

Knowledge Dynamics in Open Platform Infrastructures

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Ingenio, Research Group Meeting, Valencia, 20 October 2022



OUTLINE

1. Introduction
2. Object of study
3. Keys concepts & methods
4. Conclusion

Idea lab « Innovations, Numérique, Économie Sociale et Solidaire »

Mélissa
BOUDES



Nicolas
JULLIEN



Cynthia
SRNEC



Muge
OZMAN



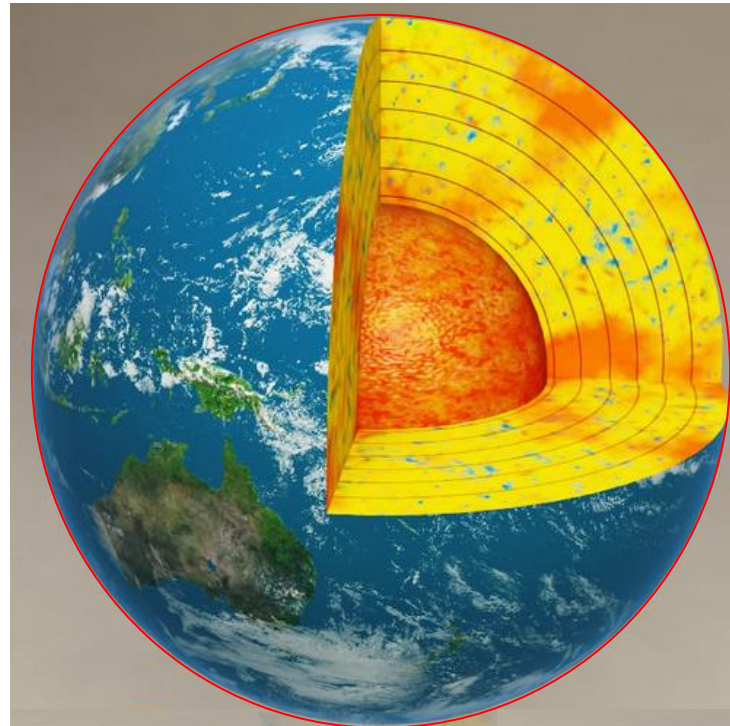
Louis
Cousin



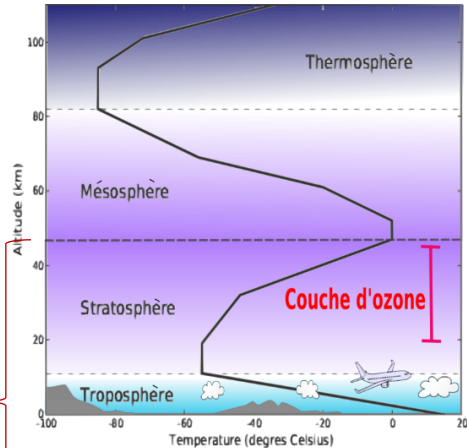
LIFE ON EARTH: A CRITICAL ZONE



Where we find the **biosphere** [-11000 m. → +6000 m.]
(Vernadsky, 1929)

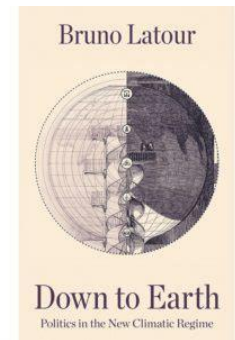


Nature & Humanity
Systems thinking



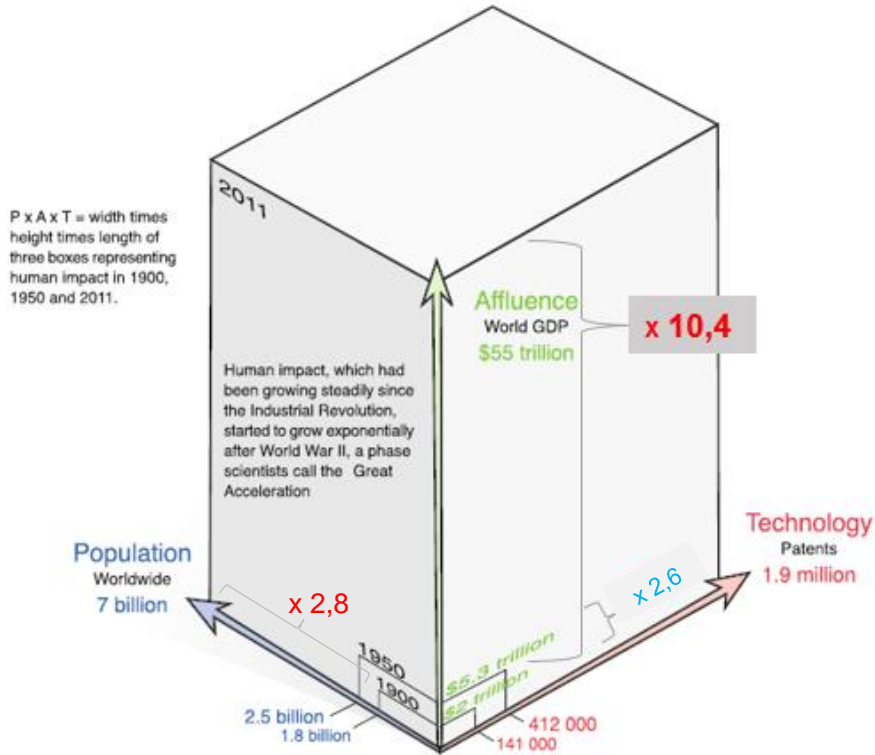
Ecosphere

(L.C. Cole, 1958)

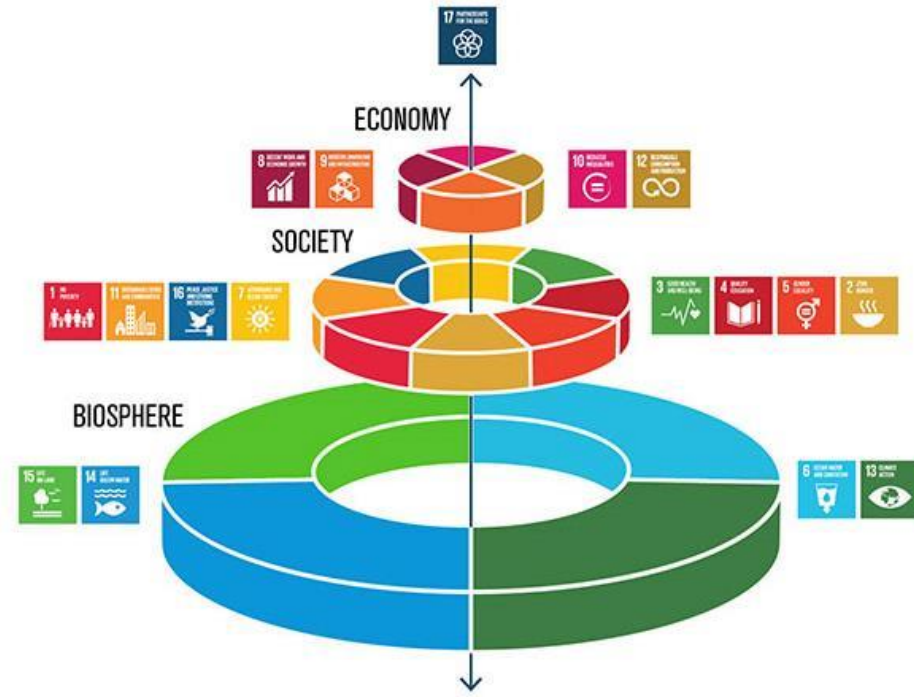


<http://www.bruno-latour.fr/fr/node/738.html>

SINCE 1950: THE « GREAT ACCELERATION »



GRAND CHALLENGES REQUIRE COLLABORATION AMONG ALL STAKEHOLDERS



Source: <http://www.stockholmresilience.org/research/research-news/2016-06-14-how-food-connects-all-the-sdgs.html>

DIGITAL PLATFORMS

Programmable digital architectures built to organize user interactions (Powered by data, Organised by algorithms and interfaces, Formalised by **ownership** relationships, Supported by an economic model, Governed by conditions of use, Different operating mechanisms).

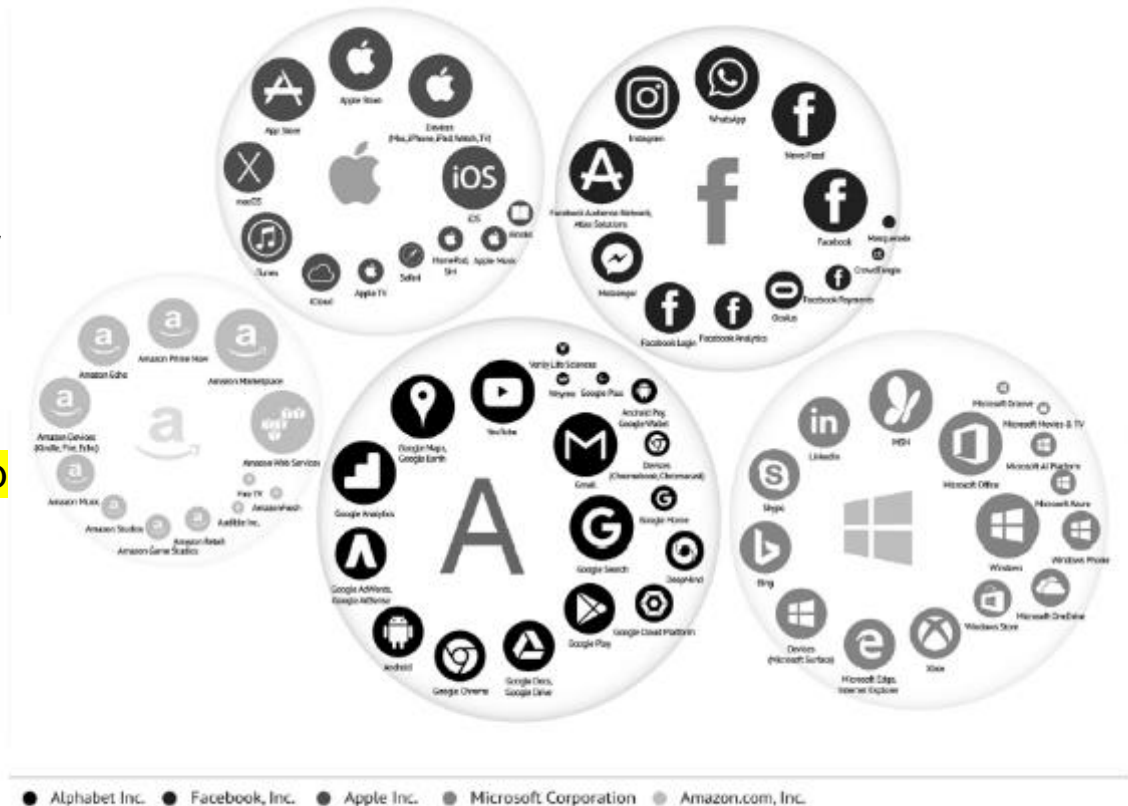


FIGURE 1.1. Schematic illustration of the infrastructural services provided by the Big Five platform corporations. The different services are proportionally represented, depending on their importance for the platform ecosystem (figure designed by Fernando van der Vlist).

DIGITAL PLATFORMS VS. OPIs

- Proprietary algorithms permit replicating solutions & extract value across geographical spaces
- But to properly replicate the solution they need inputs from local actors, which are socially & geographically distant
- These local inputs are very important to solve social & ecological problems

Open digital infrastructures facilitate the integration of local knowledge

- **OPIs**: Open Platform Infrastructures

FOUR EXAMPLES OF OPIs

Alaveteli

<https://alaveteli.org>

- Open-source **platform** for making **public freedom of information** requests to public bodies.
- Over 1,000,000 Freedom of Information requests in 25+ jurisdictions



<https://world.openfoodfacts.org>

- **Food products database** made by everyone, for everyone
- Developed by thousands of volunteers
- 15000+ contributors like you have added 1 000 000+ products from 150 countries using the app



<https://solidproject.org>

- **Specification** that lets people **store their data securely** in decentralized data stores called **Pods**:
 - = secure personal web servers for data (data stored in your Pod => control which people and applications can access it).



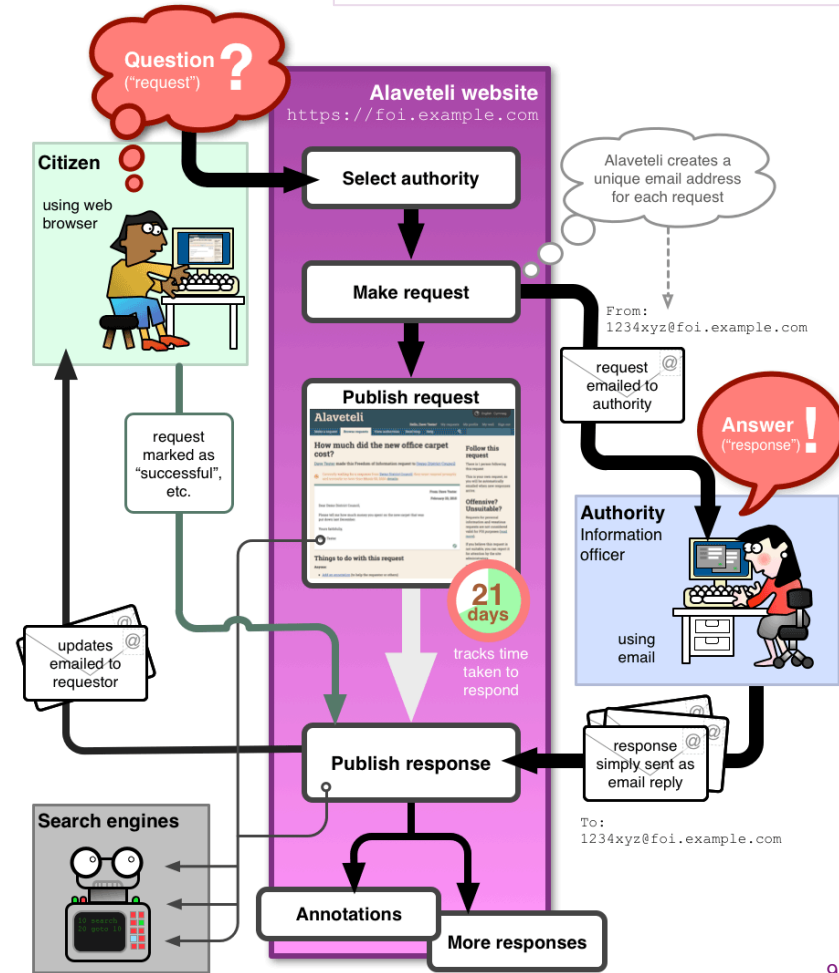
<https://coopcycle.org/en>

- Federation of **bike delivery** co-ops.
- Creates strong bargaining power to protect bikers' rights
- Full-fledged bike delivery **software**, it enables them to manage their deliveries, shops and restaurants owners to create their own. The software is protected by a reciprocity license, which enforces its use by coops only.

EXAMPLE: ALAVETELI

- **Open source platform** enabling citizens to make freedom of information requests to public bodies
- Developed by MySociety (UK-based NPO specialised in digital solutions fostering citizen participation)
- Adopted by 30 countries (France: [MaDada.fr](https://madada.fr), an initiative of Open Knowledge France, NPO of the Open Knowledge Foundation).

How is local knowledge incorporated into the core digital infrastructure?



KNOWLEDGE INTEGRATION THROUGH CONVERSATION SPACES

Alaveteli

Conversation
space of the
community

FOI PSO in Hungary



FOI PSO in France



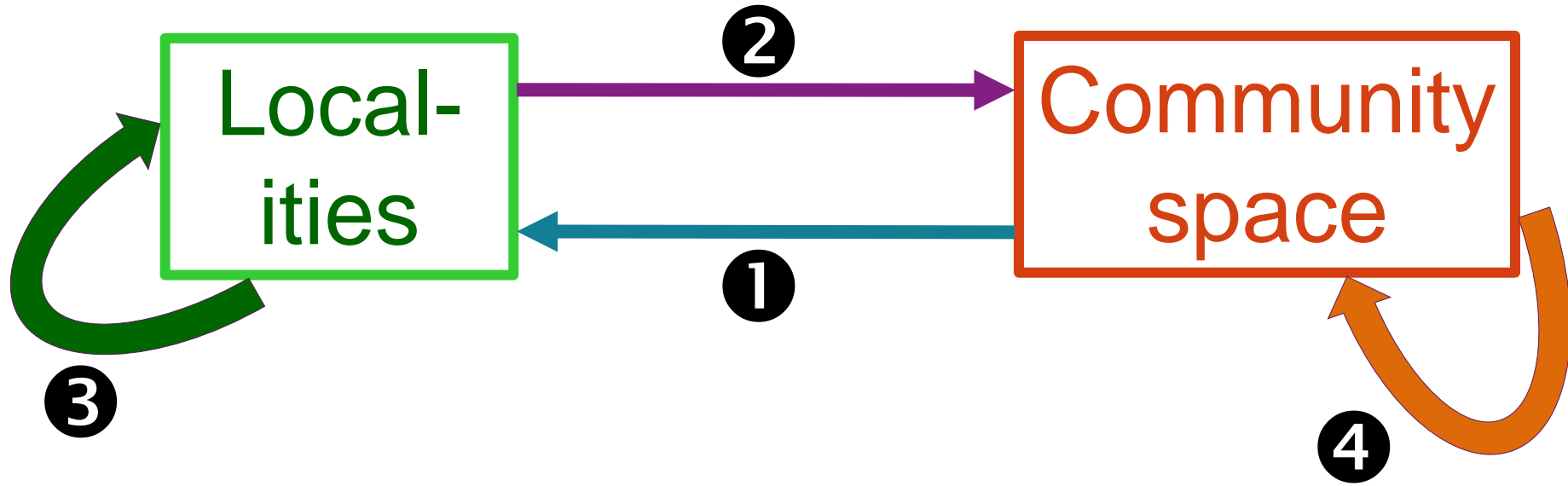
FOI PSO in New Zealand



FOI PSO in the UK



FOUR STAGES OF KNOWLEDGE LOCI IN OPIs



1 FROM COMMUNITY TO LOCALITIES



1. Transfer of the software & related practices
2. Tips and opinions about how to interact with local government authorities, users, etc.
3. Tips to increase awareness in local communities
4. Using the platform raises awareness about FOI in the locality

2 FROM LOCALITIES TO COMMUNITY



1. Information about local practices, laws, regulations, ...
2. " problems in FOI
3. " user behaviour in locality
4. " specific events & how can be solved
5. " flaws in the code, after " experiencing bugs in a locality
6. " local best practices
7. " platform business models

3 FROM LOCALITY TO LOCALITY



1. Knowledge sharing between participants and other local actors (government, NGOs, etc.)
2. Knowledge sharing between participants and local users
3. Knowledge sharing among users themselves
4. The specific information users get from the local Alaveteli site

4 COMMUNITY TO COMMUNITY



1. Joint discussions around code development, awareness raising, major events, how to improve the OPI, increase impact, widen user base, etc.
2. Generation of standardized guidelines for the community

KEY CONCEPTS

- **Platforms** = Governed technologies (**Info. syst. lit.**): organisation & functionality (design) as well as data analyses & automating of stakeholders management are embedded in the code (Kitchin 2017).
- **Knowledge flows** (**Innov. lit.**): processes of knowledge creation, sharing, dissemination and integration (Cowan et al. 2004) related to the societal issue addressed.
- **Knowledge stickiness** (**Innov. lit.**): individuals are spatially sticky (Szulansky 2002), locally embedded, especially social entrepreneurs (Marquis & Battilana 2009) who are constrained by local institutions through normative, coercive and cognitive mechanisms (Scott 1995, DiMaggio & Powell 1983).
- **Conversation spaces** (**Hum. geog. lit.**): knowledge creation happens in social spaces (Rutten 2016) where conv. take place btw individuals whose proximity can take various forms: Geographical, Social, Institutional, Cognitive, Organisational (Boschma 2005).

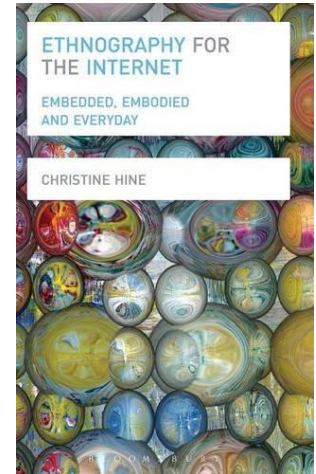
METHODS

1) Identification of the 4 loci (Alaveteli case)

- **Desk-based research:** Online forums, meeting minutes, websites & news

2) Analyse knowledge flows in OPIs

- **Qualitative observations & interviews:** map local and global actors of each case study, observe & analyse activities carried out within each OPI community, identify conversation spaces, explore types of knowledge shared & how are shared and assimilated and with whom.
- **Virtual ethnography?** (Sociology lit.)



WHAT DO WE SEEK TO ACHIEVE?

Contributions to academic literature:

- Knowledge-based view of virtual organisations => better und. DSI
- Use KBV to study OPI communities and application to new research object (OPIs)
- Role of locally anchored knowledge in grand societal challenges

Contributions to actors:

- Platform communities lack resources to reflect upon their own practices
- More sustainable digital platforms as alternatives
- Empower local users beyond developers, by giving back control on the evolution of their tools & agency empowerment

Thank you.

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<https://gossart.wp.imt.fr>



INESS IDEA lab: <https://iness.wp.imt.fr>