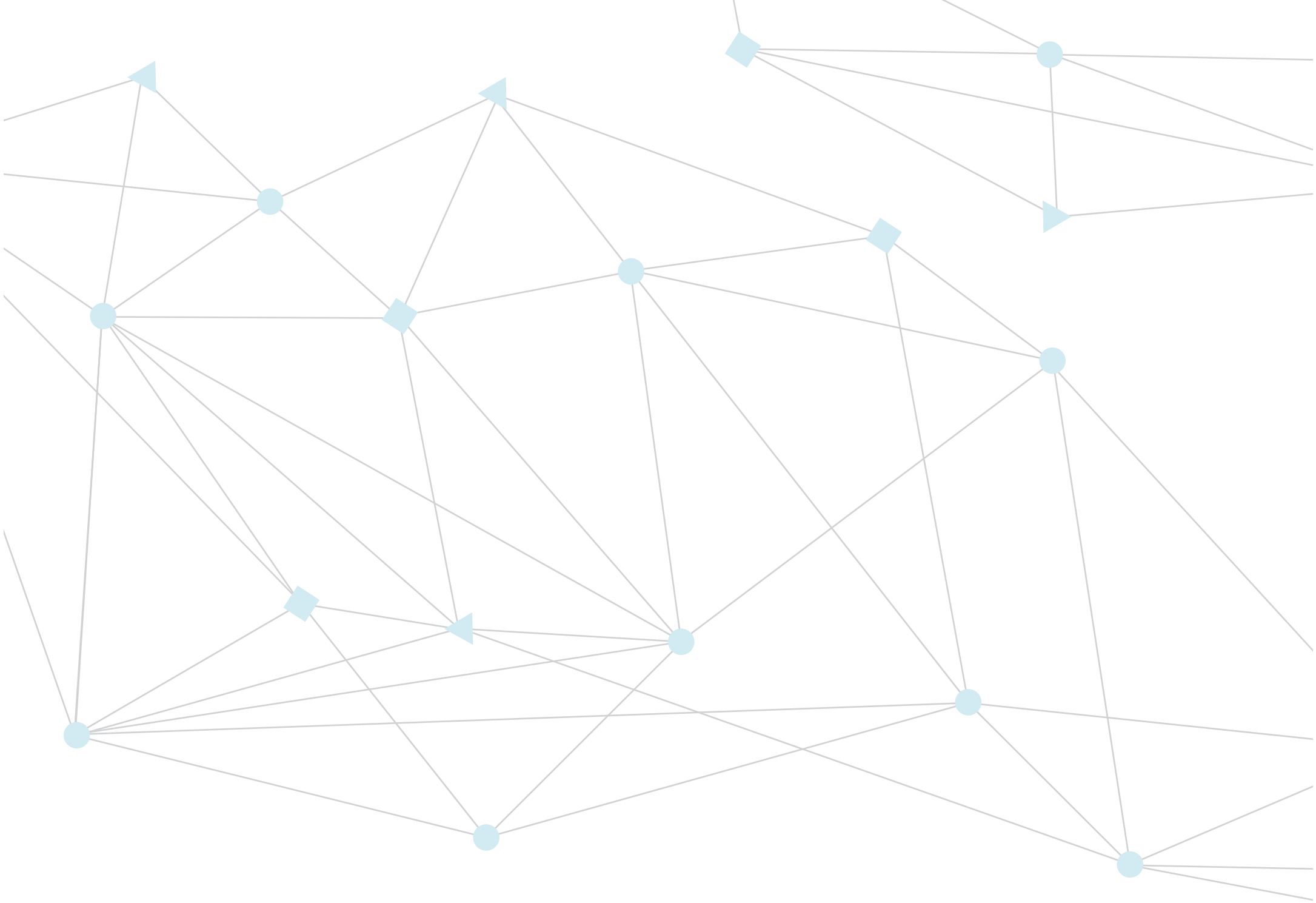
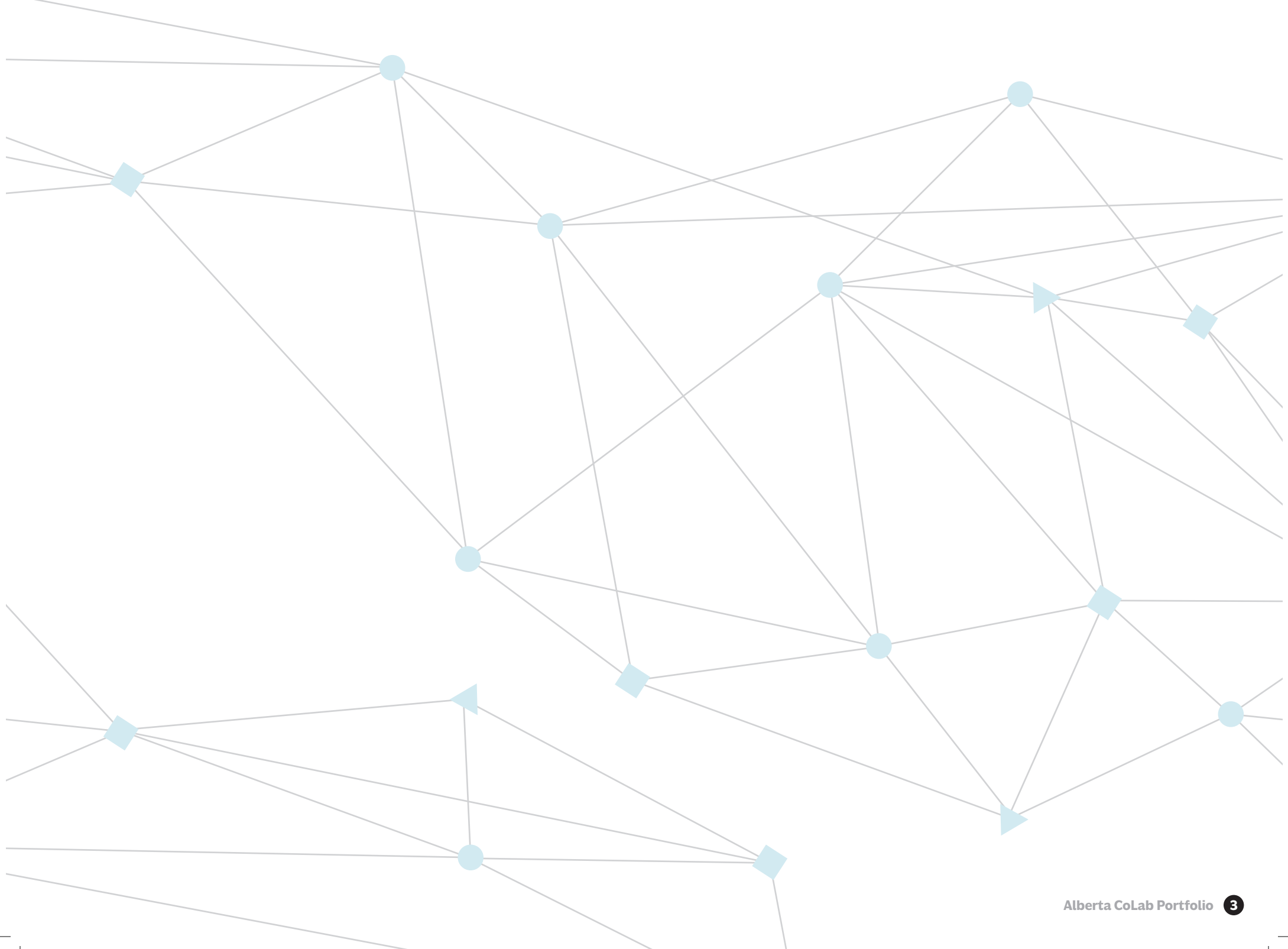


2015-2016 PORTFOLIO

CoLab.
Complexity navigation | Collaboration | Co-design | Co-creation

Alberta 







MESSAGE FROM THE COLAB DIRECTOR

Dear friends and colleagues,

It is my pleasure to share Alberta CoLab's 2015-16 Portfolio!

The Alberta CoLab was always envisioned as a new way to help the Government of Alberta spark, shape, and deliver innovative solutions for complex policy and strategy challenges. It first came onto the scene in 2014 as a cross-ministry hub for systemic design and strategic foresight, sponsored by the Department of Energy. With a drive to grow the use of new and emerging approaches for policy innovation across government, CoLab has since run over 100 projects, led three communities of practice, and created intensive training courses on its methodologies.

This portfolio highlights 13 projects that CoLab worked on over the 2015-16 period. These projects demonstrate a strong focus on creating greater system understanding, encouraging future orientation in our decision-making, and enabling meaningful collaboration among diverse actors. They also demonstrate a strong focus on Alberta's energy system, from developing oil scenarios and intelligence for strategy development to creating processes that support diverse Integrated Resource Management System actors to get real on priorities and align their efforts.

We know that the demand is only growing for governments to be more innovative, and the projects in this portfolio reflect something that we all know, and that I believe: that how we work together matters.

As the only public sector systemic design and strategic foresight unit in Canada, CoLab and the Government of Alberta are positioned at the forefront of new approaches to how we work. I look forward to continuing to collaborate – across divisions, departments, orders of government, and with our stakeholders – as this work evolves.



Keren Perla
Director, Alberta CoLab





THE COLAB TEAM

In 2014, Alberta CoLab was founded as a cross-ministry hub for systemic design and strategic foresight within the Government of Alberta's Department of Energy. Since its inception, it has assisted with many of the Government of Alberta's most complex strategy and policy challenges.

In its first year, the CoLab team supervised construction of the custom-built CoLab design studio, designed the CoLab visual identity, developed and delivered a six day training course in systemic design, expanded its Systemic Design Community of Practice to over 70 participants, and ran 62 workshops across 38 projects in collaboration with 14 different ministries. Phew!

In 2015, a further 33 projects were performed with an emphasis on increased stewardship of projects through to implementation and a stronger focus on energy and integrated resource management. CoLab's communities

of practice grew, expanding to foresight and adding a new collaboration between government and community: Systemic Design eXchange. CoLab also hosted the international Relating Systems Thinking and Design Symposium, bringing the conference to North America for the first time.

In 2016, CoLab's team of six continued to build out its three work streams: projects, capacity building, and networking. We completed over 25 projects in 2016, helping move forward work on files in the Department of Energy, the broader energy system, and beyond to explore the intersections of economic, social, environmental, and technological challenges.

A five-day intensive strategic foresight course was designed and delivered to its first cohort. Two cohorts took the systemic design intensive training course – one with a client case study from the Department of Energy, a new type of case study for our course and its

cross-ministry learners. Two field guides were developed to support training course graduates and those new to our methods: one for systemic design (Follow the Rabbit, published in March 2016) and one for strategic foresight (There May be Zombies, to be released in early 2017).

CoLab strengthened its working relationship with other labs, bringing learnings from the field into work with Government of Alberta clients. These labs include the Energy Futures Lab, Project Blue Thumb, Shift Lab, the Action Lab, and Alberta Health Services' Design Lab.

This portfolio highlights some of our most favourite, impactful, and generative projects from the past two years. We look forward to 2017!

CoLab Team



KEREN PERLA

Director of Design and Foresight, facilitates system mapping with Alberta Energy participants at the Systemic Design Training Intensive, December 2016.



BRENT WELLSCH

Systemic Designer, introduces the concept of systemic design to SDXI, December 2015.



LAURA READ

Systemic Designer, explores system mapping with a toolkit from The Australian Centre for Social Innovation at SDX4, September 2016.



ALEX RYAN

Senior Systems Design Advisor, holds up a persona map created of him by a participant in the Systemic Design Training Intensive, July 2016.



ROYA DAMABI

Systemic Designer, captures the conversation at the AHS Design Lab's Quality Summit, October 2016.



SALVATORE CUCCHIARA

Systemic Designer, talks theory at the Strategic Foresight Training Intensive, delivered for the first time in December 2016.

CASE STUDIES



Foresight



Strategy



Systemic Design



Networking



Projects



Capacity Building

**Alberta Energy
Sustainability Strategy
Foresight Scenarios**
(pg. 10)



Oil Scenarios
(pg. 12)



**Strategic Intelligence
System: Foresight
Trend Deck**
(pg. 14)




**Social Innovation
Ecosystem
Mapping**
(pg. 16)




**Alberta Culture
Production Grants**
(pg. 18)




**Follow the Rabbit:
A Field Guide to
Systemic Design**
(pg. 20)



**Alberta Energy
Sustainability Strategy**
(pg.26)




Panels Support
(pg. 32)



**Environment & Parks
Corporate Division
Planning**
(pg. 30)




Energy Futures Lab
(pg. 22)




**Systemic Design
eXchange**
(pg. 22)



**Priorities for Alberta's
Natural Resource
Management System**
(pg. 28)



Open Government
(pg.34)



ALBERTA ENERGY SUSTAINABILITY STRATEGY SCENARIOS

CONTEXT

DURATION

- December 2014 – April 2015

SPONSOR

- Cynthia Farmer, ADM Strategy & Market Access, Alberta Energy
- Barbra Korol, Executive Director Strategy & Market Access, Alberta Energy

PARTICIPANTS

- 8 Core Team Government of Alberta Staff (cross-ministry)
- ~45 session participants (cross-ministry)
- ~45 survey participants (cross-ministry)

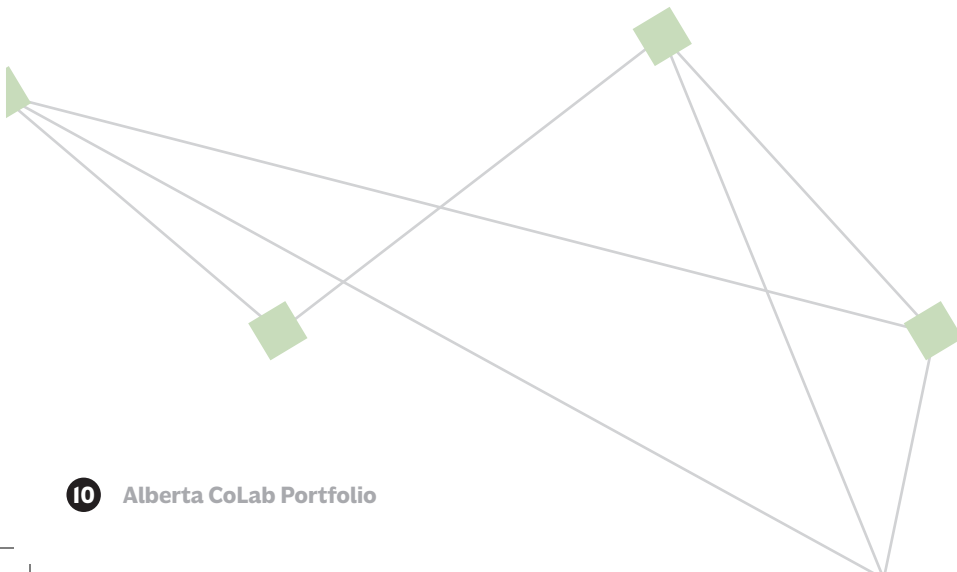
DEEP DIVE

The project resulted in two key deliverables: a trend deck and a scenario report. The trend deck presented 33 patterns of change that could shape the future of Alberta's energy sector. These trends built on the collection and categorization of more than 100 signals (i.e., indicators of change) from six broad domains: social, technological, economic, environmental, political, and geopolitical.

The scenario report built on trends by providing a snapshot of, and potential pathways for, four alternative energy sector futures that Alberta could face in 30-40 years. These scenarios were not meant to be predictive, but rather to provide insights into futures that Alberta could face.

FRAMING QUESTION

How might Alberta ensure continued prosperity given changing energy systems?



KEY INSIGHTS

In December 2014, the CoLab started a foresight project to inform the development of the Alberta Energy Sustainability Strategy, a strategy providing long-term direction for Alberta's energy system.

A core group was formed to lead the project, including staff from Alberta Energy, Environment & Parks, Agriculture & Forestry, and Aboriginal Relations.

In January 2016, the core group completed a trend report to help create a picture of the operating environment and its potential evolutions. The trend deck challenged readers to pay attention to emerging developments that could significantly shift the trajectory of Alberta's energy system, away from a business-as-usual direction. It also emphasized the importance of looking at the energy system from a number of different perspectives, including social, technological, and environmental.

Following a series of three online surveys (Delphi), the core group developed four scenarios using a 'cone of plausibility'. Through this method, the core group started to define the business-as-usual trajectory, and then applied "what if?" questions to key variables to generate alternative views of the future.

The scenarios were provocative enough to elicit rich discussion amongst energy experts, but also easy enough to effectively educate non-energy experts on the energy system. At final strategy workshops, participants used the scenarios to test the robustness of different recommendations. The key take-away for participants was that a long-term strategy needs to be robust against future uncertainty if it is to remain relevant.

IMPACT

The scenarios created a strong context for strategy development by enabling a conversation around the desired future. They also helped participants stress-test different strategy options and discuss ways to enhance the performance of options in the face of future uncertainty.

By ensuring a strong focus on the future, the project enabled participants to test their implicit assumptions regarding the future of Alberta's energy sector.

Rockies

By 2050, the world is transitioning away from hydrocarbons as the predominant energy source.



Costs to produce hydrocarbons in Alberta have risen significantly, forcing some producers to abandon marginal projects.

Aided by **low-cost renewables, improvements in battery technology, and the worldwide carbon tax**, India and other developing countries have leapfrogged their way to a lower-carbon economy.



- Uranium
- Hydrocarbons
- Other renewables
- Wind
- Solar

Renewables represent **55%** of overall global energy demand.

The shift away from hydrocarbons as a primary energy source has meant Alberta's economy is experiencing **near zero growth**.



The worldwide carbon tax of **\$250 per tonne** means the world is on its way to reducing GHG emissions to **70%** of 2006 levels by 2050.



Infographic for the *Rockies* scenario.

OIL SCENARIOS

CONTEXT

DURATION

- February 2016 – July 2016

SPONSOR

- Alberta CoLab & Market Access Team

PARTICIPANTS

- ~30 cross-divisional and cross-departmental staff

DEEP DIVE

The project resulted in the formulation of four potential scenarios:

PRAIRIE: A business-as-usual scenario where Alberta's oil sector continues to grow on the back of a price rebound and access to new markets.

PLATEAU: A potential scenario where Alberta's oil production comes to a standstill in 2018 due to export constraints, persistently low prices, and the rapid electrification of transportation world-wide.

LAGOON: A potential scenario where Alberta's integrated producers remain profitable despite low prices, thanks to high margins in their refining operations; and yet, Alberta is largely unable to share in industry profitability.

DELTA: A potential scenario where Alberta's oil sands companies have to innovate in order to survive and grow in an increasingly carbon-constrained world.

FRAMING QUESTIONS

How might Alberta's oil sector look by 2025?

How might Alberta Energy effectively respond and adapt to these potential futures?

FEEDBACK

"One of the most profound comments was developing a hedging strategy."

John Donner,
ADM Strategic Initiatives and Finance, Indigenous Relations

IMPACT

This project pioneered the application of the Three Horizons Model for strategy and policy development, which gained widespread adoption within and beyond Alberta Energy.

Alongside energy sector forecasts and emerging trends, the scenarios served as a key input into Alberta Energy's Executive Team strategic planning sessions in December 2016. Specifically, the triangulation of scenarios with energy sector forecasts and emerging trends enabled the identification of a set of strategic issues that Alberta Energy could face over the next 10 years.

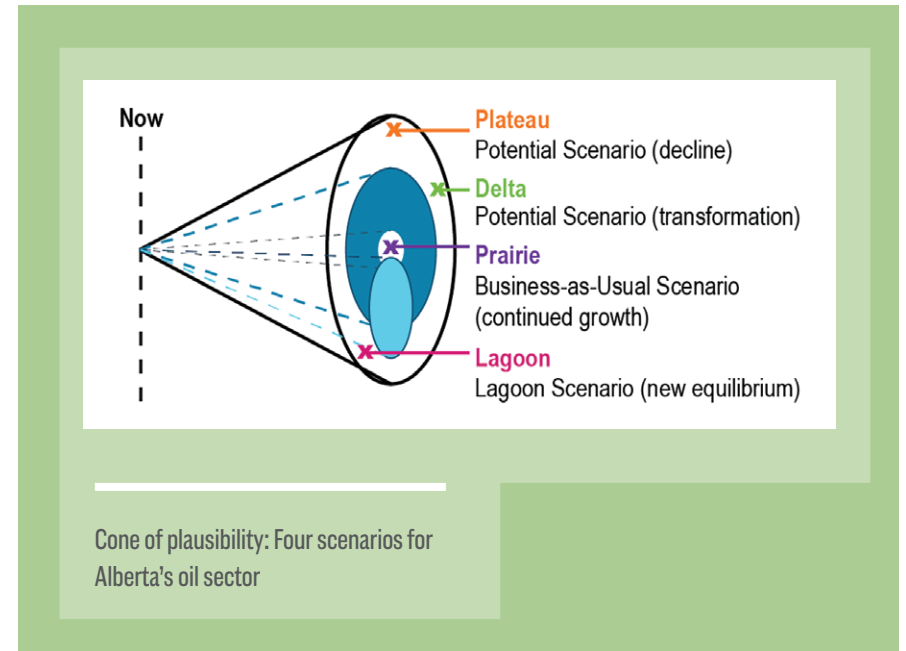
The project has the potential to inform the development of sectoral strategies (e.g., market access, international energy policy, oil sands) and diversification efforts.

KEY INSIGHTS

Between January and March 2016, Alberta CoLab developed a set of three, five-year scenarios (Prairie, Plateau, and Lagoon) based on interviews with key experts, publicly available forecasts, and scanning. The scenarios were intended to support discussions on emerging structural shifts that could impact Alberta's oil sector in the medium-term.

Following this workshop, the scenarios were revised to:

- Add an additional 5-year increment to the timeframe, bringing scenarios to 2025.
- Include a fourth scenario addressing the possibility of aggressive, if uncoordinated, climate action globally.
- Highlight the strategic issues stemming from each scenario and organize these issues in a Three Horizon model, to better anchor strategy development.



In April, CoLab convened 25 cross-ministry representatives to test the scenarios. Despite still being at the testing phase, these scenarios alerted participants to the importance of hedging against future uncertainty and being able to leverage emerging opportunities.

The Three Horizon model successfully highlighted the need to consider strategy as a portfolio of initiatives that enable an organization to simultaneously:

- Compete in existing structures by defending and expanding the core business.
- Adapt to an evolving environment by driving growth in areas related to the core business.
- Shape the new standards of the sector by uncovering options for completely new businesses.

STRATEGIC INTELLIGENCE SYSTEM: FORESIGHT TREND DECK

CONTEXT

DURATION

- Scanning: January – March 2016
- Refining Trends: April – September 2016

SPONSOR

- Assistant Deputy Minister James E. Allen, Innovation and Integration Division, Ministry of Energy

PARTICIPANTS

- Core Team for Scanning and Trend Development: 3 CoLab Team Members, 5 Department of Energy Staff
- Trend Analysis and Feedback: 50 Department of Energy Staff and foresight specialists

FEEDBACK

“The trend deck is a useful resource for me to go back to. It helps me consider things I might not usually consider, and check for things that I might be missing in my analyses.”

Department of Energy Staffer

DEEP DIVE

The Strategic Intelligence System (SIS) works to integrate department intelligence to anticipate impactful changes (opportunities and risks) in energy sectors, generating adaptive strategies and pathways.

As part of this initiative, a trend report was developed to explore potential developments that may impact Alberta's energy system over the next 20 years.

First, scanning was undertaken by a number of cross-division partners to identify signals of change. Signals are single events that serve as symptoms or indicators of a larger change. Multiple signals showing a directional shift constitutes a ‘trend’ or ‘pattern’.

The 300 signals were collected from a diversity of sources spanning industry reports, academic journals, conference findings, and news sources. These signals were then examined for patterns and themes, which helped to identify 19 emerging trends spanning social, technological, economic, environmental and political aspects of the energy system.

Energy system experts contributed feedback through two open house sessions and an online survey. Participants were asked specifically to identify the expected time horizon, potential impact, and likelihood of occurrence for each trend.

The final report consists of 19 emerging trends that span across the energy system.

The report identifies the trends with a potential high impact and high likelihood of occurrence over the next 5-20 years (known-knowns). It also identified trends with a potential high impact and uncertain likelihood of occurrence (critical uncertainties). Critical uncertainties reveal important threats and opportunities for the Ministry of Energy to consider.

FRAMING QUESTION

Explore potential developments that may impact Alberta's energy system over the next 20 years.

KEY INSIGHTS

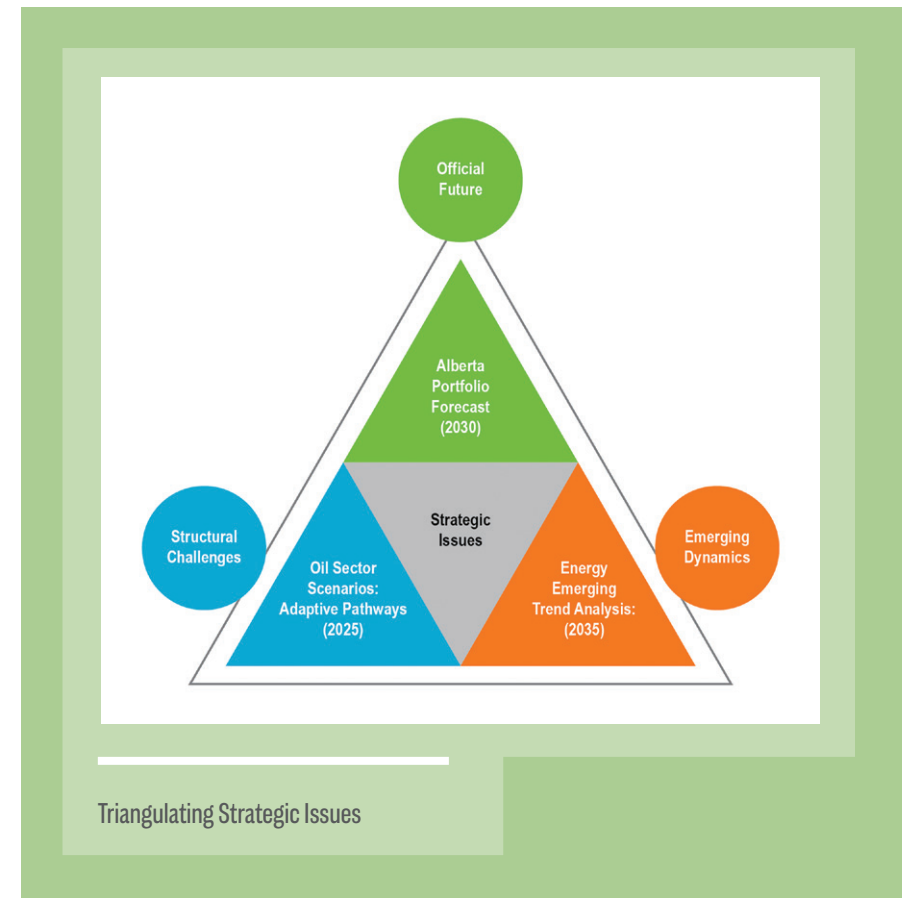
The Department of Energy is largely acting upon known-knowns (high impact, high likelihood trends). These include:

- Increasing scrutiny on energy development
- Pipelines as symbols and tokens
- A global shift from peak oil to peak demand

Critical uncertainties (high impact, high uncertainty trends) are important to challenge assumptions about anticipated events.

Critical uncertainties reveal potential threats and opportunities that the Department of Energy may consider for effective strategic planning. These include:

- The rise of the circular economy.
- Energy and climate long-shots: as the global population looks to protect environmental health, innovators are increasingly looking to nature to reshape energy challenges.
- Arrested development in Alberta: momentum as Canada's economic powerhouse is stalling. Low oil prices, job losses, and stagnating growth may shift perceptions of Alberta both within and outside the provincial borders.
- A global drive towards near-zero emissions vehicles.



IMPACT

The trend deck has been used as a key input into a number of facilitated discussions focusing on strategic issues, helping provide context for strategy development.

The trend deck surfaces a number of potential disruptors to the current energy system, in order to focus strategy development and provide robust options to decision-makers.

Trend analysis helped illustrate the need for adaptable and robust future-proof strategies.

SOCIAL INNOVATION ECOSYSTEM MAPPING

CONTEXT

DURATION

- April 2014 to September 2015

SPONSOR

- Lora Pillipow, Assistant Deputy Minister, Policy & Community Engagement, Alberta Human Services
- Leann Wagner, Executive Director, Strategic Policy Initiatives, Alberta Human Services

PARTICIPANTS

- 70 in-person workshop participants and 256 online survey responders from across Alberta
- 2 workshop facilitators (CoLab & Human Services) & 1 graphic designer (CoLab)



Mapping workshop participants explore what SI looks like in Grande Prairie.

DEEP DIVE

In early 2014, the Government of Alberta created a cross-ministry Social Innovation (SI) Project Team co-led by the departments of Human Services, Innovation & Advanced Education, and Culture & Tourism.

Beginning in summer 2014, the SI Project Team partnered with community organizations around the province to map Alberta's SI ecosystem. The purpose of this work was to facilitate a better understanding of social innovation in Alberta and to help establish a baseline against which to measure future social innovation activities.

The first step was to send out an online system mapping survey, which used snowball sampling to compile a list of almost 500 people who considered themselves to be part of Alberta's SI ecosystem. This list was used to generate preliminary insights into existing innovation networks. Once connections (the 'what') were identified through the survey, individuals were invited to participate in workshops where participants explored the 'how and why' of these connections. The workshops were also intended to identify potential new collaborative spaces, network strengths, and gaps.

Four in-person workshops were convened with local organizers: Calgary, Edmonton, Grande Prairie, and Lethbridge.

FRAMING QUESTION

How might we catalyze and support social innovation in Alberta?

KEY INSIGHTS

- System change is often incremental, and is disruptive only in retrospect. Do not define social innovation as only going after big game-changing ideas.
- The role of government is as a stable platform, convener, partial funder, and setter of public priorities.
- Communities should be encouraged to lead and own the social innovation agenda.
- The maturity and connectedness of Alberta's social innovation ecosystem varies by place. More effort needs to be made to engage indigenous and rural communities.
- There is a role for government to bring together diverse system actors to make connections where none currently exist, particularly in less connected geographies.
- Participants would find value in developing a map of the ecosystem. This should be developed iteratively through convening different sub-groups of social innovators around themes that transcend sectors .
- By using its convening power and signalling interest, government can be a powerful catalyst for action by external actors. AbSI Connect and other community organizations took up the work started by the mapping project and are continuing this almost two years after project completion.

IMPACT

By engaging and bringing together community members and organizations, the project catalyzed excitement about the potential for this work around social innovation to continue. As the project wound down, community members took it up, coming together to create a report on the state of social innovation in Alberta and prospects for the future. This became the impetus for AbSI Connect, a fellowship program supported by Social Innovation Generation (SiG) to explore the question: how can we do better at solving complex social and environmental problems in our province?

The project was also the first time that Human Services and Energy, two departments that do not typically interact, worked directly together to co-lead a project.

FEEDBACK

“I came to appreciate the importance of analyzing networks and visually presenting them as a tool to see where one could influence change. It illuminated the importance when you are entering a new space to really understand who the players are and how they interact. I keep looking for places to replicate the methodology in other work!”

Leann Wagner,
Assistant Deputy Minister, Strategy & Policy, Labour

FEEDBACK

“The work left a long term impression as I became more fully aware of a more holistic view of innovation (i.e., social, technical, and economic). In an innovation system there is a complex interplay between economic, technical and social factors. The mapping project provided a view into a completely different part of the system that I did not understand, appreciate and see its potential.”

Lee Kruszewski
Executive Director, Science and Innovation Policy and Strategy
Economic Development and Trade

ALBERTA CULTURE PRODUCTION GRANTS

CONTEXT

DURATION

- June – November 2015

SPONSOR

- Assistant Deputy Minister, Lora Pillipow, Ministry of Culture

PARTICIPANTS

- 13 participants from the Ministry of Culture
- 10 external stakeholders interviewed
- 2 CoLab Team Members

DEEP DIVE

Staff from the Alberta Production Grant (APG) program felt the need to adapt to a significantly shifting environment - one characterized by shrinking funding and the rise of platforms like Netflix and HBO that have replaced traditional television and movie-going practices.

Members of the APG team convened for a facilitated discussion in the CoLab on October 20, 2015. The goal was to better understand the system within which the APG exists.

As an input to this session, CoLab conducted a series of ethnographic interviews with film producers in order to understand the client perspective. In ethnographic research, the researcher collects user perspectives and aims to find meaning behind people's actions. Research questions asked producers about their experience applying to the APG, what they found most valuable and frustrating about the program, and the importance of the APG to their decision to film in Alberta.

FRAMING QUESTION

How might we better understand the system of the Alberta Production Grant?

KEY INSIGHTS

Key insights that surfaced from the research include:

- While administration of the program is speedy, film producers feel it is not fast enough.
- The program is simple and easy to navigate, however it still requires more administration than film producers would like.
- Participants applaud the support for indigenous film-makers; they also want the province to focus on bringing in larger projects.
- Participants highly value Alberta-specific solutions; at the same time, they do not want to see added regulations or rules that go beyond what other provinces require.

Ultimately, film producers want support to provide their maximum time and energy to their projects. This helped the team identify a design principle which centers on the user's core need: minimize red tape!

IMPACT

Insights from the project's ethnographic research phase informed the Alberta Production Grant team's understanding of the complexity in the system and helped to surface key points of tension for action.

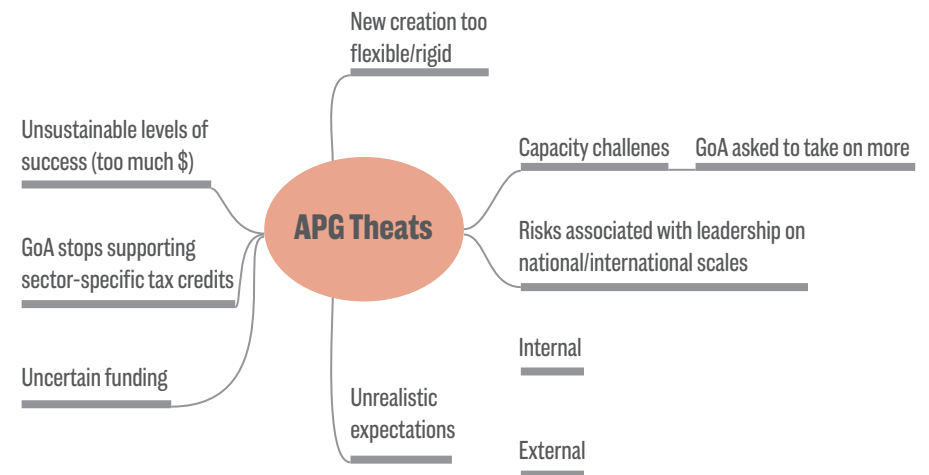
The client shared that one of the most significant things the CoLab did was help to their team better understand their current program, what needs to be addressed, and to better recognize the complexities and linkages within the system.

The research insights from the ethnographic interviews provided analysis relevant to other continuing work the team is doing with respect to the case for funding for the sector.

FEEDBACK

“CoLab helped us see new things about the program and our goals and in other cases, it's helped confirm or support our existing perceptions and in a way has provided validation of past thinking. Conversely, it's also helped shed light on areas we may not have considered or shift thinking on some things.”

Kimberly Evans,
Manager, Industry Development



Core threats identified by workshop participants.

FOLLOW THE RABBIT: A FIELD GUIDE TO SYSTEMIC DESIGN

CONTEXT

DURATION

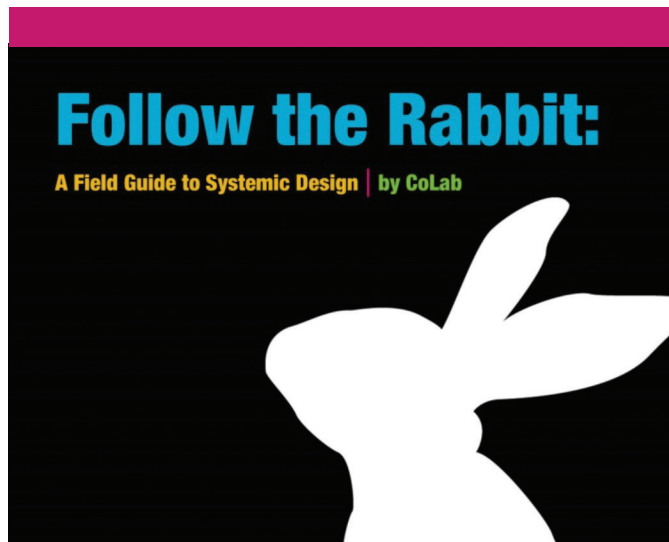
- November 2015 – March 2016

SPONSOR

- Barbra Korol, Executive Director, Alberta Energy

PARTICIPANTS

- 6 CoLab Team Members, 4 Energy Staff
- 37 Systemic Design eXchange (SDX) Community of Practice Participants



Final cover page of Follow the Rabbit: A Field Guide to Systemic Design by CoLab.

DEEP DIVE

In November 2015, CoLab began drafting its first field guide. The aim was to provide Government of Alberta staff with a useful, practical resource to put systemic design theory and methods into practice. It was also an opportunity to share the way CoLab approaches its work with a larger audience.

CoLab took the opportunity of the very first Systemic Design eXchange (SDX) – a community of practice bringing together a cross-sector group of people to learn and practice systemic design together – to test the first draft of the field guide with users. The draft was used both as a way to provide participants with an issue to explore at their stations using systemic design methods (prototyping, rich pictures, six hats, and more) and as a way for CoLab to receive end-user feedback. As a result of the input provided by SDX participants, the final guide looks much different: it has a user-friendly landscape layout over the original hexagonal page design, the whimsy level was maintained but turned down a notch, and there is a greater focus on the ‘how’ to help ground the theory presented.

Published in March 2016, the field guide is now part of CoLab's Systemic Design Intensive training course, and everyone who takes the course receives a copy to help them implement their learnings in their work outside the lab.

FRAMING QUESTION

How might we support Government of Alberta staff to use systemic design methods and tools?

KEY INSIGHTS

- The opportunity to test early drafts of the field guide with a diverse internal and external-to-government audience via SDX was invaluable to producing a more user-friendly and useful product.
- Ongoing user feedback suggests that there is a need for practical tools and tips that go beyond theory and explanations of method to support people to implement systemic design approaches.
- Facilitation is an important, and often overlooked, skill set required for systemic design, lab, and other collaborative approaches. Building these pieces into lab resources and training will support people to use systemic design tools and methods.
- Sharing methods, tools, and approaches among lab practitioners is an important field-building mechanism, enabling people to learn from and build on each other's approaches.
- Being able to offer something tangible to others has enabled CoLab to share its approach beyond the capability of a hard-to-find, internal website – with Government of Alberta staff and beyond.
- CoLab's strong formal and informal networks have enabled it to share the field guide widely in the absence of a public-facing online presence. Social Innovation Generation, for example, hosts the guide in its online toolbox for lab practitioners.

IMPACT

People have used the field guide to help plan more effective meetings, facilitate design sessions with their staff, and source simple ways to explain complex concepts. The impact has also been felt amongst executive, where the guide is often shared as a way to socialize the practice of systemic design.

The Guide is featured on Social Innovation Generation's Lab Resources webpage and on CoLab's internal website. While available online, the CoLab team regularly meets with government staff who carry their guide around with them to meetings they lead and to planning sessions for workshops they are in charge of designing for others.

Offline, the Guide is also being referenced by others in their field building work around labs and social innovation. For example, LabWise, a partnership of the J.W. McConnell Family Foundation and the Waterloo Institute of Social Innovation and Resilience, has used the Guide's section on the systemic design mindset in its work to train and coach community-based teams leading a social innovation lab to tackle intractable social and/or environmental challenges.

The success of the Systemic Design Field Guide has encouraged the CoLab team to create a similar guide for its Strategic Foresight work, anticipated in early 2017.

FEEDBACK

"I would go as far as strongly recommending it as a tool for socializing systemic design in more traditional organizations. Many guides available on the internet are either too extensive or rely heavily on visuals (which also makes them hard to reference). The format and information in this guide is perfectly adapted to organizations still contemplating the value of systems thinking. The combination of text, visuals and the friendly format makes this guide my go-to resource!"

Simona Ralph,
Alberta Health Services Design Lab & Systemic Design Intensive Graduate

SYSTEMIC DESIGN EXCHANGE (SDX)

CONTEXT

DURATION

- December 2015 – Present (ongoing)

SPONSOR

- CoLab and the Skills Society Action Lab

PARTICIPANTS

- Multi-Stakeholder Community of Practice
- To date, approximately 170 people have participated in SDX over five sessions



SDX4 hosted The Australian Centre for Social Innovation (TACSI) for an SDX hijack

DEEP DIVE

In December 2015, CoLab partnered with the Skills Society's Action Lab to launch the Systemic Design eXchange (SDX). SDX is an ongoing experiment that attempts to cultivate and support a Community of Practice - a group of diverse people who come together to learn, share practices, and co-create knowledge around shared areas of interest.

SDX is open to a broad range of participants interested in engaging with the theory, issues, and practices related to systemic design. Topics explored so far include systems thinking and sense-making, complexity and the value of social innovation, prototyping, and various systemic design methods, tools, and techniques. SDX community members come from all walks of life, including government, the not-for-profit sector, private enterprise, and consultants.

To date, there have been seven SDX gatherings: five official and two casual socials. SDX has been a rewarding and fulfilling experience for CoLab, providing an outlet to grow and support learning about tools and techniques for addressing complexity for social innovation. A strong collaborative relationship with the Action Lab, which will continue, will set the stage for further collaboration on future projects.

FRAMING QUESTION

How might we connect people interested in using systems thinking, design thinking, ethnography, prototyping, and social labs to tackle real-world problems?

KEY INSIGHTS

There are a number of ways that SDX benefits participants. SDX helps to:

- Foster a sense of community for people working on complex challenges.
- Share practices, methods, and skills to help each other learn and grow their impact.
- Spark new collaborations and projects.
- Provide a place that people can practice newly learned skills and learn from each other.

Regular surveys with SDXers reveal that SDX provides value to them in two key areas:

- SDX provides quality learning through a balanced emphasis on relevant theory, practical case studies, and applied practice.
- SDX has created a space for effective networking and has either fostered or reinforced a sense of community in Edmonton's social innovation ecosystem.

IMPACT

- Systemic Design opens new ways of understanding the complex issues that organizations and individuals deal with. Given the increasing interdependence of various social, economic, technological and other domains/systems, the importance of a systems approach in understanding the interactions and their implications is vital.
- Through a challenge mapping exercise in SDX2 we learned the procedural challenge of moving a group from a creative divergent process (small group work) to a plenary convergent end (large challenge map creation). Part of the objective in systems mapping is to build shared understanding of the system. Participants need appropriate time to share their perspectives, reflect on others' and their own ideas, and appreciate diverse opinions in the room.
- Space must be given to allow for the identity and purpose of a Community of Practice to form. While pre-conceived ideas of purpose might be useful in testing scope and purpose in the beginning, real community is built by stewarding a developmental path that fosters an organic sense of purpose that is ultimately created by the community itself.

FEEDBACK

“[SDX] is a great way of opening the [systemic design] box so they could take a glimpse inside.”

Feedback from SDXers

FEEDBACK

“I liked being among people with a rich understanding of systems thinking, and the common language really made those conversations fluid.”

Feedback from SDXers

ENERGY FUTURES LAB

CONTEXT

DURATION

- Fall 2015 - 2018

SPONSOR

- The Natural Step

PARTICIPANTS

- A diverse set of 40 innovators and influencers across the energy system that participate as primary fellows.



DEEP DIVE

As a global energy leader, Alberta has experienced more than most how divisive and polarizing energy issues can be. In response, the Natural Step Canada and a growing number of partners, including the Government of Alberta, have designed a forum to discuss, experiment and innovate on energy challenges. The Energy Futures Lab (EFL) is a five-year lab process that examines what the transition for Alberta's energy future might look like and launches efforts to enable this transition. As a lab initiative, EFL engages CoLab as an advising partner to help design and shape fellows' engagement, lead system-sensing activities, and synthesize fellows' understanding of current and emerging trends. This approach is intended to:

1. Spark and coordinate action as a Lab: e.g., through working groups of leading organizations, innovators, and thought leaders.
2. Give EFL a shared voice and amplify its reach: e.g., through strategic communications efforts and network building.
3. Solicit input and support of partners and stakeholders: e.g., through surveys, presentations, and invitations to be part of the EFL.

FRAMING QUESTION

How can Alberta's leadership position in today's energy system serve as a platform for transitioning to the energy system the future needs?

IMPACT

EFL continues to leverage CoLab's expertise - from tool sets to products to strategic insights - in particular, for prototyping and navigating the complexity of Alberta's energy system. Fast forward to today, the lab has established a shared vision and innovation pathways that form the foundation of their strategy. In addition, a suite of 17 emerging prototypes have been identified that will be tested for their ability to generate impact along the following innovation pathways:

- I. Radically increase carbon efficiency
2. Pioneer innovative, high-value uses for carbon
3. Make major advances on renewable energy
4. Dramatically reduce energy use via smart energy communities
5. Empower Albertans to participate in local and distribute approaches
6. Build awareness and literacy broadly on full spectrum energy choices
7. Pioneer transparent, integrated policy development
8. Engage hearts and imagination of Alberta in the transition
9. Support transfer/development of new skills for low carbon economy
10. Support initiatives where indigenous communities lead innovation
- II. Dramatically reduce energy used for transportation

KEY INSIGHTS

- From a process perspective, the ultimate challenge was whether a lab process (where insights are fluid and emergent) would be compatible with the Natural Step's Sustainability Framework (which presumes the constraints that solutions need to meet).
- The set-up for prototyping as a creative, collaborative AND integrative exercise is critical for challenging business-as-usual perspectives and jointly identifying areas of potential innovation.
- Among the most critical aspects of lab processes are the specific supports the backbone or design team can provide participants outside of lab engagements. These include supports for broad communication, narrative creation, and guidance on prototyping.
- As a case study, the Energy Futures Lab continues to generate immense insights and evolve understanding around the development, use and deployment of a prototyping approach versus traditional implementation tools. Open House events to solicit a broad range of external feedback and identify supports provide high-value platforms for refining, iterating and scaling ideas.

FEEDBACK

“CoLab has deep, leading-edge expertise in approaches for systems sensing, innovation and collaboration, experimentation for identifying where to intervene in complex systems and how. It's clearly a key/strategic component for policy in the energy space.”

EFL Support Team

ALBERTA ENERGY SUSTAINABILITY STRATEGY

CONTEXT

DURATION

- November 2015 - May 2016

SPONSOR

- Grant Sprague, Deputy Minister, Department of Energy
- Cynthia Farmer, Assistant Deputy Minister, Strategy and Market Access Division, Department of Energy

PARTICIPANTS

- 150 participants across Government of Alberta departments and agencies

DEEP DIVE

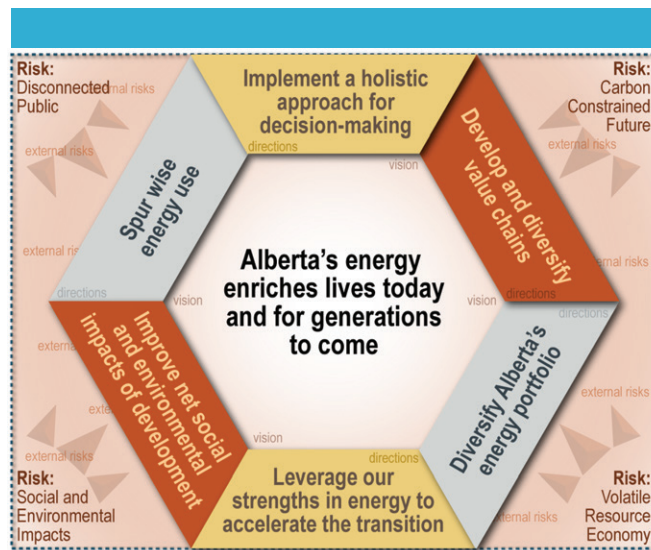
In November 2015, the Government of Alberta embarked on a robust process to deliberate on the requirements of Alberta's future energy system. Over the course of six months, Alberta CoLab designed and led a campaign of parallel systemic design and foresight research, engagement and analysis efforts that would culminate in the draft Alberta Energy Sustainability Strategy (AESS). The strategy established long-term direction to guide energy policy over the next 30-40 years, reinforcing the need to transition to a low-carbon future as a means to mitigate escalating the following risks identified in the external environment:

- A carbon constrained future
- A volatile resource economy
- Social and environmental impacts
- A disconnected public and communities

FRAMING QUESTIONS

How might we create a strategic approach for Alberta's energy resources that is:

- *Responsive to changing economic, environmental, and social trends and developments?*
- *Resilient to future uncertainty and shocks to the system?*



Vision, Directions and Strategic Risks for Alberta's Energy Sustainability Strategy

IMPACT

The final strategy was grounded in four transformational shifts in the energy system. Shifting from:

1. Hydrocarbons to energy as a full spectrum of resources
2. A focus on economic opportunities to holistic development and decision-making
3. Albertans as passive consumers of energy to engaged owners/users
4. Using non-renewable resource revenue to fund core services to using resource revenue for asset management purposes, including reinvestment for economic diversification

These shifts served as the foundation for a strategy that, for the first time, established a shared trajectory for energy that was 1) created and supported broadly by the public service, 2) sought to go beyond a triple bottom-line approach (trade-offs), and 3) sought to strengthen social, environmental and economic interests at the same time.

From a process perspective, AESS stands out as the first large-scale, complex initiative to fully integrate systemic design and strategic foresight, demonstrating the value of new and emerging approaches for public policy challenges.

FEEDBACK

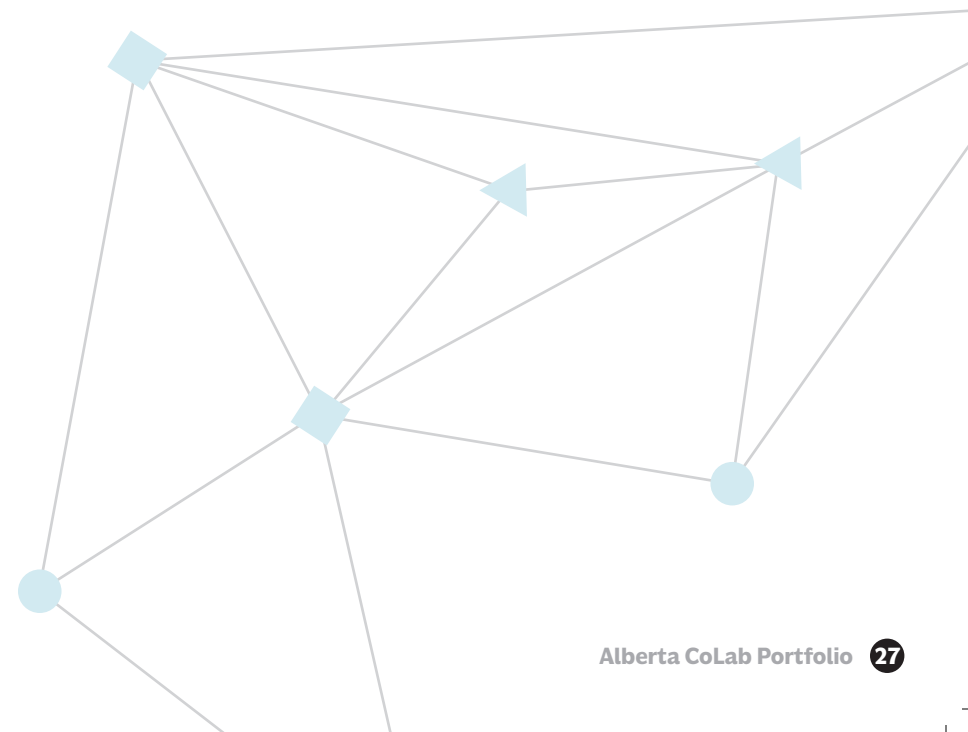
The most important insight I achieved...

“That an integrated Government of Alberta vision and strategy is possible. That an energy industry that is environmentally superb and enriches our Albertan communities by being socially responsible and respected is possible.”

Workshop participant (AESS evaluation)

KEY INSIGHTS

- For Albertans, the trajectory of energy development and use is intimately connected with the concept of prosperity. In this space, success depends on maintaining a long-view in order to anticipate and adapt to emerging issues and developments that may shape energy globally.
- Economic growth is necessary but insufficient by itself to enrich the lives of Albertans. Alberta must move to a model where social, economic and environmental are interwoven.
- Transformation, like diversification, of the energy system is not an end unto itself but should be geared towards improvement of the whole system.
- A portfolio approach, one that represents a mixture of initiatives target core business and emerging opportunities, can help to hedge against future uncertainty.
- Legislation is insufficient for effective strategy implementation. It is important to think beyond sharply defined and strictly enforced levers towards those that operate through influence and are context dependent (e.g., research, partnerships, pilots, prototypes).



PRIORITIES FOR ALBERTA'S NATURAL RESOURCE MANAGEMENT SYSTEM

CONTEXT

DURATION

- October 2014 to October 2015

SPONSOR

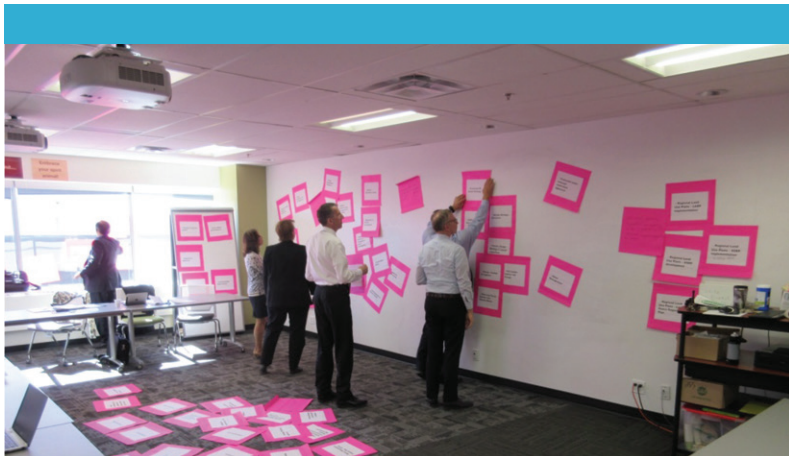
- Al Sanderson, Assistant Deputy Minister, Policy Management Office, Departments of Energy and Environment

PARTICIPANTS

- 30 participants from Energy, Environment, Indigenous Relations, and the Alberta Energy Regulator

DEEP DIVE

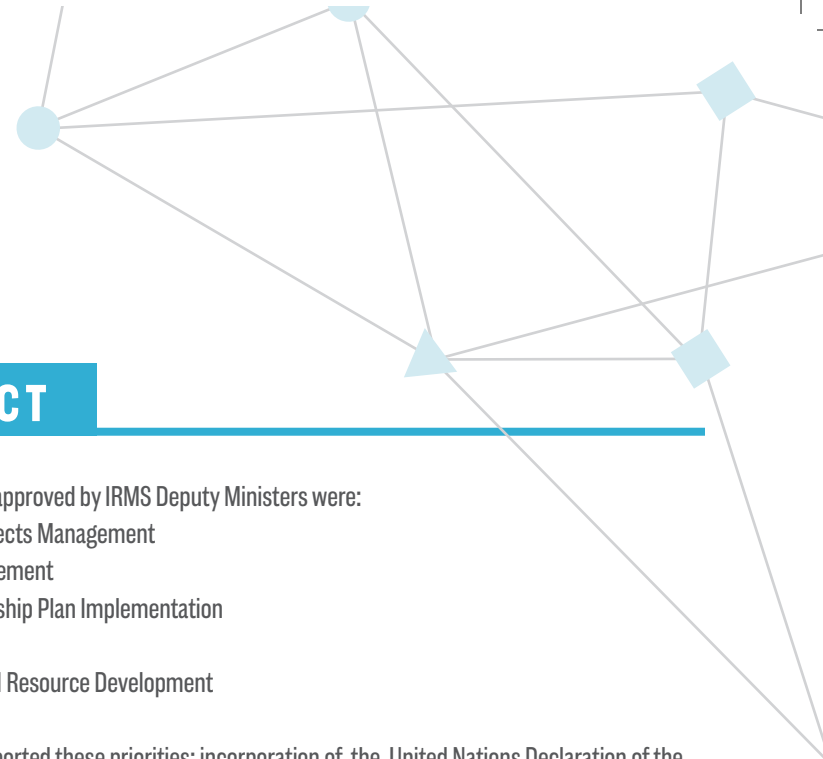
A scan of the Integrated Resource Management System (IRMS) partners' strategic plans identified more than 130 strategic priorities. When you have 130 priorities, nothing is a priority! Over the course of three systemic design workshops, Alberta CoLab convened IRMS partners at the Assistant Deputy Minister and Executive Vice President levels to map, group and refine priorities to create a single set of shared, system-level priorities. The photo on the right illustrates the process where all 130 priorities were sorted by participants. Many priorities were discarded onto the floor because they were not system-level priorities. The remaining priorities were grouped into common themes. Participants then ranked the themes using dot voting, and then critically discussed their voting choices and their biases. A core working group took the outputs of the workshops forward and presented the results to IRMS Deputy Ministers for approval.



Sorting and clustering resource management priorities.

FRAMING QUESTION

How might we create commitment to a set of common priorities shared across Integrated Resource Management System partners?



IMPACT

The final priorities approved by IRMS Deputy Ministers were:

1. Cumulative Effects Management
2. Liability Management
3. Climate Leadership Plan Implementation
4. Market Access
5. Unconventional Resource Development

Two principles supported these priorities: incorporation of the United Nations Declaration of the Rights of Indigenous People into all work; and, an open, transparent and accessible data system.

This provided, for the first time, a common focus across the resource management system in Alberta.

KEY INSIGHTS

- Over the course of three workshops, building trust enabled participants to shift from sharing information on each organization's priorities to jointly developing shared priorities.
- Participatory processes tend to be less rigorous but gain more buy-in to the priorities.
- Dot voting helped to set priorities, but the results were not taken at face value. Voting helped to focus a discussion on the comparative merits of different priorities, and to consider how the priorities fit together in a system.
- The bottom of the priority list is just as important to consider as the top: what won't we do? What will we stop doing?



Mapping IRMS Priorities

ENVIRONMENT & PARKS CORPORATE DIVISION PLANNING

CONTEXT

DURATION

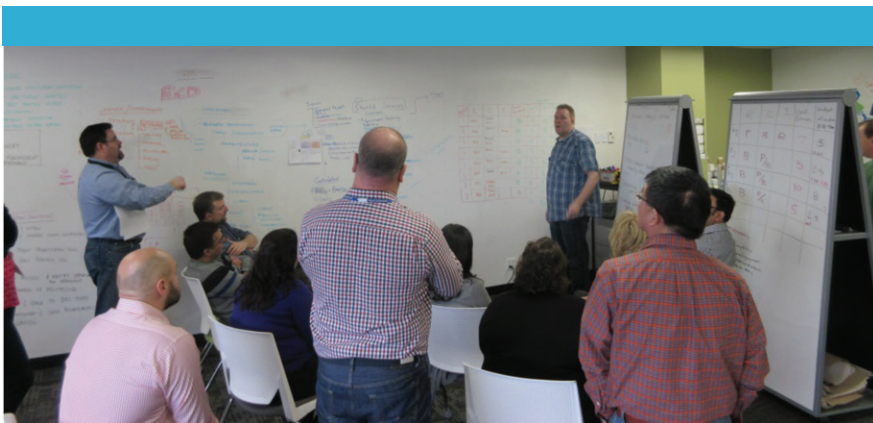
- February 2016 – April 2016

SPONSOR

- Jakub Denkwicz, Director GeoDiscover Alberta
- Lee George, Acting CIO/Executive Director Informatics
- Ray Keller, Acting Chief Data Officer

PARTICIPANTS

- Environment and Parks Corporate Division Management Team (sessions)
- Environment and Parks Corporate Division Management staff (survey)
- Informatics Council



Sorting and clustering resource management priorities.

DEEP DIVE

- A key feature of this project was a business simulation (or 'war-game').
- War-gaming enabled participants to experience a plausible situation and glimpse the consequences of their actions in a risk-free environment.
- In three different teams (red, blue, and purple), participants were asked to develop and clarify responsibilities for divisional functions. The teams were also asked to formulate and allocate a given budget to a number of priorities.
- The simulation unfolded over three rounds, each of which was followed by a debrief.
- The three teams initially approached their task alone, but realized that they had to work together if they were to be successful.
- The simulation helped participants radically re-imagine their organizational structure. Perhaps more importantly, the simulation forced them to assess their actual practices against abstract vision statements.

FRAMING QUESTIONS

- *How might we ensure information technology and data are managed and governed appropriately at Environment & Parks?*
- *How might we clarify roles and responsibilities among GeoDiscover Alberta, the Chief Information Officer, and the Chief Data Officer?*

KEY INSIGHTS

- The project consisted of a two-day retreat for the management team, alongside a series of internal as well as external engagements to gather feedback.
- The two-day retreat enabled the team to:
 - Develop a divisional strategy map detailing why, what, and how the division sets out to do moving forward;
 - Imagine alternative possibilities for the divisional structure; and
 - Identify pain points amongst different units in the division.
- The retreat highlighted the need for a number of structural changes to improve performance. However, participants also realized that significant improvements could be made here and now by following a number of principles, including:
 - Many heads are better than one.
 - Assume the best in one another.
 - Give people the time they need to reflect and work through questions.
- A feedback session with the Informatics Council and a staff survey provided additional feedback from a user and staff perspective, respectively.

IMPACT

- Implementation of project results has been delayed; however, the project helped the sponsors articulate a way forward for the division and the different groups within it.
- The project enabled participants to come together as a group, visualize themselves and their role in the division, and build a team.
- The business simulation helped participants realize that abstract vision statements around collaboration, sharing, and co-creation need to be reflected in daily practices.
- Project sponsors are using the results of the project to inform discussions on other related projects. They developed a number of options to optimize divisional functions, clarify roles and responsibilities, and improve performance.

FEEDBACK

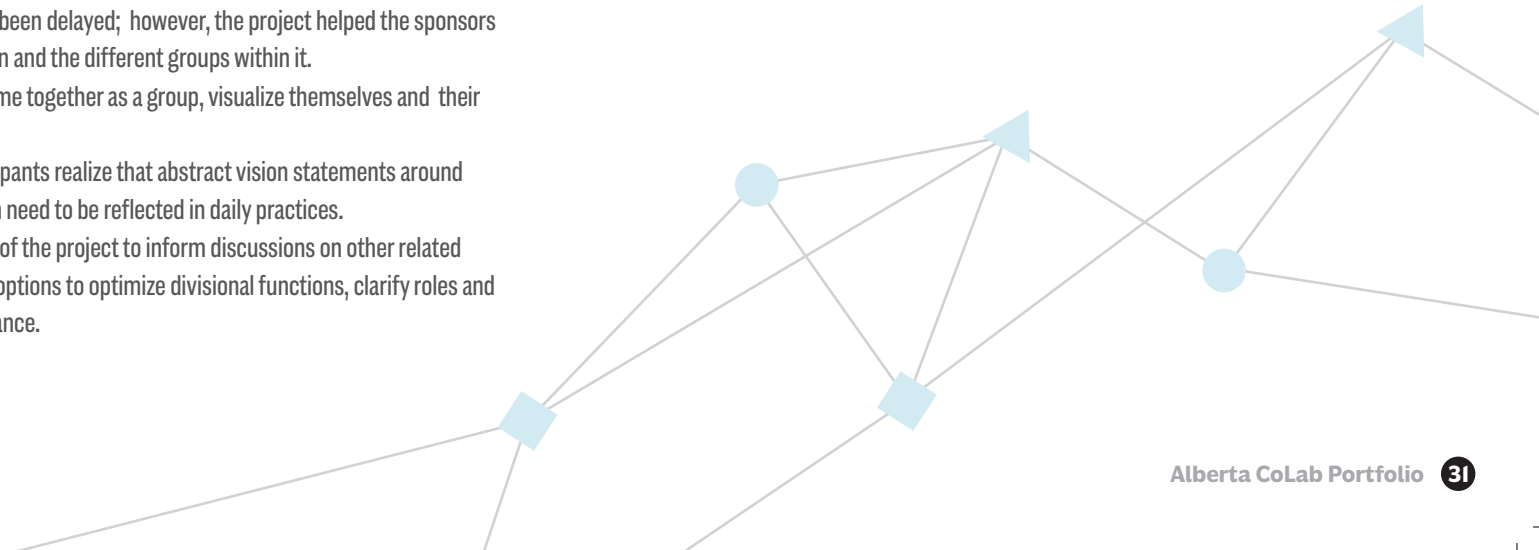
“The Co-Lab provides a unique experience no-one provides across government.”

Jakub Denkwicz,
Project Sponsor

FEEDBACK

“The Co-Lab is the preferred strategy consultant for government.”

Lee George,
Project sponsor



PANELS SUPPORT

CONTEXT

DURATION

- Mental Health Review: October 2015
- Workers Compensation Board Review: November 2015-Present (ongoing)
- Climate Change Innovation and Technology Panel Review: October-December 2016

SPONSOR

- Mental Health Review: David Swaan, MLA, Calgary-Mountainview
- Workers Compensation Board (WCB) Panel Review: Sandra Kraatz, Alberta Labour
- Climate Change Innovation and Technology Panel Review: Daphne Cheel, Economic Development and Trade

PARTICIPANTS

- Multi-Stakeholder Engagements: Panel Members, Government Representatives, and Public Representatives (session participation ranged from 10-50 participants)

DEEP DIVE

CoLab has supported priority government initiatives featuring appointed external panels. These panels are tasked to examine a strategic issue in depth, rationalize and make sense of the problem space, and provide recommendations to government on appropriate actions.

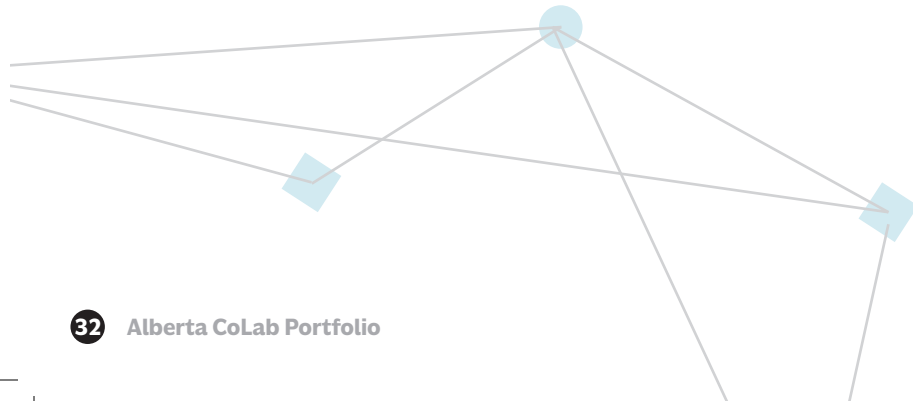
Alberta CoLab has combined methods from systemic design, strategic foresight, and certain strategy development frameworks to best support these panels in their work. This has enabled the panels' engagement processes to maintain a sharp focus on their inquiry while adhering to an approach that is systemic, designerly, and futures-oriented.

Using systemic design and foresight methods supported robust engagements and conversations, surfacing themes that may not have been explored otherwise.

FEEDBACK

“Your team brought a much needed alternative perspective that was integral for achieving our result.”

“A systemic perspective helped everyone appreciate alternative perspectives and aided in collectively driving to a result.” development of recommendations.”



FRAMING QUESTIONS

Mental Health Review:

How might we develop a strategy that strengthens and, where needed, updates the current system for delivering services to Albertans living with addiction and mental health issues?

WCB Review:

How might we approach our work in a way that best meets the needs of all parties involved and those ultimately affected by this review?

Climate Change Innovation and Technology Panel Review:

How might we best align Alberta's Research and Innovation System to meet the objectives of Alberta's Climate Leadership Plan?

FEEDBACK

"Your commitment to assisting the team in completing various phases of the Review, in often very short timeframes, has been invaluable to this Review and the development of recommendations."

IMPACT

These engagements, while unique, had common elements that benefitted from systemic design and strategic foresight approaches. All of the engagements had:

- Multiple interests at stake
- Polarized opinions about the nature of the issue and what the true nature of the problem is (shared frame of the problem space was absent)
- Tight delivery timelines with discreet windows of opportunity for engagement

The processes designed for each of these initiatives respected the important nature of the subject matter. They created space for exploratory and creative thinking, embraced multiple perspectives, and led to actionable recommendations within given time frames.

KEY INSIGHTS

- A systems approach helped illuminate prior gaps in approach and design, and helped the teams understand where to focus their recommendations.
- Design thinking helped bring the user to the forefront of people's minds – perspectives that are typically missing from more traditional government decision-making approaches and that may have been absent without CoLab's involvement.
- The exploratory nature of systemic design and strategic foresight can be harnessed in ways that yield positive outcomes for groups tasked with delivering high stake recommendations with considerable time constraints.

OPEN GOVERNMENT

CONTEXT

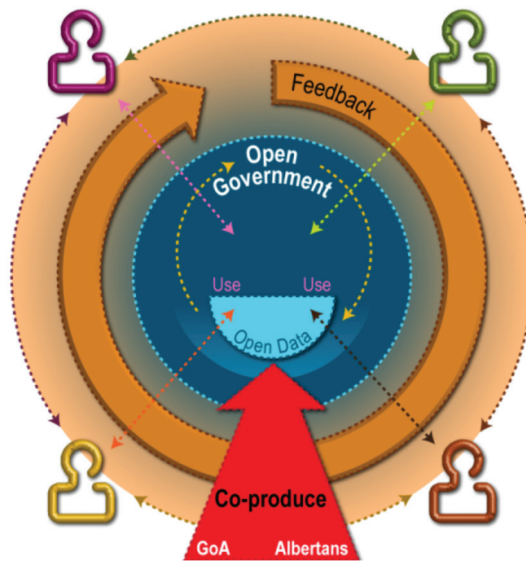
- DURATION** • February 2015 – August 2015
- SPONSOR** • Mark Diner, Chief Advisor, Open Government, Service Alberta
- PARTICIPANTS** • 60 participants across three channels: strategic planning workshop; systemic design training course; and the systemic design community of practice.

DEEP DIVE

Systemic design helped the Government of Alberta's Open Government team to develop a new Open Government Strategy. The strategy was prototyped through the Systemic Design Community of Practice, the systemic design training course, and a strategy workshop. Each channel tapped into a different cross-section of civil servants and used different methods to frame and formulate a strategy for open government. A one day strategy workshop brought together the Open Government Team to formulate a shared understanding of the strategy. The six day training course used open government as a vehicle for learning systemic design. At the same time, participants interviewed citizens, stakeholders and public servants to understand their needs with respect to open government. Through a series of four Community of Practice sessions, systemic designers prototyped six concepts supporting open government. A further four prototypes were developed in the training course.

FRAMING QUESTIONS

- *How might we shift the culture towards open government and embrace collaboration, engagement and transparency?*
- *How might we design for information exchange that the public wants, avoids harm and promotes the public good?*



A vision for open government and open data

KEY INSIGHTS

OPEN DATA IS IMPORTANT

It also becomes significantly more meaningful and possible when supported by open information and open engagement.

REAL WORLD TRAINING

Using the training sessions to take on live issues that affect the whole organization makes the training more engaging while delivering useful organizational outcomes.

IMPACT

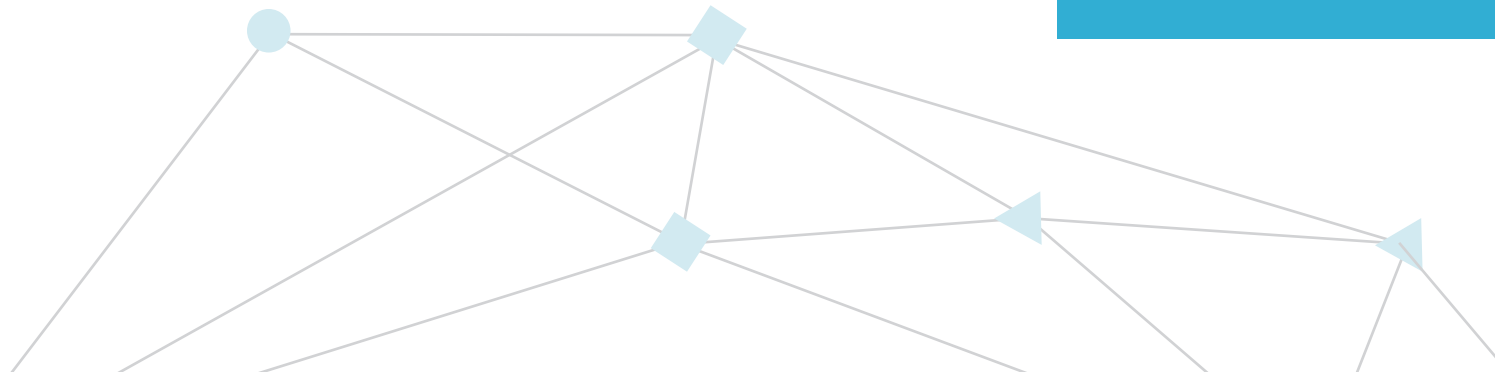
The Open Government Strategy was published on August 21, 2015 (see <http://open.alberta.ca/documentation/strategic-plan>). The strategy launched with the vision of a public service openly engaged with the citizens of Alberta.

The published strategy was a significant reframing from the starting point of the systemic design project. The big shift was from a focus on the quantity of data shared with citizens, to the quality of engagement with citizens.

FEEDBACK

“Systemic design is a good way of looking at complex problems and coming up with some kind of direction, but you have to be open to that direction not being what you thought it was going to be.”

Max Merrett,
Manager, Strategic Planning, Open Government Program



Contacts

CoLab is a team, a way of working, and a space within the Government of Alberta. One of CoLab's aims is to help nurture and support communities of practice around systemic design, strategic foresight, and strategy.

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To explore any of the concepts presented in this document in more depth, visit the CoLab's website for a range of theoretical resources, practical tools, upcoming events, and learning opportunities. Check it out!

colab.alberta.ca

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