

April 4, 2021

LEARNING ECOLOGY

An emerging network of learners
expanding ecological literacy

Co-Created By
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LEARNING ECOLOGY

Thirty-five people who are dedicating their lives, time, insights, passion, and money to conserving natural systems and wildlife were joined by fifteen designers and other innovators involved with organizational change. They were assembled for a “design sprint” on Zoom to explore how design frameworks and methods could help various organizations informally linked by their purpose enhance conservation efforts in a changing world.

Collectively known as the Conservation Institution (CI), their member organizations were formed various times within the last century. While they recognize the world has changed, they still carry mental models and use planning and management methods from the 20th-century. As a result, innovation comes hard, few of their bolder ideas are brought to reality, and value creation opportunities are not seen. These conditions put the CI and its legacy of accomplishments at risk because the percentage of people in the overall population who find relevance in their work is shrinking.

Using the group’s wisdom to create a scan of the natural and human-made assaults on the natural world, they speculated about the emerging competition (see page 85 and 87 for more information). About half-way through the sprint, they had an insight about the main competition and adopted the metaphor: “We are not caught in traffic; we are the traffic.”

They realized that their assumptions, values, attitudes, and worldviews were different from those of the population, and in many cases, were different from each other. Their emerging competition is their own inability to respond to today’s world.

This is the story of how, in 12 hours over three days and amid a pandemic, the group framed a new strategic direction: to become a learning ecology that continuously increases its relevance to the fast-changing forces affecting the well-being of people and the planet.

EXECUTIVE SUMMARY

Objectives

Leaders in government, companies, and NGOs are adopting design because they find traditional processes invented in the 20th-century insufficient to cope with today's uncertainty.

Whether they are running a hospital, auto manufacturer, publisher, investment fund, a government agency, or a large NGO, leaders of organizations need greater flexibility, responsiveness, and speed that design provides. Design combines various methods, frameworks, tools, and techniques to help organizations cope with complexity and explore more ambitious, leap changes.

There were two main objectives for the sprint: (1) introduce AFWA, USFWS, NACLEC, and other leaders within the CI to the Whole View, a design model that can help organizations thrive when faced with uncertainty, (2) see if the model facilitates productive conversations that help resolve different, often conflicting viewpoints within the CI.

Results

The structured and pliant application of design frameworks helped participants learn they need to “listen more than tell” to engage effectively with a broader set of constituencies. “Learning ecology” serves two complementary pathways that respond to this insight: (1) creating a network of unusually diverse members and a solution-oriented process that accelerate learning by doing and (2) leveraging available initiatives, assets, and expertise to help various stakeholders learn about ecology and its threats.

Overall, the sprint offered a safe space for open conversations, critical debates and critiques, and the exploration of new offerings and organizational models for the CI. Rather than advanced solutions, six groups created a set of questions that were broader than the typical questions about small changes,

reflecting aspirations for foundational changes to increase the relevancy of conservation efforts in the US. For example, one group explored new urban gateways to nature, welcoming judgment-free, inclusive, and safe learning experiences that increase nature access. A second group explored how nature-based activities for Latinx millennials and multi-generational families, helping them understand the health benefits of nature. See page 71-84 for a high-level description of all six concepts and their development journey. See page 89 for observations and interpretations provided by the organizing team from the CI.

Moving forward

We recommend that the CI build upon the productive first steps taken in this sprint by supporting a 2-year research project led by the D-Lab at Harvard T.H. Chan School of Public Health. The central research questions would be part of the forthcoming proposal, not this report, but we know they will be similar to the following two questions. Considering Nature as a social construct that is defined and described in very different ways,

1. What are the options for defining and describing Nature that go beyond traditional CI viewpoints and are reflective of a changing society?
2. Which of these options seems best at creating information and programs that show how Nature can benefit, and in turn be benefited by, people and organizations?

The process of this research will involve CI leaders as early adopters in user-research, idea development, and refinement of ideas into systems of products and services that make the Relevancy Roadmap real. This active involvement in using the Whole View model will give conservation leaders the ability to create solutions to both incremental step projects and bolder leap projects.

We thank all the participants involved in the organizing and planning this initiative, specifically the organizing team from the CI, Elsa Haubold, Mark Humpert, Randy Stark, Mo Sook Park, Cynthia Jacobson, Jen Newmark, Heather Dugan, and Jason Sumners. Their commitment and contributions were critical to the success of this design sprint and the development of this document.

Patrick Whitney and Andre Nogueira, Ph.D

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MOVING FORWARD

LEARNING ECOLOGY

Fish and wildlife organizations were founded over a century ago for a very different country than the one we live in today. Urban areas are much larger; there is declining interest in hunting and fishing; frequently, mountain bikers, birders, and hikers outnumber hunters in traditional hunting grounds; people's views of Nature are shifting from being a resource to use to a partner with humans who desire a healthy and prosperous planet.

We now understand the close relationship among threats of a hot world, diseases jumping from animals to people, loss of biodiversity, and social challenges, including lack of economic and racial equity. Each of these crises requires massive investment at an unprecedented level that puts national economies at risk. These are early skirmishes in a confrontation that not only threatens the existence of wildlife but also humans.

Can governments, companies, and communities amplify the powerful ideas of 'Nature' and 'wilderness' to help address the growing crisis of the loss of 'Nature'? Can the Conservation Institution, with the power of its programs, authorities, and control over a massive amount of land, help save the planet from largescale decimation?

We believe the CI can lead if it chooses to transform itself into a learning ecology focusing on the well-being of people and the planet. Rather than waiting for a full consensus of all leaders, we suggest a small group of early-adopters begin acting as a learning organization in selected projects that would be guided by principles like:

- *Seeking new questions before choosing answers recognizing we do not know what we do not know.*
- *Empathizing with and engaging many people, including those who do not care about or have limited access to Nature.*
- *Recognizing that anyone can go out of business because no organization is immune to disruptions.*
- *Thinking of learning as an experience constructed by the learner doing something, not preparing for doing something.*
- *Creating learning experiences for others is often the best way to learn.*
- *Accepting that more is often learned from failure than success.*

Principles like these will let the CI catch up to today's society and be prepared for tomorrow. Complementary to this new way of working is a list of design principles that represent the approach we suggest leaders in CI adopt when making change:

- *When the world is static, it is risky to change. When the world is changing, it is risky not to change.*
- *Agree whether a project involves incremental changes to something you know well or a leap change that is ambitious and filled with unknowns yet brings higher value if you succeed.*
- *Become more comfortable in being roughly right than precisely wrong.*
- *Prototype the future rather than benchmark the past.*

Learning and design will become the way you work and serve as a compliment but sometimes also serve as a counterbalance to the scientific method.

DESIGN AND LEARNING

A key challenge of individuals leading government agencies and private companies is to prepare their organization for the future. They need to have a sense of how fast the future will arrive, how different it will be from today, what new competencies will be needed, and how the changes will affect users, competitors, and allies.

When leaders of organizations call for change, they usually expect new versions of the products and services they are currently making. This is usually the right approach; successful organizations should, in general, have most of their focus on incremental change to things that are currently successful.

However, there are turning points in history when obvious indicators (i.e., demographic shifts, social change, pandemics) show that the future will be very different from today. We are at one of these turning points now; we know life will be different, we do not know in what ways.

This creates situations that are highly ambiguous and fast-changing. The resulting uncertainty is a challenge for traditional planning processes that need precise data to make reliable predictions. Design helps leaders make progress in preparing their organizations for the future even when information is unreliable and incomplete. Design knowledge can be used in many ways. To help explain, the following is an example of one of many possible ways of working.

EXAMPLE: ECOLOGY OF TRANSFORMERS

Even though the dire predictions linked to rapid urbanization, biodiversity loss, and climate change are upon us, we still debate their progression rate rather than take action. We believe insufficient action is not caused by a lack of knowledge or great ideas. To act differently, people must also see differently. While the standard frameworks of science and management are still required, they are far from sufficient to cause government agencies and the public to change actions that are laden with emotion, values, culture, beliefs, and other behavioral factors that have kept us from embedding the natural environment into our decision-making frameworks.

Expanding how organizations in the CI work to embrace the complexity of human behavior would need an unusually diverse team and a solution-oriented process that can help accelerate learning by doing. To encourage expansive thinking, we would set up a core team of transformers distributed across different states to run 10-15 prototyping experiences that could help us discover what it would take for the conservation leaders to increase their organization's learning competency. Teams would be formed from representatives of the following groups:

- *Leaders in the Conservation Institution.*
- *Public health and design professors from Chan and many disciplines in Harvard and other universities.*
- *Experts in public policy.*
- *Leaders of community-based organizations working in different industries.*
- *Companies and funders concerned about environmental challenges and social innovation.*

Transformers would be chosen for their expertise in a specific discipline and their experience in catalyzing social and organizational change. We would use a fast-moving design process that includes audits, scans, and sprints.

Audits are assessments of the current design competencies of an organization and recommendations for improvement. They would help us increase the capacity of individuals and organizations involved in this initiative to systematically apply design as a way of working.

Scans are observations of the daily life experiences of the people directly afflicted by one or more of the challenges related to rapid urbanization, biodiversity loss, and climate change. They are useful to ensure we are grounded in the people's experiences and perceptions of their lives. Criteria for selecting scan participants would be defined by key partners involved in this initiative.

Sprints are short intensive workshops for creating early-stage prototypes of products, policies, and services that would use knowledge from the transformers and insights from scans.

The transformers would be involved in several ways, including conceiving prototypes and advising about moving prototypes into government and industry.

WHY WHOLE VIEW?

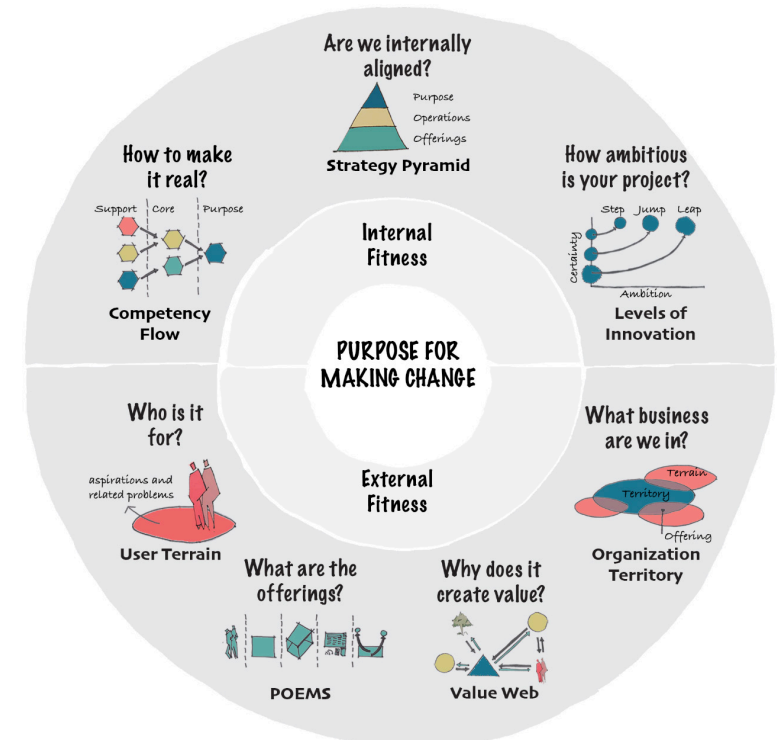
The Whole View is a conceptual design model showing relationships among the various forces that influence ambitious design projects fraught with uncertainty. We used parts of the Whole View during this design sprint and will continue to use it as an underlying structure moving forward.

With much more emphasis on fast responding than on perfect predicting, the model can be used to describe the current state of a situation or to explore more ambitious, leap changes, such as those facing the CI. Used early in a project, the model helps abstract reality and identify a broader range of questions by providing a structure to explore “Why are we doing this?” followed by “What are the main things we need to know for making a change?”

The model is divided into three parts (purpose, indicators, and frameworks and methods) that combined offer a way of thinking about the whole opportunity, helping organizations move forward in the face of the unknown by being approximately right rather than precisely wrong.

Frameworks provide a structure to organize and make sense of information (see adjacent diagram). Methods are actions taken to create and manipulate information that feeds the frameworks.

Whole View: Core Frameworks

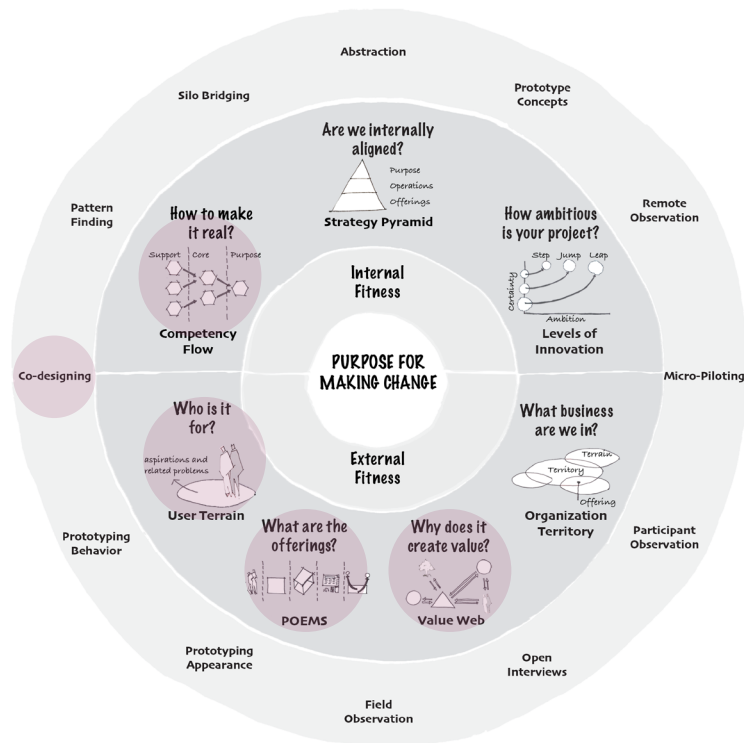


The Whole View has a set of seven frameworks, each related to a key question useful to deal with complexity. Combined, the frameworks support the visualization of ideas, making them less abstract than what words alone describe. User Terrains defines people in the context of their aspirations and related problems. POEMS is an acronym representing the types of offerings in a design project (People -staff & training-, Objects, Environments, Messages, Services). Value Web indicates assets such as money, brand, technology, and access to markets that create reasons for stakeholders to participate. Organization Territory defines the business areas a company decides to enter in response to user terrains. The Levels of Innovation helps clarify the degree of proposed change and risk. The Strategy Pyramid aligns strategy, operations, offerings to meet users' aspirations. The Competency Flow shows the core and supporting competencies needed to achieve the purpose.

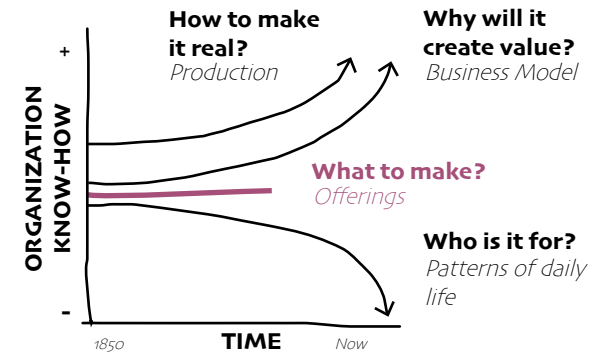
As you become familiar with the Whole View, you will combine the frameworks with the methods that fit your purpose for making change. On the diagram below, we show key methods of the model and the combination that supported our design sprint.

Additional examples include direct observation of people that create empathy and an understanding of their daily lives, early-stage prototypes that help discover new opportunities for value creation, abduction that ensures exploration of the future rather than benchmarking the past, and visualization that makes abstract ideas easier to understand.

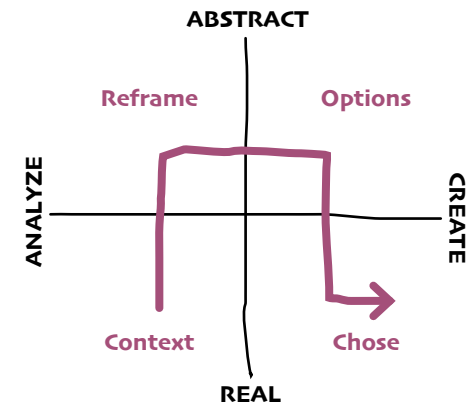
Whole View: Core Frameworks and Methods



The Innovation Gap sets the context for this approach. It illustrates that as organizational knowledge about production and business models increases, people have more choices in the things and services they use. This leads to individuals having more varied lives, which makes it more difficult for organizations to know what to make.



Abstracting the problem. Most innovation is a two-part process: see an opportunity and develop offerings as fast as possible. This approach calls for “abstracting the problem” or finding the ultimate purpose for new offerings.



REPORT ON DESIGN SPRINT PROGRAM

WELCOME

Many organizations have illustrious histories they consider an asset. When the context changes, they must have caution for their assets not to become a liability. The Relevancy Roadmap is an indicator that this may have happened to the CI. This sprint program was a way to see if the CI was open to facing this challenge. This letter from the CI leadership helped prepare the people for the intense 12 Hours of work that did not lock the CI's future to its past.

Welcome to our Designing Futures for Conservation Sprint!

Over the last 100+ years, we have made unparalleled gains in conserving many species of fish and wildlife, due in large part to the financial contributions and support of hunters, shooters, anglers, and boaters. We want to continue those successes in the next 100 years as the world around us changes.

The COVID-19 pandemic has caused a national healthcare and economic crisis. Racial unrest emphasized the urgent need for the conservation institution to address justice, equity, diversity, and inclusion. These circumstances are putting additional stresses on a 100+ year old conservation institution that has been increasingly challenged by funding inadequacies, shifting demographics, a lack of diversity, accelerated threats to biodiversity, unsustainable practices, and changing public attitudes and value orientations.

While 2020 was an unusual year, it provided many lessons from which we can learn. We have seen clearly just how relevant and important nature is to the health and well-being of our communities. During the COVID-19 pandemic, people turned to nature and outdoor-related recreation of all kinds to exercise, spend time safely with family and friends, find solace, and remain physically and mentally healthy. Visitation to outdoor destinations increased dramatically over rates in previous years. This provides an opportunity to connect with new and underserved users, learn what they need and want, and work to maintain their interest in the future.

Last year, the [Association of Fish and Wildlife Agencies](#) (AFWA) and the [US Fish and Wildlife Service](#) (USFWS) began exploring how we could use frameworks from fields of Design as well as Public Health to examine the work that we do and the people we serve to ensure our system of conservation remains viable. We partnered with design experts Patrick Whitney and Andre Nogueira from the [Design Laboratory \(D-Lab\)](#) at the Harvard T.H. Chan School of Public Health to start a new collaboration that will help us envision a future for conservation. Central to this work is this design sprint that will support ongoing efforts to implement the [Fish and Wildlife Relevancy Roadmap](#) that was adopted by AFWA in 2019.

This sprint was designed to leverage your intellectual capacity to envision a world where we can build upon past accomplishments and ensure an even brighter future for fish and wildlife and outdoor recreation.

Even though the pandemic created challenges for agency staff to accomplish work, it produced opportunities as well. Thank you for making the time to participate in this critical endeavor. We look forward to working with you on designing our conservation future!

Sincerely,

Sara Parker Pauley

President, AFWA
Director, Missouri Department
of Conservation

Deborah Rocque

Assistant Director, Science
Applications, US Fish and
Wildlife Service

CONSERVING FUTURES

The Conserving Futures is a research initiative led by Patrick and Andre Nogueira, Ph.D, exploring new ways to increase connections between humans and the natural environment. In particular, it intends to help organizations with a long history of connecting people and nature to respond to recent shifts in demographics, public interests and attitudes, climate, biodiversity, and health threats to both humans and wildlife from zoonotic diseases.

Since the mid-1800s, almost all organizations in the private and public sectors worked in ways that fit the underlying emerging forces of the Industrial Age. The economy of scale, mass production, and mass media led organizations to create long-term planning processes and adopt standards that provided guidance to the growing number of employees and customers. This was in stark contrast to fast disappearing rural society where people did what they wanted to do as long as they fit within the conventions of their local community. The shift in context, including urban growth, overuse of resources, and reduction of open lands not only changed existing organizations, it required that new organizations be created to address the decline of fish, wildlife and their habitats.

The context has shifted again, from a world where organizational planning was based on predicting the middle class's normal behavior to a world that needs flexible responses to an ever more diverse society. Organizations that ignore this risk becoming a 20th-century organization trying to fit into a 21st-century world. With roughly 80% of people living in urban areas across the United States, the American society is disconnected from the natural world. And those who do connect with the outdoors are increasingly experiencing nature in different ways than those from the beginning of the 20th-century.

The Conserving Futures initiative supports leaders interested in designing for the well-being of people, organizations, and the natural environment, but lacking proper methods and frameworks to deal with the uncertainty and dynamics of the 21st- century.

The specific goal of the 'Designing Futures for Conservation' design sprint was to introduce AFWA, USFWS, and other leaders within the Conservation Institution to design frameworks and methods useful to help them thrive in the new world. They explored these options through the eyes of potential competitors, current users, and the many people who could be customers. It took into account current disruptive forces, such as the COVID-19, climate change, social inequities, environmental degradation, among others (see appendix 3 and 4).

Sponsoring Partners

Association of Fish and Wildlife Agencies

Founded in 1902, the Association of Fish & Wildlife Agencies represents and serves as the voice of North America's fish and wildlife agencies and represents the states on Capitol Hill and before the Administration. It advances funding policies favorable to their member states and science-based management and conservation of fish and wildlife and their habitats in the public interest. The Association coordinates and supports national partnerships and initiatives on migratory birds, fish habitat, energy and wildlife, fish and wildlife health, conservation education, climate adaptation, species conservation and habitat conservation, leadership training and international relations.

US Fish and Wildlife Service

The US Fish and Wildlife Service works with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. We continue to be a leader and trusted partner in fish and wildlife conservation, known for our scientific excellence, stewardship of lands and natural resources, dedicated professionals, and commitment to public service.

National Association of Conservation Law Enforcement Chiefs

The NACLEC works collaboratively with state, federal and international conservation law enforcement agencies, and diverse alliances and partnerships to protect people, sustainably conserve our wildlife and other natural resources, and promote safe, diverse, and enjoyable outdoor experiences.

THE CONSERVATION INSTITUTION

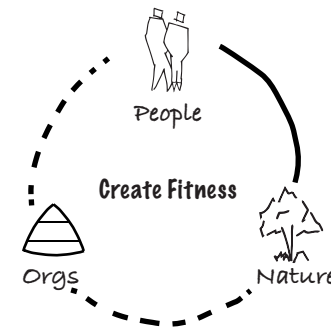
Over 150 years ago, Americans created organizations in the private and public sectors to protect the environment and help people enjoy nature. These include natural resources and fish and wildlife agencies in each of the fifty states, tribes, federal natural resources and environmental protection agencies, and non-governmental organizations and associations. Combined, these organizations created systems of offerings that formed a Conservation Institution (CI) with a vital mission to protect and conserve natural habitats and wildlife due to rapid industrialization and population growth.

For example, AFWA was created in the first decade of the 20th century to conserve natural areas in the United States. The Association had a particular interest in sustainable ways of using nature that provides long-term support for hunting and fishing. It worked with the government to let them sell fishing and hunting licenses to fund their work. Without AFWA and many other organizations within the CI, the natural environment would be viewed mostly as a source of cheap resources to fuel short-term economic needs and a place to discard waste. However, fishing and hunting are less popular now and, despite their work, the environment is being overpowered by carbon emissions and other threats.

Although the need for transformational change of the CI has been discussed for two decades, leading organizations achieved a milestone in 2019 with the publication of the Relevancy Roadmap. The Roadmap analyzes the impact of societal changes on fish and wildlife conservation's relevancy and presents recommendations on how agencies can transform to engage and serve broader constituencies. The Roadmap creates momentum for accelerating change in leading organizations of the CI, including the AFWA, its member states, and the USFWS.

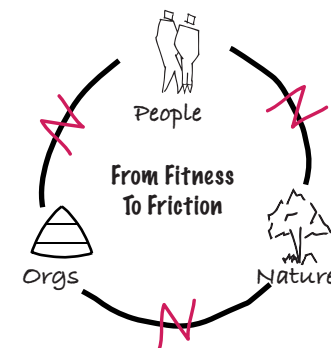
The CI should lead changes to this new context, but it will not find their future using the same conservation programs currently offered. The situation is similar to that of these organizations' founders; they had the insight to see the world was changing, and new threats needed new programs. Like then, North America now has a new demographic profile, new media, changes in the workforce, and other characteristics that call for a renewed vision and different approach.

FIT - FRICTION - FICTION



Late 19th, Early 20th-Century

The dotted lines represent the emergence of the U.S. Conservation Institution in response to changes in the relationship between people and nature. New organizations were needed to fit a new context.



Late 20th, Early 21th-Century

The red lines indicate changes in speed, scale and scope of the context, causing *frictions* on the interactions between people, organizations, and nature.



21th-Century

Today, we must find ambitious ways to create fitness, rather than continuing with the fiction that we are still relevant in the new context. We believe designing for the *well-being* of people, organizations, and nature can help lead the way.

The following is an example dealing with access and involvement with the national parks.

Today, most people visit specific areas of a park, while many others in the same park are underexplored. Every year, we witness people stuck in traffic jams on the roads near Yellowstone's iconic sites while they could watch a herd of elk during their Fall migration one mile away. However, getting people that already access nature a mile further into the park is not sufficient.

We are learning about the behavior of wild animals and their habitats through Internet-connected GIS or telemetry tags worldwide. This infrastructure could enable students in urban areas and their families to "foster" an elk, or any other animal, and follow their travels. Tiny cameras could be placed around the park, giving the kids data in the form of maps and photos.

The organized data could present real-world context for meaningful learning experiences, including the role of disease and predation as natural limiting factors, and inspire a new generation to reconnect with the natural world in various ways, such as viewing wildlife, restoring habitats, camping, hunting, running, fishing, sailing, gardening, among others. Government agencies would benefit by increasing environmental literacy and could use the same infrastructure to support our understanding of wildlife and natural habitats, pinpoint wildfires or even lost hikers, significantly reducing the extensive search and rescue budget required by wilderness parks.

LEADING DIFFERENTLY

It is clear we need to redesign the fit among people, organizations, and nature. Leaders in many private and public organizations realize bolder actions are required by society at large. These include but are not limited to more reliance on renewable energy, developing new economic models that count protecting nature as an asset rather than a cost, and creating platform-based manufacturing facilities that can provide consumers with personal choices without the waste inherent in overproduction. However, they often make small and incremental step changes that respond to the context they are leaving, not the one they enter.

The new way of living with the natural environment will not emerge from current organizational practices, be created in a university think tank, or be invented by one leader. Instead, it will require ambitious leap changes in what organizations do and how they do it. This initiative focused on developing principles and prototypes that help organizational leaders overcome the friction caused by using the 20th-century context to solve for 21st-century challenges. Two fundamental questions underlie this initiative:

How can leaders envision new offerings relevant to the well-being of people, organizations, and nature?

How should organizations change their strategy and operations to fit the new context?

The unprecedented nature of this challenge requires a reframing of how organizations from the CI plan and co-operate within and outside their institution's traditional boundaries. It will also demand creating an expanded perception of the types of value they should be seeking and generate new principles to help all interested organizations increase their fitness with the population they serve and the ecosystems they live in. Without such a paradigm shift, isolated efforts will continue to both merely adapt existing practices and make incremental changes in existing offerings towards marginally less harmful ones.

START SMALL, LEARN FAST, SCALE WHAT MATTERS

We believe it would be good for the environment and the CI if leading organizations could find alternatives to involve people in the outdoor world in ways that include but go beyond fishing and hunting activities. The first part of the Conserving Futures initiative was the ‘Designing Futures for Conservation’, a design sprint led by Patrick Whitney and Andre Nogueira, Ph.D. Design sprints provide short intensive use of design to expand the scope and accelerate impact in existing projects.

This sprint helped us learn more about AFWA, USFWS, and other organizations in the CI as agents of change and to help these organizations reframe conservation challenges towards well-being. We hope this initial exploration will lead to an expanded set of questions and new opportunities for igniting systems change that will inform part two of the Conserving Futures initiative, a 2-year research project led by the D-Lab at Harvard T.H. Chan School of Public Health focused on sketching holistic models and prototyping alternative futures for the CI, rather than benchmarking its past.

Design Sprint Program

We introduced this approach during three sessions from 10 am to 2 pm ET on February 16, 18 and 19, 2021. There were short presentations followed by breakout sessions and whole group discussions. We used the Whole View as an underlying structure for all activities described below.

The participants were a diverse group from different industries such as conservation, food, health, mobility, energy, housing, sustainability, design, finance, and philanthropy. Participants’ composition was determined in collaboration with leaders in AFWA and USFWS, considering a wide range of experience levels, sector representation, and disciplinary background. Criteria for invitation involved open-minded and energized people aligned with this research initiative’s conservation and social innovation purpose.

We also considered diversity in race, ethnicity, gender, sector representation, and other factors that can condition people’s outdoor experiences in America today. In addition to active participants, we invited a small group of advisors to participate

in specific parts of this program to learn about this initiative and provide feedback to participants.

Short presentations set the context for activities and provided instructions for breakout sessions and whole group discussions. During breakout sessions, we worked in small multidisciplinary teams of 7-8 people, each with a facilitator, a sketcher, and an active observer. The facilitator was an experienced designer mediating conversations and moving the team forward. Facilitators used key questions presented in the Whole View to guide co-creation activities and provide participants freedom and encouragement to share what is important to them via their own words, experiences, and emotions. The sketcher was a senior designer capturing and organizing the content generated by participants into the Whole View frameworks and ensuring all teams can accomplish their work in the expected time. The active observer was a leader in the CI trained in Adaptive Leadership. Active observers focused on participants’ interactions, capturing examples of key drivers of change, identifying emerging themes and anticipated challenges, and critical opportunities shared among participants.

During whole group discussions, breakout teams presented their work and received feedback from their peers and the advisors’ group. Patrick and Andre facilitated peer discussions around two central aspects: participants’ experiences and emerging ideas and related questions. The advisors’ group was composed of 30-50 selected individuals. Their inputs were made over chat and facilitated by a pair of active observers. In between days, active observers worked together to identify patterns of challenges and opportunities across teams and combine their observations with the advisors’ feedback. At the beginning of the following day, a designated observer shared their insights about patterns of challenges and opportunities via short presentations.

We shared in this document the results of this design sprint to further discuss ways for this initiative and the CI to move forward. We believe the CI will increase conservation relevancy and agency support by prototyping new activities that fit the new world we are entering, not relying on programs created for the past. This is the key to bringing the Relevancy Roadmap to life.

AGENDA

This program consisted of three working sessions on February 16, 18, and 19, 2021, 10-2pm ET.

A calendar invite with a link to the event was provided.

Day 1 - Feb 16

10:00–10:45 ET

Whole Group Discussion + Advisors

Welcome

Introduction to a Changing Context
Disruptive Forces, Risks, and Design
Green Alliance (appendix 3)

10:45–11:45 ET

Breakout Sessions

Designing Your Competitors

Each team focused on detailing different aspects of the conceptual competitor.

11:45–12:00 ET

BREAK

12:00–13:00 ET

Breakout Sessions

Teams combined their ideas into concepts for the competitor.

13:00–14:00 ET

Whole Group Discussion + Advisors

Teams presented their work for collective discussion, peer review, advisors inputs via chat, and reflections on relevancy and types of risk.

Day 2 - Feb 18

10:00–10:45 ET

Whole Group Discussion

Recap Day 1

Emerging challenges and Questions
Design Value and Innovation Suicide
1 Billion-Dollar Bet (appendix 4)

10:45–13:00 ET

Breakout Sessions

Overcoming Your Competitors

Teams focused on exploring how AFWA and USFWS could overcome their conceptual competitors.

13:00–14:00 ET

Whole Group Discussion + Advisors

Teams presented their work for collective discussion, peer review, advisors inputs via chat, and reflections about key barriers and drivers for implementing change.

Day 3 - Feb 19

10:00–10:45 ET

Whole Group Discussion

Recap Day 2

General discussions on key barriers and drivers for implementing change
Introduction to the Exercise

10:45– 13:00 ET

Breakout Sessions

Expanding Options

Teams expanded their concepts and incorporate new viewpoints to their purpose for making change.

12:00–13:00 ET

Parallel Sessions: Advisors

Advisors will have one hour of facilitated conversation to discuss recommendations moving forward.

13:00–14:00 ET

Whole Group Discussion + Advisors

Teams presented their work for collective reflection on content and process. We discussed the value of initiatives like this based on emerging questions and opportunities for making change.

PARTICIPANTS

The list of participants is organized in considering the following categories:

1. Internal to the Conservation Institution

CI Participants: individuals who work in the industry

Observers: senior conservation leaders or consultants trained in Adaptive Leadership

2. External to the Conservation Institution

Beneficiary: individuals with significant experience in different industries who benefit from conservation work

Facilitators: experienced designers interested in supporting conservation efforts

Sketchers: senior designers with experience in applying the Whole View

3. Organizers

Individuals in each category are alphabetically organized.



Angelou Ezeilo

Founder and CEO
Greening Youth Foundation

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CI Participant

Angelou's love for the environment stretches far back to when she was a little girl who had the chance to escape the dense urban streets of Jersey City to summer at her family's home in upstate New York. After a brief stint of practicing law, it was through her work as a Legal Specialist for the New Jersey State Agriculture and Development Committee that Angelou embarked upon a career as an environmentalist. Angelou further honed her skills as a Project Manager for the Trust for Public Land (TPL) in New Jersey and Georgia. In her position, she acquired land for preservation and worked on the New York/New Jersey Highlands Program, Parks for People-Newark, the New York/New Jersey Harbor Program, the Atlanta Beltline and the 20 County Regional Greenspace Initiative in Georgia. While at TPL, she realized the disconnect between the land that was being preserved and the education of people about that preservation—particularly as it related to our next generation. This was the impetus for the Greening Youth Foundation.

As a woman and minority-founded and led non-profit, Angelou is at the helm of a movement to provide environmental and wellness education and career pathways to a diverse young generation, both in the United States and in countries throughout Africa. The Greening Youth Foundation is cultivating a generation of youth of color to be stewards of our land and natural resources, ultimately shifting the demographics of the environment conservation movement. She was an Ashoka Fellow in 2016 for her work.

Angelou graduated from Spelman College, Georgia, and received her Juris Doctorate in Law from the University of Florida. She is a member of the National Center for Civil and Human Rights Women in Solidarity Society, and Georgia Audubon boards; Advisory Board Member for Outdoor Afro, The Million Mile Greenway, Inc., Keeping It Wild, Inc., and Rachel's Network; and most recently the author of "Engage, Connect, Protect: Empowering Diverse Youth as Environmental Leaders. She is a lover of cultural dance, hiking and birds. Angelou and her husband of 25 years, split their time between Atlanta, GA and Lagos, Nigeria.



Brian Yablonski

CEO
Property and Environment Research Center

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CI Participant

Brian Yablonski is the chief executive officer of the Property and Environment Research Center (PERC). Previously, he was a PERC board member as well as an adjunct fellow since 2003. In his work for PERC, he has published research articles on wildlife as well as public and private land management.

Brian currently serves on the board of the Theodore Roosevelt Conservation Partnership. He also recently served two terms as chairman of the Florida Fish and Wildlife Conservation Commission (FWC), the state agency charged with conserving and managing Florida's wildlife and marine resources and overseeing the state's hunting, fishing, and boating activities. He served as a commissioner on the FWC for more than 14 years.

In 2009, the Florida Wildlife Federation named Brian "Florida's Wildlife Conservationist of the Year" for his work advancing private land stewardship. And in 2016, he was presented Florida Audubon's "Theodore Roosevelt Conservation Award," their highest honor, for his work on coastal bird species conservation.

Prior to coming to PERC, he was the director of external affairs for the Gulf Power Company, the Florida subsidiary of the Southern Company, one of the nation's largest energy companies. He was also vice president of public affairs for the St. Joe Company, one of Florida's largest private landowners at the time.



Colin O'Mara

CEO & President
National Wildlife Federation

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CI Participant

Collin O'Mara serves as President and CEO of the National Wildlife Federation, America's largest wildlife conservation organization with 53 state and territorial affiliates and nearly six million hunters, anglers, birders, gardeners, hikers, paddlers, and wildlife enthusiasts. O'Mara serves on the Hunting and Shooting Sports Conservation Council, is a professional member of the Boone & Crockett Club, and represents the National Wildlife Federation as a member of the American Wildlife Conservation Partners and the Blue Green Alliance. In 2015, O'Mara was named Bass Pro Shop's Conservation Partner of the Year. He is regularly called before Congress to testify about wildlife, water, and sportsmen issues.

Prior to the National Wildlife Federation, O'Mara led the Delaware Department of Natural Resources and Environmental Control as Cabinet Secretary from 2009 through 2014. In that position, he spearheaded a range of initiatives, including Delaware's "No Child Left Inside"/ Children In Nature campaign, a comprehensive strategy to introduce children to the outdoors.

His previous board service includes a term as Co-Chair of the Natural Resources and Agriculture Subcommittee of the President's Task Force on Climate Adaptation and Preparedness, Chair of the Regional Greenhouse Gas Initiative, Chair of the Ozone Transport Commission, Chair of the Climate and Energy Subcommittee of the Environmental Council of the States, and the Executive Council of the Chesapeake Bay Program.

A native of Syracuse, New York, O'Mara was a Marshall Scholar, Oxford University, a University Fellow at the Maxwell School of Citizenship and Public Affairs, and a Presidential Scholar at Dartmouth College. He is a Catto Fellow at the Aspen Institute, a U.S. Green Building Council LEED accredited, and completed Stanford Business School's Executive Management Program in Environmental Sustainability. O'Mara lives in Delaware and spends every possible moment in nature fishing, hunting, hiking, and birding with his wife Krishanti and daughters Riley and Alana.



Daniel J. Decker, PhD, CWB

Professor Emeritus, Department of Natural Resources, Cornell University

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CI Participant

Dan Decker is the director emeritus of the Center for Conservation Social Sciences, where since the mid-1970s he has been engaged in research and outreach focusing on discovery of human dimensions insights and their integration into wildlife policy, management, program planning and evaluation. Over the last 20 years Dan has focused on transformation of the wildlife management institution in the US, including enhancing relevance of the institution to a broader swath of Americans.

Dan earned B.S., M.S., and Ph.D. degrees at Cornell, where he has been involved in studies of the human dimensions of wildlife management for 45 years. His work has been widely published in journals and books. Dan has served as consultant, advisor or contractor to several federal and state natural resource agencies, including the US Forest Service, US Fish and Wildlife Service, National Park Service, New York State Department of Environmental Conservation, Colorado Division of Wildlife, Alaska Department of Fish and Game, Florida Fish and Wildlife Conservation Commission and Tennessee Wildlife Resources Agency.

Dan has received several awards and recognitions, such as: Wildlife Publication Award of The Wildlife Society (article) (1992); Daniel L. Leedy Urban Wildlife Conservation Award, National Urban Wildlife Institute (1993); Distinguished Research and Extension Award, Gamma Sigma Delta (1994); Jack H. Berryman Institute for Wildlife Damage Management Award (1996); SUNY Chancellor's Award for Excellence in Faculty Service (2005); Wildlife Society Outstanding Edited Book Award for "Wildlife and Society: The Science of Human Dimensions" (2009); Outstanding Service to the College of Agriculture and Life Sciences Community Award (2013); and the Wildlife Management Institute's George Byrd Grinnell Memorial Award for Distinguished Conservation Service (2019). Dan also served as VP, President-elect, President and Past President of The Wildlife Society (TWS) in 2001-05, and prior to that Northeast Representative to TWS Council and President of the Northeast Section of TWS. Dan is a TWS Fellow and in 2012 he received The Wildlife Society's Aldo Leopold Memorial Medal.



Deborah Rocque, Ph.D

Assistant Director, Science Applications
US Fish and Wildlife Service

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CI Participant

Deb Rocque is the Assistant Director for Science Applications for the US Fish and Wildlife Service where she coordinates the Service's Science needs and works with partners on collaborative conservation. Deb works hard to foster an inclusive workplace and believes that all conservation opportunities depend on working together. Deb was an enthusiastic member of the President's Task Force on Shared Science and Landscape Conservation Priorities and is eager to continue to build partnerships around shared conservation priorities.

Deb served as the Deputy Regional Director in the North Atlantic and Appalachian Region where she oversaw regional operations in over 14 states for 7 years. Prior to that, she worked in headquarters filling various positions in the National Wildlife Refuge System program. During that time she played a key role in developing the Refuge System's vision: Conserving the Future; Wildlife Refuges and the Next Generation. She joined the US Fish and Wildlife Service as a contaminants biologist in Alaska.

Deb has a PhD from the University of Alaska Fairbanks, where she studied intrinsic markers in avian populations. Her Master's and Bachelor's degrees from the University of Connecticut both focused on population modeling of greater scaup. Deb has a small working farm in Western MA and enjoys all thing outdoors.



Howard K. Vincent

President & CEO
Pheasants Forever/Quail Forever

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CI Participant

Howard originally came from Duluth, Minnesota where he graduated from the University of Minnesota, Duluth with a Bachelor of Accounting degree in 1979.

He worked in public accounting for 7 years including his time with the national accounting firm of KPMG Peat Marwick where he was the Supervisor in charge of Business Advisory Services for the Twin Cities area.

He came to Pheasants Forever (PF) in 1987 as their first Director of Finance. He has also held the position of Senior Vice President and Chief Financial Officer before PF's National Board of Directors appointed him President and CEO in January 2000. In his time with PF, it has grown from a \$1 million to an \$98 million dollar organization with 750 chapters in 40 states and 140,000 members. PF also continues to have an efficiency rating of 90+%.

Howard is a National Board of Director of the Wildlife Management Institute, the Council to Advance Hunting and Shooting Sports, the Theodore Roosevelt Conservation Partnership, the American Wildlife Conservation Partners, and served two terms as a Member of the Wildlife Hunting Heritage Conservation Council. This Council gave direction and guidance to the Secretary of Interior and the Secretary of Agriculture on national conservation and hunting related issues.

Howard and his wife Wendy have been married for 40 years and live in White Bear Lake, Minnesota where he enjoys chasing the wily ringneck with his two sons, Marco and Ian.



Lise Aangeenbrug

CEO
Outdoor Industry Association

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CI Participant

For the past 30 years, Lise has served the outdoors and the outdoor industry, whether she has worked to protect lands and wildlife habitat, to build parks and trails, to connect communities to outdoor infrastructure or to grow and ensure the vitality of the outdoor gear and apparel industry. She currently serves as the executive director of Outdoor Industry Association (OIA), the trade group that represents 1,300 retailers, manufacturers, suppliers and other businesses in the outdoor recreation industry. Prior to her leadership of OIA, Lise served as the executive director of the Outdoor Foundation, OIA's charitable arm that works to inspire the outdoor habit through community investments and research.

Lise previously served as the National Park Foundation's second-in-command. She played a primary role in managing the organization and in helping the foundation to ensure the strongest second century possible for America's national parks, including fundraising toward the \$350 million Centennial Campaign for America's National Parks. In the 1990s, Lise helped establish the Great Outdoors Colorado (GOCO) Trust Fund— a constitutionally chartered public fund—and later served as the executive director, shepherding more than \$600 million in investments for the protection of 1 million acres of land for people and wildlife, transforming school playgrounds into green and inviting nature play spaces, constructing community parks, protecting 1000 miles of river corridor, and building 900 miles of trails. Under Lise's leadership, GOCO launched a first-of-its-kind collective impact model for engaging diverse youth and community organizations in making the outdoors come alive for children.

Lise began her career in natural resources as a field biologist in the Maasai Mara National Reserve in Kenya. She earned her master's degree from the Yale School of Forestry and Environmental Studies and her bachelor's from St. Lawrence University. Lise is a board member of the Resources Legacy Fund, Land Trust Alliance and Global Dental Relief and serves on the advisory committee for the Salazar Center for North American Conservation. She also serves annually as a trip leader for Global Dental Relief to Kenya.



Mamie Parker, Ph.D

Founder
MaParker and Associates

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CI Participant

Dr. Mamie Parker is a professional fish and wildlife biologist, success coach and principal consultant at Ecologix Group, Inc. She was elected chair of the Virginia Department of Wildlife Resources Commission leading the commission in the changing the name of the agency. Parker is the chair-elect of the Student Conservation Association (SCA) and serves on the Board of Directors of Brown Advisory, Center for Large Landscape Conservation, The Nature Conservancy-Virginia Chapter, Marstel-Day Consulting, Duke University NSOE, the National Wildlife Federation, the Chesapeake Conservancy and the Chesapeake Bay Foundation. She spent a career as a biologist and senior executive in the federal government as the FWS Chief of Staff, Assistant Director of Habitat Conservation/Head of Fisheries in this country.

Dr. Parker made history serving as the first African American FWS Regional Director of the 13 Northeastern states after working in the Great Lakes and Big Rivers regions and in the southeastern United States. Parker was the Department of the Interior's lead negotiator working with General Electric's cleanup of PCBs in the Hudson River, the most aggressive environmental effort ever proposed to clean up a river. She has an extensive experience working with her staff in building bridges to nontraditional partners in the conservation community. This work resulted in her receiving the 2020 Association of Fish and Wildlife Agencies John L. Morris Lifetime Achievement Award, William P. Reilly Environmental Leadership Award and the Presidential Rank Award, the highest honor bestowed upon federal employees.

Dr. Parker facilitated at the White House Conference on the Environment. She is the recipient of the Emmaline Moore Award, named after the first female President of the American Fisheries Society for mentoring and coaching women and people of color. Parker is one of the authors of *The Future of Fisheries: Perspectives for Emerging Professionals* published by the American Fisheries Society.



Mark S. Tisa, Ph.D., M.B.A.

Director
Massachusetts Division of Fish & Wildlife

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CI Participant

Mark S. Tisa has worked for the Massachusetts Division of Fisheries and Wildlife for 34 years. During this time, Dr. Tisa has held positions as senior aquatic scientist, assistant director for fisheries, deputy director, and now director of the agency. He is responsible for the administration of all programs and activities for the Division including fisheries, wildlife, hunter education, natural heritage and endangered species, forestry, and land stewardship programs. Dr. Tisa was the lead in the development of the Division's new field headquarters building in Westborough, MA.; a 45,000 square-foot, zero-net energy, LEED Platinum Building.

He represents the agency at both the regional and national levels and is President of the Northeast Association of Fish and Wildlife Agencies. He serves on the Joint Federal/State Task Force on Federal Assistance Policy (JTF), the Trust Funds Committee, Trust Fund Collections Working Group, Vice Chair of the Leadership and Professional Development Committee, and Chair of the Awards Committee for the Association of Fish and Wildlife Agencies (AFWA). He is also a member of the Board of Directors for the Council to Advance Hunting and Shooting Sports.

He earned a B.S. in Biology from Springfield College, an M.S. in fisheries science from the University of Tennessee, a Ph.D. in Fisheries and Wildlife Sciences from Virginia Tech, and an M.B.A. from Anna Maria College.



Nancy Foley

Alumni Association Coordinator
International Conservation Chiefs Academy

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CI Participant

Nancy has over 30 years' experience in conservation law enforcement at both state & federal levels. She is the retired Chief Law Enforcement Officer from California Fish and Wildlife, after a 25 year career with them. With conservation as the focus, she has worked to enhance relationships, communication and coordination with law enforcement, non-governmental organizations and private individuals.

She has participated as a peer coach and adaptive leadership facilitator in most International Conservation Chiefs Academies (ICCA) & National Association of Conservation Law Enforcement Chiefs (NACLEC) Leadership Academies since the inception of each program & has provided instruction at the International Law Enforcement Academies in Bangkok & Gaborone.

In her role as the ICCA Alumni Coordinator, Nancy established and maintains communications through an international network of conservation law enforcement personnel where over 200 participants share information, cases and communications. She has personal relationships and knowledge of these groups from her work with the ICCA, NACLEC & ILEA. She also coordinates Alumni events for the ICCA in partnering countries to maintain the connections and contacts around the world to further combat illegal wildlife trafficking.

She is committed to conservation & conservation law enforcement. It is not only her profession but also her passion. She is the Chair of the National Association of Conservation Law Enforcement Chief's Education Foundation, the California Wildlife Officers Foundation and is on the Board of Directors for the Morro Coast Audubon Society. She lives in a small beach town with her partner in Cayucos Ca, where her hobbies of road bicycling, hiking, birding, and beach walking are easy to access.



Nephi Cole

Director of Government Relations
National Shooting Sports Foundation

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CI Participant

Nephi Cole is Director of Government Relations-State Affairs for the National Shooting Sports Foundation – the Firearm Trade Association of America. He spearheads outreach efforts with State officials, develops key relationships with conservation groups, provides accurate information and represents the NSSF's 9,000 member manufacturers, distributors, retailers and others. NSSF leads the nation in promotion, protection and preservation of hunting, conservation and the shootings sports.

Formerly, Nephi acted as Senior Policy Advisor for Wyoming Governor Matthew H. Mead for Outdoor Recreation, Natural Resources, Water, Firearms, Law Enforcement and Governors Associations. He led development of Wyoming's Energy and Water Strategies, Outdoor Recreation Task Force, the Wyoming Lottery Corporation, and numerous other key initiatives and efforts. His background come from the USDA Natural Resources Conservation Service where he led conservation efforts at national and state levels. He has master's degree in Soil Science and bachelor's in Environmental Soil and Water Science with Geology and Agronomy minors. He also worked with less advantaged communities in Brazil for two years at a non-profit and is fluent in Portuguese.



Preston Cole

Secretary
Wisconsin Department of Natural Resources

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CI Participant

Secretary Cole had been a member of the Natural Resources Board since 2007, first appointed by Governor Jim Doyle and then re-appointed for another six-year term by Governor Scott Walker in 2013. Secretary Cole served as NRB chair from 2013-14, where he put an emphasis on making board meetings open for citizens to see online.

Previously, Secretary Cole worked in a government setting as a parks superintendent for the city of St. Louis and a resource forester for the Missouri Department of Conservation. He also served as operations chief for the Milwaukee Department of Public Works and earlier the city forester. Most recently, Secretary Cole was the commissioner of the Milwaukee Department of Neighborhood Services.

Secretary Cole was a proud member of Future Farmers of America in high school. He graduated from the University of Missouri-Columbia with a Bachelor of Science degree in forest management. Secretary Cole supports traditional conservation activities and environmental protection as well as connecting nontraditional audiences with opportunities to get outdoors.

Raised on 15 acres in southwestern Michigan, Secretary Cole hunts ducks, geese and pheasants, and enjoys hiking the state park system with his wife, Laura.



Ron Regan

Executive Director
Association of Fish and Wildlife Agencies

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CI Participant

Ron Regan is now in his 12th year as the Executive Director for the Association of Fish and Wildlife Agencies. Prior to that, he spent over 25 years working for the Vermont Fish and Wildlife Department where he served as Deer Project Leader, Director of Wildlife, and Commissioner.

Ron has a strong professional interest in the historical underpinnings of our profession and the future standing of state fish and wildlife agencies in terms of authority, identity, and relevance. He has co-authored two papers regarding the North American Model of Wildlife Conservation, both of which focus on state engagement, and he has participated in a variety of reviews and panel discussions about the Model.

Ron serves on the Boards of the Hunting and Shooting Sports Conservation Council, the Recreational Boating and Fishing Foundation, the Council to Advance Hunting and the Shooting Sports, and the National Conservation Leadership Institute. Ron is a professional member of The Wildlife Society and the Boone and Crockett Club.

Ron has a B.S. in Wildlife Biology from the University of Vermont (1974) and he is a Certified Wildlife Biologist (TWS).



Sara Parker Pauley

Director
Missouri Department of Conservation

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CI Participant

Sara Parker Pauley serves as the ninth Director of the Missouri Department of Conservation since its formation in 1937. The Missouri Conservation Commission announced Pauley's selection effective November 1, 2016.

A native of Columbia, Pauley received both her law degree and bachelor's degree in journalism from the University of Missouri – Columbia and did post-graduate studies in Australia as a Rotary Fellow. She previously served as Director of the Missouri Department of Natural Resources since 2010. She has worked as project manager for D.J. Case & Associates, a natural resources communications firm, and as a deputy director for the Missouri Department of Natural Resources. She has been an instructor at the University of Missouri's School of Natural Resources, teaching a course in natural resource policy and administration. She also serves as the current President of the Association of Fish & Wildlife Agencies.

Pauley began her professional career as a Policy Analyst with the Missouri Department of Conservation from 1993-1996. Over the years, though her career path varied, it has never strayed far from her personal desire to be engaged in the stewardship of Missouri's natural resources.



Simon Roosevelt

Principal
Olympia Fund Management

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CI Participant

Simon Roosevelt is an avid hunter, outdoorsman and conservationist whose interests have involved him in a wide variety of conservation and environmental projects in North America, South America and Africa. Current US projects include the Conservation Roundtable, a forum that brings together the leaders of American hunting, environmental and land conservation organizations to discuss and act on issues of common concern. Previously, he organized the Catalyst Dinner, a conference in New York City bringing together world leaders in climate change policy and science with a group of the largest US hedge fund managers.

Simon is also at work on a book portraying the essential connection between American hunting and conservation. Intended primarily for non-hunters, the book will be a tribute to American Fair Chase hunting— its centrality to the creation of the American conservation movement and the essential role it continues to play in our system of conservation. He is also a frequent writer, commentator and speaker on topics relating to hunting, conservation and environmentalism.

Simon is a New York State Parks Commissioner (NYC Region); he is Chairman of the Congressional Sportsmen's Foundation, Chairman of the Scenic Hudson Land Trust, a member of the Boone & Crockett Club and the Camp Fire Club of America, and a member of the President's Advisory Council of the National Wildlife Federation.

Simon is a principal of Sabricas, a multi-family investment group based in the U.S. and abroad. Formerly he was general counsel for the investment firm KCM, LLC. Prior to that, he was an attorney in New York City.



Steve Williams, Ph.D

President
Wildlife Management Institute

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CI Participant

Steve Williams is the President of the Wildlife Management Institute (WMI). Established in 1911, WMI is a non-profit conservation organization dedicated to science-based, professional wildlife management. WMI's mission is to enhance North American wildlife populations, their habitat, and the continent's hunting heritage. As President of WMI, Steve serves on the Board of Directors of the Council to Advance Hunting and Shooting Sports, National Cooperators Coalition, Conservation without Conflict Coalition, and Chair of the National Conservation Leadership Institute. With a lifelong commitment to developing professional leadership, Steve was one of the original founders of NCLI.

He is also a professional member of the Boone and Crockett Club and The Wildlife Society. Steve serves on various national committees, work groups, and task forces focused on sustaining our nation's wildlife conservation and hunting heritage. Steve and Director Tony Wasley from Nevada co-chaired the Blue Ribbon Panel's Relevancy Roadmap Working group which resulted in adoption of the Roadmap by the Association of Fish and Wildlife Agencies.

Prior to joining WMI, Steve served as Director of the U. S. Fish and Wildlife Service from 2002-2005, the Kansas Governor's Cabinet Secretary of the Kansas Department of Wildlife and Parks from 1995-2002, Deputy Executive Director of the Pennsylvania Game Commission (1992-1995), and Assistant Director for Wildlife and Deer Project Leader of the Massachusetts Division of Fisheries and Wildlife (1986-1992). He received his B.S. and Ph.D. from The Pennsylvania State University and a M.S. from the University of North Dakota. He and his wife currently reside in Pennsylvania.



Tony Wasley

Director
Nevada Department of Conservation

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CI Participant

Tony Wasley has worked for the Nevada Department of Wildlife since 1997 and has been the Director since spring of 2013. Currently, Tony is creating and leading an adaptive and innovative agency through political and social change. Tony scrambles to and from legislative hearings and cabinet meetings while upholding the public's trust and trying to make conservation more relevant in the state, that has changed more in the last 15 years than any other state in the country.

Tony is a member of the Executive Committees in both the Western Association of Fish and Wildlife Agencies (WAFWA), as well as the national Association of Fish and Wildlife Agencies (AFWA) where he currently serves as Vice President. He is the Chairman of AFWA's Education Outreach and Diversity Committee, WAFWA's Sagebrush Executive Oversight Committee, and cochairs the national Relevancy Working Group. He is also presently the Vice Chairman of the North American Wetland Conservation Act (NAWCA) council, and was a proud fellow in National Conservation Leadership Institute's Cohort 9. He was the past co-chairman of the National Landscape Conservation Cooperative Council, and past chairman of the Pacific Flyway Council and the Management Board for the Intermountain West Joint Venture. Additionally, Tony serves on AFWA's National Grants Committee, and the Western Governors' Association Sage Grouse Task Force.

He started his career as a GIS specialist and biodiversity coordinator, then spent 10 years as a field biologist, ran the state's deer program for 4 years, and has served as director under both democrat and republican Governors.

Tony earned bachelor's degrees in both Wildlife Management and Biological Sciences from CSU Chico and earned a master's degree in Biological Sciences from Idaho State University where while on a National Science Foundation Research Assistantship he studied plant and animal interactions.



Cynthia Jacobson, Ph.D

Founder
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Observer/Organizer

Dr. Cynthia Jacobson is a conservation social scientist with over 25 years of experience working in conservation policy and management. Prior to starting her consulting business, Innovative Outcomes, she worked for the U.S. Fish and Wildlife Service (USFWS) and served as the Chair of the Conservation of Arctic Flora and Fauna Working Group of the Arctic Council, Senior Advisor for Arctic Conservation, and Assistant Regional Director for the Science Applications Program in the Alaska Region.

Before working for the USFWS, Cindi was an Assistant Director for the Alaska Department of Fish and Game's Division of Wildlife Conservation, where she worked for 12 years.

She received a B.A. from the University of Colorado and M.S. and Ph.D. from the Department of Natural Resources at Cornell University. The focus of her dissertation work was on conservation relevancy and transformation of state fish and wildlife agencies. She is a Senior Research Scientist at the University of Alaska Fairbanks and an affiliate faculty member at Colorado State University. She is on the Board of Directors of the Aspen Valley Land Trust and Alaska Audubon.



Elsa Haubold, Ph.D

Administrator, Science Applications
US Fish and Wildlife Services

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Observer/Organizer

Elsa Haubold is passionate about working with partners and stakeholders to find common ground and solutions to seemingly insurmountable conservation challenges. She is currently a fish and wildlife administrator in the US Fish and Wildlife Service's Science Applications Program. In 2020 she led a Service-wide team developing recommendations to create a more inclusive, welcoming work environment in the Service. Since 2017, Elsa has served as a member of the Fish and Wildlife Relevancy Roadmap Coordination Team, first ensuring its completion and now implementation.

During 2019, she detailed with Texas Parks and Wildlife and helped them create diversity and inclusion plans for each of their 12 divisions and their executive office and then with Nevada Department of Wildlife to help their executive team think about how to implement the Relevancy Roadmap. She served for six years as the national Landscape Conservation Cooperative coordinator where she coordinated a network of thousands of partners working toward establishing and implementing a common conservation vision across state and international boundaries. Prior to joining the federal government in 2013, she worked twelve years for the Florida Fish and Wildlife Conservation Commission on manatee, non-game, and endangered species challenges.

She has a BS in Wildlife and Fisheries Science and a MS in Veterinary Anatomy from Texas A&M University, a Ph.D. in Pathology from University of Texas Medical Branch, and a MBA from the University of Houston Clear Lake, is a proud Fellow of the National Conservation Leadership Institute (NCLI) Cohort 4, and is a certified Project Management Professional. She served as co-chair of the NCLI Alumni's 2.0 systems thinking training attended by nearly 80 alumni. In 2019, Elsa completed a year-long federal Senior Executive Service Candidate Development Program. Elsa enjoys spending time outdoors diving, hiking, kayaking, and fishing with the love of her life, Tony, to whom she has been married 28 years.



Jennifer Newmark

Wildlife Diversity Division Administrator
Nevada Department of Wildlife

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Observer/Organizer

Jennifer Newmark is the Wildlife Diversity Division Administrator for the Nevada Department of Wildlife. She has been with the agency for the past 5 years and prior to that was with the Nevada Natural Heritage Program. She has been a wildlife biologist for the State of Nevada for more than 20 years working with birds, mammals and reptiles.

Jennifer is a coordinating team member for the Relevancy Roadmap and continues to work on relevancy, both within Nevada and with regional and national colleagues. She graduated from the University of Nevada Reno with a BS in Conservation Biology and holds a Masters degree from Boston University. She lives in Reno, NV with her husband and two teenage boys.



Mark Humpert

Director of Conservation Initiatives
Association of Fish and Wildlife Agencies

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Observer/Organizer

Mark Humpert serves as the Conservation Initiatives Director for the Association of Fish and Wildlife Agencies in Washington DC. He supports the AFWA Science Team and State Wildlife Diversity Program Managers and leads advocacy for the State and Tribal Wildlife Grants Program.

He helped lead development of the Fish and Wildlife Relevancy Roadmap and serves on the coordinating team overseeing its execution. Prior to joining AFWA in 2008, Mark served as the Wildlife Diversity Program Manager for the Nebraska Game and Parks Commission.



Mo Sook Park, Ed.M

Founder of I-D Leadership
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Observer/Organizer

Mo Sook Park is an organization and leadership development consultant who specializes in adaptive leadership and systems thinking that integrates group dynamics and design.

Mo Sook is currently a faculty member of the Center of Leadership Development (CLD) in the Office of Personnel Management, where she trains senior executives of the federal government in adaptive leadership. Mo Sook also serves on the faculty of the Institute of Design at the Illinois Institute of Technology where she teaches adaptive leadership to equip designers to leverage their training to lead complex change efforts.

Prior to joining CLD, Mo Sook ran her own consultancy that focused on helping mission driven organizations implement complex and sustainable change efforts. Clients include Chicago Public Schools, BlueDog Design, and the Grand Victoria Foundation.

Mo Sook received her Masters in Education from the Harvard Graduate School of Education. She is certified in Case-in-Point Adaptive Leadership facilitation from the Kansas Leadership Center, and facilitator of the Immunity-to-Change approach, granted by Minds at Work, Inc. She is also a certified consultant for the study of groups and social systems with the A.K. Rice Institute for the Study of Social Systems.



Randy Stark

Executive Director
National Association of Conservation Law
Enforcement Chiefs

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Observer/Organizer

Randy grew up in Superior, Wisconsin, and currently lives in Oregon, Wisconsin with his wife Sandy of 35 years who manages a Veterinary Clinic. His son Ryan is a professional horse trainer. Randy enjoys hunting, fishing, hiking, canoe camping and learning from history.

Randy attended the University of Wisconsin-Superior between 1980-1983, where he pursued a biology degree, and between 1997-2002 he obtained a Bachelors from Concordia University in Management of Criminal Justice Agencies. He's a graduate of Northwestern University School of Police Staff and Command, the FBI National Academy (214th Session), the National Conservation Leadership Institute, Teaching Adaptive Leadership via Case in Point at the Kansas Leadership Center, the AK Rice Institute Study of Social Systems Conference, and the Harvard Kennedy School of Government Adaptive Leadership Development Program.

Randy started his career with the Wisconsin Department of Natural Resources (DNR) in 1984 as a field conservation warden. In 2002, he was appointed as Wisconsin's Chief Conservation Warden, a civil service position he held for nearly 13 years serving four administrations. In this capacity, he was responsible for the overall supervision, management and administration of the conservation and environmental law enforcement programs in the State of Wisconsin. Randy retired from Wisconsin DNR in 2014.

Currently, Randy is the Executive Director for the National Association of Conservation Law Enforcement Chiefs. In this capacity he coordinates the National Conservation Law Enforcement Leadership Academy at the National Conservation Training Center. Additionally, Randy works with the United States Fish and Wildlife Service as a Leadership Development Instructor in the International Conservation Chiefs Academy (ICCA). This is a multi-year project designed to strengthen global law enforcement relationships and transnational coordination in service of combatting wild-life trafficking.



Anthena Gore

Project Manager
Elevate Energy

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Beneficiary

Anthena is a social innovation strategist using design, systems thinking and agile management practices to produce actionable solutions for intractable problems. Anthena has worked with community-based organizations, business, governments and utilities to access timely information and tools to create tangible change and impact.

Anthena is a Project Manager on the Public Sector Team at Elevate Energy, a nonprofit that designs and implements clean energy and energy efficiency programs to ensure smarter energy use for all. In this role, Anthena manages community-scale climate and energy planning projects. The American Council for an Energy Efficient Economy mentioned her work in economically distressed communities in northern Illinois as a case study innovative approach for municipal buildings which previously did not benefit from low-income energy efficiency programs and services.

Anthena served on a select team from Elevate Energy providing consultation to the Sustainable Development Solutions Network (UN SDSN) on the Deep Decarbonization Action Plan and America's Zero Carbon Action Plan. She was also a founding advisory council member of the Environmentalists of Color Network. Most recently, Anthena has as a member of the leadership team of the Metropolitan Planning Council Planning Coalition to provide strategic thought partnership on the historic We Will Chicago Citywide Plan, and was enlisted to serve as a buildings and energy lead for the Bloomberg Philanthropies American Cities Climate Challenge.

Anthena holds a degree in communications and economics, and certificates in business management, public interest design and enterprise design thinking. She enjoys spending time with her family, traveling, and reading a good book.



Brent Bailey

Executive Director
West Virginia Land Trust

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Beneficiary/ CI Participant

Brent Bailey is Executive Director of the West Virginia Land Trust, leading the organization's efforts to conserve land and catalyze public engagement in conservation in the state.

The Land Trust focuses on projects that support community development, such as lands that protect drinking water, provide recreational opportunities, preserve historic and cultural sites, secure important habitats, or sustain working farms and forests.

Bailey started his conservation career working internationally, in Latin America and West Africa. Prior to his current role protecting land, Bailey worked in environmental education, land management, and research. He holds an undergraduate degree (Biology and French) from Kalamazoo College, a Masters (Environmental Studies) from Yale, and a Ph.D. (Forest Resources Science) from West Virginia University.



Candace Brooks

Senior Design Researcher
Agncy

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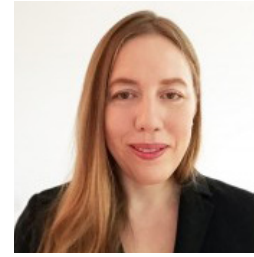
Beneficiary

Candace is a researcher who brings together the perspectives of psychology and design. She brings to her work 15 years of design experience in design research, strategy, design thinking and innovation. Her current focus is in the rigor of research, data analysis and unique ways to tell people's stories. Candace believes that art and design are powerful tools for change. As a Senior Design Researcher at Agncy, she creates and uses design tools to reduce structural inequities in communities and for industry leaders and teams in a broad range of organizations. She works with clients to find new ways of working to reach their goals and that bring a broader range of voices and experiences to the table.

She has trained and coached teachers, district leaders, university staff and college-level students in the use of design research methods as an effective tool for innovative problem solving. She has facilitated school-based teams, developed curriculum for professional development and online courses, acted as a technical assistant and has presented to teachers and school administrators the benefits of using the design process and design thinking in school-change efforts.

Throughout her career, Candace has applied her research and design capabilities to work in education, healthcare, consumer goods, and environments. She has worked with the following organizations: Boston Public Schools, Boston Medical Center, Boston Museum of Fine Arts, NewSchool Venture Fund, Nellie Mae Foundation, Crystal Bridges Museum of American Art, Brandeis University, Steelcase, Bose, Staples, CVS, Proctor and Gamble, and Kimberly-Clark.

For the past 15 years, Candace has been a Visiting Lecturer at the Massachusetts College of Art and Design in the Industrial Design department. She holds a B.A. in Psychology from Boston University, a B.F.A. in Industrial Design from the Massachusetts College of Art and Design and an MDes for Human-Centered Product Design from the Institute of Design at the Illinois Institute of Technology.



Chelsea Mauldin

Executive Director
Public Policy Lab

cmauldin@publicpolicylab.org

Beneficiary

Chelsea Mauldin is a social scientist and designer with a focus on public-sector innovation. She directs the Public Policy Lab, a New York City-based nonprofit organization that designs better public services for low-income and at-risk Americans.

Prior to co-founding the Public Policy Lab, Chelsea led a community-development organization, oversaw government partnerships at a public-space advocacy nonprofit, and consulted to municipal and federal agencies. She is a graduate of the University of California at Berkeley and the London School of Economics.



John Mulrow, Ph.D

Postdoctoral Fellow
Georgia Institute of Technology

john.mulrow@ce.gatech.edu

Beneficiary

John Mulrow is a Postdoctoral Fellow in Civil and Environmental Engineering at the Georgia Institute of Technology. His research focuses on the environmental impacts of vehicle electrification and communications infrastructure. John's focus is on material extraction, use, and circularity.

He has previously designed recycling and composting programs for companies like Google and McDonalds, led a circular economy non-profit (Plant Chicago), and served as the District of Columbia's Environmental Summer Camp Director.



John Spengler, Ph.D

Akira Yamaguchi Professor of Environmental
Health and Human Habitation
Harvard T. H. Chan School of Public Health

spengler@hsph.harvard.edu

Beneficiary

John “Jack” Spengler, co-founder and Principal of EH&E, has dedicated his career to research in the areas of personal monitoring, air pollution health effects, indoor air pollution, and a variety of sustainability issues.

Jack brings more than 30 years' experience in developing and managing large-scale, multidisciplinary studies to assess human exposures to environmental pollutants. He is well known for developing state-of-the-art sampling and analysis methods and receptor modeling techniques. Jack has worked closely with the U.S. Environmental Protection Agency and the Department of Energy on many of their human health risk studies involving airborne particulates.

Additionally, Jack is the Akira Yamaguchi Professor of Environmental Health and Human Habitation, as well as the Director of the Center for Health and the Global Environment at the Harvard T.H. Chan School of Public Health. He is also a Senior Faculty Advisor of the Sustainability and Environmental Management Program at the Harvard Extension School. Jack has been extensively published in peer-reviewed journals and articles and is considered one of the premier authorities on personal exposure to air pollutants.



Rizal Hamdallah

Chief innovation Officer
Clif Bar & Company

rhamdallah@clifbar.com

Beneficiary - Only day 1 and 3

Rizal Hamdallah is Chief Innovation Officer for Clif Bar & Company, a company creating energy food with organic and sustainable ingredients to feed and inspire adventure. Guided by the company's five bottom lines – Sustaining our People, our Business, our Brands, our Community and the Planet – Rizal leads the development of products and business models that are purpose-built and create positive change through food.

Prior to joining Clif Bar in November 2020, Rizal was Chief Growth Officer at Ocean Spray Cranberries where he led their Innovation, Research and Development, Sustainability and Corp. Affairs and Communication teams to develop a sustainable, health and wellness corporate roadmap. Rizal was also instrumental in the creation of Lighthouse, the company's innovation incubator.

In 2019, Rizal was named one of the Boston Business Journal's "40 Under 40" honorees. He is also a US patent holder for his work on dispenser technology.



Sharon Bush

Executive Director
Grant Victoria Foundation

sharon@grandvictoriafdn.org

Beneficiary

Sharon Bush has over 20 years of nonprofit and business experience. She is the executive director of Grand Victoria Foundation. She is only the second person to lead the Foundation in its 20-year history.

Sharon is a recognized leader in the field who strongly values the economic and social contributions of the nonprofit sector. Throughout her career she has worked to ensure that the sector is strong, equitable, sustainable, and highly capable of serving individuals and families throughout the Chicago region. She has launched, led, and participated in innovative collaborations that have resulted in thousands of people securing employment and millions of dollars to support the regional workforce system.

Sharon is on the board of directors of ABFE, a national philanthropic organization that advocates for responsive and transformative investments in Black communities and African and American Legacy at the Chicago Community Trust. She is an advisor to Willie's Warriors, a leadership development initiative of Chicago Foundation for Women and to Greater Good Studio, a human-centered design firm that builds the capacity of communities to solve old problems in new ways. She also is a member of the Illinois COVID-19 Steering Committee.

Sharon was an Association of Black Foundation Executives Connecting Leaders Fellow. She also is a former co-chair of Chicago African Americans in Philanthropy and the 2017 recipient of its Champion of Diversity Award. She has been a featured Op-Ed columnist in the Chronicle of Philanthropy on race and equity and Crain's Chicago Business on diversity and leadership. She is a member of the Economic Club of Chicago and The Chicago Network.

Sharon was born and raised in Chicago. She has a B.S. in Business Administration from the University of Illinois at Urbana-Champaign and a Master of Public Administration from Roosevelt University.



Amanda Geppert

Director
Ci3, University of Chicago

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Facilitator

Amanda Geppert has worked at the intersection of design and public health for more than a decade. As the founding Director of the Design Thinking Lab at the University of Chicago Center for Interdisciplinary Inquiry and Innovation in Sexual and Reproductive Health (Ci3), Amanda leads the creation of novel community and clinic-based interventions to advance the health and well-being of young people, including Hello Greenlight, an award-winning, Chicago-based sexual health service platform.

Prior to Ci3, Amanda advanced the mission of Cure Violence, a public health approach to reduce shooting and killing among highest risk youth. As the first Director of U.S. Programs, she initiated and led model replication for Cure Violence in 16 U.S. cities including Baltimore, New Orleans and New York City. Amanda is a PhD candidate in Design (expected 2021) at the IIT Institute of Design where her research focuses on the development and evaluation of participatory design processes concerned with democratizing innovation.

She holds a Master of Design Methods from the IIT Institute of Design; a Master of Public Health from the University of Illinois at Chicago; and, a Bachelor of Arts in English Language and Literature from the University of Chicago. She was named a PopTech Social Innovation Fellow in 2010, and a Kathryn Wasserman Davis Fellow for Peace in 2012. Amanda has taught undergraduate, graduate, and executive education courses on design, and coached innovation teams in Brazil, India, and the United States.



Bill Hartman

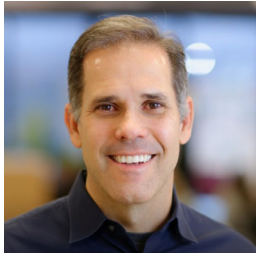
Co-Founder, Partner
Essential Design

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Facilitator

Bill Hartman has practiced human-centered design for 25 years working with startups, non-profits, and large enterprises. At Essential Design in Boston, a part of PA Consulting, Bill works with Consumer and Professional client companies, however, evidence-based design for healthcare innovation has been his longstanding passion. He has consulted to teams in chronic and rare disease, diagnostics, therapeutics, clinical operations, digital health, and wellbeing to help create systems, services, and products which are respectful of their users.

As a social science and behavioral economics enthusiast, Bill finds inspiration from adjacent disciplines and methods leading to meaningful design outputs. He is a graduate of Davidson College and the Institute of Design/Illinois Institute of Technology.



Carlos Teixeira, Ph.D

Charles L. Owen Professor in Design
IIT-Institute of Design

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Facilitator

Carlos Teixeira is the Charles L. Owen Professor in Design at IIT Institute of Design (ID), where he teaches graduate courses and advises doctoral students on the strategic use of design capabilities in complex spaces of innovation. He is also faculty director of the Action Lab.

He is the founder of ORGE Innovation Consulting, which advises global leaders in organizations on how to build the know-how to innovate through design capabilities and strategies. Carlos received a doctorate in design from ID in 2002. Previous to his PhD, he received a master's and bachelor's degree in design from Pontifícia Universidade Católica in Rio de Janeiro, Brazil.

Before joining ID in 2016, Carlos served as a faculty member at Parsons School of Design in New York (2003–09), where he was instrumental in developing undergraduate and graduate programs in strategic design and transdisciplinary design. In 2014 he received the Distinguished Teaching Award by The New School for his innovative pedagogy in graduate design studios and projects.



Christopher Rudd

Instructor & Lead of Community-led Design
Action Lab, IIT-Institute of Design

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Facilitator

Chris Rudd is an Instructor and Lead of Community-led Design for the Chicago Design Lab at the Illinois Institute of Technology-Institute of Design (ID) where his work focuses on co-designing with community stakeholders. Chris is a former Stanford Institute of Design (d.school) Civic Innovation fellow where he focused on the intersection of youth development, design, and technology.

In addition to his role at ID, Chris is a community organizer, and founder of ChiByDesign, a black-owned and people of color led design firm in Chicago. Chris has a deep background in social equity work, systems change, and youth development. He's worked with youth on the south and west sides of Chicago, challenging them to engage with their communities through activism and technology.



John Pipino

Innovation Leader and Strategist
Doblin/ Deloitte

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Facilitator

For most of his adult life, Pip has worked at Doblin, the design-led innovation consultancy founded by Jay Doblin and Larry Keeley. He has worn so many hats he has lost his hair. He has deep experience in a wide range of industries across heavy equipment, manufacturing, B2B, consumer goods, and financial services, always with an emphasis on customer insight and great user experiences.

His early work in innovation diagnostic tools helped to lead to the formal Innovation Diagnostic process, helping enterprises to assess how well their readiness matches with their ambitions. Pip is a co-developer of Doblin's innovation coaching service and a highly experienced innovation coach. He routinely works as a facilitator in high ambition workshops and coaching initiatives.

Trained academically as an historian, he holds a deep-rooted belief in the value of liberal arts in the worlds of business and technology. He is a graduate of Frostburg State University in Maryland. In the distant past, Pip's career began as communications director for a Silicon Valley startup.

Pip has been an organizer of and participant in 39 back country backpacking trips. In a good year, he gets to spend ten nights sleeping on the snow high in the mountains. He has been making beer, mead, and cider since well before the microbrew revolution.



Kevin Denney

Professor of Practice and Design Strategy
Hong Kong Polytechnic

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Facilitator - Only Day 1

Kevin Denney is a Design Strategist. Kevin hails from Chicago where he did his graduate studies at the IIT, Institute of Design. Kevin's focus is on designing cities for health and prosperity.

In his work in industry and academia, Kevin emphasizes the importance of developing models and frameworks that enhance collaboration across domains.



Ric Edinberg

US President
The Evolved Group

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Facilitator - Only day 2 and 3

Ric currently leads as the US President for the Evolved Group, a next generation insights technology platform which uses conversational artificial intelligence to scale insights in real time. Ric is also currently a Bloomberg Harvard City Leadership Initiative City Coach, helping bring cutting edge innovation techniques to systemically engage city teams to engage their residents, develop concepts and prototypes that make lasting impact.

As a managing partner, Ric started and grew the Chicago Office for Insitum, an international strategic innovation firm with 7 offices in the US, LATAM and Europe before helping Insitum get acquired in 2019 by Accenture. He later helped with the organizational integration with their design consultancy Fjord, acting as the North American Design Research Director.

Ric applies research methods to develop new products, services and strategies for many applications and industries. Recent projects have included communication strategies, devices, services, systems, and new business strategies in the many sectors. He has also helped organizations design, develop and set up internal innovation practices. He has shared his knowledge by teaching design related courses within various universities over the years.

He holds a master's degree from the Institute of Design in Human Centered Product Design and a bachelor's degree in sculpture from the Art Institute of Chicago.



Ruth Schmidt

Associate Professor
IIT- Institute of Design

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Facilitator

Ruth Schmidt is an associate professor at the Institute of Design (ID) at Chicago's Illinois Institute of Technology whose work sits at the intersection of behavioral economics and humanity-centered design, combining strategic design methodologies, an understanding of latent human needs, and behavioral insights to inform solutions concerning human judgment, decision-making, and behavior. Her work focuses primarily on blurring the line between these disciplines, integrating behavioral insights into design methodologies and design thinking into behavioral problem-solving in the form of effective and ethical solutions to applied challenges as well as new tools, frameworks, and conceptual models. She has applied this expertise to a range of industries, most significantly health care, financial services, and education.

Prior to joining ID full time in 2017, Ruth was a senior leader at the innovation consultancy Doblin | Deloitte, where she developed strategic and behavioral design approaches to inform innovation solutions and help clients embed innovation processes more effectively within their organizations. She has a Masters in Design Strategy from the Institute of Design at the Illinois Institute of Technology and a BA in Art-Semiotics from Brown University.



Aaron Cook

Senior Product Designer
Syapse

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Sketcher

Aaron is a human accelerator: an innovation leader, educator and social scientist who loves to connect with and develop people. As a thinking partner, he listens with curiosity, compassion, and intention to illuminate pathways and discover new frameworks for understanding.

Currently, he leads design research and strategy at Syapse, a real-world evidence company that partners with health systems, life sciences companies, and regulators to drive better outcomes for people with cancer around the world. As Assistant Academic Director, Aaron launched the Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship at IIT, developing strategies, spaces, programs, and learning tools to grow and support creative interdisciplinary collaboration with campus and community partners.

He has also advised leaders and facilitated workshops for MAYA Design (BCG Platinion), Gold Peak Industries (Hong Kong), Advocate Aurora Children's Hospital, Steelcase, and the University of Chicago Design Lab. Prior to design, he proudly served the Chicago Public Schools as a Chicago Teaching Fellow.

Aaron completed the M.Des. + Foundation program at the Institute of Design at IIT and holds a M.A.T. in Foreign Languages (Spanish), and a B.A. in Psychology. He lives in Berkeley, CA.



Azra Süngü

Ph.D. Candidate
IIT- Institute of Design

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Sketcher

Azra Sungu is a designer, researcher and social entrepreneur currently continuing her PhD research at the IIT Institute of Design.

As a strong advocate of communities' power to bring change, Azra's work focuses on leveraging collective intelligence to transform systems and unlocking more livable futures.

She channels her background in industrial design and her experience as a social entrepreneur to create new ways for navigating pathways to change and embracing plural future visions for cohabiting the Earth.



Catherine Wieczorek

Teaching and Research Assistant
Harvard T.H. Chan School of Public Health

cwieczorek@id.iit.edu

Sketcher

Catherine Wieczorek is currently a Research and Teaching Assistant at the Design Laboratory at Harvard T. H. Chan School of Public Health (D-Lab) and a Master of Design student at the IIT Institute of Design.

Prior to joining the D-Lab, Catherine worked as a design researcher at Flip Labs where she developed community facing prototypes aimed to engage residents in individual water conservation efforts and invite them to participate in city-level decision making in a water insecure community.

As a core member of the Design Thinking Lab at the Center for Interdisciplinary Inquiry and Innovation in Sexual and Reproductive Health (Ci3) at the University of Chicago, she co-developed the brand, products, and services for the award-winning, youth-centered, sexual health service platform, Hello Greenlight.

Catherine holds a BA in Visual Communication from Loyola University Chicago. She served as a board member for AIGA Chicago where she co-developed a workshop series that taught design frameworks and methodologies to graphic designers and non-profit professionals.



Harsh Wardhan

Design Strategies
Ford Motors

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Sketcher

Harsh has collaborated with organizations across different sectors like automotive, health-care, hospitality, fin-tech, and architecture, bringing his Design Thinking expertise to the table.

He has earned his Masters of Design degree from IIT Institute of Design, Chicago. As a part of the Product Design team at D-ford, Harsh is currently helping the Ford Motor Company build strategies for future products and services.



Prapti Jha

Innovation Catalyst
Ford Motor Company

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Sketcher

Prapti Jha is a design strategist and researcher, helping Ford Motor Company weave the capability of human-centered design in the organization. Her curiosity in designing human experiences has taken her on an exciting adventure across art, architecture, user research, strategy, and open innovation.

She believes that the heart of it all is the focus on people - our behavior, motivations, and all the little quirks that make us human.



Sameer Tendolkar

Design Researcher and Visiting Faculty
NMIMS

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Sketcher

Sameer is a User Experience Designer and Visualizer. He has a Masters degree in Design Methods from the Institute of Design at Illinois Institute of Technology.

He currently works as Head of Design at a Voice Tech startup Navana Tech in India and teaches at NMIMS School of Design as a visiting faculty.



Patrick Whitney

Professor in Residence
Harvard T.H. Chan School of Public Health

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Organizer

Mr. Whitney is the former dean of the Institute of Design (ID), Illinois Institute of Technology (IIT), where he was the Steelcase/Robert C. Pew Professor of Design and an IIT distinguished professor. During his leadership of ID, the school created the first PhD program in design in the USA, transformed ID into a leading institution in design methods and theory, and created an executive education program translating design to organizational leadership.

Mr. Whitney is widely regarded as a thought leader for pioneering the notions of human-centered design and strategic design. He conducts executive seminars and advises many organizations including Aetna, BP, Godrej & Boyce (Mumbai), Proctor & Gamble, SC Johnson, Texas Instruments, and government agencies in Denmark, Hong Kong, India, and the UK. Business Week has featured him as a design visionary for bringing together design and business; Forbes named him as one of six members of the 'E-Gang' for his work in human centered design; Fast Company has identified him as a 'master of design' for his leadership in the design field of linking the creation of value for users and economic value for companies; and Global Entrepreneur Magazine named him one of 25 people worldwide doing the most to bring new ideas to business in China.

Mr. Whitney earned his bachelor of fine arts in visual communication design at the University of Alberta, followed by a master of fine arts in design at the Cranbrook Academy of Art. Mr. Whitney was appointed associate professor and chair of the Division of Design at Minneapolis College of Art and Design in 1979. Five years later, he was appointed associate professor and head of communication design at the ID. In 1987, he was appointed professor and director, and then dean of the institute.



André Nogueira, Ph.D

Associate Researcher & Instructor
Harvard T.H. Chan School of Public Health

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Organizer

André investigates how design frameworks and methods can help create infrastructural interventions to support the well-being of people, organizations, and the ecosystems within which they live in.

His work has been funded by The Kresge Foundation, The Chicago Community Trust, Chicago Food Policy Action Council, USAID, among others. He currently leads investigations on complex challenges related to life after pandemics, eradicating tuberculosis, urban food systems, infrastructures for local circular economies, and organizational models and leadership for environmental conservation.

André also advises senior executives in corporations and leaders of NGOs and in the public sector interested in building design capacity within their organizations. Before going to Harvard, André completed his Ph.D. in Design at the IIT-Institute of Design, where he helped create the Action Design Lab and led projects that influenced food policy change.

He holds an M.S. in Contemporary Urban Planning and a dual major bachelor's in Architecture and Urban Design from Universidade Presbiteriana Mackenzie, São Paulo, and a Masters in Geography, Cities, and Architecture, from Escola da Cidade, São Paulo.

APPENDIX 1: TEAMS COMPOSITION

ROLES	TEAM 01	TEAM 02	TEAM 03
<i>Facilitators</i>	John Pipino	Bill Hartman	Amanda Geppert
<i>Participants</i>	Carlos Teixeira (Day 2 and 3)	Anthena Gore	Brent Bailey
	Sara Parker Pauley	John Mulrow	Howard Vincent
	Sharon Bush	Mark Tisa	Mamie Parker
	Simon Roosevelt	Nancy Foley	Steve Williams
		Preston Cole	
<i>Sketchers</i>	Sameer Tendolkar	Harsh Wardhan	Aaron Cook
<i>Observers</i>	Elsa Haubold	Jen Newmark	Mo Sook Park
ROLES	TEAM 04	TEAM 05	TEAM 06
<i>Facilitators</i>	Christopher Rudd	Kevin Denney (Day 1) Ric Edinberg (Day 2 and 3)	Ruth Schmidt
<i>Participants</i>	Chelsea Mauldin	Brian Yablonski	Angelou Ezeilo (Day 1 and 2)
	Collin O'Mara (Day 1)	Candace Brooks	John Spengler
	Dan Decker	Deborah Rocque	Nephi Cole
	Lise Aangeenbrug	Tony Wasley	Rizal Hamdallah (Day 1)
			Ron Regan
<i>Sketchers</i>	Prapti Jha	Azra Sungu	Catherine Wieczorek
<i>Observers</i>	Mark Humpert	Randy Stark	Cynthia Jacobson/ Heather Dugan

APPENDIX 2: WORKING IDEAS

See appendix 1 for group compositions

[Link to Miro Board](#)

Day 01

Prompt: Green Alliance Scenario (see appendix 3)

Group 01

Urban-Nature Continuum

Bridging sectorial and geographic siloes to make nature relevant for all.

Group 02

Urban-Rural Connection

Facilitating educational experiences between rural and urban dwellers who want to indulge in nature and expand their knowledge about different lifestyles.

Group 03

On Ramps

Offering intergenerational and multicultural access and stewardship opportunities to diverse youth groups to explore the outdoor world.

Group 04

Natural Step

Scaling up urban gardens and parks to provide sustained engagement with “nature” to form a “delightful and safe” sense of place close to where families are.

Group 05

OS Planet Earth

Enhancing familiarity and continued engagement with nature for kids and families by translating scientific data into storytelling through new channels.

Group 06

Meeting People, Now

Offering diverse trusted mentors to guide people who think they do not belong into the outdoors.

Day 02

Prompt: A billion-dollar bet: RAWA Scenario and Questions (see appendix 4)

Environmental Services

An open channel providing a voice to the environment through information systems that collect, share, and monitor ecosystems conditions to the public and organizations.

Two-Way Street for Covid Relief

Reducing barriers and roadblocks through funding and libraries of outdoor equipment to people that protect and conserve the natural environment to expand America’s outdoor capacity during crisis.

Agency X

For latinx who want to take control of their health but have language and financial barriers and representation in conservation activities, we offer various activities and programs that meet people where they are at.

Natural Nations

A self-governing coalition providing funds, learning opportunities, and objective evaluations to facilitate engagement of youth of all races, sexual orientations, and physical abilities with the natural world.

Nature Continuum

Creating experiences that add to health and well-being through nature for “non-stakeholders” or individuals who do not see themselves as beneficiaries and contributors to conservation efforts.

Learning for De-siloing: Why not?

Placing conservation in urban environments, using health as a common ground to build relationships with residents through learning and giving opportunities for them to establish an aspirational relationship with nature.

Day 03

The Eco Service

A platform for collecting data and providing tailored, actionable insights about and indicators of ecosystem health to help residents, communities, and businesses make better daily choices to improve their quality of life.

Learning Together

Enabling the formation of affinity groups through structured environments, cross-promotion & marketing that responds to how people value and could value nature.

Health through Nature

Working with CBOs to provide nature-based activities for latinx millennials and multi-generational families, helping them understand the health benefits of nature.

Natural Nations

Unlike program delivering organizations, we are a bridge organization focused on connecting federal resources to community-based organizations taking action on the ground.

N-ARPA

Healing the human-nature relationship by rebuilding respect and desire to protect, decentralizing decisions, and adapting to emerging needs of users with different values, including health and culture.

Nature Incubator

A gateway to nature located in urban spaces to welcome judgment-free, inclusive, and safe learning experiences that increase nature access.

EcoService

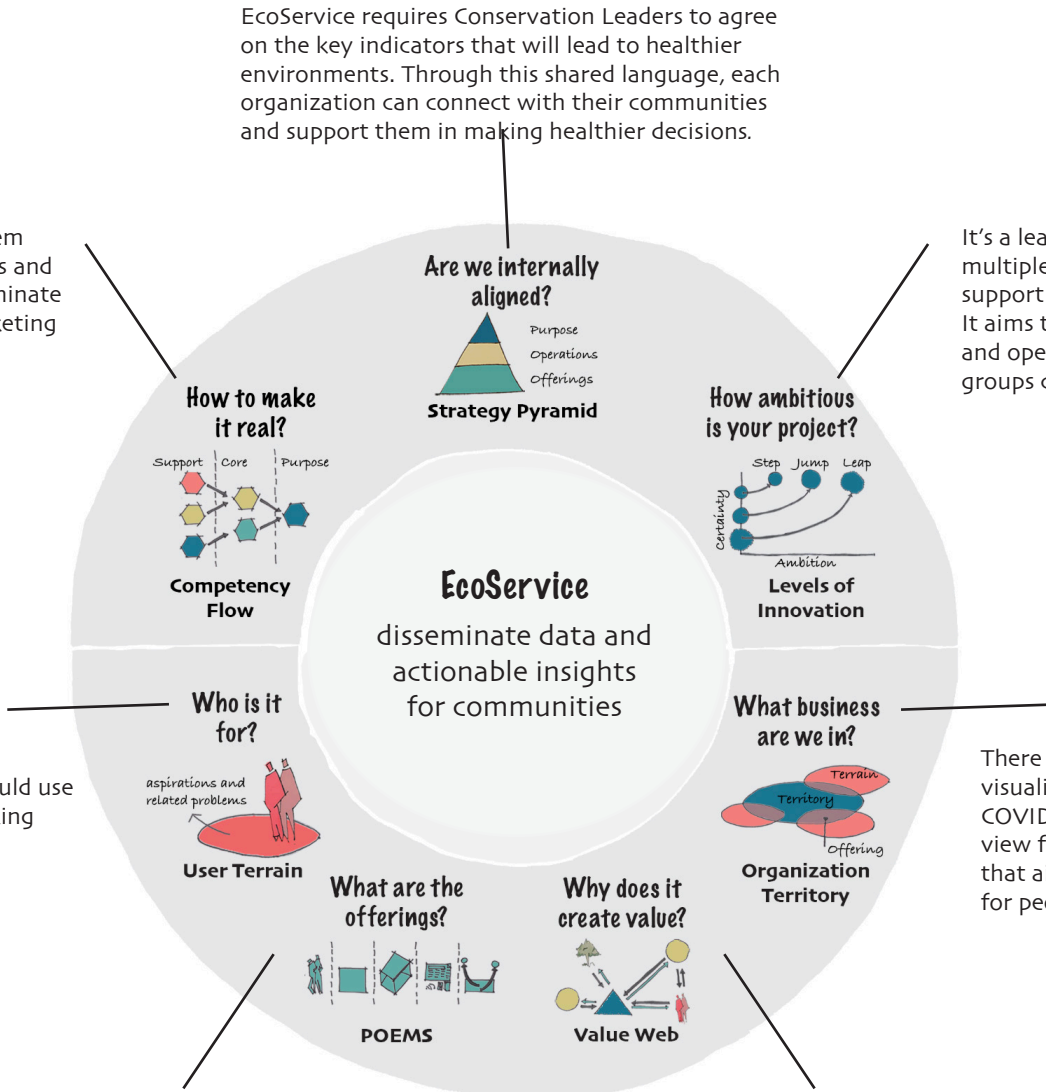
EcoService requires Conservation Leaders to agree on the key indicators that will lead to healthier environments. Through this shared language, each organization can connect with their communities and support them in making healthier decisions.

EcoService must create a system for data collection and analysis and develop partnerships to disseminate the information through marketing campaigns.

It's a leap project because it brings multiple data sources together to support numerous organizations. It aims to share resources quickly and openly so that individuals and groups can make informed decisions.

Residents, communities, and governmental services that could use data to facilitate decision-making processes.

There are various sources for data and data visualizations that can be found Online like COVID-19 maps. EcoServe provides a point of view for the data through actionable insights that aim to improve the quality of life both for people and the environment.



The platform makes data accessible with indicators for ecohealth, easy to understand information design, and actionable insights for people to make changes in their homes, businesses, and governments. A marketing strategy shares these insights to bring knowledge to a variety of stakeholders.

Through identifying key indicators, communities can identify solutions to change behavior that is currently harmful to people and environment. EcoServe also provides the opportunity for residents of all kinds to benefit from the data and participate in change in their communities.

Learning Together

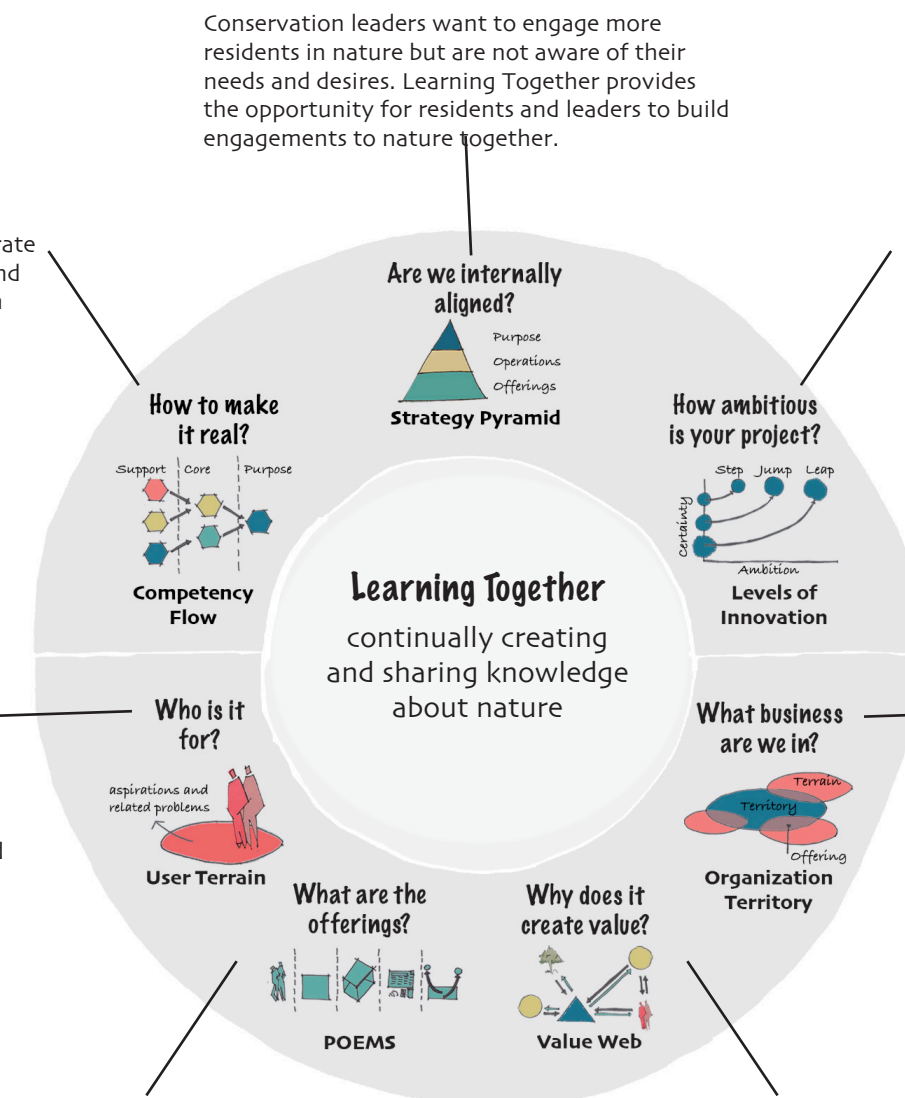
Conservation leaders want to engage more residents in nature but are not aware of their needs and desires. Learning Together provides the opportunity for residents and leaders to build engagements to nature together.

Conservation leaders must cooperate with each other to find funding and build private partnerships to learn about their constituents.

It's a leap project because it focuses on community engagement that is supporting the needs and aspirations of individuals already rather than a large-scale, universal approach to attempt to change people's behavior.

Conservation institutions that want to not only connect new constituents to nature but to also learn more about user's needs and aspirations.

Most of the research efforts in the conservation space are aimed at scientific approaches to understand how to protect nature. Learning Together provides an opportunity to understand how to connect more people to the natural world and participate in its conservation based on their daily life and needs.



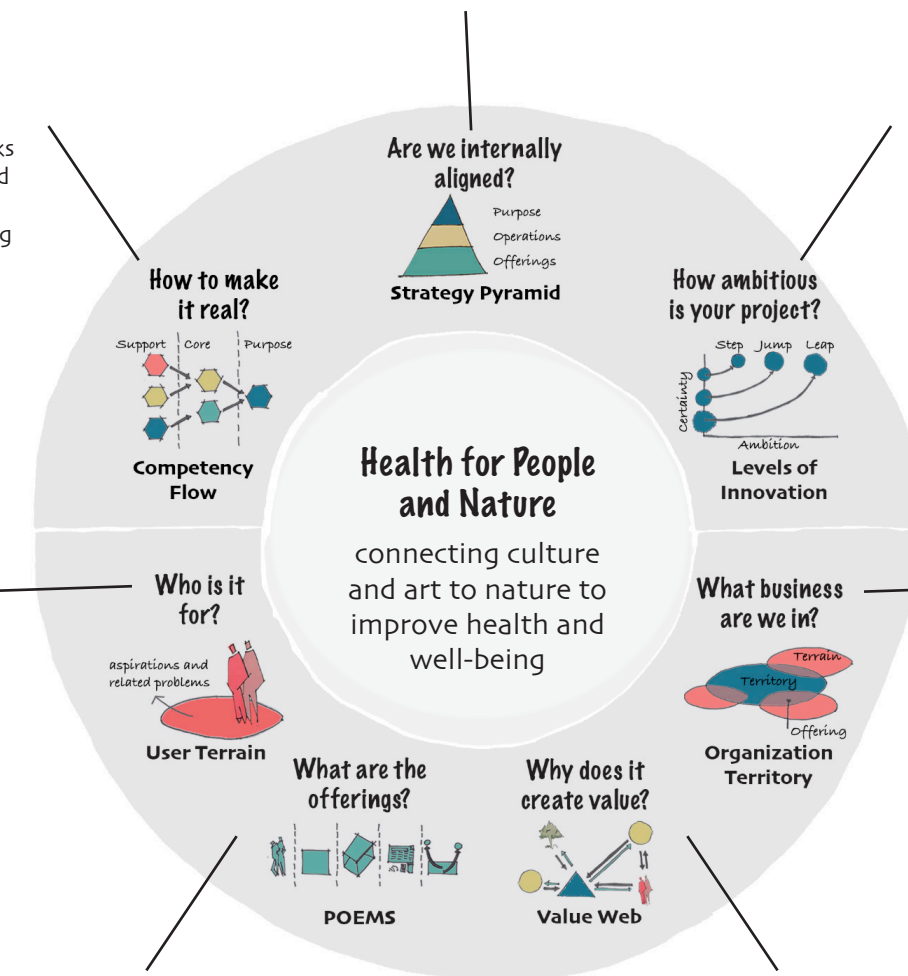
Learning Together is a platform that provides continual input, sense making and drive about the needs and aspirations for users at a regional level. Insights are shared back to the community through marketing campaigns and data sharing platforms.

Currently, there is a disconnect between urban users and conservation leaders. Learning Together provides information about how to engage people on their path to learn about and experience nature so that conservation leaders can develop implement strategies on a regional level.

Health for People and Nature

Conservation leaders will need to develop partnerships and networks with different communities to find artists, activists, and community leaders interested in co-developing programs that improve the well-being of their community.

LatinX millennials and multi-generational families that engage in cultural activities in their community.



This approach requires conservation leaders to work in a cultural space that is likely outside their day to day activities.

It's a leap project because it shifts paradigms on how to engage with nature by inserting cultural experiences in nature as an integral part of health and wellness.

There are organizational efforts to engage people in the outdoors. Health for People and Nature takes an alternative approach to celebrate the cultural aspects of daily life to build a community around health and nature.

Develop nature based activities and share health self-advocacy and knowledge through partnering with community-based arts, foods, and cultural entities.

Urban communities engage with various activities that celebrate aspects of the human experience like music festivals. Health for People and Nature celebrates the community built around these events to engage with nature through hands on experiences that promote healthy living for both people and then environment.

Natural Nations

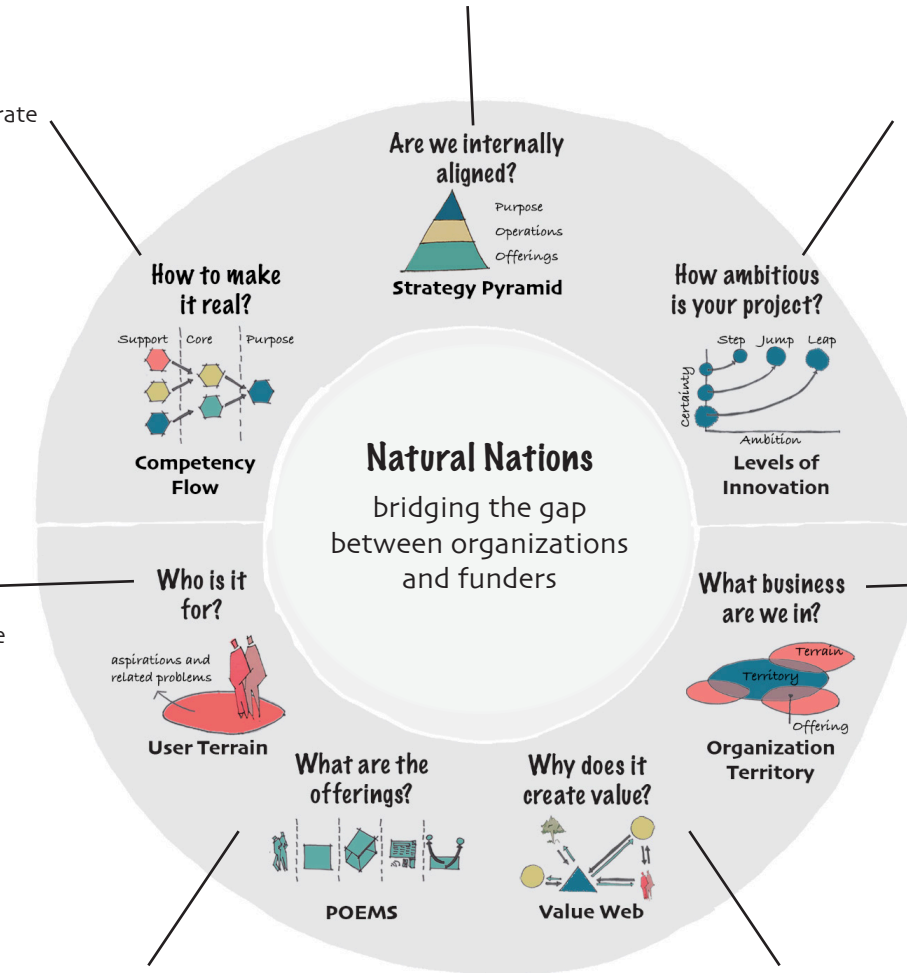
Conservation leaders will need to challenge their thinking about how to form equitable networks to serve a variety of stakeholders.

Conservation leaders must cooperate with each other to find funding and build private partnerships to construct the experiences of the incubator.

It's a leap project because it is leveraging insider knowledge like grant writing and personal network to connect outside networks to funding.

Organizations that want to create more equitable opportunities for community-based organizations to receive funding.

Rather than being a funding source itself, Natural Nations aims to connect organizations to funding sources. While there are many organizations leverage their network to connect people to nature, Natural Nation's approach is a self-governing coalition aimed at equitable sharing rather than serving an individual institution.



Natural Nations is a self-governing coalition that serves as a bridge between funders and organizations that provides learning opportunities, connections, and objective evaluations for a variety of residents.

Currently, funding streams are allocated to well-known organizations that are outside of urban areas. Natural Nations expands their network to advocate for a wider variety of communities to be served.

N-ARPA

The insights developed by N-ARPA can facilitate new job and program development to heal the human to nature relationship.

N-ARPA needs to establish a network within the government as well as partners outside to fund the operation, build a network, and conduct field work.

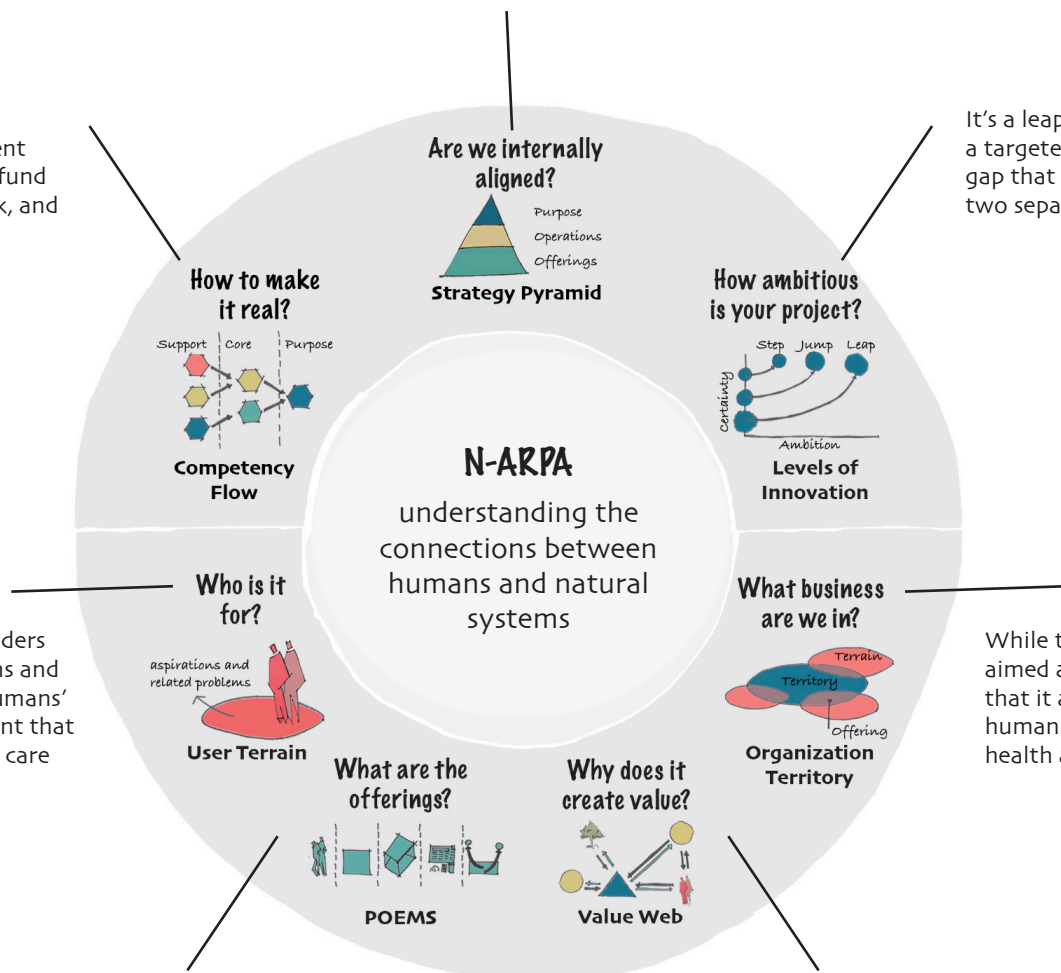
It's a leap project because it involves a targeted approach to a knowledge gap that is typically considered as two separate research areas.

Conservation organization leaders that want to develop programs and interventions that improve humans' relationship to the environment that ultimately lead to respect and care for the environment.

While there are many research institutions aimed at conservation, N-ARPA is unique in that it aims to understand the gap between humans and nature that currently impedes health and well-being.

N-ARPA is a de-centralized research and development agency that seeks disruptive ways to understand and health the relationship between the Human+Natural systems. Through research initiatives and iterative prototyping, N-ARPA can provide critical insights to improve connections between human and nature. This knowledge can be used by conservation leaders to develop programming and services that rebuild those connections.

The focus on connections includes modifying values beyond moentary focuses to include values from typically excluded voices like Native Americans. As a result, the research will be guided by a wide variety of cultures and considerations to reveal and construct connections to nature.



Innovation Incubator for Nature

Conservation leaders want to engage more residents in nature but are not aware of their needs and desires. The incubator provides the opportunity for residents and leaders to build engagements to nature together.

Conservation leaders must take a cooperative approach to find funding and build private partnerships to construct the experiences of the incubator.

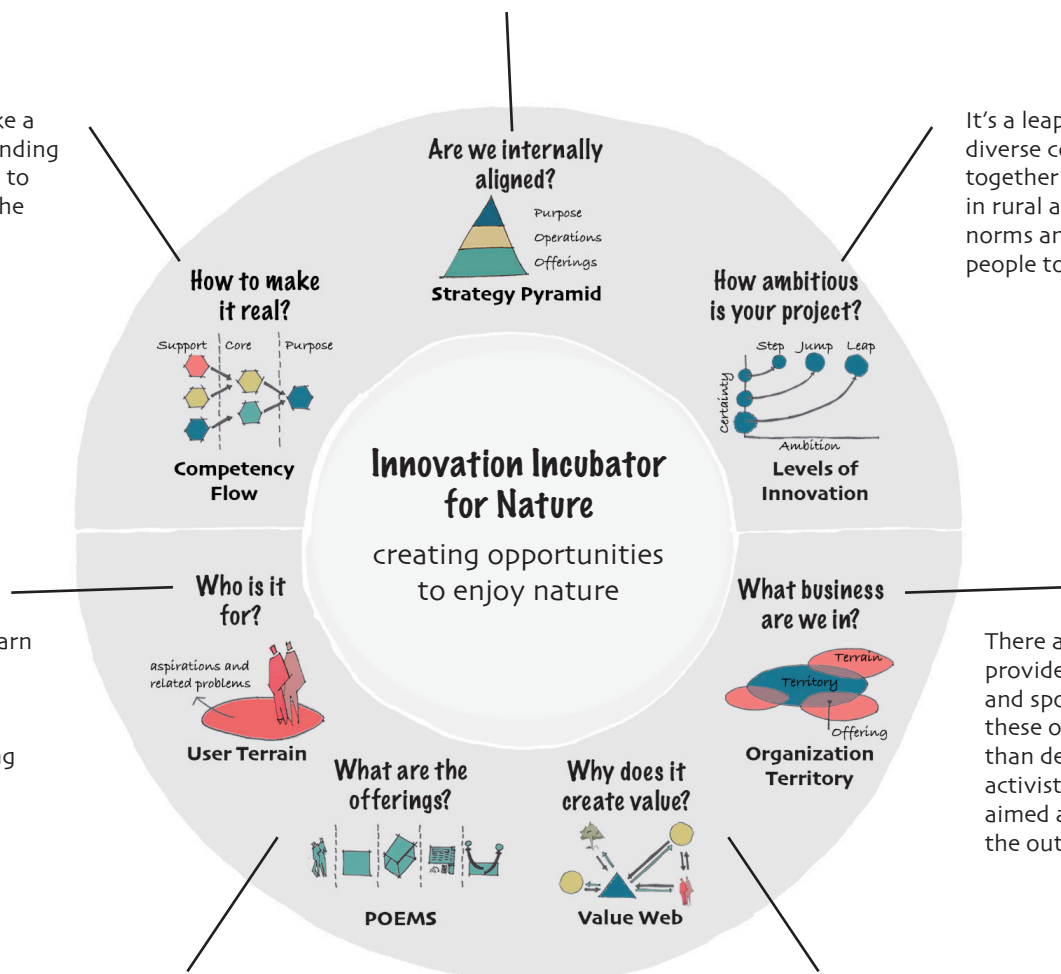
It's a leap project because it brings diverse conservation leaders together in urban spaces rather than in rural areas. It challenges internal norms and ways of connecting people to nature.

Organizations that want to learn about urban residents that do not currently have a network or resources to experience outdoor adventures or learning opportunities.

There are several outdoor companies that provide opportunities to experience nature and sports within urban stores. However, these organizations work individually rather than developing a network of community activists, outdoors mentors, and educators aimed at creating more equitable access to the outdoors.

The physical location provides the opportunity for residents to informally learn about equipment, nearby opportunities to access to nature, and the possibility to try out activities on the spot like rock climbing. Longer engagement opportunities like courses, community groups, and equipment rentals bring residents outside of the incubator to experience nature. As a result, conservation leaders can learn what their users are interested in and where there are opportunities to engage with them.

The Innovation Incubator creates a network for different conservation institutions to join together to provide a cohesive hub for their offerings rather than operating in silos that are typically inaccessible for urban residents. The Innovation Incubator for Nature makes a physical entry point for residents to enjoy nature in a multitude of ways and for conservation leaders to connect with new users.



APPENDIX 3: GREEN ALLIANCE

This morning the new Secretary of the Interior and the leaders of National Park Service, Natural History Museums, IBM, Teach for America, and the Explorers Club announced the Green Alliance, a new network of change-makers dedicated to connecting the nation's youth to nature.

The Secretary called for action: "As urban and suburban environments expand, it becomes difficult for a kid to find a forest. Time spent watching hand-held screens leaves no time for watching a hawk diving for its prey." The Secretary continued: "For too long, so-called "empty land" has been valued by the commodities that could be extracted and the trash that could be deposited."

The Green Alliance will serve kids from 6 to 16 years of age and their families. It will be a platform with a constellation of services that work with individuals and other organizations. Its programs will vary in scale and ambition. Some are focused on long-term change and require more significant investments. For example, Victory Parks will bring nature into the city. Like the Victory Gardens that citizens created to help win WWII, Victory Parks will form a national grid of urban areas to help win the climate war by restoring and regenerating contaminated land in abandoned industrial areas.

Other programs that can be quickly prototyped. Examples are "Wild Legends" which supports members of the Explorers Club plan to host web events to tell kids about their adventures and support mentorship programs.

Some programs will have a specific agenda. For example, "Wild Tours" would help kids growing up in inner-city marginalized areas attend night tours to the countryside, where, away from the high-rise buildings and bright streetlights, they would be able to see a sunset and a sky full of stars for the first time.

The Secretary followed by saying there would also be bolder "leap change" experiences. For example, "Adopt a Herd" is a program conducted by Teach for America and IBM to take kids into various ecosystems to see migratory animals. Once back in their classroom, they would monitor their migration with sensors and satellites. The same database can be used by scientists in the National Park Service and Natural History Museums.

An information platform called "My Journey" would integrate a learning software for programs like "Adopt a Herd" with personal web diaries for friends and family to make and share stories about activities and plans. The same platform will help them buy products to support the Alliance's programs, including all entree permits to parks and licenses for outdoor activities.

The Secretary recognized some organizations in the Conservation Institution had been developing innovative programs for decades but seldom scaled and never met their potential. The difference now is this will be a national effort, with a network of companies, foundations, individuals working together to help catch up to people's current views and desires for experiences in the outdoors. The Secretary described this as a new initiative that responds to a 21st-century America, where people view their relationship with nature as mutually beneficial, rather than utilitarian, which considers wildlife and raw materials as resources for people to use and consume.

APPENDIX 4: A BILLION-DOLLAR BET

After decades of advocacy, Congress just passed and the President signed the Recovering America's Wellness Act, also known as "RAWA". This Act will provide \$1.3 billion annually in dedicated and sustained funding to organizations that collaborate with communities to co-create programs that:

use nature to bring people from all walks of life together to celebrate and improve understanding and appreciation of diversity;

promote mental and physical health and well-being through experiences in nature; and

engage low-wealth and marginalized populations into design solutions that benefit those communities and contribute to sustaining the nation's biodiversity and ecosystem health.

Eligible entities include federal, state, local governments, private organizations and businesses. Any organization receiving funding would be required to enter into a 50-year renewable cooperative agreement.

Participants were presented with two strategies:

Healing Organization

creating experiences that help healing in three topics

Social: How might we support diverse users in achieving their aspirations?

Health: How might we support people creating experiences that add to their health and well-being?

Ecosystem Sustainability: How might we accelerate nature's ability to regenerate itself?

Learning Organization

learning about people and their aspirations related to nature

Anticipating: How might we quickly learn about diverse user groups?

Prototyping Futures: How might we create platforms for continuous learning about people's interests and aspirations?

Brokering Knowledge: How might we facilitate learning among diverse groups?

APPENDIX 5: OBSERVER/ORGANIZER EXPERIENCE

The organizers of Design Sprint from the CI (Mark Humpert, Elsa Haubold, Randy Stark, Jen Newmark, Jason Summers, Mo Sook Park, Cynthia Jacobson) used the Adaptive Leadership diagnostic cycle to help make sense of the experience from their perspective.

The organizers tried to “stay on the balcony” during the sprint in order to make diagnostic observations that might help inform the next intervention to make progress. Below are observations, interpretations and a potential next intervention based on the experience in the Design Sprint.

Observations

Actual quotes from participants or events happened

- “I’m a scientist, it’s hard to not look backwards going forward.”
- “We don’t know what we don’t know and we don’t know who to ask to find out what we don’t know.”
- “We are not stuck in traffic, we are traffic.”
- “We’ve been talking about this for 15 years, this is nothing new.”
- “We are biased and don’t test our assumptions.”
- “Many of the challenges facing residents and communities are not as obvious to us (CI).”
- The majority of the people who attended the design Sprint from the Conservation Institution were 40 plus years of age, and white.
- The organizers (from within the CI) observed they themselves had a difficult time identifying a diverse audience to invite to the Design Sprint.
- Participants stated the CI has a paternalistic orientation, a “we know all the answers, follow our lead” mentality.
- Participants said we need to “talk less and listen more”.
- The CI does not articulate from the larger frame that sustaining nature is about sustaining humanity.

Multiple Interpretations

Attempting to make meaning from what happened as it relates to the adaptive challenge the conservation institution faces.

- Talking about for this for 15 years has not been effective in creating the type of change required.
- Factions within the CI are reluctant to put competitive instincts aside or work beyond the formal authorities established in law or policy which kills or prevents collaboration and innovation.
- CI assumptions about why or how people do or do not engage with or value nature are often wrong.
- There is not a consensus on the problem(s) to be solved. Different members of the CI hold different versions of the problem.
- The Conservation Institution is operating from a model created in a context that existed more than 100 years ago. The CI is rapidly falling behind as its not keeping pace with societal changes, the context in which it gained its experience no longer exists.
- If sustaining nature is about sustaining humanity then the CI must engage the social, political, and economic systems that make decisions impacting nature.
- Factions within the CI view nature differently. Some view nature as something we should leave alone while others view it as a resource that we use or manipulate. These different mental models prevent the CI from designing innovative ways to sustain nature.
- The CI doesn’t seem to see its part in sustaining barriers to inclusion or the vast opportunity available to it to make progress in overcoming conservation challenges and promote social equality.
- Conservation is framed as a user based transactional endeavor (pay to play) rather than being viewed more universally as everyone being a constituent.

- The CI lacks the social science capacity needed to balance the natural science orientation of the institution.

- Lack of knowledge about the problem is not the barrier to action. Most people within the institution recognize there is a problem (been talking about it for 15 years). However, people’s thinking is stuck in historical mental models and relationships. Convening the same cast of characters to design solutions does not create conditions for innovation that is required.

- The institution could benefit from deliberate “vertical development”, that is, to learn and develop new ways to “think about its thinking”, and develop new capacities to learn, think, and act differently in response to profound shifts in conditions.

- Broader engagement is critical. Continuing to discuss these challenges only with people “inside the institution” is insufficient. Current incumbents (organizers included) on their own lack the capacity to empathize, see, understand and “make real” the types of innovations necessary to thrive in this new reality.

Potential Intervention Based on Diagnosis

What did we learn from this approach that would help support the need for the proposed next interventions? The design format forced walls to come down, enabled deep listening to diverse voices and initiated an understanding of our assumptions and the incorrectness of them.

Making progress on these challenges will require deep adaptive work. Adaptation will require transformational change, a shift in mindset, new way of working, starting with our institutional culture.

The goal of the Association of Fish and Wildlife Agencies Relevancy Roadmap is for agencies to enhance conservation through broader engagement. Increasing diversity and inclusion is more than the right thing to do, it is critical to successful and enduring conservation efforts.

Similarly, one of the key recommendations that emerged from the 2020 National Survey of Planning for the Future of Conservation Law Enforcement in the United States can be summed up in one line:

“Agencies must enlarge, not shift, focus.”

The following are potential institutional “next interventions” to make progress on this work:

- Use Design to deliberately prototype learning experiences in each AFWA region designed to shift mindsets by “changing who is in the conversations” surrounding conservation planning efforts to broaden engagement in conservation. The purpose would be to expand thinking within the institution, involve new voices, test assumptions and learn from a broader cross section of society what is important to them. Engage diverse, urban citizens from outside the institution in the prototypes, and deliberately recruit younger, more diverse employees within the agencies to lead the prototyping experiences.
- Develop Design capacity within the institution to offset natural science orientation.