PHOENIX RESILIENCE

NATIONAL BIOSECURITY RESPONSE TEAM

EXERCISE NETWORK

EVALUATION REPORT

CONTENTS

EXECUTIVE SUMMARY

The National Biosecurity Response Team (NBRT) is at the forefront of emergency preparedness and embraces technology to build virtual response capabilities. Not only did Exercise Network (the Exercise) increase capacity and capability of its participants, but the national Exercise was also planned, developed, and delivered virtually in its entirety – a first in Australia.

From April to June 2021, a team across Australia worked together to plan and deliver Exercise Network for the NBRT. Exercise Network consisted of six sessions over four days, taking the participants through the newly developed protocols for virtual control centres (VCC) using a range of virtual emergency management scenarios. The Planning-cum-Exercise Control Team included representatives from Animal Health Australia (AHA), Plant Health Australia (PHA), the Australian Government Department of Agriculture, Water and the Environment, the Queensland Government Department of Agriculture and Fisheries, the Western Australian Government Department of Primary Industries and Regional Development, and Phoenix Resilience Pty Ltd.

Many of the challenges anticipated by the Exercise Planning Team occurred during the Exercise but were far outweighed by "light-bulb moments" and insights gained by all involved. Exercise Network developed VCC resources for the NBRT, which now has an increased capability and competency to respond virtually. By extension, the learnings of this exercise will inform virtual incident management across Australia and beyond.

OBSERVATIONS AND INSIGHTS

Operating in a virtual environment poses challenges as compared to a face-to-face environment.

It is more challenging to form and maintain the interpersonal relationships which are essential during a response. Under great pressure and in a fast-paced environment, response personnel require skill and proficiency in operating technology while working remotely to respond in a timely manner. Remaining sedentary and viewing a screen for an extended period also introduces the necessity for an ergonomic working station while responding to a potentially significant event.

In a physical control centre, processes are well-established. This is not the case in a VCC and agreement must be sought on processes in areas such as VCC set-up, roles and responsibilities, approval processes, document management, meeting management and version control.

VCCs rely more heavily on the capability of the individual to manage their own technology, safety, and wellbeing. However, the Exercise identified solutions which can be implemented to assist.

RECOMMENDATIONS

Objective 1: Analyse the needs, gaps, and challenges for NBRT members managing a biosecurity emergency response in a VCC.

R1.	Develop NBRT guidance for minimum and ideal technology requirements for virtual response operations. Implementing the minimum resource requirements will mitigate findings in relation to information monitoring gaps.
R2.	Develop a VCC induction checklist, which should include: • information management and version control • approval processes • file structure • protocols • safety management • introductions and team formation.
R3.	Develop Microsoft Teams (MS Teams) and VCC induction training modules that can be provided upon activation to enable a smooth transition into the VCC environment.
R4.	Identify and secure dedicated technology support (human resources) that can be rapidly deployed during a response.

Objective 2: Formalise and test the VCC operating protocols.

R5.	Form an NBRT VCC Protocol Working Group that will review, enhance, and formalise the VCC protocols. This group should comprise the Exercise Planning Team members and NBRT mentors. This group should focus on: • researching the most appropriate document and record control procedures and integration with relevant document management systems (Boris/Max) • investigating how the use of function-specific email addresses affects VCC set-up • assessing how the additional VCC roles and responsibilities listed in the protocols integrate and/or align with existing response frameworks, such as the AUSVETPLAN Control Centres Management Manuals and PLANTPLAN • determining how VCCs will integrate with response efforts/plans/structures in other agencies and jurisdictions • reviewing and enhancing the approval process of incident management documents • considering information security measures • determining who will be the custodian of the protocols.
R6.	Develop a set of short instructional videos and interactive workshops that address aspects of the protocol to build competency.
R7.	Allocate resources and appoint roles and responsibilities in the ongoing management of the VCC protocol training program.

Objective 3: Build the capabilities of NBRT members operating/deployed in a virtual incident management environment.	
R8.	Develop and provide additional VCC MS Teams proficiency and VCC protocol training and exercising.

NBRT Program and development	
R9.	Undertake ongoing review and update of NBRT incident management tools and templates package, building and expanding on these where appropriate.
R10.	Provide ongoing training on incident management processes, cross-functional collaboration, risk assessment, Public Information, appreciation process and decision-making.

BENEFITS

The Exercise also brought to light the benefits the VCC introduces.

- Representatives from across Australia could participate and build relationships without travelling. This allows people who would otherwise not be able to due to their personal or professional circumstances to participate and contribute. It also allows for an activation time of minutes instead of days.
- Recent events have shown that sudden border closures may be an ongoing challenge and COVID-19-related developments may affect this for some time to come. Having this capability will ensure preparedness through any circumstance.
- In comparison with physical deployments that take people "offline" for an extended period of time, the VCC minimises disruptions to the organisation.
- It allows for easy access to subject matter experts for specific response meetings, which is an ongoing coordination benefit.
- The VCC is a cost-saving option to responding. It utilises existing systems which do not incur extra costs and prevents the travel and deployment costs of a physical response.
- MS Teams offers the opportunity to record meetings which increases the ability to track actions and decisions post-event.
- The ability to work together in one document in real-time, such as an Incident Action Plan (IAP), is more efficient and effective.

Overall, the virtual capability enables rapid, low-cost and inclusive activation for future events.

However vast the benefits are, it is also important to recognise that VCCs pose challenges and risks. Additionally, face-to-face responses and co-location within control centres are still seen as the preferred method for responding to biosecurity incidents but VCCs offer an alternative where this is not the most appropriate option.

1

EXERCISE CONCEPT

1.1 BACKGROUND

Control centres are established during the initial stages of a biosecurity emergency response to facilitate coordination and management. Traditionally, this has involved setting up physical facilities with the necessary resources and IT infrastructure to ensure response personnel are co-located. While this approach continues to be preferred and has its advantages, it may not always be a viable option. For example, considerations relating to the safety of responders and operational risks have had to be made in light of the COVID-19 response.

To accommodate the changes in the response environment and associated risks imposed by the COVID-19 pandemic (e.g. physical distancing, mass movement to work-from-home arrangements, restricted travel etc.), jurisdictions have adopted VCCs. Feedback from biosecurity emergency response stakeholders indicate that the transition from physical to VCCs has been relatively smooth, with many of the required IT systems having been previously introduced as staff started to work remotely. However, due to the rapid introduction there has not been a chance to carefully consider the nuances of a VCC. This exercise offered an opportunity for the NBRT Program to explore these nuances with jurisdictional response personnel.

1.2 EXERCISE NEED

This exercise was developed and delivered within the MS Teams online environment. Deploying VCCs was initially adopted as a workaround to accommodate COVID-19 restrictions, but has proved to be a valuable resource. The Exercise provided an opportunity to further test and assess the performance of and capabilities in MS Teams against the needs of the NBRT.

Exercise Network was designed to meet the needs of NBRT preparedness, staff development in incident management and continuous improvement in people, processes, technology, and agility through the development of online incident management arrangements. The outcomes of the Exercise will inform future development of NBRT virtual incident management processes and enhanced capability.

1.3 AIM AND OBJECTIVES

The aim of this exercise was to enhance the NBRT's preparedness to respond in a VCC.

Three objectives were set to achieve this aim:

1. Analyse the needs, gaps, and challenges for NBRT members managing a biosecurity emergency response in a VCC.
2. Formalise and test the VCC operating protocols.
3. Build the capabilities of NBRT members operating/deployed in a virtual incident management environment.

1.4 SCOPE

The Exercise was delivered as part of the NBRT Program to its members. As such, participants comprised of jurisdictional personnel with extensive experience, knowledge and skills in biosecurity emergency responses specifically within the functions of Incident Management, Logistics, Operations, Planning and Public Information.[1] The systems included in this exercise were MS Teams, the Microsoft Office suite and GovTEAMS. Specialised and jurisdiction-specific systems were excluded to prevent technical challenges during the Exercise.

The Exercise was intended to be a combination between training and discussion and functional exercise. The first three sessions were designed for the NBRT mentors and Incident Managers to explore and practice how to implement the protocols, followed by three functional sessions for all NBRT members.

1 At the time of exercise planning and conduct, the NBRT Program did not include the Finance and Administration or Liaison functions.

Recommendations and actions flowing from this report will be shared with the respective jurisdictional departments to inform their virtual capability development. The NBRT Program will manage the resources and make them available as required.

1.5 PHILOSOPHY OF THIS EXERCISE

Exercise Network was innovative in using a virtual platform, but also in applying scenario-based activities. The setting included a biosecurity-related scenario relating to plant and animal pests and diseases, but mainly used other relevant disaster/emergency scenarios. This enabled the focus to be on virtual incident management processes and not a specific biosecurity response.

The motivators for using this format included:

- The participants of this exercise included multi-jurisdictional, multi-disciplined representatives. This format would ensure the exercise remained equally engaging for all.
- NBRT members are deployed to control centres across Australia and should be able to respond to any hazard (be all-hazards proficient). The structure and processes within incident management are the same, irrespective of the event. This exercise focused on the processes and how to coordinate and manage tasks virtually.
- The additional benefit of raising awareness in NBRT members of the implications/ considerations of a multitude of emergency events. This would bolster the "all hazards" response proficiency.

1.6 EXERCISE STRUCTURE

The Exercise was structured across six sessions. Sessions 1–3 were designed to familiarise the mentor and Incident Management cohorts with the VCC environment and protocols and build their capabilities to effectively mentor and lead other NBRT members in sessions 4–6.

The structure and relating topics for each of the sessions are outlined in the tables below.

Table 1 Structure, timings and topics for Exercise Network sessions 1–3

Segment	Session 1	Session 2	Session 3
Topics	**Deployment and setting up the Incident Management Team**	**Situational awareness, Common Operating Picture, operational tempo**	**Multi-agency coordination, liaison, safety management**
Introduction/induction/recap	20 mins	10 mins	10 mins
Process and practice refresher: presentation/ guest speaker/mentor	20 mins	20 mins	20 mins
Scenario introduction	5 mins	5 mins	5 mins
Execute tasks	45 mins	55 mins	50 mins
Brief back	20 mins	20 mins	15 mins
Debrief	10 mins	10 mins	20 mins
Total	**120 mins**	**120 mins**	**120 mins**

Sessions 4–6 were designed to test the protocols and the VCC by implementing incident management processes. During these sessions, participants performed the duties of their function and collaborated to meet the response objectives of the VCC. For sessions 4–6, an Incident Controller (IC) was appointed from the Incident Management cohort.

Table 2 Structure, timings and topics for Exercise Network sessions 4–6

Segment	Session 4	Session 5	Session 6
Topics	**Activation, mobilisation, setup, induction**	**Planning cycle**	**Stakeholder engagement, communication and coordination between functions, multi-agency coordination, briefings**
Introduction/induction/recap	20 mins	10 mins	10 mins
Process and practice refresher: presentation/ guest speaker/mentor	20 mins	20 mins	20 mins
Scenario introduction	5 mins	5 mins	5 mins
Execute tasks	45 mins	55 mins	50 mins
Brief back	20 mins	20 mins	15 mins
Debrief	10 mins	10 mins	20 mins
Total	**120 mins**	**120 mins**	**120 mins**

1.7 EXERCISE SCENARIOS

The scenarios utilised and their respective sessions have been listed in Table 3.

Table 3 Exercise Network session scenarios

Session	Scenario
1	There has been a suspected, highly volatile and fast-spreading outbreak in a very remote area. The severity of the event requires a control centre to be set up as soon as possible, target: 4–6-hour activation time. The jurisdiction has requested the NBRT to set up an interim VCC while a physical deployment is set in motion. The Local Control Centre (LCC) on location is expected to be complete in 3 days. The NBRT has committed to provide the IC, 2 Planning Officers, 2 Logistics Officers, 4 Operations Officers and 1 Public Information Officer in the VCC for the next 3 days. Several representatives in the field are collecting impact reports. There are various industry representatives who require regular updates.

2–3	You are part of a response to widespread bushfires. Your VCC is expected to report to the State Emergency Management Committee (SEMC) which meets daily at 06:00, 12:00 and 18:00. Prior to each meeting, the SEMC expects updates on your response objectives/strategies, as well as updated situation reports (SitRep). The inter-governmental communications network requires meetings to develop messaging daily at 05:00, 11:00 and 15:00. The event is a trending topic on social media, with significant community outrage over the lack of government support in the impacted regional areas. Fire is the control agency. You are a state support agency responsible for the management of community consequence, specifically community safety/wellbeing. Agencies you are working with include: other government departments/agencies; local councils/ municipalities; police and emergency services; Red Cross; utility providers; telcos; and industry organisations.
4	A deliberate food contamination issue has arisen with some fruit. The issue has been detected by consumers in City A, but the fruit was distributed from a remote area. The investigation and response are led by a law enforcement agency but require a biosecurity agency to provide support. Setting up an LCC will take at least 2 days. The NBRT is requested to provide support to the lead agency and activate the VCC within the next 4 hours until the LCC is activated.
5	MV Wakashio ran aground on a coral reef about 1.6km off Mauritius, releasing approximately 1,000 tonnes of crude oil (a quarter of the ship's total cargo) in the Indian Ocean in vicinity of the internationally recognised Blue Bay Marine Park – polluting the island of Mauritius' once untouched coastline. Prolonged pounding by heavy sea conditions has caused further cracking of the ship's hull. The ship could potentially break apart and the remaining crude oil would be released into the ocean. A state of disaster is declared by local authorities and additional resources, including international Incident Management Team (IMT) resources, are deployed to assist. The spill has so far extended about 27kms^2 around the Wakashio.
6	At approximately 05:30 this morning, it was reported that a pod of 60 whales were found beached at an Australian island. This island is known for its 4WD/camping/fishing tourism and can only be accessed by ferry. The island has 2,239 inhabitants. You are the lead government agency (environment, wildlife and tourism) operating from the VCC. Response agencies involved include: fire; state emergency services; spontaneous volunteers; animal rescue agency; the major local tourist; marine and conservation park; residents; police; council; Surf Life Saving; and the Environmental Protection Agency. Other stakeholders include the local community and animal rights activists.

1.8 EXERCISE DELIVERY DOCUMENTS

The following documents were used in the delivery of the Exercise:

- Pre-exercise:
  - exercise plan for the Exercise Planning Team
  - joining instructions
  - exercise pre-brief PowerPoint presentation
  - MS Teams training document.
- Exercise delivery:
  - VCC protocols
  - exercise schedule (master schedule of events)
  - Exercise Control (EXCON) instructions
  - mentor instructions, sessions 4–6
  - IC instructions, sessions 4–6
  - exercise delivery PowerPoint presentation, session 1–6
  - scenarios and supporting documents, session 1–6
  - task sheets for each group and each session
  - incident management templates (IAP, SitRep, communication plan, safety plan, risk assessment)
  - improvement logs (e-logs)
  - mentor/EXCON exercise assessment form
  - participant feedback forms (e-forms).

For the successful execution of tasks, the VCC protocol was developed by the Phoenix Resilience team, which included instructions for:

- set-up
- roles and responsibilities
- information management
- processes
- establishment and maintenance of the Common Operating Picture
- safety management for staff working remotely.

1.9 VIRTUAL CONTROL CENTRE

The VCC design was based on lessons from previous VCC exercises in which members of the Exercise Planning Team had been involved.

The VCC structure and colours (Figure 1) reflect the incident management structure in the Biosecurity Incident Management System (BIMS). However, within Planning, two Planning rooms were added for multi-functional Planning meetings to take place. This allows for multiple Planning products to be developed simultaneously.

The Common Operating Picture sits within the "files" section of the Planning channel to enable shared situational awareness across the VCC. Planning is also the custodian of the Planning products within their channel. Operations, Logistics and Public Information maintain their functional documents within their channel as directed.

Incident Control maintains the IMT agenda, minutes and meeting logs within their channel.

The VCC was structured as follows:

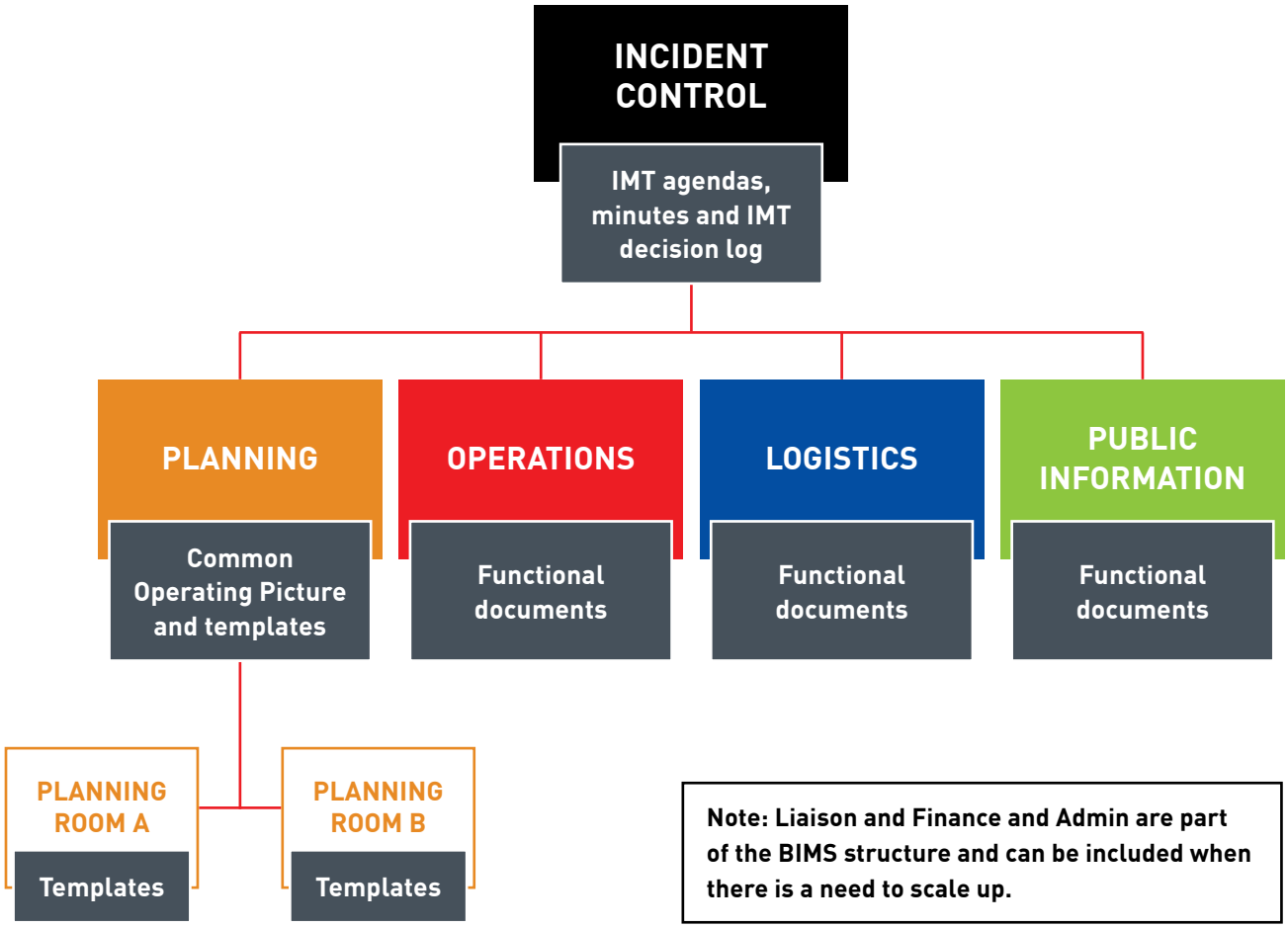


Figure 1 Exercise Network VCC structure

1.10 EXERCISE PLANNING TEAM

The Planning-cum-Exercise Control Team was formed by representatives from AHA, PHA, Australian Government Department of Agriculture, Water and Environment, Queensland Government Department of Agriculture and Fisheries, Western Australian Government Department of Primary Industries and Regional Development and Phoenix Resilience Pty Ltd.

Throughout the design, planning and development, the Exercise Planning Team and EXCON collaborated in MS Teams. Exercise planning and EXCON documents were stored in restricted channels.

The Exercise Planning Team and EXCON also made use of a Whatsapp group to coordinate time-critical and in-session activities.

1.11 EXCON ROLES

EXCON role	Responsibilities
Exercise Director	• overall oversight • ensure exercise objectives are met • decision-maker in case of disruption/real emergency
Exercise Controller	• guidance on incident management process and outcomes • coach for IC in sessions 4–6
Exercise Coordinator	• guide and maintain the schedule • narrator for all activities
Technical support	• process and manage technical issues • respond to technical questions
Safety Officer	• ensure that all participants' cameras are on and check on anyone who turns it off • respond to any safety concerns and direct participants to the appropriate support
Channel support	• observe activities in the assigned channel • maintain WhatsApp communications on the situation • raise any issues
Mentors (sessions 4–6)	• guide the activities • provide technical insight into relevant incident management processes

1.12 EXERCISE EVALUATION

A thorough approach to capturing evaluation data was applied for this exercise by ensuring the following:

- all sessions were recorded for future reference
- all participants, EXCON and mentors were issued improvements logs should there have been any ideas, suggestions or recommendations that could be captured during the Exercise
- EXCON and mentors were issued templated assessment forms that were in line with the methodology of the *Australian Institute for Disaster Resilience Lessons Management Handbook*; columns were divided into observations, insights and lessons identified
- debriefs were conducted after each session
- an online feedback form was provided to the participants which gathered quantitative and qualitative data.

Outcomes of the above have been captured using the P²OST² E method. The P²OST² E evaluation process uses elements of the P²OST² E capability framework. This provided the basis for evaluating the effectiveness of the Exercise by addressing each capability element as listed in Table 4.

Table 4 P²OST² E capability framework

People	Roles, responsibilities, accountabilities, skills
Process	Plans, policies, procedures, processes
Organisation	Structure
Support	Infrastructure, facilities, maintenance
Technology	Equipment, systems, standards, security, interoperability
Training	Capability qualifications/skill levels
Exercise management	Exercise development, structure, management, conduct

The exercise evaluation methodology is detailed further in Annex B.

2
EXERCISE EVALUATION

This section contains the findings against the three exercise objectives.

Each section describes the observations and insights, then provides recommendations (lessons identified).

2.1 OBJECTIVE 1

Analyse the needs, gaps and challenges for NBRT members managing a biosecurity emergency response in a VCC.

2.1.1 Observations and insights

As expected, the first session proved challenging and participants had difficulty accessing their nominated channel, allocating roles and performing tasks. Despite the pre-exercise training provided, participants appeared unfamiliar with the location of relevant information. Similarly, the next challenge, which involved establishing familiarity with completing templates and preparing documents collaboratively in the software, proved challenging. However, this provided excellent insights about the differences between operating a VCC and a physical control centre.

The four key observations below provided the foundation for some the exercise recommendations.

Technical capability

First, virtual incident management proved to be challenging. According to observations made during the Exercise, this may be attributed to individuals having limited experience working in MS Teams, varying levels of competency, and/or different levels of access to appropriate technology. The participants noted a significant improvement in their confidence and perceived competence when navigating in and operating from MS Teams by the sixth session. Most participants agreed that MS Teams is intuitive and proficiency can be easily obtained with practise. However, provision of sufficient IT support is critical for learning and ongoing proficiency. The overall participant feedback stated that the quantity (2), skill and approach of the IT technical support during the Exercise was excellent and essential for effective VCC operations. In relation to technological resources, observations indicated that one screen is insufficient to be effective in monitoring the many information channels in a VCC. One participant had four screens and indicated this was highly beneficial.

Working relationships

Second, in incident response, it is essential to establish strong interpersonal relationships within the team. Familiarity and comradery with others working in the team improves overall success but establishing this is more challenging in a virtual environment. In an incident response we need to achieve "forming, storming, norming, performing[2]" in 20 minutes, so specific measures need to be undertaken to facilitate strong relationships. For example, having each person introduce themselves and share something unrelated to the VCC activity at the start of the shift. During the Exercise, a short activity was trialled in which participants shared two things about themselves (e.g. "Share what do you look after – kids, pets, vegetable garden?" And "tell us something curious about you.") which was noted to be a great icebreaker.

Time pressure

Third, the pace is much faster in the virtual space because individuals move from meeting to meeting in seconds, which does not allow for short breaks to "collect their thoughts". Further, the perceived expectation among staff that they must be available at any given time (due to that on-demand nature of virtual workspaces) complicates the ability to manage competing priorities both at home and in the workplace. Extended hours are common and this prolonged screen time, lack of breaks and ongoing pressure introduces safety hazards in relation to physical and mental wellbeing.

2 Bruce Tuckman,1965, "Developmental Sequence in Small Groups."

Information management

In a VCC there are many areas where information can be shared and most are critical to the response. It was observed during the Exercise that it is very challenging to monitor all areas simultaneously as well as focus on individual tasks. This may easily result in information being lost and/or duplicated.

The ability to co-work in documents is beneficial; however, it can add complexity to version control. Removing, moving, copying and downloading documents is very easy, which is beneficial in some ways, but is a significant information security risk as well.

The ability to record all meetings provides an added capability in tracking actions and decisions for reviews and inquiries.

Despite the challenges observed, feedback from participants indicated that there is a medium-to-high willingness of the NBRT members to respond in a VCC in the future. Several participants stated they entered the Exercise with scepticism about the VCC but felt it to be a beneficial platform for incident management after the Exercise.

"I had no idea a VCC was even possible before this!"

NBRT member/exercise participant

2.1.2 Recommendations

Technology	**R1.**	Develop NBRT guidance for minimum and ideal technology requirements for virtual response operations. Implementing the minimum resource requirements will mitigate findings in relation to information monitoring gaps.
Process	**R2.**	Develop a VCC induction checklist, which should include: • information management and version control • approval processes • file structure • protocols • safety management • introductions and team formation
Training	**R3.**	To enable a smooth transition into the VCC environment, develop MS Teams and VCC induction training modules that can be provided upon activation.
Technology	**R4.**	Identify and secure dedicated technology support (human resources) that can be rapidly deployed during a response.

2.2 OBJECTIVE 2

Formalise and test the VCC operating protocols.

Prior to the Exercise, draft protocols were developed to guide the incident management activities conducted in a VCC by NBRT members.

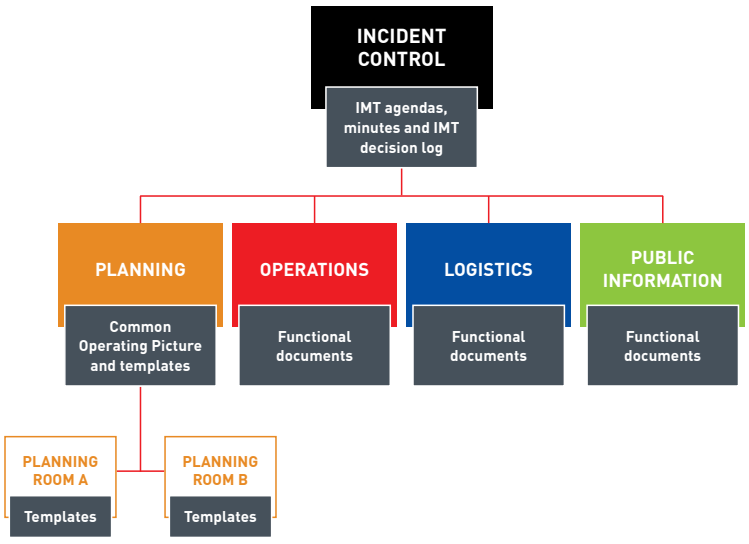
The draft VCC protocols developed for testing during the Exercise included:

1. Code of Conduct
2. VCC setup
3. Additional roles and responsibilities in a VCC
4. VCC structure
5. IAP and SitRep development and approval process
6. Establishment and maintenance of the Common Operating Picture
7. Monitoring the various information sources in MS Teams
8. Communication options in MS Teams
9. How to notify VCC members of new, important information
10. Setting your status
11. Safety management.

The draft protocols were based on the learnings identified in various VCC exercises, as well as consultation with response personnel that have participated in virtual responses and have been refined based on findings from Exercise Network.

The purpose of the updated protocols is to mitigate the identified risks of a VCC response, as well as optimise the outcomes, by setting expectations for set-up, roles and responsibilities and processes. In an actual response, these protocols should be used in conjunction with AUSVETPLAN, PLANTPLAN, BIMS and the Interstate Deployment Arrangements.

Incident Action Plan (IAP)



STEP 1: The IC is to select the team to work on the IAP from all the functions and allocate them to a Planning Room.

STEP 2: The selected staff attend the allocated Planning Room and open the IAP template located in the 'Files' section of Planning.

STEP 3: The team is to complete the IAP and once completed and approved by the Planning Manager move it to the 'for approval' folder in the IC channel. The Planning Manager is to send an @message to the IC that the IAP is ready for approval.

Step 4: The IC is to review the IAP and once approved relocate to the folder COP in Planning and issue a broadcast to inform all that the updated IAP is available.

Figure 2 Exercise Network VCC document approvals process (e.g. IAPs)

2.2.1 Observations and insights

As the Exercise sessions progressed and the initial MS Teams proficiency was achieved, it was noted that the participants increased their use of the VCC protocols. In sessions 4–6, participants practiced the IAP approval process and set up the Common Operating Picture.

In the session 4–6 feedback, 20 out of 21 respondents indicated that they found that the protocols assisted them in performing the functional tasks in a VCC.

The feedback trend indicated the VCC protocols were particularly beneficial for clarity on the virtual product (IAP, SitRep, Common Operating Picture) development and approval processes.

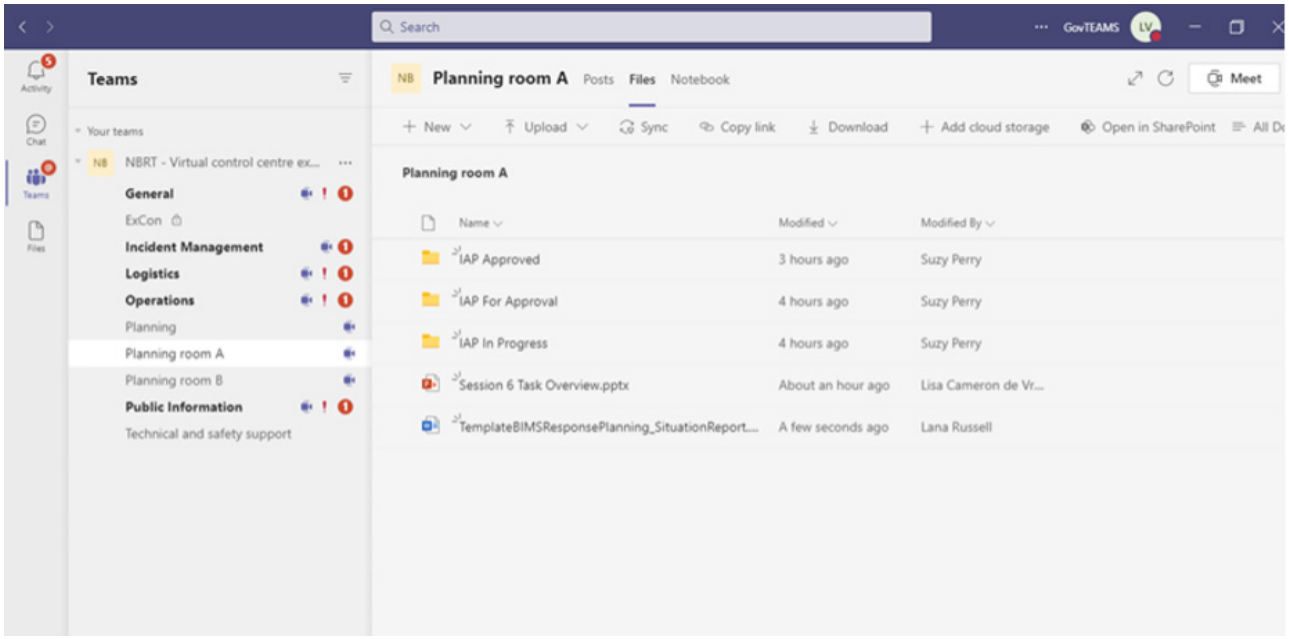


Figure 3 Example of IAP approval process being implemented

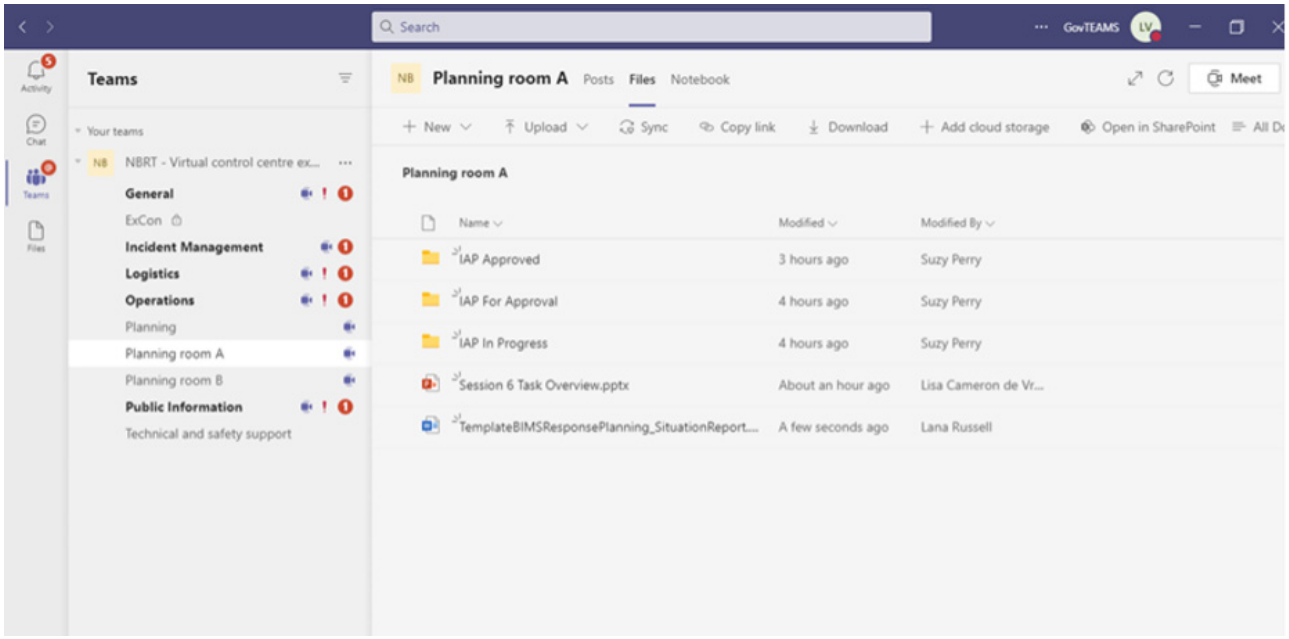


Figure 4 Example of Common Operating Picture being developed

2.2.2 Recommendations

Process	**R5.**	Form a NBRT VCC Protocol Working Group that will review, enhance and formalise the VCC protocols. This group should comprise the Exercise Planning Team members and NBRT mentors. This group should focus on: • researching the most appropriate document and record control procedures and integration with relevant document management systems (Boris/Max) • investigating how the use of function-specific email addresses affects VCC setup • assessing how the additional VCC roles and responsibilities listed in the protocols integrate and/or align with existing response frameworks, such as the AUSVETPLAN Control Centres Management Manuals • determining how the VCC will integrate with response efforts/plans/structures in other agencies and jurisdictions • reviewing and enhancing the approval process of incident management documents • considering information security measures • determining who will be the custodian of the protocols.
Training	**R6.**	Develop a set of short instructional videos and interactive workshops that address aspects of the protocol to build competency. Note that it would require allocation of resources and appointing roles and responsibilities in the management of the VCC protocol training program, including planning for ongoing delivery.

2.3 OBJECTIVE 3

Build the capabilities of NBRT members operating/deployed in a virtual incident management environment.

2.3.1 Observations and insights

The final objective of this exercise was to build capabilities in virtual incident management.

The Exercise was designed to build that skill in the NBRT mentor cohort first.

As per *NBRT Arrangements*, the mentor cohort is a pool of personnel that can be called upon to assist and guide a jurisdiction when establishing its initial response structures and when deployed, mentors will work alongside jurisdictional response staff in order for them to perform their assigned incident management function/s.

The first 3 sessions focused on exploring and practicing transitions between channels, forming an effective team, collaborating in documents and conducting a briefing. Having this skill allowed the mentors to lead groups of NBRT members more effectively in sessions 4–6.

"We learnt, we did, we taught."

Exercise participant and NBRT mentor

Additionally, the exercise tasks directed cross-functional teams to collaborate in the Planning rooms, which built skills in virtual collaboration techniques between functions.

In sessions 4–6, virtual responses were implemented. At the start of each session, an appointed NBRT member from the Incident Management cohort (2 of whom were mentors) performed the role of the IC and delivered the brief on the situation to the participants, described the priorities and considerations and allocated tasks. The participants formed their functions and teams and collaborated in the development of their functional products. Throughout the process, the IC transitioned across channels and directed the teams. An IMT meeting was conducted mid-session and the session was closed off with a plenary debrief.

The exercise feedback and observations showed a rapid learning curve throughout the sessions and by Session 6, all participants demonstrated their ability to conduct virtual incident management. This confirms that the concept, format and structure for the Exercise was appropriate for achieving the capability development objective.

However, this exercise provided just baseline competence and further training and exercising is a priority. If VCCs are to become part of the standard response package across emergency management, further capabilities within the NBRT will need to be built.

2.3.2 Recommendations

Training	**R7.**	Develop and provide additional VCC MS Teams proficiency and NBRT VCC protocol training and exercising.

2.4 NBRT DEVELOPMENT FINDINGS/RECOMMENDATIONS

The objectives set for this exercise focused on building VCC capabilities; however, other valuable insights were formed and lessons were identified during the planning and delivery. This section describes the additional opportunities that were identified to support the ongoing improvement and management of the NBRT Program.

During this exercise, participants were asked to complete IAPs, risk assessments, safety plans and communications plans. As part of exercise planning, various templates were considered (including NBRT templates) and it was found that the IAP template could be adjusted to enhance its effectiveness. While it is important to recognise that jurisdictions possess a suite of contextualised resources for responding to biosecurity incidents within their borders (including templates), the Program offers an opportunity to address resource gaps through the development of NBRT templates. Other templates obtained from outside of the Program and identified for possible development by and for the NBRT included the risk assessment and safety plan templates.

Process	**R8.**	Undertake ongoing review and update of NBRT incident management tools and templates package, building and expanding on these where appropriate.

Exercise Network was designed to promote cross-functional collaboration by allocating representatives from all functions to the Planning rooms A and B. Overall feedback indicated that participants appreciated the cross-functional collaboration aspect of the Exercise and see the value of more training that promotes cross-functional collaboration.

Training on specific activities like the PESTLEO/risk assessment, appreciation process, incident communication and decision-making was indicated as a desirable addition.

Building cross-functional relationships will enhance the preparedness of the NBRT, as effective collaboration significantly improves response outcomes. Since meeting physically is very uncertain for the future, it is important to provide interim virtual opportunities for NBRT members to build these relationships.

Training	**R9.**	Provide ongoing training on incident management processes, cross-functional collaboration, risk assessment, public information, appreciation process and decision-making.

3

EXERCISE CONDUCT – EVALUATION

This multi-agency exercise was planned, developed, delivered and evaluated 100 per cent virtually by representatives from various organisations located across Australia. At the time of the Exercise, this had not been done before.

Exercise Network was highly complex for several reasons:

1. Exercise Planning Team and EXCON were all located remotely
2. Exercise was delivered fully virtually
3. Exercise was delivered across 6 sessions, each with a different theme and scenario
4. Sessions 1–3 were for mentors and Incident Managers only and 4–6 for all NBRT members
5. Participants participated from eight jurisdictions (Aus. Gov., NSW, NT, Qld, SA, Tas., Vic. and WA)
6. Participants were required to perform incident management tasks virtually by using incident management tools and templates.

Exercise risk management

Delivering an incident management exercise in a virtual environment introduces a variety of risks that were thoroughly assessed and mitigated by the Exercise Planning Team.

These risks relate to the complexity of the Exercise, the difference in forming human connections in a virtual environment, human interaction with technology and the technology itself.

To manage the significant risks that were introduced by this format, lessons were drawn from similar previous exercises. The team at Phoenix Resilience Pty Ltd had been involved in the design and delivery of these exercises since 2020 and the key exercises that informed the NBRT exercise were: a multi-agency flood scenario VCC exercise with Logan City Council, Queensland (2020); and an African Swine Fever scenario VCC exercise with the Queensland Government Department of Agriculture and Fisheries, Biosecurity Queensland (2021).

The exercise plan contained the risk assessment and controls. Below is an overview of some of the key risk controls that were implemented.

- Pre-exercise MS Teams training was provided prior to the Exercise to build proficiency of participants. This included how to transition between channels and how to work collaboratively online and in one document.
- Participants received a briefing prior to the Exercise on the VCC protocols and purpose of Exercise Network.
- The protocols were issued prior to the Exercise for familiarisation.
- Mentors and EXCON were briefed prior to the Exercise on their roles and responsibilities.
- Function- and EXCON-specific backgrounds were set to make individuals more easily identifiable.
- Appointment of a Safety Officer to provide support to participants and monitor participant wellbeing.
- Two technical officers provided MS Teams training in the lead-up to the Exercise as well as in-session technical support to manage the variety of technical challenges.

3.1 OBSERVATIONS AND INSIGHTS

Some specific design considerations for the context of the NBRT were observed to be successful.

The use of non-biosecurity scenarios rather than disease- or pest-specific scenarios to keep the focus on incident management processes rather than the technical details. This was found to be valuable with participants embracing the scenarios and demonstrating robust incident management skills in formulating a response.

Appointing an IC from the mentor cohort and Incident Management function for sessions 4–6 enhanced the realistic feel and really engaged participants. The ICs that were appointed put in a commendable effort to embrace the scenario, deliver their briefs and lead the VCC to outcomes. The other ICs shadowed the main IC in the IC channel and this "brain trust" was valuable in setting the strategy and coordinating activities.

Process	R10.	Ongoing use of generic non-biosecurity scenarios (in line with all hazards and national direction) to focus NBRT development on principles and processes.

Exercise management improvement opportunities

During the first session, the scenario, task instructions and task template were located in separate documents. With the initial technical challenges of finding the documents to start with, this added an unnecessary complexity. For Session 2 and 3, the scenario, task and template were issued in one document which showed a demonstrable improvement.

It was found that exercise instructions are even more important in a virtual exercise and they need to be delivered slowly and thoroughly with ample opportunity for questions. Additional time could have been allocated for this, especially in the first session (following which appropriate adjustments were made).

When allocating participants to channels, it is recommended that EXCON appoints a leader to reduce loss of time sorting out roles and responsibilities.

ANNEX A
PARTICIPANT FEEDBACK

WHAT DID PEOPLE LIKE ABOUT THIS EXERCISE?

Developing skills in navigating teams; the commitment from all participants to jump right in; the supportive environment created by ex con introductions and IC.

Open discussion; ability to participate in differing scenarios; testing a protocol not an 'incident'.

The ease of use and the level of preparedness and special mention of the support given in technology use etc.

from Nicole and Karly

The ability to really test the teams environment and build new skills.

Becoming more familiar with Teams rather than just as a meeting platform.

Collaboration; team work; knowledge sharing.

Seeing how a VCC would all come together across functions and how we interact - it is very different to how we work in Teams in BAU.

WHAT WERE YOUR KEY LEARNINGS FROM THIS EXERCISE?

I had no idea a VCC was even possible before this! Mostly an awareness of the tools that are actually available.

Time pressures, need to get away from the desk regularly and increased commitment to managing and developing the team => more resources in some ways required.

How Teams can be best used in a VCC and training - and the need for me to learn more about how it works.

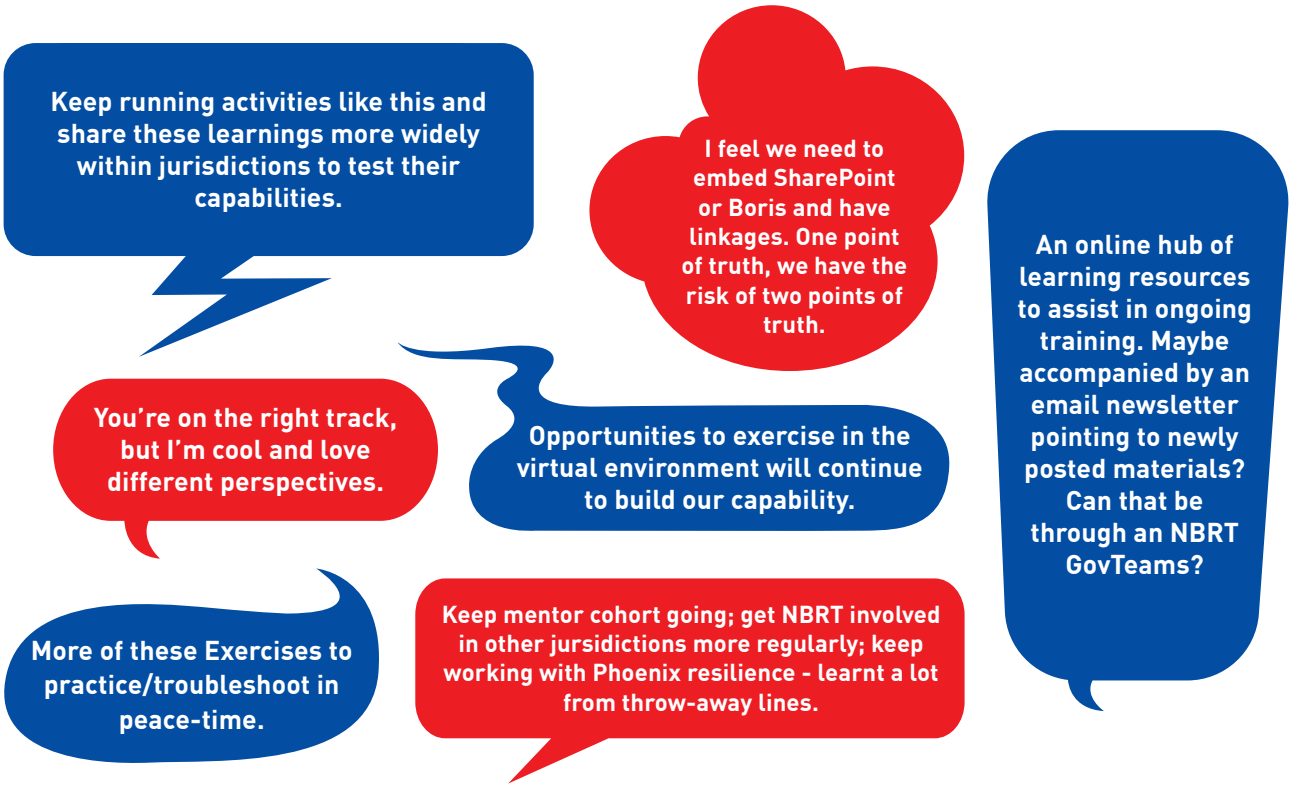
Need to work harder on communications compared to a routine IMT.

That whilst everyone appears to use Teams in the current environment the level of knowledge and expertise is very varied.

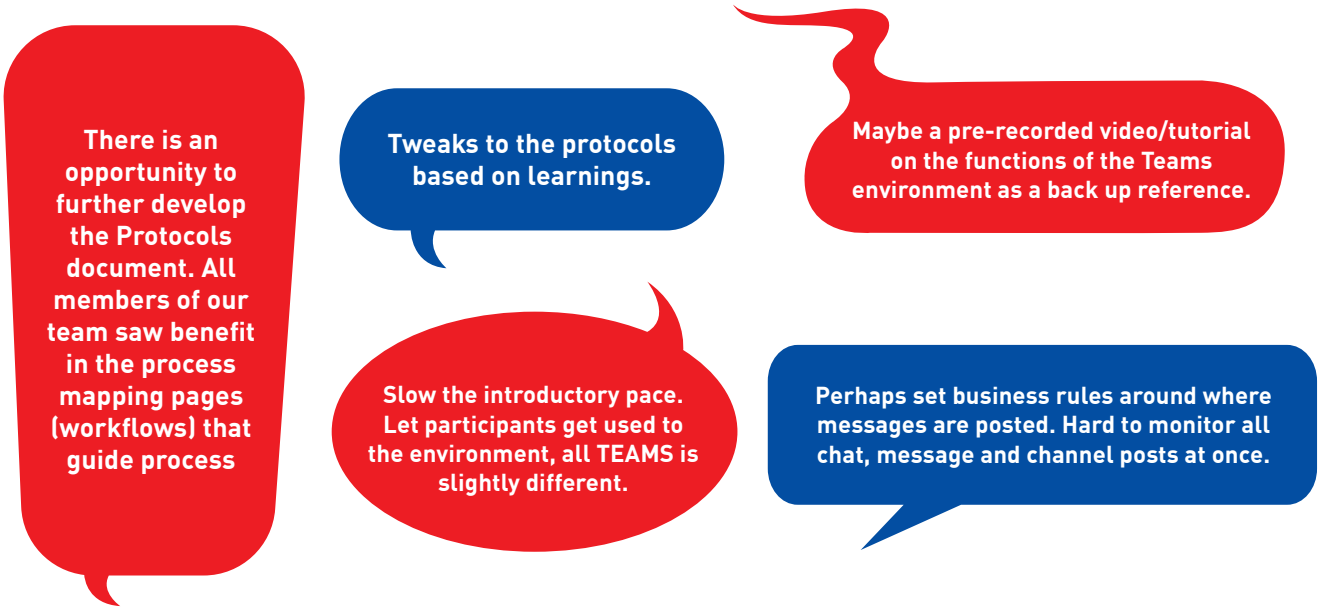
use of Teams, Filing, sharing screens etc, managing a group in this remote way could provide useful outcomes in emergency situations.

MSTeams, multiple channels, document handling; was great interactive chat; definitely needs positive IT support - makes a huge difference.

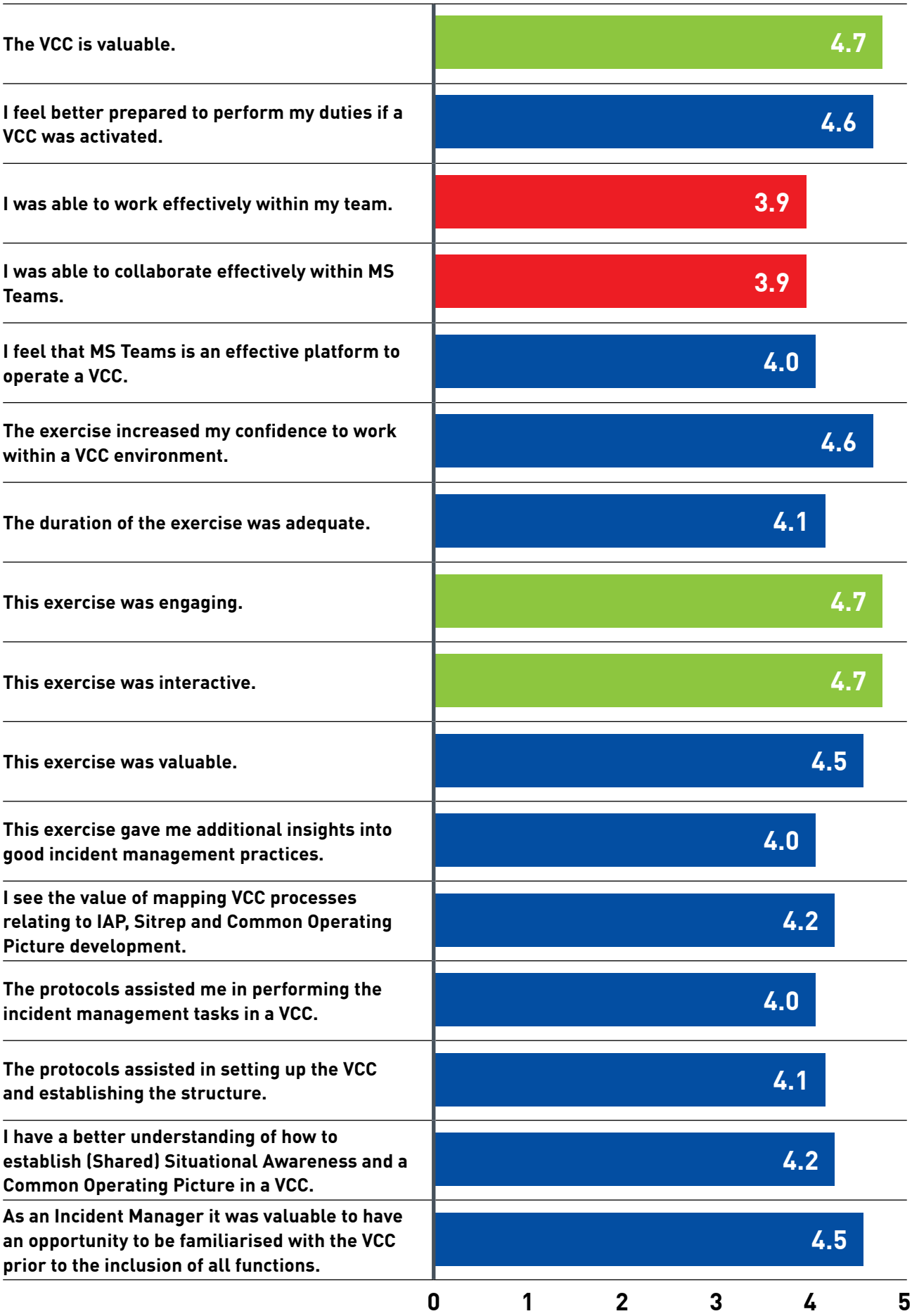
WHAT CAN NBRT DO TO FURTHER ENHANCE PREPAREDNESS AND RESPONSE CAPABILITIES?



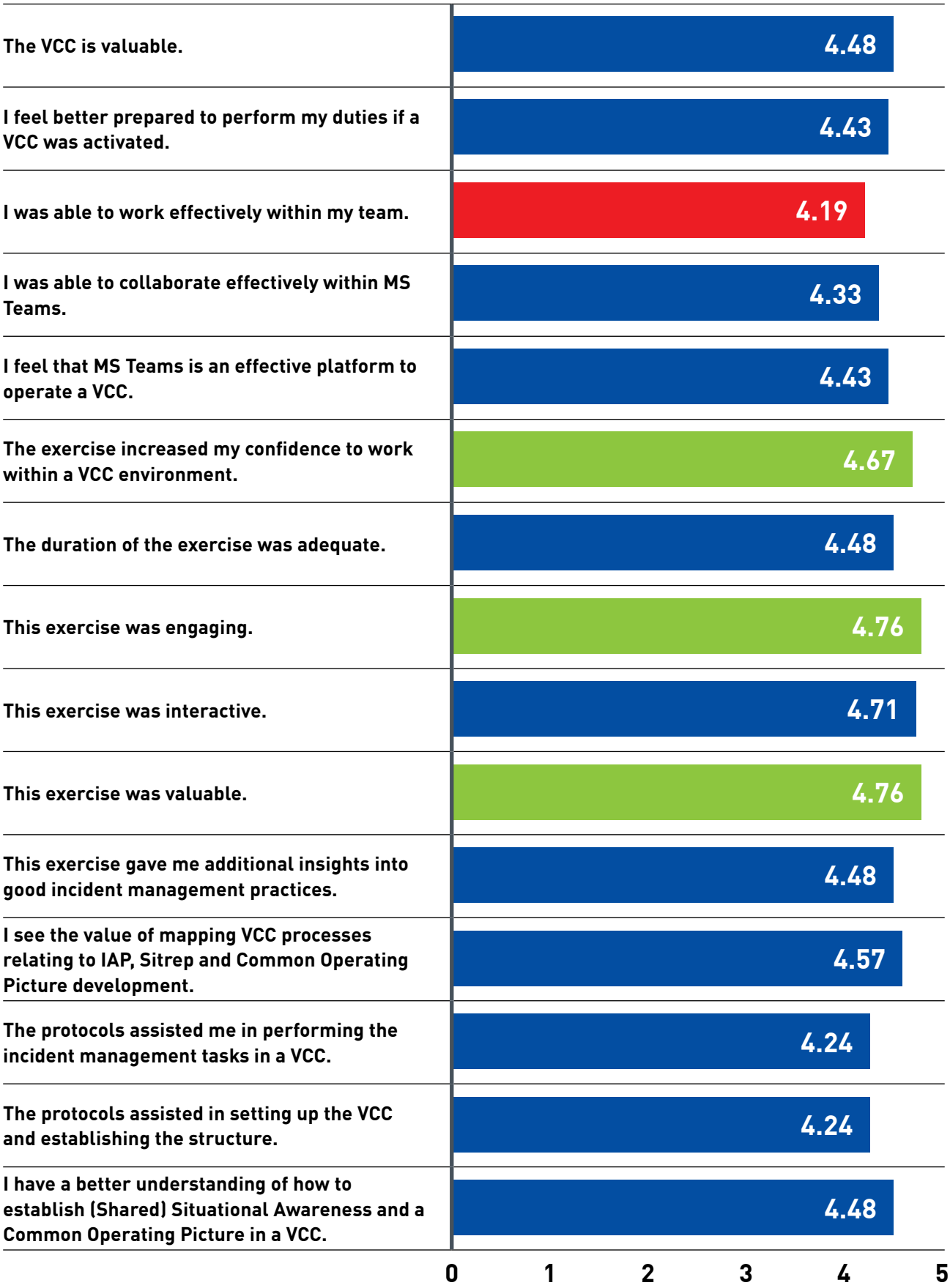
BASED ON THIS EXERCISE, WHAT IMPROVEMENTS COULD BE MADE TO ENHANCE THE VIRTUAL CC EXPERIENCE



SESSION 1-3 PARTICIPANT FEEDBACK



SESSION 4-6 PARTICIPANT FEEDBACK



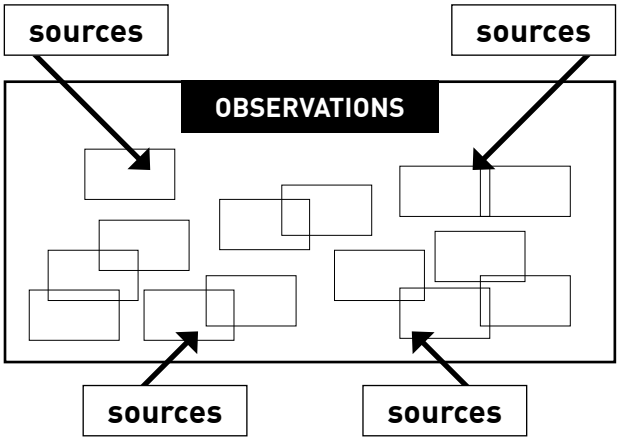
ANNEX B
EXERCISE EVALUATION METHODOLOGY

REVIEW PROCESS

The review process adopted for this evaluation is in line with the *Australian Institute for Disaster Resilience (AIDR) Lessons Management Handbook*. The observations are processed following the observation, insight, lessons identified, and lessons learned (OILL) process, as shown below.

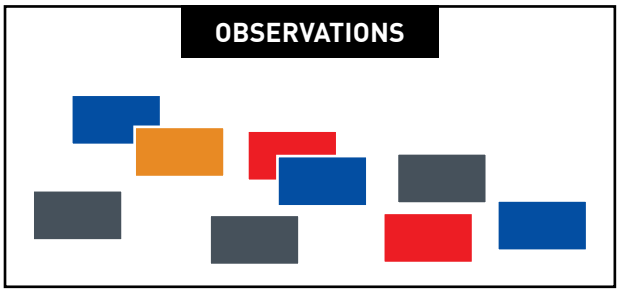
STEP ONE

Collect observations. Numerous observations are collected from multiple sources.



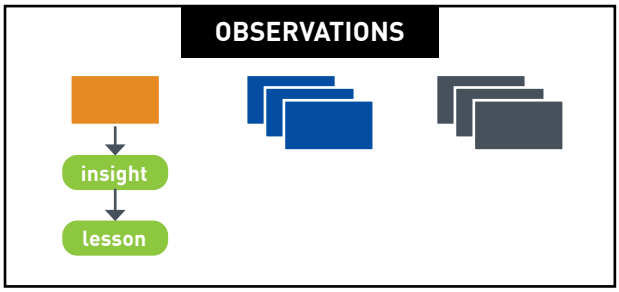
STEP TWO

Observations are coded so that like observations can be sorted into themes.



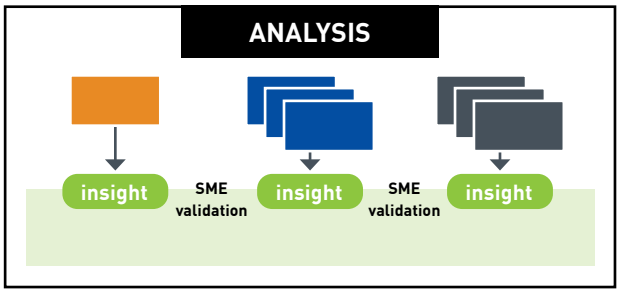
STEP THREE

Observations are sorted to facilitate analysis. HIGH RISK OBSERVATIONS ARE IDENTIFIED FOR EXPEDITED ACTION.



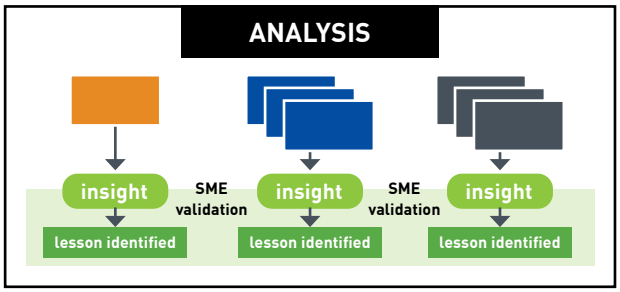
STEP FOUR

Insights are developed in conjunction with subject matter experts (SME).



STEP FIVE

The lesson identified (what needs to be learned and the action required to achieve it) is developed with SME input.



STEP SIX

The lessons identified are documented (with relevant supporting detail i.e. insights and/or observations).

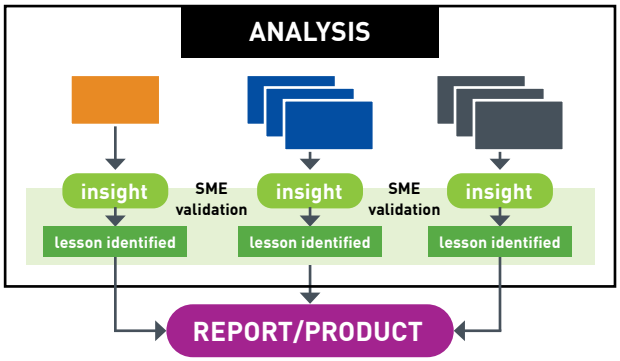


Figure 5 OILL evaluation process (Section 3.3.4, *Lessons Management Handbook*, AIDR)

EVALUATION

Various methods were adopted to evaluate the Exercise, which included improvement logs, evaluation sheets, feedback forms and debriefs for the Exercise.

- The EXCON and participants recorded suggestions, ideas and improvement opportunities on the digitally provided improvement logs as they were going through the Exercise.
- NBRT "assessors"[3] observed and assessed participant performance against set criteria and recorded the findings on evaluation sheets.
- A debrief was facilitated by Phoenix Resilience after all sessions with EXCON where improvement opportunities were collectively discussed.
- On the last day of the Exercise, an exercise feedback form was made available online to captures participant feedback. This feedback form was designed to measure performance against the exercise objectives. It consisted of a quantitative component where statements were rated and a qualitative component with open questions.

P²OST²E EVALUATION

The P²OST² E evaluation process uses elements of the P²OST² E capability framework as the basis for evaluating the effectiveness of the Exercise by addressing each capability element as listed in the table below.

Table 5 P²OST² E capability framework

People	Roles, responsibilities, accountabilities, skills
Process	Plans, policies, procedures, processes
Organisation	Structure
Support	Infrastructure, facilities, maintenance
Technology	Equipment, systems, standards, security, interoperability
Training	Capability qualifications/skill levels
Exercise management	Exercise development, structure, management, conduct

3 The assessors were not additional individuals to the Exercise; rather, nominated NBRT members already participating in the Exercise were asked to perform this additional role."

SUCCESS MEASURES

This exercise was designed to build the confidence and capabilities of responders. This was achieved through a combination of training and discussion and scenario-based activities in a VCC. The focus was on the process.

The success of the Exercise was measured based on its sub-objectives:

1. explore the strategic considerations required by IMT personnel and their implications on response management
2. compare and consider the nuances between physical and VCCs, and how these influence the roles and responsibilities of the NBRT as response personnel
3. identify opportunities, challenges and gaps to information management, information flow and resources (within and between functions) for response personnel working in VCCs
4. assess if the virtual incident management protocols/procedures address the challenges of an emergency response in a virtual environment (information/records management, roles and responsibilities, information security, Common Operating Picture, safety)
5. build participant capability in operating in a VCC
6. assess the suitability of MS Teams as a platform for virtual incident management.

The exercise success indicators were:

- participants feel more confident to perform the duties of their role in a virtual environment
- the technology allowed all participants to connect and participate
- there was effective communication within functions, between functions, and between functions and the IMT
- the virtual incident management protocols/procedures are understood and followed.

ANNEX C

SUMMARY OF THE OILL PROCESS

Below are definitions[4] of the parts of the OILL evaluation process that assisted facilitators in recording observations, insights, lessons identified, and lessons learned.

Observations are records of noteworthy facts or occurrences seen or heard during an activity or operation. Observations can be of good practices to be sustained or opportunities for improvement.

An **insight** is a deduction drawn from the observations collected which needs to be further considered. Insights provide guidance for future analysis and potential action. Insights can be positive or negative and can contribute to reinforcing positive behaviour or changing practices. Insights may be developed when a single observation poses a high risk to the organisation or when several (three or more) similarly themed observations have been collected.

A **lesson identified** is a viable course of action (recommendation) based on the analysis of one or more insights, which can either sustain a positive observation or address an area for improvement. The development of a recommendation usually involves some level of analysis of the root cause of the insight. Several actions may be required to achieve the recommendation and the changes in behaviour required to improve performance.

A lesson identified becomes a **lesson learned** once the recommended changes have been implemented, embedded and institutionalised (e.g. post-exercise). However, there is nothing to stop facilitators from using the OILL process to convert individual lessons identified into lessons learned during the Exercise.

Capability is a sum of tightly integrated capability elements. A deficiency in any element adversely affects the whole capability. This evaluation supports the identification of deficiencies and provides the opportunity for the NBRT to address the deficiencies.

4 Paraphrased from Section 3.2 of the *Lessons Management Handbook*, AIDR.