

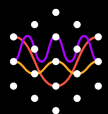
July 2023

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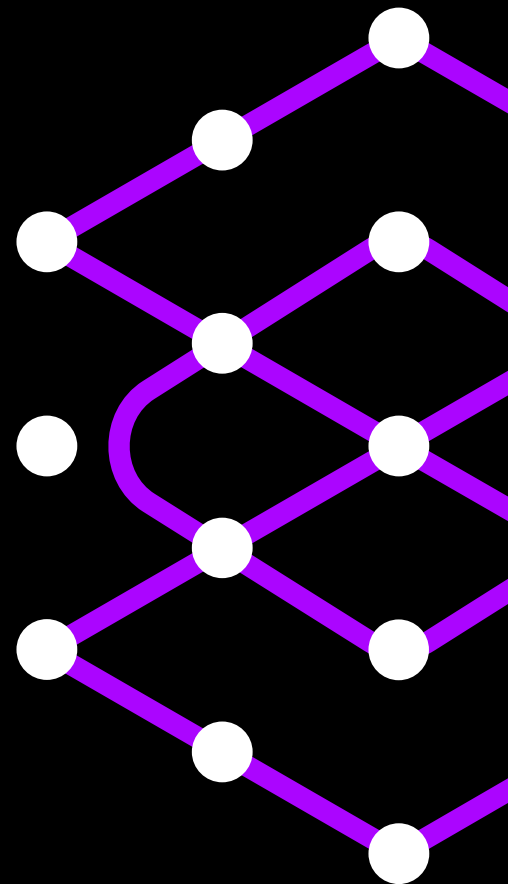
# Towards a System Transformation Strategy: Insights from the Net-Zero Mobility Prototype in Switzerland

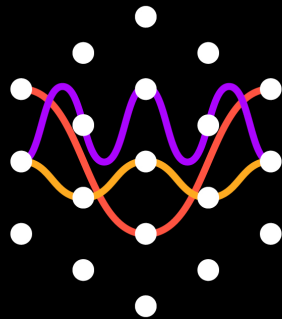
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Interim results from our initial attempt to develop a system transformation strategy to inform a systemic investment program, combining applied systems thinking and strategic foresight



**TransCap Initiative**  
Systemic Investing for Sustainability



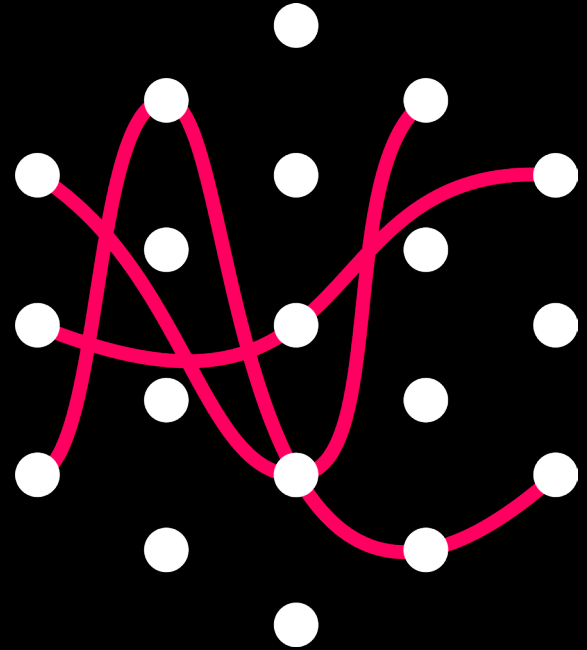


This is a working document based on a presentation we delivered in Q1 of 2023. It serves as the 3rd entry in a series of publications we created to invite other practitioners from the worlds of systems thinking and sustainable finance into our work on systemic investing in Switzerland.

We are aiming to give you a birds-eye view of how we have been developing a system transformation strategy, a core element in our prototyping process. Unlike [part 1](#) and [part 2](#) of this series—which placed heavier emphasis on our experience, challenges, partnerships, and boots-on-the-ground actions—this deck sheds light on some of the more technical aspects of our endeavor. This is an overview only and we will share more detailed and formal reports in the near future.

# Context

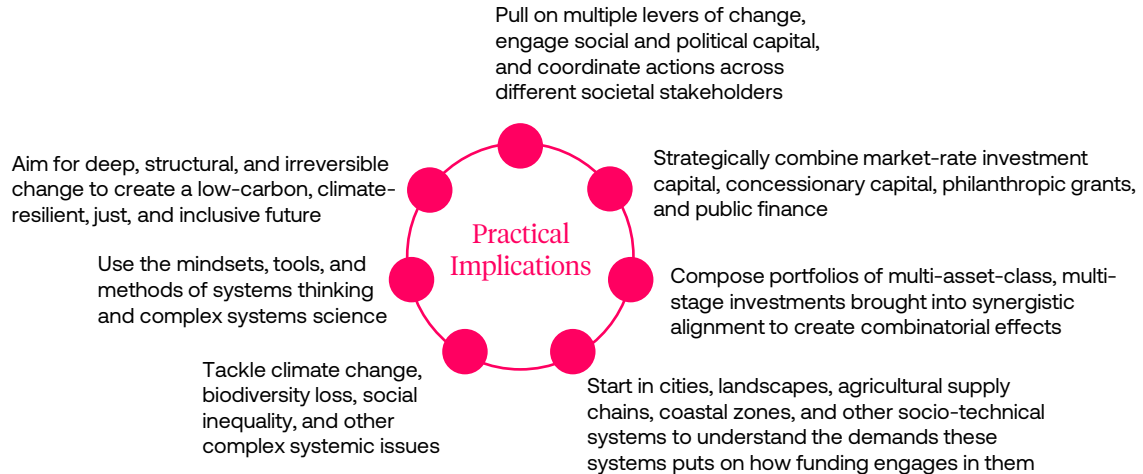
About Systemic Investing



# What is systemic investing?

## Definition

the application of systems thinking to addressing societal problems through the strategic deployment of diverse forms of capital, nested within a broader systems change program and intended to transform human and natural systems

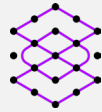


# Key concepts of systemic investing



## Transformative Intent Setting

Defining an impact goal as changing the configuration and dynamics of a human system



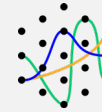
## Systems Analysis

Studying a system's nodes, connections, and dynamics, both for the present and the future



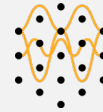
## Leverage Points

Engaging nodes where a relatively small action can trigger an outsize systemic response



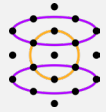
## Strategic Investment Portfolios

Building multi-asset-class, multi-stage portfolios of strategically linked investments



## Nesting

Nesting an investment portfolio within a broader systems intervention approach



## Funding Architecture

Taking a polycapital approach to funding different interventions in a systems change programme



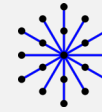
## Combinatorial Effects

Amplifying impact by bringing different assets into synergistic relationship with each other



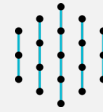
## Investment Program Design

Designing investment programs with appropriate accountability, governance, and legal structures



## Systemic Impact Measurement

Focusing on system dynamics and properties in measuring success, not on static outputs



## Learning & Sensemaking

Continuously studying what is emerging in a system to extract insights for follow-on investment

# How does systemic investing enhance sustainable finance?

1

## Introduces a Systems Lens

Human civilization is a collection of complex, intertwined, and interdependent systems that span social, environmental, economic, political, and technological domains.

Applying a systems lens to the way we make sense of societal challenges and of how to address them leads us to fundamentally change the way we program, structure, deploy, and manage financial capital.

2

## Broadens the Objective Function

The goal is not only to reduce greenhouse gas emissions—we must defend all of Earth’s planetary boundaries while nurturing inclusiveness, equity, justice, and resilience in society.

Achieving true and lasting sustainability requires that we adopt a holistic notion of impact, one that goes beyond tech solutionism and the risk-frame of ESG and champions systems health instead.

3

## Redesigns the Modus Operandi

Traditional impact finance runs on a set of ingrained structures and practices. Many of these are inherently unsystemic and thus self-limiting in their ability to catalyze structural change.

Systemic investing calls for a new modus operandi, one that prizes collaboration over competition, value creation over risk reduction, and collective strategic intelligence over proprietary deal flow.

4

## Provides a Coherent New Investment Logic

The science is clear—to build a low-carbon, climate-resilient, just, and inclusive future, we must transform the real-economy systems on which human prosperity depends.

Catalyzing systems change will not be possible through incremental adjustments to traditional investment approaches. We need different paradigms, structures, and practices.

# Systemic investing vs. traditional impact investing

## Traditional Impact Investing

## Systemic Investing

**View of the Nature of the World**

predictive, linear, atomized

uncertain, complex, systemic

**Impact Frame**

improve an (SDG-)metric

transform a system

**Source of Impact**

individual companies/projects

combinatorial effects among multiple assets/interventions

**Unit of Analysis/Transaction**

single asset

strategic portfolios

**Impact Metrics**

static gains/reductions

system dynamics, emergent system properties

**Funding Paradigm**

single asset class/instrument/stage

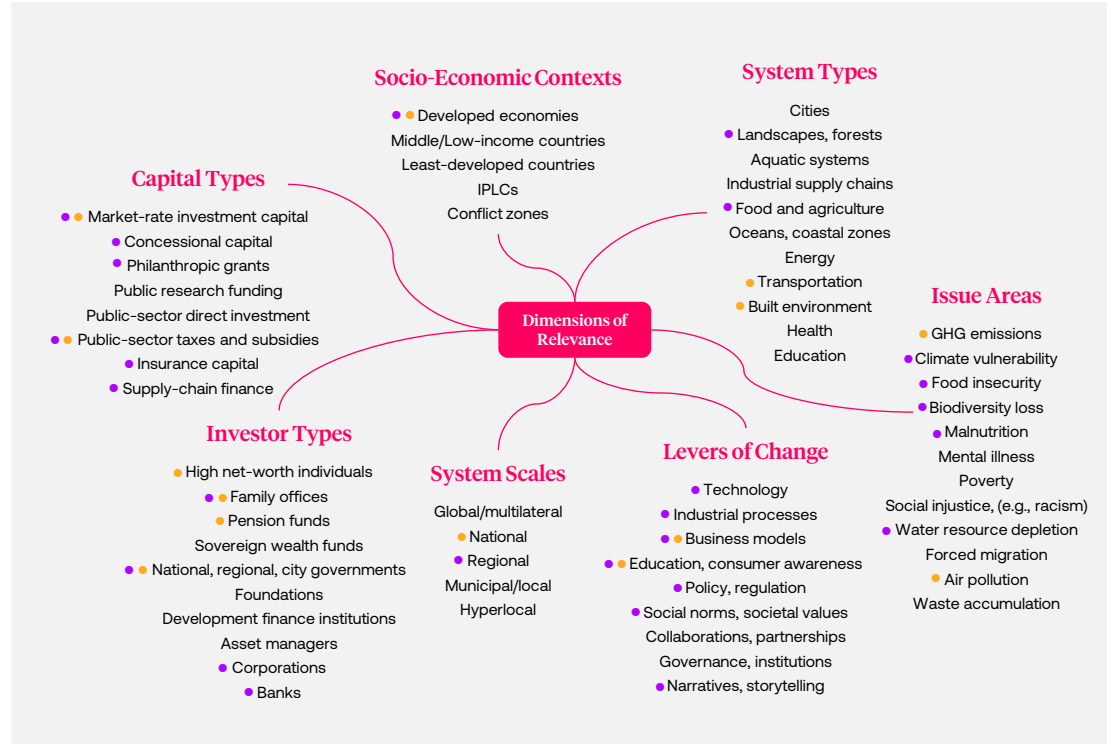
polycapital funding architecture

# Where is systemic investing relevant?

Systemic investing is a holistic investment logic that is relevant for all capital and investor types, system types and scales, issue areas and socio-economic contexts, and levers of change.

## Examples

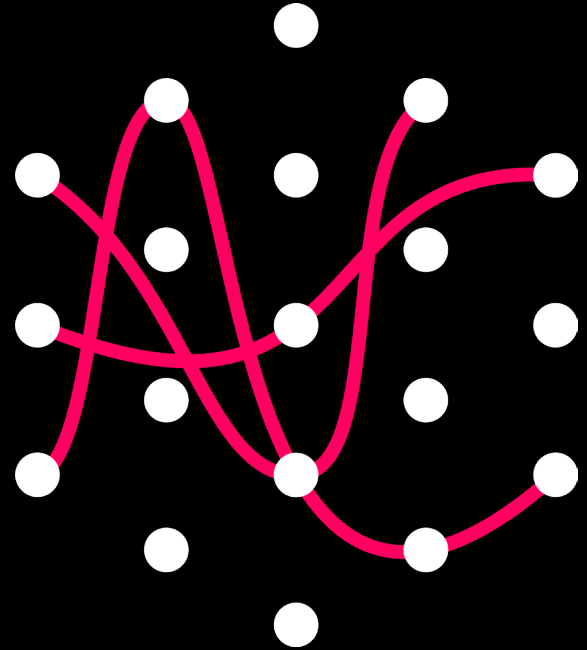
- Our full-fledged prototype on net-zero mobility in Switzerland targets a national-level transportation system that causes GHG emissions and air pollution and whose transformation depends on private wealth, institutional capital, and public finance.
- Our conceptual-stage prototype on regenerative food in the U.S. focuses on an industrial supply chain, has a regional entry point, will likely involve corporates, and depends in part on new insurance solutions as well as on shifts in social norms around agricultural production and food consumption.





# Main Part

Developing a systems transformation strategy in our net-zero mobility in Switzerland prototype



# Our prototype at a glance

## What is it?

A real-world experiment to apply TCI's systemic investing logic to Switzerland's net-zero mobility transition, aiming for the creation of a multi-asset-class strategic investment portfolio nested within a broader system intervention approach

## Why mobility?

- highest sectoral GHG emissions in Switzerland
- biggest net-zero investment need (SDG's 13 and 9)

## Specific characteristics

- Place-based: Switzerland
- Challenge-specific: Net-Zero / Decarbonization

## Our main partners



Funding  
Partner



System  
Partner



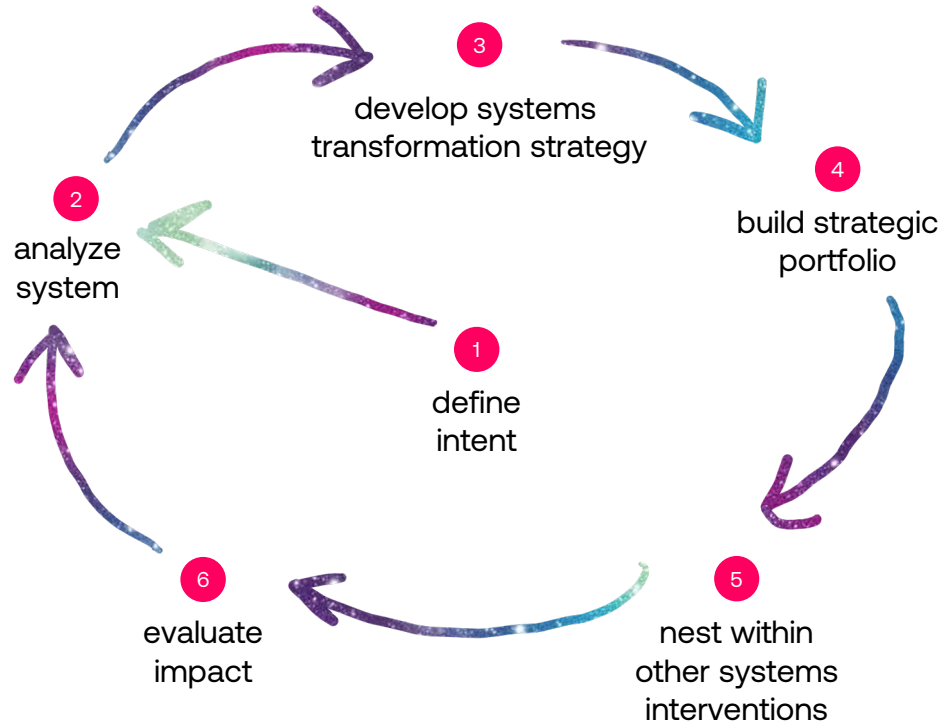
Financial  
Partner



Systems  
Analysis Partner



# Simplified Process Hypothesis for Systemic Investing



This is a strongly simplified version of a more granular process diagram we will reveal in the coming weeks, which will also include news about points 4, 5, and 6 (which this deck does not cover).

If you are interested already, [we invite you to look at our website here](#), where we elaborate some of these key concepts from a theoretical standpoint.

# Step 1: Transformative Intent Setting



## Transformative Intent Setting

Defining an impact goal as changing the configuration and dynamics of a human system

## Intent Statement for Prototype “Net-Zero Mobility in Switzerland”

“Mobilize financial capital in Switzerland in order to reduce Greenhouse Gas (GHG) emissions through both accelerated electrification and reduction of private motorized mobility consumption towards a low-carbon, climate-resilient, just, and inclusive Swiss mobility system.”



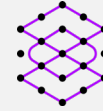
**Transformation**  
deep, structural, and  
irreversible change



# Step 2: Systems Analysis

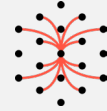
1. Setting boundaries
2. Gathering data
3. Making sense of data
4. Mapping the current system
5. Looking to the future
6. Identifying and prioritizing leverage points

**Note:** On the following slides, you will find several illustrations and clippings from a variety of virtual collaboration tools we have been working with. These serve to give you a taste of how we work and the volume of information we work with.



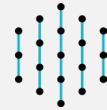
## Systems Analysis

Studying a system's nodes, connections, and dynamics, both for the present and the future



## Leverage Points

Engaging nodes where a relatively small action can trigger an outsize systemic response



## Learning & Sensemaking

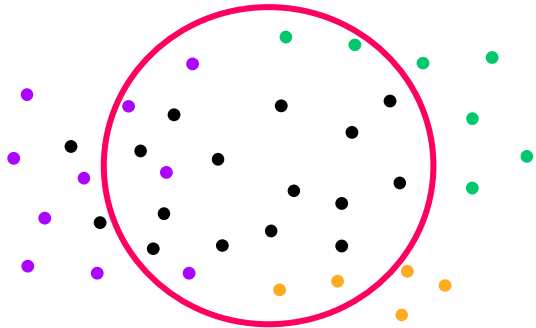
Continuously studying what is emerging in a system to extract insights for follow-on investment

# 2.1 Setting boundaries as a principal first step

## Our Approach

Guiding questions to delineate the system of interest:

- What is the purpose of the system?
- What lies outside of the scope?
- What is your sphere of influence?
- What is beyond direct reach but needed for the end goal?
- Which elements are likely to contribute to the purpose?



## Our System Boundaries

Based on a joint workshop with our partner Metabolic, we defined the following scope for our work:

Catalysis of the net-zero mobility transition...

- by decarbonizing motorized individual transportation,
- Electrifying and reducing traffic,
- in Switzerland,
- with a focus on the use phase and further downstream activities.

# 2.2 Gathering data and activating stakeholders

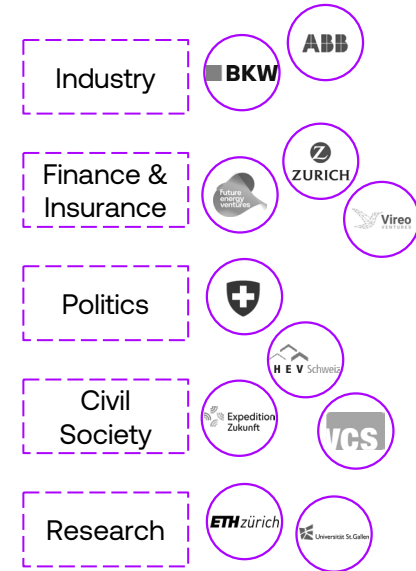
## Desk Research

We conducted a review of the available literature on the mobility system and adjacent fields to gather information on

- the actual usage and uptake of electric vehicles in Switzerland
- related policy and regulation
- technological developments
- popular sentiments towards the electrification of mobility
- the interlinkages with adjacent systems like energy and other personal mobility solutions
- post-usage and further downstream phases (circularity)

## System Stakeholder Interviews

We conducted 20+ semi-structured interviews with various stakeholders to identify dynamics, drivers and barriers within the system.

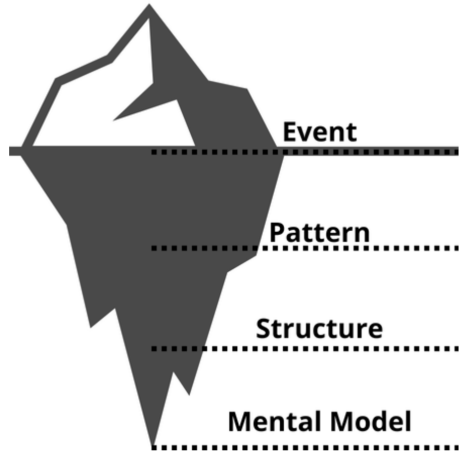




# 2.3 Making sense of the data

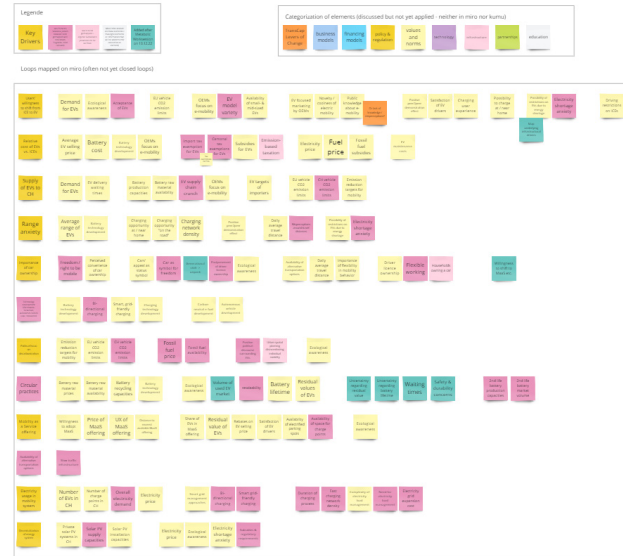
## Assessing Root Causes

Utilizing the iceberg model, we distinguished between problem symptoms and underlying root causes



## Identifying Key Drivers

Based on the gathered information, we began to identify key drivers and related underlying factors



Source: Nathan Mahr 2022, *Iceberg Model in Systems Thinking Overview and Examples*, accessed August 4, 2023, < <https://study.com/learn/lesson/iceberg-model-systems-thinking-overview-analysis-examples.html> >



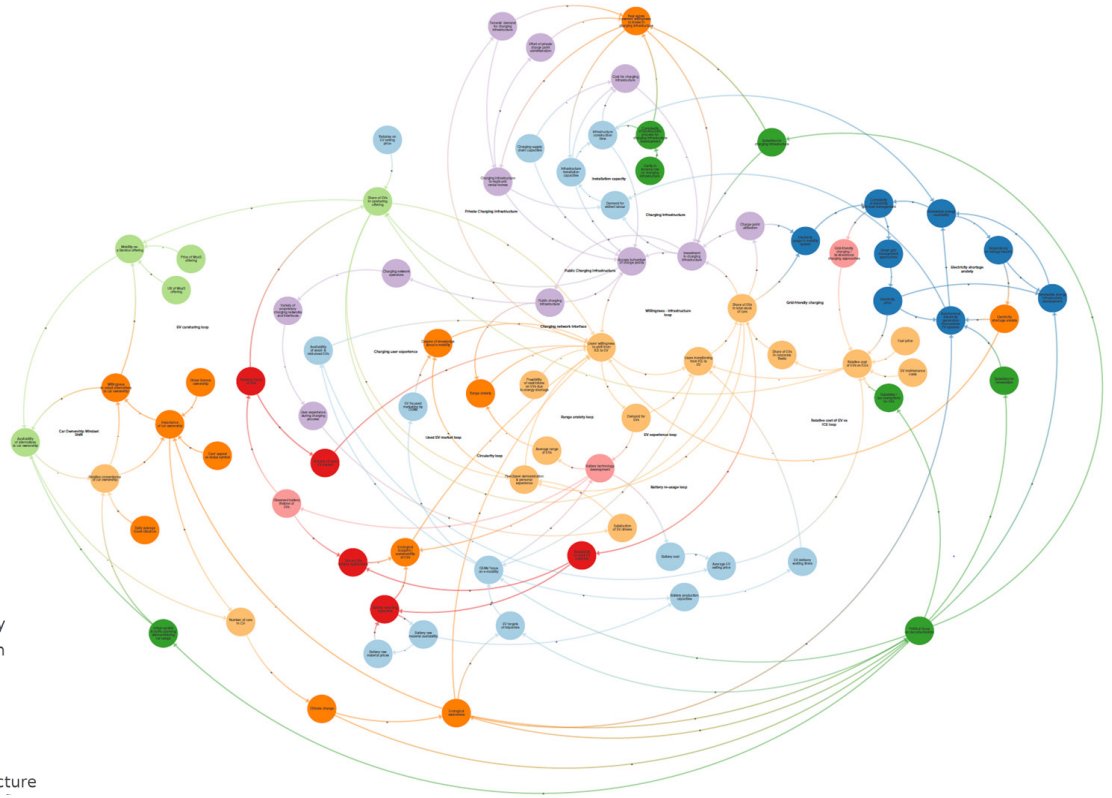
# 2.4a Mapping the system in its current state

## Constructing Causal Loops

- In an iterative fashion, we started to construct causal loops around identified key drivers in order to build out a system map
- These causal loops were qualified as either exerting balancing or reinforcing forces on an underlying system dynamic

### Legend

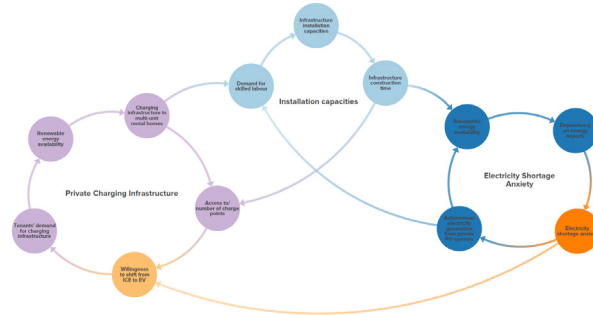
- Opposite
- Supply Chain
- Energy System
- Alternative Mobility
- Policy & Regulation
- Technology
- EV Post-Usage
- EV Usage
- Civil Society
- Charging Infrastructure



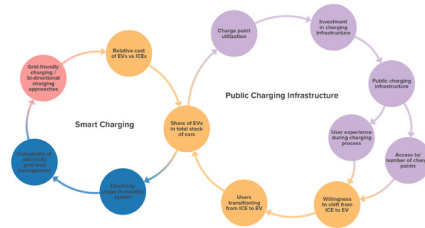
# 2.4b Identifying key feedback loops and narratives

The following key loops were identified, based on the research, stakeholder participation, and an iterative co-creative process with our system partner Swiss eMobility and Metabolic:

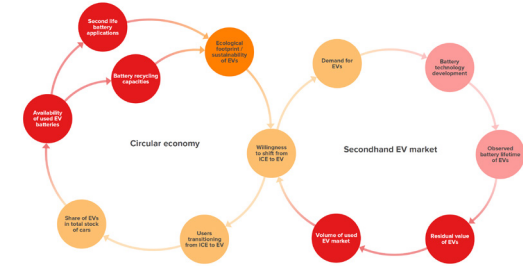
## Private charging infrastructure and electricity generation



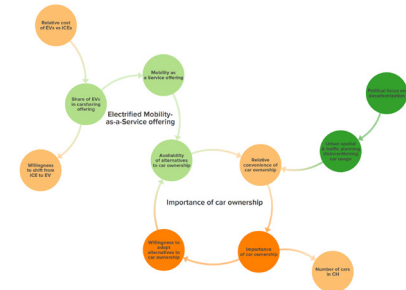
## Public charging infrastructure and smart charging



## Circularity and secondhand EV usage



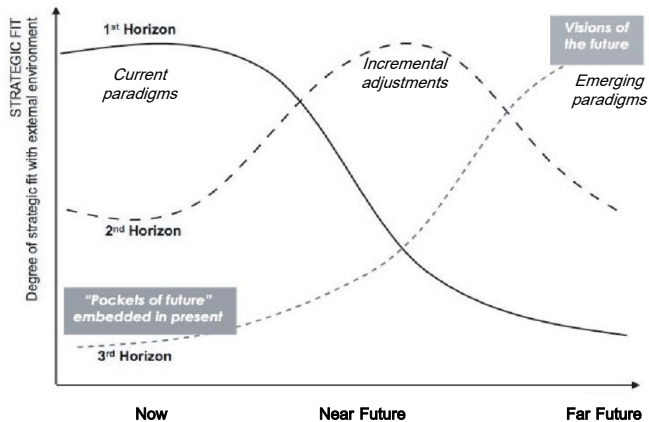
## Importance of car ownership and car sharing



# 2.5 Looking to the future

## Applied Strategic Foresight

1. Research into concrete future visions for the Swiss mobility system by government entities and NGOs
2. Horizon scanning to spot signals that are either status-quo preserving, transformational, or disruptive



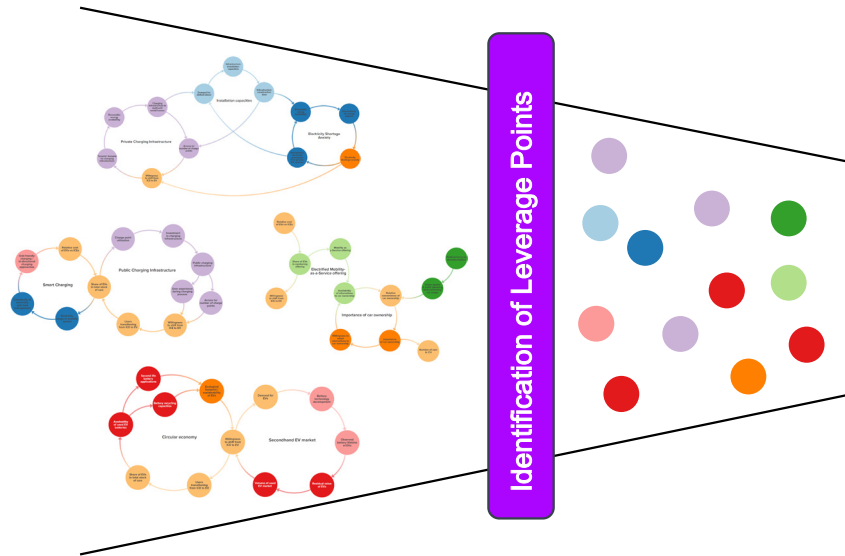
Source: Adapted from Curry, Andrew & Hodgson, Anthony. (2008). Seeing in Multiple Horizons: Connecting Futures to Strategy. *Journal of Futures Studies*. 13.

3. Application of the Three Horizons framework to conceptualize major waves of change in the mobility system:

- H1: fossil fuel driven, inefficient, polluting mobility system (motorized private transport)
- H2: electric mobility (electrification of motorized individual/private transport)
- H3: a low-carbon, climate-resilient, just, and inclusive mobility system in Switzerland

Our focus lies on building a strategic portfolio and nesting approach around H2+, which has a catalytic function to bring about a more sustainable mobility system in the long run.

## 2.6a Identifying leverage points



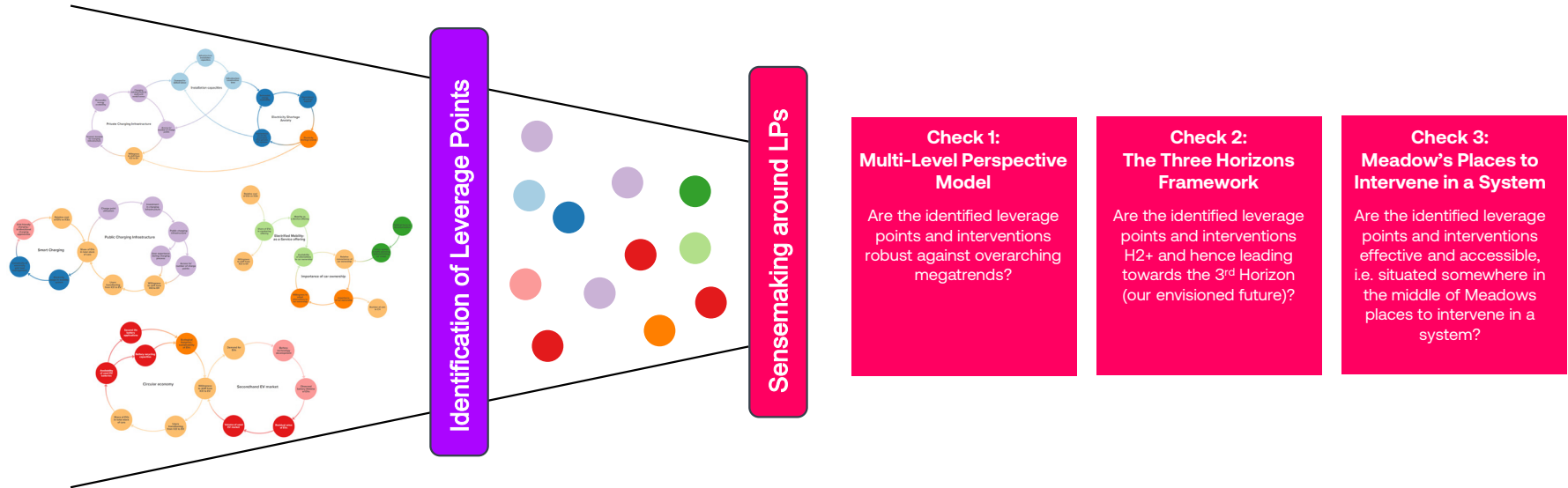
### Approach

Based on the identified key dynamics (i.e., loops) within our system, we sought out leverage points through an iterative multi-step approach:

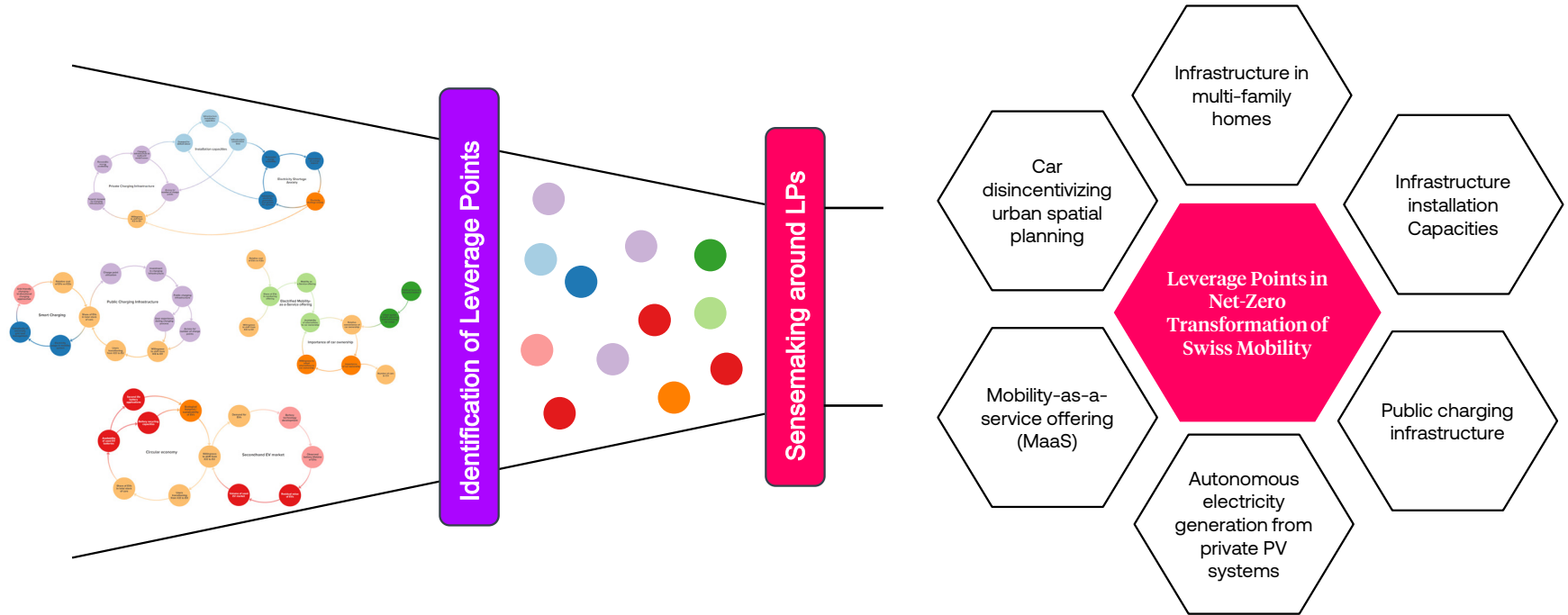
- Analysis of closeness metric in Kumu to identify elements that can spread information to the rest of the system most easily and have high visibility across the system
- Stakeholder workshop with experts from various domains of the system to validate our system map and leverage points and ideate and discuss potential interventions
- Write-up of change hypothesis underlying each leverage point, i.e., analyzing the ripple effects from activation of a specific leverage point based on the system map

## 2.6b Prioritization and validation of leverage points

The list of identified and validated leverage point was further narrowed down through the following assessment criteria:



# 2.6c Result from leverage point prioritization



# Step 3: Develop Transformation Strategy

1. Derive change hypothesis and intervention strategy
2. Combine intervention strategies that create combinatorial effects to catalyze impact
3. Synthesize a transformation strategy



## Systems Analysis

Studying a system's nodes, connections, and dynamics, both for the present and the future



## Leverage Points

Engaging nodes where a relatively small action can trigger an outsize systemic response



## Combinatorial Effects

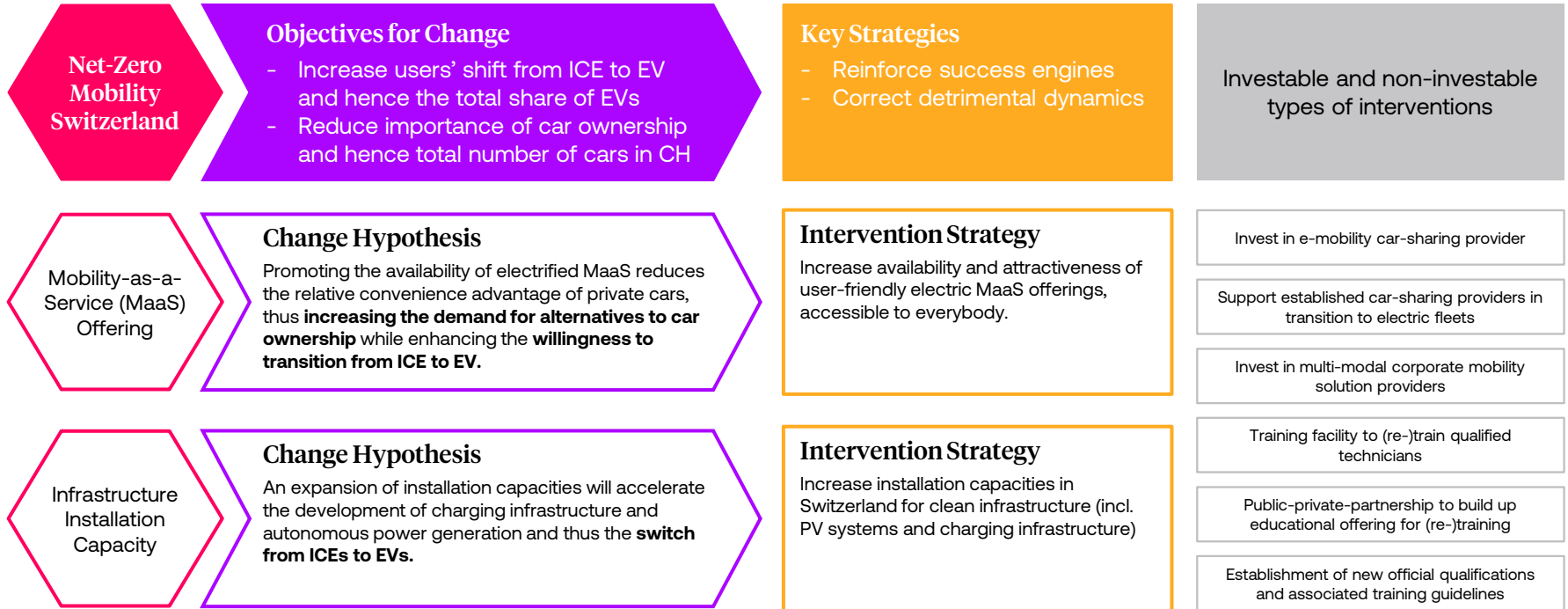
Amplifying impact by bringing different intervention strategies into synergistic relationship with each other



## Learning & Sensemaking

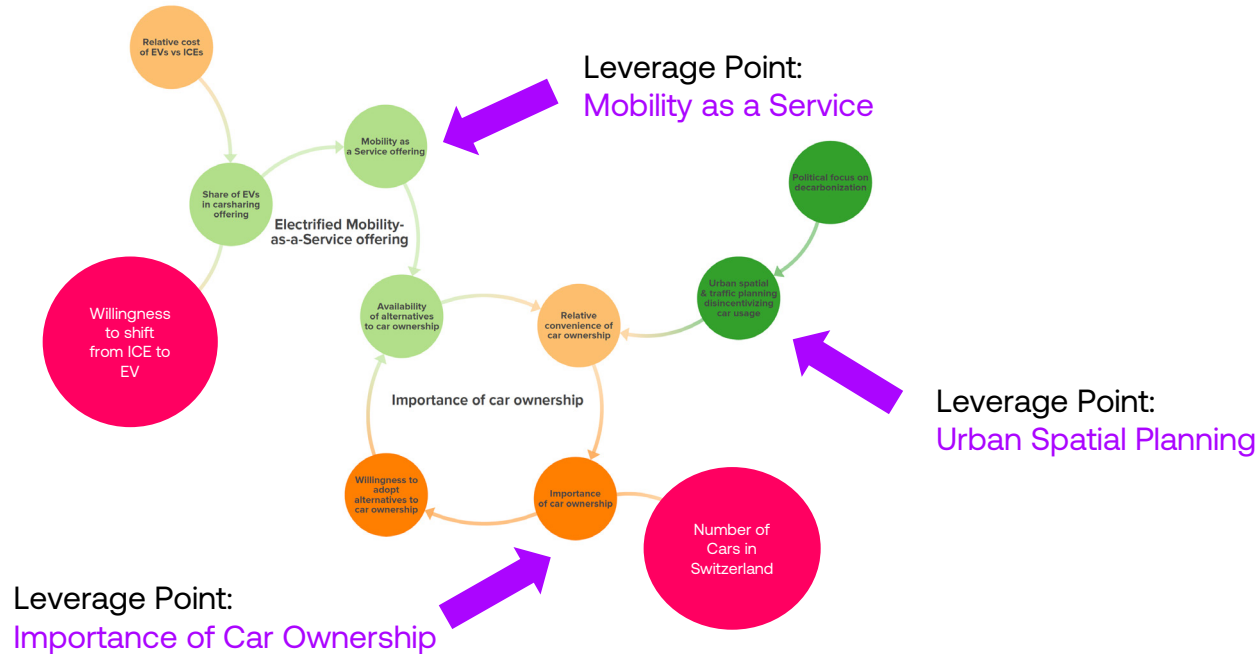
Continuously studying what is emerging in a system to extract insights for follow-on investment

# 3.1 Change hypothesis and intervention strategy





## 3.2 Combinatorial effects to catalyze impact



# 3.3 Resulting system transformation strategy

## Combined Intervention Strategies

1. Supporting to build-up of clean infrastructure in Switzerland (PV systems and charging infrastructure)
2. Increasing installation capacities in Switzerland for clean infrastructure
3. Increasing the availability and attractiveness of the Mobility-as-a - Service offering in Switzerland
4. Acceleration of urban spatial planning that disincentivizes car-usage
5. Supporting infrastructure build-up for white spots (underserved areas due to low utilization rate).



Rewire  
Feedback  
Loops (correct  
or amplify  
system  
dynamics) to  
achieve the  
following  
outcomes:

## Outcome

1. Increased willingness to shift leading to accelerated transition from ICE to EV
2. Increased willingness to adopt alternatives to car ownership leading to reduced numbers of cars



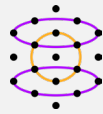
New system  
dynamics  
leading to  
intended  
change on  
societal level

## Impact

Accelerate the decarbonization of the Swiss mobility system

1. significant greenhouse gas emission reductions
2. while ensuring equal access to mobility solutions across the country and society

# What's next in our prototype?



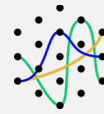
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Taking a polycapital approach to funding different interventions in a systems change program



## Investment Program Design

Designing investment programs with appropriate accountability, governance, and legal structures



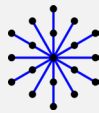
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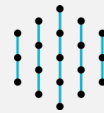
## Nesting

Nesting an investment portfolio within a broader systems intervention approach



## Systemic Impact Evaluation

Focusing on system dynamics and properties in measuring success, not on static outputs



## Learning & Sensemaking

Continuously studying and integration emerging dynamics within a system to refine insights

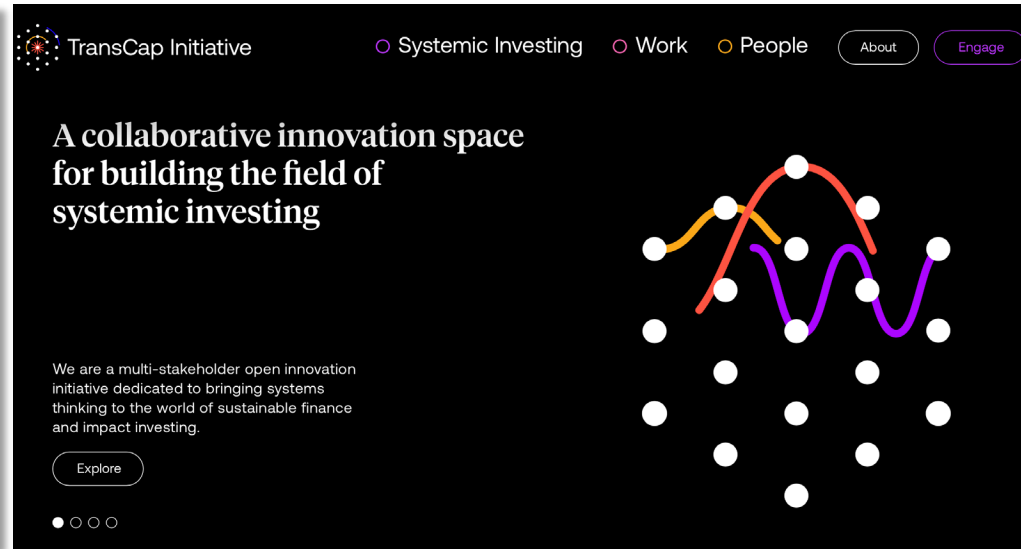
# Learn More



→ read our [strategic plan](#) to learn more about the TransCap Initiative's work



→ read our [white paper](#) to delve deeper into systemic investing



→ visit our [website](#) to read more about our projects, see who's involved, and learn how to engage

# Prototype Team



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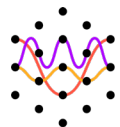


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Made possible by  
**MIGROS**  
Pioneer Fund





**TransCap Initiative**  
Systemic Investing for Sustainability

## **TransCap Core Team**

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