GARR Conference

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Overview of the Next Generation Internet initiative

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What is it?

A

new, ambitious, European

initiative to develop the internet of the future.


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Concerns

- Security & privacy
- Concentration, silos, lack of interoperability
- Socio-economic transformation which leaves people behind.
- A digital divide which increases
- Lack of trust

What is the vision? What is the challenge?

- Our **vision** for the internet: A human-centric internet which delivers more to people and society than today.
- Europe is a **new entrant**.
- The Internet keeps on **evolving rapidly**.

Strenghts

- Unique European values
  - Cooperation
  - Openness
  - Inclusiveness
  - Protection (privacy)
- Digital Single Market policies
- Level playing field for strong vertical base
- Solid and broad tech base

2017 Bruno Kessler Lecture on NGI

Seamless interaction between real and virtual world, cooperation between man and artificial intelligent agents will shape the future. However, to unlock this potential ***trust*** *by users is the precondition. Universal identity, personal data spaces, and security of transactions are expected to be major enablers to build this trust.*

Roberto Viola

Full speech: https://ec.europa.eu/digital-single-market/en/news/internet-humans-how-we-would-internet-future-be

Use policy making toolkit

Spending Programme

- Steering power of R&I
- Own EU programme
- Targeted (actions, actors)
- Cooperation with national programmes and initiatives
- Start now and grow under the next multi-annual financial framework (2021-2027)
- Procurement

Policy Programme

- Proportionality
- Subsidiarity
- User-centric (human-centric)
- Full toolbox (legislation, soft measures, standardisation, communication)
- Start now and spill-over into the next Commission (2019-2024)

The NGI Key Priority

In the LEIT ICT Work Programme 2018-2020
Objectives ICT-24 to ICT-31

Next Generation Internet – WP18-19

Artificial Intelligence

Interactive Technologies

Internet of Things

Multilingual

Global Social Sphere

Inclusive

NGI - Open Internet Initiative

5G

Cloud

HPC

Big Data

Cyber Security

NGI Open Internet Initiative: Objective ICT-24

Call 1: 2018

Closure: 17 April 2018

- 3 research & innovation projects with a total budget Euro 21.5 million

  Use of cascading grants (financial support to third parties, 80%)

- 3 CSAs, total budget Euro 7 million

Call 2: 2019

Closure: 28 March 2019

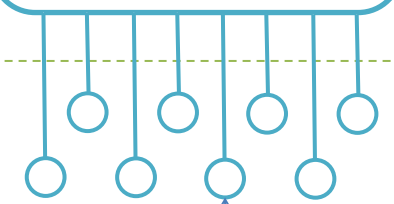
- 3 research & innovation projects with a total budget Euro 21.5 million

  Use of cascading grants (financial support to third parties, 80%)

R&I project implementation through sub-granting

Project submitted to EC call:
Euro 7-7.5 mil, 2-3 years,
80% for sub-grantees
Pan European
Procedures adapted to stakeholders
Run by organisations in the ecosystem

R&I Action:
Privacy and trust enhancing technologies



Activities include inter-alia:
- Call for & selection of top-teams
- Monitoring
- Mentoring, Coaching, Sharing
- Communications
- Community building

Sub-grantee:
- One legal entity with one specific project
- **Young researchers from outstanding academics, hi-tech startups and SMEs**
- Carry out the R&I work
- 50.000 – 200.000 Euro, 9 – 12 month

Intermediaries could consider the following …

- Project co-ordinators need to have the proven financial viability (in H2020) to receive pre-financing at the level of Euro 5 million or more.
- Project partners which have:
  - Outstanding technical competence in the area chosen
  - Proven organisational and managerial competences
  - Capacity to mobilise (networks of) stakeholders
- Able to develop a long-term vision for the area
- Able to develop a detailed research and engineering work programme ; Implement evaluation program (incl. external experts),
- Bring use cases from vertical markets incl. novel sustainability models
- Ensure that final outcomes will have an impact on the chosen area
- Commit high-level mentors/coaches
- Small and agile partnerships
- Mobilise additional financial and/or in-kind resources e.g. Instruments, tools, infrastructures, services offered to 3rd parties
- Adhere to the programme notions and values and make explicit provisions for this

1) Privacy and trust enhancing technologies

Work Programme

As sensors, objects, devices, AI-based algorithms, etc., are incorporated in our digital environment, develop robust and easy to use technologies to help users increase trust and achieve greater control when sharing their personal data, attributes and information.

1) Privacy and trust enhancing technologies

Consider…

As research examples:

- Decentralised or federated internet-wide identity, authentication, authorisation mechanisms
- Distributed trust reputation
- User-defined and controlled personal data release
- Privacy-safe personal data checking/proofing mechanisms
- Open hardware and software; usability, deployability, scalability

For the intermediaries:

- Uses cases from vertical markets and novel sustainability models
- Commitment to implement the WP values: openness, cross-border cooperation, decentralisation, inclusiveness and protection of privacy
- Instruments, tools, infrastructures, services offered to 3rd parties
- Attract top talents as 3rd parties
- Mentoring and adoption logic

2) Decentralized data governance

Work Programme

Leveraging on distributed open hardware and software ecosystems based on blockchains, distributed ledger technology, open data and peer-to-peer technologies.

Attention should be paid to ethical, legal and privacy issues, as well as to the concepts of autonomy, data sovereignty and ownership, values and regulations

Consider …

- involve the right technological actors, competent in P2P, blockchain, open source, open hardware
- involve multidisciplinary views in a wider context
- Attract top talents addressing the technical issues as 3rd parties

3) Discovery and identification technologies

Work Programme

Search and access large heterogeneous data sources, services, objects and sensors, devices, multi-media content, etc., which may include aspects of numbering; providing contextual querying, personalised information retrieval and increased quality of experience.

3) Discovery and identification technologies

Consider …

- Focus on the actual discovery mechanisms
- Address the global remote discovery problem that led to the domination of a few platforms
- Develop open semantics at all layers, eco-systems around are critical to avoid silo-based approaches
- Enable individuals and companies to be discoverable on the internet without intermediaries
- Impact of search and discovery in system design, data transparency and model implementation
- Importance of management of live streams of data requires new system approaches to access, process and store streams.
- Novel approach for multi-modality and multi-lingual content aggregation
- Importance of algorithmic systems transparency for digital trust and appropriation of emerging technologies

R&I Actions

Approach may include:

- open source software
- open hardware design
- software quality and usability audit
- security audit
- access to data
- standardisation activities
- access to testing and operational infrastructure
- think about visiting scientist/experts
- an IPR regime ensuring lasting impact and reusability of results
- whatever else is missing, including marketing
- give money to people to break things…

What is a good proposal?

- Among the three criteria, build a perfect impact story
- KPIs, go much beyond excellent words and plans
- your evaluator will not be administrators, rather top people in the field: write for them!
- Have your proposal checked by the NCP, colleagues, internet gurus.
- Evaluators take an investment decision

Three Programme Support Actions

Technology Strategy & Policy

Technology Harvest & Transfer

Outreach Office

Integral part of programme success

EU-US Collaboration on NGI: Calls

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Deadline 17 April 2018

Support Actions

A. Think/Do Tank
B. Fellowships

Budget Euro 2.5 million

2

Deadline 28 March 2019

Research & Innovation Action

- Joint experimentation

Budget: Euro 3.5 million

Where are we so far?

The Pathfinders Phase

Ongoing NGI support actions:

- *Test an innovative methodology to **identify key-enabling technologies** and core driving values for NGI and shape the NGI Programme through desk research on technology topics.*
- *Create a state-of-the-art **consultation platform** to engage the NGI Stakeholder community. Collect input from relevant communities, experts and Member States.*
- *Build an active **NGI ecosystem and mobilise new players.***

Ground the NGI strategy and establish the base for a long-term large-scale research flagship.

Leadership Team:

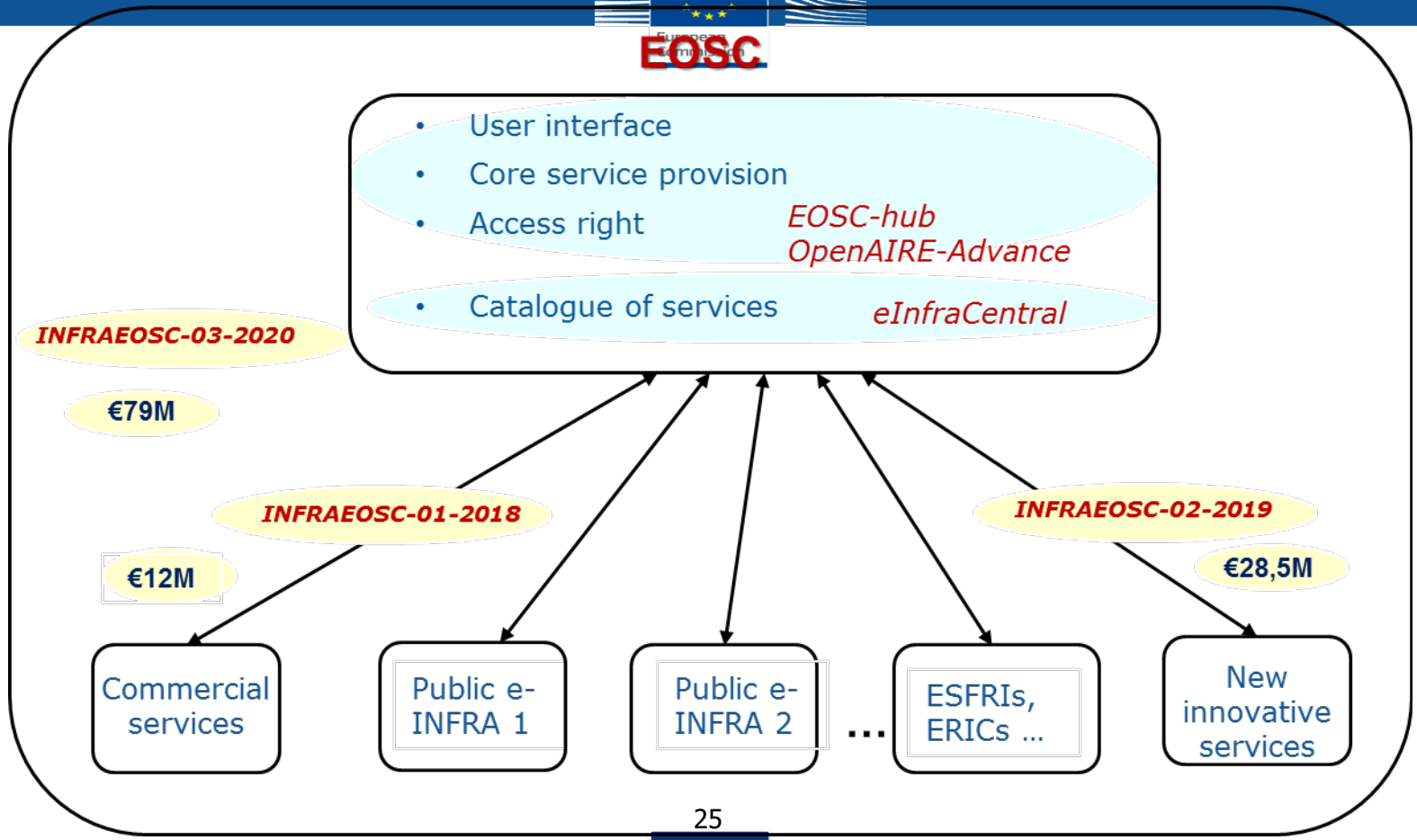
- **Katja Bego** (topics)
- **Mirko Presser** (ecosystem)
- **Jim Clarke** (consultation)
- **Monique Calisti** (Member states support/mapping)

Engagement & community building

- ✓ **Follow us *@NGI4eu***
- ✓ **Read more about NGI: www.ngi.eu**
- ✓ **Be part of NGI & Register: https://map.hub4ngi.eu/map/**
- ✓ **Take part in the NGI open consultation: http://consultation.ngi.eu/about-ngi-consultation**
- ✓ **Blockchains for social good prize: https://ec.europa.eu/research/eic/index.cfm?pg=prizes_blockchains**

+ Engaging Member States/H2020 Associated Countries via the H2020 FIF expert group & the NGI Contact points

EOSC present and future



Thanks for your attention.

Any questions ?

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