The Next Generation Internet - An Internet of Humans

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DG Connect

Internet evolution

Trend will accelerate

10 years from now Internet indispensable for all socio-economic activity

Today, Internet is the engine of digitisation

29y ago

www

European Commission

Original values of the internet

- A universal and **decentralised** 'network of networks'

- Robust, **resilient**

- **Openness, inclusiveness**, collaboration, transparency

- Supports permission-less **innovation**

- Premised on **voluntary** exchange of data

- Do these **internet values** still apply?
    - Open?
    - Secure?
    - Protection of personal data?

Internet challenges

- **Internet Users** in Europe **concerned** by private companies monitoring and commercialising personal information has increased from 68% (2014) to 77% (2016)

- Almost half of Internet users (48%) have limited or kept from some online activities due to **security concerns**

- Only 4% of **world data** is stored in the EU

- A mere 25% of large EU enterprises and 10% of EU SMEs **used big data** analytics in 2017

Digital Single Market
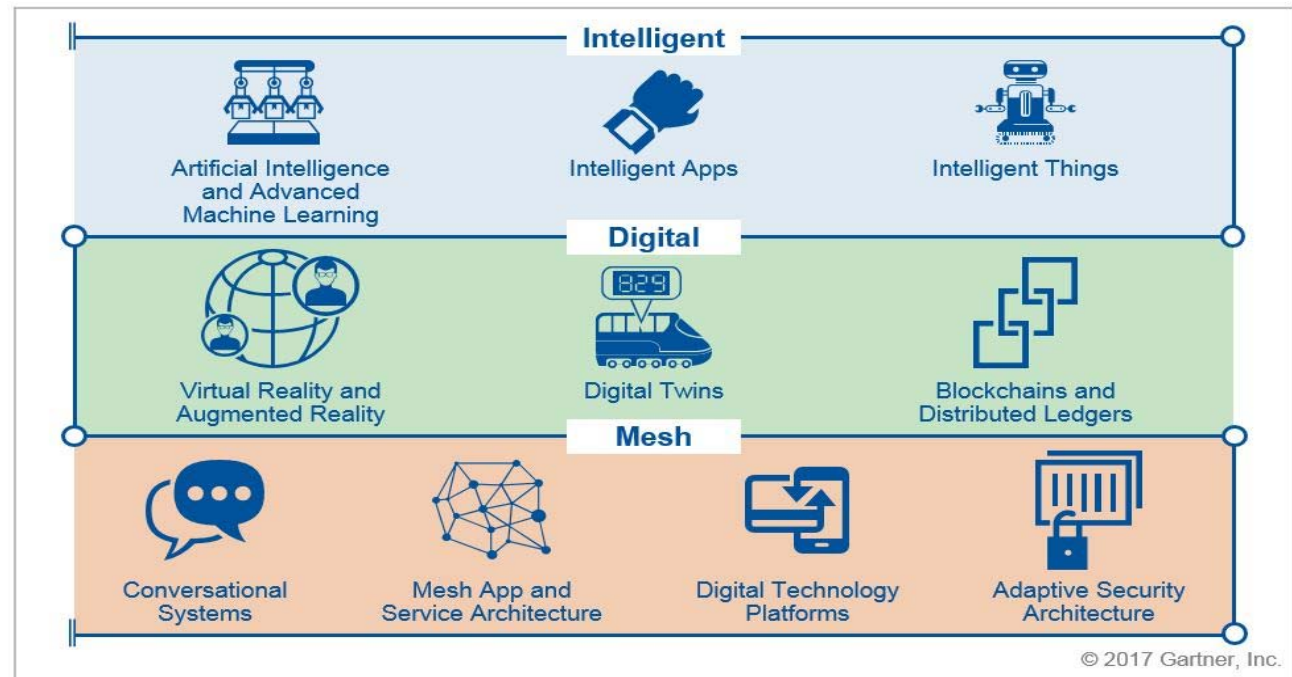

Building a solid regulatory framework

- GDPR (General Data Protection Regulation)

- Free Flow of Non-personal Data

- Net Neutrality (open internet)

- Online platforms (illegal content)

- Cybersecurity
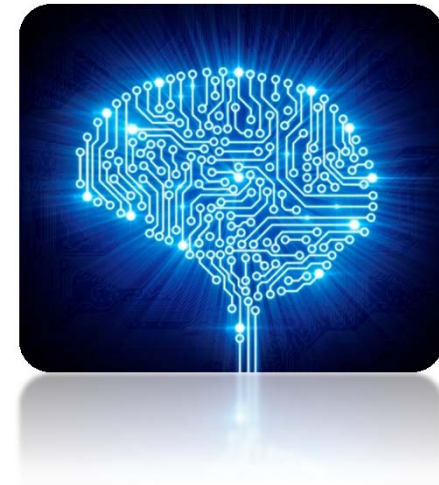
Mastering the technology

A number of technological trends will thoroughly **reshape** the internet over the next **10-15 years**

Source: NLnet & Gartner; Next Generation Internet study

Commissioner Mariya Gabriel

The way I envision it, it will be a human centric internet or an internet of humans. It will have to be trustworthy, resilient, sustainable and inclusive.

Full speech: https://ec.europa.eu/commission/commissioners/2014-2019/gabriel/announcements/keynote-video-message-commissioner-mariya-gabriel-european-dialogue-internet-governance-eurodig_en

NGI Vision

- **Trust**
  - Users control their data
  - Authentication and online identity
  - Integrity & traceability of information
  - Human control

- **Resilience**
  - A highly secure and resilient infrastructure
  - Test and deploy cyber technologies at scale

- **Decentralisation**
  - Peer-to-peer transactions using distributed ledger technologies

- **Openness and inclusion**
  - Accessibility
  - Language transparency
  - Universal access

- **Sustainability**
  - Reduced carbon footprint

A joint effort

- ➤ **Defragment and connect:** *Ecosystem of European actors and an Ecosystem which is broader than ICT*

- ➤ *Engage* **new stakeholders:** *Real Internet researchers & innovators, stake-holders who are not part of community RTD&I today*

- ➤ *Link* **long-term research** *with* **applied research & innovation**, *with* **policy & societal expectations**

- ➤ **European core values:** *Openness, security, privacy, participation, a level playing field for all business actors, open to innovation and preserving democracy*

- ➤ **European movement:** *human Internet as a political goal*

*Unite stakeholders on a common goal: **an Internet of Humans***

NGI Roadmap

Digital Single Market

Open dialogue with stakeholders

MFF 2021-2027
HORIZON EUROPE
NGI – Priority Area in "Digital and Industry" cluster

**Horizon 2020
WP2018-20**
Next Generation Internet

NGI Study & CSAs

| 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |

Horizon Europe

European Commission
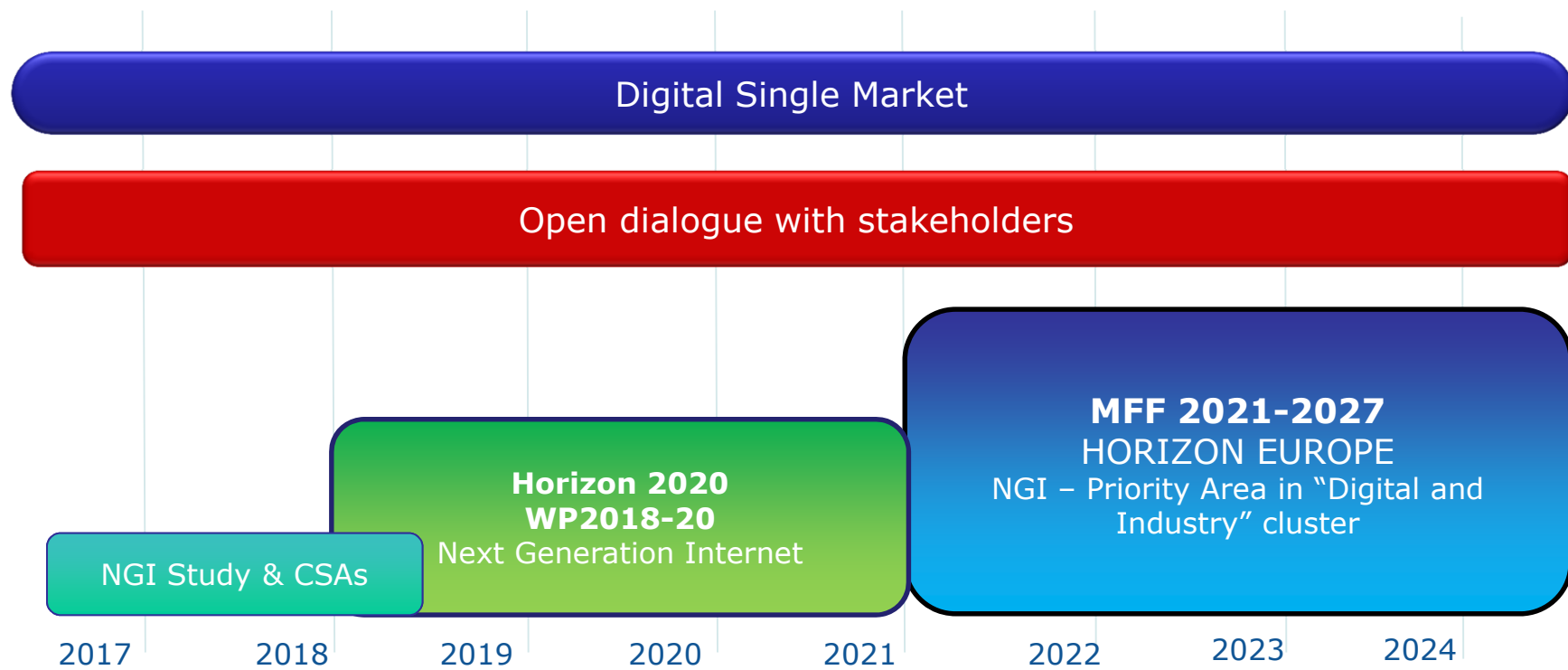
Specific objectives of the Programme

Support the creation and diffusion of high-quality knowledge	Strengthen the impact of R&I in supporting EU policies	Foster all forms of innovation and strengthen market deployment

Optimise the Programme's delivery for impact in a strengthened ERA

Pillar 1
Open Science

- European Research Council
- Marie Skłodowska-Curie Actions
- Infrastructures

Pillar 2
Global Challenges and Industrial Competitiveness

Clusters
- Health
- Inclusive and Secure Society
- Digital and Industry
- Climate, Energy and Mobility
- Food and natural resources

Joint Research Centre

Pillar 3
Open Innovation

- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

Strengthening the European Research Area

Sharing excellence	Reforming and Enhancing the European R&I system

Horizon 2020: NGI

Artificial Intelligence
ICT-26-2018-2020

Interactive Technologies
ICT-25-2018-2020

Internet of Things
ICT-27-2018-2020

Multilingual
ICT-29-2018

Global Social Sphere
ICT-28-2018

Inclusive
ICT-30-2019-2020

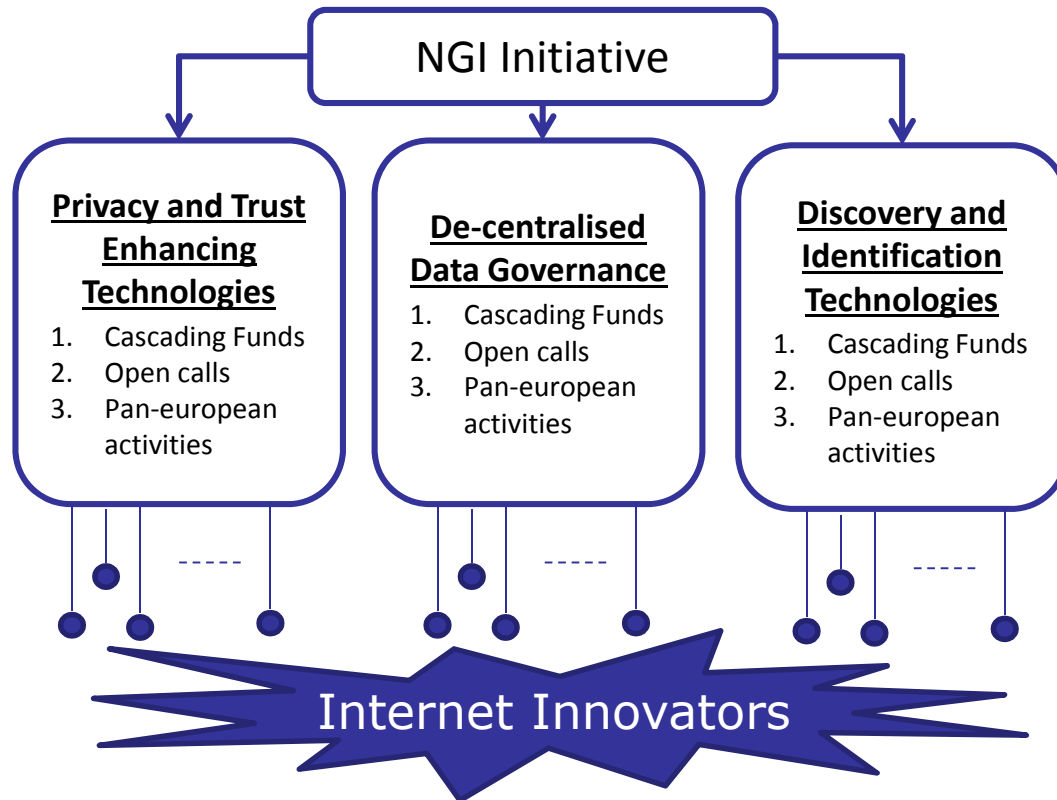**NGI - Open Internet Initiative**
ICT-24-2018-2019 + ICT-31-2018-2019

5G

Cloud

HPC

Big Data

Cyber Security

Involving Internet Innovators

European Commission

NGI Initiative

Privacy and Trust Enhancing Technologies
1. Cascading Funds
2. Open calls
3. Pan-european activities

De-centralised Data Governance
1. Cascading Funds
2. Open calls
3. Pan-european activities

Discovery and Identification Technologies
1. Cascading Funds
2. Open calls
3. Pan-european activities

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Internet Innovators

The Intermediaries:
- ✓ Open calls with funds for new stakeholders (startups, SMEs, young researchers, civil society,…)
- ✓ Fast & flexible, continuously agile
- ✓ providing training and support
- ✓ Launch early 2019

The Sub-Grantees:
- ✓ 1 legal entity with 1 specific Project
- ✓ Young researchers, outstanding academics, hi-tech startups and technology researching SME's
- ✓ Carry out the R&I work
- ✓ 50,000 – 200,000€, 9-12 months

ICT-31: EU-US Collaboration

Call 1: 2018

Closure: 17 April 2018

- 2 CSAs, total budget Euro 3.5 million

- **Think/Do Tank:** Organise support activities to facilitate the collaboration, coordination of research and innovation initiatives in the EU and US

- **Fellowship programme:** Support 3 to 6 months fellowships for Internet researchers to contribute to NGI services and products 'Made in Europe'.

Call 2: 2019

Closure: 28 March 2019

- 1 Research and Innovation Action, total budget Euro 3.5 million.

- **Joint experimentation**

Take-aways

- An **ambitious** and significant initiative for the years to come

- A **human-centric** approach

- A joint effort involving **Internet innovators**

Building a community

- ✓ *Follow us @NGI4eu*
- ✓ *Read more about NGI: www.ngi.eu*
- ✓ *Be part of NGI & Register: https://www.ngi.eu/ngi-map/*
- ✓ *Register in the NGI Newsletter/News: https://www.ngi.eu/subscribe*
- ✓ *LinkedIn group: https://www.linkedin.com/groups/2206279*

+ *Engaging Member States via the H2020 FIF expert group & the NGI Contact points*