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School of Management



Telfer Foresight Leadership Forum

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Report

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1. Introduction and Context

In 2010-2011, in response to several shared needs, four federal departments and agencies and the Telfer School of Management's Centre for Executive Leadership initiated the Telfer Foresight Leaders Forum as a colloquia of peers to exchange best practices and learn from each other in the design and deployment of foresight techniques within the Federal Government of Canada. The basic need involved how to become better prepared for change, how to benefit from the growth of foresight application elsewhere, and practical ways to share the experience acquired by first generation foresight professionals with second generation recruits and new entrants to the world of forward policy engagement and government strategic planning.

After five sessions the first year of the TFL Forum is now complete. While this is the report from the last session, it also is serving as a short summary of the years activities. Each of the four prior sessions has been described in separate reports.

The fifth session of the forum focused on developing foresight literacy and foresight capacity. This report begins by identifying the current context for why foresight development is both timely and useful to Canada, and in exploring this issue it takes stock of where foresight appreciation and practice has improved and looks toward the future prospects for applying foresight in a policy environment characterized by increased complexity and persistent horizontal issues and problems that are often global in scale and impact.

Over the past year, Canada has seen its foresight activity grow and extend into new domains, engage policy authorities much more extensively than ever before. Further, the need for foresight was highlighted as one of three key recommendations of the Prime Minister's Advisory Committee on the Public Service, annual report (March 2011): ***A Public Service for Challenging Times***. The committee highlighted the need for longer term thinking as one of two key recommendations in a manner which aptly sets the stage for a renewed interest in foresight by the many agencies and departments of the federal government:

"In our view, longer-term thinking is more important than ever as we move from a period of relative stability and growth to one of global complexity and uncertainty. To provide the best possible advice to government, the Public Service must continue to invest in research, analysis and strategic thinking. We believe its role as a platform for longer-term policy thinking must be strengthened, particularly in the current environment of economic uncertainty. "

Members of the TFLF have been recognized for excellence in Foresight activity by international review bodies.

- The CFIA's Fore-Can has garnered international attention and praise;
- Health Canada's policy engagement on Health Futures has stimulated a vibrant debate and was selected for inclusion in the European Commission's Overview Conference of Future Oriented Technologies (FTA 2011).

- PRI's Canada at 150 project and subsequent training initiatives engaged senior policy stakeholders and were identified by international speakers at the Seville Conference as best in class practices;
- Dr. Calof and Jack Smith were honoured by the international foresight community and asked to be guest editors for a special issue for Foresight Journal on foresight impact. As well, they were asked in this year to serve on the advisory boards of APEC, Russian and European Union foresight committees.

The report focused on the continuing needs and issues that were generated or that emerged during the past year and how the development pathways for foresight and new initiatives subsequent to the TFLF 2010-2011 might therefore be positioned or planned in the next fiscal year 2011-2012.

2. The Core Concept: Foresight + Intelligence = Insight

As complexity has intensified, leaders in all fields are being challenged to be cognizant of the big picture, aware of how change in other domains might impact their work and how the interplay of technology with business, environment and global development might impact one's own organizational agility, prospects and positioning. Foresight as a set of tools to anticipate change in the medium- long term, plus competitive, technological and organizational intelligence, focused on the short and medium term have jointly become the new essentials for smart organizations because through their complementary application they can help organizations develop insights into the choices ahead so the surprise factor is diminished and navigation within the fog of the present and appreciation of plausible pathways forward are strengthened. At the same time, there is growing recognition of the need for intelligence (short to medium term) on the environment to assist in making today's decisions. Rather than discuss the difference between foresight and intelligence, the European Union and others have combined both fields into one. With new definitions of foresight mentioning the need to collect strategic intelligence and recognizing that the objective of this combined field is to assist in developing shared long term vision to assist with making today's decisions.

The emphasis on making decisions today in anticipation of future environments was a dominant theme in the 2010/2011 foresight conferences and was the subject of much discussion at the forum.

Even the PM's senior external advisory committee on the public service has recognized the need for better long term thinking to support decision making today. Now with a majority government in place for the first time since foresight activity in its present form emerged in Canada, the environment is more propitious than ever before for further development of a strong strategic federal foresight capacity.

Canada is already well recognized internationally for its ability to design a low cost network based foresight infrastructure largely self developed, and financially supported through decentralized projects without a single national foresight champion organization. The TFLF was designed to extend and extract insights from this experience.

Increasingly other countries are now seeking advice from Canada as they too are facing hard choices regarding public funds management. As a model for building foresight capacity, the TFLF has already attracted international attention from the UK, Russia, Australia and the European Commission.

So this report highlights the areas and capabilities (almost 30 in total) that Canadian foresight leaders have identified as key to moving forward to the next level – by seizing opportunities and strengthening some areas and filling gaps in others.

In most cases, the report does not suggest who should lead or how a proposed activity could be funded, since the purpose of this report is strategic rather than operational and a detailed development agenda will require widespread stakeholder input. This report is to spark the discussion and act as a catalyst for moving Canada forward into new fields of foresight application and insight-opportunity. For readers that wish to learn more about what Foresight is, its critical success factors and the concepts of foresight literacy, consult the appendix.

3. Foresight Literacy: What is It and Why it is So Important

Foresight has become an important tool for forward policy formulation, business strategy and academic and non government organizational planning and capacity building for anticipating and managing the challenges associated with an increasingly complex and accelerated pace-of-change world.

All of the players define foresight with some similarity – as bringing a longer term viewpoint and its uncertainties and contingencies into the realm of better informed and prepared short term decision making, ideally through collaborative and participative processes that involved experts outside one's own organization to enable consideration of more diverse views and knowledge inputs.

At the core of the TFLF foresight model are two key premises:

1. No organization fully controls its forward and future operational environment, hence it needs the stimulus of foresight for agility and preparedness; and
2. The requirement to think **deeper** (using competitive intelligence and technology foresight techniques such as profiling, intelligence gathering from public sources, and better understanding of the prospective impacts of technology) **further** (longer timeline, more diverse horizons and domains) and **broader** (more outside-in, diversity and more elements affecting the environment).

By deploying the three perspectives of deeper, further and broader within a context of less control, organizations can be warned earlier about prospective pitfalls, threats and traps, and decisions can be better informed and less risky. This applies to most organizations and notably includes the Public Service of Canada.

The Prime Minister's Advisory Committee on the Public Service, in its recent (March 2011) annual report: ***A Public Service for Challenging Times*** chose to highlight the need for longer term thinking as

one of two key recommendations in a manner which aptly sets the stage for a renewed interest in foresight by the many agencies and departments of the federal government.

This creates both opportunity and challenge. The opportunity is to bring forward new techniques and perspectives; the challenge is to do so in a competent orderly manner, with an effective training and development paradigm, to ensure that the techniques of foresight are professionally understood and delivered, and that a sustainable base of expertise is created and integrated into the policy formulation process.

Calof and Smith have witnessed some of the problems that a quick fix approach can bring:

- Attracts people without the experience and complex understanding of the techniques – bad projects are remembered;
- Champions at a senior level move on and are replaced by those without any appreciation – hence a need to more broadly communicate and train throughout the succession system;
- Budget and staff cuts tend to gravitate to the newest cadres – and as such longer-term initiatives tend to be more easily targeted;
- Short term projects tend to receive renewed funding and prominence during periods of organizational stress;
- Foresight brings new concepts, new terms and new mindsets – all represent challenges to existing professions (e.g., economic policy advisors) that dominate the Public Service decision making environment.

Foresight literacy is both about organizational engagement and fundamental perspectives on how protagonists deal with uncertainty and the contingent nature of change. In the context of how organizations and their key staff approach these fundamentals, foresight literacy also means being able to address futures understanding on multiple levels:

1. Building a futures narrative capacity around changing values, expectations and uncertainties;
2. Mobilizing collective intelligence and collaborative mechanisms to rigorously imagine plausible future situations;
3. Re-framing the possibilities for action and solution through strategic scenarios casting and analysis;

For example, Adam Kahane, Canada's most famous scenario manager and leader of the Global Business

Network Mont Fleur scenarios on the future of South Africa, in his book *Solving Tough Problems*, relates the importance of realizing that scenarios can be transformative ways of imagining the consequences of present day actions- i.e. good scenarios inform us about what may happen and what could alternatively happen given the choices we make today.

Following the last TFLF session Professors Calof and Smith met with each client team to further explore what foresight literacy had come to mean to them in practical terms within their respective organizations. Some of the key comments and observations include:

- Foresight Literacy (FL) is a springboard from which one can engage the leadership, to build awareness, to address their issues and problems, to appreciate and assist them in managing their "pain";
- FL is achieving the credibility and in return acquiring the opportunity to make a business case for more resources and continued support for foresight;

- FL is also a realization that foresight development and training is required to keep it alive beyond the end of single projects – this is particularly important for foresight groups just starting out or managing their first major projects;
- FL is engaged when leaders are asked to derive insight from foresight – i.e. to ascertain added meaning, patterns and ideas that provide an organization with perspective and information about prospective futures that is strategic and influential;
- FL is in knowing who to involve – and approach – i.e. connecting to the right people for particular needs, and then working with them to formulate the key questions and target the deeper dives necessary;
- FL is being flexible with terms and timelines, if that is what is required to engage a client on their terms, where the future is “not in foresight”, 3-5 years out, but now or soon;
- FL is about bringing the customer along with you, building resiliency with them and knowing the audience and the chances they are willing to take;
- FL in the context of clients, can also be pushing them to become more comfortable with ambiguity, innovation and uncertainty;
- FL is a commitment by the foresight team to listen to clients, to engage and to see through to action or resolution the key future oriented challenges;

Some of the participants have been able to work with Dr. Riel Miller, an internationally recognized expert specializing in foresight and foresight literacy training.

From his recent lectures: to be a foresight practitioner means working with diverse groups to change the ways they think about and see the world – to embrace contingency, plausibility and ambiguity-simultaneity, and the ways that they categorize, organize and plan for the future. The two major changes that enable these concepts to be more readily accepted than in the past are that there is now a growing appreciation of the constancy of change and the ‘end of certainty’ ; and along with this is the creative destruction created by technology, innovation and attitude shifts. Foresight literacy is now only really effective when both clients and practitioners accept these as fundamental to all but the most short term issues.

What this means in operational terms is that adopting foresight as an effective adjunct to policy formulation, requires some key changes in how policy making as a collaborative governance process should evolve:

- There must be a conscious effort to break through the hubris and collective comfort of the present – to diminish its ‘pervasive thickness’ ;
- There must be a mechanism for questioning the sustainability of present assumptions about economy, its interdependency with environment and other key measures of well-being;
- Expectations about evidence may have to shift given that essentially there is no data on the future, just weak signals that should be examined and tracked to see how and whether and with what impacts their intensity may increase;
- Wildcards and other prospective shocks are useful because although they may have low probability, they can alert us to where behaviour change may be required for systemic resiliency and robustness (e.g., Japanese tsunami impacts);

- Simulation, gaming and modelling will be more frequently deployed for contingency purposes because of problems of some data but no models or models but no data – so the scenario teams have to imagine plausible situational dimensions.

While there is no single authoritative Canadian source for discussion and validation of wild cards or weak signals, there are several groups weighing these on a continuous basis: Foresight Canada, the Foresight Synergy Network; Health Canada and Defence R&D Canada.

Internationally many more are available for consultation: e.g., European Foresight Platform; APEC Centre for Technology Foresight; Millennium Project; Global Futures Forum; Institute for the Future and Institute for Alternative Futures.

Telfer, through the networking of Professors Calof and Smith, has excellent access to all of these.

4. Building Foresight Appreciation and Capacity (Organizational Receptivity, Champions and Integration)

At the core of the development of foresight as an adjunct to policy, is the relationship between the two that matters most. Policy advisors have had to become ever more focused on the short and medium term of 1-5 years, theoretically freeing up space for foresight roles, approaches and techniques to be more widely accepted. In theory it may seem evident, but in practice, because it involves both turf issues and behavioural change it is not so smooth.

Nevertheless, members of the TFLF reported some success and some enduring issues and barriers that continue to frustrate foresight development within the federal system.

Several organizations report a good level of awareness in scanning and capacity building, but some uncertainties regarding how to satisfy their policy group's expectations for useful products and services. Foresight is catching on but this stretches the challenge further- in time horizon and regarding the extent and focus of coverage of prospective topics and science implications.

There needs to be a more concerted training focus for receptors of foresight so that their expectations can be realistic and aligned with that can be delivered. The skill most lacking or in demand is that which combines foresight –insight with science knowledge. This is needed to turn intelligence and observations into insights which the policy community can use to engage decision makers.

Good interviewing skills are also an asset when it comes to engaging senior management - and knowing who are the “right” people to seek out as experts. Senior stakeholders turnover remains a thorny issue – just when a strong appreciation was acquired, the person moved on or up in the system.

One group noted that it has been able to increase foresight appreciation through a bi-weekly science flash electronic newsletter- identifying the unit as a source of future awareness – uncovering the tip of the iceberg so to speak. Other best practice communications vehicles include a brochure on foresight

processes, case studies in summary format, and education of departmental Communications staff so they understand the value of foresight and its limitations.

Critical insights are what resonate and create the visibility. Managers do not care about technique, only solutions so we see a movement from foresight to insight and how to apply these to influence the evolution of organizational agendas.

Another group, currently in start-up mode offered the observations that there is no real course work in Canada for government focused knowledge development on foresight. Fortunately they were able to build awareness by citing a current regional success story to engage others in building a culture of appreciation of foresight – tools, techniques and benefits.

Capacity remains an issue because of being pulled in many directions. A source of both formal training and a practice environment would be helpful.

Foresight should also be integrated into the strategic review processes of departments, and connected to the Treasury board efforts to help them improve business management. This will help foresight become more proactive instead of reactive.

Another barrier is the challenges associated with defining, scoping and assessing horizontal issues. Departmental working groups tend to receive these but have few incentives or resources to deal properly with them. Done well, foresight is an area that the federal government can lead by example, fostering collaboration, promoting logical solutions with consideration for the future – clearly a leadership opportunity.

The Policy Research Initiative (PRI) (now being rebranded as Policy Horizons Canada) has the most extensive scanning and policy advisory experience in using foresight to provide advice to a broad range of senior decision makers within the present configuration of the federal policy system. Foresight literacy as practiced by the PRI involves both understanding the techniques and applying these to the policy context. For PRI, building foresight capacity and extending practice means moving it up the value chain for both clients and users. More frequently now directors are being trained to appreciate the techniques of foresight. PRI as a key horizontal centre of both expertise and insight, and training capacity needs to have sufficient resources to have the space and ability to play to its full potential.

One concern which should be noted is that building successful foresight capacity demands professional experience and advice – it is not easy to acquire this on a do-it-yourself or advised and aided by a few policy advisors who have read something about foresight methods.

In the consultations done by Calof and Smith for the Critical Success Factors for Government Led Foresight paper¹ some practitioners referred to foresight as both rich in tacit knowledge requirements

¹ *Science and Public Policy*, 37(1), February 2010.

and laden with a low tolerance for inadequate understanding and appreciation of the complexities involved in dealing with the fundamental uncertainty of futures issues and their exploration – especially avoiding the easy-to-assume tendency to believe that an ability to do foresight can be readily acquired and/or provides a capacity for prediction.

It is in this context that the TFLF has stressed extensive sharing of experience with professional guidance, rather than mere peer to peer mutual support without a professional-educational structure, and leaders are advised that, in a time of pressure on budgets, to avoid seeking solutions that clearly are not based on professional support underpinned by extensive tacit knowledge and experience.

In conclusion, despite the growing success with the TFLF group of foresight, several challenges persist despite the increased awareness. These include:

- How to connect the long term and present day issues;
- How to innovate foresight and its methods;
- How to increase training capacity and develop materials;
- How to fashion new outputs that resonate – scenarios and reports do not;
- Policy receptivity is higher now and exposure is greater but what is the right response? – Answer: 2-5 page strategic briefs with some evidence and high quality insight on how future change affects today's decisions;
- The development of widespread foresight literacy is so essential that participants should not have to pay. PRI now has a network of 136 federal staff trained covering 36 departments and agencies; high policy literacy is a good entry point.
- Key lessons learned are that capacity starts at home, first with internal capacity and domestic focus; that the audience should include policy leaders and that a training approach should be followed by a doing one. This all builds receptivity.

A final point noted by several participants is the urgent need for hands on practice – to acquire more of the tacit learning. As one foresight leader noted:

There is a need to move beyond the theoretical. After an initial understanding of techniques and processes, there are a few critical things needed: hands on experience in a foresight exercise; exposure to futures (such as speakers who have a view of where things are heading); and skill development in how to read the entrails of the present to develop insight. This latter is really intelligence work, but it is something that we need to be able to do since we will not always have the luxury of conducting a foresight exercise before we are asked to provide insight about the future. Things like: how can you tell a weak signal from irrelevant anomalies? When should you pay attention?

5. Future Federal Foresight Development Needs, Opportunities and Priorities

This final section of the TFLF report summarizes the ideas, suggestions and improvements in federal foresight practice and positioning that the TFLF members believe should guide the way forward. Who or how and when these suggestions might be acted upon is, in most cases, not specified-pending further strategic analysis by the TFLF team.

The views regarding what next steps and investments should be considered to advance the practice and professional capacity of foresight and advance its application to practical business and policy decisions also are designated according to the key stakeholder perspectives: foresight practitioners and developers; senior champions; policy collaborators and clients and business collaborators and clients.

The foresight practitioners and developers represent the majority of participants who were involved in the TFLF. As a group, it consists of federal officials from multiple departments and agencies and comprises a broad range of experience and disciplines, from recent hires to managers with several years of foresight and strategic planning, policy and project management experience. Their priorities are mainly about professional development, certification, coaching, mentoring, experiential learning and practice, and techniques for stakeholder engagement, building credibility and value propositions for champions and the other parts of the organization.

Champions and receptors want to become conversant with the types of capabilities foresight can enhance or deliver, and what can be expected regarding new insights into the future implications of present decisions, especially in those areas defined by wicked and enduring horizontal type problems such as climate change, obesity and health, poverty and human security.

Arms length stakeholders such as policy advisors, policy authorities, communications branches and business market researchers are seeking enhanced insight, reliability, consistency and value appreciation from foresight.

As part of the final series of interviews conducted by Professors Calof and Smith, TFLF participants identified a number of wish list items that they felt still needed to be developed, strengthened or improved to enable foresight activity to flourish:

1. Case studies of successful application and value; Initially, when foresight is in a start-up phase, foresight leaders and practitioners are often asked for examples of impacts, success and value. This is a widespread need wherever foresight is being developed as a new addition to an organization's capabilities;

2. Practical coaching, hands on mentoring and access to experienced advisors on a regular basis. A frequent response was: how could we access the knowledge and experience of Telfer or other sources on an ongoing basis to provide guidance in foresight strategy, advice on methods and answers to questions that call for knowledge beyond the experience of the team;

3. Colloquia, practice forums and discussion groups on big and horizontal issues, where foresight can provide unique insights; Many new entrants to foresight are not well prepared for the scope and depth of understanding required to frame issues effectively to be able to derive strategic insights, and they look to those already there to provide guidance and inspiration, even encouragement to be more courageous, because many issues are quite daunting in their complexity, scope and prospective future impacts.

4. Identifying and educating prospective champions and receptors. Every organization and decision system has a range of possible players and influencers, mindsets and decision and leadership styles. Several comments indicated that it would be useful to have some additional capacity development, sharing of experience etc. in this area, characterized as it is by tacit knowledge, ability to read attitudes, inclinations and effective use of personal and organizational networks.

5. Further work, inventory of projects and practical and theoretical references regarding key foresight terms and their evolution in practice. Many TFLF leaders are aware of the changing nature of key terms related to contemporary foresight, (e.g., scenarios, insights, contingencies,) and the fact that these are not exclusively associated with foresight. More specifically, in some organizations, foresight is being replaced in practice by *insight* as the operative term for managing uncertainty;

6. How to manage complexities involving multi-stakeholder processes, and expectations by some receptors for more subject specific answers, and how to align generalist and expert capacities in shared projects; Each foresight project involves context specific challenges for which experience is the best guide. Sharing this experience is a key need and benefit for the emerging foresight professional community.

7. How to establish provocative and credible benchmarks of foresight prospects for Canada in key domains of global focus. Several participants noted that although Canada has a strong international focus for some of its key policy research domains, (e.g. energy, agriculture, commodities trade), our foresight horizons internationally have tended to be rather ad-hoc, opportunistic, not linked to DFAIT, and dependent upon a few individuals. Despite these shortcomings, our foresight networks, expertise and outputs are respected and access to global expertise and organizations has remained high enough to attract invitations to events and receive reports. The problem is that few resources have been available in Canada to disseminate, analyze and learn from this access. With just a modest application of in-kind and financial resources it may be quite easy and cost-effective to assemble a project to document and enable broader distribution of insights and facilitate some ongoing connections with leading global foresight organizations.

8. Development of a university based foresight training and certification program for new entrants and staff transferring into foresight units, plus focused regular forums for foresight managers to share intelligence, advice and project experience.

These eight broad areas of capacity development needs resulted in the identification through the TFLF group of 28 specific key needs and opportunities recommendation. These recommendations are designed to help the government improve its foresight capabilities and thereby realize these opportunities and generate resilience for its policy functions that it has so ably started. Again we commend the Federal government on its investments in the starting development of foresight capacity for the government. We are pleased with the international recognition that this capacity is starting to generate. The purpose of the recommendations are not to criticize the capacity but in keeping with

what are recognized as the critical success factors for foresight (see appendix for more information on this) help to improve the capability.

SUMMARY TABLE: FORESIGHT DEVELOPMENT AGENDA – KEY NEEDS AND OPPORTUNITIES 2011 – 2012	
<i>Problem or Need</i>	<i>Recommendation</i>
1. How to develop a capacity, both within new foresight practitioners and policy makers, to be able to cast and analyze issues, deeper, further and broader.	An ongoing dialogue space or forum structure should be created for policy and foresight leaders to jointly identify weak signals and policy issues according to a regular schedule (e.g. quarterly) well before they need resolution. Telfer and PRI could collaborate to develop such a mechanism.
2. How to identify and develop research, analysis and strategic thinking capacity that will support longer term roles and expectations being asked of the Public Service.	Telfer and PRI, working through the Centre for Executive Leadership, could initiate a discussion with the Clerk, the PM Advisory Committee on the Public Service, the PS Commission and the Canada School for Public Service regarding how foresight tools, techniques and approaches could be added to what already exists as developmental supports for next generation PS leaders.
3. How to develop competency through training and a new paradigm for forward policy engagement (FPE) that will be more cognizant of the big picture societal risks and solutions to persistent problems.	Following on need # 1, Telfer and PRI could seek some modest training funds to sponsor a series of lectures and webinars-seminars to enable global leaders in FPE such as Dr. Leon Fuerth of George Washington University in Washington DC. to collaborate with Canadian foresight organizations and policy units to develop this capacity- particularly for new senior advisors, and promotions to the EX category in the PS.
4. How to identify, nurture and support champions of foresight in their senior decision making capacities.	A more organized and testimonial based experience sharing approach from current and recent champions could be developed as an executive development event or series of events by the Telfer CEL, in partnership with Departments and Agencies.
5. How to ensure that current foresight capacities are appreciated, defended and applied during periods of organizational stress.	Through PRI- Clearspace and informal networks, it may be timely to develop a strategic inventory of federal foresight capacity resources and to mount strategies to proactively support them during the strategic reviews being launched or extended.
6. How to build effective futures narratives for all policy stakeholders around changing values, societal expectations of government and uncertainties affecting governance.	A hi-level advisory board of current and ex ADM level policy and research leaders could be organized through Telfer to support a small strategic foresight team that would work with governance experts and policy

	institutes to develop key narratives.
7. How to mobilize organizational intelligence, learning capacities and collaborative skills and knowledge to improve forward readiness through plausible foresight.	With present expertise and some modest resources, Telfer could in partnership with foresight friendly organizations develop a strategic series of briefing documents, presentations and communications materials, possibly following the practices of the European Foresight Platform and their policy manual.
8. How to create and reframe possibilities for action, policy goals and program effectiveness through the use of scenarios and other key foresight tools.	Consider using the TFLF community as a resource to engage other Departments; i.e. as a peer advisory capability for helping them understand and use scenarios and other techniques with application to upcoming program reviews and forward needs assessments.
9. How to build in foresight teams a capacity for sensing the areas of real pain within their key receptors and clients, and designing ways to provide relief.	Telfer, in partnership with foresight stakeholders could develop a set of interview questions designed to elicit the source and impacts of key irritants for decision makers – a sort of organizational pain index, and test its application for the policy-foresight community in a half day sponsored event.
10. How to effectively make the business case for adequate or additional resources to enable foresight to be done well.	By the end of 2011, the <i>Foresight Journal</i> Special Issue on Impacts and success stories being edited by the Telfer team should be available, plus more feedback from diverse Canadian projects. These articles, along with others such as the <i>Science and Public Policy</i> article on Critical Success Factors should be used to develop a Strategic Brief on foresight impacts and value.
11. How to build the foresight practice into an ongoing capacity – i.e., beyond the life of single projects.	Develop a series of key data points, and value propositions supported by ongoing foresight capacity centres that state and make the case for more than single-one off projects – showing cumulative efficiencies, learning benefits and case studies.
12. How to know who and how to attract the key people and expertise required, and how to use foresight techniques - questions to motivate their collective intelligence and extract their wisdom.	There is emerging a foresight body of professional and academic literature that can be accessed and could be summarized for practitioners. As well this could be the subject of a specific seminar or as part of a larger training effort focused around sharing tacit knowledge.
13. How to be flexible and responsive with clients, to be able to engage them on their terms, timelines, risk tolerance and strategic priorities and create room for foresight even when the term is not used or useful.	Similarly, there is a body of literature and consultant expertise that highlights the importance of customer-client relationships. As well, each foresight situation could benefit from a structure risk profile at the start of a project.
14. How to create big picture imaginative capacity, to be able to reach beyond the “thick hubris” of the present, how to question the	Ensuring a range of iconoclastic views is a part of most foresight initiatives – facilitating access to these types of resources could be done using a contacts data base

sustainability of present assumptions etc.	as an element of an ongoing foresight infrastructure.
15. How to create futures due diligence in the absence of data, how to examine implications of weak signals, wildcards and prospective shocks.	Telfer will be part of the <i>IKnow European Commission</i> database on weak signals and wildcards – this experience can be easily adapted to Canada and extended if an ongoing foresight training capability initiative emerges.
16. How to identify future organizational and societal vulnerabilities, and new threats to organizational performance.	Similarly, Telfer or PRI or both could develop a structured approach to target the area of organizational performance and foresight interface.
17. How to educate and train organizational managers, directors to appreciate a foresight group's abilities and limitations, and realistic expectations for products and services.	PRI has already developed some mechanisms in this domain- these could be expanded through collaboration and become more widely applied- possibly as part of a PRI-Telfer joint effort.
18. How to build and nurture foresight capacity to apply intelligence and observations to define patterns and derive insights which the policy community can use to engage decision makers.	The development of insight capacities requires a special set of case approaches and some dedicated efforts to build a course or very focused event. TFLF made a start on this but clearly more case work will be required to deepen the knowledge base.
19. How to develop foresight interviewing skills, and other strategic communications abilities	Foresight communications is a relatively new element in the development path – fortunately there are resources from other domains that can be applied , best as part of a broader foresight training and learning system.
20. How to develop a government focused university-based, foresight course-curricula – certification process that can be used to assure proper training and best practice familiarity for new and recent entrants.	If the demand seems sufficient, then Telfer could consider how to best satisfy this through its current and potential additional or occasional resources, including collaborative work with other faculties and Institutes at the University of Ottawa. Currently the alternatives seem to be the Universities of Houston and Manchester for degrees and certified course work.
21. How to ensure a risk tolerant and good practice through peer learning environment for new foresight organizations and teams	The idea of a neutral ,risk tolerant space in which to develop , experiment and test project ideas is consistent with the initial plan for the TFLF – which could be replicated in some measure with a more hands on learning by doing emphasis – some already support this idea.
22. How to ensure there remains an effective central agency-policy research capacity for being a leader-coordinator of government foresight practice and how to prevent overload, mandate alteration-shift, and protect-enable adequate resourcing.	It is important that the full foresight community continue to support PRI and its foresight development opportunities – including direct collaboration and mutual leveraging of resources and skills if applicable. Where beneficial, PRI may also benefit from special or term assignments of staff from the foresight community and Departments who wish to strengthen their longer term planning, thinking and analytical capacities.
23. How to provide incentives for foresight	Like all evolving areas of the social sciences, the digital

<p>innovation through trying new approaches, testing new methods, by accessing experience and intelligence from elsewhere.</p>	<p>revolution has brought forth substantially new and more powerful tools for supporting foresight. As global experience with foresight grows there are many new tools and ways of managing the uncertainties emerging. Also since much of the innovation being observed is software driven, derived or connected, it will be essential for foresight to ensure it can access the most recent tools.</p>
<p>24. How to educate and strengthen the foresight-policy interface through the use of concise briefing notes, strategic decision frameworks etc.</p>	<p>This should be an element of any new course plans – how to effectively position foresight impacts through executive communications – taking the experience of TFLF meeting four and extending this further in a hands on way.</p>
<p>25. How to develop a body of reliable foresight case knowledge focused on impacts, success stories and applications of foresight to policy.</p>	<p>The <i>Foresight Journal</i> Special Issue on impacts will be an important milestone and one which Telfer can build upon both in Canada and abroad with its good access to European, US and Asian cases.</p>
<p>26. How to make available, on a cost-effective basis, a real time mentoring and coaching capacity for new foresight leaders and entrants.</p>	<p>The Telfer team is able to provide mentoring-coaching capacity to individual organizations on a one off basis through a variety of mechanisms. The specific needs and opportunities to be pursued require more specific discussion about frequency, roles and types of advice and timeliness requirements.</p>
<p>27. How to design and manage complex projects and international partnerships, where Canada can both participate and learn from others, as either a leader, a partner or collaborator.</p>	<p>The Telfer team has unparalleled international experience in foresight and strong connections with global leaders that can be developed further as needs evolve, opportunities arise and organizational strategies dictate. A meeting to discuss what might be useful to consider as candidates for international collaboration could be useful which Telfer would volunteer to host.</p>
<p>28. How to establish provocative and credible benchmarks of foresight prospects for Canada in key domains of global focus.</p>	<p>In the context of Canada as a country that has still many stages of development ahead, and multi-dimensions of societal potential to fulfil, the notion of applying foresight to national goals is not beyond consideration – indeed there might be interest on the part of other societies and their foresight organizations as well in comparative foresight benchmarks.</p>

There are several existing vehicles that can assist the government in implementing many of these recommendations.

- 1) PRI: Inside government the PRI (now Policy Horizons Canada) has accomplished some significant orientation and training of federal directors and senior policy advisors, but because of strong demands on its few staff for additional roles and projects, including foresight and substantive advice on policy directions and issues, its ability to manage this growing training demand itself with current resources is questionable.
- 2) At least two interdepartmental groups, boards and committees exist for coordinating aspects of the federal forward policy agenda that involve foresight-like perspectives, but these have neither developed nor supported any new training initiatives, and in any event they do not seem to have any resources themselves. Also several Departments are collaborating to share resources for foresight development e.g. around regulatory issues.
- 3) Outside of the federal system, the TFLF was initiated to be a forum where departmental foresight leaders could meet and exchange experiences this group has not only exchanged experienced but received training in analytical methodologies, communications, project planning and deployment and critical success factors. As well, by sharing their foresight plans and results, the group has assisted each other improve foresight plans and has benefited from sharing practices and study results. One member noted during the insight session that they would not need to conduct an aspect of their future foresight project rather they would integrate the results they just heard.
- 4) During the year, Telfer School of Management provided introductory foresight training to participating departments and others. There is a capacity to provide a full spectrum of foresight and intelligence training and methodology through the program managers (Dr. Calof and Jack Smith) as well as through the academic network that Telfer has established which includes access to other leading academic practioners such as University of Houston (Peter Bishop), University of Manchester (Ian Miles et al), Millennium project, and other international providers. Telfer is well known in the NCR for provision of quality customized training solutions and remains available to conduct and coordinate foresight training programs.
- 5) Foresight Canada is a Calgary based foresight conference organization that also offers consulting and training services.
- 6) The Insight Alliance is a global network of foresight-insight experience professionals from Canada, Europe, US and Asia. It includes Canadian experts such as Dr. David Harries, Dr. Robert Slater, Dr. Riel Miller, Danielle Tanguay, Dr. Kenneth Andrews, John Benesh, and is coordinated by Dr Calof and Jack Smith.

- 7) The authors of this report (Dr. Calof and Jack Smith). The authors of this report are available to assist those who wish to implement this report's recommendations by providing an introduction to the main players associated with these groups.

The above represents the beginnings of an inventory of foresight resources and help in dominantly in the NCR. Regardless of the approach taken to develop foresight capacity it should be noted that a critical success factor as identified in previous studies is having appropriate skills. There are many examples of foresight success around the world but all have started with the appropriate skills, appropriately developed. A foresight technique such as scenario cannot be done without strong facilitation, appropriate designs and development. Yet, we have seen many organizations do this, doing foresight and 2020 type exercises without benefit of the appropriate skills and with what we would call predictable results. As indicated on page 9, it is important that foresight development be supported by professionals with proven educational structures and bases of experience, so that the deep tacit knowledge essential for effective foresight can be communicated and shared.

5. Conclusion

This report was prepared based on discussion at the TFLF forum, interviews both before and after session 5 with the forum leaders and discussions at the Seville FTA 2012 conference. Based on these sources, the conclusions are as follows;

- There exists both a critical need and probable demand for foresight structure development, learning, training and skills development and transfer during the next 2-5 years;
- Given what seems likely to emerge from almost any scenario of federal leadership is a focus on how Canada will start to address longer-term and horizontal issues;
- This should translate into a continuing requirement for more attention to the mechanisms for crafting forward thinking policy, sharing experiences and expertise internationally and a strong demand for foresight and intelligence perspectives and expertise;
- Such a progression of needs should establish a favourable environment for following through on the recommendation provided in this report which also provides a list of consultative resources to help with their implementation.

It has been a year of learning for the TFLF. What started as an unstructured group desiring improvement in foresight practice developed into a wide ranging mutual assistance program which encompassed foresight insights, communications, literacy, policy interface and more. The groups agenda varied based on the groups stated needs in the previous session. The TFLF is a group driven by its members stated needs. As it develops in the future these needs will become more focused and clearer.

A general conclusion is that all the participants, including the Telfer team, learned a great deal in the five TFLF sessions about the complexities, challenges and choices associated with obtaining value from foresight activities.

A second conclusion is that there remain many more challenges, opportunities and needs if foresight as an adjunct to policy making is to achieve its full potential.

The major conclusion is that more work is required to support an effective and sustainable base for foresight practice and its continuing application to federal policy and planning mandates.

The year began with uncertainty regarding various aspects of foresight practice and activity and ended with recognition by world bodies of Canadian expertise and validation of selected project methodologies.

Finally, while the TFLF group has been instrumental in identifying the needs for enhancing foresight in Canada, all recommendations, analysis, and content of this report are the responsibility of the Telfer TFLF coordinators (Dr Jonathan Calof and Jack Smith). Thus, any omissions, interpretations and errors are not those of the Departmental representatives of the TFLF. As such, the telfer team is able and willing to facilitate with any aspect of this report.