



# NEXT GENERATION INTERNET

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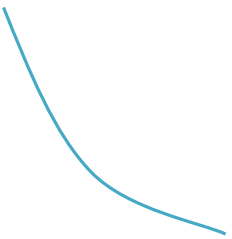
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# Why an NGI Key Priority

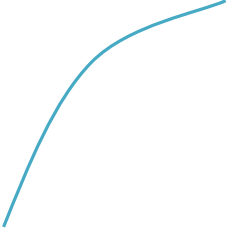
- ✓ A number of **technological trends** will thoroughly reshape the internet over the next 10-15 years.
- ✓ Europe should **drive this technology revolution** while contributing to making the future internet more human-centric.
- ✓ An **internet for the people**, that contributes to a more sustainable and inclusive society.
- ✓ Increasingly these technological trends influence each other and a programme targeted towards the Next Generation Internet must **consider them in a holistic way**.

# What is the aim & what to do?

- 1. Defragment and connect:** Ecosystem of European actors and an Ecosystem which is broader than ICT
- Engage **new stakeholders**
- Link **long-term research** with **applied research & innovation**, with **policy & societal expectations**
- 4. Radical new functionality** to support people's lives & global sustainability
- 5. European core values:** Openness, security, respecting our vision of privacy, participation, a level playing field for all business actors, open to innovation and preserving democracy
- 6. European movement:** human Internet as a political goal



Build a priority which unites stakeholders on a common goal:  
**Human Internet**



# Next Generation Internet

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

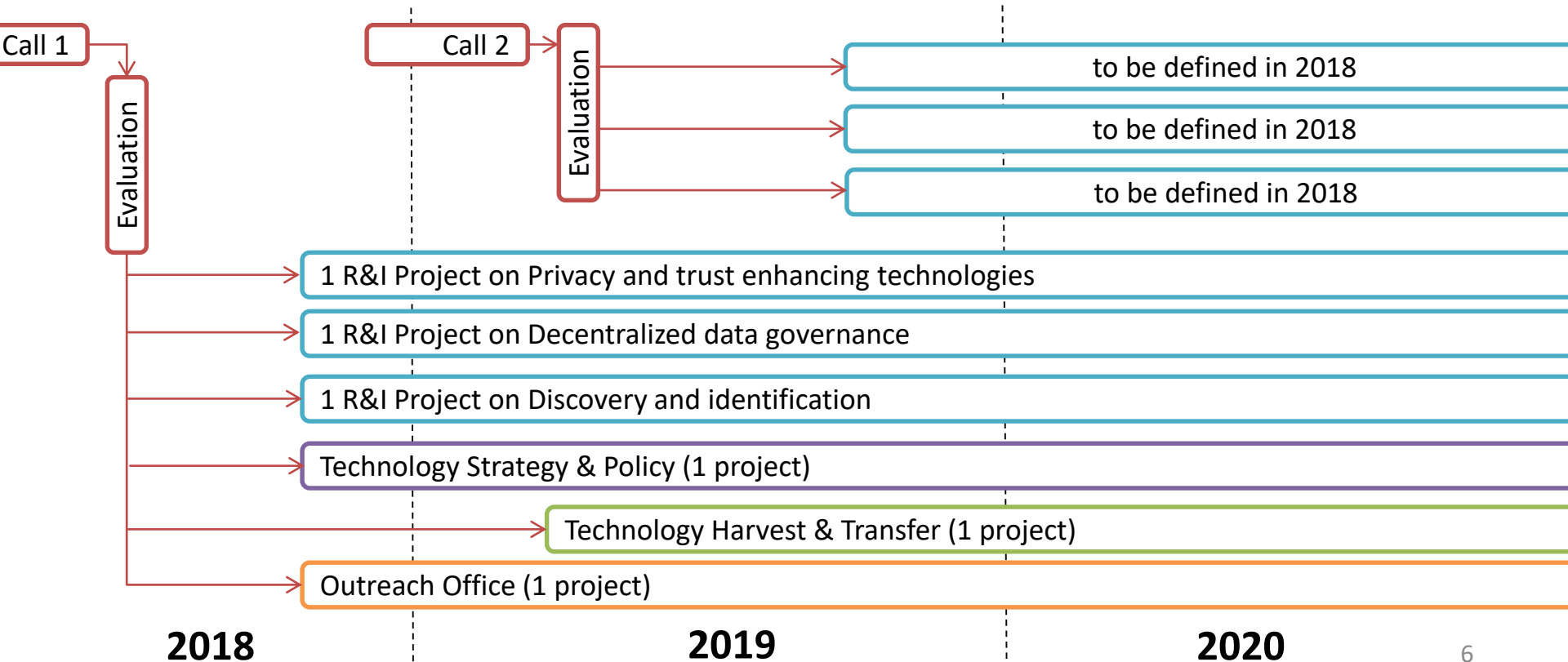
## Call 2: 2019

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%)

# Programme logic of objective ICT-24



# 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



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 3<sup>rd</sup> 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 3<sup>rd</sup> parties
- Attract top talents as 3<sup>rd</sup> 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 3<sup>rd</sup> 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

# The three Programme Support Actions

Integral part of programme success

# Technology Strategy & Policy

- Engage leading-edge Internet stakeholders and will identify emerging research trends and policy needs, through a continuous public online consultation, open stakeholder engagement, fora and debates, and data analysis.
- Use the most innovative approaches and technologies, and unconventional ways to maximise involvement of those stakeholders who are new to community programmes and who will actually drive the evolution of the Internet.
- Map and cooperate with national/regional initiatives and global activities where relevant.
- Driven by actors with a solid background and standing in today's NGI community, it aims at sustainability right from the beginning.
- **Be the intellectual spearhead of the 'Next Generation Internet – An Open Internet Initiative' and will closely engage with the other actions supported in this topic.**
- 3 years, Euro 3 million, partially be implemented through small prizes (max budget Euro 300.000)

# Consider the following ...

- Small and agile partnerships, 1-3 partners?
- Name the project leader and why this person is qualified.
- High-level, proven skills, authority in EU research landscape
- What are your KPIs?
- New and more effective and efficient ways – use of the latest online technologies and tools
- Integrate knowledge from ongoing actions.
- Mobilise additional resources (financial and/or in-kind)
- Demonstrate how you will be at service of the NGI initiative – what flexibility do you bring in?
- Adhere to the programme notion and make explicit provisions for this

## **New ways:**

- Data mining, Crawling
- publications
- Automatic data collection, dynamic spaces, crowd-sourcing
- Virtual networks
- Policy validation
- Visiting scientists
- Challenges
- Social media
- Thought leaders
- Meet-ups
- Events, groups,...



# Technology Harvest & Transfer

- Support 'R&I Actions' and their third parties in ensuring the best use of the outcomes created by **delivering specific exploitation strategies**, including follow-up investment opportunities, industry relations, IPR/knowledge transfers, tech-transfer services to digital innovation hubs, mentoring / coaching services and linkage to national IPR exploitation programmes, in a most innovative and effective way.
- Support impact assessment at the level of the 'Next Generation Internet – An Open Internet Initiative' topic.
- Start 6 months after R&I Actions (summer 2019)
- 3 years, Euro 2 million

# Consider the following ...

- Small and agile partnerships, 1-2 partners?
- Proven background and the skills and competences necessary for this job
- Name the project leader and why this person is qualified.
- What are your KPIs?
- How will you filter the once to work on more intensively (VIP class?)
- Help the teams to package into products and services which can move to the next stage (of development, of trials, of deployment, or mass market,...)
- Software/security audits, licenses,
- Support the ability to deploy, lead customers, procurements,
- How will you attract corporates to the programme (talent & startup)
- Overall demonstrate how you will be at service of the NGI initiative – what flexibility do you bring in?
- Mobilise additional resources (financial and/or in-kind)
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# Outreach Office

- Execute the programme communication strategy, branding and marketing activities, including extensive online and social media presence and events, establishing a positive brand image among young researchers, innovators, policy makers and people at large.
- **Centralised, more efficient and professional, it will lead communications towards the outside world** but also coach all actions under this topic in effective communications and marketing.
- 3 years, Euro 2 million.

# Consider the following ...

- Small and agile, why should a proposal have more than one partner?
- Aimed at professionals (in the communications & advertisement business)
- Name the project leader and why this person is qualified.
- Proven track record in communicating
  - Europe wide and multi-lingual
  - Complex (abstract) societal and economic challenges
- Tech-savvy, use of hottest online services
- Demonstrate how you will be at service of the NGI initiative – what flexibility do you bring in?
- Mobilise additional resources (financial and/or in-kind)
- Adhere to the programme notion and make explicit provisions for this

# Characteristics of the NGI Open Internet Initiative

**#Think Big:** Start now, prototype in H2020, flagship in FP9?

**#Different process:** Fast & flexible, continuously agile, programme approach

**#Different people:** Real Internet researchers & innovators, stake-holders who are not part of community RTD&I today.

**#Open:** Build true partnership, national programmes & US

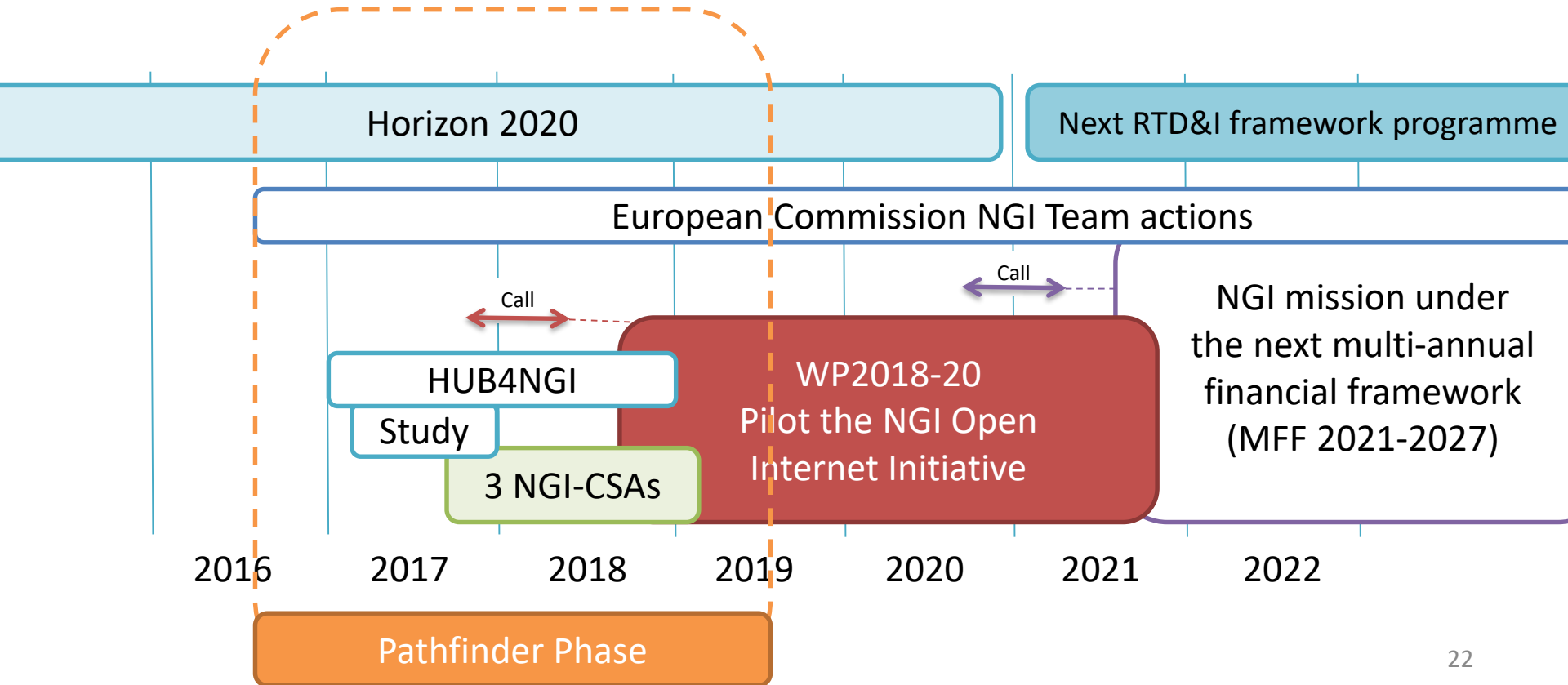
**#Visible:** Professional communication & marketing

**#Multidisc:** Cater for innovation coming from the unexpected

**#Policy:** Embed in European policy lines – use full policy toolbox

**#European:** Strong European partners with an interest in Europe

# Roadmap



# 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.*

# Communication & community building

- ✓ Follow us [@NGI4eu](https://twitter.com/NGI4eu)
  - ✓ Read more about NGI: [www.ngi.eu](http://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>
- + Engaging Member States/H2020 Associated Countries via the [H2020 FIF expert group](#) & the [NGI Contact points](#)





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