



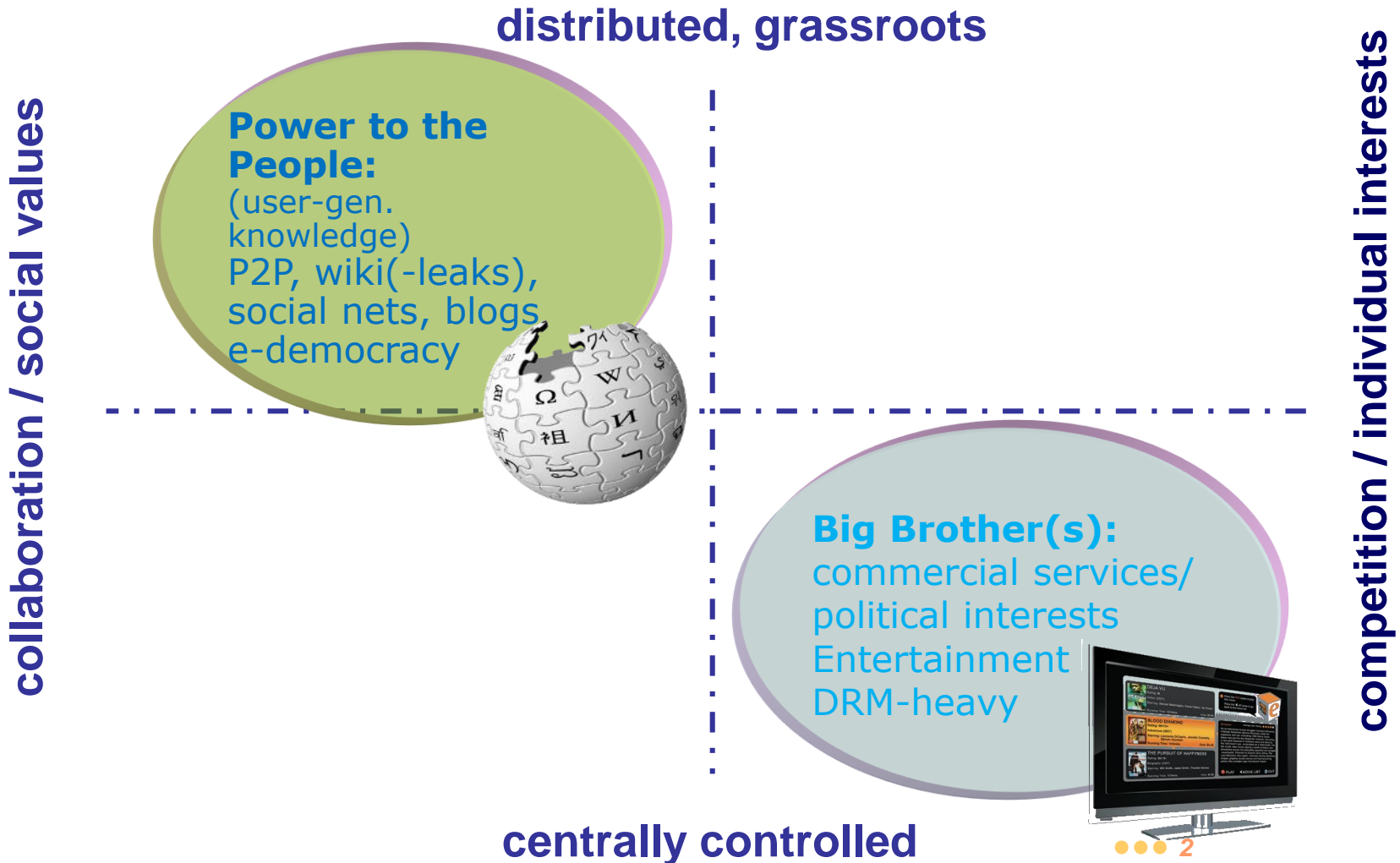
Internet and Democracy: priorities for research and innovation

Fabrizio Sestini
DG CONNECT E3 Next Generation Internet

<http://ec.europa.eu/digital-agenda/en/collectiveawareness>

Future Internet scenarios

(Oxford Internet Institute Study on Technological, Social and Economic aspects of FI
http://cordis.europa.eu/fp7/ict/fire/docs/tafi-final-report_en.pdf)

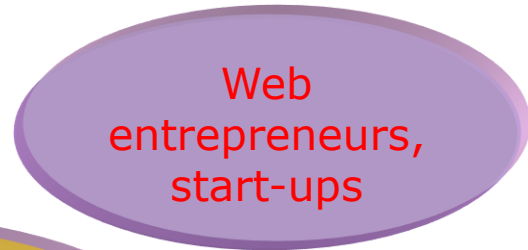
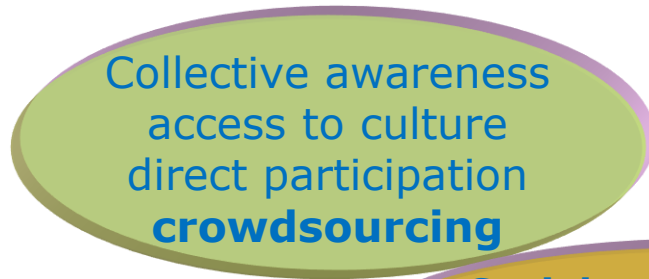


Current Internet scenarios

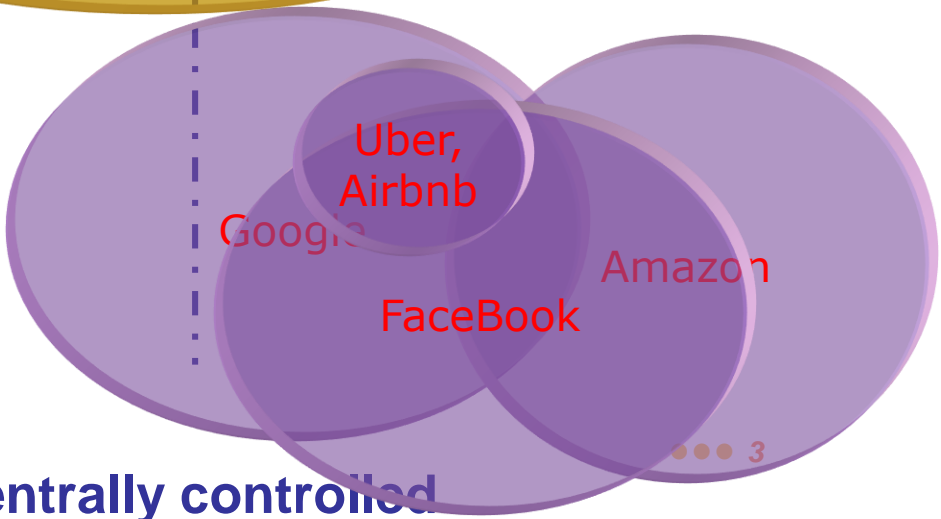
European
Commission

collaboration / social values

distributed, grassroots



competition / individual interests



centrally controlled

Big Brothers: centralised data platforms

- unparalleled new public services
- extraordinary revenues
 - only for the big companies
- unprecedented risks for privacy
- uncompetitive advantage
 - high barriers for new entrants
 - stifling innovation

Why decentralisation?

| Centralised | Decentralised |
|-----------------------|-------------------------------|
| One choice | Multiple choices |
| Uniformity | Diversity |
| Monopoly | Network neutrality |
| Proprietary solutions | Open standards, open source |
| Clouds | Community networks |
| Monitoring | Privacy |
| Asymmetric data flows | Decentralised data governance |

Fixing asymmetry in data governance

*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***

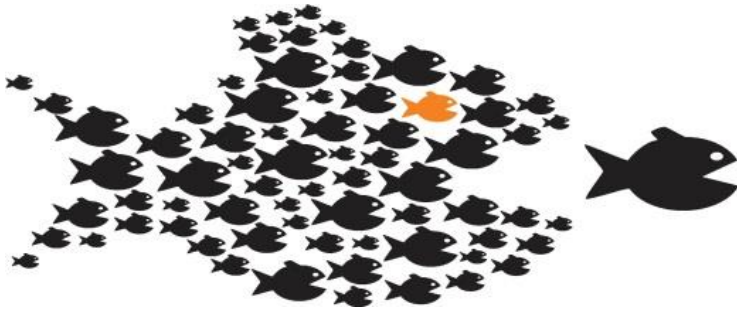
Can we build it?

- *technologies already exist:*
 - **P2P networks (robust distributed architecture)**
 - **Blockchains** and other distributed ledgers (decentralised certification and security of transactions)
 - **Open data, linked data**
- *to be generalised to clouds, social networks and IoT*
- *with robust standards*

"Individually, we are one drop.
Together, we are an ocean."
Ryunosuke Satoro



An example of DSI policy: Collective Awareness Platforms for Sustainability and Social Innovation



Harnessing ICT networks, network effects and collective intelligence

Creating awareness of sustainability challenges - and of bottom-up collaborative solutions grounded on real communities of people

Supporting new economic models beyond GDP

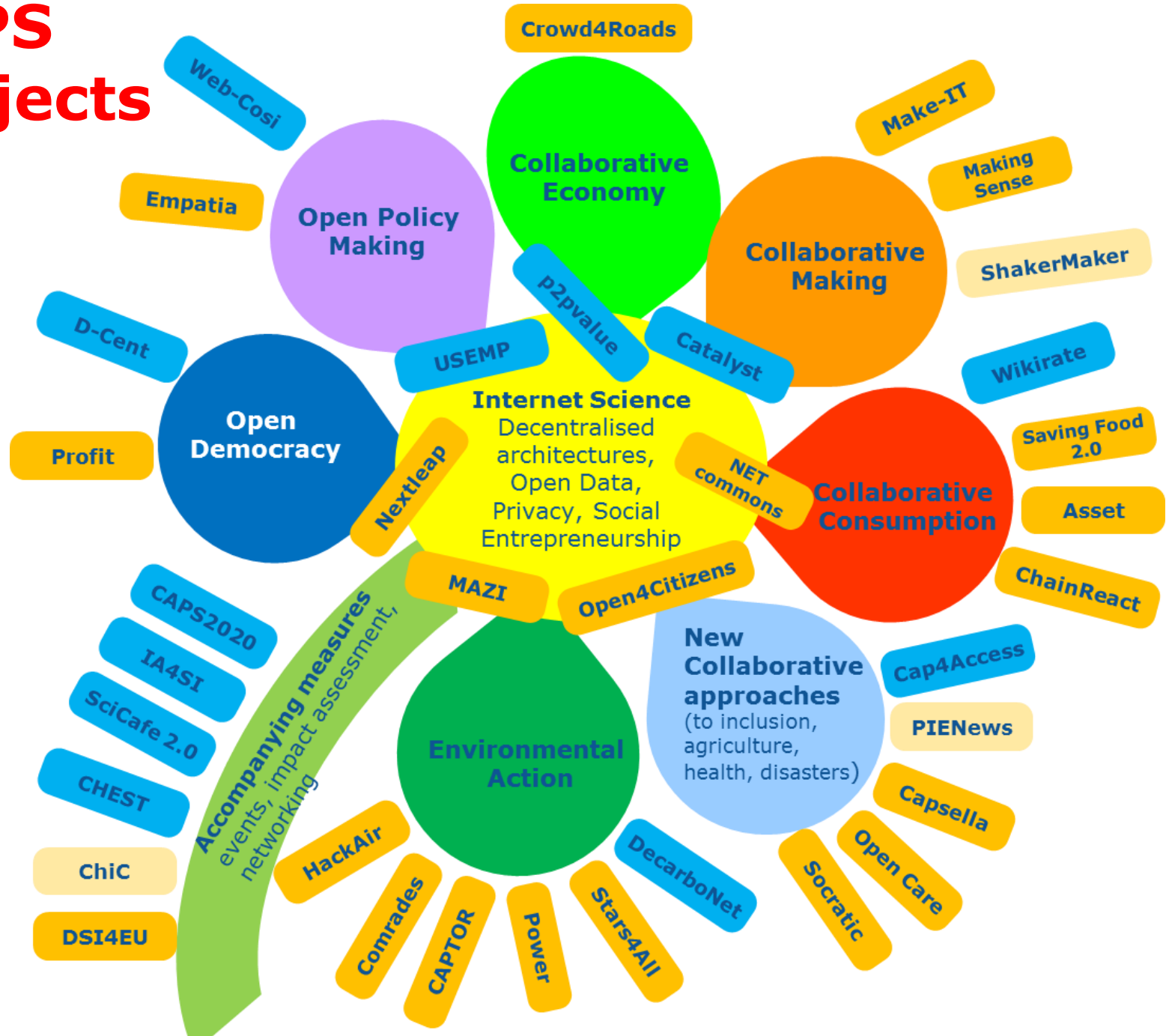
Based on open data, open source and open hardware participatory innovation paradigms

Requiring participation of at least two non-ICT partners

Appealing to new grassroots actors: social entrepreneurs, students, hackers, civil society organisations

<http://ec.europa.eu/digital-single-market/en/collectiveawareness>

CAPS projects





Tools for democratic participation and citizen empowerment

(1st call of CAPS, Collective Awareness Platforms for Sustainability and Social Innovation)

- **Be informed and notified on issues that matter to you**
Citizen notifications for town hall decisions
- **Propose and draft solutions and policy collaboratively**
Collaborative policy making
- **Decide and vote on solutions collectively**
Electronic voting
- **Implement and reward people while tracking progress**
Blockchain reward scheme (freecoin)
- **Large-scale democracy pilots**
Barcelona
Reykjavik
Helsinki
Madrid

http://dcentproject.eu/wp-content/uploads/2016/06/D-CENT_PUBLISHABLE-SUMMARY-05-2016_A5_final_web.pdf



- *Demonstrating a **distributed open hardware and software platform** supporting*
 - **decentralised data and identity management**
 - **bottom-up participatory innovation**
- *using **decentralised algorithms based on blockchains***
- *Involving*
 - **technological actors** (P2P, blockchains and open source developers, open hardware manufacturers, experts in security, encryption)
 - **civil society organisations** (local communities, 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***

Why is DSI important?

For society

- **delivering public services for and by the citizens**

For the environment

- **collaborative solutions to reduce pollution, crowdmap issues (traffic, etc.)**

For the economy

- **enabling new economic models (sharing or collective economy)**

For the Internet itself

- **driving different technological priorities for its decentralised development**

Vision for a "Next Generation Internet" *an Open Internet initiative*

European
Commission

*Artificial Intelligence
Immersive Interfaces*

IT-driven
Business driven
Right 2 disconnect

Proliferation of
devices
Sustainability

Monopolies
Centralization
Censorship

**Human
Immersive
Emotional
Easy**

**An "agent"
Internet
Green & Blue**

*New Discovery
technologies
Distributed architectures
Blockchains*

**Diversity
Pluralism
Right 2
choose**

Cybercrime
Regional
disconnection

**Inclusive
Open 2
change**

**Resilient
Secure &
Safe**

Discrimination
Fragmentation
Digital divide

**Democratic,
Participatory
Transparent**

**Level playing
field
New participatory
economic models
multistakeholder**

Lack of
Privacy
Monitoring
Asymmetries
Profiling

Incumbents
No network
neutrality

*Personal Data Spaces
Decentralised (Data) Governance
Privacy preserving technologies*

Concerns
Vision
Research topics

Research Projects (focused on specific research domains):

To provide support to third party projects by individual research groups /organisations (70-80% of their budget)

Size of funding to third parties: 50k€-200k€, 9-12 months

The proposers should encourage, when relevant, open software, firmware and hardware design, access to data, open standardisation activity, access to testing and operational infrastructure as well as IPR regime ensuring lasting impact and reusability of results

NGI Next Generation Internet

Research areas (*first draft*)

- *a) **Privacy and trust enhancing technologies:** to help users achieve greater control when sharing their personal data*
- *b) **Decentralized data governance:** explore new distributed data management systems, paying attention to ethical, legal and privacy issues*
- *c) **Discovery and identification technologies:** to access heterogeneous data sources, services, objects and sensors, devices, content, etc.*

Engage with the



NGI Initiative

See the outcome of the **open consultation!**

Follow **Futurium!**

Join and contribute to our **debate section!**

Follow us on  **@ngi4eu!**

Share it!

<https://ec.europa.eu/digital-single-market/en/next-generation-internet-initiative>



towards a *Manifesto for Digital Social Innovation*

<https://www.dsimanifesto.eu/manifesto/>

1. *Financial support*

- **Shift governance (from lobbies to bottom-up), Methodology, Additional sources**

2. *Experiment*

- **Bring together, Set technological priorities, Public adoption**

3. *Digital skills and multi-disciplinarity*

- **Promote digital skills, More ICT curricula, Incentives for multi-disciplinarity**

4. *Democracy and decentralization*

- **Accelerate democracy projects, Showcase open democracy, Promote awareness**

5. *Openness*

- **Mandate Open-Source, Promote Open Data, Sustain Open Knowledge**

Next events

<https://www.dsimanifesto.eu/manifesto/>

"What next for Digital Social Innovation?"

<http://bit.ly/2mT1hNR> in London, on 16th and 17th May

"DSI Manifesto workshop" in Rimini, Italy, on 23rd May

<https://www.dsimanifesto.eu/workshop/agenda/>

CAPS Community Workshop, in Volos, Greece, on 12th July

https://capssi.eu/event/2nd-caps-community-workshop/?instance_id=44

Questions (for YOU!):

Should we do more of this?

If yes, how?

-funding small activities or collaborative projects?

-multidisciplinary?

-focus on technology or on sustainability?

-Which are the most urgent concerns?

Comment on the manifesto at

<https://www.dsimanifesto.eu/manifesto/>

THANK
YOU!

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Digital Social Innovation (DSI), CAPS:

<https://ec.europa.eu/digital-single-market/en/collective-awareness>

Next Generation Internet – an Open Internet initiative:

<https://ec.europa.eu/digital-single-market/en/next-generation-internet-initiative>