ICT WP2013, Objective 5.5 CAPS: Collective Awareness Platforms for Sustainability and Social Innovation

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Future Internet scenarios

(See also the Oxford Internet Institute Study on Technological, Social and Economic aspects of FI, http://cordis.europa.eu/fp7/ict/fire)

Collective Awareness:
(user-gen. knowledge)
P2P, wiki(-leaks),
social nets, blogs
e-democracy

Big Brother:
commercial services entertainment (e.g. IPTV)
DRM-heavy apolitical
What is "Collective Awareness"?

- Gathering of big data (from humans and sensors)
  - Made available to all citizens as open data
  - Enriched and interrelated with other sources of information/statistics/simulations
- Providing an extended awareness of the social world, the environment and the consequences of our actions
What are "Collective Awareness Platforms"?

- Using *collective awareness* to support better informed and sustainability-aware decisions
  - At individual and/or collective level
  - In specific or generic "platforms"

- Harnessing concepts from:
  - IoT - collecting data from environment
  - Social networks - interaction
  - Wikis – coproduction of new knowledge
Approach

• Harnessing the **network effect**
  – to create collective intelligence

• **Sustainability** as a goal
  – Beyond GDP, Low Carbon economy

• Behavioural changes
  – Self-regulation based on collective awareness

• **Bottom-up**
  – And coordinated

• **Non commercially-driven** platforms
  – That can produce new business models and (social) innovation
possible applications:

• Food, health
  - ranking/labelling/advice

• Low carbon, energy savings
  - Energy savings, environmental monitoring...

• Smart Cities
  - Social innovation, transport, emergency...

• Safer, better Internet
  - Crowdsourcing, open social media

• New democracy, participation
  - Politics, inclusion, youth, elderly...
Is it new? some (initial) examples:

- **SUNSET**: exploiting social networks to manage urban mobility in a sustainable manner
- **Eyeonearth**: collecting environmental information from social networks
- **EVERYAWARE**: Enhance environmental awareness and promote behavioural change through social information technologies
- **EcoSearch**: a search portal supporting the environment
- **Freecycle**: grassroots and nonprofit movement of people who are giving stuff for free
- **echo**: open source community for sustainable changes and living democracy
- **AVAAZ**: connecting citizens to drive sustainable political decisions
- **Code for America**: helping governments work better for everyone with the people and the power of the web

**Example: How can ICT incite behavioral reactions to environmental data?**

Subjective monitoring
- opinions, personal experiences
- incentives

Objective monitoring (sensors)
- sound, temperature, air quality

Enhanced awareness

Impact on individual/collective behaviours

Pressure on policy making

"Tell me, I forget. Show me, I remember. Involve me, I understand."
Chinese proverb

EC funded project: Everyaware
CAPS: hard ICT needs

- Interfaces with sensors, IoT
- Management of Open Data
  - from sensors and people
- Usability, interfaces for inclusion
- Integration of different systems / networks
  - open source, open hardware, free software
- Provision of unrestricted communications
  - opportunistic, community networks, …
CAPS: scientific needs *(multidisciplinary)*

- simple online reputation mechanisms
  – based on identity but preserving privacy
- Understanding new collective models for value creation beyond monetisation
- Understanding motivations and incentives for online collaboration
- Impacts of social networks on sustainable collective behaviours
CAPS: regulatory needs

• Fundamental rights of the citizens
  – E.g. quality guarantees from collective systems
• Links with policies
  – on open data, network neutrality, competitiveness, copyright, open government
• Trialling of new forms of "self-regulation"
  – based on individual situational and contextual awareness of global social constraints
Obj. 5.5: CAPS objectives (1/2)

- **a) Supporting multidisciplinary experiences/pilots** of grassroots digital social innovation platforms involving citizens and communities *(STREPs, 9M)*
  - Societally, environmentally and economically sustainable solutions to societal challenges (e.g. in direct democracy, health, environment, sustainable lifestyles, etc.)
  - Collective decision making tools based on the combination of social networks, wikis, IoT
  - Empowering existing (local or global) communities of citizens
  - Using free software, open hardware, open data

- **b) Providing seed money** supporting bottom-up social innovation and education initiatives *(1 IP with open calls, 3M)*
  - based on crowdsourcing and network intelligence principles
  - empowering web innovators, research teams, communities and entrepreneurs
  - activities selected on the basis of excellence and crowd-funding criteria
c) Engaging citizens and society at large:
- distil best practices from existing initiatives, creating synergies and critical mass
- assess impact of CAPs on communities
- achieve a multi stakeholder approach (helping social entrepreneurs benefit from seed funding)
- discuss ethical aspects, e.g. fundamental rights such as quality guarantees
- link with policy/regulatory activities e.g. on privacy, identity, open data, NN, copyright, etc.

d) Integrating the scientific base for the multidisciplinary understanding of CAPs, addressing:
- innovative mechanisms for value creation beyond monetisation
- reputation
- motivation and incentives for online collaboration and sustainable behaviour
- innovative licensing
- open government
- new forms of "self-regulation" (based on awareness of global constraints)
Bottom-up emergence and take-up of more sustainable organisational changes
- harnessing the “network effect” and the resulting collective awareness

To strengthen civil society by improving social and sustainability aspects of all kinds:
- Quality of life at large
- New production and consumption patterns
- Societal resilience
- Social innovation
- Social entrepreneurs
- Innovative business and economic models
CAPS - Collective Awareness Platforms for Social Innovation and Sustainability in ICT WP 2013

Internet Science: understanding techno-social research issues

Coordination Actions, 3M€
- societal debate
- coordination, best practices
- multi-stakeholder approach
- multidisciplinary technology enablers for Social Innovation

Research Projects, 9M€
- multidisciplinary experiments/pilots

Obj. 5.5
- CAPS 15M€
- open calls

Obj. 1.7b (+ existing NoE)
- seed money for small actors in SI

Integrated Project, 3M€
- Coordination Actions, 3M€
- Research Projects, 8 M€
- 3M€
- 8 M€
Key priorities for proposals

- Innovativeness and effectiveness
  - compared to existing "classical" solutions
- Social value
  - number and type of citizens involved: young, elderly, …
- Scalability
  - to reach a critical mass
- Portability
  - to other application areas
- User take-up and motivation
- Positive impact on sustainability aspects
- Multidisciplinary approach and impact
multidisciplinarity: Internet is not just about technology...

• **Economic transformation**
  - Productivity gains in standard businesses
  - New businesses/SMEs, new advertisement paradigms, energy grids
  - New economic models (skype, google, apple, cloud, ...)

• **Social expansion**
  - Ubiquitous access to information (copyrighted or free: wikipedias, googlemaps, ...)
  - Online social networking (Linkedin, Facebook, Twitter, ...)
  - Personal expression (Youtube, Flickr, ...)

• **Psychological change**
  - Internet time (affecting workstyles and lifestyles)
  - Globalisation, multilinguality, Augmented Reality
  - Online Trust

• **Legal Impact**
  - Redefinition of Privacy and Identity
  - Copyrights in the digital era
  - Cybercrime
How to be "multidisciplinary"?

- Integrating life and human sciences needs **incentives**, e.g.: require participants from at least 3 of these areas:
  - ICT
  - Legal
  - Physics
  - Sociology/philosophy
  - Economics
  - Innovation
  - Art and history
Reminder: pre-notice of Call for Tender SMART 2012/0049
Study on Social Innovation in Digital Agenda
(excerpts from pre-notice published in the supplement to the OJ of the European Union on 31/12/2011)

- focusing on the social innovation enabled by the "network effect" and by new models for co-production and sharing of content
  - involving entrepreneurs, academics, students and "geeks", NGO and volunteers, citizens
    - identify actors in the different fields (e.g. democracy, energy…)
    - analyse and compare their approaches in relation to DAE
    - compare strategies for innovation in EU research
    - mobilise the new actors and the general public
    - explore new types of entrepreneurship and business models
Synergies with Objective 1.7b **Internet Science** *(multidisciplinary investigation of key techno-social issues)*

- Also addressing **reputation**, **network neutrality**, **identity**, **crowdsourcing**, **citizen involvement in content generation**, **new collective economic models**, **privacy by design**, **behavioural and societal changes**

- **Multidisciplinary requirement** *(at least 2 entities from sociology, economy, law, content/culture, perception/interfaces)*

Website (background docs, links, examples, etc.):

infodays (Paris, Warsaw, Pisa, Barcelona, ...)

Relevant links: