CASE STUDY

AUT UNIVERSITY

Herrmann

CASE STUDY:
Improving Decision Making Under Stress and Pressure

How a Whole Brain® approach to decision making enhances emergency management and disaster recovery outcomes.

OBJECTIVE:

To determine whether a Whole Brain® approach improves outcomes for managers engaged in leading and decision making in emergency situations.

A group of managers engaged in studies about leading and decision making in emergency situations were profiled using the Herrmann Brain Dominance Instrument® (HBDI®) assessment, which defines and describes a person's preferences for thinking across each of the four quadrants of the Whole Brain® Model.

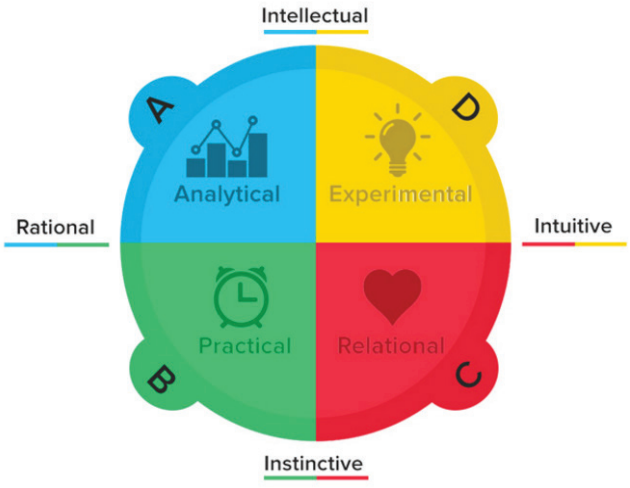

Figure 1: The Herrmann Whole Brain Model

The objective was to ascertain the effectiveness of taking a Whole Brain® approach to decision making, one that combines analytical, organizational, interpersonal and strategic thinking. All of these managers were engaged in studies at Auckland University of Technology (AUT) and held leadership roles with decision-making responsibility in emergency service agencies.

CHALLENGES:

To optimize decision making and outcomes across the various phases of recovery management.

This case study involved presenting scenarios to emergency managers familiar with and whose roles involved recovery management considerations. The timeline for decision making in the recovery phase following a disaster tends to be longer and involves higher levels of complexity. The response phase focuses on swift actions to primarily save lives and then focus on securing critical infrastructure and assets. In recovery management, there are opportunities to reflect and carefully consider whether a holistic, integrated approach is being taken.

Participative management devolves responsibility and decision making to middle/lower organizational levels. Recovery scenarios offer opportunities to engage others in the organization, including drawing on the different decision making perspectives of those at different levels. This ensures that the widest pool of talents and ideas is available to contribute to the task in both "business as usual" and emergency circumstances.

A capacity for more effective, responsive and devolved decision making needs to be developed. The challenge is finding and introducing a proven, easy-to-apply organizing principle to allow this to happen.

SOLUTIONS:

Using Whole Brain® Thinking as an organizing principle for better decision making in recovery and emergency management.

"The use of the HBDI® and Whole Brain® Thinking is essential in reduction, and assists in readiness phases. The under-pressure profile facilitates a planned response and visualization of individual behavior for the pressured response phase."

– Wayne Goodley, Director, Herrmann International New Zealand

Herrmann International's Whole Brain® methodology, based on proven research into how people think and communicate, including when under pressure, was chosen because it provides a validated and well-researched organizing principle that facilitates holistic and integrated reflection in emergency management decision making, especially in the post-disaster (recovery) phase.

According to Chris Webb, Emergency Management Programme Leader for the School of Healthcare Practice at Auckland University of Technology, reflection within the complexities and varying nature of recovery situations is vital if organizations are to enhance effective, responsive and devolved decision making. As a tool for reflection, Whole Brain® Thinking gives people an insight into their own and others' thinking preferences as well as the skills they need to operate outside their preferences when the situation arises.

The HBDI® profiles also describe how thinking preferences shift under pressure—of particular application to decision making in organizations that wish to enhance their thinking in recovery and emergency management processes.

Different thinking and responses are required in emergency recovery situations, and decision makers need to allocate tasks on the basis of a clear understanding of individual team members' thinking and how they react under pressure. Armed with these insights, the decision maker is in a stronger position to assess task allocation, the dependency of individuals and teams, and inter-personal dynamics that support or detract from the desired outputs and outcomes

Improved decision making that involves engagement of key contributors throughout the organization (as well as key external contributors) requires embracing changed thinking about the devolution of responsibilities.

The Study: Applying Whole Brain® Thinking in Recovery

"In the fire service, patience and intense pressure are part of our jobs. The HBDI® makes us confront our and others' thinking styles under pressure. This knowledge is essential for the readiness of all competent emergency service managers in developing their capabilities to respond and recover."
–Stu Rooney, Southern Fire Region Manager, Dunedin

Managers' individual HBDI® profiles were plotted onto an HBDI® Quadrant Chart (shown in Figure 1) to gain an understanding of their individual thinking and decision-making preferences.

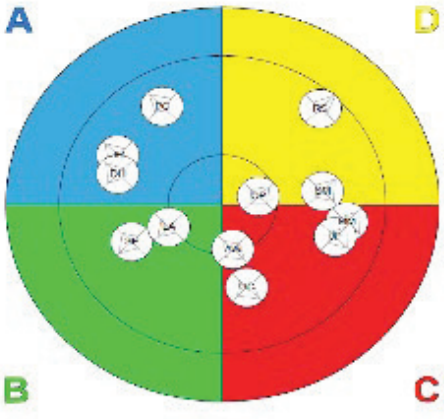

Figure 1: Plot of HBDI® Profiles of Survey Participants (Emergency Management Practitioners)

The application of Whole Brain® Thinking to typical recovery tasks was tested with two groups of managers who held leadership roles and were decision-makers in emergency service agencies. Once profiled using the HBDI®, their decision-making responses to typical recovery tasks were then compared to determine whether the responses constituted a holistic, inclusive ("whole-brained") approach.

Participants were asked to assess a number of typical recovery tasks and consider the thinking/decision-making aspects related to each task; they then mapped these to the quadrants of the Whole Brain® Model. Each of the quadrants has specific relevance in how decision making is applied to recovery:

(A) Top-left quadrant (focusing on facts)
Decision making using facts and data (information) based on evaluation, data collection, financial and technology considerations and how performance is to be measured in the recovery process.

(B) Bottom-left quadrant (focusing on form, including planning and implementation) Decision making using planning processes, deciding on the timing of implementation, administrative processes and quality of outcomes/outputs.

(C) Bottom-right quadrant (focusing on feelings, or people considerations) Decision making using consultation, partnerships and other communication and people considerations in its implementation.

(D) Top-right quadrant (focusing on future) Decision making using strategy, a clear vision and consideration of desired future states

As part of the study, the emergency managers were tasked with completing a recovery management survey that required them to individually prioritize decisions, based on a recovery scenario, indicating their top eight out of a total of 23 possible recovery decisions. They were also asked to include a brief statement explaining the rationale for each decision.

The decisions chosen and supporting rationale were analyzed according to the Whole Brain® Model quadrants, shown in Table 1. The extent and application of Whole Brain® Thinking concepts and language to each action was then evaluated in order to assess whether their awareness and learning about Whole Brain® Thinking made for more balanced decision making in the given recovery scenario. Multiple responses, or "loadings," within any given quadrant were noted, together with recovery decisions that have a "left-brained" (blue-green) or "right-brained" (yellow-red) orientation.

FOCUS ON FACTS

- Effectiveness of the volunteer program is evaluated.
- Independent review and evaluation of recovery plan/exercises.
- Financial systems and budgets for recovery have been considered.

FOCUS ON FUTURE

- Consideration of appropriate supplier and other support arrangements for recovery.
- Following the recovery process, future recovery strategies are developed..
- Reduction measures are considered for incorporation into district and regional plans for future recovery planning.
- Considering appropriate messages for delivery to the public about recovery processes.

FOCUS ON FORM

- Distinguishing between my normal business role and my allocated recovery role.
- Clarifying roles and responsibilities for recovery.
- Volunteers have a work program/plan to work to.
- Prioritization process for allocation of resources in recovery.
- Key contacts in agencies involved in recovery have been identified.
- Conducting impact assessments and analyzing the results during recovery.
- Documentation of recovery operating procedures (SOPs), e.g., Operation of Emergency Recovery Office.
- Identification and equipping of recovery facilities in the community, e.g., welfare centers.
- Plans for temporary accommodation during the recovery
- Development of systems to enable inter-agency cooperation, assessment of needs and management during recovery.
- Establishment and maintenance of an up-to-date database of all welfare-related agencies.

FOCUS ON FEELINGS

- Engaging all recovery team members in regular recovery training and exercises.
- Articulating and communicating recovery plans and procedures to recovery team members.
- The community are engaged and know where to go to in a disaster, e.g., welfare center.
- Development of appropriate relationships between and with agencies and organizations involved in recovery.
- Development of appropriate relationships with the media.

An analysis of all responses/decisions choices made by all respondents indicated a low preference for decisions that relate to the top left quadrant (focusing on facts); only 5% of the 96 decision choices made related to using facts and data (information) based on evaluation, data collection, financial and technology considerations, and how performance is to be measured in the recovery process. This under-representation in actual decision choices points to the potential for such important considerations to be excluded from the consideration of recovery priorities.

Responses across other quadrants indicated a balance in decision making related to:

- Using planning processes, deciding on the timing of implementation, administrative processes and quality of outcomes/outputs (bottom left quadrant that focuses on form – planning and implementation): 41% of top 8 responses reflected that this type of decision making would receive priority.
- Using consultation, partnerships and other communication and people considerations in its implementation: 32% of top 8 responses reflected that this type of decision making would receive priority.
- Using strategy, a clear vision and consideration of desired future states: 22% of top 8 responses reflected that this type of decision making would receive priority.

Recovery decisions that were given the least priority or less consideration in the recovery management process included:

- Health and safety of affected residents
- Evaluation of the effectiveness of the overall program will inform areas for improvement
- Removal of internal bias to facilitate accurate assessment and feedback
- Value of a well-maintained and up-to-date network
- Operating procedures that are documented facilitate role clarity and accountability

Thinking Under Pressure

Under-pressure profiles of respondents indicate how their thinking changes and how they respond when under pressure. For respondents with a “right-brained” dominance (decisions focused on feelings and future), their pressure profiles confirmed a low preference or avoidance of fact-based or analytical decision making. An analysis of the under-pressure profiles of respondents indicated that 50% of all respondents have a low preference or avoidance of fact-based or analytical decision making, and that may explain the low number of decision choices in that area.

The survey results indicate the potential for exclusion of important considerations from decision making related to recovery priorities. Whether making decisions as individuals or in teams, an awareness of the low preference or avoidance of fact-based or analytical decision making would facilitate the opportunity to achieve a more holistic, balanced whole-brained approach to making recovery decisions.

By addressing recovery decision making in a team context, supported by appropriate thinking (and, therefore, decision-making) preferences in team members' standard HBDI® profiles and under-pressure profiles, decisions that are balanced across all thinking preferences (i.e., taking into consideration issues across all four quadrants) are ensured, making for better recovery outcomes.

RESULTS:

Whole Brain® Thinking provides an organizing principle for better decision making in recovery and emergency management, ensuring no critical areas are overlooked.

"The application and adoption of Whole Brain® Thinking concepts to risk- and emergency management approaches and business disruption scenarios presents a huge opportunity for practitioners and managers who wish to proactively address the 4Rs of integrated emergency and risk management: readiness, reduction, response and recovery." ***– Dr. Dean Myburgh, Risk and Emergency Management Consultant, Director, Confluence Group***

Effective (whole-brained) decision-making for recovery involves thinking from all four quadrants. Unless a leader as decision-maker is confident that the emergency management recovery team is whole-brained in its approach (using the thinking from all four quadrants in decision making) and is able to address all of these dimensions, the results are likely to be sub-optimal and not provide sufficient focus to the desired recovery outputs and outcomes. Equally important is how the leader approaches the decision-making process while under pressure.

Overall, the study found that:

- Decision makers in emergency recovery situations need to allocate tasks on the basis of a clear understanding of individual team members' thinking and how they react under pressure.
- There is potential for decisions related to facts and form (processes and procedure) to be given lesser priority or to be excluded from decision making in recovery scenarios.
- Decision making with an awareness of the low preference or avoidance of decision making in certain quadrants facilitates the opportunity to achieve a more holistic, balanced whole-brained approach to making recovery decisions.
- The application of a Whole Brain® approach to recovery ensures that decisions that focus on facts and form are given appropriate consideration.

The findings of this case study suggest that Whole Brain® Thinking offers an organizing principle for better decision making in recovery and emergency management. When recovery management teams address recovery scenarios where holistic, integrated thinking is required to ensure balance and success, Whole Brain® Thinking ensures that the "bases are covered." Those involved in emergency situations are better equipped to demonstrate proactive decision making in their approaches to managing recovery and other emergency management processes.

Whole Brain® approaches, including using the HBDI® assessment and applying Whole Brain® Thinking tools, offer decision makers the opportunity to review and evaluate both the nature of their decisions (i.e., which decision quadrants they are addressing) and the extent to which they contribute to a balanced consideration of critical recovery components.

"An understanding of Whole Brain® Thinking has focused emergency management decision makers (students) on the need to reflect thinking aspects from all four quadrants," says Webb. "This understanding has shown the students the importance of their thinking under pressure and what this may mean for their decision making. It has also increased their awareness of the thinking preferences from the other quadrants that become important when making emergency recovery decisions."

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