

# TECHNO-SOCIAL INNOVATION IN THE COLLABORATIVE ECONOMY

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# RESEARCH QUESTION

The role of open-source technologies and the digital commons in the creation of a collaborative economy?



# THE COMMONS

The commons consist of distributed or **common property** resources/infrastructures (natural resources, technology, knowledge, capital, culture), **self-managed** by user **communities** in accordance with collectively established rules or norms.

## Types and examples:

- **local**: pastures, forests, irrigation fields, a farm, a building, a park
- **global**: science, knowledge, information, language, the digital commons, airwaves
- **cosmolocal**: the digital commons (design, knowledge and software) connecting to hardware locally

Decentralization

Self-governance

Do-ocracy

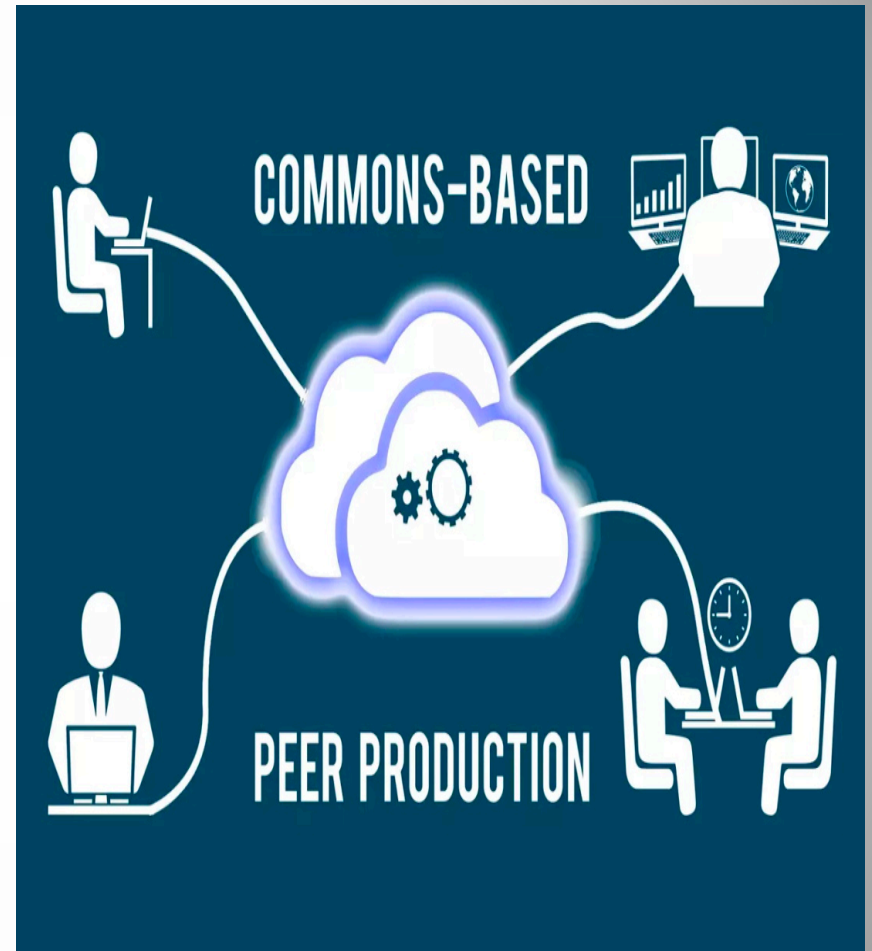
Stigmergy = indirect coordination

Modularity

Holoptism = transparency

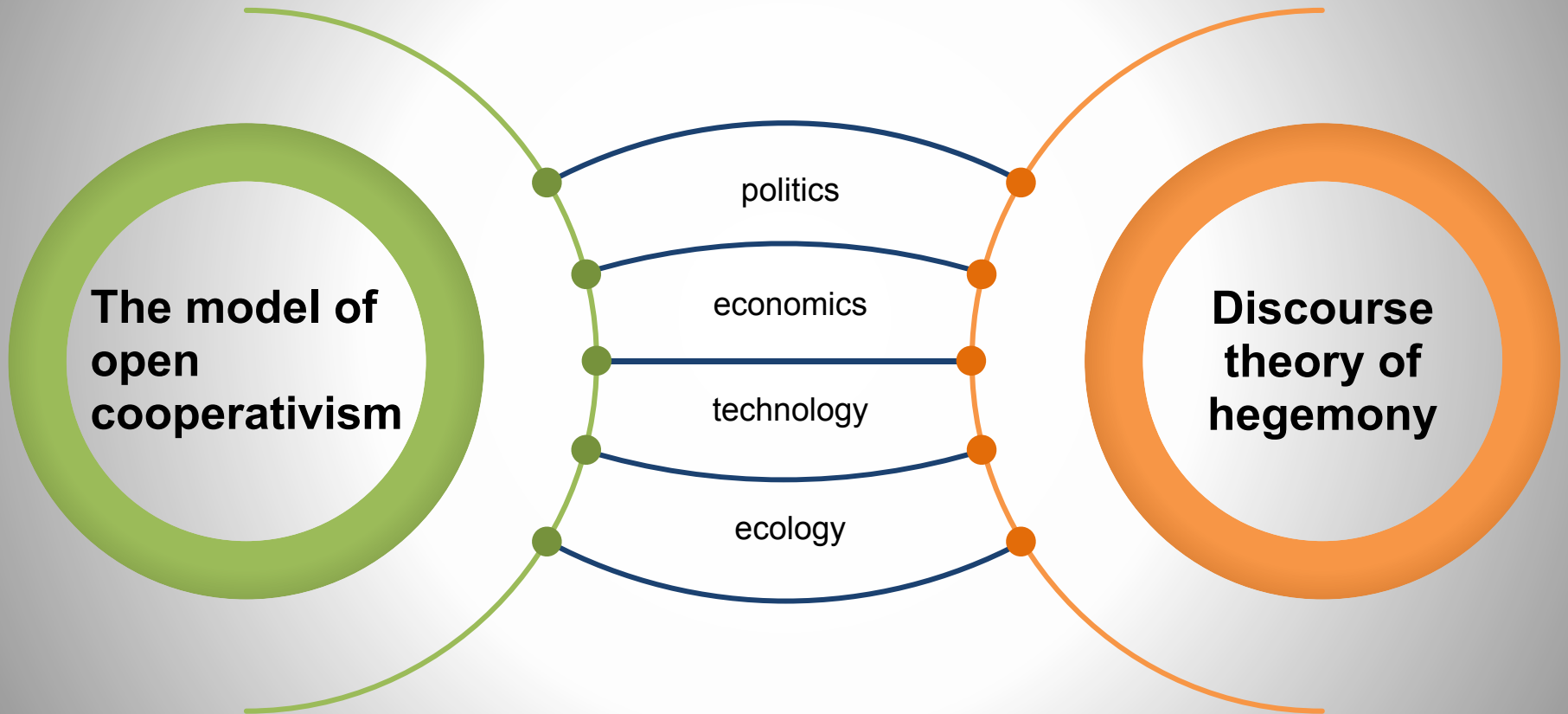
Value distribution

Sharing, openness





# THEORETICAL FRAMEWORK



## How ? > **Methodology**

Expanding/applying Laclau and Mouffe's discourse analysis (theory) in economics and organisation theory through a multi-case study

## Why? > **Research objective**

To reveal the politics (norms, values, power relations) of economics and organization theory

To articulate hegemony and counter-hegemony



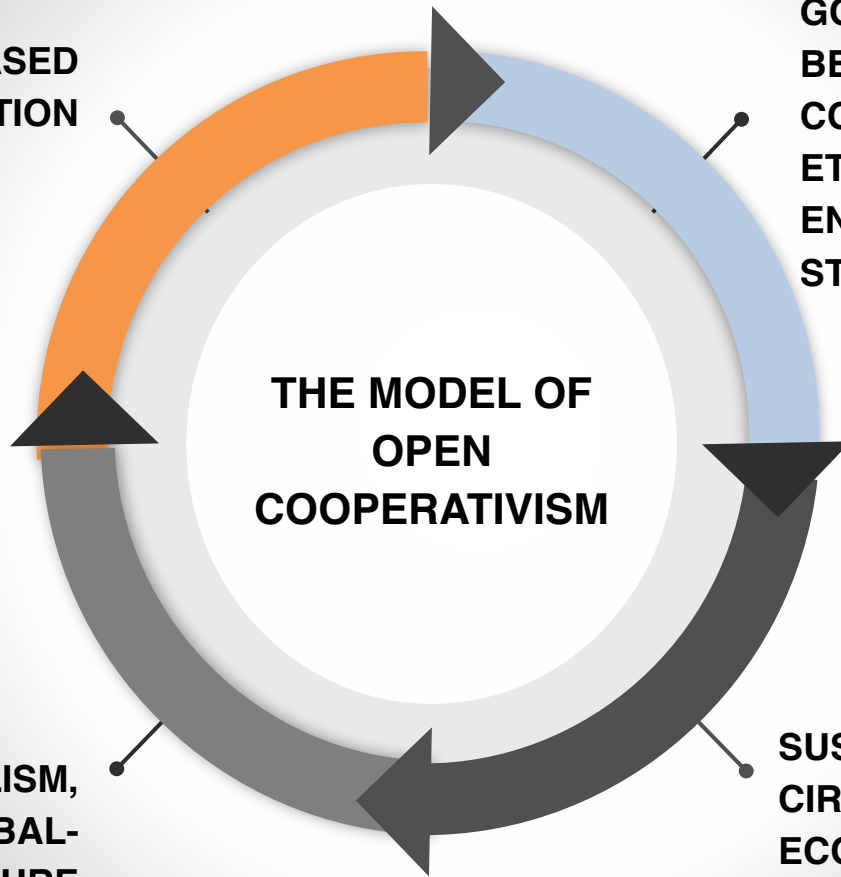
**COMMONS-BASED  
PEER PRODUCTION**

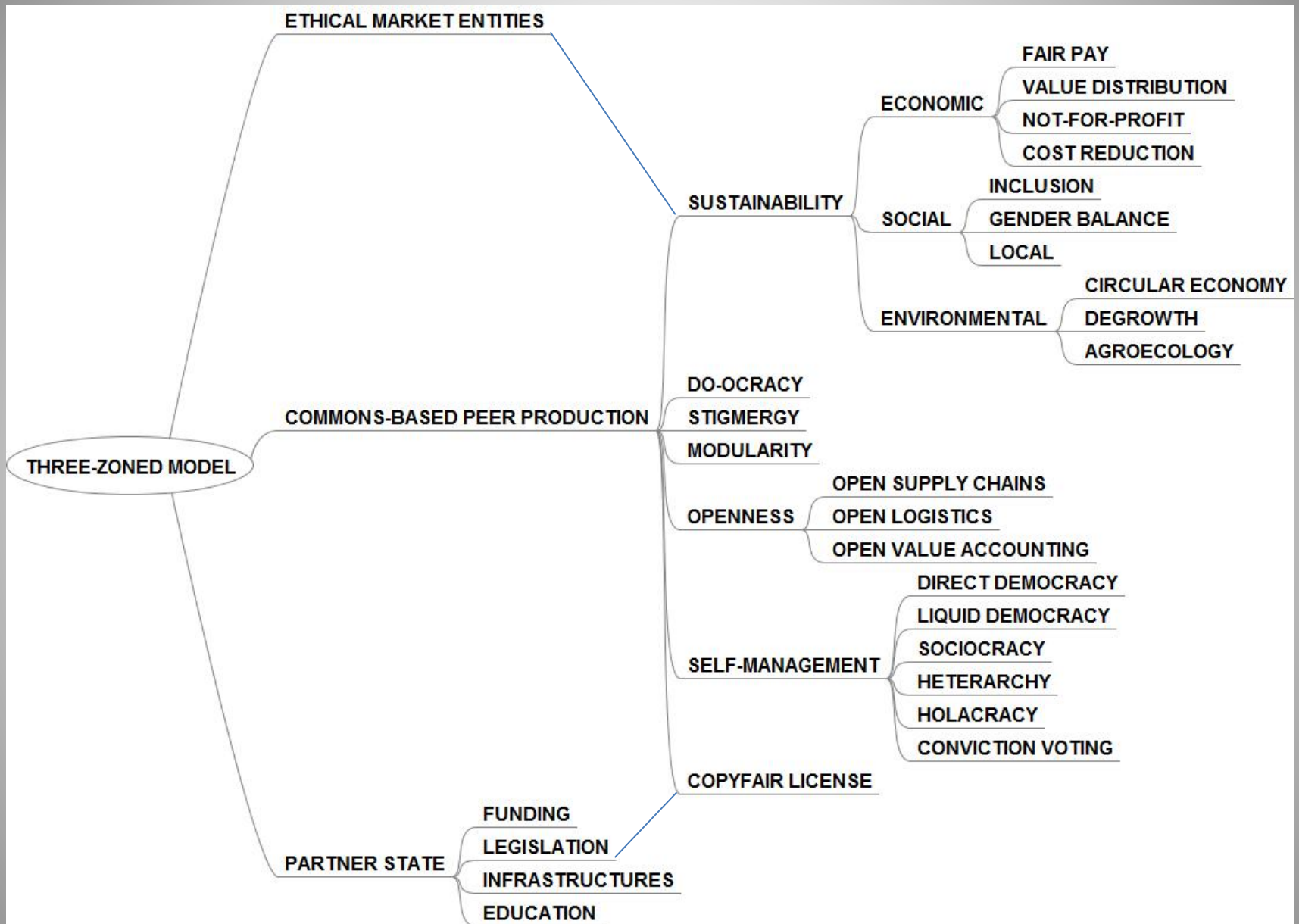
**MULTISTAKEHOLDER  
GOVERNANCE  
BETWEEN THE  
COMMONS,  
ETHICAL MARKET  
ENTITIES AND A PARTNER  
STATE**

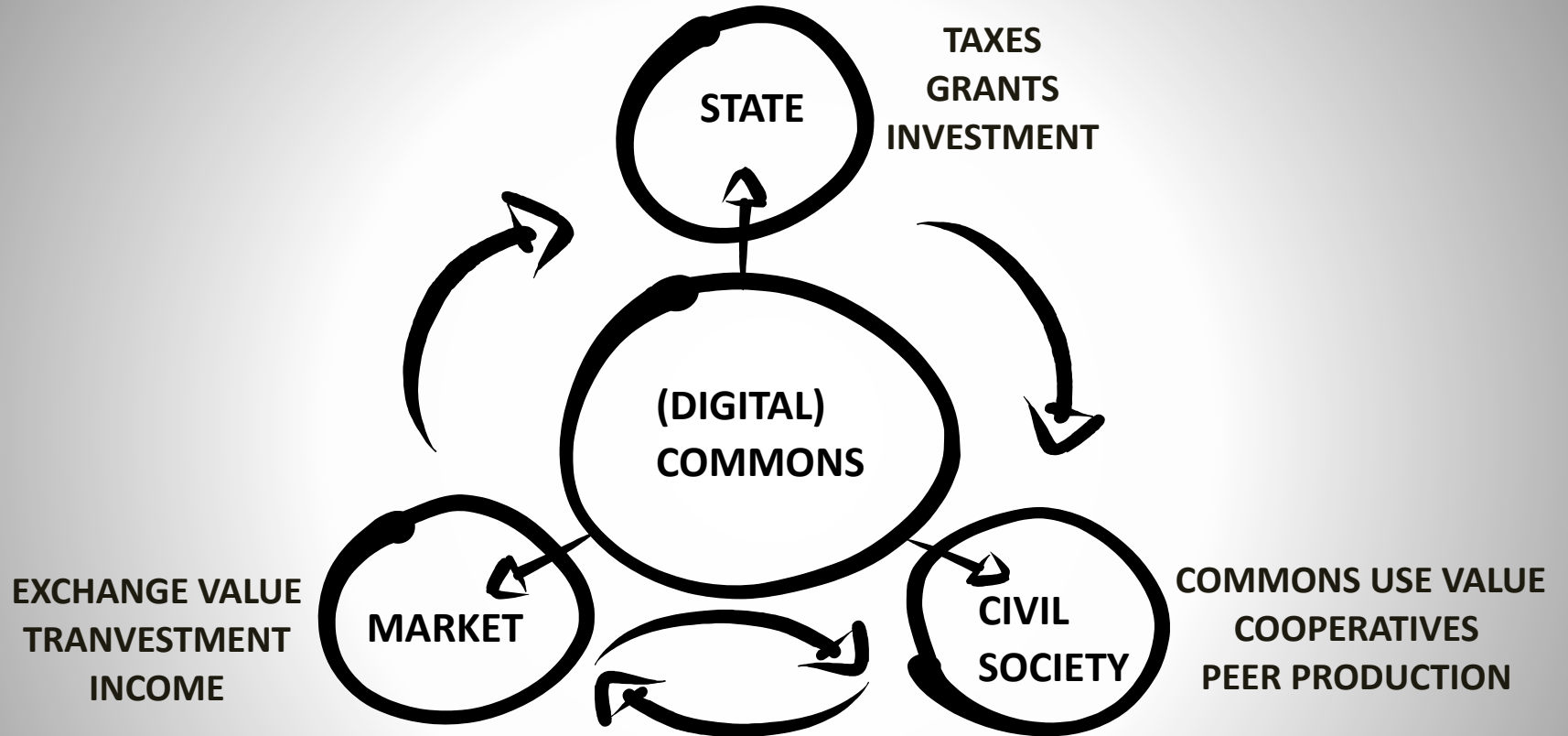
**THE MODEL OF  
OPEN  
COOPERATIVISM**

**COSMOLOCALISM,  
DESIGN GLOBAL-  
MANUFACTURE  
LOCAL**

**SUSTAINABILITY,  
CIRCULAR  
ECONOMY**







# THE MODEL OF OPEN COOPERATIVISM IN OPEN-SOURCE SOFTWARE

<b>Productive community</b>	Linux	Mozilla	GNU	Wikipedia	Wordpress
<b>Entrepreneurial coalition</b>	e.g. Linux Professional Institute, Canonical	e.g. Mozilla corporation	e.g. Red Hat, Endless, SUSE	e.g. Wikia company	e.g. Automatic company
<b>For-benefit association</b>	Linux Foundation	Mozilla Foundation	Free Software Foundation	Wikimedia Foundation	Wordpress Foundation

Neoclassical economics	Commons-based economics
self-interest, individualism, utility maximization for firms and households	diversity of motivations (altruism, hedonism, creativity)
perfect knowledge, privacy	open knowledge, sharing, holoptism (transparency)
perfect competition (zero-sum game)	cooperation, benefit-sharing (win-win game)
private property	Ostrom's bundle of rights (access, withdrawal, management, exclusion, alienation)
optimal allocation of resources on conditions of scarcity	scarcity combines with the abundance of the commons
price signals > supply and demand equilibrium	open supply chains, circular economy, the gift economy
exchange value, commodities	use value, social needs
green growth, eco-efficiency	de-growth/post-growth, eco-sufficiency

Capitalist enterprise	Traditional cooperative	Open cooperative
information asymmetry, privacy	partial information symmetry	openness, sharing, holoptism (transparency)
profit maximization, shareholder value	value distribution among coop members	value distribution among multiple stakeholders
hierarchy, one dollar, one vote	hierarchy, assembly, one member, one vote	self-governance, sociocracy, one member, one vote
centralised proprietary R&D, patents, rent extraction	<b>closed proprietary licenses</b> <b>&gt; not producing commons</b>	open protocols, open supply chains, stigmergic coordination, commons
planned obsolescence, negative externalities	sustainability	circular economy, repairability, adaptability, maintenance
division of labour	division of labour	equipotentiality, do-ocracy, stigmergy, modularity
salaries	salaries	open value accounting, salaries


Green Growth	Post-Growth
technological innovation, substitution of fossil fuels with renewable energy	soft mid-tech techno-social innovation, renewable energy
eco-efficiency	eco-sufficiency
decoupling of growth from resource and energy use	decoupling is not possible due to thermodynamics
neoclassical theory of value: GDP as the metrics of value	commons value, the satisfaction of social needs
policy as usual	climate change requires global policies, basic income, change in production mode, reduction in working-hours
business as usual	post-capitalism, limits on production and consumption, zero-waste economy, circular economy

# RESEARCH HYPOTHESIS

Commoning can result in a constantly improving collective repository of knowledge, best ideas, practices and resources > social innovation, democratization



Ethical market entities that have access to commons gain a competitive advantage vis-à-vis closed proprietary models such as extractive capitalism



Capitalism is forced to adapt to post-capitalism



From each according to her capacities, to each according to her needs



# ADVANTAGES OF OPEN COOPERATIVISM VIS-À-VIS EXTRACTIVE CAPITALISM

- democratization of the means of production
- production of commons
- multi-stakeholder governance
- value distribution
- social innovation spill-overs from anti-rival network effects
- low-cost eco-sufficiency (thermodynamic flows of matter/energy)
- improved work quality
- sustainability
- resilience

## **Problem 1**

Traditional and platform cooperatives cannot challenge capitalism

## **Solution 1**

Traditional and platform cooperatives need to transform into open cooperatives

## **Problem 2**

Open cooperatives are prone to **capitalist cooptation** due to the openness of the commons they produce

## **Solution 2**

Open cooperatives need protective mechanisms such as **closed loops** of cross-sectoral value chains between the commons and ethical market entities and **copyfair licenses** to secure livelihoods for commoners

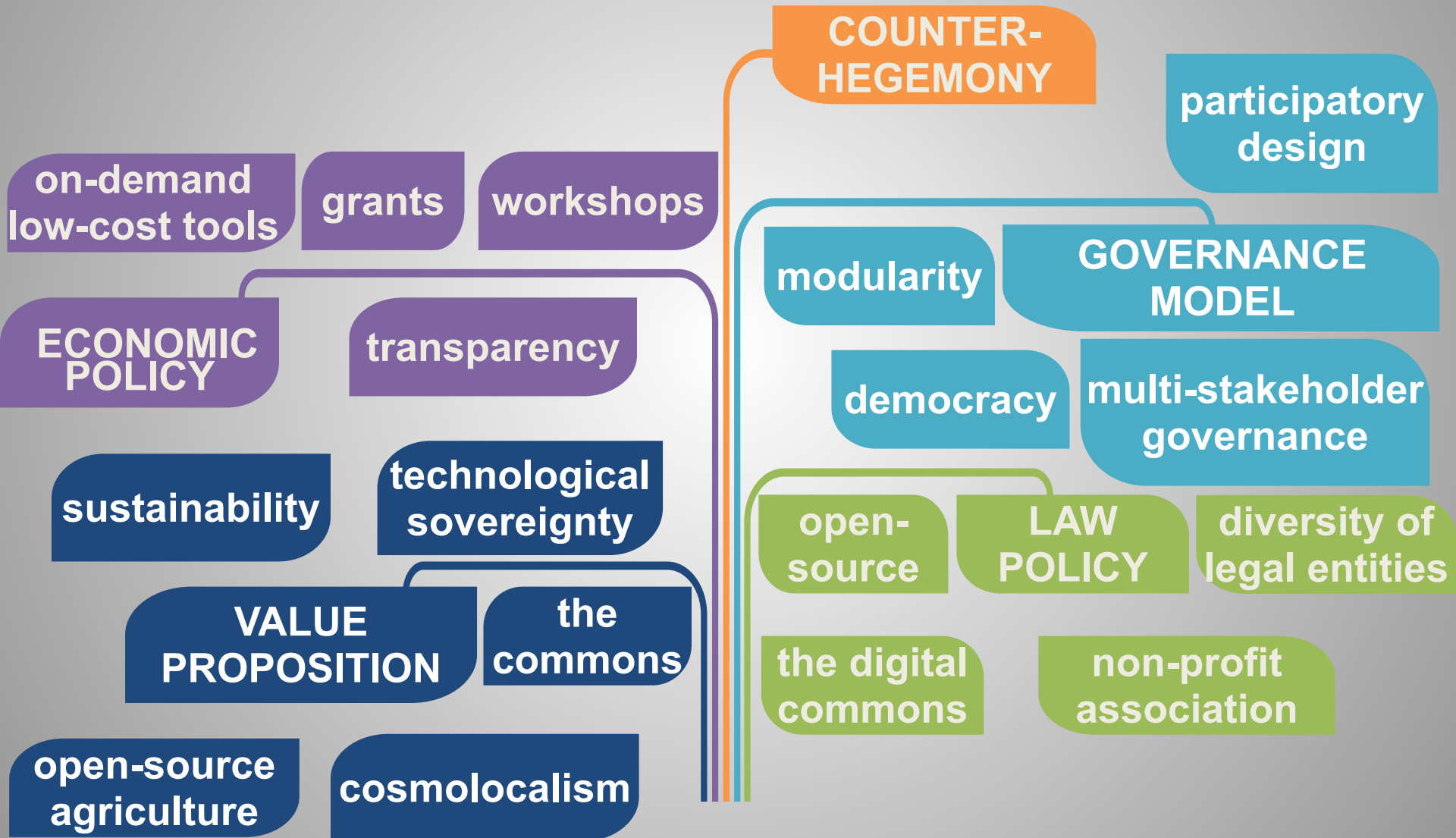
# Cases: housing, robotics, biohacking, prosthetics, peer-to-peer farming, Covid-19 masks, etc.



# Tzoumakers: open-source agriculture



# TZOUMAKERS DISCOURSE ANALYSIS



Papadimitropoulos V. 2023. The digital commons, cosmologicalism, and open cooperativism: The case of P2P Lab and Tzoumakers, *Organization* 1–24

## Breakthroughs

- open-source agriculture
- commoning
- sustainability
- cosmologicalism
- multi-stakeholder association

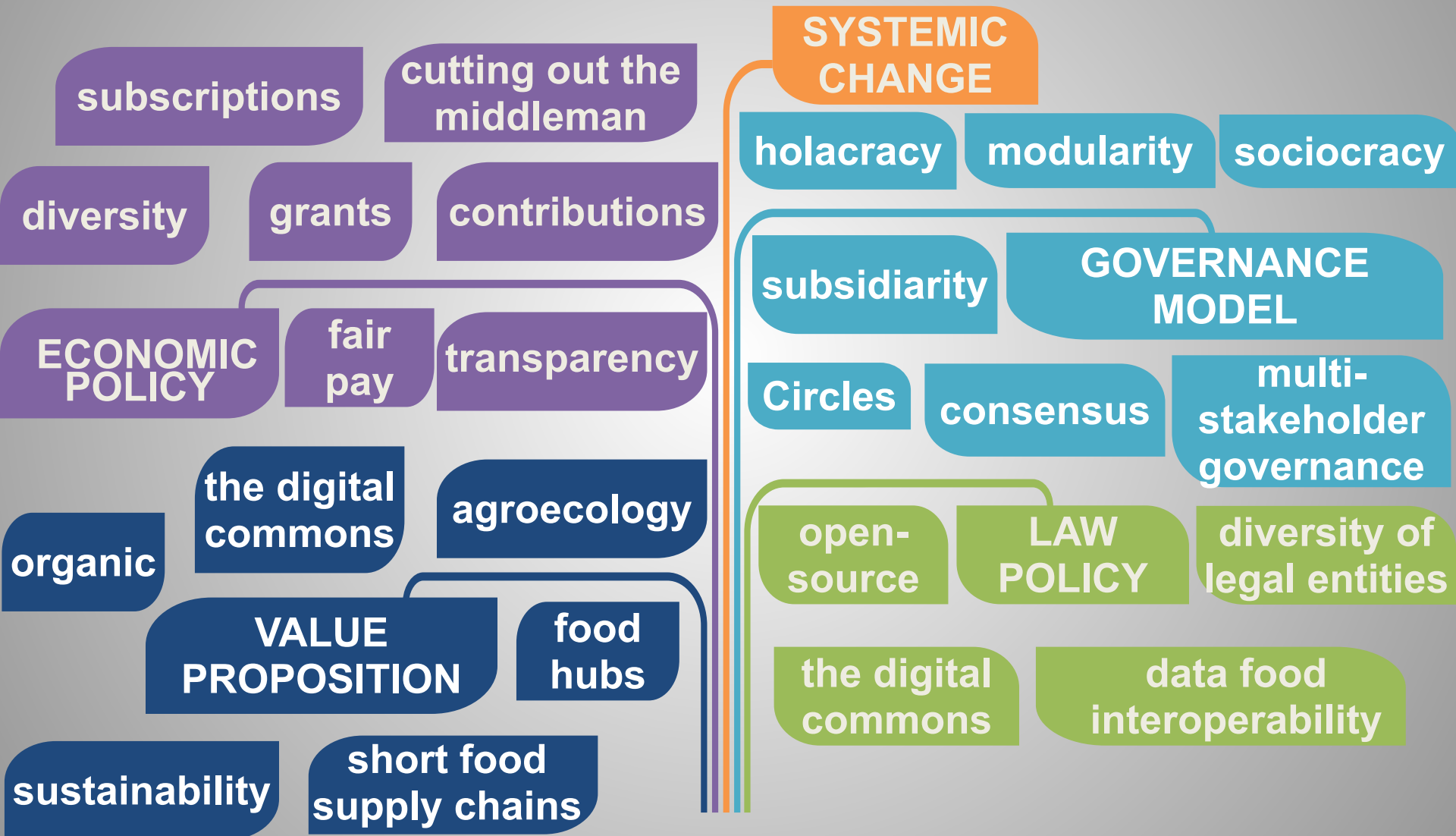
## Challenges

- (s)low demand > (s)low scalability
- lack of cross-sectoral value chains
- weak counter-hegemony

# Open food network: open-source short food supply chains



# OFN DISCOURSE ANALYSIS





Papadimitropoulos V and Malamidis H. 2023. Prefiguring the counter-hegemony of open cooperativism: The case of Open Food Network, *Journal of Rural Studies*, 101

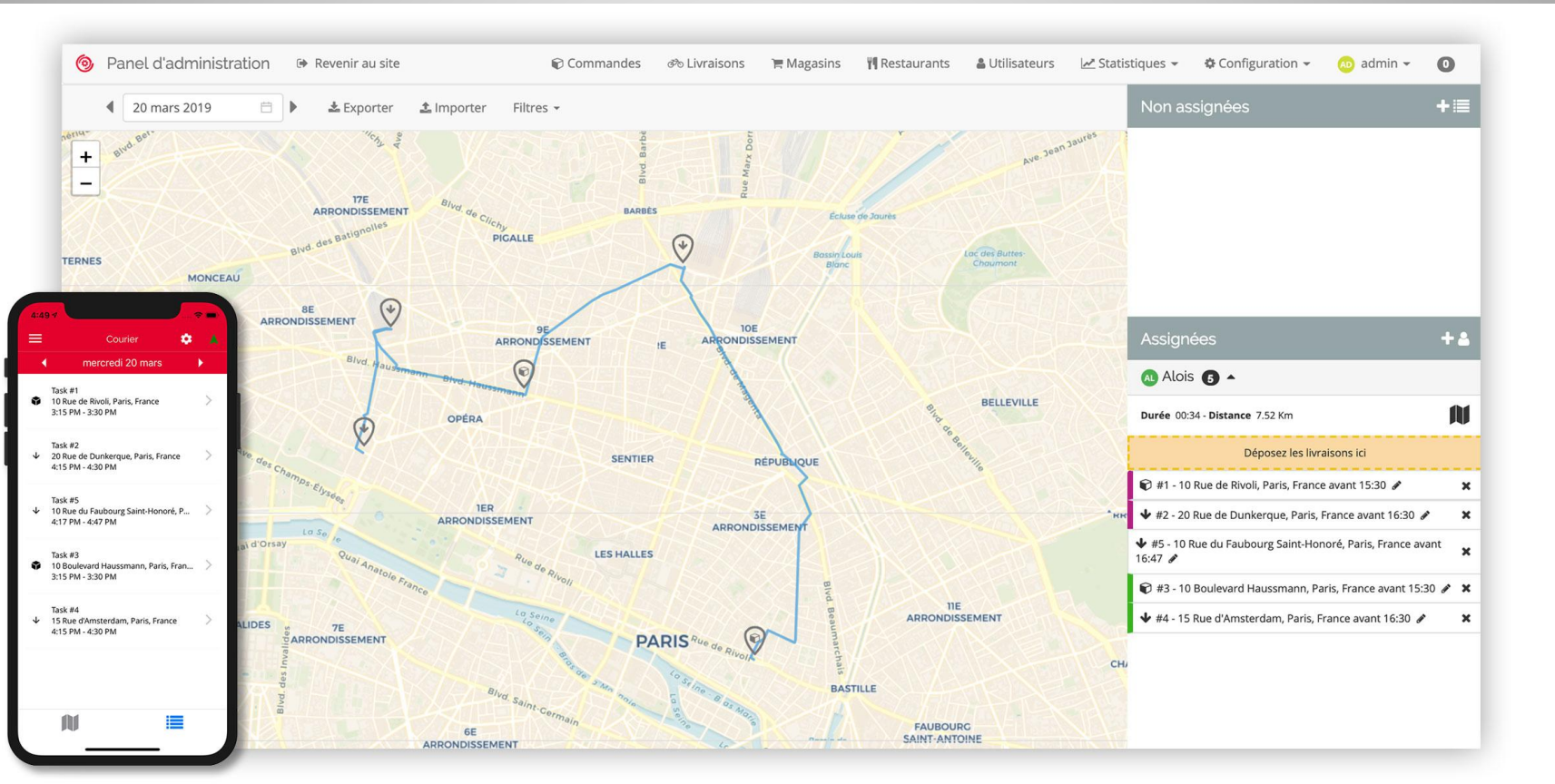
## Breakthroughs

- open-sourcing
- cutting out the middlemen
- food data interoperability
- sustainability
- agroecology

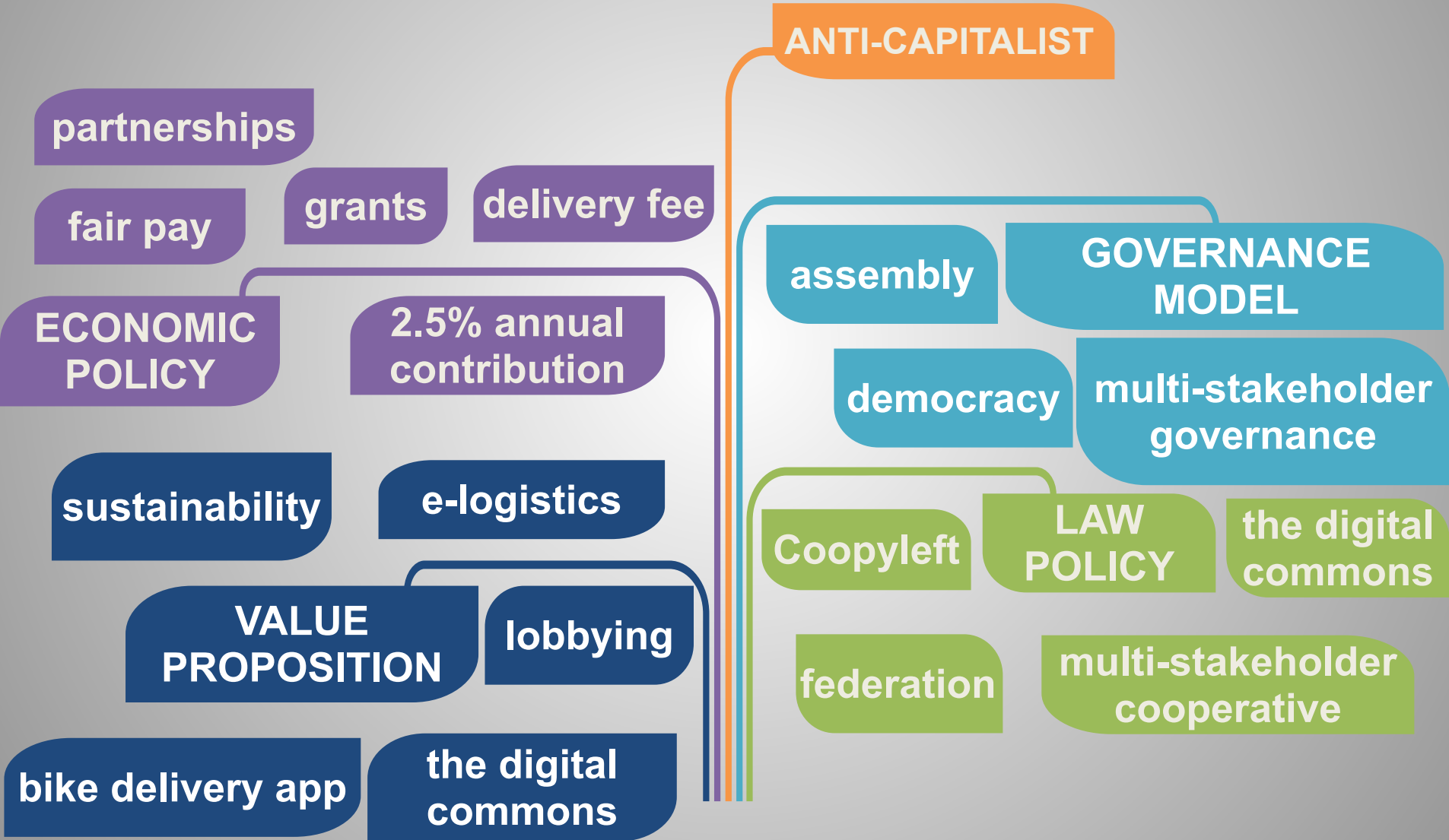
## Challenges

- diversity > a two-edged sword > fragmentation > cooptation
- strong competition from agri-business
- lack of cross-sectoral value chains
- lack of common strategy
- weak counter-hegemony

# CoopCycle: open-source bike delivery app



# COOPCYCLE DISCOURSE ANALYSIS



**Papadimitropoulos V. and Malamidis H. 2023. The Transformative Potential of Platform Cooperativism: the case of CoopCycle, *TripleC*, forthcoming**

**Breakthroughs**

- open-sourcing
- copyfair license
- federation
- multi-stakeholder cooperative
- sustainability

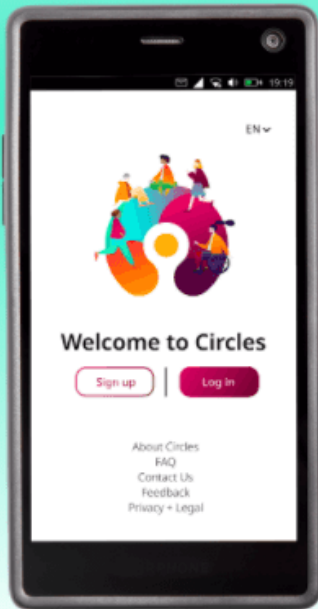
**Challenges**

- strong competition from the gig economy
- lack of cross-sectoral value chains
- weak counter-hegemony

# Circles: universal basic income (tokens) on Blockchain

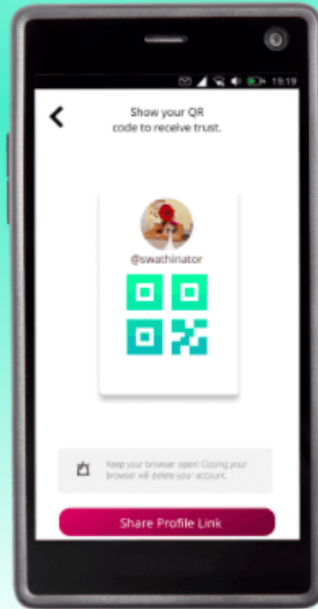
1

Sign up



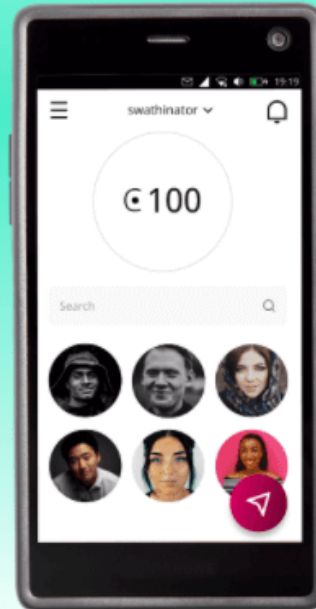
2

Get Trusted



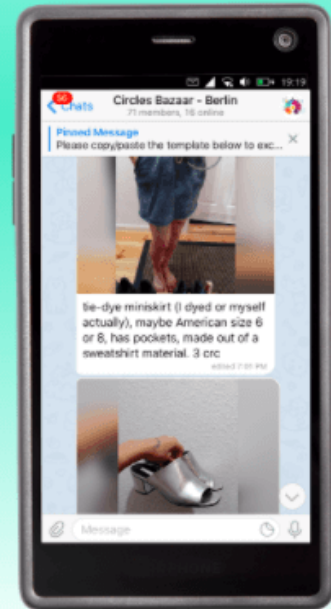
3

Receive your Circles



4

Use your Circles!



**Papadimitropoulos V. and Perperidis G. 2024. Universal Basic Income in Blockchain: the case of Circles UBI, *Frontiers in Blockchain*, forthcoming**

## **Breakthroughs**

- open-sourcing
- Blockchain innovation
- UBI, money as a commons
- circular gift economy

## **Challenges**

- lack of shared incentives
- lack of skilled Blockchain developers
- business as usual
- no connection to production
- not closing the loops
- weak counter-hegemony

# Consolidation of findings

Lack of cross-sectoral value chains to close the loops between capitalism and post-capitalism

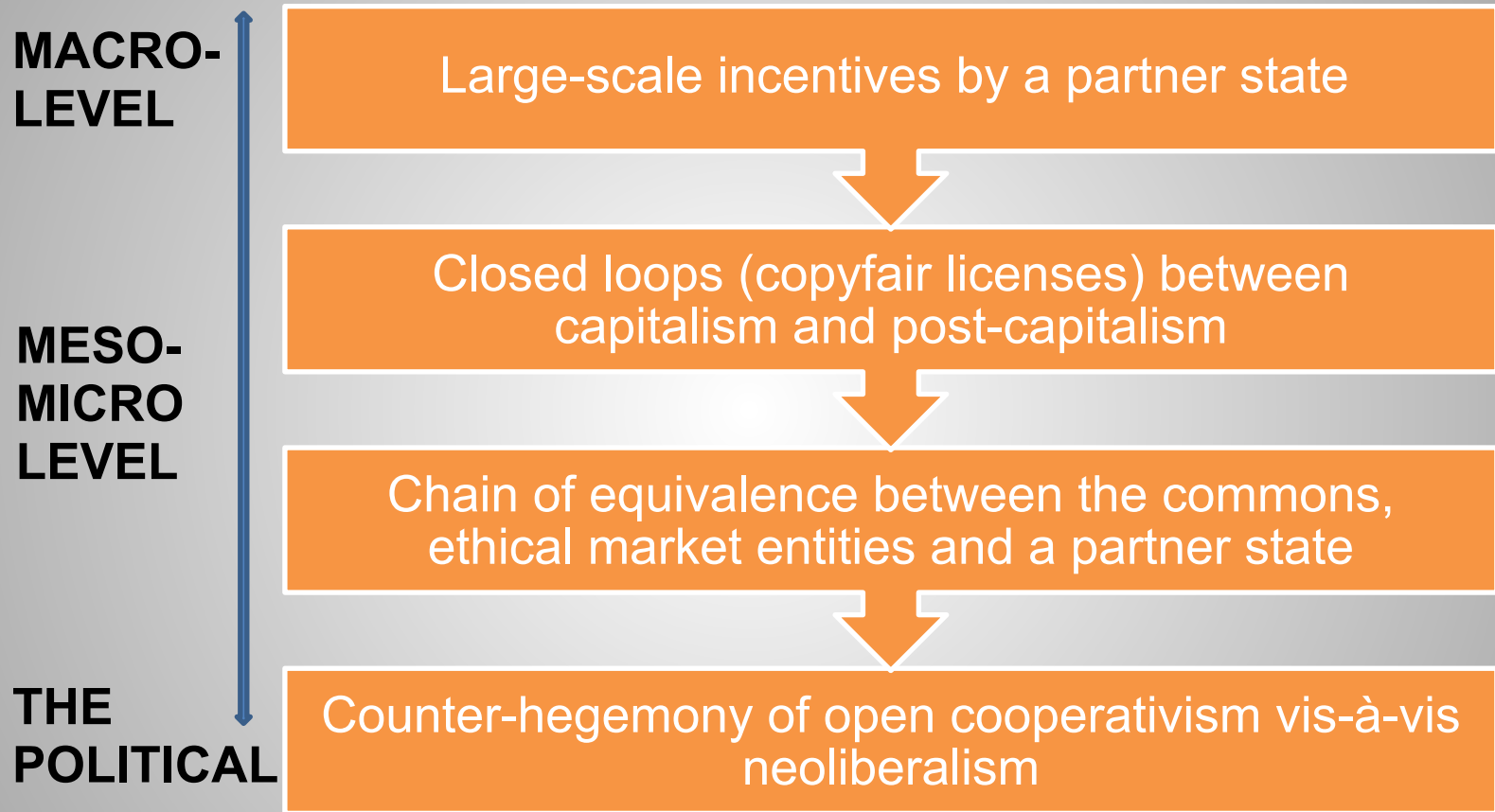


Lack of a chain of equivalence between the commons, ethical market entities and partner state



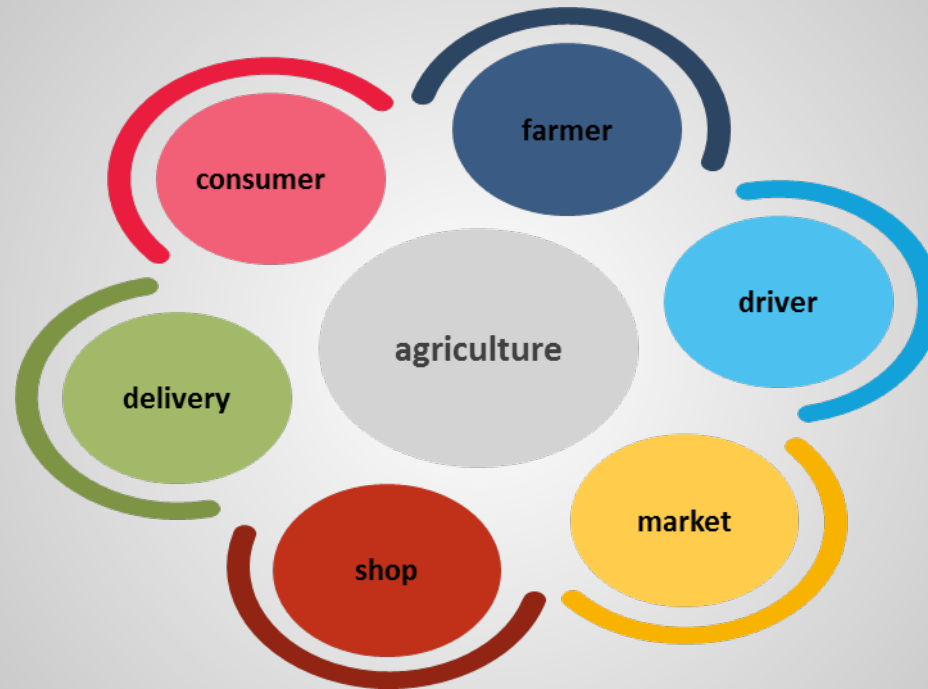
Weak counter-hegemony of open cooperativism

# Recommendations

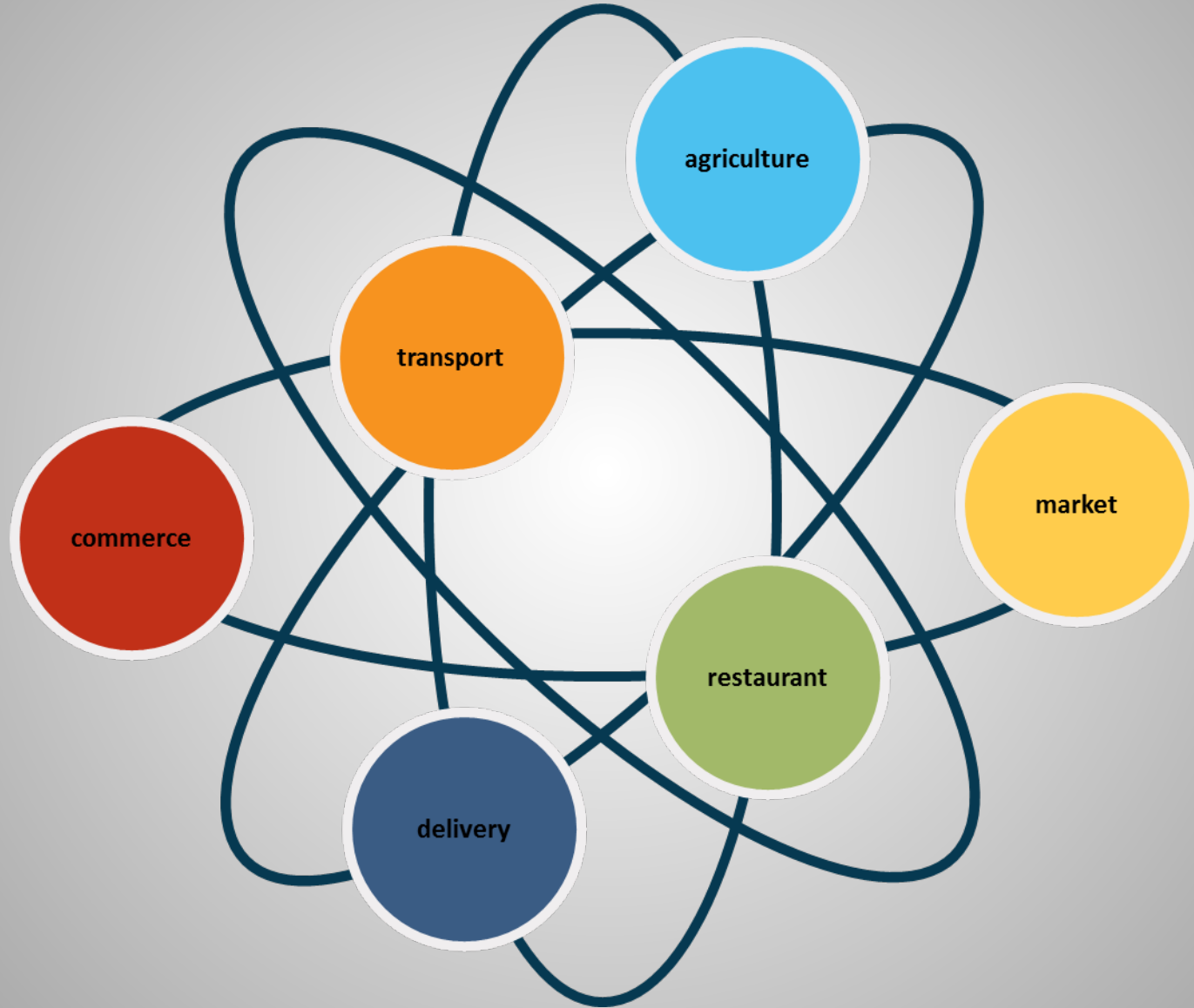


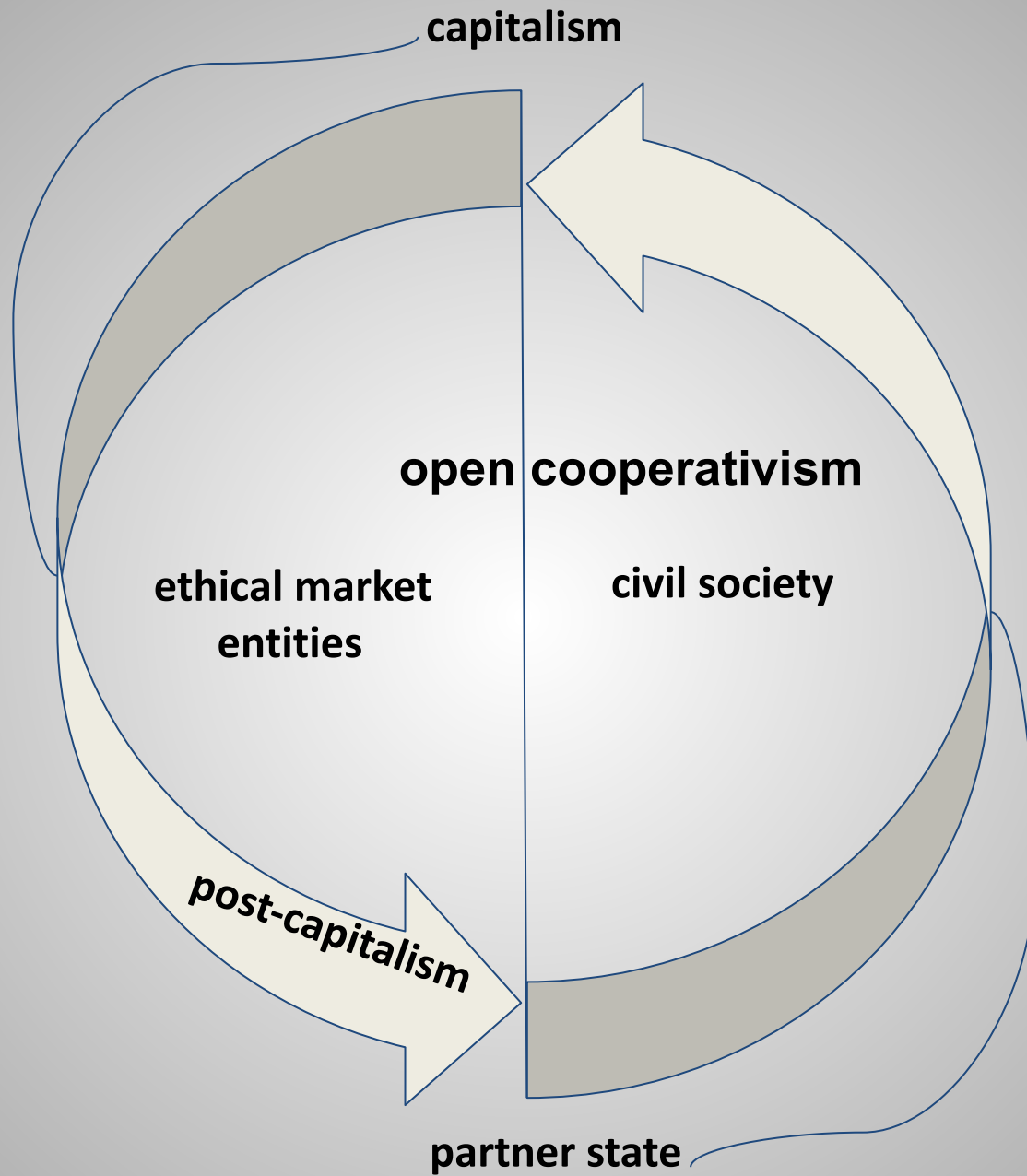


# UNISECTORAL CLOSED LOOP



# CROSS-SECTORAL CLOSED LOOPS





# THANK YOU

<https://collabecon.gr/>

Vangelis Papadimitropoulos, *The Commons, Economic Alternatives in the Digital Age*, Westminster University Press, 2020

Vangelis Papadimitropoulos, *Blockchain and the Commons*, Routledge Editions, 2022