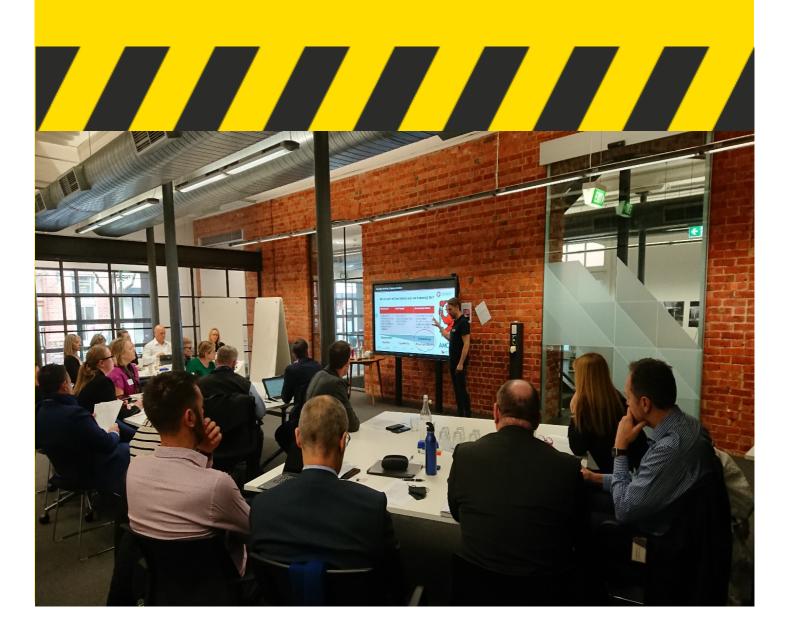# UTILISATION FUNDING: SOUTH AUSTRALIA STRETCH THINKING PROJECT

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TABLE OF CONTENTS

ACKNOWLEDGMENTS

ACKNOWLEDGMENTS

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ABSTRACT

The Bushfire and Natural Hazards CRC project entitled "Decision making, team monitoring and organisational learning" is focused on improving decision-making for response agencies/operations.

This utilisation project involved the research team from the University of Tasmania conducting two training workshops for a multi-jurisdictional group in South Australia and adapting aide-memoirs for decision making to support long-term recovery.

This Bushfire and Natural Hazards utilisation funding enhanced the South Australian Department of the Premier and Cabinet and University of Tasmania program, known as 'Stretching for Recovery', which involved broadening research for decision-making for long-term recovery and offering the opportunity to run ana addiotbal workshop for South Australia.

END-USER STATEMENT

Monique Blason, *South Australian Department of the Premier and Cabinet*

The workshops were clearly successful and there were some great ideas on how people want to be engaged in the future to maintain and practice these skills. My plan is to get some participants together to brainstorm and identify ideas on how we can embed stretch thinking and the aide memoirs into doctrine and practice and facilitate continued use/development.

END-USER STATEMENT

INTRODUCTION

Ben Brooks and Steve Curnin from the University of Tasmania were approached by the South Australian Department of Premier and Cabinet to develop and conduct a workshop on stretch thinking based on their current decision-making research with the Bushfire and Natural Hazards CRC.

Co-funding from the Bushfire and Natural Hazards CRC allowed an additional workshop to be conducted. Consequently, two workshops were conducted in Adelaide on 5 and 6 September 2019. The following report details the aims and outcomes of the workshop.

BACKGROUND

The State Emergency Management Committee (SEMC) is a high-level strategic planning committee that provides leadership and maintains oversight of emergency management planning for South Australia. SEMC takes an 'all hazards' approach, whereby policies, processes and systems are applied consistently across all hazards, man-made or natural.

The SEMC Strategic Plan 2017-2022 includes a focus on state-level consequence management which encourages consideration of broader needs and longer-term impacts of events and the unexpected or unplanned secondary effects of decisions made in relation to events.

In 2018 the Exercise Seismos program was run which considered state-level preparedness arrangements in relation to catastrophic events and emerging risks with increased attention on relief and recovery.

One of the recommendations from the program was to develop a complimentary program of strategic thinking and stretch thinking with the aim to challenge mindsets and consider big picture issues which will inform and influence catastrophic disaster planning and policy, such as the State's economic and strategic development directions and Exercise Seismos Phase Two Implementation Roadmap 2018.

AIM

The aim of this project was to deliver a targeted capability development program based on cognitive psychology and emergency and crisis management research which challenges participants to think beyond their usual thought processes and assists them to be more creative in relation to relief and recovery. This includes a focus on divergent thinking skills that are conducive to taking new perspectives on problems, pivoting among different ideas, thinking broadly, and making unusual associations, and then changing to convergent thinking to establish a preferred option, or to reach agreement.

The program used relief and recovery-based examples to link the generic concepts (e.g. divergent thinking) to the applied environment (e.g. long-range recovery efforts) and to stretch thinking around relief and recovery. It also addressed option analysis in-depth and how this links into the management of consequences.

The program provided a suite of aide memoires and cognitive tools adapted to the relief and recovery context.

Overall, the outcome of the program provided operational confidence to participants through practical application of imparted theoretical knowledge.

Target audience

The participants were mid to senior level management including directors and managers, whose role may include providing strategic advice to SEMC members and overseeing EM policy development driving initiatives and implementing strategic direction.

Workshops

Researchers from the University of Tasmania developed a stretch thinking capability development program, including:

a. Developing and facilitating a targeted workshop in Adelaide, South Australia, with the aims addressing:

i. Exploring the limits of current decision-making approaches used to manage relief and long-term recovery.

ii. Understanding and applying tools that facilitate big-picture thinking; creating team environments to support that thinking, managing cognitive bias and maintaining situational awareness.

iii. Applying the 'Stretch and Curl' method (linking divergent and convergent thinking) to develop skills in thinking creatively.

a. Post workshop debriefs.

b. Preparing and undertaking an evaluation of the workshops including participant feedback.

c. Delivering a report on the outcomes of the workshops, including identified opportunities and an evaluation of the workshops including an assessment of feedback.

Development

From inception to completion, the planning for the workshops spanned over seven months with the first meeting between the University of Tasmania researchers and South Australian Department of Premier and Cabinet occurring in February 2019. Over the following period the research ream went through a process of assessment with the end-users to tailor the workshop for the client's specific requirements. In addition, the research team performed a review post workshops in order to deliver the final product.

In the development phase the research team worked closely with the South Australian Department of Premier and Cabinet to adapt the training materials, so they suited the context of South Australian disaster recovery arrangements.

This included but was not limited to:

- Investigation of the decision-making models used by the participant agencies so that his could be incorporated into the decision making training session.

- Articulation of the South Australian Department of Premier and Cabinet 'big why' so this could be used to frame the discussion exercises.

- Design of the two discussion exercises that included scenario development.

- Modification of all presentations to ensure the content was specific to the participants recovery requirements.

OUTCOMES OF THE WORKSHOPS

The training workshop provided participants with the tools to manage the cognition of decision-making and a technique to significantly improve the creativity of teams engaged in stretch-thinking around long-term disaster recovery.

The aide-memoirs developed as part of the Bushfire and Natural Hazards CRC project supported the cognitive and social component of emergency management decision-making for long-term recovery by managing cognitive bias, provide heuristics to quickly assess levels of individual and team coping and develop psychological safety and maintain situational awareness.

Outputs were made available to any agency engaged in long-term recovery from disasters. In the short-term, the South Australian Government will use the materials to train relevant people in cognitive decision-making and in stretch thinking.

REPORT

Participants were provided with a pre and post workshop by the research team survey to determine outcomes of the two workshops. A summary of the results from the surveys is below.

SUMMARY OF SURVEY RESULTS

The summary results indicate significant improvements in the ability to apply decision heuristics (rules-of-thumb), build and maintain psychological safety within teams, manage cognitive bias and implement divergent and convergent thinking. These skills are fundamental to good decision-making and demonstrate the change in knowledge and skills from the workshop.

Statement	Score pre	Score post	Comment
I understand the principles that support effective decision-making and different styles of decision-making	76	87	By the end of the workshop the percentage of participants who believed they had this knowledge increased from 67% to 97%
I understand how to apply decision heuristics in my role during a real incident or crisis.	69	83	Almost 50% of participants thought they gained this skill during the workshop
I have the skills to build and maintain Psychological Safety within a response team/taskforce.	71	87	50% of participants thought they gained this skill during the workshop
I know how to systematically manage Cognitive Bias in my role during a real incident or crisis.	65	85	67% of participants thought they gained this skill during the workshop
I know how to use divergent and convergent thinking to support decision-making during a real incident or crisis.	62	83	58% of participants thought they gained this skill during the workshop

Comments

Before the start of the workshop we asked participants *"What do you want to get out of the workshop today in order to have made the investment of time worthwhile?"* The overwhelming request was for new tools associated with decision-making and better decision-making processes. From the results identified above it is clear that the workshops achieved this for almost all

participants. Following the workshop we asked participants *"What support would be required for you to feel more confident to use these tools in a real incident or crisis in the future"* – there were three key themes in the responses: (a) more practice and exercises using these tools; (b) embedding the tools in organisational systems and processes and (c) provision of the training and/or tools to a wider group of executives and team members so that everyone in a taskforce was familiar with the tools.

Stretch Thinking Workshop – Decision-making skills survey & feedback

This survey explores participants perceptions of their decision-making skills before and after the workshop in order to understand whether there was any change in their knowledge and what they wanted to get out of the workshop (during the pre-workshop survey) and what support they believed was necessary to feel more confident to use the tools in a real incident (during the post-workshop survey).

How to Interpret the Results

Average Score - identifies to what extent participants strongly support the statements about decision-making during the workshop. Originally calculated using mean responses on a five point Likert-Scale, which are then transformed first to a numeral from 1-5 and the average of all participant responses are then converted to a score out of 100.

Statement: I understand the principles that support effective decision-making and different styles of decision-making	Distribution of Responses					Score	Comments
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree		
BEFORE:							High scores before indicate that participants thought they already held the skills related to these items.
AFTER:							

This provides an indication of the spread of responses for the statement identified to the left	The average score gives the 5 points on the scale a score from 1-5 and then multiplies the average by 20 to provide a score out of 100.	Brief commentary on results

Survey Question Detailed Responses

Statement: I understand the principles that support effective decision-making and different styles of decision-making	Distribution of Responses					Score	Comments
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree		
BEFORE (DAYS 1 and 2 combined):	0	2	9	16	7	76	When asked a generic question about decision-making principles and styles two thirds of participants felt they already had this knowledge.
AFTER (DAYS 1 and 2 combined):	0	0	1	17	12	87	Subsequent to the training 97% of participants thought they had this understanding

Statement: I understand how to apply decision heuristics in my role during a real incident or crisis.	Distribution of Responses					Score	Comments
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree		
BEFORE:	0	4	12	14	2	69	Only 50% of participants thought they had this skill.
AFTER:	0	0	1	23	6	83	Post workshop 97% thought they now had this skill

Statement: I have the skills to build and maintain Psychological Safety within a response team/taskforce.	Distribution of Responses					Score	Comments
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree		
BEFORE:	0	4	14	10	6	71	Only 50% of participants thought they had this skill.
AFTER:	0	0	0	19	11	87	100% of participant thought they now have this skill.

Statement: I know how to systematically manage Cognitive Bias in my role during a real incident or crisis.	Distribution of Responses					Score	Comments
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree		
BEFORE:	1	4	19	4	6	65	Only 30% of participants thought they had this skill.
AFTER:	0	0	1	21	8	85	97% of participants thought they now had this skill

Statement: I know how to use divergent and convergent thinking to support decision-making during a real incident or crisis.	Distribution of Responses					Score	Comments
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree		
BEFORE:	1	7	10	8	2	62	Only 35% of participants thought they had this skill
AFTER:	0	0	2	18	10	83	93% of participants thought they now had this skill

Participants Comments

Pre-workshop Comments

The following comments were received from the following question, *"What do you want to get out of the workshop today in order to have made the investment of time worthwhile?"*

Participants Comments
I am not familiar with some of the terminology - clearly I have a bit to learn.
To gain insight into the use of fast and slow thinking in the context of response command and control org.
Move all the answers above to the right, i.e learn and then apply to real life scenarios
Would like to be able to have the tools to identify different behaviours during crises, and how to change them
More tools to support wider decision making, before, during and after an event
Anything that leads me to better decision making, especially under pressure, would be beneficial
Shared knowledge and experiences to enhance my abilities to collaborate and be more safe
Practical tips and skills that can be rolled out to others in local gov. sector
Some basic tools that can be utilised on the fly

Participants Comments
More options/tools/systems to support my role in "peace time" and during a crisis
improved use of strategic thinking in decision making + strategies to improve 'crisis' decision making
clearer understanding of the concepts discussed
Skills and knowledge to make effective decisions during crisis. Understanding of how I think
Understand more about decision making in the context of pressure situations to achieve the best outcomes. What can I pass on to our organisation and teach others ideas and tips/tools to apply back in the workplace.
New tools to help with options analysis (and a way to improve wider adoptions of these).
A better understanding of how to encourage/ facilitate better decision making within my unit/directorate and less reliance on incident controllers.
More understanding and practicing skills related to improving operational decision making.
Time to think properly about these concepts, reinforce what I have already do, but also learn additional.
Better understanding of the above.
Increase knowledge of managing self and others better during the decision making process.
Assess where my decision making skills are at currently and expand on my knowledge and abilities.

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Participants Comments
Expand my tool box to enable me to adapt further to better suit circumstances or a situation to enable a better outcome.
Greater clarity and ability to manage myself and others during times of crisis/emergency.
Practical tips and strategies to implement during an event.
New perspectives and tools for me and the sector. Not just for incident response.
Greater understanding and practical tools to apply back into my workplace.
Improve decision making - challenge thinking
Improve my ability to make decisions quickly and the right decision.
Learn new methods of creative thinking to improve my decision making for emergencies. Learn about some of the principles/theories that influence other's decision making.
Understand and consider the application of new decision making frameworks for crisis decision makers.
Strategies that will enhance my decision making skills and push me in areas where I am not strong. *Challenge me in ways of thinking.
Refine, learn new techniques, become familiar with the research of this area.

Post-workshop Comments

The following comments were received from the following question, *"What support would be required for you to feel more confident to use these tools in a real incident or crisis in the future?"*

Participants Comments
More opportunities to use these skills and materials to be able to use this material
Need more practice to reinforce learnings + bring together more diverse groups to create a creative dynamic.
Psychological safety -> government does not like to take risks!
Use of the tools within local processes, additional practice through exercises, and passing on the training to others within the team
Create safe environments - encourage divergent thinking, often this is given a passing, any further amounts at the end of the discussion - almost a shut down
Ongoing exercising with freedom to get it wrong. Embed the psychologically safe and bias checking roles in scenarios and actual planning/incidents
Tools available and using regularly in exercises and real situations.
Wider training to put thinking into "standard practice". Further unpacking of experience and learnings. Establish into "common language" for sector thinking.
Notes on tools and approaches used. More workshops and exercises. Support (support = workshops, materials and access to experts) to use in day-to-day business (not just crisis).
Exposure to decision making environments that are actually driven and involve people from different backgrounds.
Consequence management team may provide an opportunity to test time processes in future incidents. Devil's advocate role.

Participants Comments
More understanding of how to use 'lean scenario exercises'. More practice.
More practice
More practice exercises, some more studies which show how it has been done in precarious events.
Great session. Have some tools to take back and utilise plus share with our organisation. Good to meet and work with new people and listening to their thinking/approach.
Systematic approach to decision making a team environment much clearer - good platform available to think through some more.
For this to be ongoing as these can be perishable skills.
More exercises, more practice, examples of completed scenarios, real examples. Broadening reach of 'stretch thinking' to operational staff - not just decision makers.
Employing the tools provided more often. Reminding self to remember these things.
Better understanding of the principles - thank you! However, this takes practice and I still need to break old thinking styles. Checklists, templates etc would be valuable. How do you teach this to people really quickly???
Practice and then active reflection and follow up to ensure I've learned/practiced the skills and tools. Pass the training in my jurisdiction to embed the thinking tools so everyone can benefit/use.
The provision of exercises/workshops to practice/maintain the learnt knowledge.

Participants Comments
Ensuring I have the tools and prompts to remind me - but also to distribute to team members so they can implement stretch thinking on the fly.
Similar instructions/training to a broader section of the SA EM community.
Refresher - SOP's aide memoir etc
Continue with training and educational workshops to host actual exercises without assets - only with decision makers and planners in EM