



GUIDE TO SPEAKING POINTS:

The following presentation includes a set of speaking points that directly follow the text in the slide.

The deck and speaking points can be used in two ways.

- As a learning tool to enhance the reader's foresight literacy
- As a presentation tool to accompany the facilitation of foresight sessions

The facilitator can be selective when choosing their slides and speaking points to deliver, depending on the needs of the audience.

Horizons publications are readily available for personal and public non-commercial use and may be reproduced, in part or in whole and by any means, without charge or further permission from Horizons. We ask only that Policy Horizons Canada be identified as the source of the material.

PH4-164/1-2016E-PDF
978-0-660-05847-4

© Her Majesty the Queen in Right of Canada, 2016.

OVERVIEW

- What is Foresight?
- What is Horizons' Approach to Foresight?
- How is Foresight Useful in Public Policy?

Overview

- The purpose of this presentation is to:
 - Provide an understanding of foresight
 - Provide an introduction to the Policy Horizon Canada (Horizons) approach to foresight
 - Explain how foresight is useful in the public policy context

WHAT IS FORESIGHT?

- **Foresight is a skill** we use every day that allows us to consider a problem, explore options, run mental movies and in so doing develop possible strategies and desired future outcomes
- **Foresight as a sub-discipline of Future Studies** uses a systematic approach to explore how complex issues could evolve
- Foresight tools help people share, explore and test their mental models about how the world is changing and what it could mean for their organization
- Foresight is beyond the normal 1-5 year planning horizon

What is foresight?

- Foresight is a skill that we all use regularly.
- Everyone builds mental models about the way the world works from the images, experience, knowledge and stories we carry in our minds. We use our mental models to run 'movies' in our mind so we can explore alternative paths that help us make the best decision. Some examples of how we use mental models every day:
 - Consider your thought process when planning the best route to a store across town. You might recall that one road is closed for construction, and anticipate that another road will be slow due to cars parked along the side today. You think of a third route with light traffic, a pleasant view and a potential stop at your favourite coffee shop along the way.
 - Or, *TRY THIS*: Close your eyes for a moment to picture yourself in your kitchen with someone you know. Think of a question you want to ask them. Ask the question and see what happens. (Pause) Now open your eyes. Did your intuition suggest how they might respond

to your question? We use such mental models every day to guide our actions.

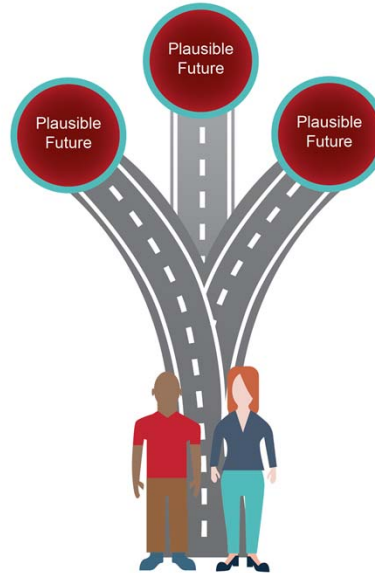
- In Horizons' work, we use guided imaging exercises and other foresight tools to surface participants' mental models about the world.
- There are many interpretations of foresight. Horizons' particular view of foresight places an emphasis on systems, surfacing mental models and testing assumptions.
- Horizons communicates the following points:
 - Future studies is a discipline that includes the sub-discipline of Foresight. It has been around for about 60 years (see Annex 2), graduate degrees are awarded, and there is a large, robust global community of foresight practitioners. It has been and is being used quite extensively in the private sector (Shell, etc.) and more recently in the public sector (see Annex 3).
 - Foresight uses inputs generated from scanning in a systematic process that seeks signs of change, explores how these changes can interact and examines how these interactions could lead to surprises that may disrupt the expected future in the next 10 to 15 years.
 - Horizons takes a systems approach, recognizing the importance of complexity and how one particular element could interact with another and cause significant disruptions to the system as a whole.
 - Foresight allows us to surface the assumptions underlying current policy, question their validity and maybe even replace some of them with more robust ones.

Additional points, as necessary:

- Foresight is a human trait that allows us to consider a problem, explore options, weigh pros and cons and in so doing develop possible strategies and work towards desired outcomes. The Horizons Foresight Method builds on this capacity, especially our ability to visualize systems undergoing change.
- Foresight tools help people share, explore and test their mental models about how the world is changing and what it means for their organization.

EXPLORING A RANGE OF PLAUSIBLE FUTURES

Foresight is *not* about trying to predict the future. It helps us understand a range of plausible futures that may lie ahead.



What is Foresight?

- The objective of foresight is **not** to predict the future, but to explore a range of plausible futures that could emerge.
- This includes both the future that people are expecting and plausible alternatives.
- This process can inform the development of strategies that are robust across that range of futures and that deliver desired outcomes.
- Forecasting is the use of historical data to estimate a future condition. An example of forecasting would be extrapolation of population or GDP growth based on past data.
- Foresight is understanding a range of plausible alternatives of the future – it uses forecasting as one of many tools to help inform possible outcomes. See Annex 4 for more information on the difference between forecasting and foresight.

WHY FORESIGHT?

Rapid change and system complexity are driving a need to complement current processes

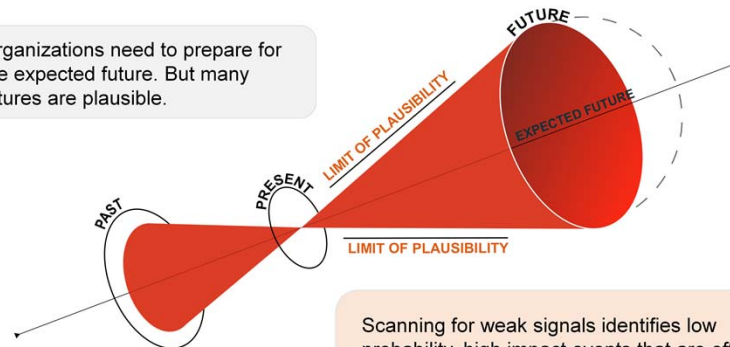
- Look beyond the 'rearview mirror'
 - Generally, policy is developed based on an extrapolation of past data and experiences
- Anticipate surprise events
- Build early warning systems:
 - Identify signposts of potential futures
- Support resilient strategies, policies and programs
 - Informed risk management

Why Foresight?

- In a government context, foresight is growing in use:
 - The military has long used foresight to strategize potential courses of action
 - Singapore is a notable leader in the incorporation of foresight into policy and planning
- Rapid change and system complexity are driving the need to complement current processes
- Foresight widens the scope of policy development by looking beyond the extrapolation of past data and experiences
- Foresight allows us to anticipate surprise events
- Foresight helps us build an early warning system by identifying signposts of potential futures
- Foresight helps support resilient strategies, policies and programs and contributes to informed risk management

THE CONE OF PLAUSIBILITY

Organizations need to prepare for the expected future. But many futures are plausible.



Scanning for weak signals identifies low probability, high impact events that are often ignored. Foresight explores how they may interact to help us anticipate surprises.

Adapted from Original: Charles Taylor, Army War College

The Cone of Plausibility

The cone of plausibility is a useful concept that illustrates several important ideas in scanning and foresight.

- Looking at the diagram ... the present is in the middle. On the left is the past. The future is on the right.
- First, let's look at the past. This is the realm of data and evidence. It is important to note that all data reside in the past. There are no data on the future. Data help us understand the present.
- Notice the line called the "expected future." The expected future is the future that many people consciously or unconsciously expect to happen.
- It consists of people's interpretations of facts, beliefs, assumptions, trends and ideas that are thought to be important to the topic under discussion.
- Often, these perceptions are part of, and shaped by, everyday conversation. They shape our thinking and analysis but may not have been critically examined.
- Generally, our perceptions of the expected future assume the future will be

- familiar. It will be like the recent past or an extrapolation of the recent past.
- One approach to thinking about the future is to take data and our understanding of the past and project it into the future (i.e. forecasting) using a range of tools from simple extrapolation to complex simulations and even informed expert judgments.
 - Some aspects of the expected future do occur. At its best, the expected future correctly identifies the high probability, high impact developments that are coming at us. We need to think about them and be prepared for them. We look fairly silly if we don't prepare for the obvious.
 - However, more often, the expected future does not occur exactly as anticipated. We are caught off guard by some unexpected development. Usually, it is something we were not paying attention to, or have not thought through, that causes the surprise.
 - At a time of dramatic social, economic and technological change, forecasting tools don't take into account that many dimensions of underlying systems are changing.
 - Drawing conclusions based on extrapolation of data may give us an incomplete picture of the future.
-
- Looking at the diagram ... on the right are a range of plausible futures, including the expected future. We could find ourselves living in any one or combination of potential futures going forward.
 - The edges of the cone delimit the zone of plausibility. Plausibility is determined by data, evidence, logic and judgement. This may bring in personal biases, but the foresight process aims to examine these biases to assess plausibility.
 - Remember, we don't have data from the future, and extrapolation models are incomplete in helping us understand plausible futures – so what do we look for? We scan for weak signals.
 - A weak signal is a sign that change may be underway. Something different is starting to happen and could have a disruptive impact on the system.
 - For example, consider an expected future based on the extrapolation of past population data: it excludes the potential impacts of future medical technologies. The 3D printing of organs (a weak signal) could potentially extend life and disrupt our current expectations of how the system would evolve.
 - One test of whether or not something is a weak signal is when people say things like, “if that happens again, we will be out of business” or “we will have to change our plan.”

- The interesting question is why are we surprised? Why did we not see a disruptive change coming? Because we are not challenging our perceptions of what is important to pay attention to.
- It's not hard to imagine slight changes from the expected future (e.g. the decline in fertility rates), where we have a good sense of how the change could directly impact the system (we know enough about the system to see connections and how it might behave).
- However, as we move closer to the edge of plausibility, we are moving into the unknown. We may not understand the weak signal and how it could disrupt the system. There are levels of unknown: unknown to us, unknown to experts in our domain, unknown to everyone. We tend to ignore or discount weak signals (at our peril) because we don't see the pathway by which they will impact the system.
- Good scanning looks for possible disruption across the zone of plausibility. We do this by scanning broadly.

One final note: in organizations the priority is on high probability, high impact developments.

- People who do the important scanning at the edge of plausibility are often thought to be crazy or wasting their time. They often perform this function without recognition or support.
- Learning to do scanning and foresight in an organization often requires cultural change to embrace disruptive ideas.

THE ROLE OF SCANNING

- Insightful scanning is the foundation of foresight
- **Scanning** identifies changes in the domestic and international environments that could have a significant impact on the issue or system under study. It focuses on weak signals, indicators of possible change. It explores low probability, high impact events that few people talk about or consider
- **Foresight** explores how these changes may evolve and interact to create a range of futures as well as new policy challenges and opportunities

Scanning, the foundation for great foresight

Our foresight method is dependent on good scanning.

- Scanning identifies changes in the domestic and international environments that could have significant implications for government policy and programs and challenge our current understanding
 - focus on weak signals, which are signs that a significant change is starting or that it could be underway in a particular system
- We then use foresight tools to explore how these changes may evolve and interact in a particular system to create new policy challenges and opportunities
 - not about trying to predict the future, but exploring a range of plausible futures as a way of supporting policy readiness
- Needless to say, insightful scanning is the foundation for great foresight, so we spend a considerable amount of time scanning for weak signals in

order to uncover deviations from the expected future

THE HORIZONS FORESIGHT METHOD

The Horizons Foresight Method is a rigorous and systematic approach that allows us to test assumptions against a range of plausible futures and identify policy challenges and opportunities



The Horizons Foresight Method

- Horizons uses a rigorous and systematic approach to foresight that allows us to test assumptions against a range of plausible futures and identify policy challenges and opportunities
- This slide represents the method that Horizons has developed to do foresight and train public servants with whom we often co-create
- Ideally, a foresight study would include all of these steps; this can take weeks to months
- Each step includes a number of different tools
- The process requires us to:
 - Frame the system under study by determining the focal question and developing a domain map in order to identify key elements in a system and the relationships between them.
 - Identify current, commonly held assumptions about the system under study. These are collected at the outset and then put aside until the end.
 - Initiate a comprehensive scanning process where we assess relevant trends and identify weak signals and insights that are pointing to change

within a particular system. Scanning continues throughout the entire process.

- Explore major change drivers impacting the system under study and their interactions through the use of various tools, such as cascade diagrams (or futures wheels) and cross-impact matrices.
- Develop scenarios to explore a broad range of distinct, plausible and strategically-useful futures.
- Identify potential policy challenges and opportunities.
- Test the original list of assumptions against the scenarios to identify areas of vulnerability. If vulnerable, develop a more credible assumption.
- This is a very fluid, dynamic and iterative process, which allows us to build upon each step as we gain a better understanding of the system under study.

FEATURES OF THE HORIZONS FORESIGHT METHOD

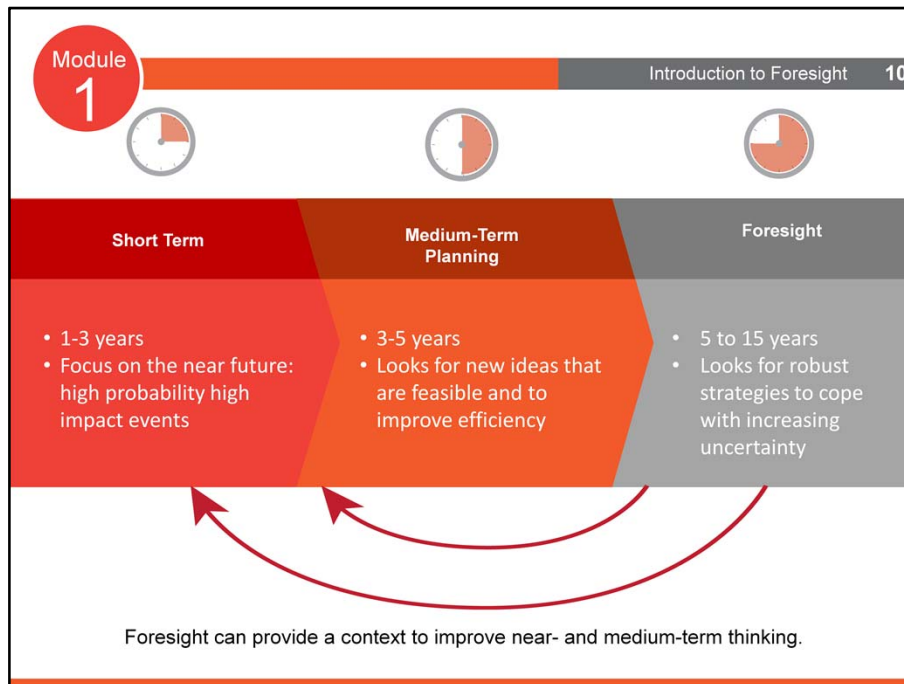
- Systems thinking is the foundation
- Engages knowledgeable people to share their mental models of the system and how it may evolve
- Uses our amazing capacity to visualize the future through our mental models and movies
- Visual tools provide scaffolding at every step of the method to help participants share their models and facilitate dialogue
- Uses various forms of reasoning to better understand the system under study
- Focuses on policy

Features of the Horizons Foresight Method

- Systems thinking is the foundation
- Engages knowledgeable people to share their mental models of the system and how it may evolve
 - Taking advantage of and getting a better understanding of various perspectives in order to get a better understanding of how changes may shape a particular system.
- Uses our capacity to visualize the future through our mental models and movies
 - We all have the intuitive capacity to visualize the future in virtually every thing we do – at Horizons we rely on this basic skill to get a better understanding of changes shaping particular systems.
 - We use a range of techniques to surface mental models, including guided imaging techniques.
- Visual tools provide scaffolding at every step of the process to help participants share their models and facilitate dialogue
 - It is difficult to push out and explore further into the future in the absence of scaffolding or a process.
 - Process locks issues down in a manageable framework, one step

at a time, that allows participants to develop a fairly complex understanding of the system.

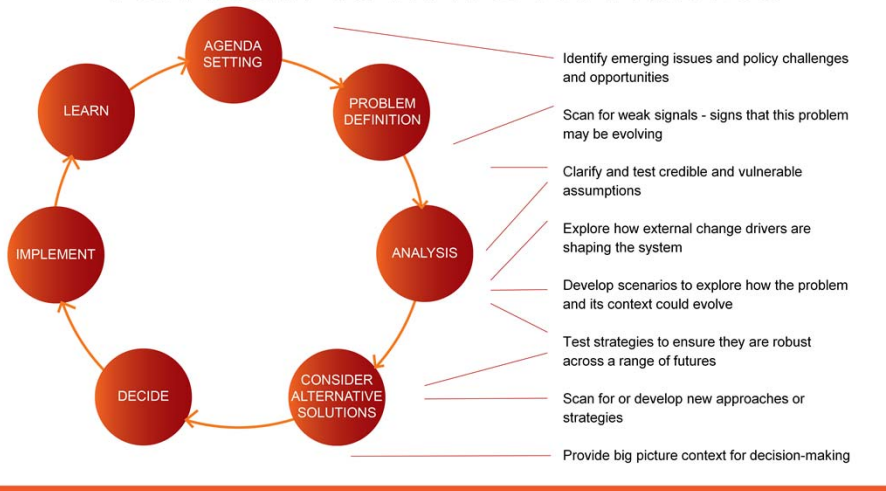
- Uses various forms of reasoning (deductive, inductive, abductive) to surface patterns and make some sense of an uncertain environment
 - For a better understanding of reasoning in complex environments, see:
<https://www.butte.edu/departments/cas/tipsheets/thinking/reasoning.html>



How Can Foresight Help Build More Robust Policy?

- Foresight can provide a context to improve short- and medium-term thinking
- Foresight explores plausible futures and identifies potential challenges and opportunities that current policy and institutions are not prepared to address
- Medium-term planning can reduce risks and take advantage of emerging opportunities by starting to lay the groundwork to assess and prepare for these emerging challenges
- Foresight lays the foundation to develop robust strategies to cope with an increasingly complex world

POTENTIAL CONTRIBUTIONS OF FORESIGHT TO THE POLICY PROCESS



Potential Contributions of Foresight to the Policy Process

Generally, the policy process prepares for and addresses high probability, high impact events.

Potential and practical contributions of foresight in different phases of the policy development process include:

- Helps in the agenda-setting phase by identifying emerging issues and policy challenges and opportunities
- Helps shed light on potential challenges and opportunities through the identification of weak signals of change
- Helps significantly in the analysis phase of policy development by questioning assumptions embedded in policy and exploring changes impacting the policy domain and how it could evolve across different scenarios

SUMMARY – VALUE OF FORESIGHT

- Clarify and challenge assumptions
- Identify emerging issues and potential discontinuities
- Recognize opportunities and deal with surprises across a range of plausible futures, not only the expected future
- Develop an improved early warning system
- Rehearse for change by testing readiness across a range of future scenarios
- Improve an organization's resilience in a rapidly changing, complex environment
- Help focus current planning and research on strategic issues

Summary – Value of Foresight

The most valuable contributions of foresight to policy are:

- It helps clarify and challenge planning assumptions
- It identifies new and emerging challenges and opportunities and potential discontinuities
- It helps organizations recognize opportunities and deal with surprises by considering a range of plausible futures, not simply the expected future
- It develops an improved early warning system to help manage risk
- It helps rehearse for change by testing readiness across a range of future scenarios
- Foresight capacity can improve an organization's resilience in a rapidly changing, complex environment
- It helps focus current planning and research on strategic issues

The next module will describe the next step of the Horizons Foresight

Method, which is about Assumptions.

REFERENCES

Books:

- Bishop, Peter and Andy Hines. **How to think about the future: a guide to strategic foresight**. 2007
- Peter Schwartz. **The Art of the Long View**. 1992, 2012
- Leon Fuerth. **Anticipatory Governance: Practical Upgrades**. Epub. 2012
 - http://www.wilsoncenter.org/sites/default/files/Anticipatory_Governance_Practical_Upgrades.pdf

Websites:

- Horizons foresight videos <http://www.horizons.gc.ca/eng/content/videos>
- UK Foresight (<http://www.bis.gov.uk/foresight>) and tools at <http://hsctoolkit.bis.gov.uk/>
- Shaping Tomorrow <http://www.shapingtomorrow.com/> (scanning site and toolkit)

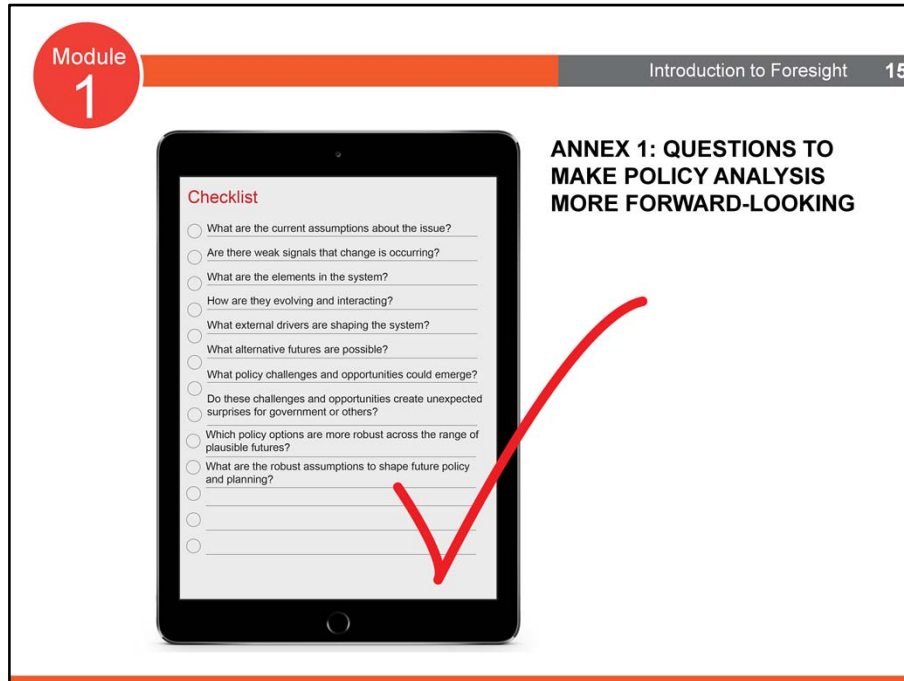
References

- This slide highlights some books that may be useful in better understanding foresight as a discipline.
- Also included are websites of organizations that use foresight, including Horizons and...
 - UK Foresight – UK government-based organization housed in the Government Office for Science
 - Shaping Tomorrow – scanning site that includes a network of experts that contributes to an extensive database of weak signals

INFORMATION

Policy Horizons Canada
Horizons de politiques Canada
www.horizons.gc.ca





Annex 1: Questions to Make Policy Analysis More Forward-Looking

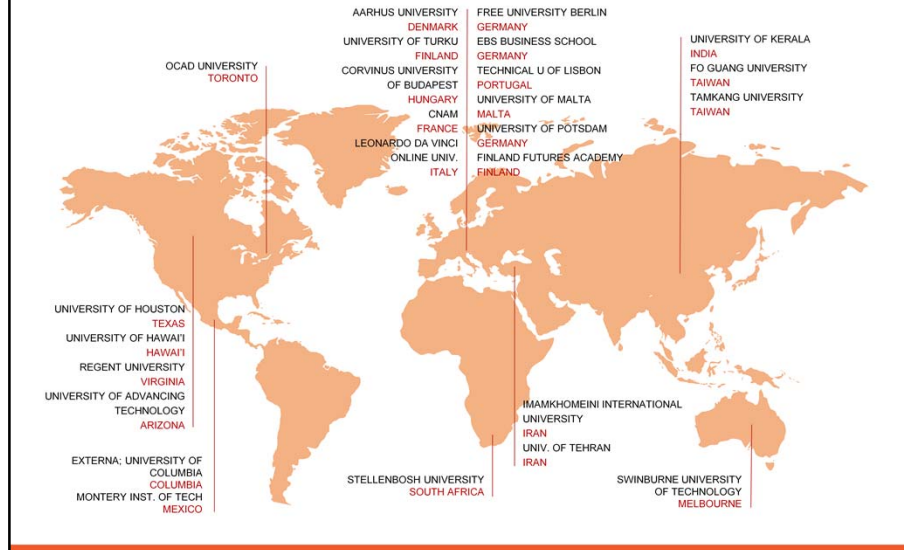
The following are some questions that policy analysts and decision makers can ask themselves when developing policy:

- What are the current assumptions about the issue?
- Are there weak signals that change is occurring?
- What are the elements in the system?
- How are they evolving and interacting?
- What external drivers are shaping the system?
- What alternative futures are possible?
- What policy challenges and opportunities could emerge?
- Do these challenges and opportunities create unexpected surprises for government or others?
- What policy options are more robust across the range of plausible

futures?

- What are the robust assumptions to shape future policy and planning?

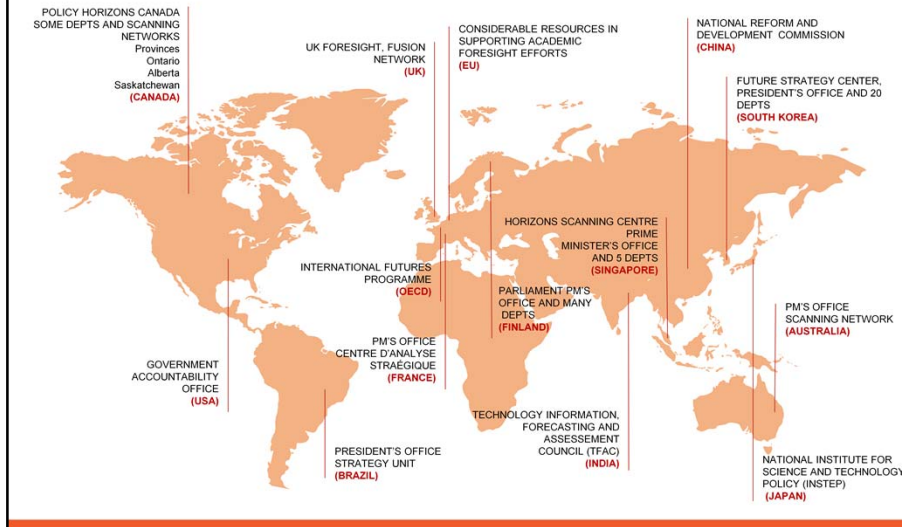
ANNEX 2: ACADEMIC FUTURES PROGRAMS



Annex 2: Academic Futures Programs

- This slide highlights some of the academic futures programs offered throughout the world.
- Canada offers a program on Strategic Foresight and Innovation at the Ontario College of Art and Design.

ANNEX 3: FORESIGHT CAPACITY IN GOVERNMENTS



Annex 3: Foresight Capacity in Governments

A number of governments have, or are building, foresight units close to the centre of decision making. For instance, multiple foresight units in Singapore have been using foresight as a formal policy tool to support strategic planning since the 1980s.

Most of the government foresight units indicated on this map are part of an emerging network of governmental foresight units that Horizons has been helping to create. The Global Foresight Network has held 6 meetings since 2009. The UK and France hosted the first two meetings in 2009 and 2010, respectively. Horizons hosted the third meeting in September 2011. The European Commission, South Korea and India hosted the latest meetings in 2013, 2014 and 2015, respectively.

ANNEX 4

APPROACHES TO LONG-TERM THINKING

APPROACH	TOOLS	IMPLICIT ASSUMPTIONS	PRODUCT
Focus on forecasting	<ul style="list-style-type: none"> Scanning for trends Data analysis Trend extrapolation Trend impact assessment 	The future is an extension of the present. Surprises come from changes in the value of known variables.	An understanding of the expected future .
Focus on foresight	<ul style="list-style-type: none"> Scanning for weak signals of change Driver analysis Cascade Diagrams Cross-impact analysis System analysis Scenarios Assumption testing 	The underlying system is evolving. Surprises come from changes that disrupt the system.	An understanding of the range of plausible futures .

Annex 4: Approaches to Long-term Thinking

- Foresight can make a useful contribution to longer-term policy development.
- We are all becoming familiar with the value of foresight, but there are some things we need to watch out for.
- The expected future is a key concept in foresight.
 - This is the future we think will occur.
 - It usually consists of high probability, high impact developments that we must pay attention to.
 - If we don't, we will be unprepared.
 - Most policy analysis focuses on the expected future.
 - Trend analysis is the conscious or unconscious tool often used to elaborate the expected future.
 - However, it cannot help if the underlying system that we are studying is going through a period of significant change.
- Foresight builds on, and goes beyond, the expected future.
 - It uses a broader tool kit to explore how the underlying social and

economic systems could evolve.

- The product is a more robust understanding of a range of plausible alternative futures and different challenges that could emerge.
- While the two approaches are complementary, both are needed to get a full picture of the challenges we confront in a period of significant change.