

# Digital Social Innovation

<http://digitalsocial.eu>

## Crowdmapping Digital Social Innovation with Linked Data

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# How can Europe tackle the crisis?

**Thesis** : New forms of bottom-up, grass-roots collective organization can be lead actors in helping tackle the crisis.

**European Commission** contracted Nesta, IRI, Waag Society, and ESADE to create a study of **digital social innovation** and **discover new actors** for future funding and support.

Created an open data repository and crowd-sourced map to complete the study.



# What is Digital Social Innovation?



Digital Social Innovation (DSI) as “a type of social and collaborative innovation in which innovators, users and communities collaborate using digital technologies to co-create knowledge and solutions for a wide range of social needs and at a scale and speed that was unimaginable before the rise of the Internet.”

**Examples** : hackerspaces, fablabs, community wifi networks ...

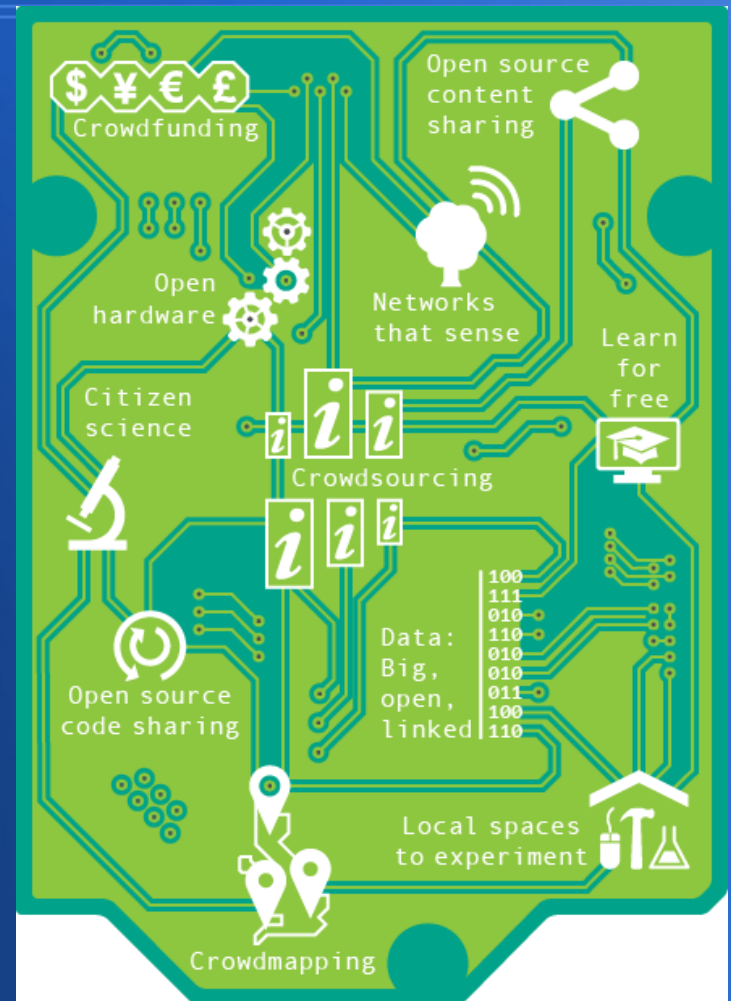
See European Commission Call : **SMART 2012/0049**

# Breaking down DSI

- **Innovation:** *any (possibly disruptive) change to the process of production, consumption, or distribution of commodities necessary for the social reproduction of society.* Not linear 'lab' to market, but a complex, dynamic, and interdependent process involving 'bottom-up' Web-based communities.
- **Social:** Change to social institutions (governments, citizen groups, etc.)
- **Digital:** Scales via use of digital technologies, in particular the Web.

# Domains of DSI

- New Ways of Sensing
- Collaborative Economy
- Open Access
- Open Democracy
- Funding and Incubation
- Awareness Networks



# Crowdmapping DSI

Began in October 2013 with an initial set (transformed into RDF) of **32** case studies.

**581** organizations by **August 2014**.

**January 2015** : **967** organizations and **609** collaborative activities.

<http://digitalsocial.eu>





# Did Linked Data Help?

## Yes !

- Allowed us to merge data from Waag, NESTA, etc.
- Naturally fit graph network.
- Helped with data analysis.

## Not really (or just “No”)

- Really slow
- Not enough developers
- Hard for UX people



# Linked Data Features

- **Social Innovation Ontology**

<http://data.digitalsocial.eu/data/organizations-and-activities>

- Entire Data-Set is available as **Linked Data**:

<http://data.digitalsocial.eu/>

- **SPARQL endpoint:** <http://data.digitalsocial.eu/sparql>

Subject	
OpenDataCommunities	
Type: Activity	
Predicate	Object
technology focus	Open Data
Description	Linked Open Data for the UK Department of Communities and Local Government.
area of society	neighbourhood regeneration education and skills work and employment finance and economy health and wellbeing
page	<a href="http://opendatacommunities.org">http://opendatacommunities.org</a>
technology method	open data open source
time	<a href="http://data.digitalsocial.eu/id/timeline-interval/6b05d0df-120-481-142-00-552-2268">http://data.digitalsocial.eu/id/timeline-interval/6b05d0df-120-481-142-00-552-2268</a>

Ontology	<a href="http://xmains.com/foaf/0.1/">http://xmains.com/foaf/0.1/</a>
Ontology	The RDF Schema vocabulary (RDFS)
Ontology	An ontology of terms for describing Digital Social Innovation organizations and activities
Ontology	The data cube vocabulary
Concept Scheme	Full-Time-Equivalent Ranges
Concept Scheme	Organisation Types
Concept Scheme	ActivityTypes
Concept Scheme	Areas Of Society
Concept Scheme	Activity Technology Focuses
Concept Scheme	Activity Technology Methods
Concept Scheme	Areas Of Digital Social Innovation
Concept Scheme	Activity Roles

• An ontology is a set of classes and



# Network Analysis of DSI

- 
- The success of DSI is located in the social structure of the larger network of social innovation.
- Looking for **scale** is looking for a power-law.

**DIGITAL SOCIAL INNOVATION**

Home About Organisations & Projects Funding & Support Resources Events Blog

We are setting up a network of organisations that use the Internet for the social good.

Explore **1091** organisations with **685** collaborative research and innovation projects.

*"Digital Social Innovation is a type of collaborative innovation in which innovators, users and communities co-create knowledge and solutions for a wide range of social needs exploiting the network effect of the Internet."*

**LEARN ABOUT DIGITAL SOCIAL INNOVATION**

- New Ways of Making
- Collaborative Economy
- Awareness Networks
- Open Democracy
- Funding Acceleration and Incubation
- Open Access

Explore the map

Get on the Map

The image shows a screenshot of the Digital Social Innovation website. The header includes the logo and navigation links: Home, About, Organisations & Projects, Funding & Support, Resources, Events, and Blog. The main content area features a world map with various colored pins and icons representing different projects and organizations. A central graphic shows a network of interconnected nodes. Text on the page describes the mission and provides statistics: 1091 organizations and 685 collaborative research and innovation projects. A quote defines Digital Social Innovation as collaborative innovation that co-creates knowledge and solutions for social needs. A central section titled 'LEARN ABOUT DIGITAL SOCIAL INNOVATION' lists six categories: New Ways of Making, Collaborative Economy, Awareness Networks, Open Democracy, Funding Acceleration and Incubation, and Open Access. At the bottom, there are two teal buttons: 'Explore the map' and 'Get on the Map'.

# What is distribution of social innovation throughout Europe?

- There are 243 organizations with connections to other organizations (26%).
- The average number of connections per
- Mostly disconnected!



# What communities of social innovation exist in Europe?

- Clustering Coefficient:  
Number of Triangles/Number of Triplets
- The global clustering coefficient of the DSI network is 0.875 with undirected links.
- Modularity is .65



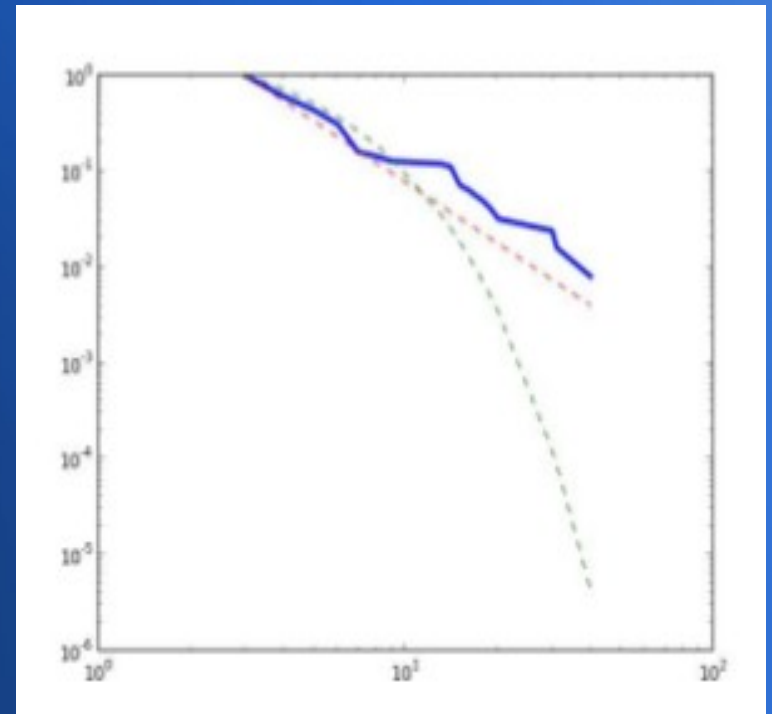
# Which organizations bridge the various communities?

- It also calculated the total network diameter of 7 and average path of 2.75.
- Only five organizations have over .6 eigencentrality
- Institute of Network Cultures, giDROPSzw, Elva Community Engagement, Arduino, and Fing.



# What are the conditions for scaling DSI in Europe?

- Not really a power-law, a truncated power-law
- Used Clauset's powerlaw method
- $x = 3$  with and an  $\alpha$  of 3.13
- The long tail doesn't exist!





# Data-Driven Policy Recommendations

- Existing DSI networks are heavily centralized around funders (Nesta in UK, etc.) but there is a huge amount of disconnected actors. **Focus on networking.**
- Lots of success in Open Data and preserving network neutrality.
- Open Knowledge needs help – focus on European copyright reform. 11,000+ comments
- Public Procurement of Innovative Solutions (January 2014)

# European Commission Funding

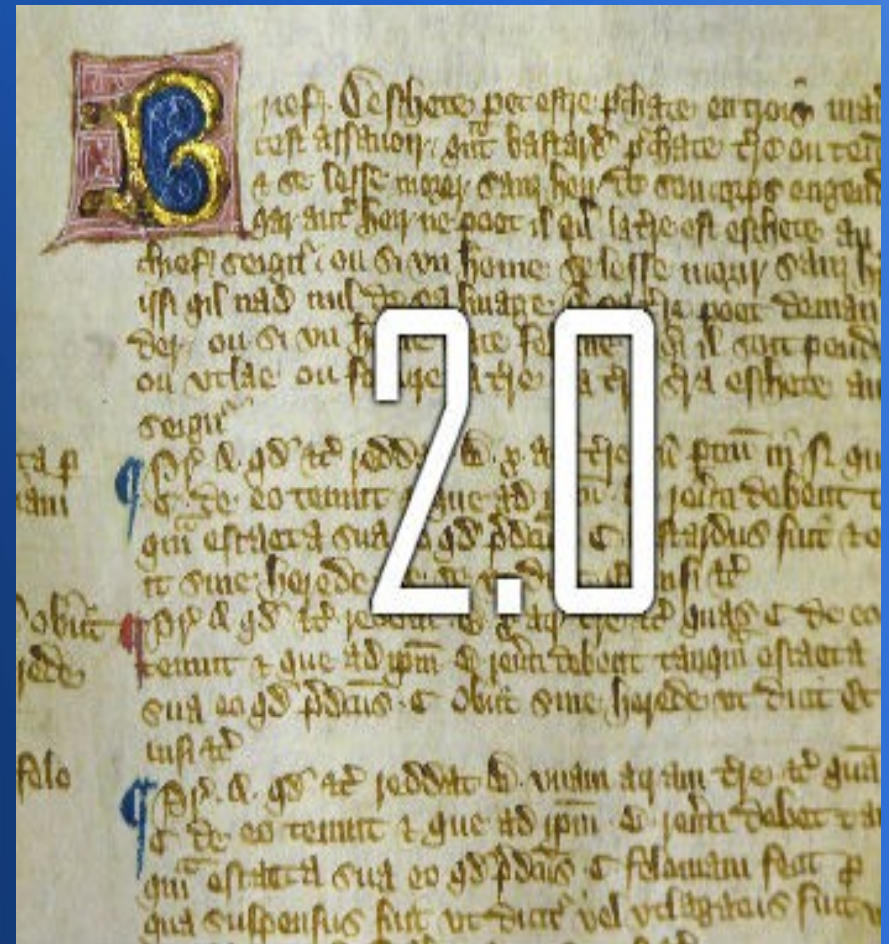
- Currently it is too difficult for small organizations and hackers to apply for European Commission support (80 page proposals!)
- Lightweight small projects and crowd-funding approaches are needed!
- See European Social Innovation Challenge:  
<http://socialinnovationcompetition.eu>



# The “Magna Carta” for the Web

If the Web is the source of innovation, then our rights should be extended to the **common** infrastructure.

- Crowdsourced basic rights from the Web from users themselves.
- <http://webwewant.org>



# Next Steps

- **Collective Awareness Platforms :**  
<https://ec.europa.eu/dgs/connect/en/content/collective-awareness-platforms>
- **CHEST (crowd-funding) :**  
<http://netfutures2015.eu>
- **D-CENT project:**  
<http://dcentproject.eu>
- **The DSI final report:**  
<http://content.digitalsocial.eu/>



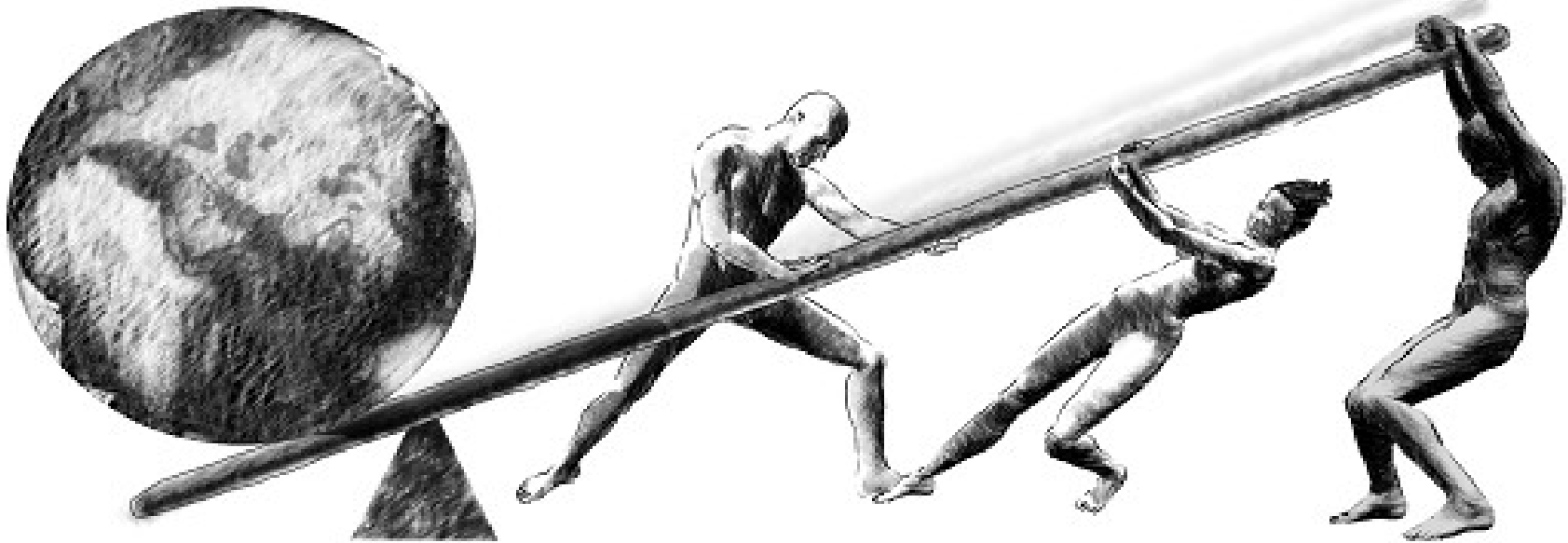
# Conclusions

- We combined traditional sources of data with survey-collected data in order to create a crowd-mapped around DSI with [digitalsocial.eu](http://digitalsocial.eu). Could be repeated **for other new domains**.
- The **network analysis** combined with **visualizations** made the data-set comprehensible for **policy-makers**.
- What if more policy-decisions were based on **open data** and **empirical analysis**?



# Questions?

**The lever of planetary solidarity**



**The planetary platform of the web**

**The fulcrum of planetary consciousness**