# Synopsis

## of the Report

# "Transition Accelerator: Building Pathways to a Sustainable Future" by

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This document provides a synopsis of <u>the Report</u> (Figure 1) that led to the establishment of <u>the Transition Accelerator</u>. Some of the points made below also draw on additional insights gained over the past few months and supplement or extend the messaging in the report.

#### A. Philosophical Framework for the Work of the Transition Accelerator

- Addressing climate change will require a fundamental transformation of key systems of social provisioning including the way we generate and consume electricity, move people and goods, design our agricultural and food systems and build our cities.
- 2. However, for many, perhaps most Canadians, concerns about climate change are **not sufficiently compelling** to drive the magnitude of systems change that is required, especially if there is a cost associated with the change.
- 3. Perhaps **the climate change problem isn't big enough** to drive transformative change. Maybe we need to make the problem bigger. (There are precedents: International trade agreements or collective bargaining are two examples where making the problem bigger can lead to resolution of complex challenges.)



**Figure 1,** A report documenting the philosophy and methodology for the Transition Accelerator. Click on the image to download.

- 4. We argue for the need to expand the problem space to include issues that **are compelling** to Canadians because solutions to those problems offer **more convenience**, lower costs, greater comfort, improved health, or a higher quality of life. These are things that we know Canadians want.
- 5. We live in a time of disruptive / transformative change, as demonstrated by changes that have occurred over the past 20 -30 years in sectors such as music, books, photography, retail, telecommunications, etc. The same digital and social innovations that disrupted these sectors in the past are now focused on sectors that have large greenhouse gas (GHG) emission, and inherent problems that if addressed would be highly compelling in the marketplace.
- 6. The challenge is to **direct these disruptive innovations** to realize positive societal outcomes, including GHG emission reductions and the movement to a low carbon economy. Once a system is in the midst of transformative change, is should be possible to more easily influence the outcomes that are achieved.
- 7. The key to 'directing disruption' is to engage key stakeholders, define a shared vision for a better future, and then work together to identify one or more **transition pathways** that have the potential to achieve the shared goal. In this process, each of the stakeholders takes on responsibility for a portion of the journey.

#### B. Transition Pathways: What are They and their Selection Criteria

- 1. Transition pathways identify the timing, character and magnitude of changes in technologies, infrastructure, business models, societal practices, and policy or regulatory frameworks.
- Pathways must be credible (biophysically, economically and socially), compelling to the key stakeholders who will ultimately drive the desired systems change, and capable of achieving societal objectives.
  Figure 1 highlights the risk of dead-end pathways that have no potential to actually achieve the desired target.
- Transition pathways may differ with region. What is credible and compelling in one region of Canada may not be in another.
- 4. For the Transition Accelerator, Transition Pathways worthy of investment should meet the following criteria:
  - Engage systems with large greenhouse gas (GHG) emissions, typically in the range of 100 Mt CO<sub>2</sub>e/year;





- The systems have other shortcoming that are in addition to the GHG problem (eg. inefficiencies, sub-optimal convenience, comfort, adverse health impacts, poor return on investment)
- There are disruptive forces at play that could be harnessed to transform the sector in a way that could achieve climate change solutions while addressing some other, more compelling problems.
- There are key stakeholders interested in working with the Accelerator to speed transformative change.
- 5. In defining transition pathways, key elements in such an approach include:
  - A grounding in systems thinking and transition dynamics;
  - An empirical focus on the collection of data and the analysis of the character of existing systems;
  - An integration of technical, socio-economic, cultural and policy/political dimensions;
  - Co-creation through structured, iterative interactions among researchers, innovators and other societal stakeholders; and
  - Quantitative analysis and scenario modelling; and a practical orientation to move from analysis to action.

#### C. The Transition Accelerator Methodology

The Transition Accelerator uses a four-stage methodology as summarized in **Figure 3** and itemized below:

1. **Understand** the system that is in need of transformative change, including its strengths and weaknesses, and the technology, business model, and social innovations that are poised to disrupt the existing system by addressing one or more of its shortcomings. This is done through literature research supplemented by stakeholder engagement that leads to the production of one or more reports.



**Figure 3.** Iterative process in a methodology to develop and implement transition pathways that will achieve societal objectives, including greenhouse gas management.

- 2. **Co-develop** transformative visions and pathways in concert with key stakeholders and innovators drawn from industry, government, academia, environmental organizations and other societal groups. This engagement process will be informed by the insights gained in Stage 1.
- 3. **Analyze** and model the candidate pathways from Stage 2 to assess costs, benefits, trade-offs, public acceptability, barriers and bottlenecks. With these insights, the researchers then re-engage the stakeholders to revise the vision and pathways so they are more credible, compelling and capable of achieving societal objectives that include GHG mitigation. Stages 2 and 3 are carried out in an iterative way to derive towards being most credible, compelling and capable.
- 4. Advance the most credible, compelling and capable transition pathways by spinning off consortia (typically industry led) to pilot, demonstrate of commercialize the pathway visions. Advancing pathways also involves informing innovation strategies, engaging decision makers in government and industry, and participating in public forums.

#### D. How the Transition Accelerator's Approach Differs from Traditional Climate Change Strategies

The Transition Accelerator's approach to climate change solutions, differs from the traditional approach as summarized in Figure 4.

We are convinced that (a) the focus on more than just GHG reductions, (b) the engagement of industry, government and other societal actors in developing a shared vision and credible, compelling pathways to the future, (c) the integration of both technical and societal assessments and (d) the spin-off of industry-led consortia will yield more promising results in the transition to a low carbon economy.

### E. Values, Principles and Approaches to be used by the Transition Accelerator

- The Transition Accelerator will employ a positive, collaborative approach, with an open architecture to empower existing initiatives and maximize collective impact. It will contribute to public debate, inform policy, provide advice to decision makers, and spin off 'consortia' practically engaged in building out specific pathways.
- 2. Transitions are as much about people and

	TRADITIONAL APPROACHES	PATHWAY APPROACHES
Goal	Incremental GHG reductions over time (an abstract number: megatons or per cent reduction)	Improve human systems to deliver human desires (convenience, comfort, lower costs, enhanced quality of life) as well as GHG management (a compelling story).
Approach	Climate change policies (carbon pricing, regulations, incentives) narrowly focused on meeting short term GHG targets	Co-develop credible, compelling visions and pathways for systems change that will harness disruptive forces to address shortcomings in existing systems (including GHG management).
Tools	Either data & analytics without societal input, OR societal input without data & analytics	Integrate analytical and human dimensions to inform the processes of change.
Outcome	Paralysis and political polarization around pricing and pipelines	Emergence of Pathway Consortia using socio-technical and economic reasoning to drive for systems change that also aligns with environmental and other societal goals.

**Figure 4.** The difference between the traditional and transition pathway approaches to address climate change.

behaviour as they are about technology and economics. One way to move things forward is to develop transition visions and pathways – not just as paper projects or academic modelling exercises, but as societal co-creations that are focused on practical outcomes. Efforts in this direction are already going on across Canada, for example in community energy plans or municipal sustainability initiatives.

3. The Transition Accelerator will give this process added impetus by setting it on a firmer theoretical and empirical footing, and by linking the research community more closely with change agents among societal stakeholders.