A Strategic Conversation: How to Engage Staff in Scanning and Scenario Building – A Case Study

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Introduction and Context

This paper presents an historical account and some lessons learned in applying a novel approach to horizon scanning and scenario building in a government organizational context in Canada. The methods applied have a direct connection to the first implementation of Singapore's Risk Assessment and Horizon Scanning project. This paper, with its presented project, demonstrates an approach to engaging large and diverse employee groups in thinking strategically about the future. It also describes the use of tools and methodology that capture high volumes of fragmented data in order to rapidly scan for patterns of meaning. The indirect message is one of coming to terms with not only accepting the uncertainty of complex and highly dynamic and evolving situations, but also learning to think differently and to approach scanning in a way that challenges past practices and assumptions.

The Ministry of Forests and Range (MFR) is a provincial level government entity in the province of British Columbia in Canada. The ministry's mandate is to look after the environmental and economic interests of the public forests in the province. The landmass of the province is almost 95 million hectares, (roughly 4 times the size of the United Kingdom) of which nearly seventy percent (64 million hectares) is forested. Ninety five percent of the forested land base is owned by the province and managed by the ministry. The organization is involved in a wide range of business including fire management, forest health, revenue policy and collection, stewardship, tenure, engineering, timber sales and others[2]. The ministry's operations are distributed across the province in 26 district offices, three regional offices, 12 timber sales offices and one headquarters with an employee count of approximately 3600.

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[1] Ms. Norah White, Ministry of Forests and Range, provided review editing for the co-authors of the paper.

[2] 2009/10 Ministry of Forests and Range Service Plan

Problem Definition

Between 2004 and 2008 the ministry was caught in the winds of global change and external trends were dramatically changing many areas of the organization's business. The province's interior pine forests, which represent nearly a quarter of the forested land-base, were under siege by a massive beetle infestation (in 2008 the cumulative area affected was estimated to be 14.5 million hectares); forest fires were becoming increasingly intense; stewardship practices were being impacted as a result of climate change; and a forest industry highly dependent on the United States for its export market was facing, at that time, indications of a significant market downturn.

Forces at play in the operating environment were also changing the ministry internally. The provincial government had recently downsized and reorganized itself, and large waves of staff were approaching retirement age. Concerns were mounting about loss of knowledge in many areas during a time of increasing uncertainty and greater challenges. Workloads increased, as did the need for more collaboration and integration across organizational boundaries.

The organization's internal processes and policies no longer fit well with the demands of the surrounding environment and the acceleration of change. Traditional strategic planning processes were too slow and cumbersome to meet external and internal needs. There were also increasing demands to broaden involvement in decision-making and be more responsive and accommodating to new perspectives and stakeholders. The impact of these changes on staff was highlighted in a staff engagement survey in 2006 where the leadership in the organization was given low ratings when employees were asked whether senior management gave them a clear picture of the direction in which the organization is headed.

First experiences - Cognitive Edge and the Narrative Inquiry Project

In light of staff perceptions revealed in the 2006 survey, senior management was approached see if some of the techniques advocated in the work of Dave Snowden, co-founder of Cognitive Edge[3] might be used to investigate what underlay the perceptions and what might be done to change them. These techniques related to complex adaptive systems thinking and narrative research. A pilot project, called Narrative Inquiry, was launched using Cognitive Edge methods and their SenseMakerTM software. This project collected nearly 600 stories from staff from around the province and from a wide range of business areas and management levels. The stories together with interpretive data provided by the story contributors gave a much deeper sense of the issues highlighted by

[3] Cognitive Edge Pte. Ltd. of Singapore (www.cognitive-edge.com)

the traditional employee survey and revealed different perspectives and understandings of the traditional survey results and assumptions.

The Narrative Inquiry project revealed a strong employee perception that senior management was remote from staff's' day-to-day problems and seemingly unaware of the heavy load of process weighing down staff. Additionally, staff appeared to have a lack of trust of senior management due to past events of downsizing and reorganization. The narrative methodology used demonstrated the ability to engage a broad population in making sense of their own work environment and to provide the senior leadership team with a deep understanding of where and how to initiate improvements. The experience directly influenced the approach to the subsequent project on future scenarios (the Strategic Conversation) as well as prompted the launch of an executive blog.

The Strategic Conversation

In the period following the Narrative Inquiry project, the economic downturn accelerated bringing even greater turbulence in the ministry's operating environment - forestry revenues were falling, industry was undergoing shutdowns, and pressures on the land base were creating conflict. Old models and processes were no longer effective and there was anxiety about the future. A project was needed that engaged the entire workforce to help the ministry prepare for a future more uncertain and complex than before.

In response, the "Strategic Conversation" project was initiated with the following objectives:

- To explore and implement new tools that would help senior management, and the organization as a whole, better understand the nature of the changes they faced;
- To mitigate future risk by identifying, at a much earlier stage, trends that might impact the business;
- To build scanning capacity across the organization, incorporating a wider range of knowledge and expertise; and,
- To improve proactive decision-making throughout the organization.

The Strategic Conversation was designed utilizing techniques and ideas from scenario planning, narrative research, knowledge management, strategic planning, environmental scanning, and complexity theory. Drawing from these theories, methods, and related tools, staff were brought together from across the organization in creative, interactive

forums to share with colleagues their perspectives and insights about the trends of today and where they might take the organization in the future. Because the attending staff represented many different sources of expertise, many different perspectives were brought to the conversation.

Scenario planning was identified to be a core part of the Strategic Conversation. The emphasis of traditional scenario planning approaches to dialogue around open questions with imaginative thought was incorporated. However, the traditional approach to exclusively engage a select group of senior leaders or deep experts was not followed. Traditional approaches typically did not leave room to change or challenge perspectives by way of interactive dialogue, nor did they endeavor to be broad in their exploration (they tended to drive scenarios to the two poles of extreme positive and extreme negative). Therefore some aspects of traditional approaches were taken into consideration, but the focus of utilizing principles of complexity and narrative research to expand the effort to a much larger level of engagement across the ministry took dominance.

Figure 1 provides an overview of the Strategic Conversation project. An estimated 55% or more employees participated in one or more of the staff engagement elements (A through E, and H). All of these project elements were available at any time, whereas others such as large group workshops occurred on a periodic and as-scheduled basis. Ministry staff had many different kinds of opportunities to access information and contribute to this conversation both face to face and on-line and these opportunities ranged from events in their own work area to larger events with contributions coming from people across the ministry's business areas and organizational levels. Also, at any time, an individual could access the project's web site to offer an individual story, scenario or perspective.

Consistent across all project activities was an ability to collect individual interpretations, or perspectives, of the scenarios being presented or created. This process is known as indexing or signification[4]. In this process, staff answered a series of questions about their scenarios and about themselves. Through analysis of patterns generated within the signified data, key insights were gained that provided feedback for other Strategic Conversation elements (see activity F but also E and G) and inputs into senior leadership team discussions.

[4] Signification is a term used by Cognitive Edge which refers to the indexing of information against a predefined framework of meaning. Signification is explained in greater detail later in this paper.

Figure 1: Strategic Conversation project overview

Looking across all initiatives in the Strategic Conversation project, Table 1 below summarizes the key elements presented in Figure 1:

Table. 1: Strategic Conversation project key elements

Project Activity (see Fig.1)	Key points to highlight
A	An executive blog was created featuring regular personal posts by the Deputy Minister and other posts from the executive group. In these blog posts trends were discussed with details about how they are seen from the perspective of the top leadership. Included in such postings are musings about the possible challenges and opportunities the trends may bring which stimulated discussion both online and offline.
B	Discussion forums were created on the project website to allow group discussions on key ministry issues to take place asynchronously.

Project Activity (see Fig.1)	Key points to highlight
C	Workshops were developed and used initially to generate data. The initial sessions also provided a starting point for the project and were modified as feedback from earlier sessions informed future ones. (a section of this paper explores a workshop design that was replicated many times throughout the project)
D	All staff had access to an online project library containing future oriented information that everyone could contribute to.
E	The process of contributing data and signifying it was available to all staff and many people spent time individually contributing scenario fragments, stories, and perspectives on information items online.
F	An analysis team was created to take the data and conduct deep sense-making; this involved having multiple people study the meaning in the patterns in signification data across multiple dimensions (this is discussed in detail later). The analysis team in effect harnessed the collective scanning capacity across all engaged participants. SenseMakerTM Explorer was the primary tool used for scanning and sense-making.
G	Short documents (snap-shots) were written to stimulate thinking about the future related to specific topic areas. Such snapshots and other discussion papers were used to seed conversations and discourse in workshops, meetings, and informal contexts.
H	Many staff took ideas initiated by more formal sessions and carried discussions into their informal settings. One remote office initiated lunchtime viewings of TED talks (www.ted.com) as a means to stimulate wider and more diverse thinking about the future. Another group visited a university research department before their scenario session to talk with academics and researchers about the trends they observed.

The Strategic Conversation Workshop Process

This section describes one workshop used during the project. It illustrates the major elements used to collect scenarios and to engage employees in a Strategic Conversation (element C in Figure 1).

Trends

The concept of trends in this project was used as a means to identify aspects of the business operating environments that are in flux. The trends then served as topic guides for creating different scenarios.

In workshops, employees brainstormed changing situations, contexts, and influences that were impacting the ministry as a whole or more specifically in their business operating areas. Small groups worked in parallel with each other. Recognizing that with parallel effort duplication would occur, the trend items were clustered to identify trend 'groups'. Figure 2 below shows some trend workshop outputs.

Figure 2: Left - multiple trend clusters. Right - Single cluster trend related to water.

With trend groups defined, workshop participants then voted anonymously on the question of which would have the greatest impact on the future business of the ministry[5]. As a result of voting subsequent activities in the workshop centered on those trends participants felt were the most important. Below is a top vote-receiving cluster, related to the impacts of climate change, from one of the workshop sessions.

Cluster G:

- *Climate change is bringing advantages for some species and disadvantages for others*

[5] This was a secondary input to the overall scanning process that provided a perspective insight to the senior management from the broader employee base.

- *Climate change is forcing changes in deciding the best use of the land base, (i.e. timber, water, recreation etc)*
- *More international awareness on BC diversity, ecosystems, species*
- *AAC (Annual Allowable Cut) falldown effects are coming faster than predicted on the coast*
- *The public is increasingly afraid of climate change and worrying more and more*

Scenario fragments

Trend groups were then used to stimulate participant thinking about the future. The question was asked, "If the future were to unfold in the direction of the trend topic, what specific future situations might become a reality?" Discussions in small groups around a specific selected trend cluster were undertaken and notes were captured about key situational descriptions of the future. Following a discussion participants were asked to write a description of the possible future state triggered by extending the trend into the future. The outputs were referred to as "scenario fragments". They were most often a point form description of a possible future state that was triggered by a discussion around an identified trend topic area; however sometimes they were written in full paragraphs (see examples below).

Scenario Fragment Title: Burnt Acres

- *Fire science is an integral part of land use management*
- *FS [Forest Service] takes the lead and resolves all inter-phase issues*
- *FS is global leader in wild fire and inter-phase fire management*
- *FS wild land inter-phase program is used and purchased by other countries*
- *Year-round deployment for protection staff*

Scenario Fragment Title: Carbon management

Carbon management is set as a licence requirement in tenures. Specific carbon management goals are set depending on BEC zone and size of tenure issued. Some tenures could be solely about carbon management, whereas in other cases, specific carbon offset goals could be set to mitigate release of carbon into the atmosphere - if there is a net increase in ghg emissions from that particular tenure.

Following table discussions, participants individually wrote scenario fragments capturing key elements or points from their discussion but using their own words, knowledge and experience. The scenario fragments were titled by each individual, as well as evaluated against a common set of questions referred to as signification.

Note some of the earlier workshops attempted to write a 'group' rather than individual scenario fragment, however this proved to be not as effective for follow-up processing of the scenario fragment. Work being done as a group had the tendency to be more generalized and abstract, whereas individually written scenarios tended to be in narrative form, adhere more closely to a single topic, and were more detailed.

Signification

A data set consisting of over 1600 scenario fragments and information items was collected over a period of a year. The scenario fragments were signified by the contributor of the scenario and entered into Cognitive Edge's SenseMakerTM software. The software effectively allows the contributions of hundreds or thousands of employees to be rapidly analyzed. A purposeful design of signification questions allows deeper insights about content and meaning of fragmented scenarios to be quickly revealed (see Figures 3 to 8 below). In effect the process engages all participants in interpreting their own contributions from their own perspective and expertise but through a purposeful and consistent defined scanning lens (the signification framework). By interpreting signification data across all scenario fragments on a combined basis, a new level of meaning becomes available that provides an organization-wide perspective of the future. Likewise, outliers and anomalies can represent weak signals of emerging issues or opportunities, and gaps may represent organizationally reinforced complacencies. To achieve this broad perspective, all scenarios created by an individual or small group were signified against a predefined signification framework that was created for the specific objectives of the project. The signification framework[6] for this project consisted of a set of questions related to assessment of risk, organizational impact, level of awareness, individual concern, and other scenario or scanning aspects. Figures 3 to 8 below show some questions from the signification framework:

[6] Aspects of the signification framework are patent pending – Cognitive Edge Pte. Ltd.

Figure 3: Example question asking the perspective of the scenario contributor

Figure 4: Example question asked about the scenario

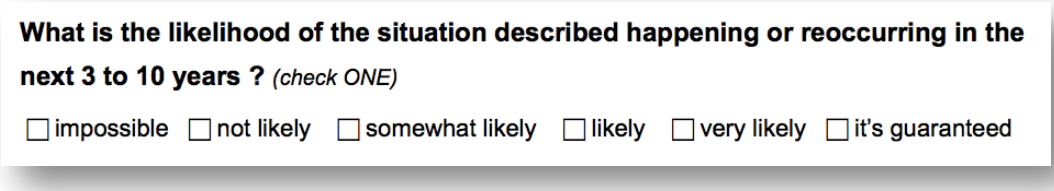


Figure 5: Example question asked about the scenario

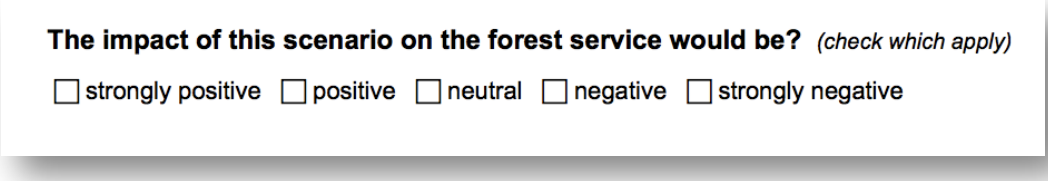


Figure 6: Example polarity question asked about the scenario

Figure 7: Example polarity question asked about the scenario

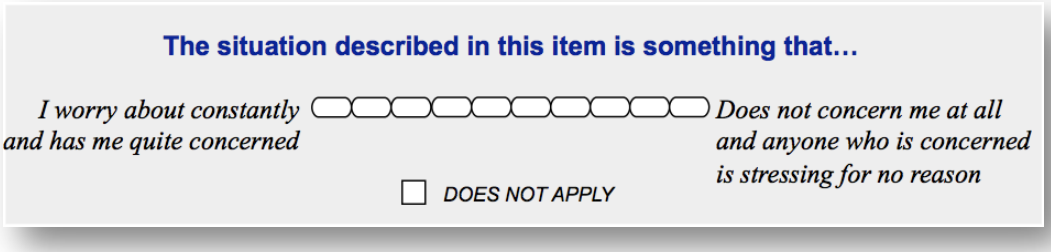
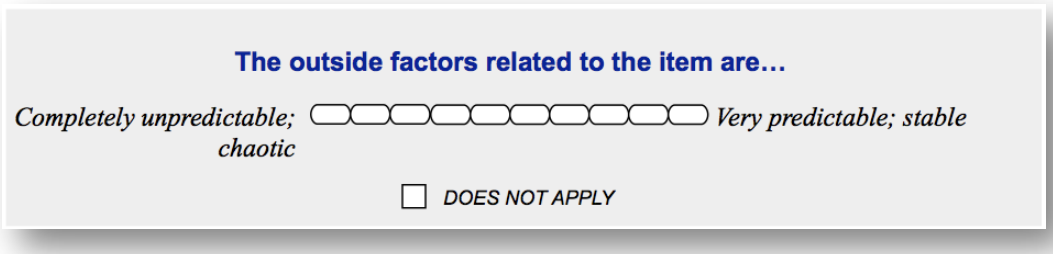


Figure 8: Example polarity question asked about the scenario



Moving to Action Planning in the Workshops

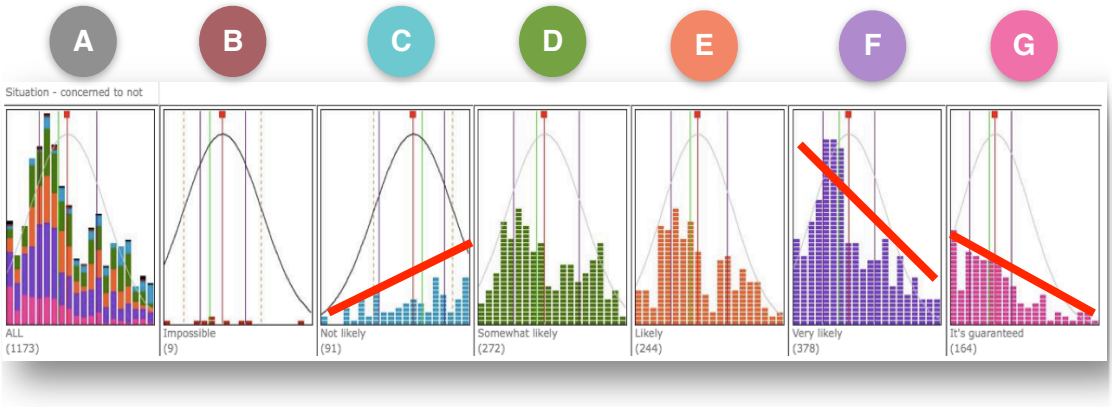
During the workshop hundreds of signified scenario fragments were collected and during this process people expanded their awareness of the diversity of future possibilities and potential impacts. The signification and scenario data was collected using forms (this can be done online in such sessions if one prepares computer access ahead of time) and this output was then submitted for data entry. The final component of the workshop sessions focused on applying the ideas generated. Participants were instructed to identify actions that could be done now in their work areas to mitigate risks and take advantage of opportunities discussed within the scenarios. This exercise helped participants apply their scanning efforts directly, but also generated a high volume of actions for the organization's leadership to consider in subsequent strategic planning processes.

Sense-making: The process of scanning for patterns

Due to the high volume of data collected, upfront thought and design of a consistent and highly relevant signification framework was critical so that the project team could quickly evaluate the data for patterns using SenseMakerTM Explorer. An internal team, supported by an external consultant trained in Cognitive Edge methods, conducted the data analysis. The use of trends to generate scenarios and discussion papers on specific topics ensured diversity in the data and helped ensure a broad scan of patterns from an organization-wide

perspective. Figure 9 shows a sample of a strong pattern revealed related to the degree of concern specifically regarding scenarios about the future.

Figure 9: Patterns in 1173 scenarios showing frequency of scenario occurrence on the signification question in Figure 7 by answers to question in Figure 4



The histogram shows the distribution of scenario occurrences related to situations about which employees are very concerned about (left) versus scenarios of situations that are not of concern (right). Histogram 'A' shows all 1173 scenarios and the distribution shows that the scenarios contributed are in general seen as concerning. Histograms 'B' through 'G' show responses moving from "Impossible", to "Not likely" through to "Very likely" and "It's guaranteed". This pattern scan by question response is based on the signification question shown in Figure 4. Overall the pattern presented in Fig. 9 suggests that the ministry is focused only on very likely future possibilities that are concerning (see highlighted slopes in 'F' and 'G'). In contrast to histogram 'C' related to not likely scenarios the pattern here indicates that participants view unlikely scenarios as not concerning. Now these patterns are not necessarily surprising however the content of the scenarios grouped on the right side of histogram 'C' reveals areas of potential complacency and situations that might be overlooked (i.e. if a scenario is thought to be not likely and not of any concern people may think "Why should we waste time thinking about it?"). Using analysis results from these patterns to stimulate dialogue and further discussion is a key function of the sense-making process and its ability to deepen scanning. The example shown in Figure 9 is a sample of a 1-dimension pattern view across elements of a signification framework. Thus with this view amongst others, the SenseMakerTM software allowed the analysis team to look at overall trends and patterns as well as the context of the scenario fragments related to such patterns.

Many other patterns were identified in addition to the example presented and the scenarios themselves provided deeper context related to the patterns. It should be noted

that the non-patterns also represented a valued output in that they often represented things outside of the scope of the organizations active scanning range. All of these outputs were taken to an annual organization-wide leadership meeting where approximately 200 of the ministries top managers gathered, and as a key part of their agenda reviewed the progress and outputs of the Strategic Conversation project after a year of activity. Supported by detailed patterns and scenario and trend data some questions that challenged the leaders to scan more broadly were presented to stimulate discussion on strategies for the future. These questions[7] were:

- *Are there areas in our scanning that we don't see? Why aren't we seeing them? What might the underlying reasons be?*
- *Do we avoid seeing the 'seemingly' impossible? Do we avoid talking about the unlikely?*
- *Do we often see outside our boundaries and see beyond our borders?*

These questions generated a rich discussion that was forced to go beyond the dominant perspectives of the leaders assembled. The fact that the questions framed were based on patterns across 1600 contributions resulting from organization-wide staff conversations, the situations presented by the questions were both powerful and unavoidable.

This type of analysis requires involvement from a diverse number of perspectives (i.e. analysts with different backgrounds) and a willingness to suspend one's personal opinions. It often reveals surprises that may be difficult to accept. Analysis can and should be undertaken by a number of individuals with different perspectives and expert levels. It is important to remember that this ability to enhance analysis and raise awareness beyond an organizations dominant purview is one of the method's strengths.

Conclusions, Lessons and Current Status

Acceptance of a new approach to data and analysis

The data collected from these processes challenges a project team and an organization. Making sense of unstructured data through the patterns that emerge from meta-data (the data captured through the signification process) requires reflective time, suspension of prior assumptions, and the ability to look beyond the content of singular information items.

[7] Presentation by Christine Gelowitz and Sue Stephen at the MFR Provincial Leadership session November 2008.

Organizationally the challenge with this type of analysis is that it does not necessarily lead to clear answers. If anything the outputs of this process undermine an all too common reliance on either reinforcing a dominant established belief or a simplified view. Typically such dominant beliefs or simplifications only categorize immediate perceived opportunities or threats, or follow influences of past practices and historical data. The benefit and value of taking the time to make sense of interpretation patterns in high volumes of unstructured data is the greater awareness it creates in terms of where actions and directions need to be set in the present day that will assist an organization in navigating an unknowable future.

The challenge for the ministry in this project was to see beyond the way it more commonly approaches data and analysis. The ministry is very used to dealing with metrics (areas, monetary values, growth, etc.) and traditional statistical methodology. The information collected in this project was considered by many ministry staff as 'qualitative' data and was difficult to translate how traditional statistical methods were being brought to bear on such qualitative data. For staff familiar with traditional metrics, this type of data can breed skepticism of the data validity and utility. Signified data is valuable as it has the ability to reveal underlying perspectives and biases, but creating widespread acceptance of the methods and data requires exploration of the patterns in depth with sufficient time to reflect on the meaning of identified biases and perspectives. Conducting studies with this method requires the same application of proper sampling techniques, a diversity of respondent perspectives, and most importantly sufficient volumes of material.

Get the Starting Conditions right:

This project required considerable design effort, planning, and preparation. A number of factors contributed to the requirement of detailed design effort including the necessary engagement of the whole organization; working with staff that were uneasy discussing difficult topics (downsizing, changing, roles etc) in public forums; asking staff to have conversations beyond their normal working units and across employee management levels; and, dealing with participant anxiety toward new techniques.

A number of existing conditions helped the ministry overcome these challenges. A strong environment of learning and open-mindedness was already present which was visibly supported by senior management along with a cohort of skilled and trained internal facilitators. Several internal ministry-wide conversations had already occurred, albeit in a different form. Sufficient resources were available internally to deliver without visible external assistance thus maintaining trust within participants through the use of our own 'language' and familiar materials.

Delivering the Technique - Participants

The processes used are emergent in nature and the scenario work requires time and reflection rather than a jump to action. For example, it was often difficult for participants to interpret the implications of trends into the future of their business. However, feedback indicated that participants found it valuable to stop and reflect on the emerging situation and what it might mean for the organization's collective future. The energy that was evident in the process came from engaging people at their familiar level and context, where they have strong knowledge and expertise.

Participants at higher levels of management gave more opinions and abstractions as opposed to field staff who were generally more detailed and specific with their scenarios, underlining the importance of a diversity of contributions.

Delivering the Process – The Internal Delivery Team

The facilitators all went through a workshop session themselves so they understood the experience participants would have. This method and approach requires a different type of facilitation, one that does not lead the participants in any way, including leading with examples. Silence is helpful as it leaves individuals to their own reflection and provides a gentle pressure for engagement.

Leadership is Key

Projects such as the Strategic Conversation raise staff expectations of leadership. The process itself gives voice to many in the organization who are natural leaders. If senior management changes or falters, the interest will not continue except for supported 'pockets'. Once an individual had been through the process, they tended to become champions of the thinking. Recently hired and younger staff responded very positively to the process. For maximum benefit, processes such as the Strategic Conversation or others based on similar principles must be built into the organization while the momentum of future thinking is there.

Moving from Future Thinking to the Present

The Strategic Conversation was a first step in positioning the ministry for future business challenges. The Strategic Conversation created a space for exploring trends and building possible scenarios for the future within a safe, trusted environment. Backed by the experience and knowledge gained from the Strategic Conversation initiative, the ministry later launched a mass staff collaboration project to help solve a specific problem in the

present – how to fundamentally transform the business in light of new internal and external operating realities.

In this project staff were solicited to contribute ideas for transforming the business at all levels, functions, and areas. Staff readily explored unconventional and even unsettling ideas; and openly shared these ideas with senior management. The ideas identified options for transforming the business in fundamental ways, and often in the area in which the staff member submitting the idea personally worked. Demonstrating the capacity created by prior initiatives, over 2000 suggestions were gathered from nearly 25% of all staff throughout the ministry, all on-line, over a two-week period. The accelerated completion time was a result of employee familiarity and trust in the process, experience with the methodology and tools, and senior leaders visible support and interest. As with the Strategic Conversation, to facilitate a deeper analysis of the submitted ideas a signification framework was created and participants signified their idea submissions as a part of the online submission process. This allowed the project team to make sense of 2000 ideas in a short but intense two-week analysis period. In effect the analysis load was distributed across all who participated – every signified contribution engaged the contributor in the analysis process. Management teams and participants also received subsets of the outputs relevant to them for further analysis and sense-making. This informed local planning processes and strategic planning.

Final Thoughts

This paper has attempted to provide an overview description of a multi-faceted and evolving project in scanning and strategic thinking about the future. Not only were the outputs generated by the project valuable to the organization, both during and at the close of the project, the experiences of all engaged employees had a cumulative impact and changed the organization. Many more employees began to think more strategically about the future and their role in preparing and developing new ways to move the organization forward. Some final thoughts on the project from an organizational impact perspective:

- A momentum was created among staff to think differently, and more widely, about the future. This also includes the willingness of senior managers to respectfully engage staff in shaping the future of their organization.

- The organization as a whole has learned the value of creating a much wider scanning capacity that makes use of a wider range of knowledge and expertise. Knowing that engaging the entire organization in scanning is possible with a method that facilitates an ability to rapidly assess large volumes of data has impacted how decisions about the future are made.

- The project started a process designed to create an organization that is more resilient in the face of uncertainty and risk. It built capacity for staff to think openly about their own and a variety of others' perspectives and knowledge. It raised the comfort level with acknowledging the ambiguity that comes with the uncertainty of future thinking. It helped the organization to acknowledge cultural blind spots and to look more outwardly for solutions.