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The dynamics of knowledge flows in online communities: The case of digital social innovation

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OUTLINE

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3. Case study
4. Results

1. INTRODUCTION

- Grand challenges (SDGs, Planetary boundaries, …)
- Digital Social Innovations (DSI; in this paper = software infrastructures), developed by specific Platform-based Social Organisations (PSOs), e.g. civic techs.
- Tradeoff: algorithms make it easy to replicate solutions => DSI can be used at global level by a variety of actors… but they need inputs from local actors to properly replicate the solution, which are socially & geographically distant…
- … those inputs are especially important to solve social & environmental problems.
- => how do software infrastructures integrate local knowledge? => scaling
- Our contribution: we argue that software infrastructures integrate local knowledge in online ‘social spaces’, and underline the barriers to such integration.

2. LITERATURE BACKGROUND (1/2)

- **Software infrastructures**: digital solutions based on algorithms, developed by PSOs who provide the solution.

Table 1. The sectors of activity of PSOs

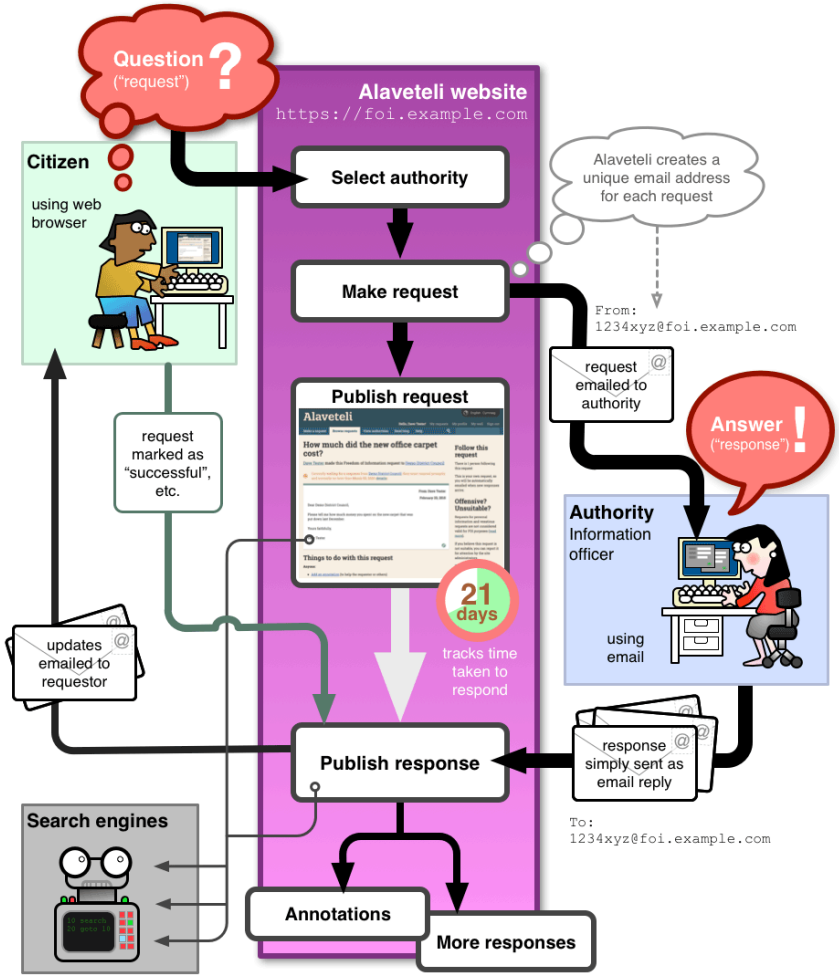
Type of social issues addressed (& sub-categories)	Explanation	Examples
Civic engagement (city, political, volunteering, petition)	Participatory systems that incentivise citizens to engage in decision making processes (civic-techs)	POPLUS, YOUR PRIORITIES, ALAVETELI
Science and Data access	Participatory open science involving citizens (like citizen science)	Pybossa, CKAN, EPICOLLECT
Sharing (swap, recycle)	Free swap, recycling, services, online time banks	COCORICO, SHARETRIBE, MAYOCAT, BEYOURMARKET
Social inclusion (homeless, immigrants, women, youth, people with disability, aged population)	Platforms that aim to empower a certain group of society	Entourage, …
Transparency and information disclosure	Participatory open data systems	Open Corporates, Wheelmap

2. LITERATURE BACKGROUND (2/2)

- **Scaling**: considerable literature on the practices of scaling in social enterprises, but knowledge of scaling strategies in PSOs not investigated.
- … important indicator of performance for social organisations (Dees et al. 2004, Bloom & Smith 2010)
- … = the extent to which the solutions generated by the organisation can be replicated in other sites to broaden social impacts (Heinecke & Mayer 2012).
- SCALERS model (Bloom & Chatterji 2009): 7 capabilities associated with the successful scaling of social enterprises (Staffing, Communications, Alliance building, Lobbying, Earnings generation, Replication, and Stimulating market forces.
- … but scaling models do not fit organisations relying on software infrastructures.

3. CASE STUDY (1/2)

- **Research problem**: the construction of DSI (software infrastructures) in distributed environments.
- **Research question**: how do DSI replicate their digital solutions while taking into account the characteristics of localities.
- **Case study**: A PSO dedicated to Freedom of Information (FOI): the case of Alaveteli. https://alaveteli.org/



Alaveteli

20+ languages, 25 jurisdictions

315,000 requests for information

3. CASE STUDY (2/2)

FOI PSO in Hungary

KI MIT TUD?

https://kimittud.atlatszo.hu/

Alaveteli

Conversation space of the community

FOI PSO in France

Ma Dada

Demande d'accès à un document administratif

https://madada.fr/

FOI PSO in New Zealand

FYI.org.nz

https://fyi.org.nz/

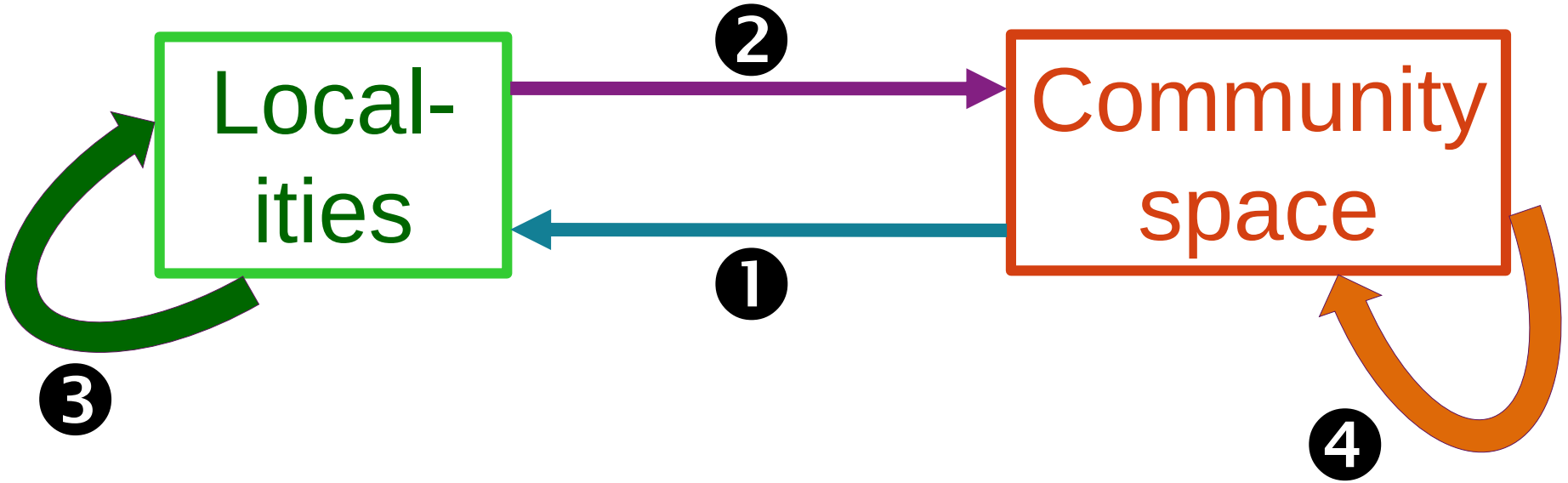
FOI PSO in the UK

WhatDoTheyKnow

https://www.whatdotheyknow.com

4. RESULTS (1/3)

4 knowledge conversion processes



NB: About knowledge conversion, see Nonaka & Von Krogh (2009).

4. RESULTS (2/3)

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. Information about problems in FOI
3. Information about user behaviour in locality
4. Information about specific events and how they can be solved
5. Information about flaws in the code, after experiencing bugs in a locality.
6. Information about local best practices
7. Information about plaform 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 dicsuccions around the code development, awareness raising, major events, how to improve the software, how to increase their impact, widen their user base, etc.
2. Generation of standardized guidelines for the community

4. RESULTS (3/3)

Factors influencing knowledge conversion across spaces

- Code openness
- Community cohesiveness
- Actors' absorptive capacity
- Actors' heterogeneity
- Proximities between actors
- Differences in local contexts

- Actors' retentive capacity
- Local embeddedness of digital social entrepreneurs
- Arduous relations between actors
- Motivation of actors to share knowledge
- Influence of third parties
- …

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Thank you.

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- **Knowledge stickyness**: individuals are spatially sticky (Szulansky 2002), locally embedded, especially social entrepreneurs (Marquis & Battilana 2009): local institutions constrain behaviours through normative, coercive and cognitive mechanisms (Scott 1995, Dimaggio & Powell).

- **Social spaces**: knowledge creation happens in social spaces (Rutten 2016), in which conversations take place between individuals whose proximity can take various forms: Geographical, Social, Institutional, Cognitive, Organisational (Boschma 2005).