



Faculty of Design

2021

CO-DE | GT BETA: The 21st-century economy app for cross-species co-living

Davidová, Marie, Sharma, Shanu, McMeel, Dermott and Loizides, Fernando

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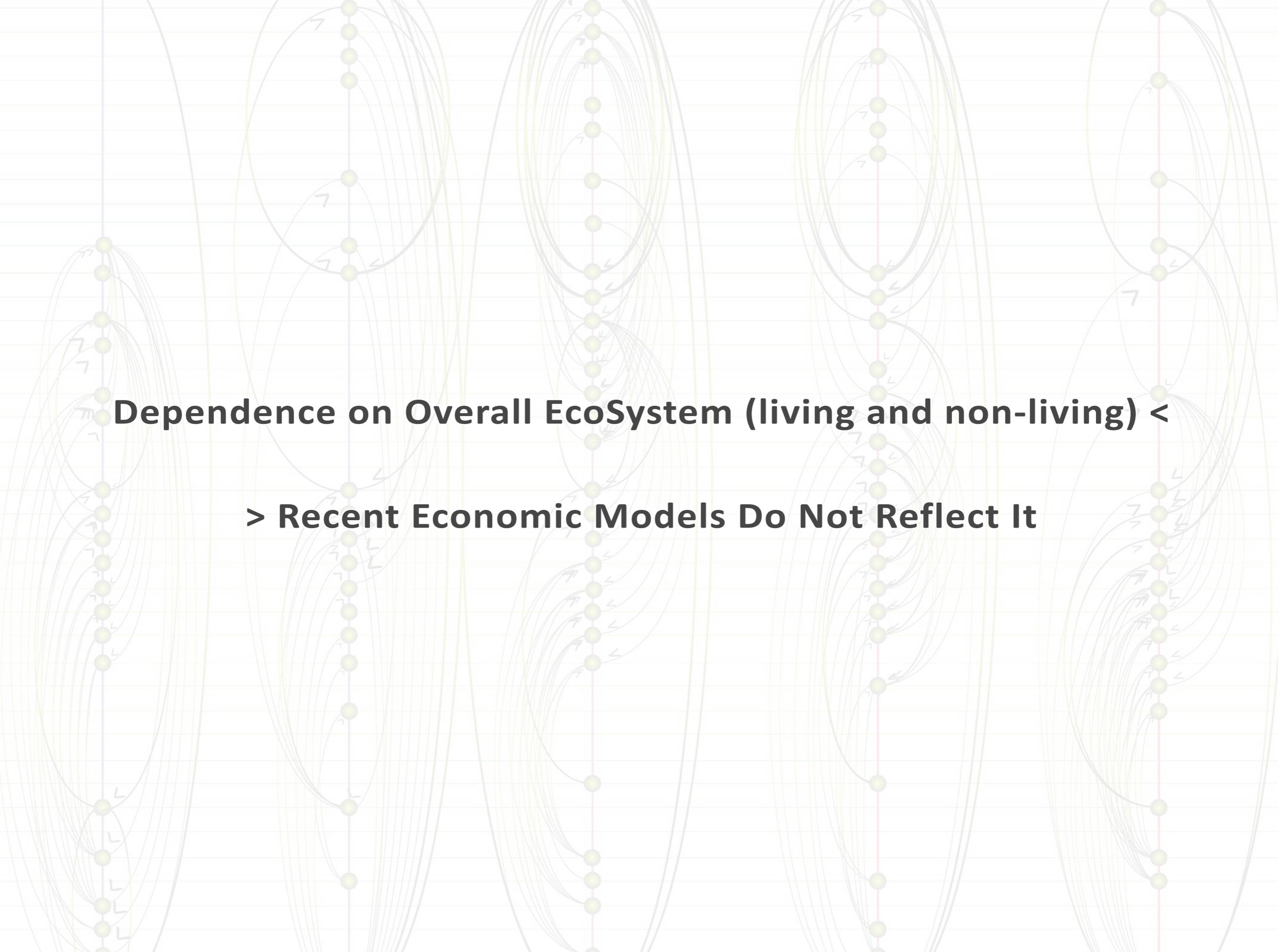
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The background features a dark green field with several vertical lines in cyan, blue, and purple. Each line is punctuated by a series of small yellow dots. Small yellow arrows point in various directions (up, down, left, right) from these dots. Faint, overlapping oval shapes are scattered across the background, some containing more dots and arrows.

CO-DE|GT

The 21st Century Economy App for CrossSpecies CoLiving

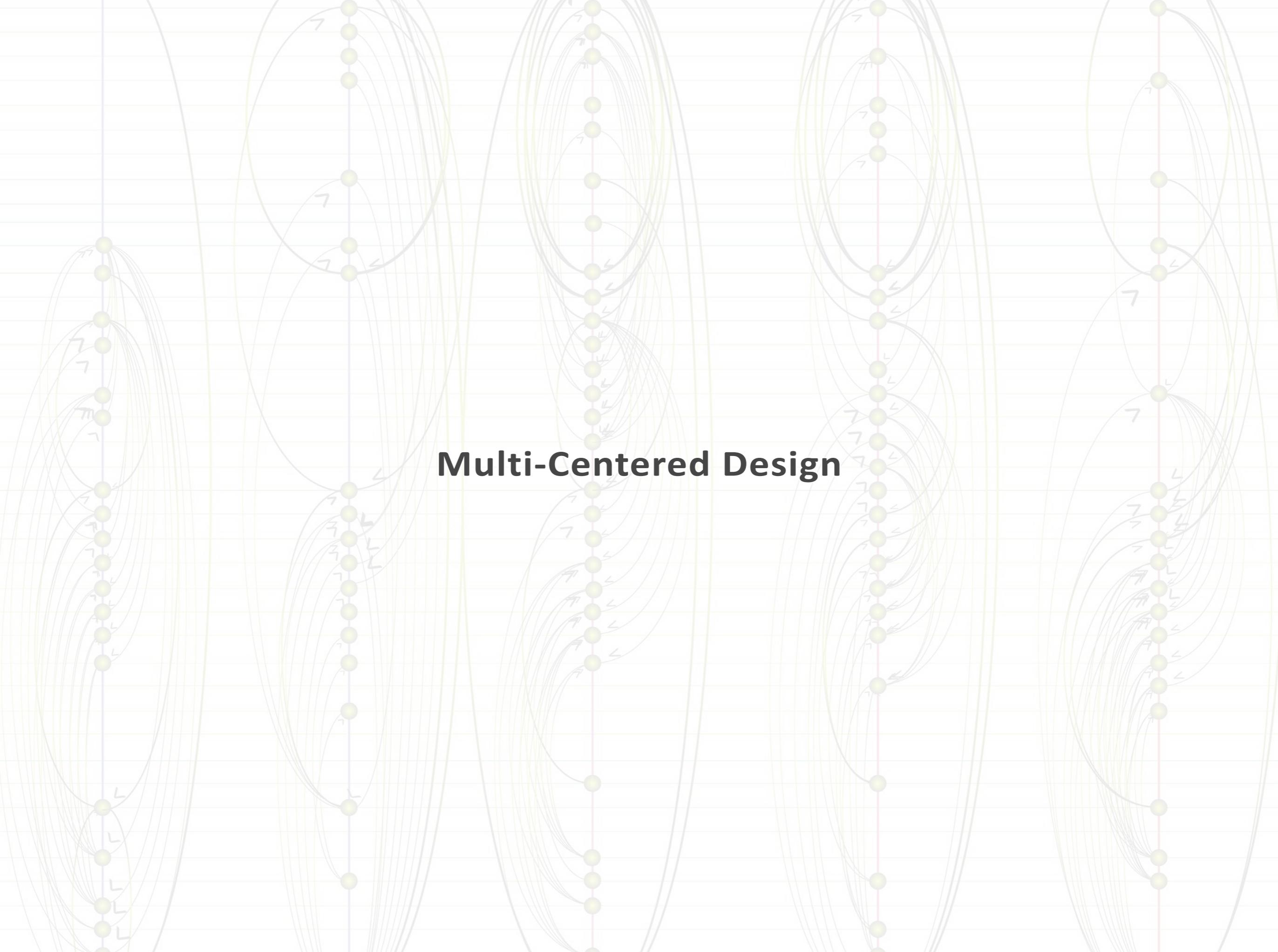
Marie Davidová, Shanu Sharma, Dermott McMeel & Fernando Loizides

The background features a complex network diagram on a light green grid. It consists of a vertical central axis of yellow circular nodes. From these nodes, numerous thin, light-colored lines radiate outwards, forming a dense web of connections. Some nodes are highlighted with larger, semi-transparent ovals. Small arrows and symbols are scattered throughout the network, indicating directionality or specific relationships between nodes.

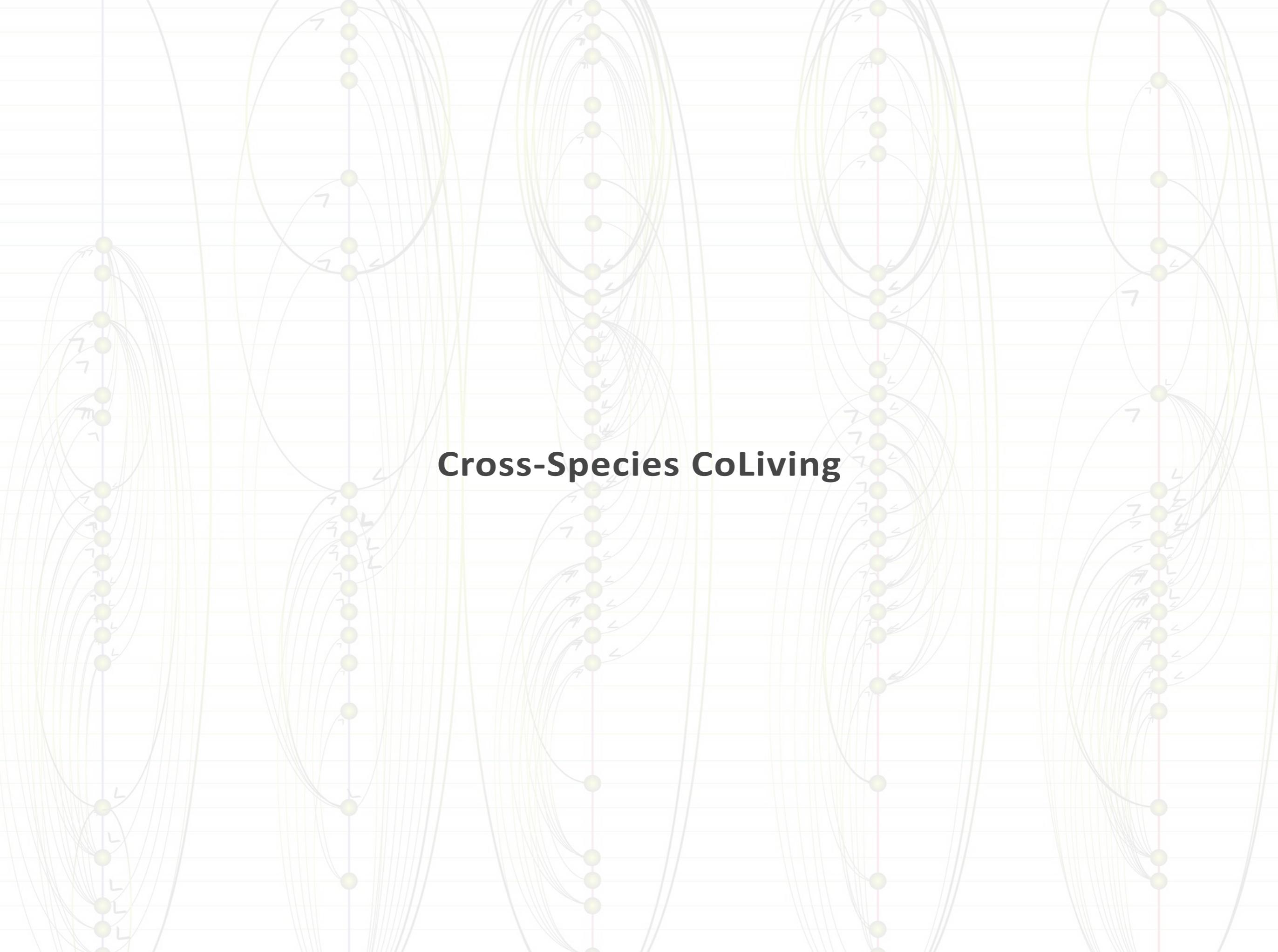
Dependence on Overall EcoSystem (living and non-living) <

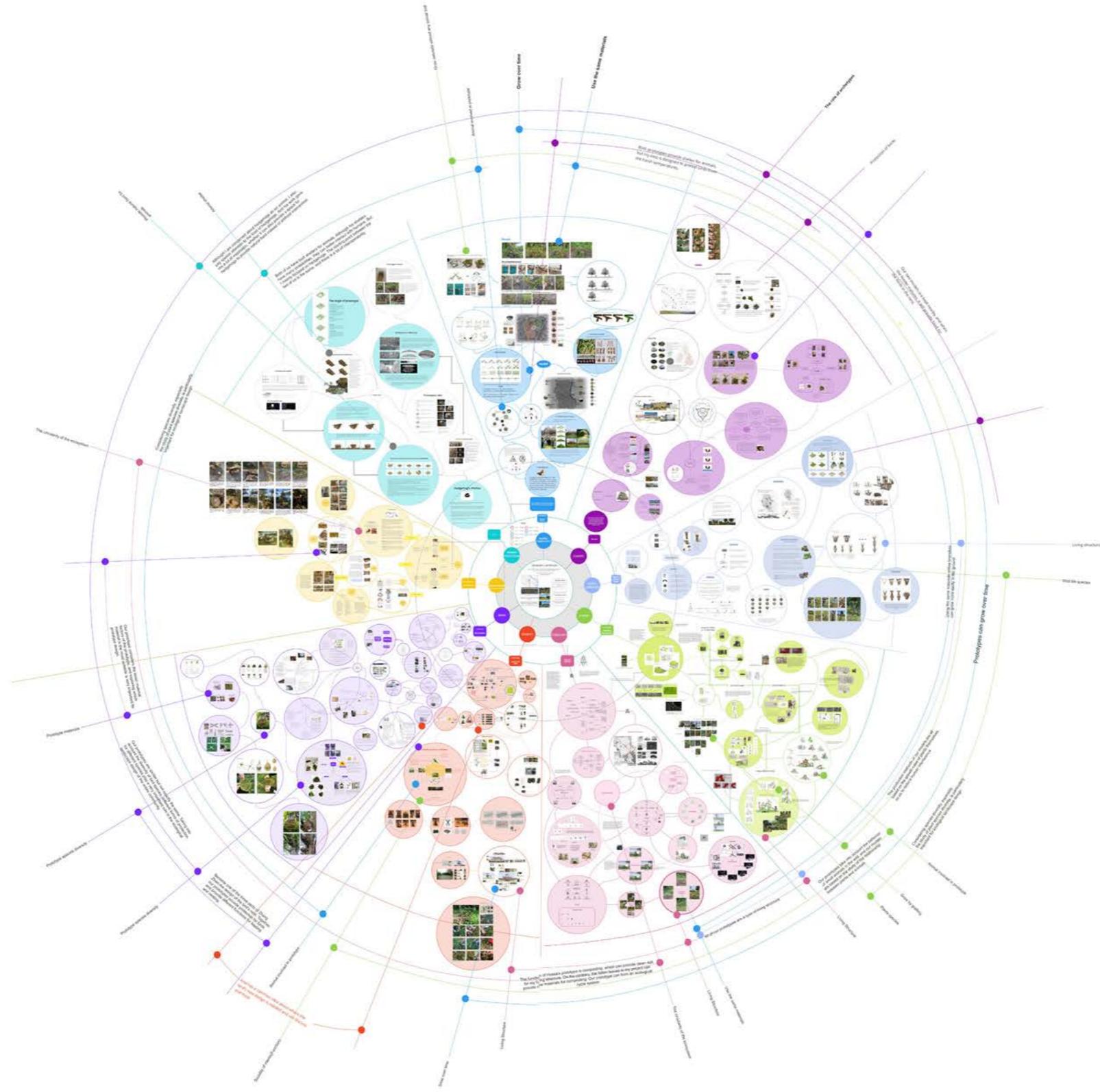
> Recent Economic Models Do Not Reflect It

Multi-Centered Design



Cross-Species CoLiving





SYNERGETIC LANDSCAPE

Tutor: Marie Davidson
 Team member:
 Tian Wang
 Hanyu Jiao
 Han Wang
 Zhen Zhang
 Jiahong Wang
 Wuyang Xie
 Yuhua Xie
 Jiaqi Guo
 Mengqi Guo

Legend

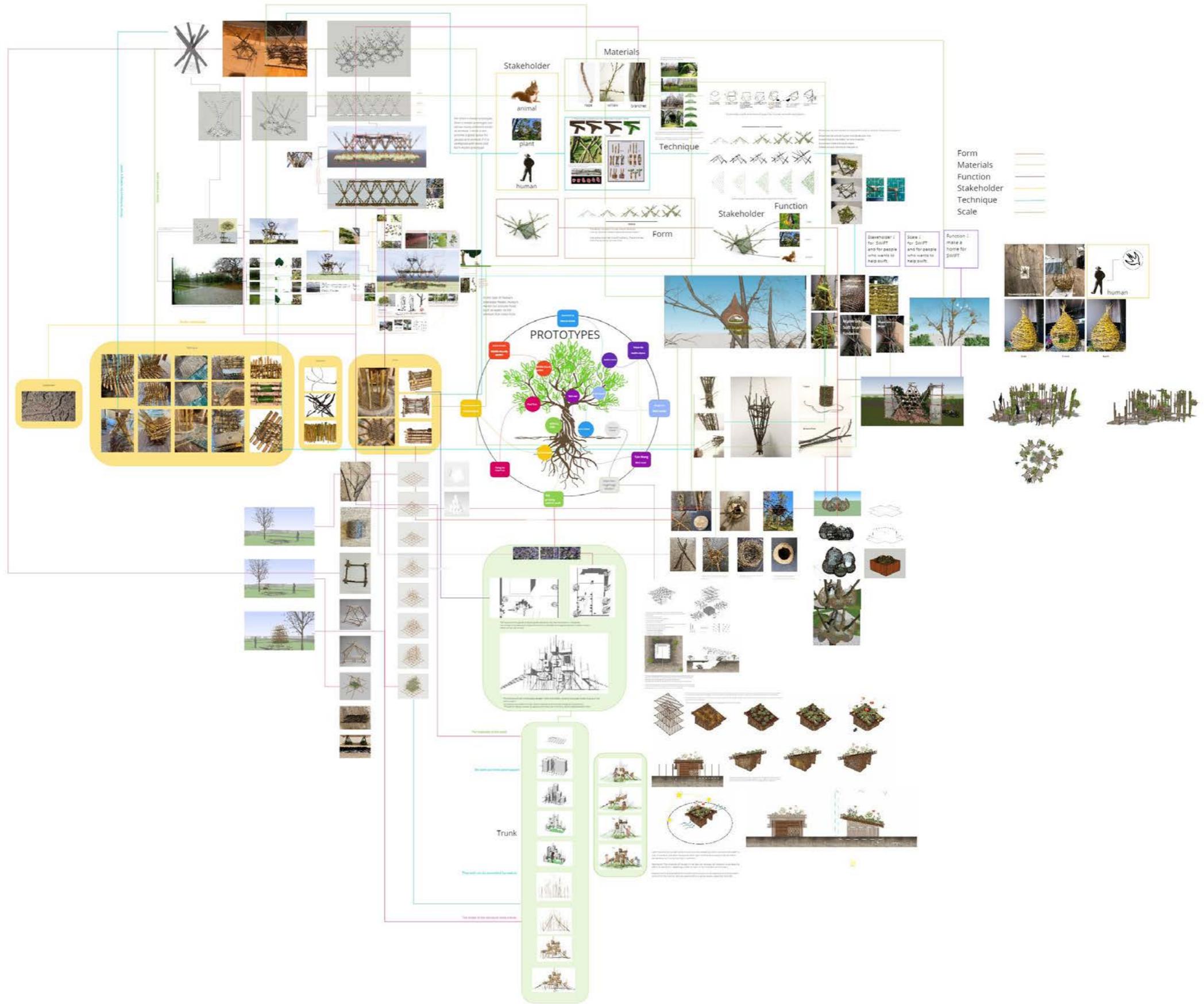
CLIMATE	COMMUNITY
PLANTS	INFRA
PUBLIC	PUBLIC INFRASTRUCTURE
SOCIAL	RURAL LANDSCAPE
SOCIETY	SOCIETY

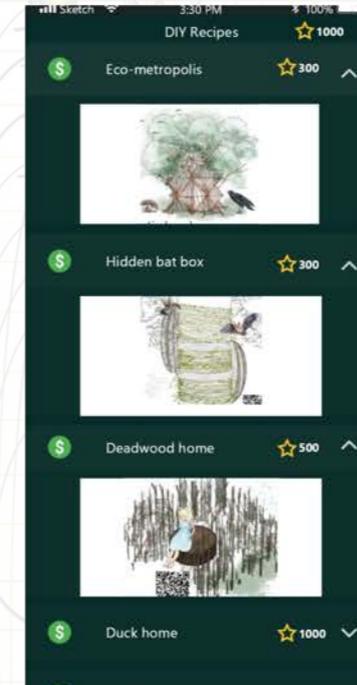
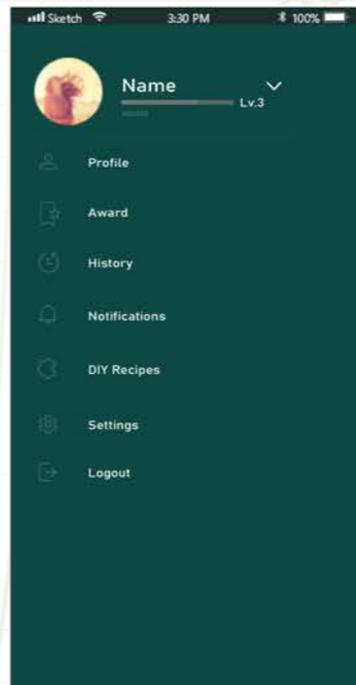
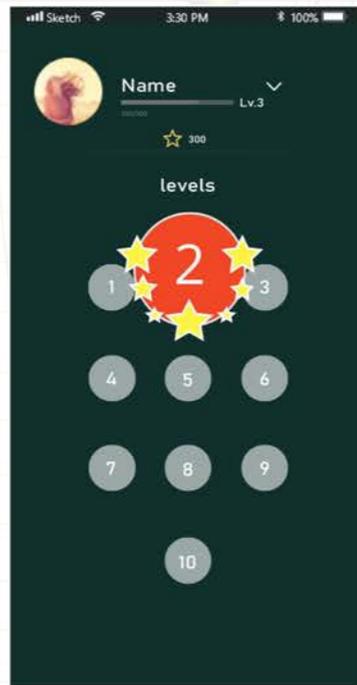
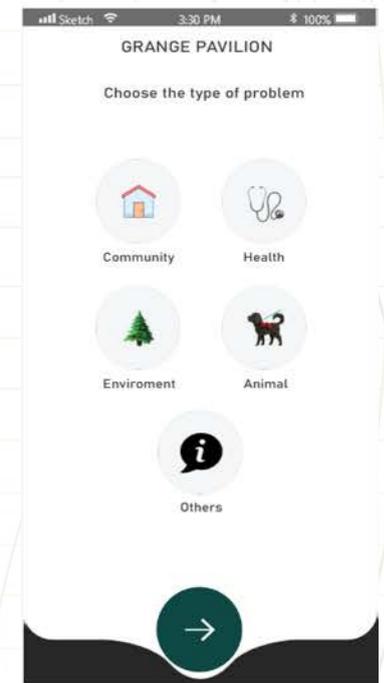
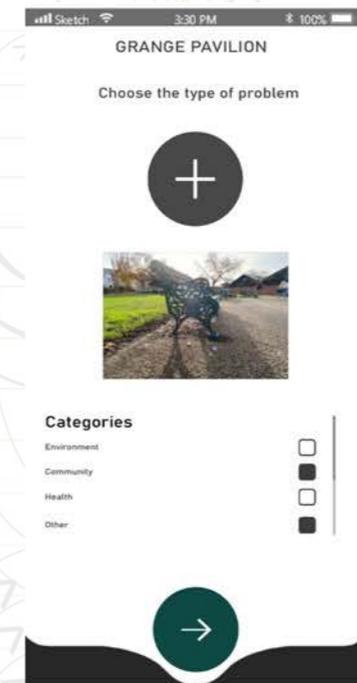
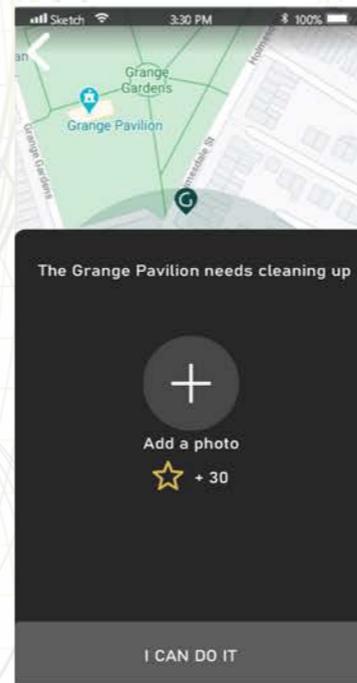
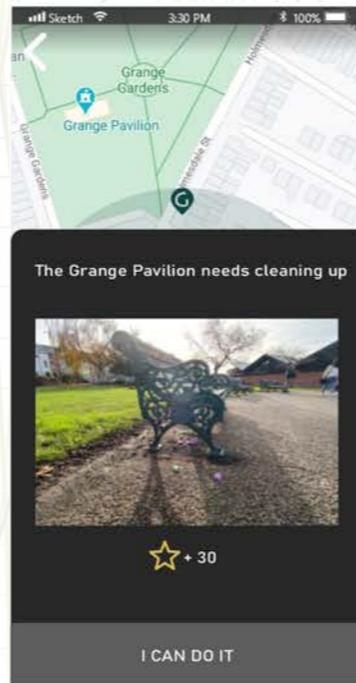
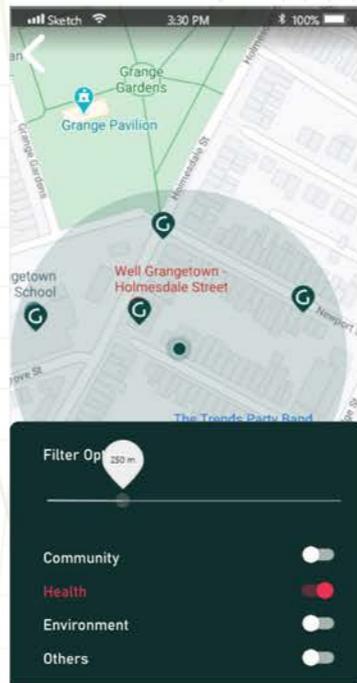
DATA MAP	DESIGN TOPIC
DESIGN TOPIC	LOCATION
LIVING LOOK LINE	LANDSCAPE DESIGN

LOCATION

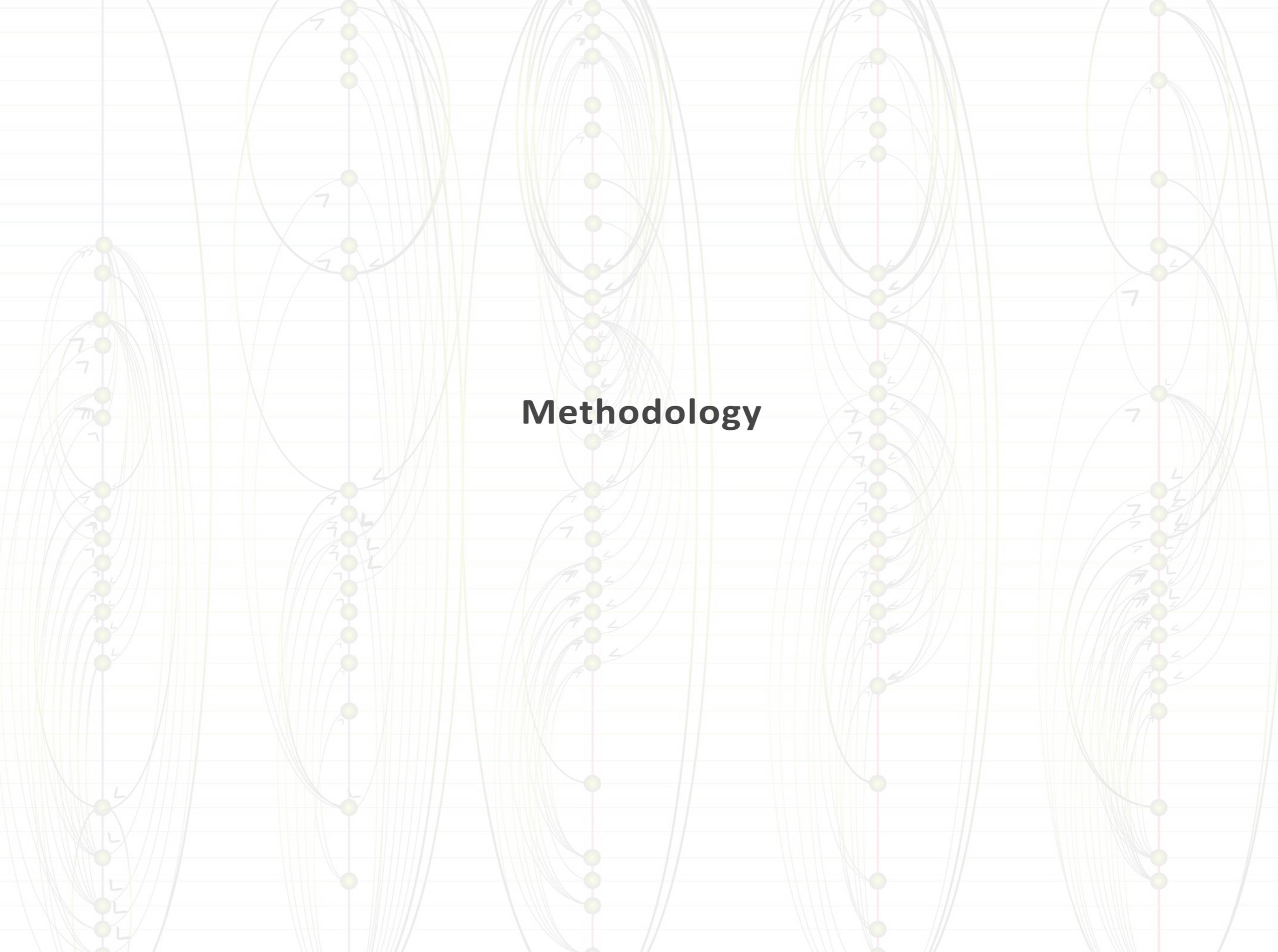
WILES, CADOPY - BRIMSTON

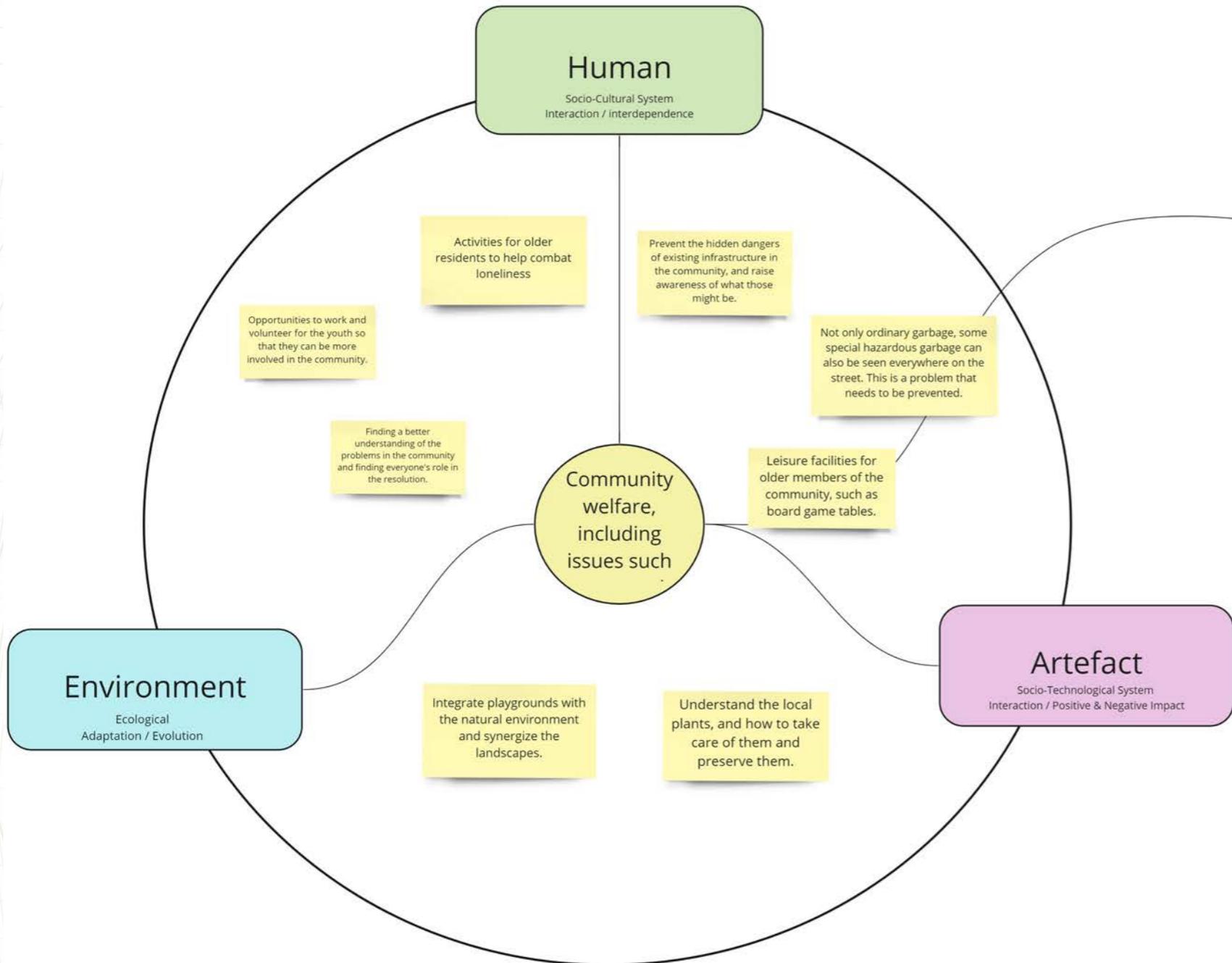
LANDSCAPE DESIGN





Methodology





Propose Possible Design App Ideas to address the problems.

Community Buddy App

Concept: The app will be available to the members of Grangetown. There will be two options:

1. 'I want to volunteer'
2. 'I need some help'

The members of the community can use this interface to support one another. For example, a young student can volunteer to help an elderly woman who needs help carrying her groceries, or an adult can volunteer to mentor a child or help with homework at the Grange Pavilion.

Users will be given ratings such as the system used in Uber and various other apps. There can be rewards given to those who achieve high ratings such as vouchers for free classes, or a meal at the coffee shop.

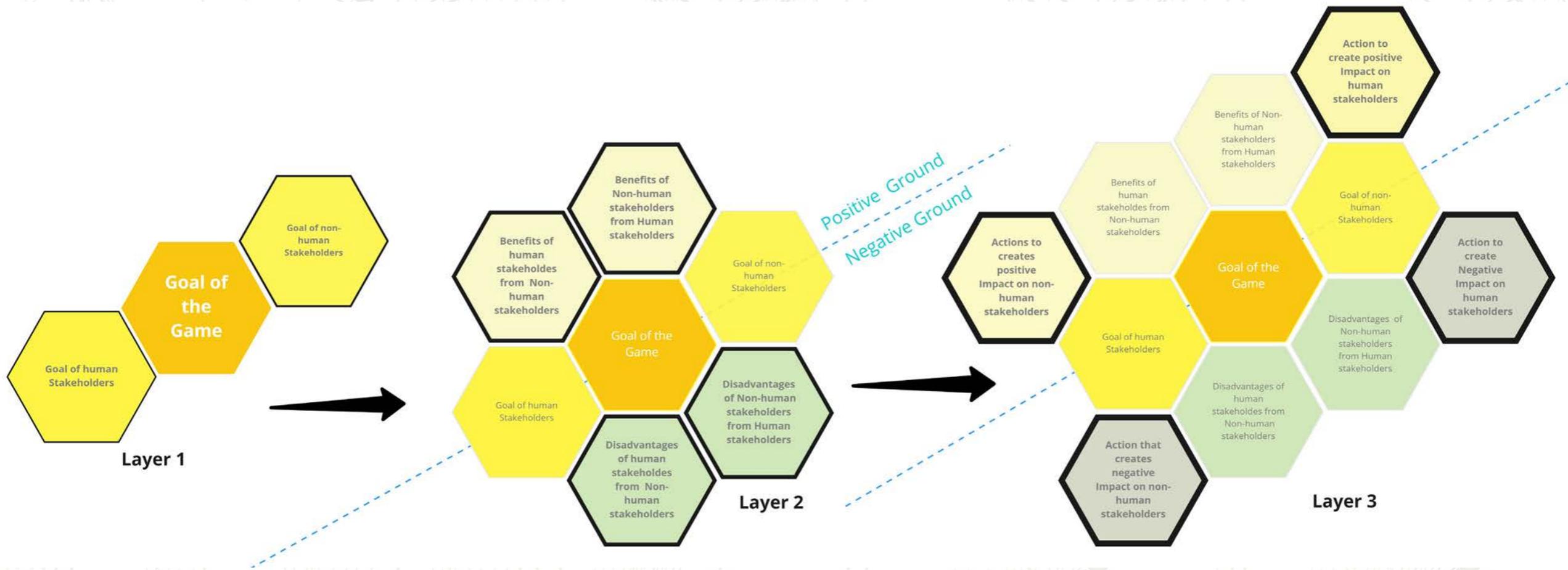
Propose Playful Design App Ideas to address the problems.

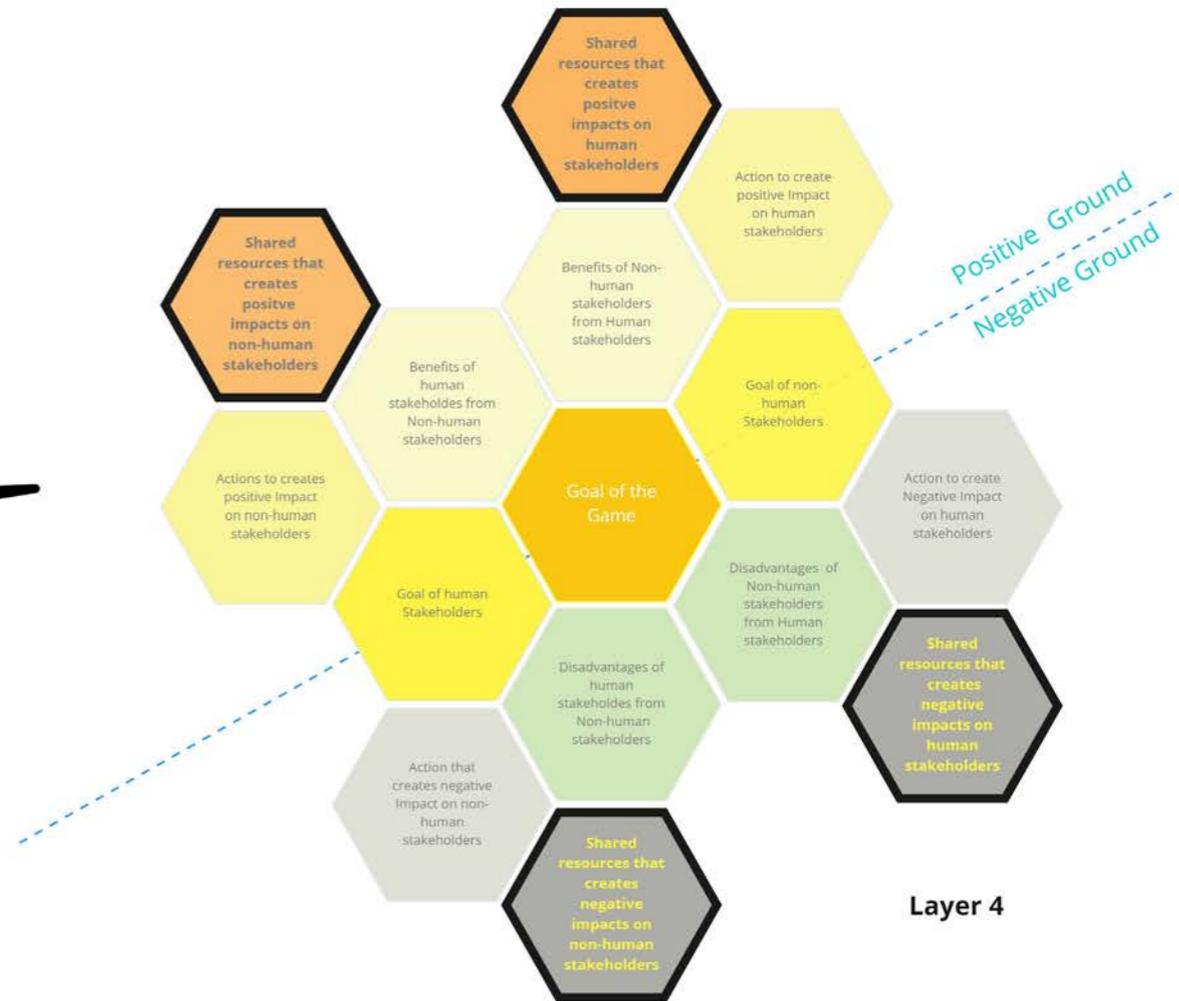
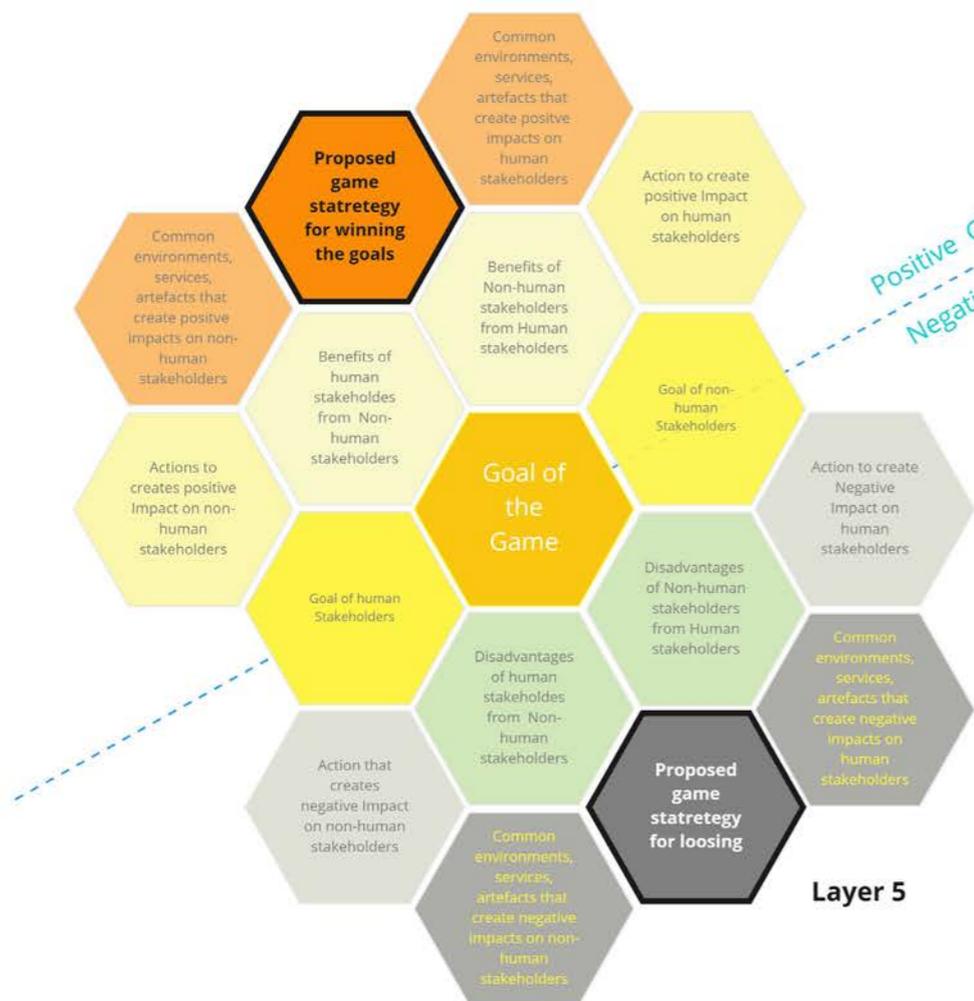
Catch the Dog - Grangetown Adventure

Game process: The character will run through paths in Grangetown to chase their dog who ran away, while avoiding some 'dangers' in the area. The dangers will be classified from 1-5, with level 1 dangers being not too harmful, and level 5 dangers being the most harmful.

Characters: Players can choose from a range of characters, all chosen to represent the human and non-human community of Grangetown.

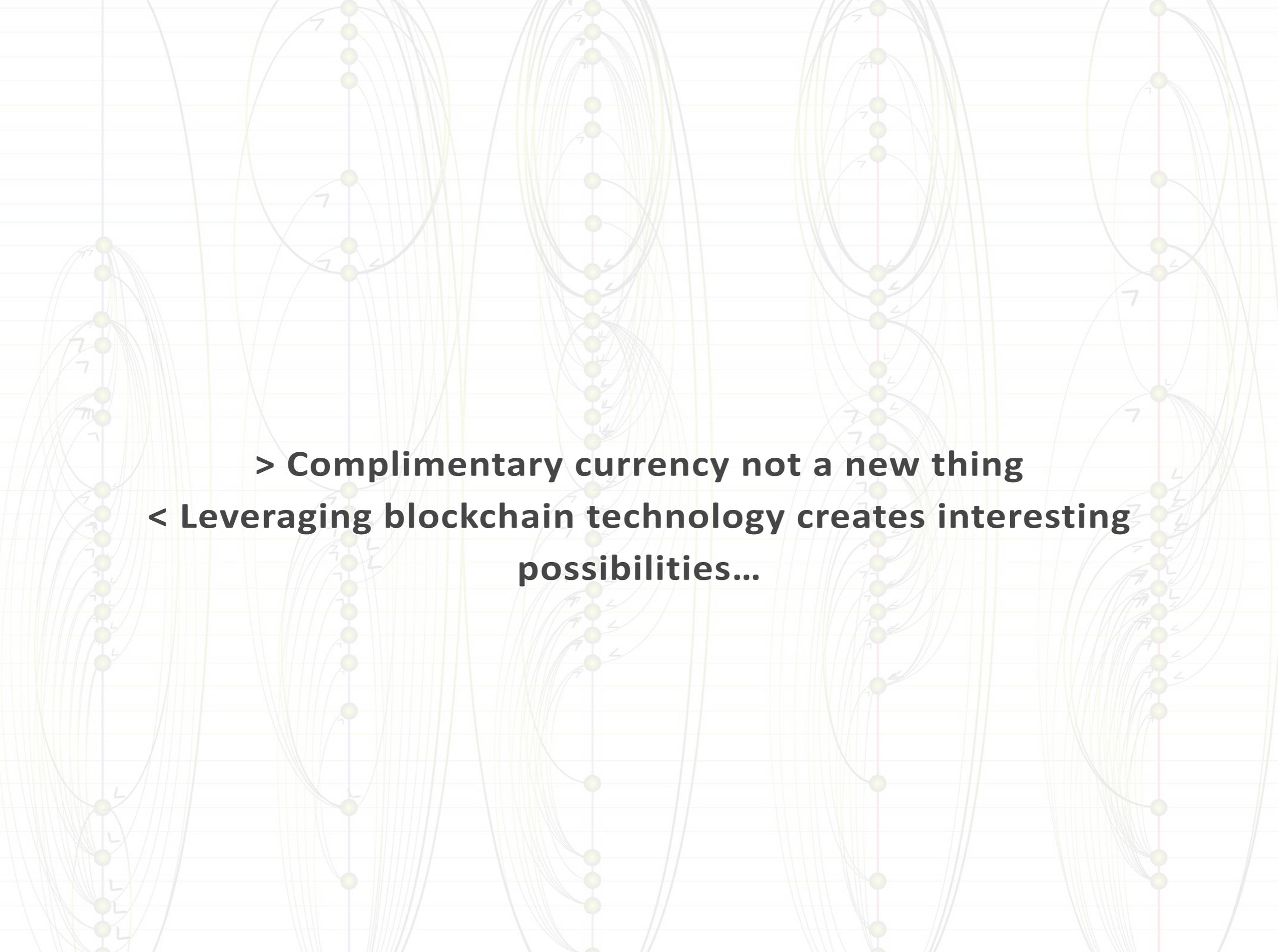
Goal of the game: The goal of the game is to make players aware of the dangers in their community, and what to avoid. This awareness will hopefully lead to some proactive measures directed at reducing them



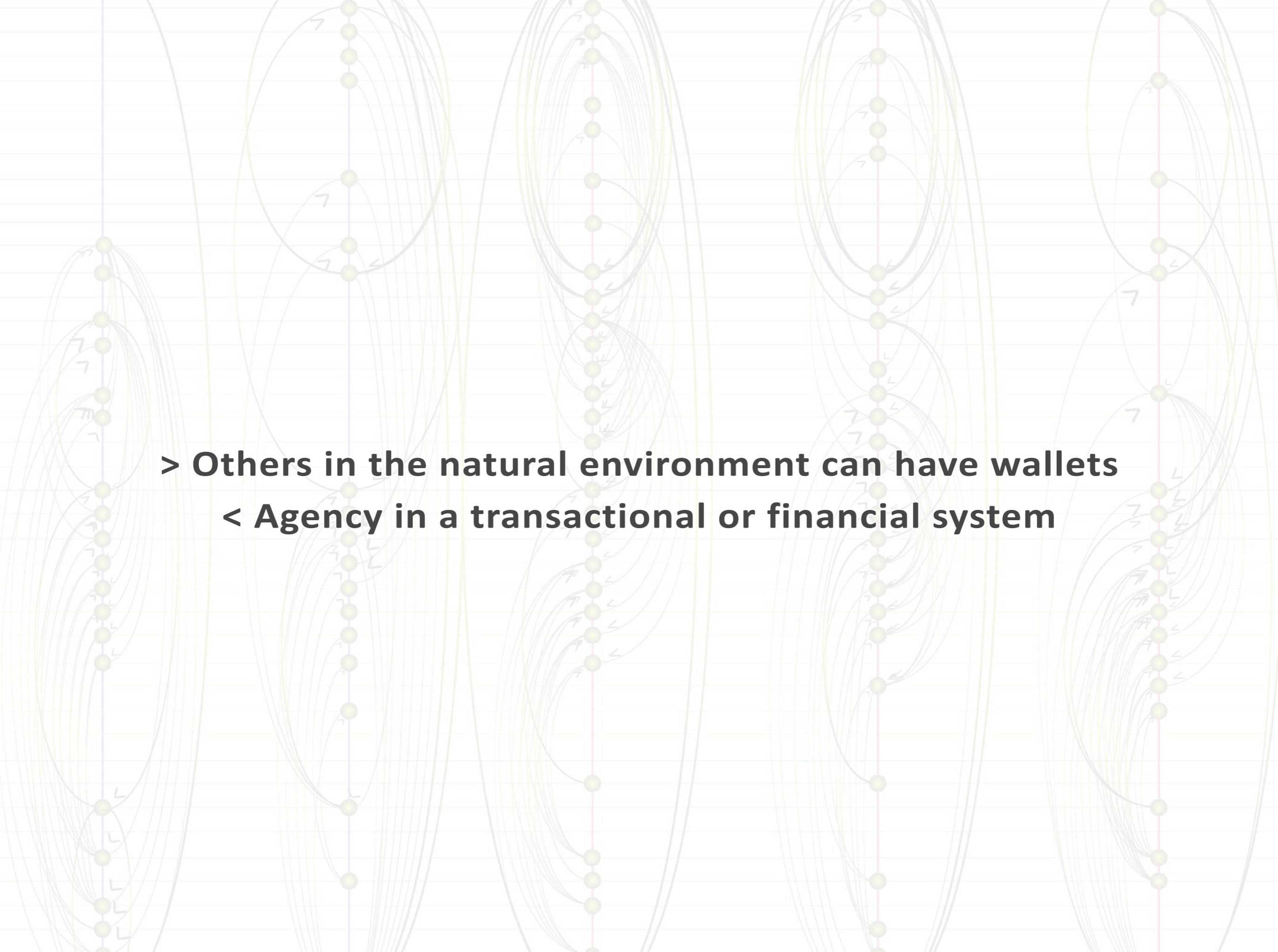








> Complimentary currency not a new thing
< Leveraging blockchain technology creates interesting possibilities...

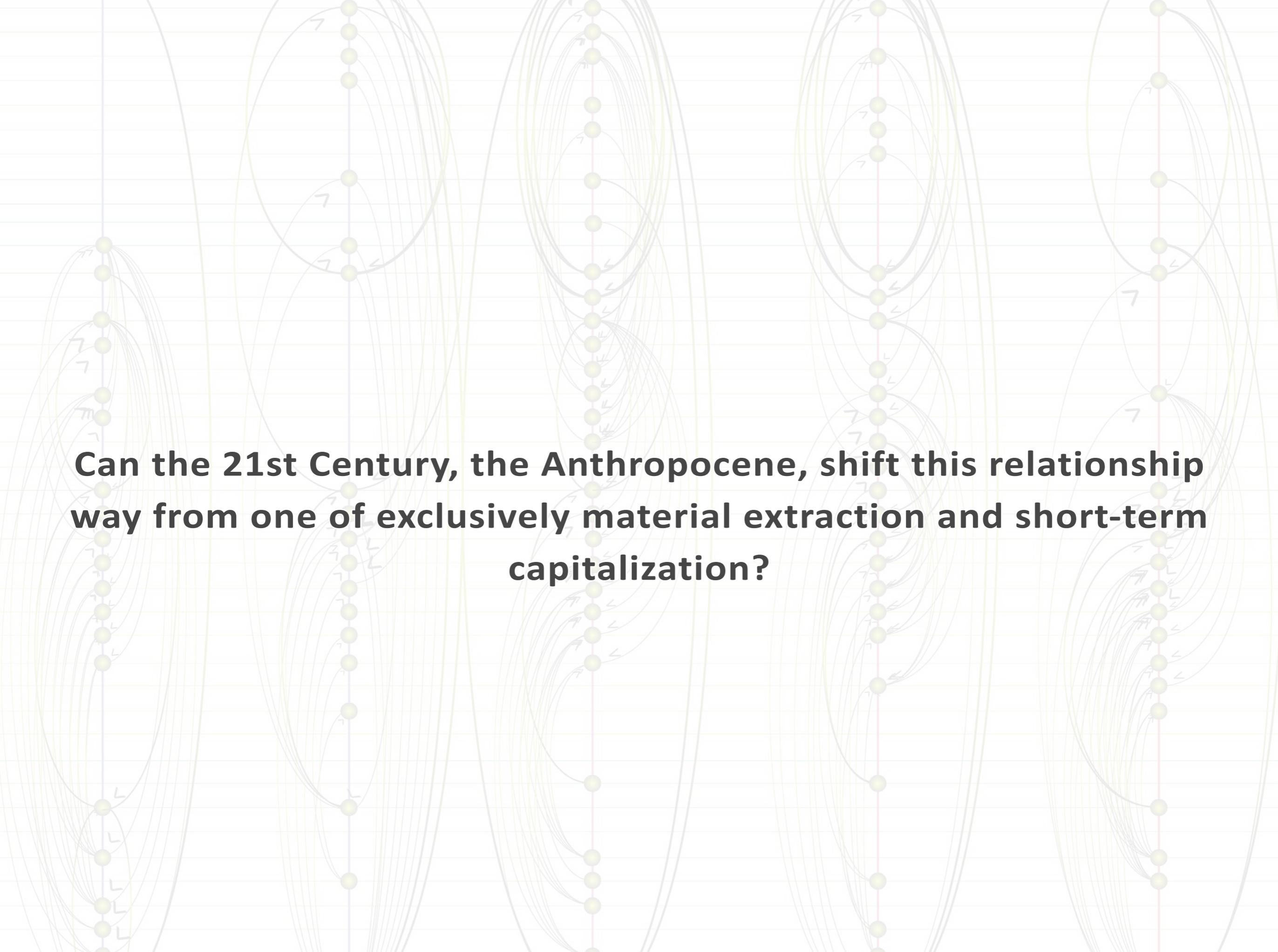


> Others in the natural environment can have wallets
< Agency in a transactional or financial system

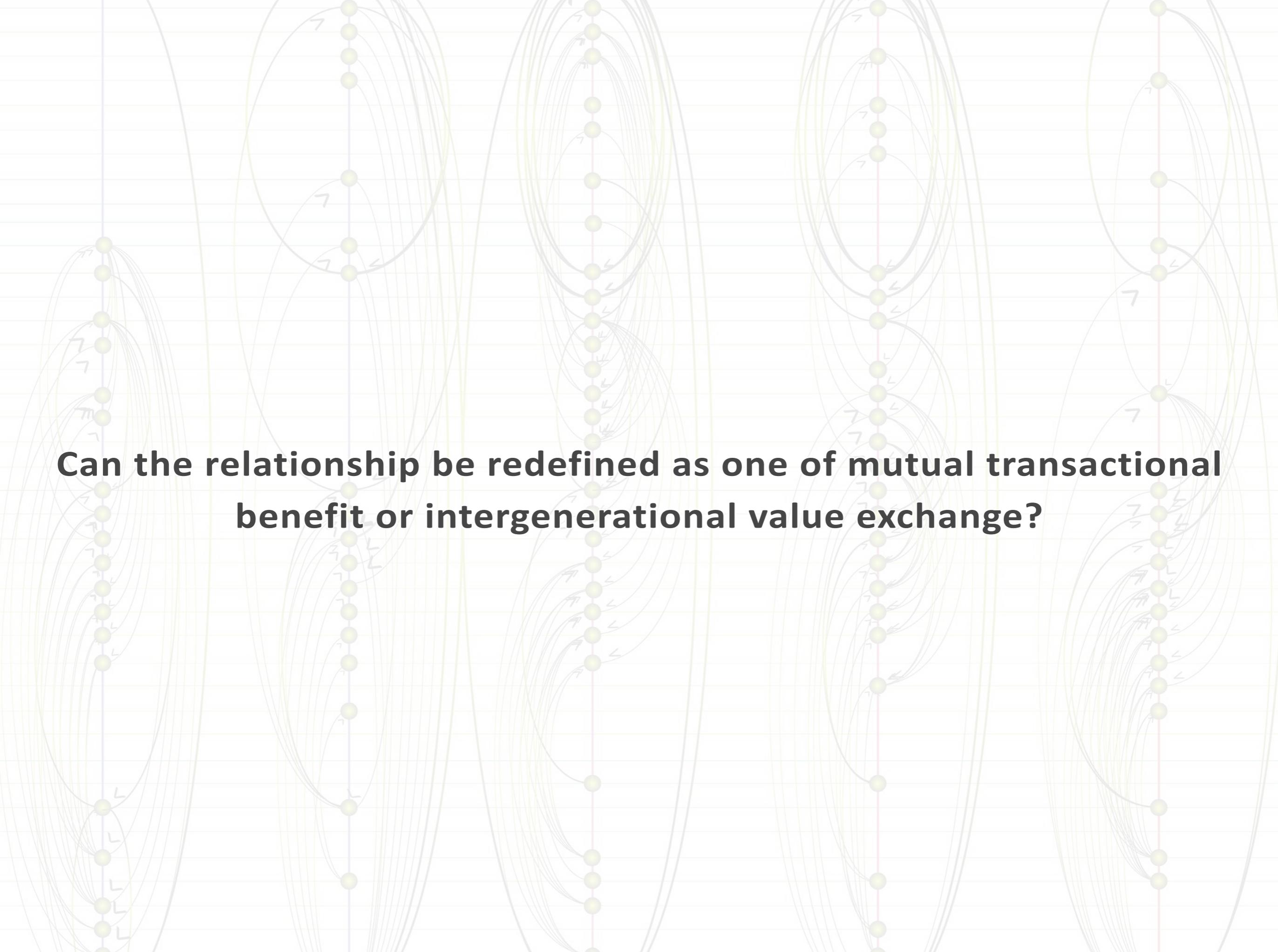


> Relationship within and towards the natural environment

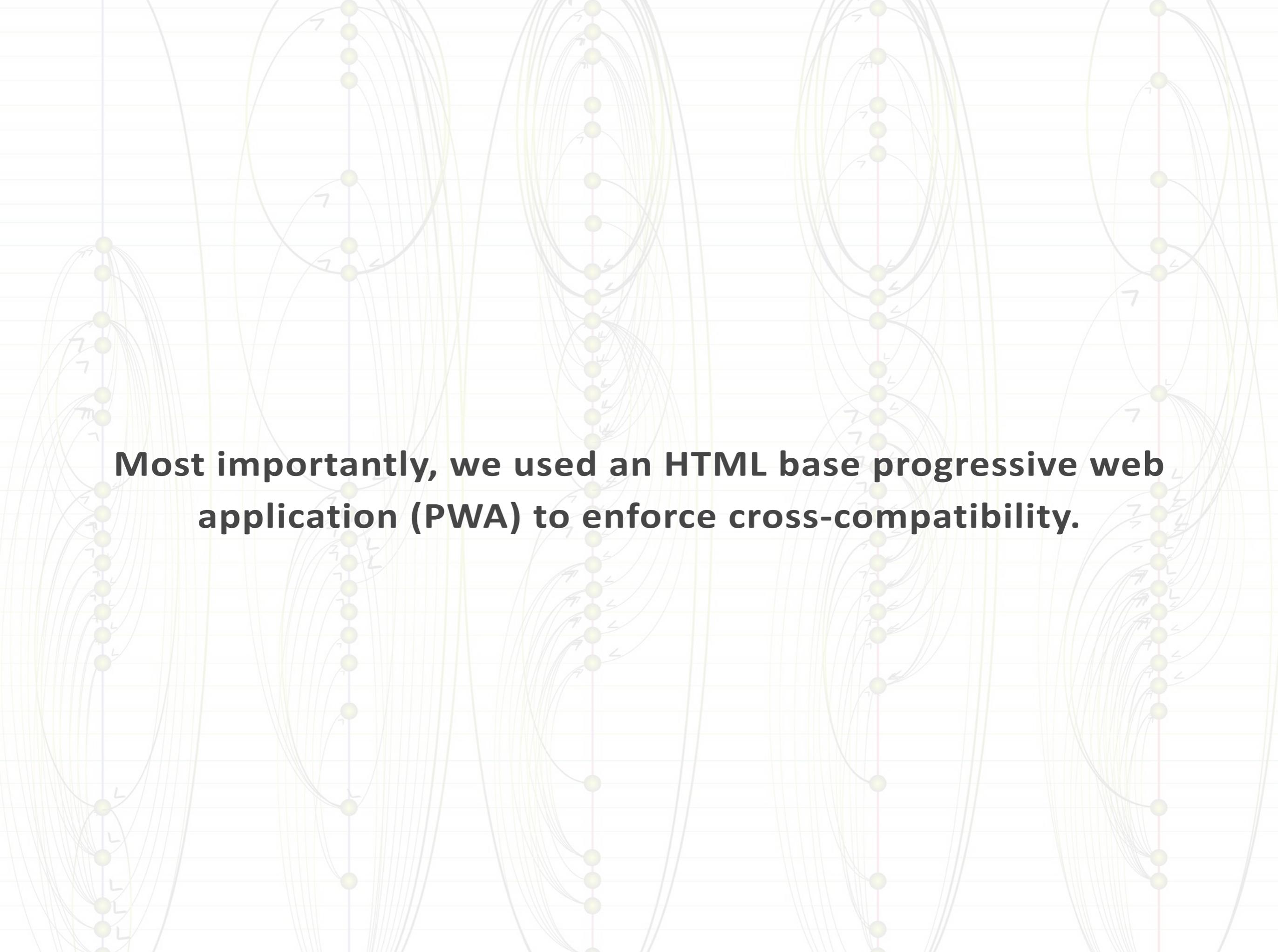
**19/20th Century defined this relationship through the
colonization and capitalization of the natural world**



**Can the 21st Century, the Anthropocene, shift this relationship
way from one of exclusively material extraction and short-term
capitalization?**



Can the relationship be redefined as one of mutual transactional benefit or intergenerational value exchange?



Most importantly, we used an HTML base progressive web application (PWA) to enforce cross-compatibility.



In more detail:

- HTML

- HTML 5

- JavaScript

- C#

- Google Maps API (Embedded in a .NET control)

- Font Awesome 4.7 Icon Typeface

Design's Boundary Conditions in Relation to Environmental Interactions GIGA-map

Systemic Approach to Architectural Performance and Wood as a Primary Medium to Architectural Performance project

Marie Davidová

This GIGA-map developed as a ZIP-analysis of GIGA-mapping Workshop lead by Birger Sevaldson that was mapping pavilions from the project Wood as a Primary Medium to Architectural Performance. It is mapping a problem of different types of environmental, biological as well as physical, interactions through a range of boundary conditions of different designs. The case designs were either authored or co-authored by the GIGA-map's author and were selected due to their suitability to the not fully strict 'gradient'.

The map lays out a matrix of parameters and relating their interactions that often generate more or less complex feedback loops, some of them cycling even in hierarchical constellations. The stroke thickness doesn't fully reflect the hierarchy in the system but the importance of related interactions. The gradient of the splines represents the boundary crossings, while the colour gradient of lines and texts for each project represent a range from design's openness to closeness of the boundary.

««««« fully open - boundary conditions - closed »»»»»



To Reflect Transitions: Memorial Site in Norway for The Victims of The Tussem Disaster Dec 20th 2004
Marie Davidová, Birger Sevaldson and Paul Steinhilber 2009

To Reflect Transitions: A proposal for environmental installation, reflecting sun light on sea surface, thus interacting with humidity level as well as with wind of the baywind that links connection with the place of the disaster through human.

instanFORM: City Intervention for festival urbanACT workshop festival, Marie Davidová and Kristof Hanisch (coll coll) with Marie Schwan and Boris Mikol (Zemorek), students Jiri Cochard, Peter Pávek, Maria Muzerová, Zuzana Pavlová, Pavol Malinský, Libor Malinský, Adam Konečný for Peter and Edward Seibert 2012

instanFORM: was a city intervention for generating concrete meeting point for public interaction, relaxation, parties gardening and play.

Landscape for Energy Exhibition in Nordberg (Eppelberg, Marie Davidová, colour selection by Marie Davidová 2009)

The Energy Exhibition is a concrete game in physical environment, relating to extreme wind conditions of the location. The landscape for exhibition use and different environments supported the human-computer interaction in its scenarios.

Model for Wood: Community Origin Furniture workshop festival, Marie Davidová, Simon Prohász, students: Palina Běláková, Doroteja Radová, Manjula Choudhury, Anil Ghosh, Monika Hájek, Wojtek Kozłowski, Lancelotti Albert, Martyna Rajewska, Simona Sirová, Agnieszka Tarczynska 2013

The project covers transformable furniture for public community garden in the city of Poznań. It enables a mixture of present and opportunistic use in various combinations, from shelter to conference tables.

Balloon Dome: Pavilion for Living City Festival (coll coll) Kristof Hanisch, Marie Davidová, Libor Malinský, Lucie Roubalová 2012

Balloon Dome was designed as a meeting and chill point for community Living City festival. Fully pervasively enveloping the space, the pavilion was designed in white, responding to its weight to humidity level.

ODOP: The Environmental Summer Pavilion for Living City Festival (coll coll) Kristof Hanisch, Marie Davidová, Simon Prohász, Martin Mladý, students: Jana Muzerová, Anna Muzerová, Antonín Štěpánek, Barbara Štefánková, Jakub Ašpöck, Jiri Pávek, Jiri Prohász, Petr Tala, Tomáš Alšanský, Radim Štěpánek, Otaš Antonín, Tomáš Čížek, Filip Janouš, Tomáš Kříž, Marie Křiváňová, Soňa Křiváňová, Martin Vaněk, Jakub Vaněk and Petr Nováček 2014

ODOP is a movable and public pavilion in use. While being weather-responsive, it's a simple ground environment for opportunistic use.

HOLEDOG: The generating of talent (Marie Davidová 2007)

HOLEDOG: The generating of talent is a city environmental installation that generates complex, non-representational output from environmental input through a series of responses. It's a multi-stage in variety of physical and visual information condition in Oslo as well as a radio signal intensity. The installation moves by interaction of material and temperature before memory alloy) while the two layers of acrylic surfaces interact perfect, 3D effect, which reacts with the sound and light input. The installation is designed to generate present urban environment.

ARCOPORT 2013 (coll coll) Marie Davidová, Kristof Hanisch in cooperation with graphic studio Stella Design (Jan Šalata 2013)

ARCOPORT is a club for international film festival in Karlovy Vary arranged in different film-music home, with parking garage generating a tension between public and private, indoor-outdoor space. Specially designed for the summer event, the pavilion offered comfortable outdoor environment for work, relaxation, social interaction and parties.

The courtyard glass wall occupied by balloons for people to chill out, play and interact.

PA 1st: Proposal for a museum complex in Sundbyrd - Norway (coll coll) Marie Davidová, Kristof Hanisch, Martin Prohász in cooperation with Marko Pevak, Jan Zemanek, Jaroslav Pevak & Carl Nissen-cow 2011

PA 9: Prototype (Marie Davidová 2006)

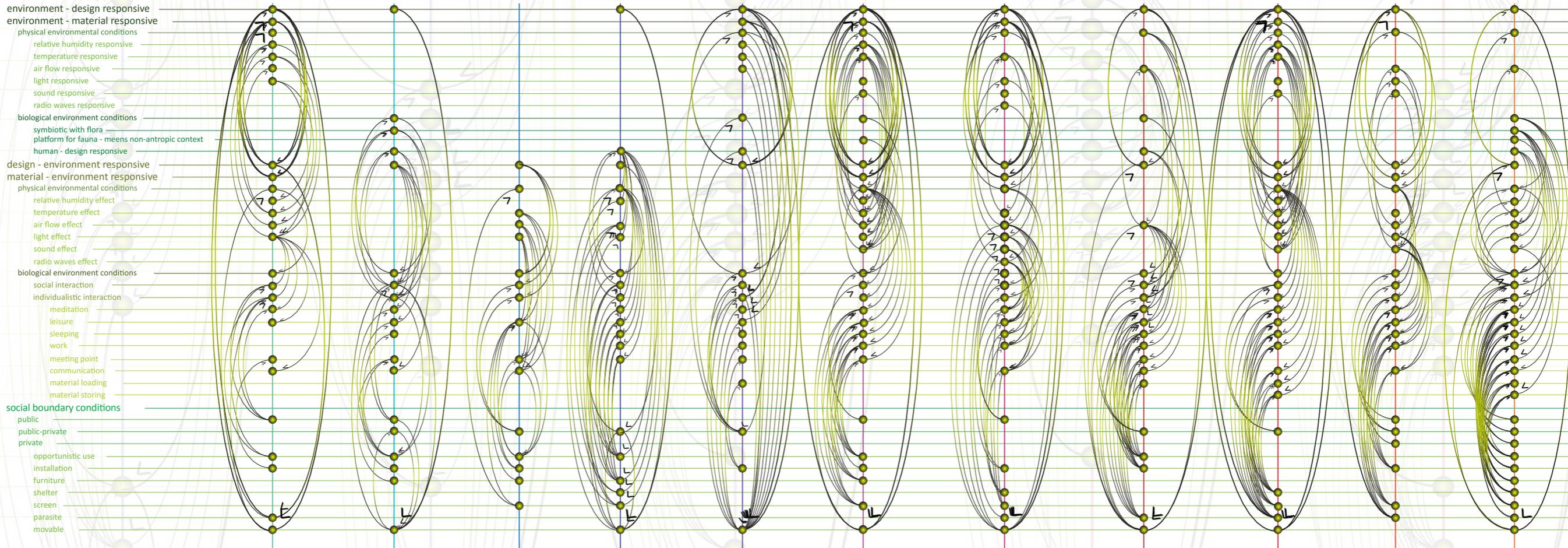
The museum complex project with urban projects for the climate, supported by environment responsive envelope Ray 2. The semi-interior space of each system generates both, present climate for visitors as well as preserving conditions for the exhibits.

BARCODE 8.0.1 - Facade Concept Development (coll coll) Marie Davidová, Kristof Hanisch, Martin Prohász in cooperation with Marko Pevak, Jan Zemanek, Jaroslav Pevak & Carl Nissen-cow 2011

On the BARCODE 8.0.1 facade concept development we were testing different types and scales of pattern and perforations of materials. The density of the material properties as well as irregularity of the pattern should lower constant effect given by the urban settings and support light and general visual diversity of both interior as well as exterior.

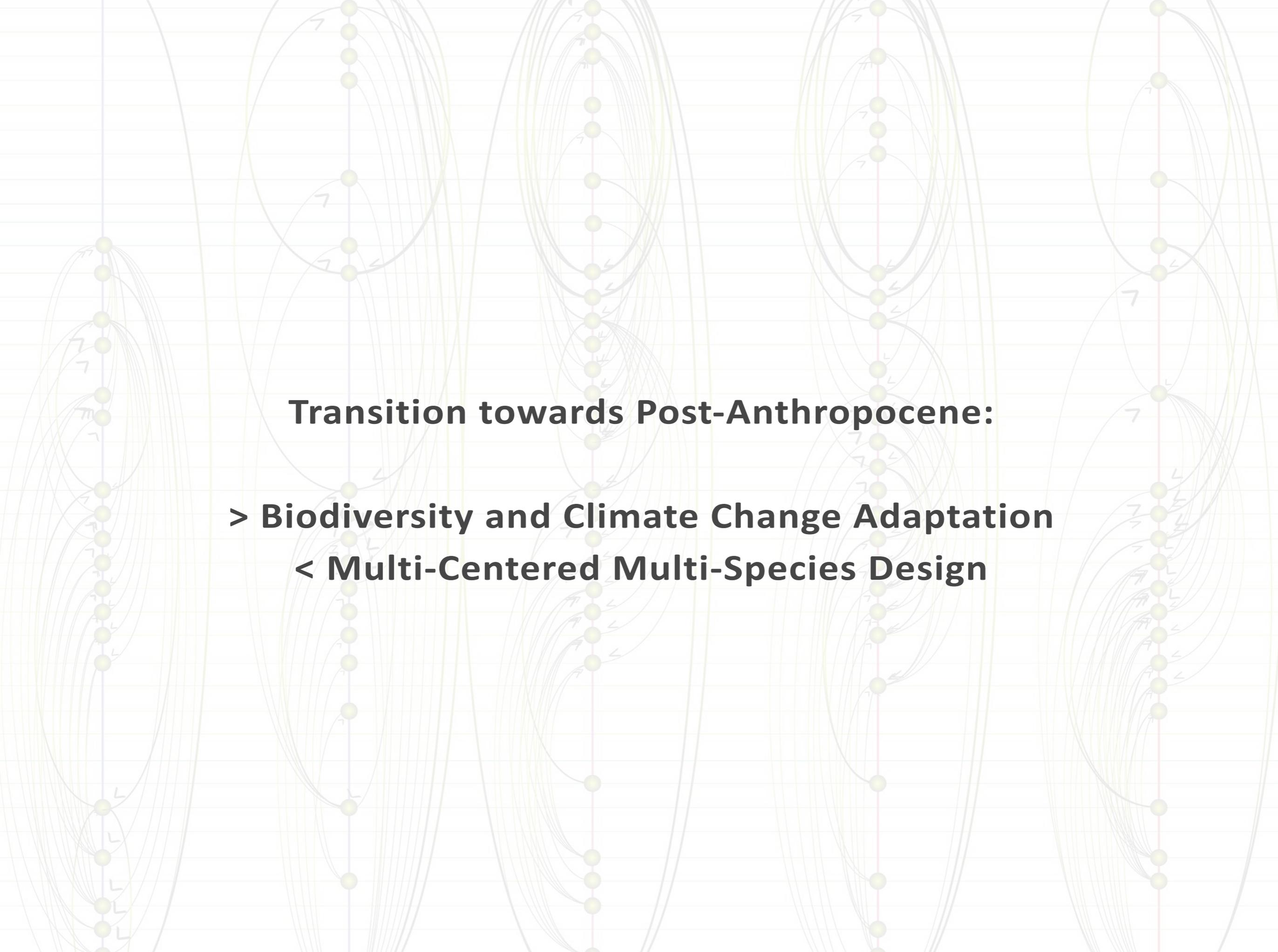
SunlightHouse (Marie Davidová & Prohász 2010, 2011)

SunlightHouse is built from the real trees in the forest and a glass for installation. It consists of stone base, pine trees' growth formed by real canopy and glass in the forest, stone-forged canopy and central fire place. The canopy is present just in the time of installation. The stone pillars serve as both, it's a site specific local material structure that is in harmony with the elements in the forest and its environmental input that will evolve due to its own ecology and growth over time.



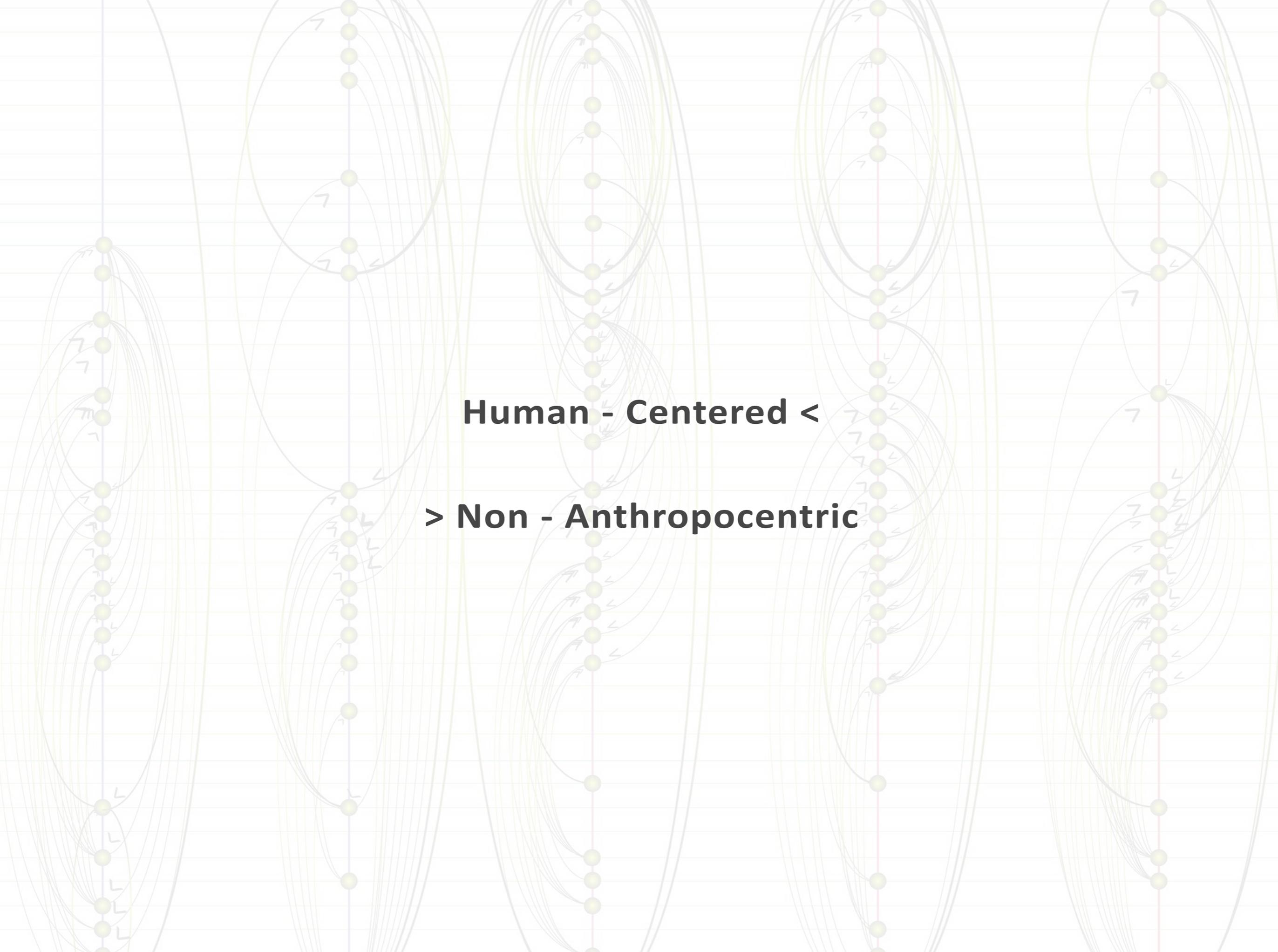
environment - design responsive

- environment - material responsive
- physical environmental conditions
 - relative humidity responsive
 - temperature responsive
 - air flow responsive
 - light responsive
 - sound responsive
 - radio waves responsive
- biological environment conditions
 - symbiotic with flora
 - platform for fauna - means non-antropic context
 - human - design responsive
- design - environment responsive**
- material - environment responsive**
- physical environmental conditions
 - relative humidity effect
 - temperature effect
 - air flow effect
 - light effect
 - sound effect
 - radio waves effect
- biological environment conditions
- social interaction
 - individualistic interaction
 - meditation
 - leisure
 - sleeping
 - work
 - meeting point
 - communication
 - material loading
 - material storing
- social boundary conditions**
 - public
 - public-private
 - private
 - opportunistic use
 - installation
 - furniture
 - shelter
 - screen
 - parasite
 - movable

The background features a complex diagram on a light green grid. It consists of a vertical central axis with 15 yellow circular nodes. From each node, multiple thin, curved lines radiate outwards, creating a series of overlapping, elongated oval shapes. Some nodes have small arrows pointing towards or away from them. The overall structure is symmetrical and resembles a multi-centered network or a multi-species design.

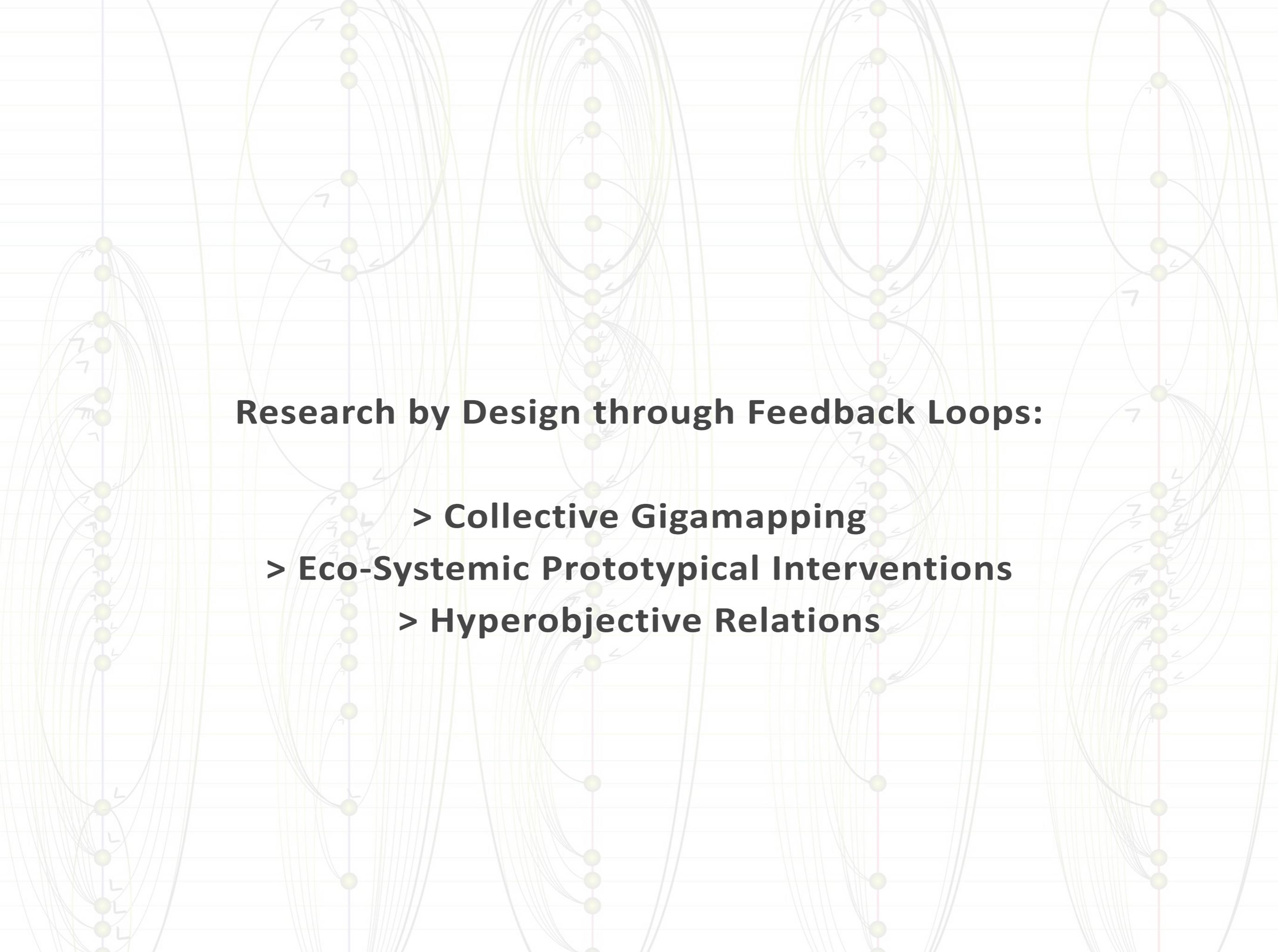
Transition towards Post-Anthropocene:

- > Biodiversity and Climate Change Adaptation**
- < Multi-Centered Multi-Species Design**



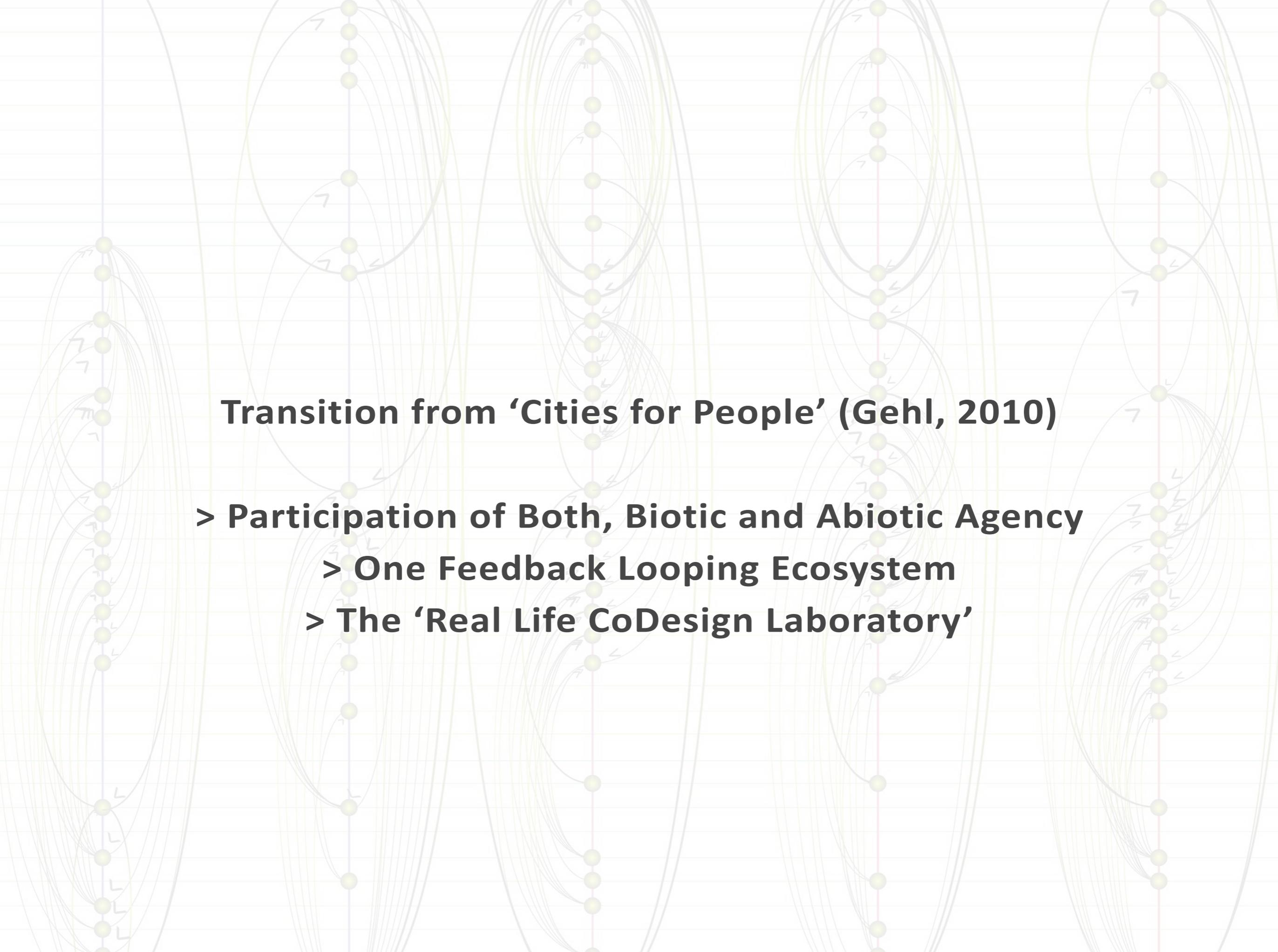
Human - Centered <

> Non - Anthropocentric

The background features a complex diagram of feedback loops on a light green grid. It consists of five vertical columns of yellow circular nodes. Each column is connected to the others by a dense network of thin, grey, curved lines that form multiple overlapping loops. Some nodes have small arrows pointing to the right, and some have small 'L' symbols. The overall structure is symmetrical and intricate, representing a system of interconnected feedback loops.

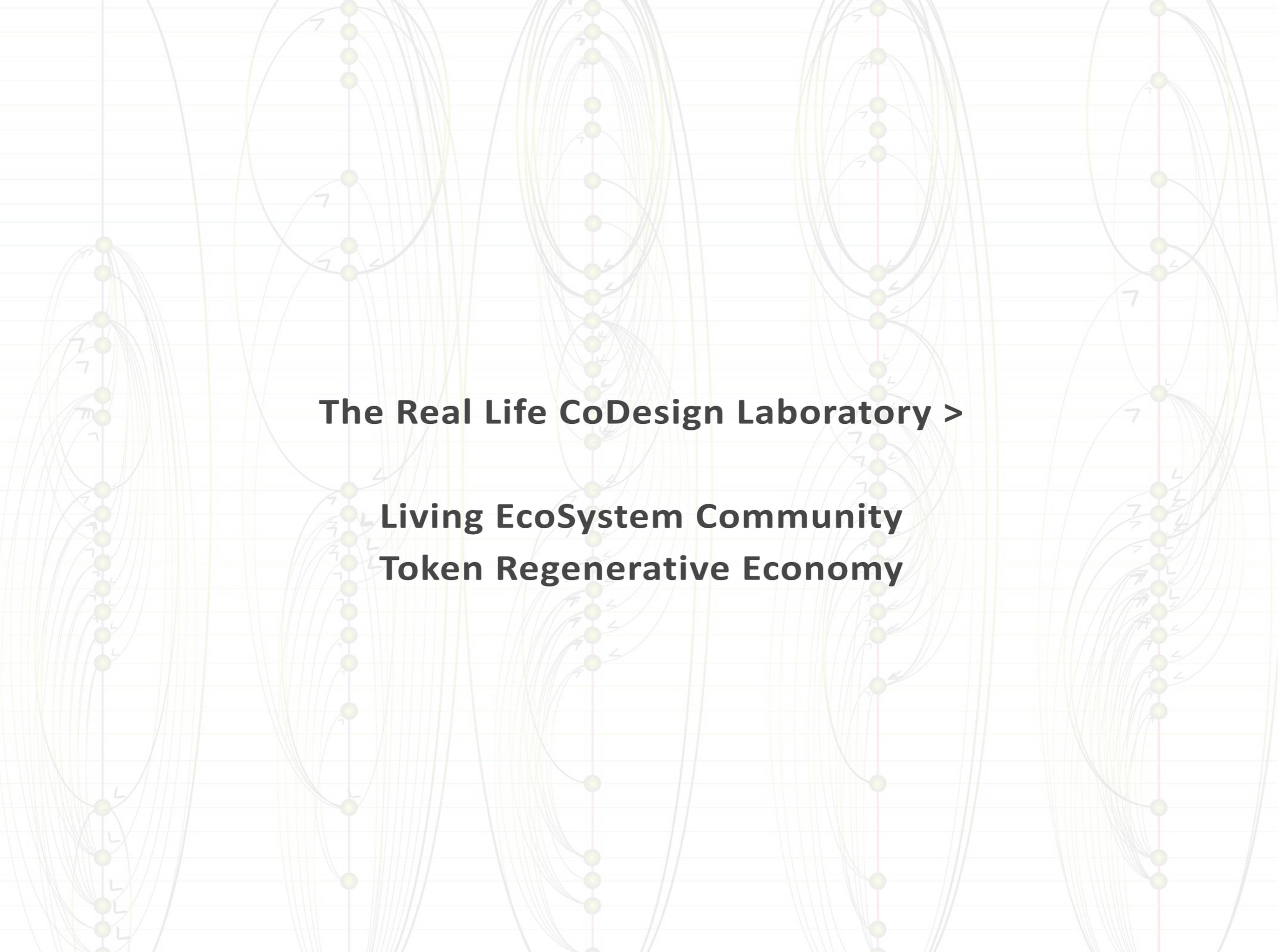
Research by Design through Feedback Loops:

- > Collective Gigamapping**
- > Eco-Systemic Prototypical Interventions**
- > Hyperobjective Relations**



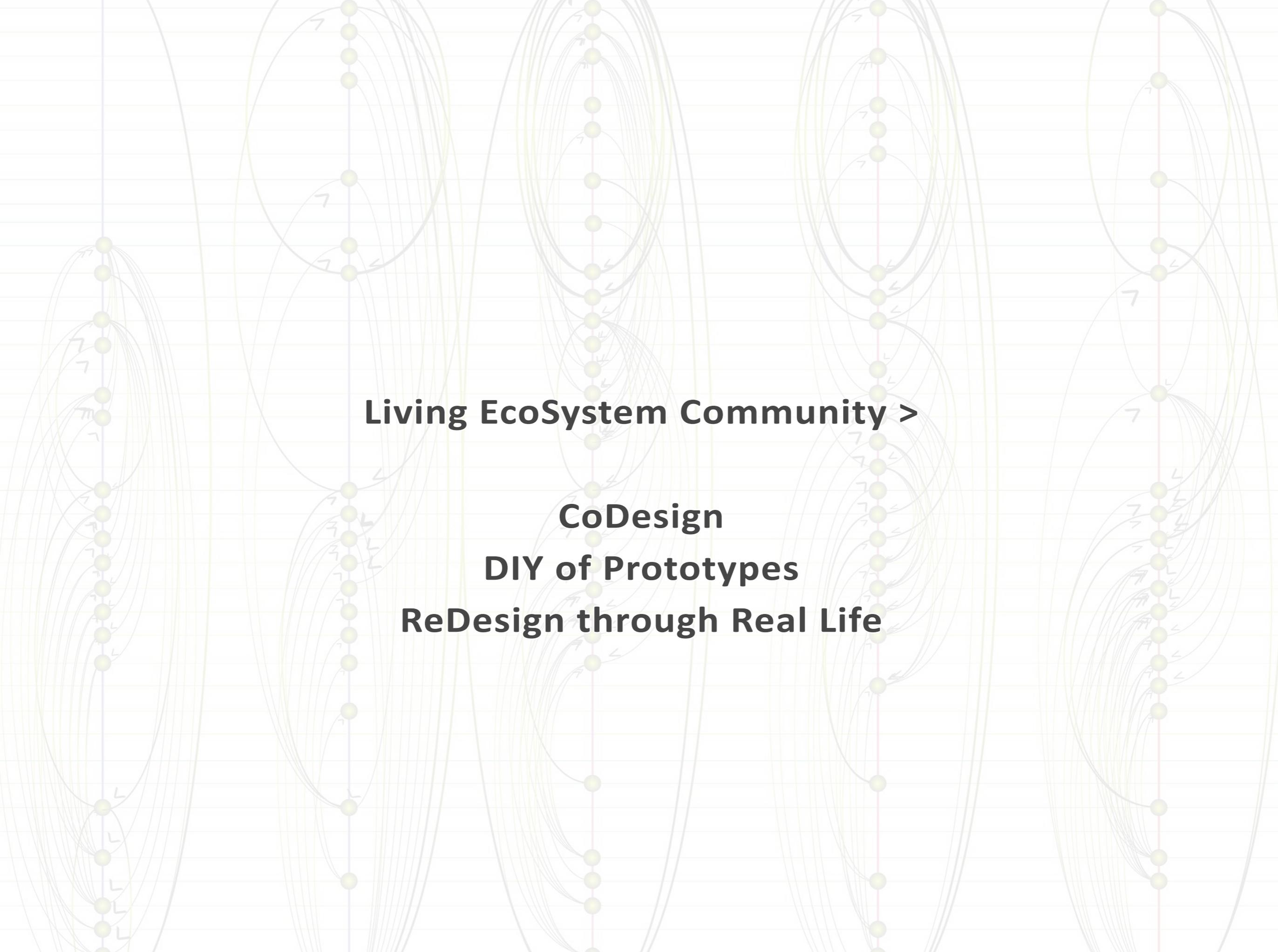
Transition from 'Cities for People' (Gehl, 2010)

- > Participation of Both, Biotic and Abiotic Agency**
 - > One Feedback Looping Ecosystem**
 - > The 'Real Life CoDesign Laboratory'**

The background features a complex diagram on a light green grid. It consists of five vertical chains of yellow circular nodes. Each chain is connected to the others by a dense web of thin, light-colored lines. Small arrows are scattered throughout the diagram, indicating various directions of flow or interaction between the nodes. The overall structure suggests a highly interconnected network or system.

The Real Life CoDesign Laboratory >

**Living EcoSystem Community
Token Regenerative Economy**

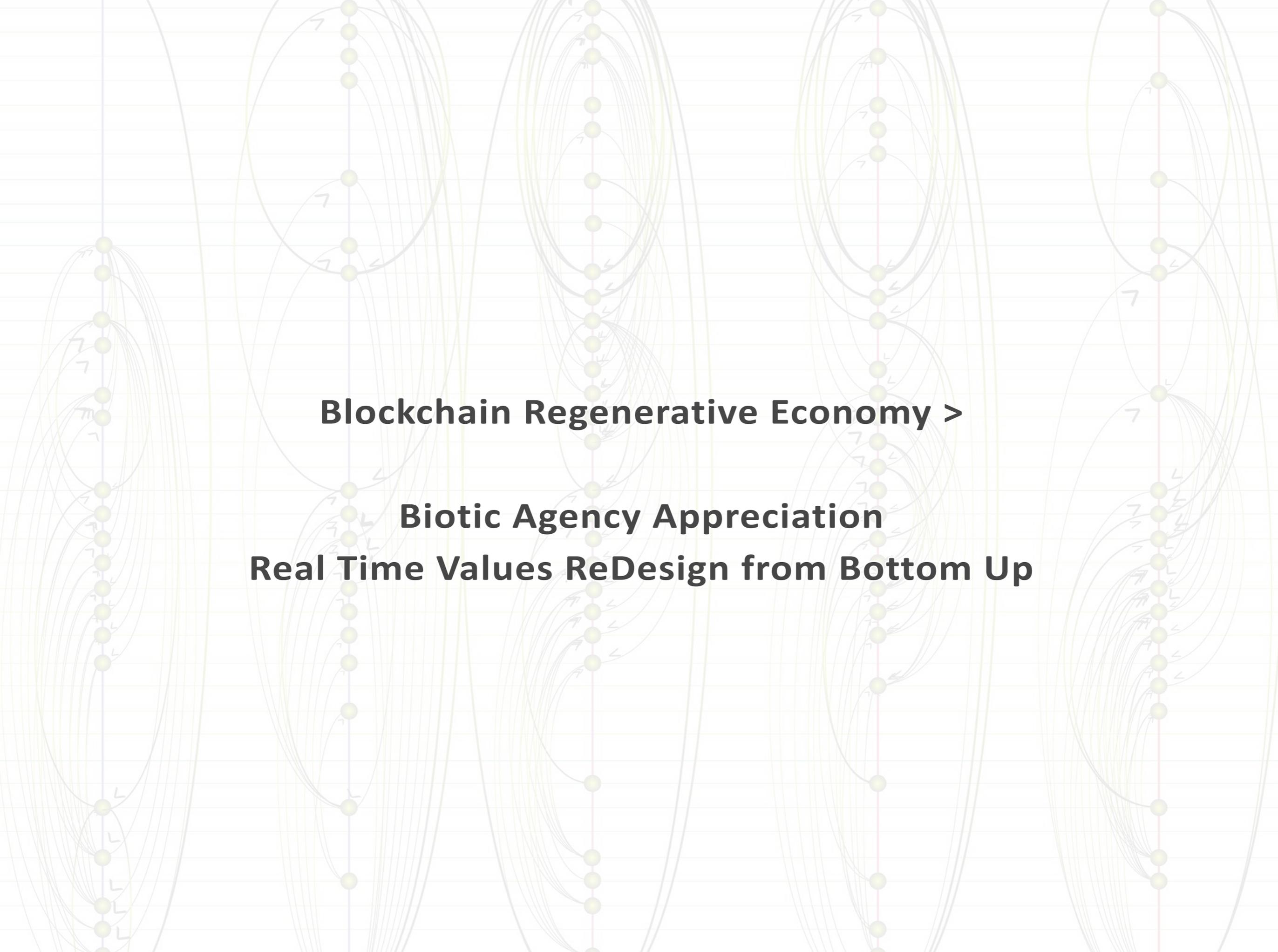


Living EcoSystem Community >

CoDesign

DIY of Prototypes

ReDesign through Real Life

The background features a complex, multi-layered diagram on a light green grid. It consists of several vertical chains of yellow circular nodes. These chains are interconnected by numerous thin, grey, curved lines that form a dense, web-like structure. Some nodes have small, hand-drawn arrows pointing in various directions, suggesting a flow or process. The overall appearance is that of a technical or conceptual diagram, possibly representing a network or a data structure.

Blockchain Regenerative Economy >
Biotic Agency Appreciation
Real Time Values ReDesign from Bottom Up

Thank You!

Marie Davidová, IntCDC University of Stuttgart

Shanu Sharma, School of Architecture and Planning Bhopal

Dermott McMeel, Auckland University of Technology

Fernando Loizides, School for Computer Science and Informatics, Cardiff University

