VISUALIZING CONNECTIVITY
COLAB PRESENTATION

BEYOND SAFE PASSAGE: BUILDING BRIDGES FOR LANDSCAPE CONNECTIVITY

IN PARTNERSHIP WITH YELLOWSTONE TO YUKON CONSERVATION INITIATIVE, ECOLOGICAL DESIGN LAB & ARC SOLUTIONS

Yellowstone to Yukon
Conservation Initiative

ECO/
LOGICAL
DESIGN
LAB

ARC
NEW THINKING · NEW METHODS
NEW MATERIALS · NEW SOLUTIONS

COLAB ATTENDEES

21 participants were divided into 3 working teams, balanced in the range of expertise represented on each team, including, but not limited to: communications, engineering, ecology, planning policy, landscape architecture, road ecology and community engagement.
The organizations represented included:

» Ecological Design Lab @ *Toronto Metropolitan University*
» Yellowstone to Yukon (Y2Y) (regional agency)
» ARC Solutions
» Harvard Graduate School of Design
» Miistakis Institute (regional agency)
» Montana State University - WTI
» Parks Canada
» Puente Strategies
» Nature Conservancy of Canada (NCC)
» Wildsight

The range of expertise included:

» Communications specialists
» Landscape architects and designers
» Civil engineers and architects
» Planning and policy experts
» Conservation organizations and wildlife management agencies
» Construction and industry representatives

PURPOSE

Connectivity is a complex social and ecological challenge. We know that engaging new allies and audiences in reconnecting our landscapes for wildlife, people and ecosystems is essential to short-term wins and long-term success. From planning to design to governance, we need new materials, new methods and new thinking to bridge gaps, crossroads and reconnect habitats. This begins with a compelling story, that takes us from science to design to implementation and action. So how do we tell effective, engaging, and compelling stories of connectivity — from the site to the landscape of Yellowstone to Yukon (Y2Y), from crossing structures to political will, from scientists to publics? During the CoLab, participants were asked to brainstorm, blue sky, dive in, and do it!

Objectives

- » Highlight wildlife infrastructure as a critical strategy for connecting protected areas supporting and meeting biodiversity conservation goals
- » Develop communications materials that support federal investment in the implementation of green infrastructure projects

Priority Geographies

Strategic locations were selected to amplify cross-border partnership and coordination on safe wildlife passage, and position Y2Y and partners as global leaders in this field to decision-makers using case studies and stories from Highways 1, 3, 93 and I-90.

Guiding Questions

» How do we make a stronger case for safe passage in the Y2Y region with policymakers?

» What message or visual elements would position the Y2Y vision as the leading factor in improving wildlife connectivity?

» What message and visuals convey a compelling story to government decision-makers on the connection of infrastructure and large landscape conservation?

» What species movement could we focus on to capitalize on people's attention?

» What is the best way to showcase the projects of the Y2Y region to decision-makers and prompt additional crossing structures?

» What communications materials/media could best present the opportunity to work across borders to improve wildlife connectivity and human safety?

» What visual elements would prompt a stronger commitment to infrastructure projects to take wildlife connectivity into account?
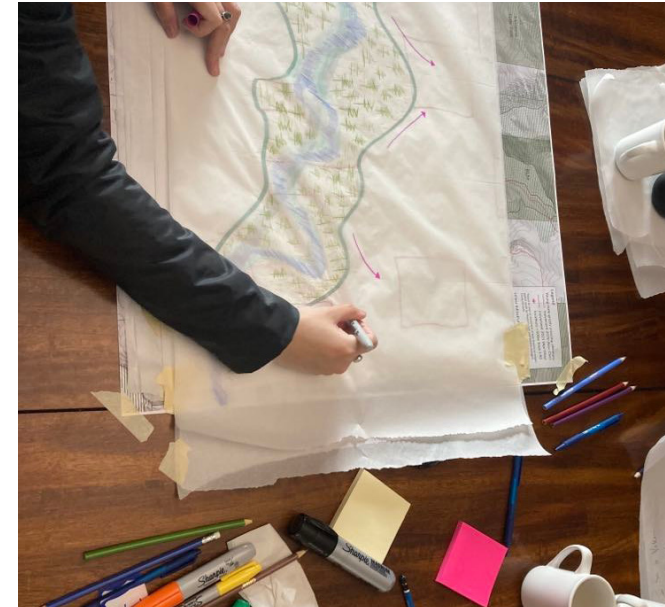
KEY CONSIDERATIONS & THEMES

1

Leading with Shared Values & Common Ground (people-to-people)

The use of asset framing can serve as a useful basis to develop common values

Meaningful engagement can create mutual respect amongst stakeholders, as well as build responsibility for what we collectively value.

2

Different Ways of Knowing (people-to-people-to-species)

Compelling stories of charismatic species can be used to build support and call for action.

There are a multitude of voices, people, and species who experience the landscape through different lenses. Participants explored what it could mean to bridge these diverse experiences.

3

Increasing Visibility, Access to Nature and Anthropogenic Influences

Groups discussed the tensions present between increasing the visibility of landscape connectivity infrastructure with the pressure of anthropogenic influences on wildlife.

4

Engaging with the Public and Various Kinds of Stakeholders

The relationship policymakers have to wildlife and conservation at the state and federal levels often acts as a barrier to taking meaningful action on these fronts.

Resistance comes from senior-level civil servants, and these are key stakeholders who must be engaged. At the same time, the role of public support was recognized as a call to action. We looked to The People's Way as an example of significant Indigenous led advocacy for the activation of this infrastructure.

ARGUMENTS AND STRATEGIES

Strategies may include:

- » Personalizing the problem: (e.g., wildlife family trying to get home, just as we as humans do) to engage people in solutions

- » Road safety: Reduced collisions and less roadkill

- » Economic argument: It can cost less to address the problem now than to defer it to future generations (costs of collisions, ecosystem services, etc)

- » Adaptability to climate change: Species have more options as the climate changes to adapt to short and long term changes in weather / climate

- » Species health: Increases genetic diversity and longevity of some target species

VISUALIZATION OF MOVEMENT

The following categories consider various scopes and perspectives for movements that can be visualized to communicate the story of connection and disconnection across landscapes:

» Animal: Range, Scale, Wandering Movement, Elevation

» Human: Linear Movement, Patchwork land use, Cultural world views

» Infrastructure: Intersections, Alignment

» Natural features: Movement of water, Dynamic nature of water bodies

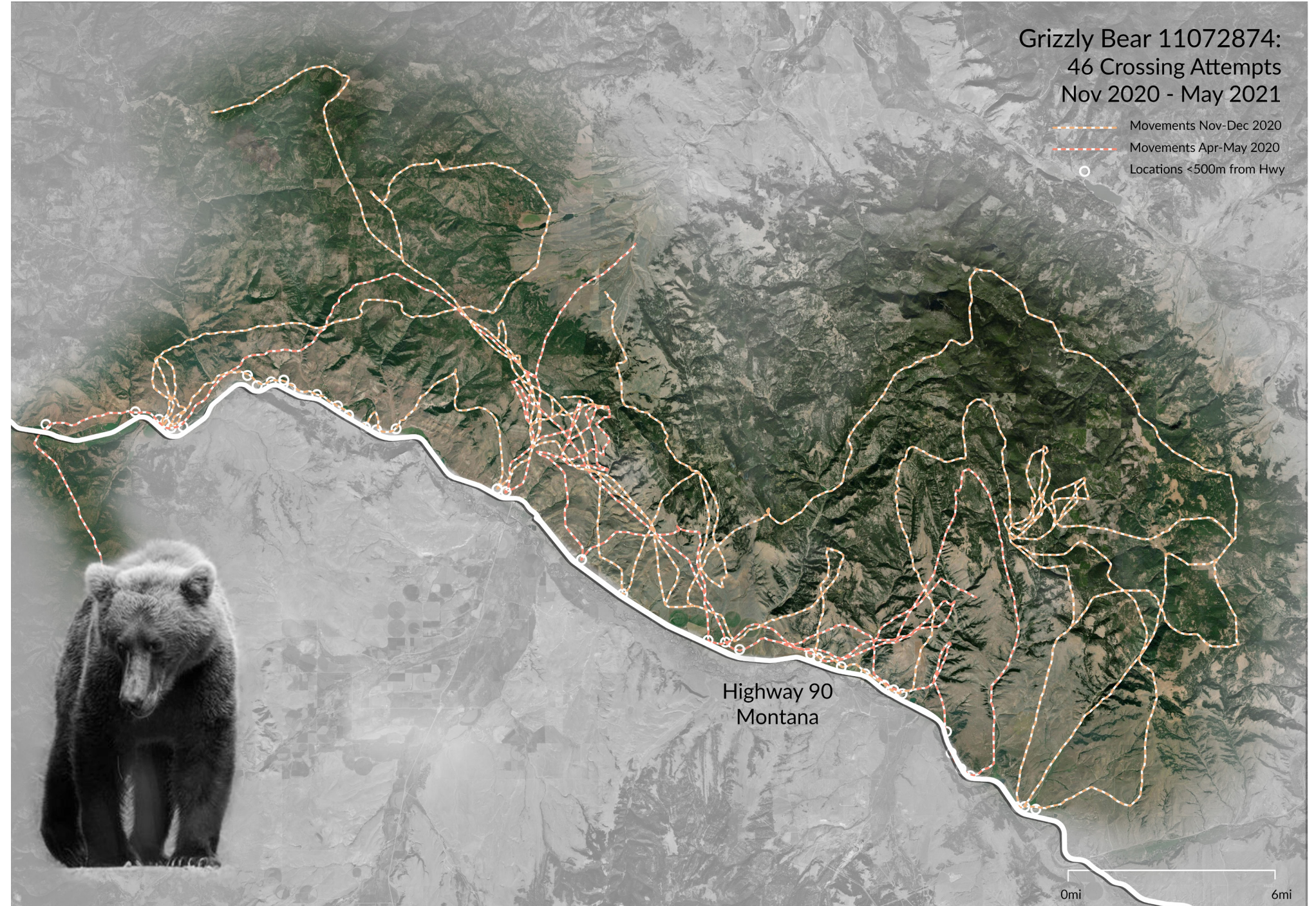» Animal's Eye View: Scale, Landscape features that draw animal's attention

THE LONELY BACHELOR

Using a narrative of a compelling and charismatic animal, such as a bear, can leverage shared experiences between humans and nature.

The "Lonely Bachelor" is one such narrative that highlights the determined efforts of a particular animal (such as Grizzly Bear 11072874 a.k.a. Ligenpolter) trying to find a mate.

Grizzly Bear 11072874:
46 Crossing Attempts
Nov 2020 - May 2021

Movements Nov-Dec 2020
Movements Apr-May 2020
Locations <500m from Hwy

Highway 90
Montana

0mi   6mi

$ Crossing
Construction
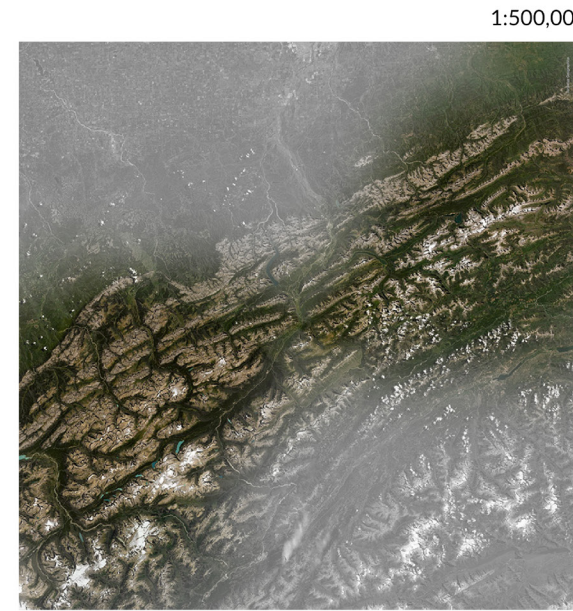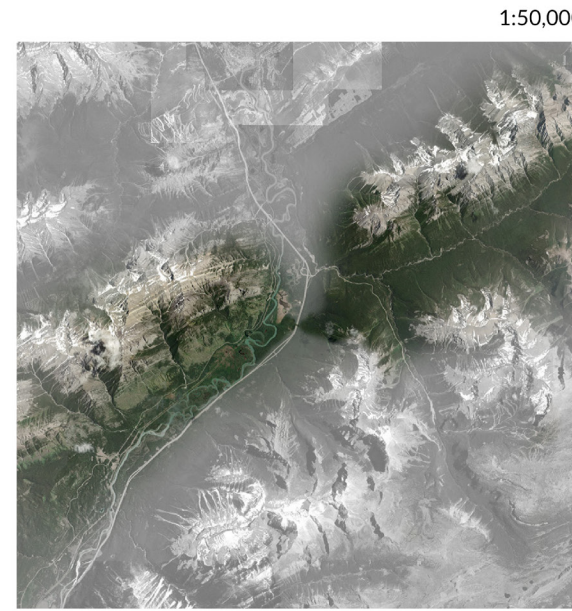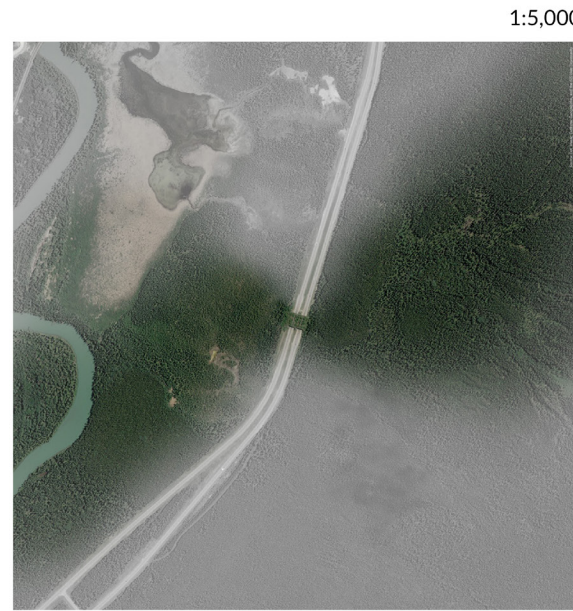
$ Collision
Costs

X m

X m

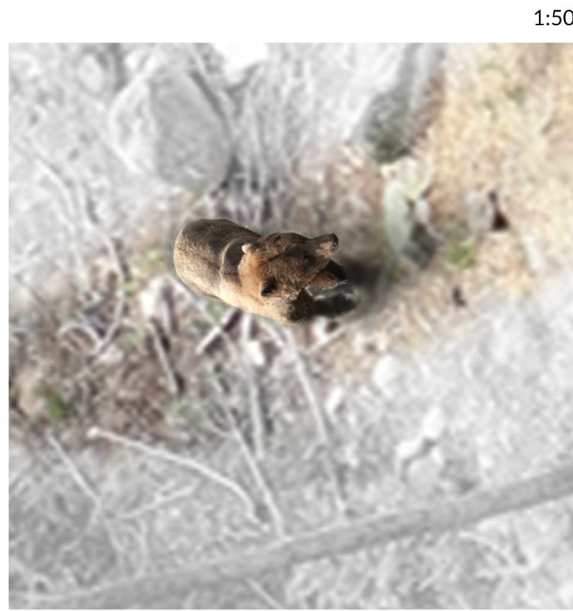The magnitude of the scale of the barriers faced by
the lonely bachelor further emphasizes the need
for crossing infrastructure.
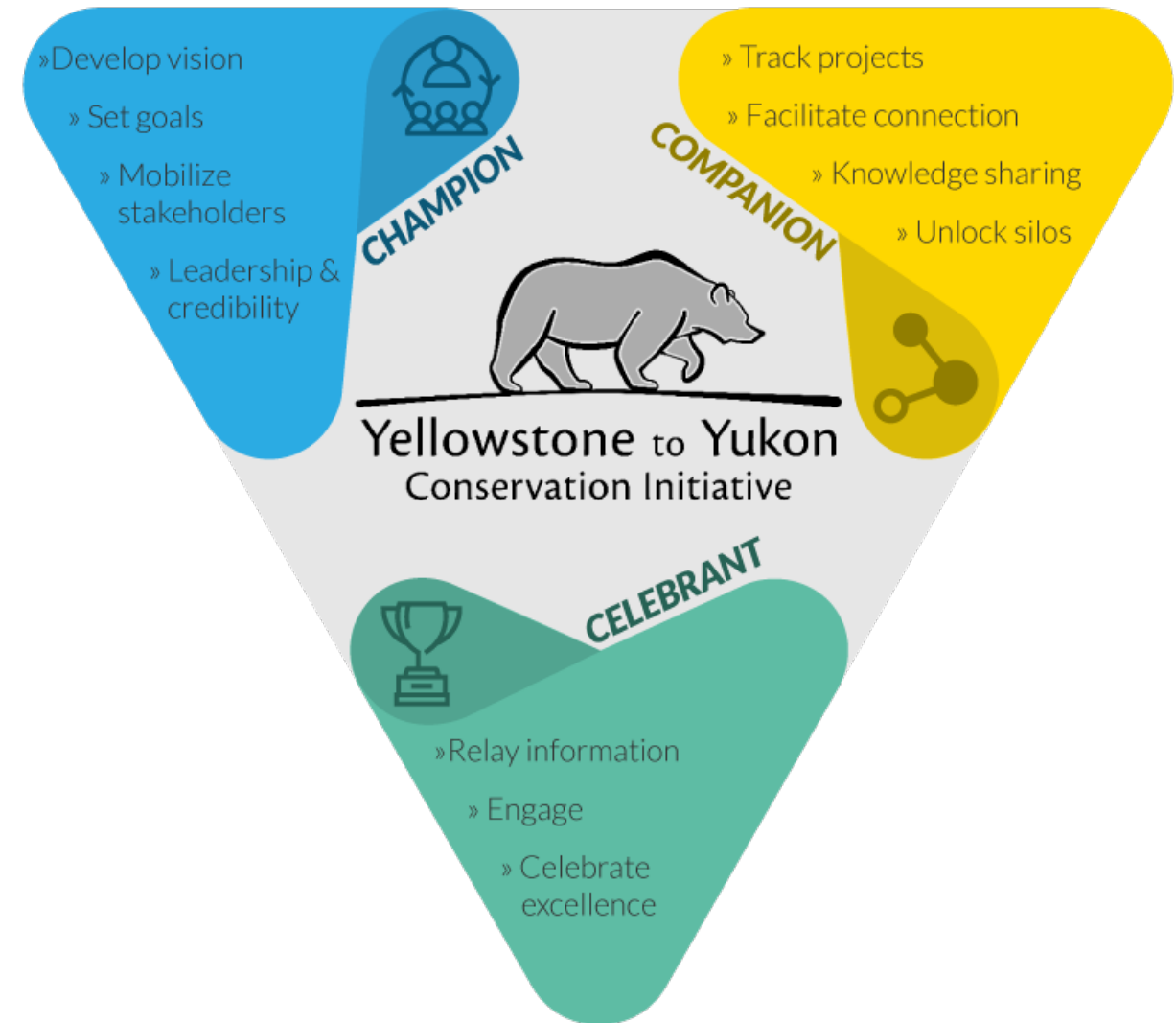
1:50   1:500   1:5,000   1:50,000   1:500,000
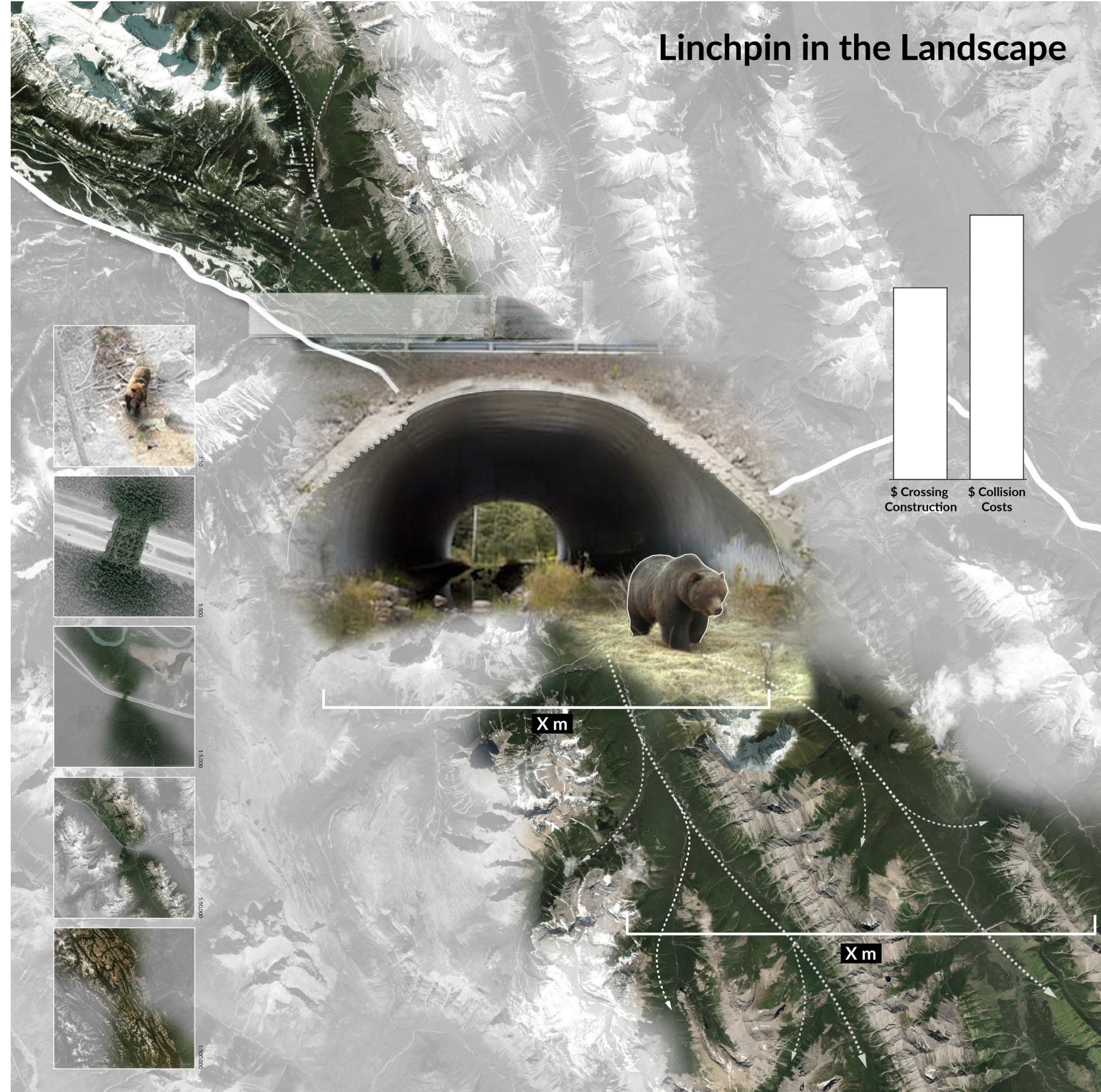
This visualization of connectivity seen on the previous slide, considers different scales, inspired by the Eames film, "Power of 10". The series shows images at varying scales, from a single animal, to a single overpass crossing, to a landscape-scale image of an animal's larger movements through the landscape.

PROFESSIONAL AND POLITICAL RELATIONSHIPS

The Y2Y team, along with their partner organizations, has three roles: Companion, Champion, and Celebrant.

» As a Companion, Y2Y can share knowledge across silos, track progress, and build relationships across boundaries.

» As a Champion, Y2Y can set a coordinated vision, mobilize stakeholders and provide leadership and credibility.

» As a Celebrant, Y2Y can build momentum through engaging and celebrating key stakeholders, promoting excellence within strategies, concepts, designs, projects and operations, and relaying key information between stakeholders.

CHAMPION
»Develop vision
» Set goals
» Mobilize stakeholders
» Leadership & credibility

COMPANION
» Track projects
» Facilitate connection
» Knowledge sharing
» Unlock silos

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CELEBRANT
»Relay information
» Engage
» Celebrate excellence

THE BISON STORY

Changing bison ranges over time is a powerful communication tool of the bison as a symbol of colonial violence, fragmented landscapes and perhaps of hope.

These visualizations depict the historic movement of the bison and the potential to facilitate connectivity for this enigmatic and culturally significant species.
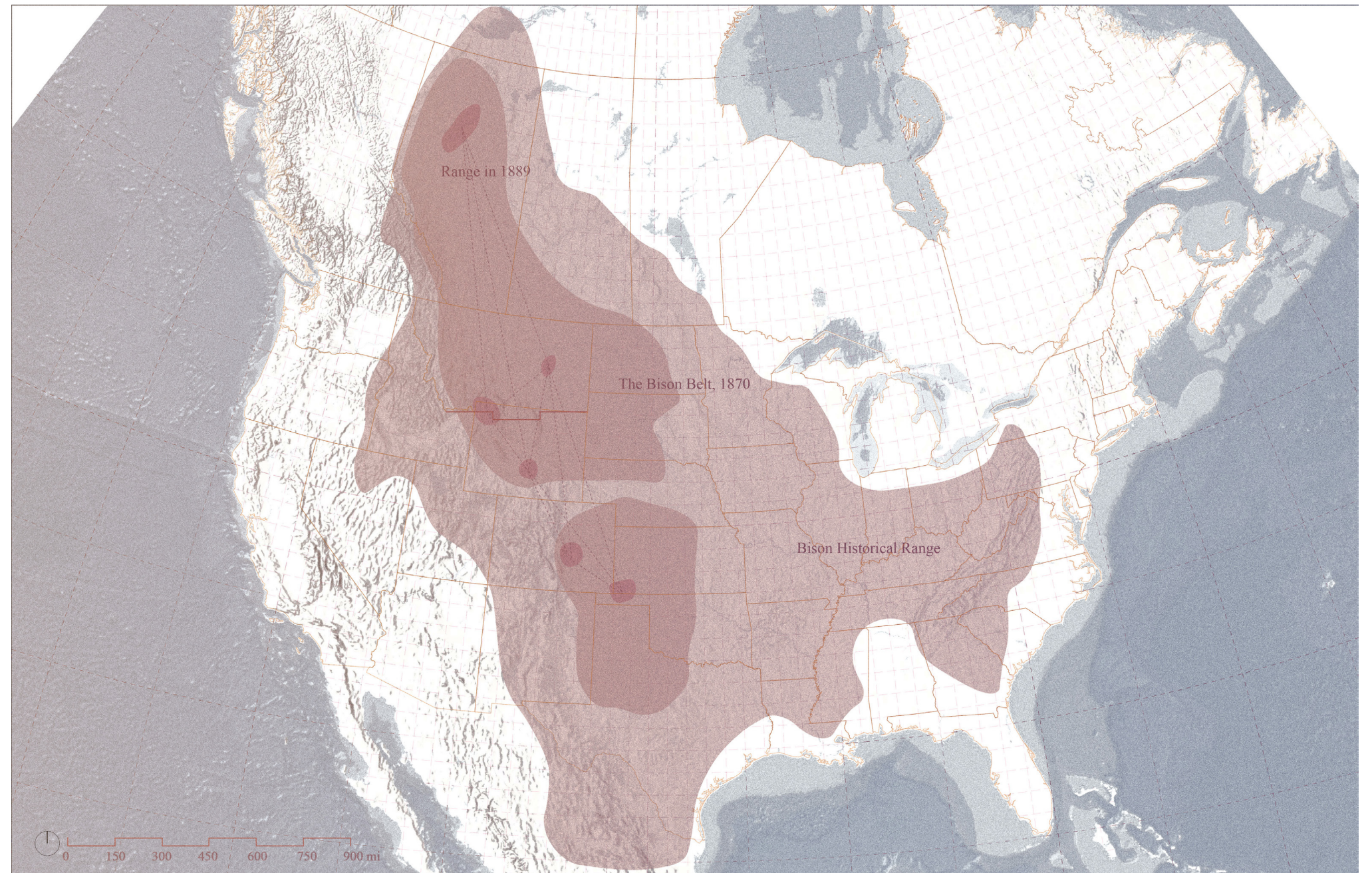
With particular focus on the Flathead Indian Reservation, this group engaged with the "landscape of possibility" and the potential for reconciliation through connection of bison ranges.

CANADA

MONTANA

Current Flathead Indian
Reservation Territory
(1904 Flathead Allotment Act)

Former Flathead Tribal Territory

I-93

I-90

I-90

IDAHO

WYOMING

0   20   40   60   80   100   120 mi

MULTI-SENSORIAL STORY-TELLING

This team considered whose / which stories are being told, versus the stories that should be told. In their exploration, the team developed a series of working guiding principles toward future visualization:

» Common ground
» Accessible language
» Respectful engagement
» The inclusion of multiple voices

Engaging with these principles led to the drafting of a multi-sensorial experience in hopes of highlighting perspectives that are not frequently represented in media and in other forms of communication around wildlife corridor - that of the eagle and the grizzly bear.

This powerful form of storytelling acts as an example of how to proceed with engaging the key audience, in this case, those who fund from far outside the region. The aim is to attract interest for funding, by developing an emotional draw through the replication of on-the-ground experiences as part of a much needed set of continentally-significant wildlife corridors.

FLY OVER, THE EAGLE STORYBOARD

» Birds-eye-view of
  landscape

» Soundscape of birds and
  the wind

» Viewer can hear rushing
  water as the eagle swoops
  down to catch salmon
  traveling along the river

» It is not long before a
  mama grizzly bear and her
  cubs show up to catch their
  favorite meal

» The eagle and grizzly
  bear represent an unlikely
  species kinship

(1)

(2)

(3)

(4)

(5)

(6)

THE BEAR STORYBOARD

» Continues from the eagle's dive

» Transition to an on-the-ground perspective of the forest and the surrounding landscape

» Robust soundscape of the forest, water, wind

» Disruption caused by the noise of the railway and roadway congestion

» Grizzly bear family is left stuck on one side of the road, unable to return to their home on the other side of Highway 3

(7)

(8)

(9)

(10)

(11)

(12)

Multi-Sensorial Storyboard Animation