country Fire Service *Operations Bulletin, Traffic Management*



Key Messages

- SACFS incident controllers are responsible for determining road closures
- Tiered Road Closure must be used to clearly inform other stakeholders of the status of road closures
- Incident Maps should contain the markings showing the tiered closure and access
- Road closure information is available on the DPTI and SA Police websites

A number of observations from incidents and exercises this year indicate that the understanding of the processes relating to managing traffic at incidents could be enhanced. This *Operational Bulletin* was issued to inform SACFS personnel of processes that will be used during emergencies. The *Management of Road Guidelines* was recently updated and has been distributed to SACFS personnel.

Observations from last year's incidents indicate that the tiered road closure approach was not implemented or understood and that personnel thought that other agencies were responsible for determining which roads were to be closed.

Responsibilities for road closures

Control agency (SACFS during bushfires)

The control agency is responsible for:

- determining the need for a road closure
- implementing the road closure by utilising their own resources if South Australia Police (SAPOL) are not present at the emergency, in line with SACFS SOP 2.11 Safety on Roads
- contacting SAPOL to ensure attendance to support the road closure

- providing ongoing advice to the SAPOL liaison officer relative to road closures in place and future needs for closures or potential openings of roads
- providing predictive information as to the nature and scope of the emergency to allow for ongoing planning by SAPOL
- advising SAPOL as to the appropriate tier of road closure to be applied
- advising SAPOL of any changes that can be made to the tier of road closure
- advising SAPOL of changes in locations of road closure
- advising SAPOL when road closures can be removed
- providing information to the community as part of the Public Information and Warnings requirements of the state emergency management plan.

Who decides on and manages the road closures?

The incident controller consults with various emergency service personnel and people who know the area well to decide where to establish road closures. Police will coordinate road closures and may delegate responsibility to other agencies such as the local council, DPTI, SES or SACFS.

Tiered access system

The control agency may develop and release maps showing the status of roads affected by the emergency.

Tiered access system:

1. **RED:** emergency services only.
2. **ORANGE:** essential services assessment and restoration activities, media with an escort.
3. **YELLOW:** bona fide resident or land owner returning to actively protect or defend property, media.
4. **GREEN:** residents, relief and recovery services.
5. **NO COLOUR:** road open.

When are road closures set up?

Road are closed when there are risks to the community such as:

- dangerous trees which may have been burnt or partially burnt and may be unstable
- power lines that have been brought down or may be brought down, these should be considered live
- road conditions
- potential for a fire to flare up
- high water across the road
- unstable ground
- wandering stock or animals
- smoke which may reduce visibility
- emergency service vehicles and personnel working and moving through the area.

Mapping of road closures

Mapping products may be developed using the symbols illustrated below to show roads affected by closure and assist other stakeholders to understand access and the risks involved. SACFS personnel need to be aware of these marking as they may appear on incident maps.

Symbol	Level of closure
	Road closure – Tier 1
	Road closure – Tier 2
	Road closure – Tier 3
	Road closure – Tier 4
	Road closure – Opened
	Road closure – Planned

Reopening of roads

The SACFS as the control agency will liaise with all key stakeholders such as DPTI, local councils, BOM and police to assist them in understanding residual risks before deciding to reopen any roads. During major fires a more formal process as described in the Traffic Management Sub Plan may have to be undertaken by the control agency or incident controller.

Are residents and media allowed in?

Bona fide residents are generally permitted access at Tier 4 if they have ID showing their address.

At Tier 3, residents wanting to protect their homes or check on their stock will be granted access on production of ID showing proof of their residency.

Farmers in particular need to access their properties as soon as possible to check:

- stock conditions
- fences
- damage to farm
- move produce to markets
- feed stock.

Farmers and business owners can expect more consideration of local knowledge in the development of return to home guidelines to prioritise the assessment and reopening of roads.

Residents provided with early access are likely to be required to meet minimum safety requirements including appropriate clothing, communications devices, vehicle and equipment.

Media are permitted in at Tier 2 if they are escorted and can access the incident area unescorted at Tier 3.

How do I find out if roads are closed?

Road closures will be displayed through social and other media sources, incident action plans and maps, government websites and community meetings.

Road closure information is available from:

- SAPOL
- Country Fire Service SA
- DPTI
- 891 Adelaide ABC radio.

References:

1. www.sacfsvolunteer.org.au/site/operational/cfs_operational_doctrine_library/section_02_safety_personnel_and_welfare/sop_211_safety_on_roads.jsp
2. www.dpc.sa.gov.au/what-we-do/services-for-government/security-and-emergency-management/state-emergency-management-plan
3. www.cfs.sa.gov.au/site/warnings_and_incidents/managing_road_closures_during_emergencies.jsp

Access tier summary

Access tier	Risk information	Access Control agency may authorise access for specific access and impose restrictions	Identification or authorisation
Tier 1 Emergency services only	<ul style="list-style-type: none"> Designated area or road likely to be impacted by emergency Access/egress route blocked and/or danger of hazardous trees, etc. Risk level = extreme 	<ul style="list-style-type: none"> Emergency services Other services authorised by the control agency Any person authorised by the control agency 	<ul style="list-style-type: none"> Emergency service Vehicles Approved farm fire Units
Tier 2 Essential services Assessment and restoration activities Media with escort	<ul style="list-style-type: none"> Primary hazard past/diminished secondary hazards: <ul style="list-style-type: none"> falling/fallen trees fallen power lines Identification of works required to mitigate risk(s) PPE required Risk level = high 	<ul style="list-style-type: none"> As per Tier 1 Essential services (includes councils, DPTI, SA power networks, Biosecurity SA, PIRSA, etc.) to conduct assessment and commence restoration activities Media with escort 	<ul style="list-style-type: none"> As per Tier 1 Agency/organisation ID CFS media accreditation ID plus appropriate PPE/PPC
Tier 3 Relief and recovery services Bona fide residents Media	<ul style="list-style-type: none"> Secondary hazards are being mitigated but still evident Caution required Risk level = medium 	<ul style="list-style-type: none"> Bona fide resident or land owner returning to protect or defend their property and/or stock Media Relief and recovery services 	<ul style="list-style-type: none"> Bona fide residents returning to protect or defend their property and/or stock* CFS media accreditation Relief and recovery services
Tier 4 Resident Relief and recovery services Media	<ul style="list-style-type: none"> Secondary hazards largely mitigated Mitigation actions continuing (mopping up) Caution required Risk level = low 	<ul style="list-style-type: none"> Residents returning to home or property Relief and recovery personnel Aid agencies 	<ul style="list-style-type: none"> Bona fide residents Evidence of residency Relief and recovery services ID
Tier 5 Road open	<ul style="list-style-type: none"> Control agency satisfied that road related issues no longer pose a threat to road users Risk level = very low 	<ul style="list-style-type: none"> Open to all 	<ul style="list-style-type: none"> Not applicable

Five minute lesson: agriculture and animal support agencies in fire

South Australian
COUNTRY FIRE SERVICE



5 MINUTE LESSON

Agriculture and animal support agencies in fires

As a result of observations collected from four incident debriefs – Sampson Flat, Bangor, Eden Valley and Pinery – this five minute lesson is to raise awareness and understanding of the roles of agriculture and animal support agencies during bushfires.

Primary Industries and Research South Australia (PIRSA) is a support agency to SACFS during bushfires and is the activating agency and coordinating body to a number of other agencies that report to and assist PIRSA during bushfires. These agencies include:

- Animal Welfare League
- Australian Veterinarians Association
- Department Environment Water and Natural Resources
- Environmental Protection Authority
- Primary Producers SA
- Royal Society for the Prevention of Cruelty to Animals (RSPCA)
- SA Veterinarians in Emergency Management.

The incident controller needs to ensure support agencies are embedded within the incident management teams and that access, resources, information and task requests are considered as part of the overall management of the incident. Where support agencies

require access onto the fire ground, approval is required by the incident controller prior to access onto the fire ground. In some circumstances approval may not be granted due to safety concerns, eg: fire behaviour or predicted weather conditions. Where approval is granted, support agencies will be managed by the operations officer and fire ground commanders.

Firefighters need to be aware that a number of the agencies listed above may be present on the fire ground before the fire is controlled.

The role of agriculture agencies includes:

- Conducting animal welfare assessment and coordinating treatment.
- Assisting primary producers affected by bushfire. Facilitate emergency fodder supplies, restoration of fence lines and drinking water for livestock.
- Facilitating emergency accommodation of animals.
- Coordinating foster care for animals.
- Conducting damage assessment as it relates to primary industries.
- Facilitating the destruction of wildlife, domestic and farm animals, and the timely disposal of carcasses.

4 – Lessons interviews

An extract from the *Army Adaptive Warfare Branch Lessons Handbook*

All lessons staff officers are required to conduct lessons interviews, whether as part of a programmed lessons collection activity (LCA) or on deployment as part of a lessons team. Whilst interview techniques will develop over time, Adaptive Warfare Branch (AWB) follows a strict interview process, which is outlined below, to capture observations.

Dependent on the lessons collection plan (LCP), interviews will be either fully semi-structured or a combination of semi-structured and structured if there are requests for information (RFI) or validation questions.

The advantages of semi-structured interviews are as follows:

- topic and issue consistency
- opportunities for deepening discussions
- opportunities for discovery
- topic response analysis possible
- more comfortable and relaxed environment.

Many of the disadvantages of semi-structured interviews are overcome because of the dedicated period interviewers spend in the lead-up to LCA becoming familiar with the LCP and post operation report (POR). These include:

- requirement for interviewer to be familiar with the themes
- requirement for interviewer to focus and manage and guide direction
- effective time management.

AWB conducts interviews using three-person teams in order to maximise time and effort. At the start of each day, two members will be designated interviewer and recorder and the third member will be an observer.

Where the third member is an experienced AWB collector, being an observer in the first interview will enable them to get operational context. Some teams may have a new collector or an external collector and the first interview should be used to introduce the collector to AWB interview processes.

At the completion of the first interview, the recorder will leave the room and enter the recorded observations in the database. The team will then rotate to have the

interviewer be the recorder and the observer as the interviewer. The team will rotate through the sessions in this manner to allow the observations to be recorded immediately after the completion of the interview. As such, it is important that all AWB staff members are trained and able to be a proficient interviewer and recorder.

Individual preparation

It is crucial that adequate preparation is undertaken, as conducting interviews in a professional manner will contribute to people forming a positive impression and opinion of AWB. Prior to attending the LCA, it is essential that all participating staff officers have read all the PORs for the rotations that are being covered. Become familiar with the lessons collection plan because it contains unstructured themes for you to develop lines of questioning during interviews. Being aware of these themes means you won't have to refer directly to the document during your interviews, giving interviewees confidence in your knowledge and experience.

Deployment

Members of the collection staff will be provided with the following for the duration of the LCA:

- a laptop preloaded with the database for the collection activity
- a digital voice recorder
- the daily timetable for the activity
- the names of the interviewee(s) you will be dealing with including background information such as rank, position, rotation and appointment
- the lesson collection plan.

Team preparation

Teams should spend approximately 10-15 minutes prior to the first interview getting to know each other and areas of expertise within the group. This is particularly important when the group has external collectors who are not familiar with AWB processes. Take this time to identify the team collection schedule and any times where team members will be unavailable for personal reasons.

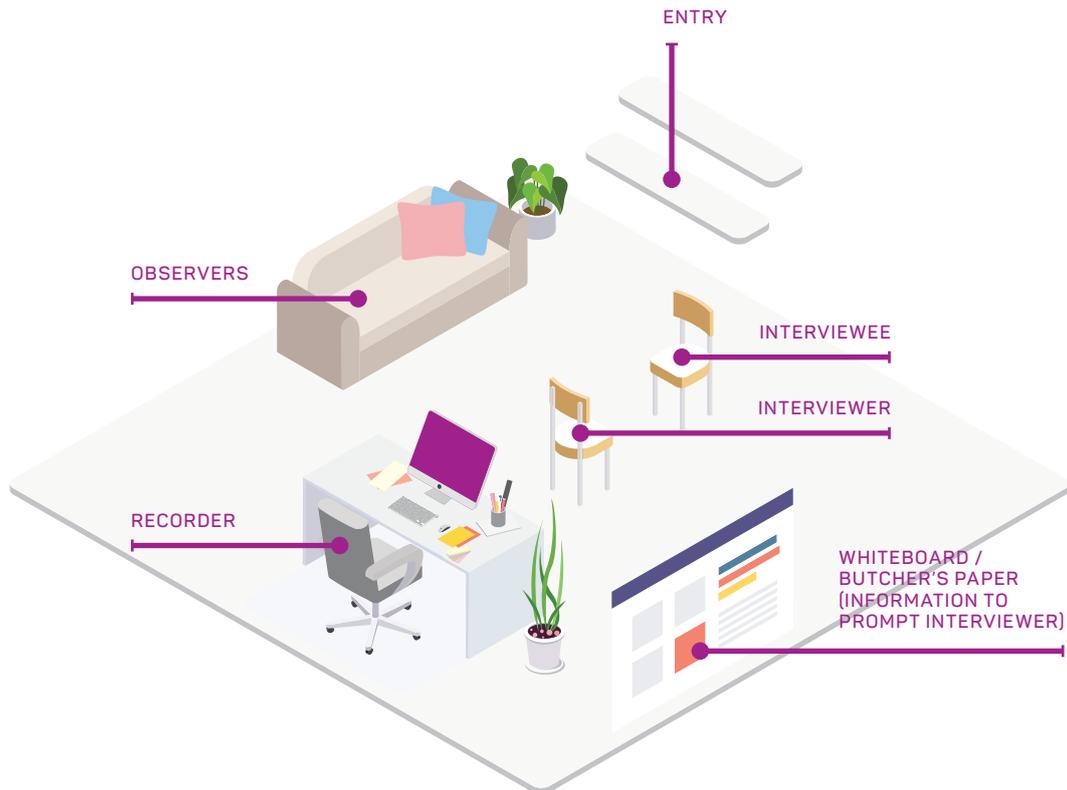


Figure 1: Example interview room set up

Set up interview room

The interview room will need to be set up correctly by the collection team to enhance the interview. The following should be considered when the room is set up:

- seating of interviewee
 - visual range free of distraction
 - focused on interviewer
- position and testing of the recording device
- position of the recorder
- side table for refreshments, such as a carafe of water
- seating for observer behind the interviewee.

Visual aids

Visual aids can be used throughout the interview to prompt discussion and get clarification. Drawing a timeline on a whiteboard or butchers paper will enable interviewees to specify the period they are talking about and prompt further discussion.

Another useful visual aid is a map of the area of operations (AO). At the beginning of the interview, get interviewees to point out where they were located and any movement they did around the AO. Other visual aids include an organisation chart or section formation diagrams.

Interviewers may find it useful to write RFI or validation questions on a whiteboard behind the Interviewees, which will prompt them to ask those questions.

Interview protocol

The following protocol should be followed during an interview:

- control access to and from the interview room and prevent people wandering in and out of the interview
- disconnect any telephones or intercoms and make sure all mobiles are off or on silent
- make any specific protocols you have clear to the recorder and observers
- do not allow any observers to interject in the interview without you first asking for any further questions.

Conduct of an interview

The interviewer follows the AWB interview process in order to enhance interviewees' comfort levels and maximise data collection. The process is as follows:

1. introductions
2. preamble
3. consider the interviewee subject(s)
4. warmer/settler
5. timings
6. closing.

The recorder is the most important part of the team because they are capturing the observations of the interviewee. The recorder may need to ask clarifying

questions during the conduct of an interview session to explore an observation further, however any interjections need to be timed to not interrupt the interviewer. Interviewers will often ask the recorder if they need to ask any questions, so this is a good opportunity to clarify any outstanding points in order to ensure the observation has been recorded accurately with the correct context.

During LCA, once a recorder has completed writing the observations, the interviewer for that session reviews it to confirm that all observations and context has been recorded.

Introductions

Introductions can be done prior to the interview, get a brew and introduce yourself to the interviewees. This will likely put the interviewees at ease and may capture some of the details required for recording the observations. It may also be used as a preamble as addressed below. Once in the interview room, introduce everyone in the room, including observers. Explain why each person is in the room and identify their role in the interview process.

Preamble

The interview preamble can be conducted in the interview room after the introductions, or as mentioned, outside the interview room whilst getting a drink or refreshment with the interviewees. The preamble needs to convey the following points:

- the interview is an informal conversation that will address certain themes rather than specific questions
- observations are recorded anonymously, with only TRADOR being recorded
- an estimate of the length of the interview
- what AWB is going to do with the information that has been collected.

Consider the interviewee

During the preamble, make a quick assessment of the interviewees' personality type(s) and body language and adjust stance to suit them. If there is an alpha personality in the interview, it is essential that it is managed in the interview to allow others to contribute. Remember that your body language needs to transmit openness and interest at all times. As the interview progresses, remember the PERLS principles:

- posture
- eye contact
- reflective body language
- language
- stance.

Warmer/settler

The warmer/settler is a way to commence the interview by easing the subject into the topic. There are several ways to do this but generally, the most effective method is to briefly get them to describe the duties and responsibilities of the appointment they filled on the deployment. Asking interviewees to point to their deployed area on the map and demonstrating knowledge of their rotation is also a good starting point to the interview.

Timings

For a standard two hour period, the aim is to complete the lesson interview at 90 minutes to allow the remaining 30 minutes for post interview discussion with observers or individuals if required. A suggested guideline for timings is as follows:

- preamble and introductions - five minutes
- warmer/settler - five minutes
- pre-deployment experience - 30 minutes
- operational experience - 40 minutes
- post-deployment experience - 10 minutes.

Closing

Be prepared to ask closing questions a few minutes before wrapping up the interview. Let the Interviewee know that the time is almost up by guiding them to any further issues they would like to raise. An abrupt halt to proceedings may result in a negative experience for the interviewee. In closing remember to:

- review what will happen with the information collected
- brief on the requirement to fill out any questionnaires (if required)
- thank them for their time and service.

Interviewing techniques and methods

Keep in mind the following questioning techniques and interview methods during the interview:

- The semi-structured part of the lesson collection plan is used to generate discussion.
- The method of questioning is chronological, beginning with notification of deployment, though pre-deployment training, deployment, operational experiences and then back through the redeployment and post-deployment phase.
- Be aware that interviewees may deviate from the chronological order of questioning or spend excessive time on an emotive topic, your skill as an interviewer is reflected in your ability to return to the topic.
- Use open questions and avoid closed questions.

- If you identify an observation, attempt to obtain a suggested solution/possible fix though be aware that not everyone has one so do not insist on one.
- Regularly throw to the recorder to allow them to confirm points.
- Maintain control of the content and flow.
- Do not ask emotive questions e.g. 'how did you feel?'
- And finally, think 'so what?' Employ a line of questioning to find out why something was good or bad or what changes have been made and the impact of the changes.
- Do: Keep judgment about an observation or recollected experience to yourself.
- Do: Keep opinions and personal experiences to yourself unless asked for one by the interviewee.
- Do: Allow the interviewee to tell their own story without fear of prejudice or agenda from the interviewer.
- Do: Keep queries involving emotion out of the interview and allow the interviewee to be professional.
- Do: Be humble. Assume you have no credibility.

DO'S

Remember the following things to do regarding the conduct of interviews:

- Do: Know the subject matter. Read the relevant POR prior to commencing the interview.
- Do: Treat the interviewee with respect and in a manner that is deferential and non-confrontational.
- Do: Use the lesson collection plan as a guide and not as a script.

Recording interviews

The recorder captures the interview as observations, so it is crucial that an effective way to take notes is utilised to ensure that observations are captured correctly. Some of the options available are using a notebook and pen or using a laptop.

5 – Examples of collection plans and techniques

A data collection plan sets out a means for evaluators to ensure that they are:

- observing the correct activities
- in the right place at the right time
- covering all the information required to report against the objectives, standards or measures
- being made aware of any relevant standards or measures that need to be applied to performance
- provided with copies of templates or tools for recording data, information and observations.

Real time evaluation and monitoring

Emergency Management Victoria: joint standard operating procedure for real time evaluation and monitoring:

www.files-em.em.vic.gov.au/public/JSOP/EMV-JSOP.htm

Centre for Army Lessons collection plan used post-Cyclone Yasi

General collection plan 11 June: Op YASI ASSIST

Preamble

Welcome and introduce interview team

Reason for interview: Information will be used in a pre-deployment handbook. We want to focus on advice you can give to others that may provide similar support in the future.

How the interview works: I'll ask questions. We are after both good and bad experiences. Can you provide examples, explain acronyms, no jargon, your point of view.

Interview is confidential. Do you have any questions?

Questions

What was your role?

What pre-deployment training did you do?

Important elements

Supporting documentation

What was missing?

What were your typical tasks on this deployment?

Major shortfalls

Tactics/techniques/procedures (used, developed, good, bad)

Searching

What were the main threats on this deployment?

Overcome and protect

What equipment worked well on your deployment?

Personal equipment

Personal protective equipment

Trade specific

Emergency relief specific

Logistic support

What lessons did you learn about liaising and working with other agencies (civilian, other services, other government, non-government organisation)?

Advice for planning and conduct

What welfare support did you have on this deployment?

Length of time away

Food and housing

Family support

Upsetting/disturbing

What advice can you provide about using communications on this deployment? How did they go? Any tips?

What type of training was undertaken on the deployment? How often/type? Successful?

Was boredom an issue? If so, how was this overcome?

What improvements can you suggest for the chain of command?

Briefed before deploying

Prepared

Task clearly outlined

Hand over take over

What three pieces of advice would you provide to someone deploying in a similar role to yourself?

6 – Thematic analysis and root causes analysis

A thematic analysis requires involvement and interpretation from the researcher; it is not simply a count of particular words or phrases. Instead, it focuses on identifying and describing both the implicit and explicit ideas within the data – that is, the themes.

Codes are then developed to represent the identified themes and applied to these or linked to raw data as summary markers for later analysis. These analyses may include:

- comparing code frequencies
- identifying code co-occurrences
- graphically displaying the relationships between codes within the dataset.

Thematic analyses can be used to build theoretical models or find solutions to real-world problems.

The strengths of this method are that it can be applied to large and small datasets, it is good for team research, the outcomes are supported by the data, and non-theme based and quantitative techniques may be included to add analytical breadth to the outcomes. It can be used to study individual and group experiences, and it can lend itself to quantification of the data to reinforce analytical outcomes.

Effective use of the thematic analysis method does require that assertions are supported by the data (evidence from within the text). This may include noting the context in which the original themes were identified.

Reliability is often an issue with thematic analyses due to the strong interpretive component, and this can be even more problematic when multiple analysts are used. Strategies to maintain agreement on theme definitions and understanding should be used in these instances. Thematic analysis is still, however, the most systematic and useful means of capturing the complexities of meaning in a textual dataset.

A simplified version of the methodology is shown below:

Research

Begin with a research question – that is, what is it you need to know. Obtain the data via interviews, surveys or other means. It is generally text or audio/video footage of interviews from which text can be obtained.

Analysis

Familiarise yourself with the data (reading and rereading) and jot down rough notes and impressions. Then code the data. Theoretical thematic analysis occurs when

there is a research question that is used to analyse aspects of the data that are relevant to it.

Inductive thematic analysis occurs when the analysis is looking for emerging themes rather than having a predetermined idea of topics in mind (also known as open coding, where the codes are developed and modified while working through the coding process).

Search for themes

Once the coding is done, begin to look for themes. Here, themes are the patterns in the data that are important or interesting in terms of the research question.

Review the themes

Review, modify and develop the themes that were identified in the previous step. Do they make sense? At this stage, it is also helpful to collate all the relevant evidence and data for each theme. Reread the evidence and ensure that the theme is appropriate and supported by this information.

Define the themes

Defining the themes means to identify the essence of what each theme is about. In addition, identify any sub-themes and how they relate to the overall theme as well as each other. This helps to form the overall understanding of the research question.

Report the findings

Write up the analysis.

Root causes analysis: tracing a problem to its origin

The Mindtools website identifies five steps in determining root causes:

1. Define the problem
2. Collect data
3. Identify possible causal factors
4. Identify the root causes using one or more of the following most popular tools:
 - Why analysis
 - Fishbone or Ishikawa diagram
 - Pareto analysis or the 80/20 rule
 - Brainstorming
5. Recommend and implement solutions

www.mindtools.com/pages/article/newTMC_80.htm

How to conduct root causes analysis?

www.greycampus.com/blog/quality-management/how-do-you-determine-the-root-cause

- Define the problem:
 - Ensure you identify the problem and align with a customer need.
 - If not existing, anticipate the problem from a customer perspective.
 - What are the specific issues you observe?
 - What happens if you do not tackle the problem now? What is the business impact?
- Collect data relating to the problem:
 - Is there data to support the specific problem?
 - Speak to customers or employees if possible, seek their voice.
 - Is it a recurring problem? How frequent has it been in the past?
 - What is the measurable impact of the problem on key customer outcomes?
- Identify what is causing the problem:
 - Identify the underlying cause.
 - What is the factor or combination thereof leading to this?
 - Identify as many causes as possible, do not think of solutions at this stage.
 - Involve your teams and relevant stakeholders.
 - Use 5Y or Fishbone analysis.
- Prioritise the causes:
 - Do not try to tackle all causes at once. Prioritise.
- PICK matrix is a good tool to achieve this.
- Bear in mind the impact and effort when you prioritise.
- Technology might be a key differentiator at this stage.
- Identify solutions to the underlying problem and implement the change:
 - Focus is on eliminating the problem, so it does not recur.
 - Who will implement the change and by when?
 - Who is responsible to monitor and control the new process?
 - What is the method and frequency of reporting performance?
- Monitor and sustain:
 - Defining a solution is not enough, execution is the key.
 - Embed the new process within the existing business processes.
 - Ensure the impact of the improvements are monitored and sustained.

Towards Data Science

Towards Data Science provides a series of techniques and tools to help navigate root cause analysis, including:

- identifying contributing factors
- sorting factors
- classifying factors
- designing for root cause analysis.

www.towardsdatascience.com/how-to-conduct-a-proper-root-cause-analysis-789b9847f84b

7 – State level codes

Capability framework



Figure 2: Capability framework

Source: reproduced with permission from the Department of Fire and Emergency Services, Western Australia

WA state level codes

Capability – Level 1 code	Core Capabilities – Level 2 code
Governance	Legislation
	Policies
	EM plans
Analysis and continuous improvement	Risk assessment
	Horizon scanning
	Lessons management
Community involvement	Alerts and warnings
	Public information
	Risk awareness and understanding
	Shared ownership
	Sector information sharing
Planning and mitigation	Land use planning
	Ecosystem management
	Infrastructure protection
	Essential services protection
	Minimise single points of failure
	Remoteness planning
	Business continuity planning
	Community activities
Resources	People
	Volunteering
	Finance and administration
	Equipment and critical resources
Emergency response	Command, control and coordination
	Situational assessment
	Evacuation
	Public protection
	Agency interoperability
	Mass casualty management
Impact management and recovery coordination	Mass fatality management
	Welfare
	Impact assessment
	Recovery coordination

8 – Capabilities

In an everyday context, capability refers to the capacity or ability necessary for doing something. Organisational capability is a logical extension of this meaning; an organisation’s ability to do or affect something using organisational resources. Although many varied definitions can be found for organisational capability, an effective one is as follows: ‘Organisational capability refers to an organisational ability to perform a coordinated task, utilising organisational resources, for the purpose of achieving a particular end result’ (Prior et al. 2008).

Organisations should consider this to be a ‘shopping list’, and pull out the categories relevant to their activities. The following list is an example of some capabilities. This is not an exhaustive or prescriptive list. Agencies can choose relevant items from this list and add others as required. Note that the longer your list of capabilities, the more cumbersome your coding and analysis process becomes.

Aviation operations	Firefighting	Preventative health
Biosecurity	Flood operations	Public order
Border protection	Hazardous materials	Recovery
Business continuity	Health	Rescue
Canine operations	Incident management	Research
Communications	Information management	Search
Community engagement	Intelligence	Storm operations
Counter-terrorism	Interagency operations	Traffic management
Critical infrastructure	Investigation	Vehicle operations
Disaster victim identification	Marine operations	Weapons
Emergency medical response	Media	
Evacuation	Preparedness	

Elements of capability

Element	Description
People	Roles, responsibilities, accountabilities and skills. Need to know: <ul style="list-style-type: none"> the number of people required for the tasks any specific physical or medical requirements or other personal attributes (e.g. no spectacles or hearing aids, of a certain fitness level).
Process	Policy, procedures or processes required for conduct of tasks (e.g. specific standard operating procedures, concepts of operation).
Organisation	The structures required for completion of task (e.g. team structure and higher level support structures). Jurisdiction and national level structures.
Support	Infrastructure facilities, maintenance. Significant areas of support for conduct of operational tasks.
Technology	Technology, equipment, systems, standards, security, interoperability.
Training	Capability qualifications and skill levels, identification of required training and development.
Exercise	Only relevant for exercises and exercise outcomes. At times, observations and insights may only be as a result of the artificiality of exercises. Exercises are not real and often things happen in exercises that would not happen in the real world.

Capability development



Figure 3: Capability element comparison

Source: reproduced with permission from Prior et al. (2008)

PPOSTE definitions table

PPOSTTE example also available in the *Managing Exercises* handbook, page 52

www.knowledge.aidr.org.au/resources/handbook-3-managing-exercises/

POSTED Aus Defence (former)	FIC Aus Defence (current)	Elements of Capability US National Security	PPOSTT Aus National Security	Lines of Development UK Military	DOTMLPF US Military
■ People	■ Personnel	■ Planning	■ People	■ Training	■ Doctrine
■ Organisation	■ Organisation	■ Organisation and leadership	■ Process	■ Equipment	■ Organisation
■ Support and facilities	■ Collective training	■ Personnel	■ Organisation	■ Personnel	■ Training
■ Training	■ Major systems	■ Equipment and systems	■ Support	Information	■ Material
■ Equipment	■ Supplies	■ Training	■ Technology	■ Doctrine and concepts	Leadership
■ Doctrine	■ Facilities	■ Exercises, evaluations and corrective actions	■ Training	■ Organisation	■ Personnel
	■ Support			■ Infrastructure	■ Facilities
	■ Command and management			■ Logistics	

ORGANISATIONAL FUNCTION

Aus = Australian

■ Personnel ■ Organisation ■ Equipment and infrastructure ■ Training ■ Process and doctrine ■ Support

Figure 4: PPOSTTE definitions table

Source: reproduced with permission from Prior et al. (2008)

9 – Examples of lessons management cycles and processes

Fire and Rescue NSW operational improvement process



Figure 5: Fire and Rescue NSW operational improvement process

Source: reproduced with permission from Fire & Rescue NSW (2019)

NSW SES lessons management model



Figure 6: Sample of a lessons management system

Source: reproduced with permission from New South Wales State Emergency Service (2012)

The Australian Army lessons process

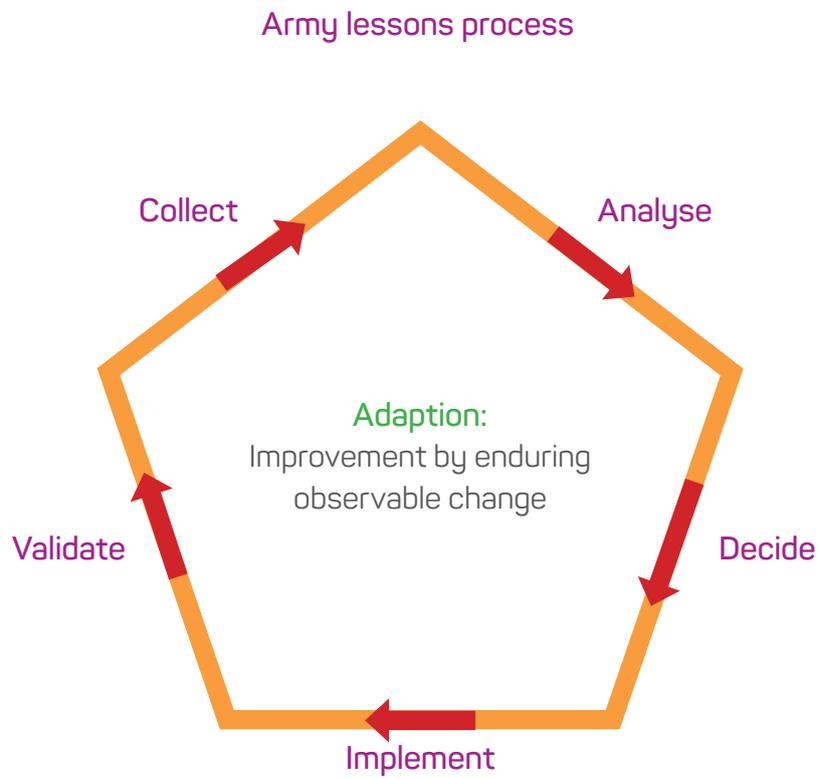


Figure 7: The Australian Army lessons process

Source: reproduced with permission from Centre for Army Lessons (2012)

EMV operational lessons management process

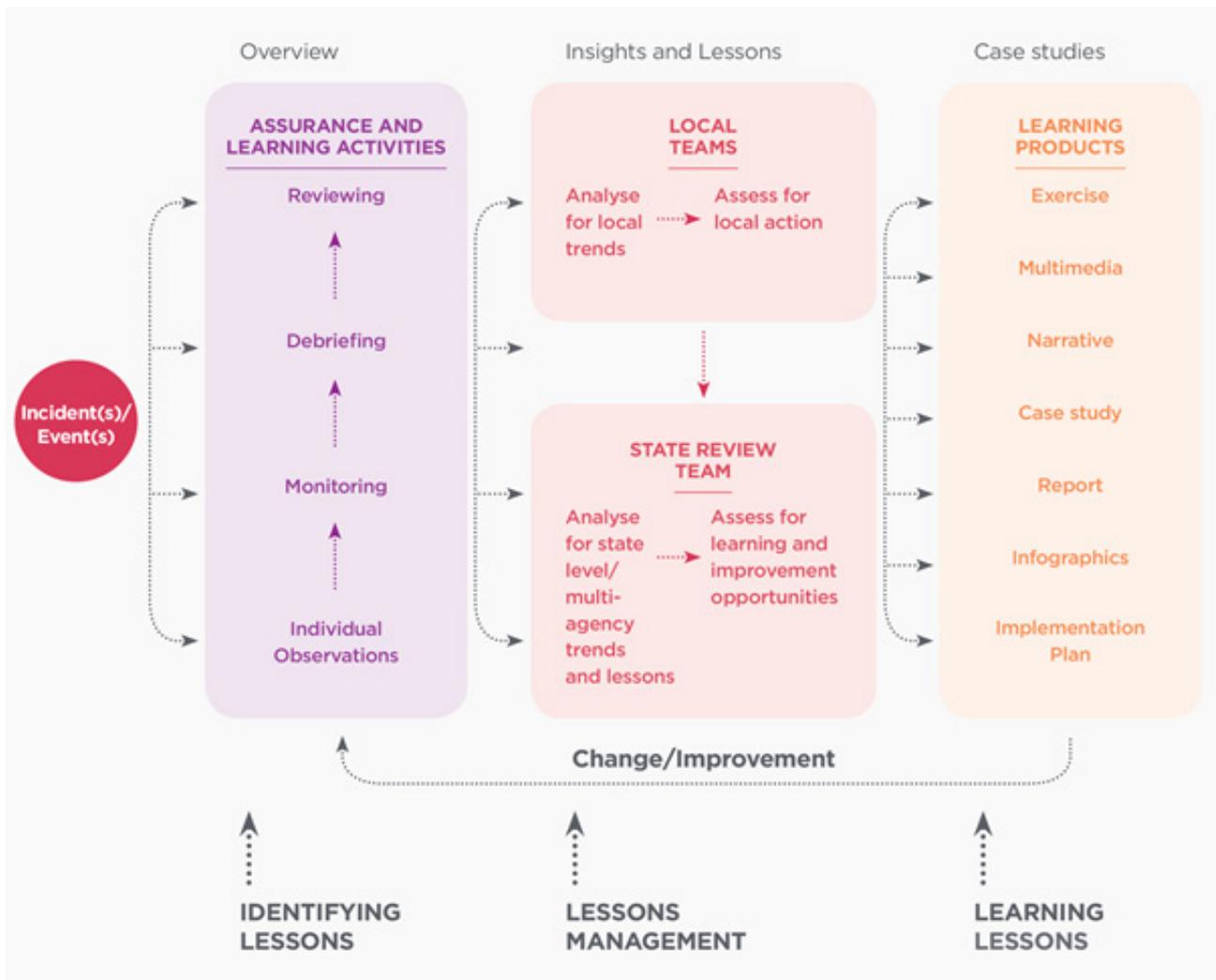


Figure 8: EMV operational lessons management process

Source: reproduced with permission from Emergency Management Victoria



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