Engineering network architectures fit for regulatory purposes: decentralised data governance

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Internet: research vs. policy

mainstream research on communication networks (5G):

- **bandwidth, access, interoperability**

most debated policy/regulatory issues :

- **The role of Platforms: concentration of power, level playing field, responsibilities**
- **Big data aggregation for the DSM: clear legal framework, privacy and ownership of data, digital sovereignty**

asymmetry in data governance

The 'culprit' is the extremely centralised architecture of the dominant data platforms – which results in:

- **unparalleled new public services from big companies**
- **extraordinary revenues (for big companies)**
- **unprecedented risk for privacy leaks**
- **uncompetitive advantage and high barriers for new entrants, stifling innovation**

network effects: can architectures come to the rescue?

*Vision: a **distributed architecture** where each piece of user-generated information remains under the full control of the user who generated it*

- **on personal data spaces at local level**
- **subject to on-demand aggregation by third parties**

*enabling **decentralised data governance***

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Can we build it?

technologies already exist:

- **P2P networks (robust distributed architecture)**
- **blockchains and other distributed ledgers (decentralised certification and security of transactions)**
- **Linked data, open data**

to be generalised to clouds, social networks and IoT

with robust standards

the goal: creating a decentralised innovation ecosystem

- **Open to new entrants and open innovation: innovative, participatory, privacy-by-design business models**
- **Open to new services: allowing more SMEs and social enterprises to implement social innovation**
  - for collaborative public services, collaborative economy, collaborative making, participatory consumption, environmental action, innovative approaches to open policy making and open democracy, …

Areas of **Digital Social Innovation** activities

New Ways of Making

Collaborative Economy

Awareness Networks

Open Democracy

Funding Acceleration and Incubation

Open Access

EC Study on Digital Social Innovation in Europe
Crowdmapping actors and networks: http://digitalsocial.eu/

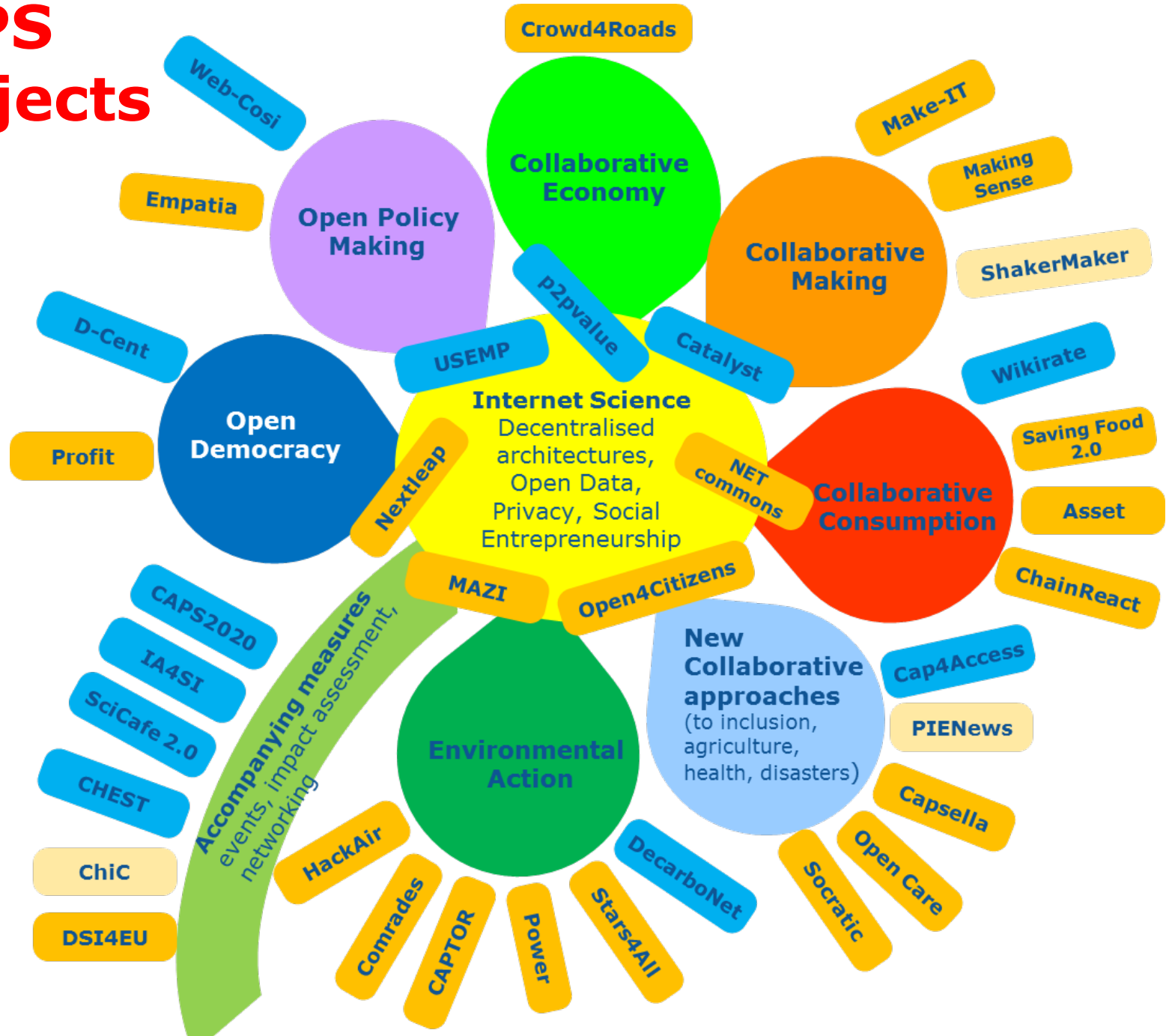# What is DG CONNECT doing in Digital Social Innovation?

Call ICT-11: Pilots of Collective Awareness Platforms (CAPS)

- **Demonstrating new forms of bottom-up innovation and social collaboration based on open data, open knowledge, open source software and open hardware**
- **Building on 36 running projects**

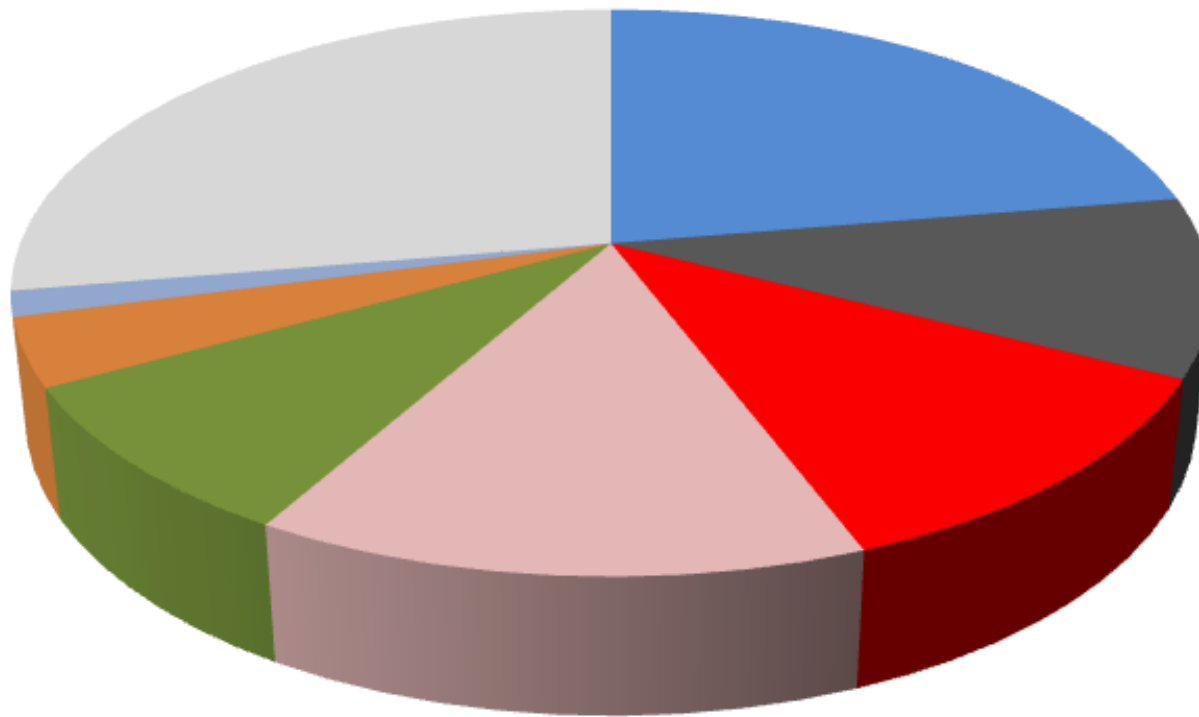*Call ICT-12b: Distributed architectures for decentralized data governance*

- **Demonstrating a distributed open hardware and software platform supporting decentralised data and identity management and bottom-up participatory innovation**

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CAPS projects

Crowd4Roads

Make-IT

Web-Cosi

Making Sense

Empatia

Collaborative Economy

Open Policy Making

Collaborative Making

ShakerMaker

p2pvalue

D-Cent

USEMP

Catalyst

Wikirate

Open Democracy

Internet Science
Decentralised architectures, Open Data, Privacy, Social Entrepreneurship

Saving Food 2.0

Profit

Nextleap

NET commons

Collaborative Consumption

Asset

MAZI

Open4Citizens

ChainReact

Accompanying measures
events, impact assessment, networking

CAPS2020

New Collaborative approaches
(to inclusion, agriculture, health, disasters)

Cap4Access

IA4SI

PIENews

SciCafe 2.0

Environmental Action

Capsella

CHEST

Open Care

ChiC

HackAir

DecarboNet

Socratic

DSI4EU

Comrades

CAPTOR

Power

Stars4All

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multidisciplinarity

Legend:
- ICT
- economics
- arts/media
- social sciences
- life sciences
- physics/maths
- interdisciplinary
- others/unknown

ICT-12b

- Demonstrating a distributed platform (for communications, cloud computing or IoT) supporting decentralised data and identity management, e.g. using decentralised algorithms based on blockchains

- Involving
  - **technological actors** (P2P and open source developers, open hardware manufacturers, experts in security, encryption, anonymity, blockchains and linked data)
  - **civil society** organisations (citizens' organisations, digital rights advocacies, artists, social scientists)
  - **developers** of the overlying social applications and systems (creative industries, SMEs, social entrepreneurs, software developers)

- Creating robust **open standards**

Good to know

ICT-12/b-2016 (decentralised data governance)
✓**Submission deadline:** 12 April 2016
✓**Budget:** 5 M€

ICT-11-2017 (caps)
✓**Submission deadline:** 25 April 2017
✓**Budget:** 10 M€

Website (background docs, projects, examples, etc.):
http://ec.europa.eu/digital-agenda/en/collectiveawareness

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Questions (for you ☺)

What do you think of this approach?

How can we improve it?

What would you like to see in future calls?