

TECHNO-SOCIAL INNOVATION IN THE COLLABORATIVE ECONOMY

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RESEARCH OBJECT

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



THE COMMONS

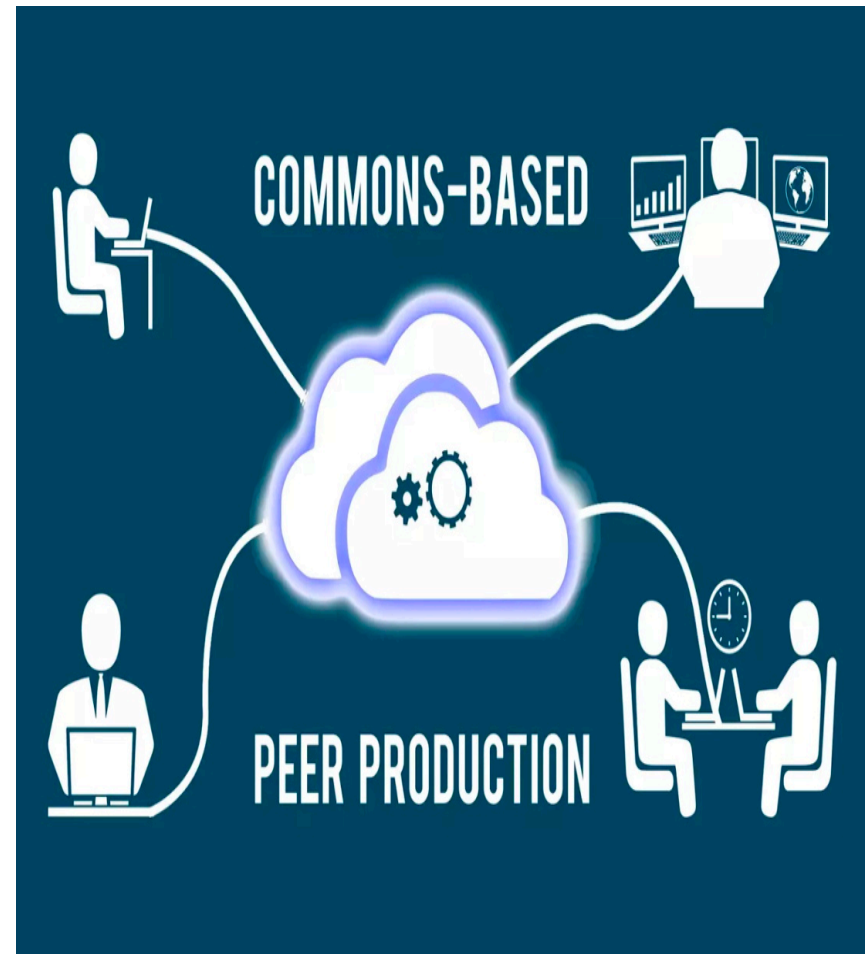
The commons consist of distributed or **common property** resources/infrastructures (natural resources, technology, knowledge, capital, culture), **self-managed** by user **communities** in accordance with collectively established rules or norms.

Examples:

pastures, forests, irrigation fields, a farm, a building, a park, science, knowledge, culture, information, language, open-source software/hardware, the digital commons, airwaves

COMMONS-BASED PEER PRODUCTION

- decentralization
- self-governance
- task self-assignment (do-ocracy)
- value distribution
- non-monetary motivations ⇔ monetary motivations
- sharing of resources
- openness and transparency
- stigmergy = indirect coordination based on peer-to-peer signals
- modularity = the breaking up of tasks into smaller units
- self-monitoring



COSMOLOCALISM

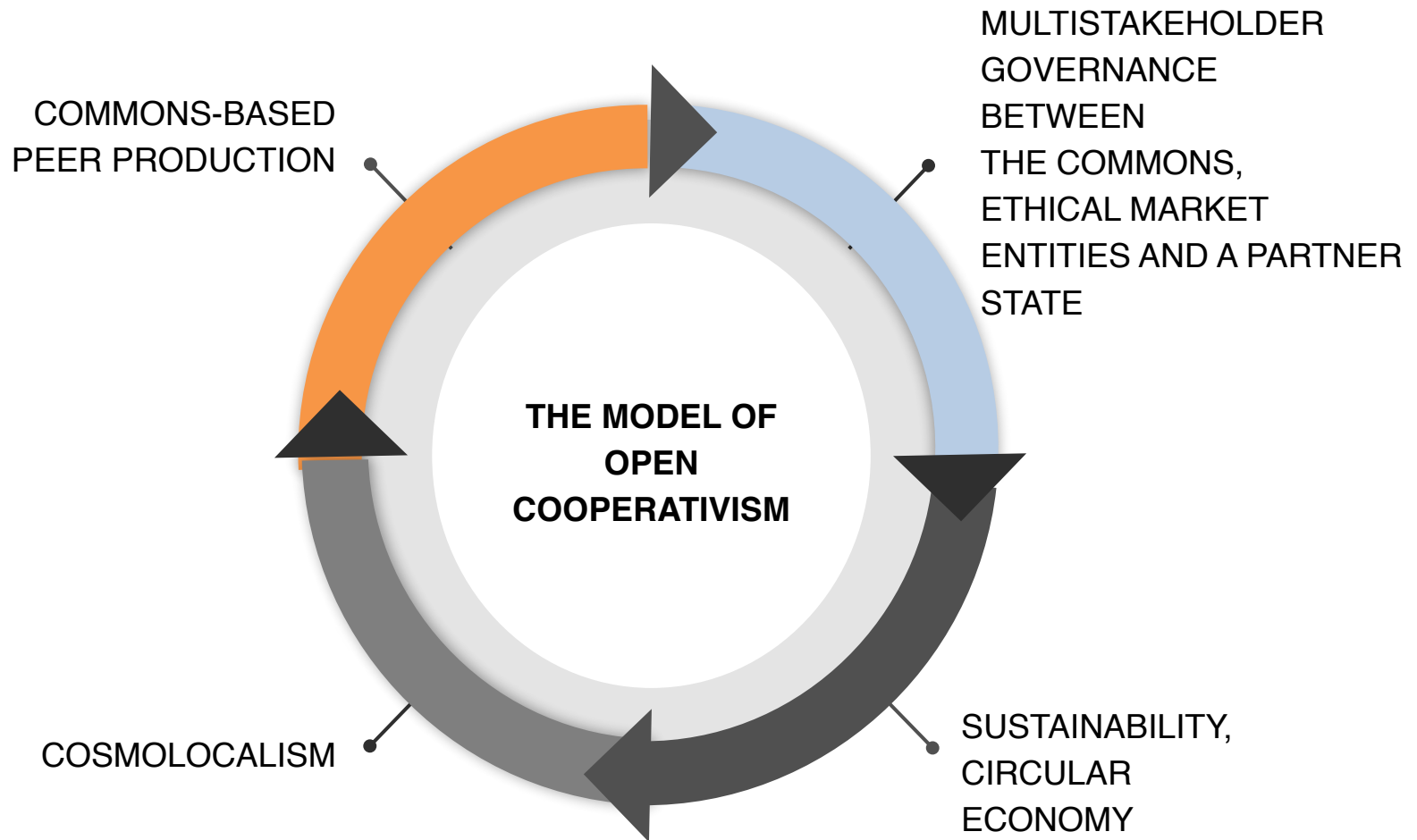
- commons-based peer production > digital commons
- the digital commons are shared on the Internet > abundance
- the digital commons connect to material commons (hardware) locally > scarcity (market products)
- sustainability and resilience, circular economy, waste management, eco-efficiency, clean energy

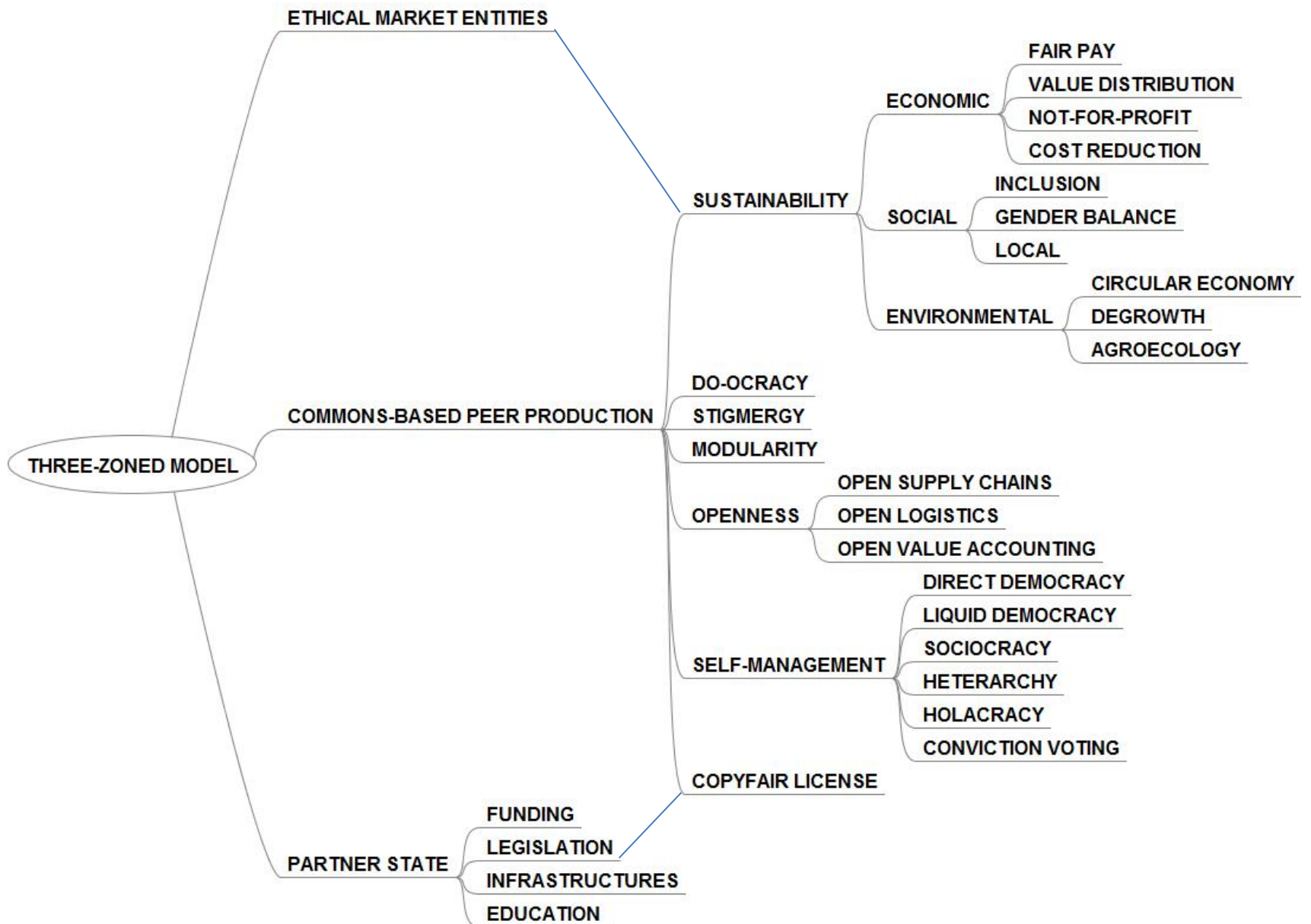
Cases: housing, robotics, biohacking, prosthetics, peer-to-peer farming, Covid-19 masks, etc.



ADVANTAGES OF COSMOLOCALISM VIS-À-VIS EXTRACTIVE CAPITALISM

- democratization of the means of production
- self-management
- equitable distribution of value
- innovation spill-overs from anti-rival network effects
- low-cost efficiency
- improved work quality
- sustainability





OPEN FOOD NETWORK(OFN) VALUE PROPOSITION

The OFN deploys open-sourced logistics on a digital platform to launch short food supply chains, thereby cutting out the middlemen



OFN: A CASE STUDY OF OPEN COOPERATIVISM IN AGRICULTURE

The OFN integrates core features of CBPP (sharing, modularity, transparency, openness, stigmergy, do-ocracy) in the three-zoned model of open cooperativism structured around:

1. the OFN community (developers, managers, etc.) producing the digital commons
2. ethical market entities (farmers, food hubs, coops, associations, etc.) participating in the OFN platform
3. a Foundation, local institutions and authorities prefiguring the role of a partner state

OFN PARADIGM SHIFT

INDUSTRIAL AGRICULTURE



AGROECOLOGY

- mass food retailing
- market concentration, profit squeeze
- monocultures, uniformity
- reliance on chemicals (fossil fuel, fertilizer, pesticides, insecticides, herbicides)
- 20 to 30% of global greenhouse gas emissions, 19% household waste
- precision agriculture: closed proprietary high-tech, Big Data grab
- information asymmetry
- top-down hierarchical management
- short food supply chains
- decentralization, fair pay
- biodiversity optimization
- organic, reduced use of chemicals, resource eco-efficiency
- carbon sequestration, recycling of waste, permaculture
- mid-tech, digital commons, open-source technologies
- open food data interoperability
- bottom-up self-management



The Problem



Profit squeeze: farmer's net income equals the 1% of the final price

Conventional Food Supply Chains



Based on



Oversupply of goods.

Big producers can provide big quantities.

Small producers cannot.



Economies of Scale.

The biggest player defines the prices.

Small producers are unprotected.



Globalization of commerce.

Imported products cost less than domestic.

Local producers cannot compete.

Each **chain link** adds :



15% avg. mark-up pricing



10% avg. emissions



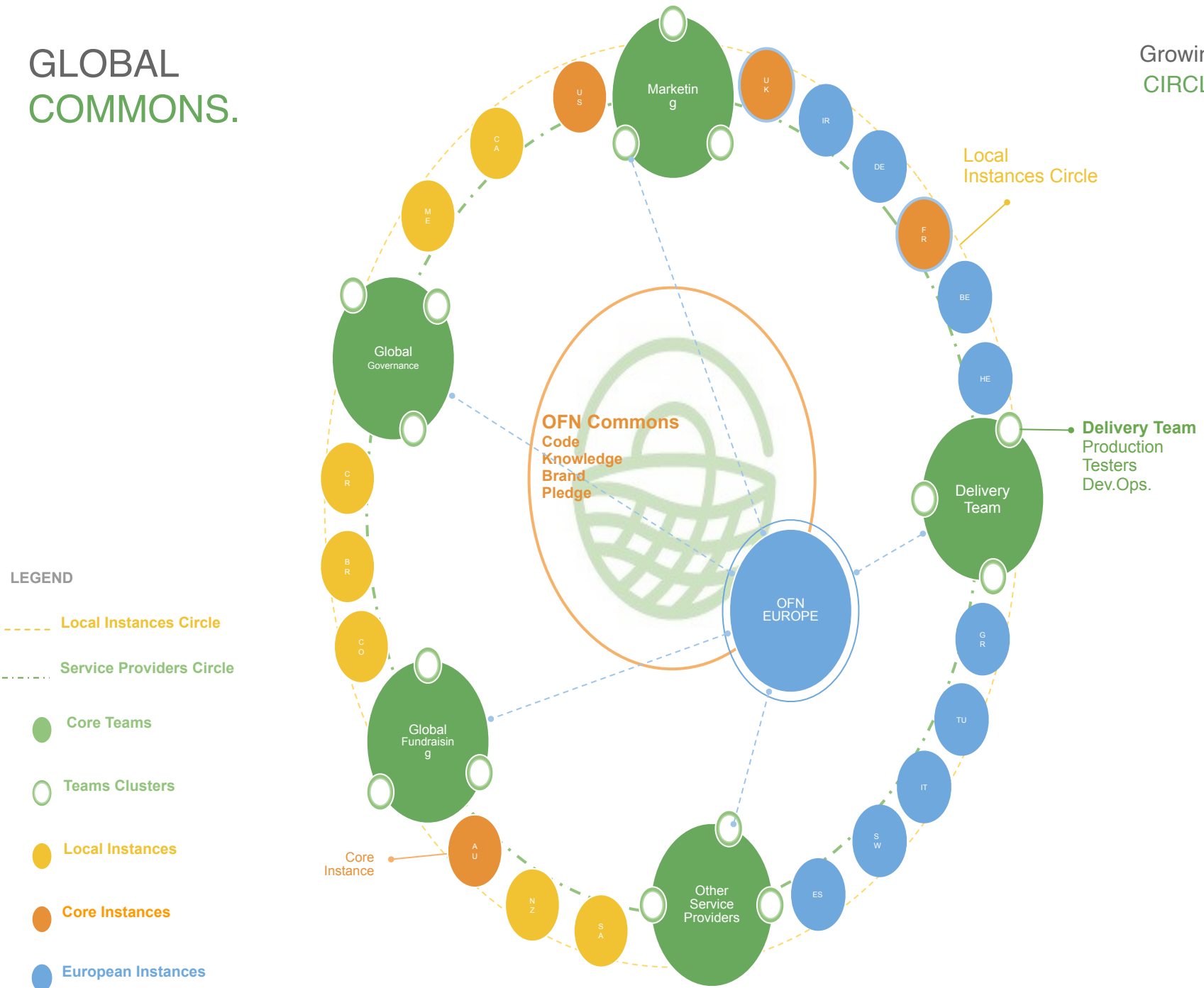
5% avg. food waste

OFN IN NUMBERS (BUSINESS MODEL)

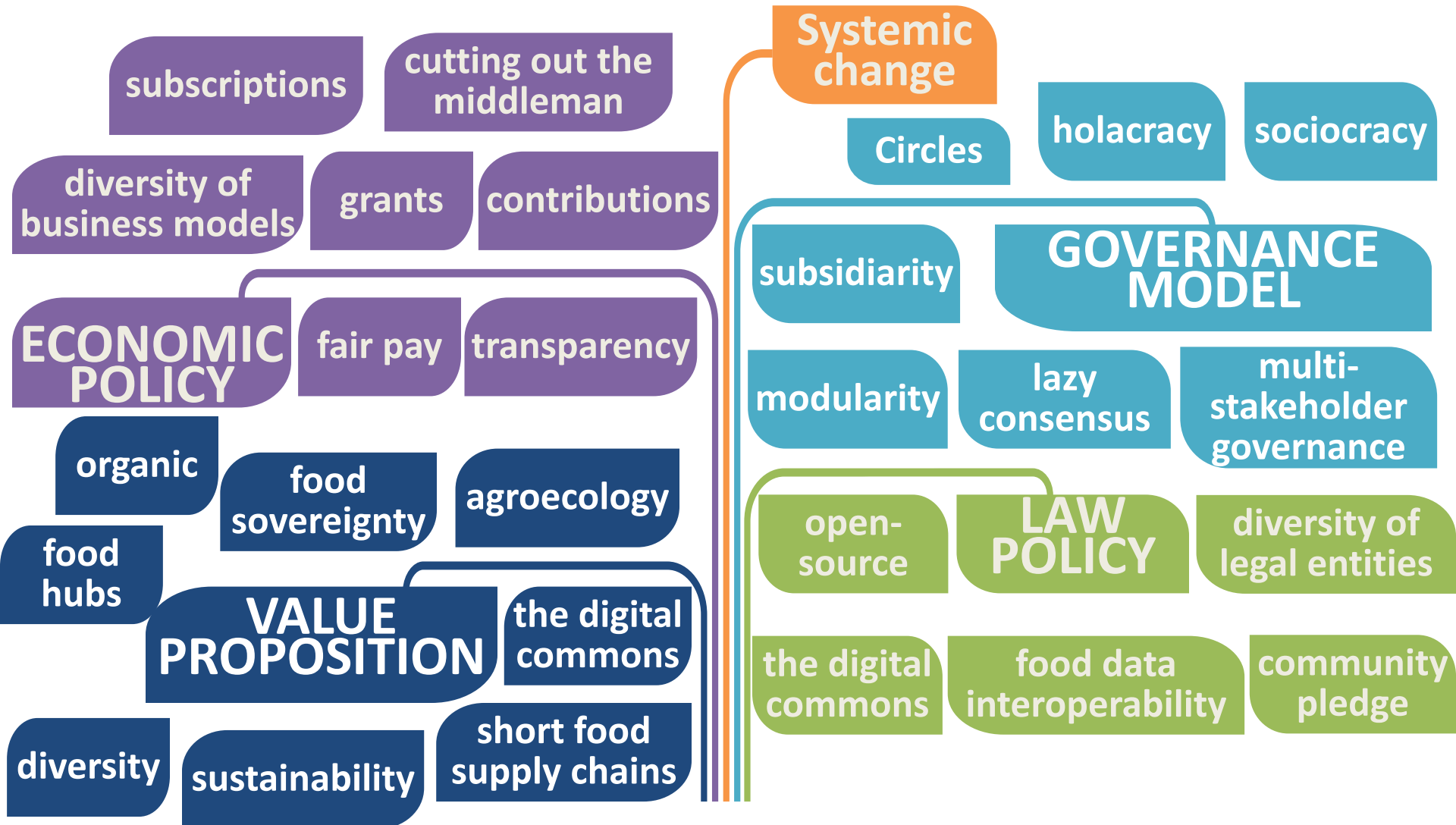


- 20 local/national instances (5 core instances: US, Canada, France, UK, Australia)
- more than 7000 producers in over 20 countries around the world
- a minimum of 40% of revenues is dedicated by local instances to the global OFN
- payment for OFN contributors according to capacity/experience and cost of living index by country: 10 to 40 euro per hour

GLOBAL COMMONS.



OFN DISCOURSE ANALYSIS



SURVEY ON OFN SYSTEMIC CHANGE

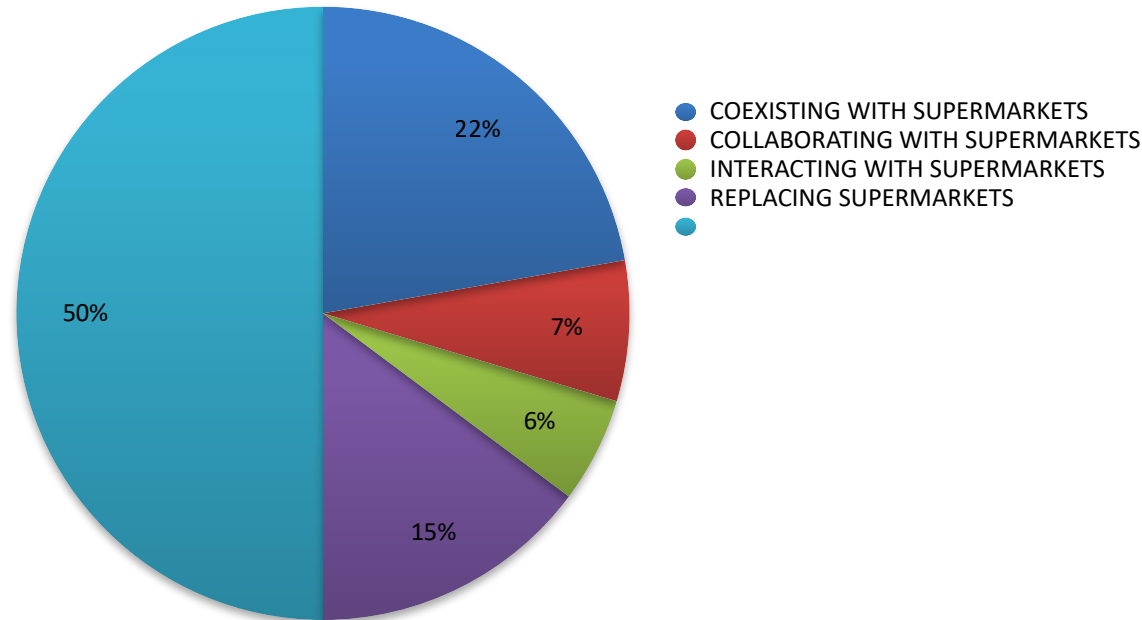
QUESTION 1

Survey sample: 27 responses out of 100
OFN members

WHAT FUTURE DO YOU ENVISION
FOR COMMUNITY FOOD ENTERPRISES?

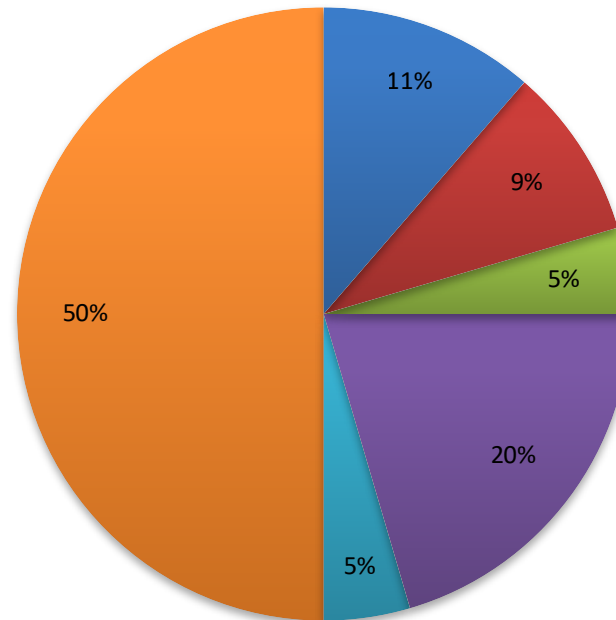
44% replied that community
food enterprises will coexist
with supermarkets

30% replied that community
food enterprises will replace
supermarkets



QUESTION 2

WHAT FUTURE DO YOU ENVISION FOR
OPEN-SOURCE INTEROPERABLE FOOD
DATA PLATFORMS?



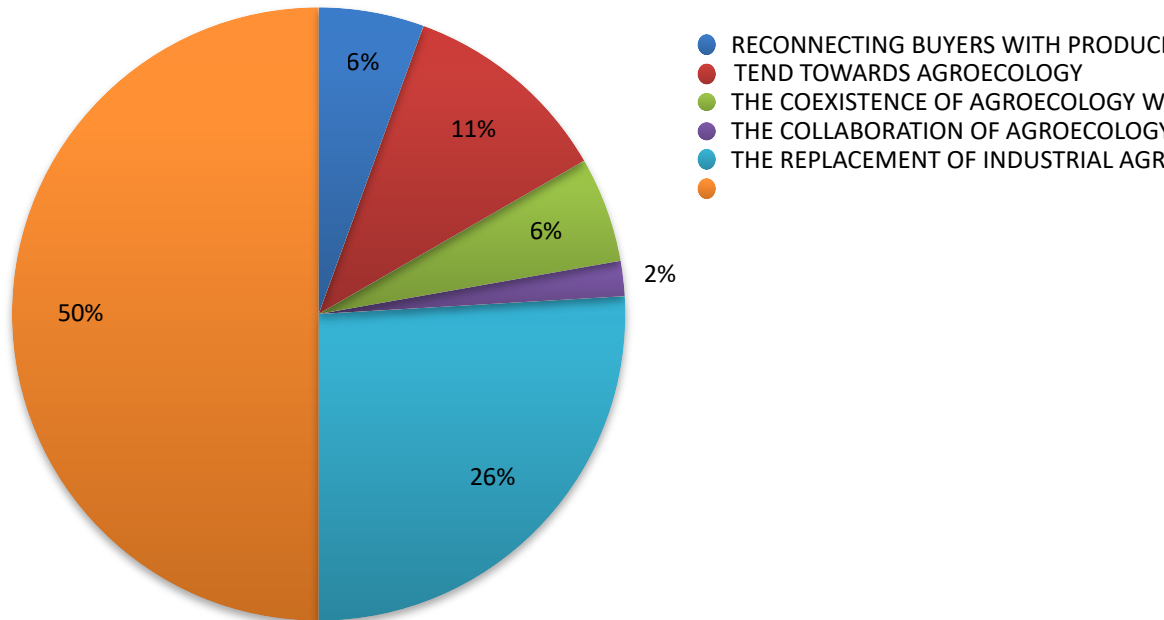
- COEXISTING WITH CENTRALIZED PROPRIETARY PLATFORMS
- COLLABORATING WITH CENTRALIZED PROPRIETARY PLATFORMS
- INTERACTING WITH CENTRALIZED PROPRIETARY PLATFORMS
- REPLACING CENTRALIZED PROPRIETARY PLATFORMS
- SUPPORTING LOCAL INITIATIVES
- REPLACING CENTRALIZED PROPRIETARY PLATFORMS

41% replied that open-source interoperable food data platforms will replace centralized proprietary platforms

23% replied that open-source interoperable food data platforms will coexist with centralized proprietary platforms

QUESTION 3

WHAT DOES "FOOD SYSTEM CHANGE"
MEAN TO YOU?



52% replied with the replacement of industrial agriculture with agroecology

22% with the tendency of industrial agriculture towards agroecology

SURVEY RESULTS



DIVERSITY of approaches regarding the meaning of systemic change

A core strand of OFN members anticipates systemic change through the gradual replacement of industrial agriculture with agroecology and big tech with open-source technologies.

SWOT Analysis

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STRENGTHS

- open-sourcing: shared digital infrastructure and shared knowledge > the digital commons
- economic, social and ecological sustainability
- a paradigm shift from industrial agriculture to agroecology

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WEAKNESSES

- lack of a common strategy
- lack of capital, expertise and market skills
- lack of relevant farmer and consumer culture
- lack of cross-sectoral value chains

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OPPORTUNITIES

- food data interoperability
- cross-sectoral value chains
- institutional support

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THREATS

- supermarket cooptation, corporate capture
- fragmentation, limited outreach
- inflation

CONCLUSION

The OFN needs to scale up and wide in equivalent sectors of the economy, civil society and politics to contribute to systemic change in agriculture and beyond.