Digital commons @ the EC

State of play and future prospects

14 June 2023
What are digital commons?

“Digital commons are non-rivalrous and non-exclusive digital resources defined by shared production, maintenance and governance. Under the right conditions, digital commons contribute to the preservation of the collective control and valuation of data, and consequently to improve the security of digital tools and innovations“

Declaration by the Presidency of the Council of the European Union calling for a European Initiative for Digital Commons

Examples include open source software, open hardware, open design, open standards (internet commons), open data.
Strategic perspective

Today, the White House convened government and private sector stakeholders to discuss initiatives to improve the security of open source software and ways new collaboration could rapidly drive improvements. Software is ubiquitous across every sector of our economy and foundational to the products and services Americans use every day. Most

10-Point Open Source and Software Supply Chain Security Mobilization Plan Released with Initial Pledges Surpassing $30M

WASHINGTON, DC – May 12, 2022 – The Linux Foundation and the Open Source Software Security Foundation (OpenSSF) brought together over 90 executives from 37 companies and government leaders from the NSC, ONCD, CISA, NIST, DOE, and OMB to reach a consensus on key actions to take to improve the resiliency and security of open source software.
Economic perspective

The study predicts that an **increase of 10% in contributions** to Open Source Software code would annually generate an **additional 0.4% - 0.6% GDP** and more than 600 additional ICT start-ups in the EU.

An analysis of the United States, Chinese and European cases show that government involvement in open source is not only pragmatic; it is increasingly politicised, and serves to uphold governments’ ambitions for national security, international influence, or digital sovereignty.

The study highlights the dilemmas that emerge for public authorities from the tensions between the desire to secure universally used, critical open source components, the desire to develop “sovereign” technologies, and the risk of encroaching on the horizontal and decentralised functioning of open source.
Digital Commons: A momentum
Why Digital Commons are important to Europe?

**Sovereignty narrative**
- Permission-less innovation
- Autonomous use and operations
- No lock-in

**Trust narrative**
- Transparency
- No central control

**European Declaration on Digital Rights and Principles**
- Privacy protection
- User control and choice
- Portability
- Inclusion
- Decentralisation

**Collaboration & Development**
- Interoperability
- Affordable technology
Over **4.5 years in operations**, we have built a **unique eco-system** of highly talented innovators driven by meaning and values who change the course of the Internet

1000 projects awarded mobilising **€80M**

15% success rate in open calls

1000+ innovators engaged, out of which **83%** have never received EU funding before

Today **100%** open source
Technology Building Blocks: Internet Commons

Data and AI
- 51
- Applications (email, instant messaging, videochat, collaboration, etc.)
- 139

Decentralised solutions (incl. blockchain/distributed ledger)
- 209

Operating Systems, Firmware & Virtualization
- 40

Network Infrastructure (incl. routing, P2P and VPN)
- 165

Trustworthy hardware and manufacturing
- 85

Vertical Use Cases, Search & Community
- 86

Middleware & Identity (incl. DNS, authorisation, authentication)
- 54

Measurement, Monitoring, Analysis & Abuse Handling
- 31

Software Engineering, Protocols, Interoperability, Cryptography, Algorithms, Proofs
- 136

Technology Building Blocks: Internet Commons

- SSI
- DID
- IRMA
- IPFS
- F-droid
- Qubes OS
- Replicant OS
- Maemo Leste
- Scion
- Nixos
- PowerDNS
- OpenPGP
- Tor
- Let’s connect
- Wireguard
- Nitrokey
- Libre SOC
- Balthazar
- RISC V Phone

BigBlueButton
Jisti
Sylk
Deltachat
Matrix
Thunderbird
Xwiki
Cryptpad
Fediverse
ActivityPub
Peertube
Wordpress
LibreOffice
Nextcloud
Solid
OpenFoodFacts
OpenStreetMap
Software Heritage
Searx

European Commission
Why cascading?

European Commission

Intermediaries

- Reaching talents
- Agility
- Small is beautiful
- Simplicity
- Scale
- Mentoring
- Complementary
How NGI contributes to internet commons?

INTERNET COMMONS

Creation

Piloting commons with verticals

Route to sustainability

Supporting commons to fit usage

Sustainability

Usage
The route to sustainability

The importance of foundations for taking care of commons

From the Study on Open Source:

• “Foundations are a significant driver in OSSH ecosystems”
• Considering “Foundation for [creating] Foundations as an umbrella organisation may be beneficial in helping smaller projects”
• Recommends “To transfer OSS projects to foundations”

According to https://flossfoundations.org/foundation-directory/ there are 161 open source foundations: 76,4% in the USA, 12,4% in Europe, 11,2% RoW

Private business exploiting open source business models
The open source life-cycle for internet commons: NGI partnership proposal

NGI moved a dozen of projects to the pre-foundation stage (e.g. filesender, let’s connect, cryptech, corteza, inter-wide, postmasterOS, CASPER…).
Supporting commons to fit usage

**Maintenance dimension**
Support to innovators in a broad range of areas including quality, security, accessibility, privacy, open source licensing, or documentation.

**Internet of trust dimension**
Supporting existing commons towards better privacy protection, user control, choices, portability of data and services, inclusion, more decentralisation.

HORIZON-CL4-2021-HUMAN-01-09 NGI Tech Review (CSA) 1.5M€ awarded
Piloting NGI commons with verticals

HORIZON-CL4-2023-HUMAN-01-12: Pilots for the Next Generation Internet (IA)

- Foster the take up of Next Generation Internet (NGI) technologies and solutions in Europe by integrating them in a variety of industrial and societal use cases, enabling the emergence of internet ecosystems supporting the needs of specific sectors…

- NGI Pilots will make use of the rich portfolio of technologies and tools developed in the NGI programme

- Focus will be on open source solutions (both software and hardware) and their integration and adoption in vertical use cases

- A minimum of 15% of the total requested EU contribution should be allocated to financial support to third parties, selected through open calls.
Inter-Governemental Activities

• A one-stop shop for commoners to easily find funding opportunity and assistance
• Call for commons proposals: a group of leading MS would collectively launch a call for proposals targeting strategic digital commons
• Establishing a European foundation for digital commons as a long-term action. Involve commoners as well as private sector
• « Digital commons first » both in usage and creation

Inter-Governemental Activities

Ivan Bartoš, Deputy Prime Minister for Digitisation, at the Tallin Digital Summit 2022: « If we want to take it seriously at European level we shall think of its institutionalisation »

OBJECTIVES

- Bring together Member States’ initiatives and avoid overlapping
- Build critical mass and scale at European level
- Create instruments for shared governance
- Bring strategic view on what is essentially bottom-up today

An European Digital Infrastructure Consortium (EDIC) has potential in terms of shared governance, access to funding and setting-up flexibility to be the instrument of choice for the desired institutionalisation.
(Provisional) Conclusion

• Bridging the gap between contributors to commons & decision makers
• Instilling top-down elements in what is essentially a bottom-up
  • Investing in bottom-up is already a strategic move
  • Not re-inventing the wheel
  • Critical mass and alignment is key
• Moving beyond 0.1%
  • Momentum: crisis of trust, deep fake & Large Language Models
  • Trust models
Thank you