Who cares about the future anyway? We all should!

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“Government and public service is too important for it to fail through lack of care; through the simple inability of yesterday’s funding model or accumulated political capital to simply continue into the future. While this is a challenge on an immense scale – an unknown-unknown in terms of problems – it does not mean that we should not take it on.”

Dan Hill in _Dark Matter and Trojan Horses: A Strategic Design Vocabulary_
The future is not predictable or predetermined and future outcomes can be *influenced* by our choices in the present.
Foresight helps government build cohesive models of the future, view the world more systemically and challenge deeply held assumptions.
“The future is here, it’s just not evenly distributed.”

William Gibson, noir prophet of cyberpunk
Systemic toolbox:

**Strategy**
- Intervention within complex social-technological systems to motivate new value creation and to create the models of the future.

**Foresight**
- Anticipating multiple futures and systemic conditions by examining events, patterns, structures and mindsets.

**Public Policy**
- The regulation of systems at the political scale with a view towards the public interest and societal value.

**Planning**
- The spatial/temporal regulation of social systems in the context of changing mindsets.
  - (urban, community, spatial, environmental)

**Design**
- Producing patterns and structures that deliver value to people and communities.
  - (industrial, visual, urban, UX, SD)
Approach

Signals: tangible specific evidence of change
Trends: patterns in signals
Drivers: the structure behind the trends
Uncertainties: unpredictable direction or effect of drivers
Possible Futures: important futures driven by key uncertainties
Implications: strategic analysis about the options available
Innovation: distilled places of intervention for value creation
Deduction

Induction

Strong

Weaker

Abduction

A

B
Uncertainty near-term long-term

Probable, plausible, possible

Multiple possible pathways and futures

Foresight horizon 20+ years
Planning horizon ~36 months
Multiple possible pathways and futures

More Uncertainty

Near-term

Less Uncertainty

Long-term

Probable

Plausible

Possible

Planning Horizon ~36 months

Foresight Horizon 20+ years
Methods

Intuitive
- Wildcards
- Science Fiction
- Simulations

Logical
- SWOT
- Relevance
- Trees

Expertise
- Genius Forecast
- Backcasting
- Roadmapping
- Era Analysis
- Interviews
- Quantitative Scenarios
- Bibliometrics
- Lit Review
- Extrapolation
- Modeling

Participation
- Essays/Narratives
- Surveys
- Voting
- Stakeholder Review
- Cross Impact Analysis
- Benchmarking
- Panels & Workshops
- Design Fiction
- Scanning
- Delphi
- Results Chains
- Stakeholder Review
- Relevance Trees

Logical

Expertise

Intuitive

Participation

Methods
Evidence of discontinuous change within complex social, technological, ecological, economic, political and values systems, collected using observations and managed with technology. Typically a framing question guides research.
Critical uncertainties: high impact and highly uncertain conditions define the outer range of possibilities. These are often linked to values as mind-sets are influential in shaping complex social systems. These become the underlying logic for possible scenarios.
Possible futures: logical models given the range of possibilities. These may take the form of scenarios, timelines, pathways, videos, narratives, mock-ups or virtual models. The number of possible futures models is only limited by the number of combinations and permutations of the logic applied.
Netizens of Ebay

July 4, 2040. This morning Montreal became the last major Canadian urban centre to dissolve its city council. As in other cities, a massively multiplayer online campaign (MMOC) has convinced city council that they no longer have a mandate to rule. A 20% voter turnout in the 2039 election seems proof enough. Montreal now joins the network of Canadian and international cities that are loosely governed by the collective decisions of global Netizens.

Many bloggers believe traditional geopolitical borders will soon be a thing of the past, as most political activity now happens through online social networks. Large-scale Netizen campaigns during the 2000’s were certainly a driving force behind the first global minimum-wage agreements, eliminating the notion of “cheap offshore labour”, and proving they could have more impact than traditional political channels.

This slow decline of Big Government in North America was largely driven by events in the United States, beginning at the national level. Out of control debt, stagnation and political polarization led to the dissolution of the US Federal Government in 2020. This marked a turning point in public perception about the role of formal, representative governments. In Canada, the situation was slightly different; healthcare spending slowly crippled the Federal and Provincial governments. As the percentage of Canadians living in large cities (over 1M) grew to 80% in 2035, urban social programs increasingly had to rely on diverse sources of funding from outside their borders, as bankrupt governments could no longer foot the bill.

There has also been a parallel evolution towards diffusion in the world of business. Most transactions are now made directly between individuals through online networks and virtual marketplaces, facilitated by ever more effective and zero-cost search technologies. In general, this had made trade messier and faster, with less regulation and the elimination of almost all “middlemen.”

Those born before 2001 still remember Big Business attempting to make the transition from financial profits to “Creating Shared Value” in the 2010’s. But their existing legal structure and values proved too rigid. Frustrated customers realized that they could do better themselves, mainly through online peer-to-peer networks like E-Baymazon.

In 2040, individuals and small businesses now produce and distribute a myriad of virtual and physical goods through the open internet. More evolved versions of the peer-to-peer networks of the past allow virtual goods to be traded globally, while physical goods tend to be exchanged or shared locally.

Market mechanisms dominate. Many small-scale infrastructure projects are funded by micro-finance networks, with individuals choosing to contribute to projects that benefit them personally. A global carbon market set up by the US Government pre-2020 collapse has been scaled to individuals and allows for self-regulation of CO2 output. Similarly, a national patchwork of Water Pricing & Trade Networks have emerged in recent years to deal with the Freshwater Crisis through market mechanisms.

Climate Change impacts have led to an explosion of migration since 2030. New nomads, people are attracted to a city by available work and climatic conditions. Portions of North American cities are now frequently evacuated due to extreme weather events, and it is estimated that up to 30% of the Canadian population is now American citizens.

All this movement, trade, and distributed decision-making has profoundly affected notions of ownership. Home ownership is seen as a liability, so new co-renting club membership fees to maintain collections of properties in multiple cities, allowing members more city-to-city mobility. Hotels are also proliferated and evolve into networks that provide highly flexible temporary lodging.

Infrastructure projects are ad hoc, always at a small to medium scale, and frequently cobbled together on the fly. This has led to a new breed of informal, flexible “urban” infrastructure. Borrowed from software development, the “Principle of Good Enough” (POGE) has come to dominate urban projects, favoring quick, simple, extensible designs over elaborate systems.

Summary
CITIES ENGAGE:
Any central driver can lead to the notion of “place” being seamlessly connected. Cities use collective opinion to drive their development.

Passionate interest in high numbers of people. This becomes a major driver of planning. They see the potential of crowd-sourced design as a way to innovate in flexible “urban” infrastructure.

Innovation is critical, first, bold, and driven by social innovation and creative problem-solving.

Who is innovating? Governments have been slow to react, and large firms...

Drivers
- Climate Change
- Volatility

New Market Configurations
- An explosion of bottom-up market mechanisms
- Micro-payments, sharing services, crowdsourcing, and tech cottage industries

Open Internet
- Availability of online networks is a key driver of the economy and political system

Trends
- Boomer Healthcare
- Unchecked costs led to government bankruptcy
- Privatization of healthcare
- Healthcare now provided by small clinics

- DOI: Do It Ourselves
- Frustrated citizens bypass government mechanisms
- Use online networks to organize political and economic action

- Live-work Communities
- Zoning bylaws were abolished
- Use of infill sites and mixed-use, small scale developments
The four scenarios presented here are underpinned by three critical conditions:

1. Systemic Conditions
2. Evidence of Change
3. Implications
4. Defining Value

The scenarios are:

- **iSurvivor**
- **Dark & Stormy Night**
- **Ontario Galactica**
- **Northern Stars**

These scenarios are impacted by various factors:

- **Interconnected + emerging economies**
- **Climate change**
- **Unfriendly**
- **Volatile**
- **Friendly**
- **Concentrated**
- **Progressive**
- **Ubiquitous**
- **Game-changing technologies**

The cube model illustrates how these factors interact with each scenario, providing a comprehensive view of possible futures.
For the Federation of Canadian Municipalities, what **urban planning innovations** will lead to **sustainable value** by 2040?
SCENARIO A
Consolidated/Expansion. Current institutions and structures are maintained and optimized. Power continues to be centralized and traditional economic and growth models are pursued. There is a belief that Alberta’s story is effective, and that external markets want Alberta’s current products, as is.

SCENARIO B
Consolidated/Holistic. Existing institutions maintain power and autonomy but pursue environmentally and socially responsible goals. This may include investing in new industries, products, and practices. Economic prosperity is centralized and uneven, but human wellbeing may improve as a result of holistic growth objectives and stable employment rates.

SCENARIO C
Diffuse/Holistic. There is an emphasis on improving social and environmental health. Power is diffused across a number of smaller, localized, independent actors and institutions. Self-sufficiency, community economies, and maker culture and DIY take precedences.

SCENARIO D
Diffuse/Expansion. Rapid and continuous growth is maintained but new institutions and structures are created. Power is decentralized and diffused across a diversity of competitive actors, facilitated by increased access to data and technologies. There are a large number of start-ups and microjobs.

NRE PREFERRED CONTEXT. Stable power structures delivering ~4% annual GDP with some power diffusion to structurally diversify the economy. Expansion with holistic trade-offs where industrial competitiveness and inflation are not problematic.
Implications: Summarizing the evidence, systemic conditions and possible futures and assimilating this research into the organization. What does this strategic intelligence mean for us? What is the range of possibilities for the future? Generally, more analytical methods are applied.
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<thead>
<tr>
<th><strong>Natural Resources System Coordination:</strong></th>
<th>IRMS:</th>
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<td>Describes how multiple players work together to manage social, environmental and economic outcomes while developing Alberta’s natural resources. Currently known as the Integrated Resource Management System.</td>
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<th><strong>Market Access &amp; Diversification:</strong></th>
<th>Access:</th>
<th>Diversification:</th>
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<td>Building relationships of influence to support timely infrastructure development &amp; market acceptance and to address social licence constraints. Reduce reliance on the US market.</td>
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<th><strong>First Nations/Aboriginal:</strong></th>
<th>ACO:</th>
<th>EOI:</th>
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<td>Alberta’s coordinated approach to Aboriginal consultation and land claims enhances resource development certainty. Aboriginal communities and people fully participate in Alberta’s economy and society.</td>
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<th><strong>Climate Change Response:</strong></th>
<th>Adaptation:</th>
<th>Mitigation:</th>
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<td>Describes the type of response to changing climactic conditions. Adaptation identifies the policies and actions that deal with shifting climate; mitigation identifies policies and actions that are aimed at reducing GHGs.</td>
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<th><strong>Innovation:</strong></th>
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<td>Facilitates technology commercialization and development to build knowledge-intensive industries in Alberta. Connects innovators with the right partner to collaborate on new initiatives and realize new opportunities.</td>
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<th><strong>Regional Planning:</strong></th>
<th>LUF:</th>
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<td>Describes specific efforts to meet economic, social and environmental outcomes for a defined region within Alberta. Current efforts are led by the GOA, and are informed by outcomes identified by a regional advisory council.</td>
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**Implications**

- **A**
- **B**
- **C**
- **D**
Defining Value: What strategic options best support the emergence of desirable futures? What actions will we commit ourselves to? This step involves evaluating and describing strategic intent and key pathways. No value is delivered, rather a concept is created which can then be implemented.
Foresight is the frame from which we define policy intentions and become aware of the possibilities. Of course the value of good policy is found in its execution.
We are humble leaders, who cultivate innovation, transform the idea of value away from just efficiency, re-frame risk in context to opportunity, connect stewardship with decision-making and build trusted citizen experiences at many scales.
Thank-you! Questions?

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EVENTS
What just happened?

PATTERNS
What’s been happening?

STRUCTURES
How do processes, organization influence?

MINDSETS/VALUES
How does our thinking allow this to persist?

Often Micro

Emergent opportunities and challenges surfacing the underlying system.

Experiences, interactions, events that persist

Built environment, infrastructure, services, legislation, regulation, organisations.

Often quite macro
Co-design

Collect a group with relevant experience, diversity, saliency and hopefulness. You needn’t be democratic.

Engage them on the strong logic first. Deduction. Induction. What is likely? Know the issue. Be prepared with good research.

Keep them focused with structured questions.

Engage the senses. Appeal to communication styles.

Build shared (not common) understanding, surfacing the competing mental models.

Engage them on the weak logic. Abduction. What is possible?

Build examples. If possible, build functional models.

Stay engaged throughout the value chain.
Why?

Society working together delivers immense shared value.

Existing approaches to value are becoming less effective in the face of disruptions.

We need new infrastructure, services, business models to address shared problems.

We also need new tools to anticipate, create, enact change in the material, immaterial and social world.

Foresight is a discipline that is anti-fragile in complexity, views challenge as opportunity, is human-centred, constructive and hopeful.