TALKING POINTS!

DIGITAL COMMONS CAN HELP GOVERNMENTS SECURE DIGITAL SOVEREIGNTY, SAVE MONEY AND BUILD TRUST.

DCPC26

Enhancing national digital resilience with digital commons

What are digital commons?

- Digital commons, sometimes called open digital infrastructure, are shared information and knowledge resources such as data, software, and cultural content.
- They are produced and managed for collective use by multiple stakeholders, to be modified and redistributed as needed.
- They drive innovation and contribute to a robust SME ecosystem: Harvard researchers have estimated that without open source software (OSS) to power digital products and services, it would cost firms $8.8 trillion to develop this software from the ground up.

HOW CAN GOVERNMENTS BENEFIT FROM DIGITAL COMMONS?

1. Securing digital sovereignty

- When governments share public data with private software vendors, these data can be used in ways citizens did not consent to, or that are detrimental to the public interest. OSS helps governments be in control of who the data is shared with by providing open, reviewable code.
- When governments are involved in shaping open standards, political, legal, cultural and technical decisions are guided by norms and values that benefit all - not just industrial actors.
- The auditability of digital commons improves cybersecurity: faults can quickly be detected and corrected.

2. Investing for the future

- Adopting digital commons saves government money by making it possible to avoid software and service duplication as well as costly (and recurring) licence fees.
- Governments can conduct national digital audits to assess public service reliance on proprietary software, public service use of OSS, and what OSS solutions it would be useful for the public service to reuse or co-develop.
- Governments can also create open source program offices (OSPOs) in the public sector, as well as public sector software catalogues to foster reuse and co-creation.

3. Building trust

- When a government transparently releases open data and government applications code, the foundations for trust and accountability are laid.
- In an increasingly polarised world, the openness of digital commons brings people together by fostering cross-border knowledge transfers and collaborations.
- Digital commons allow governments to safely manage and safeguard open data and protect citizens' data privacy - see the Humanitarian OpenStreetMap Team (HOT) for an example of how this can be done.

TALKING POINTS! DIGITAL COMMONS CAN HELP GOVERNMENTS SECURE DIGITAL SOVEREIGNTY, SAVE MONEY AND BUILD TRUST

REFLECTIONS AND OUTPUTS FROM THREE DIGITAL COMMONS POLICY COUNCIL WORKSHOPS HELD IN PARIS, LIVERPOOL AND VITORIA-GASTEIZ (2024 - 2025)

DCPC 2026

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1.

AFTER

THE WORK SHOPS

THE COMMONS CONSPIRACY

DELIBERATION IN ACTION

1. In her keynote address to a deliberative democracy conference held in November 2025 in Canberra, Brazilian scholar Thamy Pogrebinschi argued that at a time of autocratic resurgence, democratic resilience must look beyond institutional guardrails towards '*civil society's creativity, citizens' problem-solving capacities, collaborative forms of governance, and - beyond deliberation - the kinds of collective intelligence that emerge when people confront challenges directly'*.

2. In a way, this precisely describes how people collaboratively create digital commons, shared information and knowledge resources such as data, software and cultural content.

3. Liberal democratic institutions are increasingly perceived by citizens to be opaque and elitist, leading to widespread crises of trust and confidence. Digital commons can contribute to responding to these crises, as they practically implement democratic principles of transparency, accountability and participation.

4. Free, libre and open source software (FLOSS), Wikipedia, and OpenStreetMap - there are many more examples - are produced and managed for collective use. Unlike strictly private digital technologies where access to code is restricted or non-existent, the collaborative creation of digital commons demonstrates that people around the world can work together to create useful resources that everyone can use.

5. In addition to people concretely experiencing autonomy and participatory democracy, the production of digital commons can help reduce our collective environmental footprint (Shulz et al. 2024).

AIMS OF THE DIGITAL COMMONS POLICY COUNCIL

6. The Digital Commons Policy Council (DCPC) was created at the University of Canberra in 2021 thanks to the support of the Ford and Sloan Foundations. It aims to increase the recognition by governments of the benefits of digital commons and of the volunteer labour which produces these common goods.

7. The TALKING POINTS! report marks the end of the Digital Commons Policy Council's first period.

8. Between 2021 and 2025 we conducted research, published nine reports and also organised three workshops in 2024 and 2025 to further our aim of commons/government engagement.

9. The final text in TALKING POINTS!, 'Increasing the recognition and sustainability of digital commons', was initially published in French in May 2024. It was intended to inform our actions during our first workshop. We wrote:

10. *'The Digital Commons Policy Council aims to direct the scientific work of the Journal of Peer Production towards practical and concrete achievements. Rather than imagining a better future system, it is a matter of nibbling away at the market economy's territory here and now, by extending the territory of the commons. In the long term, an increasingly large sector of free public goods and services will coexist in a plural economy with paid self-employment, employment in cooperatives and salaried employment in the commercial sector (Zin 2011).*

11. *These long-term objectives have no chance of materialising if, in the immediate future, the material value of the digital commons is not protected against predation and appropriation, and if their symbolic value is not appreciated at its fair value by the greatest number. To achieve these immediate and distant objectives, allies are needed. [...]*

12. *Whether or not we wish to qualify it as a 'partner state', any action in favour of common goods will have to engage to a certain extent with the state, otherwise it will remain in culturally elitist and politically marginal enclaves.*

13. *While there is no alternative to the government, it is not simply a matter of working to complete funding applications more efficiently.*

14. *What is needed is to extend the generative capacity of the commons to establish moral relationships, postulated by Yochai Benkler, between participants. Collaborating with a state entity implies that there is an agreement on the transparency of information and the democratisation of decisions.'*

THREE WORKSHOPS TO BRING THEM ALL AND IN TRANSPARENCY BIND THEM

15. These lofty ideals were realised, if only during for the duration three collaborative workshops the DCPC organised in 2024 and 2025.

16. First, the Digital Commons Policy Council/Centre Internet et Société 2024 Policy Lab was held on 30-31 May 2024 at the CIS, part of the French National Center for Scientific Research (CNRS) in Paris, France. The event brought together thirty digital commons experts from eight European countries. They included representatives from digital commons communities, public organisations, civil society organisations, and academia.

17. Second, the Digital Commons Policy Council/Civic Data Cooperative 2025 Workshop, was held on 22-23 May 2025 at the University of Liverpool's Civic Health Innovation Labs (CHIL), UK. The event drew thirty-five participants from academia, policy, and civil society from Australia, Belgium, Brazil, China, France, India, Italy, the Netherlands, Norway, Uganda and the United Kingdom.

18. These two workshops followed an 'unconference' format whereby work directions emerged from the attendees' deliberations (Budd et al. 2015). After discussing issues currently impacting digital commons development, such as predation from Big Tech firms, support from the EU, and the need to bridge the cultural divide between government agencies and digital commons communities and projects, the general assemblies of participants identified several resources that would enhance the development and protection of digital commons, as well as their recognition and acceptance by government agencies.

19. Participants then self-selected into separate breakout groups to co-design these resources via open documents, with groups reporting at intervals to the general assemblies for feedback. Following the workshops, group members continued working to finalise the resources. Not all the resources were completed. Some of those that were are presented in Part 2 of this report.

20. In contrast, the third workshop was a two-hour 'side event' held at the Open Government Partnership (OGP) summit in Vitoria-Gasteiz. The OGP is a global network funded by participating states which brings together civil servants, business-people and NGO members with a common interest in making governments more transparent and participatory.

21. Two DCPC members presented the 'Enhancing national digital resilience with digital commons' stakeholder engagement tools, initiated during the Liverpool workshop, and sought participant feedback via group discussions. Despite the abbreviated time-frame, participants in this side event declared they had enjoyed the participatory and productive session.

22. The Paris and Liverpool workshops also elicited enthusiastic reactions. In the final debrief session in Liverpool, many participants declared they had found the event's positive atmosphere and mix of idealistic and pragmatic outputs inspiring.

23. In old-school terms, by collectively deciding what to do, and freely co-creating common resources with peers, participants broke from the boredom and dead time of everyday life. Yet the key word in Temporary Autonomous Zone (Bey 1991) is 'temporary'. The communal workshops end; non-communal society marches on.

24. In sum, the workshops succeeded in bringing together state and non-state actors and in producing useful resources. Positive outcomes were not just textual or material: new members joined the DCPC; new connections were made, particularly in the Majority World.

DCPC RESEARCH: FOR RECOGNITION

25. Looking back, it is clear that the DCPC has broken new scientific ground by conducting comprehensive analyses of the political economy of digital software production.

26. Our first survey of the Debian community garnered 1,479 responses and illuminated the extent of firm involvement in the project (O'Neil et al. 2021b). Our second survey of the Debian community showed the complexity of the obstacles which hinder the reduction of environmental impacts in the IT workplace (O'Neil et al. 2025).

27. We performed computational analyses of the production of industrial public goods on Github, finding 'contribution territories' whereby contributions of dominant firm (e.g., Microsoft and Google) employees never significantly overlapped in repositories (O'Neil et al. 2021a, 2024)

28. We also conducted ethnographic and semantic analyses of foundation and firm employee discourses at professional IT conferences, finding evidence of attempts to redefine the open source institution as more 'professional' and less focused on traditional values, rights and licences (O'Neil et al. 2021, Muselli et al. 2024).

29. More recently, we have mapped researcher contributions to R repositories on GitHub, analysing not just code contributions via commits but also discursive support via analyses of which categories of users assign and close issues (Cai et al. 2024).

30. Researchers, alongside non-affiliated contributors, are the most frequent owners of R package repositories and their most active contributors; they are more likely to engage in collaborative problem-solving and support work during package development. Though their contributions benefit firms, they receive no recognition.

31. The challenges faced by academic FLOSS maintainers point to a wider issue: the lack of comprehensive institutional recognition for FLOSS. Vulnerabilities in software such as Log4j incited Germany to set up a Sovereign Tech Agency in 2022, which precisely intends to address market failures by supporting FLOSS developers and projects, notably through its Bug Resilience Program, but this initiative is exceptional.

NEW RESEARCH DIRECTIONS AND ADVOCACY

32. In addition, new research directions are being forged by our emerging scholars. Xiaolan Cai's research investigates how civic tech initiatives negotiate the boundaries of openness in Australia's open government data ecosystem. It shows digital commons operate as sites of boundary work that enable the public to contest and co-produce openness, and reveals volunteer contributions as resilient labour sustaining deliberative democracy through maintaining civic infrastructures and co-creating new forms of public data.

33. Ramya Chandrasekhar's research explores data trusts as new institutional structures for sustainable data commons, to ensure respect for new data access and reuse licenses also cultivate new practices of interoperability, drawing from copyright collecting societies and collective stewardship of personal data.

34. In terms of advocacy for the commons, we have produced useful resources such as the *Best Practices Guide* and the *Enhancing national digital resilience* FAQ.

35. However our limited resources – the DCPC exclusively relies on philantropic funding – prevents us from operating at the same level of operational efficiency and networking reach as the Digital Public Goods Alliance, Open Future, Open Forum Europe, or the Open Knowledge Foundation.

36. These organisations mainly focus on Europe and South America, so there is definitely an unmet need for government engagement in Oceania in general, and Australia in particular.

RADICAL CHANGE: WIKIPEDIA IN SCHOOLS

37. Australia is the site of what is potentially the most impactful DCPC program.

38. ‘Radical change’ means changing the roots of society. Education was identified in the *Journal of Peer Production* as a key tool:

39. *‘In order to instil new cultural standards, we need to popularise champions of the commons. Elinor Ostrom’s (1933-2012) focus on social and institutional forms which enable the sharing of common-pool resources and rights, showing how necessary it was to protect forests and rivers, are clearly more relevant now than ever.*

40. *Traditional communities, in existence for many centuries, may conform to the Ostrom model, but restrict access to the resource based on family belonging, with entry gained through marriage: an inclusive, global dimension should always be incorporated.*

41. *In ideological terms Ostrom contradicts how the first modernity (16th -18th Century) conceives the world, a view which still dominates our education system. By mixing law, technology and economy, ‘science’ became normalised as the act of dissipating non-renewable natural resources.*

42. *We still live in a world where private property is better protected than common property: a concerted cultural shift, primarily disseminated through schools and popular culture, must be made to change this value system’ (O’Neil et al. 2017).*

43. While the principles are the same, the means of achieving cultural change must fit the times. Our countering misinformation in schools program uses lateral reading and Wikipedia to increase students’ discernment and verification skills (see Figure 1 for a recent summary).

44. So far, these methods have only been implemented in Australian Capital Territory schools; from 2026, pilot programs will be rolled out in a number of New South Wales primary and secondary schools. These lessons will now include not just referring to Wikipedia for fact-checking but also learning editing skills: the collaborative values of digital commons will be included in the curriculum.

45. This ‘commonist’ plot is transparent; it does not exclude anyone. At a time when Big Tech firms present potentially biased or incomplete AI summaries as trusted search results, everyone benefits from making Wikipedia stronger.

NOW BEGINS THE DCPC'S SECOND PERIOD

46. The DCPC has developed arguments and tools. It has developed TALKING POINTS! It must now amplify the impact of these tools and arguments by scaling up its research and education programs as well as its policy-maker engagement activities.

For the DCPC: Broca, Cai, Chandrasekhar, Daly, Folz, Nanni, O'Neil, Thwaites

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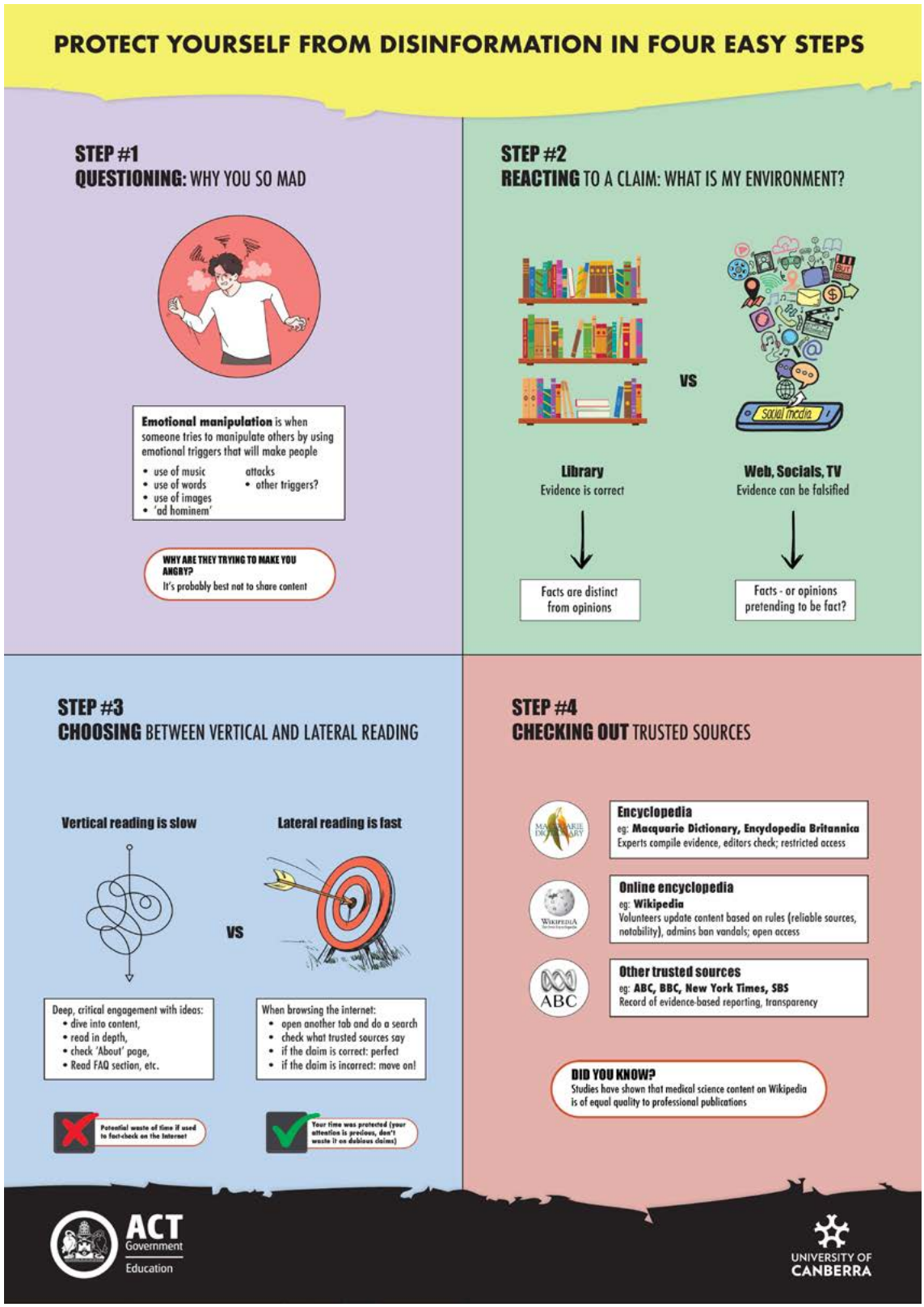


Figure 1. UCMethod, Dickson College (ACT), 2025.

2.

WORK

SHOP

OUT

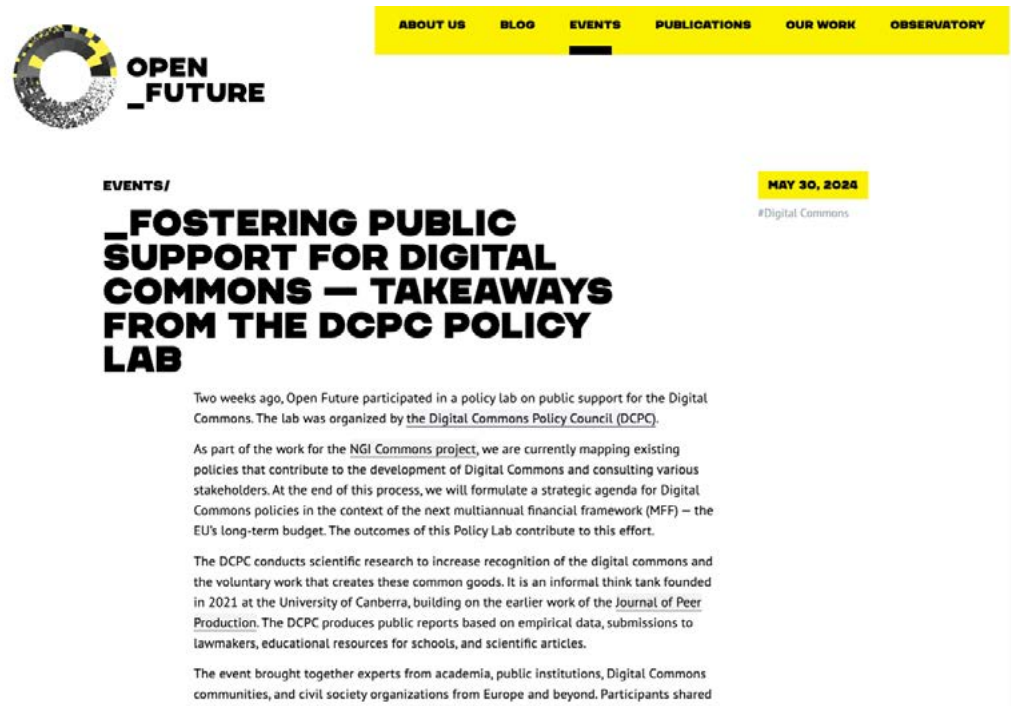
PUTS

workshop: DCPC/CIS Paris 2025

output type: Blog post

output name: Fostering public support for Digital Commons — takeaways from the DCPC Policy Lab

release date: 30 May 2024



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EVENTS/

MAY 30, 2024

#Digital Commons

_FOSTERING PUBLIC SUPPORT FOR DIGITAL COMMONS — TAKEAWAYS FROM THE DCPC POLICY LAB

Two weeks ago, Open Future participated in a policy lab on public support for the Digital Commons. The lab was organized by the Digital Commons Policy Council (DCPC).

As part of the work for the NGI Commons project, we are currently mapping existing policies that contribute to the development of Digital Commons and consulting various stakeholders. At the end of this process, we will formulate a strategic agenda for Digital Commons policies in the context of the next multiannual financial framework (MFF) – the EU's long-term budget. The outcomes of this Policy Lab contribute to this effort.

The DCPC conducts scientific research to increase recognition of the digital commons and the voluntary work that creates these common goods. It is an informal think tank founded in 2021 at the University of Canberra, building on the earlier work of the Journal of Peer Production. The DCPC produces public reports based on empirical data, submissions to lawmakers, educational resources for schools, and scientific articles.

The event brought together experts from academia, public institutions, Digital Commons communities, and civil society organizations from Europe and beyond. Participants shared

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The event brought together experts from academia, public institutions, Digital Commons communities, and civil society organizations from Europe and beyond. Participants shared experiences, presented their work, and discussed long-term challenges and opportunities.

The main goal of the Policy Lab was to define best practices and tools to increase cooperation between public institutions and Digital Commons projects. The identified problems, solutions, resources, and projects for future collaboration will be included in the forthcoming DCPC Handbook. Following the discussions that took place during the lab, participants decided to split into three areas of work:

1. Public Support Best Practices: The first group will identify and document successful public support mechanisms in different countries that could be replicated elsewhere.

2. Policy Proposals Mapping: The second group will map existing policy proposals to support the Digital Commons, starting with recommendations from participating institutions and other key proposals. The goal is to create a WikiData list that policymakers and advocates can easily access.

3. Guide to Public Procurement: The third group will create a guide on public procurement issues for Digital Commons. This guide will compile policy proposals, legal procedures,

and practical solutions to better integrate Digital Commons into public procurement.

DCPC will produce a detailed report this summer incorporating the findings from the three groups. They also plan to organize a follow-up event in the fall of 2025 to continue bringing together researchers and practitioners working on the Digital Commons and to develop new opportunities for collaboration.

Open Future will continue engaging with policymakers, community leaders, academics, and Digital Commons practitioners to map existing initiatives, assess their impact, and provide evidence-based policy recommendations to the EU.

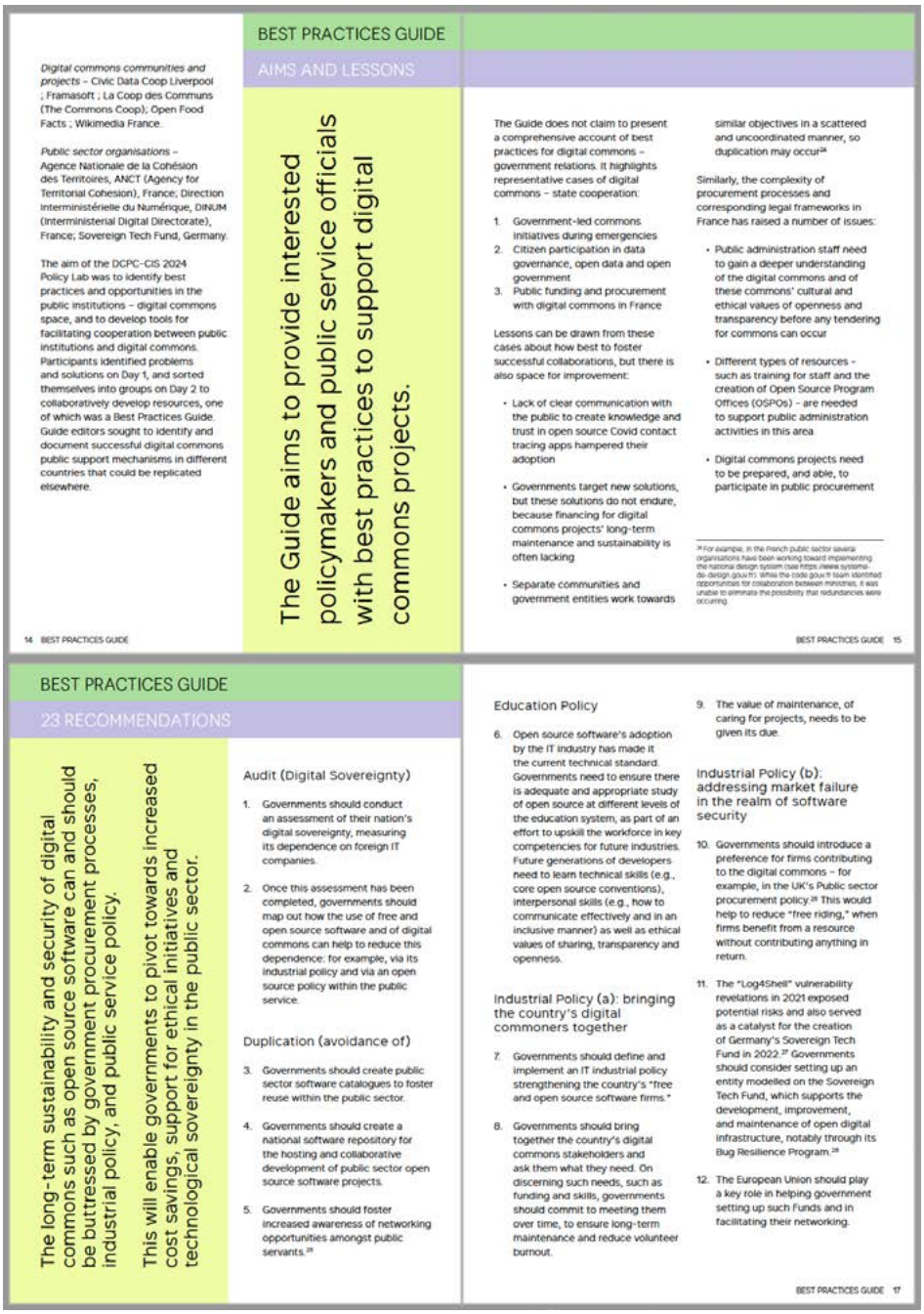
Source: https://openfuture.eu/tag/digital-commons/

workshop: DCPC/CIS Paris 2025

output type: Guide

output name: Best Practices Guide for Digital Commons – Government Relations

release date: 25 September 2024



BEST PRACTICES GUIDE

AIMS AND LESSONS

Digital commons communities and projects – Civic Data Coop Liverpool ; Framasoft ; La Coop des Communs (The Commons Coop); Open Food Facts ; Wikimedia France.

Public sector organisations – Agence Nationale de la Cohésion des Territoires, ANCT (Agency for Territorial Cohesion), France; Direction Interministérielle du Numérique, DINUM (Interministerial Digital Directorate), France; Sovereign Tech Fund, Germany.

The aim of the DCPC-CIS 2024 Policy Lab was to identify best practices and opportunities in the public institutions – digital commons space, and to develop tools for facilitating cooperation between public institutions and digital commons. Participants identified problems and solutions on Day 1, and sorted themselves into groups on Day 2 to collaboratively develop resources, one of which was a Best Practices Guide. Guide editors sought to identify and document successful digital commons public support mechanisms in different countries that could be replicated elsewhere.

The Guide aims to provide interested policymakers and public service officials with best practices to support digital commons projects.

14 BEST PRACTICES GUIDE

The Guide does not claim to present a comprehensive account of best practices for digital commons – government relations. It highlights representative cases of digital commons – state cooperation:

1. Government-led commons initiatives during emergencies
2. Citizen participation in data governance, open data and open government
3. Public funding and procurement with digital commons in France

Lessons can be drawn from these cases about how best to foster successful collaborations, but there is also space for improvement:

- Lack of clear communication with the public to create knowledge and trust in open source Covid contact tracing apps hampered their adoption
- Governments target new solutions, but these solutions do not endure, because financing for digital commons projects' long-term maintenance and sustainability is often lacking
- Separate communities and government entities work towards similar objectives in a scattered and uncoordinated manner, so duplication may occur[24]

Similarly, the complexity of procurement processes and corresponding legal frameworks in France has raised a number of issues:

- Public administration staff need to gain a deeper understanding of the digital commons and of these commons' cultural and ethical values of openness and transparency before any tendering for commons can occur
- Different types of resources – such as training for staff and the creation of Open Source Program Offices (OSPOs) – are needed to support public administration activities in this area
- Digital commons projects need to be prepared, and able, to participate in public procurement

[24] For example, in the French public sector several organisations have been working toward implementing the national design system (see https://www.systeme-de-design.gouv.fr). While the code.gouv.fr team identified opportunities for collaboration between ministries, it was unable to eliminate the possibility that redundancies were occurring.

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BEST PRACTICES GUIDE

23 RECOMMENDATIONS

The long-term sustainability and security of digital commons such as open source software can and should be buttressed by government procurement processes, industrial policy, and public service policy.

This will enable governments to pivot towards increased cost savings, support for ethical initiatives and technological sovereignty in the public sector.

Audit (Digital Sovereignty)

1. Governments should conduct an assessment of their nation's digital sovereignty, measuring its dependence on foreign IT companies.
2. Once this assessment has been completed, governments should map out how the use of free and open source software and of digital commons can help to reduce this dependence; for example, via its industrial policy and via an open source policy within the public service.

Duplication (avoidance of)

3. Governments should create public sector software catalogues to foster reuse within the public sector.
4. Governments should create a national software repository for the hosting and collaborative development of public sector open source software projects.
5. Governments should foster increased awareness of networking opportunities amongst public servants.[25]

Education Policy

6. Open source software's adoption by the IT industry has made it the current technical standard. Governments need to ensure there is adequate and appropriate study of open source at different levels of the education system, as part of an effort to upskill the workforce in key competencies for future industries. Future generations of developers need to learn technical skills (e.g., core open source conventions), interpersonal skills (e.g., how to communicate effectively and in an inclusive manner) as well as ethical values of sharing, transparency and openness.

Industrial Policy (a): bringing the country's digital commoners together

7. Governments should define and implement an IT industrial policy strengthening the country's "free and open source software firms."
8. Governments should bring together the country's digital commons stakeholders and ask them what they need. On discerning such needs, such as funding and skills, governments should commit to meeting them over time, to ensure long-term maintenance and reduce volunteer burnout.
9. The value of maintenance, of caring for projects, needs to be given its due.

Industrial Policy (b): addressing market failure in the realm of software security

10. Governments should introduce a preference for firms contributing to the digital commons – for example, in the UK's Public sector procurement policy.[26] This would help to reduce "free riding," when firms benefit from a resource without contributing anything in return.
11. The "Log4Shell" vulnerability revelations in 2021 exposed potential risks and also served as a catalyst for the creation of Germany's Sovereign Tech Fund in 2022.[27] Governments should consider setting up an entity modelled on the Sovereign Tech Fund, which supports the development, improvement, and maintenance of open digital infrastructure, notably through its Bug Resilience Program.[28]
12. The European Union should play a key role in helping government setting up such Funds and in facilitating their networking.

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23 RECOMMENDATIONS FOR GOVERNMENT

The long-term sustainability and security of digital commons such as open source software can and should be buttressed by government procurement processes, industrial policy, and public service policy.

This will enable governments to pivot towards increased cost savings, support for ethical initiatives and technological sovereignty in the public sector.

Audit (Digital Sovereignty)

1. Governments should conduct an assessment of their nation's digital sovereignty, measuring its dependence on foreign IT companies.

2. Once this assessment has been completed, governments should map out how the use of free and open source software and of digital commons can help to reduce this dependence: for example, via its industrial policy and via an open source policy within the public service.

Duplication (avoidance of)

3. Governments should create public sector software catalogues to foster reuse within the public sector.

4. Governments should create a national software repository for the hosting and collaborative development of public sector open source software projects.

5. Governments should foster increased awareness of networking opportunities amongst public servants.[1]

Education Policy

6. Open source software's adoption by the IT industry has made it the current technical standard. Governments need to ensure there is adequate and appropriate study of open source at different levels of the education system, as part of an effort to upskill the workforce in key competencies for future industries. Future generations of developers need to learn technical skills (e.g., core open source conventions), interpersonal skills (e.g., how to communicate effectively and in an inclusive manner) as well as ethical values of sharing, transparency and openness.

Industrial Policy (a): bringing the country's digital commoners together

7. Governments should define and implement an IT industrial policy strengthening the country's "free and open source software firms."

8. Governments should bring together the country's digital commons stakeholders and ask them what they need. On discerning such needs, such as funding and skills, governments should commit to meeting them over time, to ensure long-term maintenance and reduce volunteer burnout.

9. The value of maintenance, of caring for projects, needs to be given its due.

Industrial Policy (b): addressing market failure in the realm of software security

10. Governments should introduce a preference for firms contributing to the digital commons – for example, in the UK's Public sector procurement policy.[2] This would help to reduce "free riding," when firms benefit from a resource without contributing anything in return.

11. The "Log4Shell" vulnerability revelations in 2021 exposed potential risks and also served as a catalyst for the creation of Germany's Sovereign Tech Agency in 2022.[3] Governments should consider setting up an entity modelled on the Sovereign Tech Agency, which supports the development, improvement, and maintenance of open digital infrastructure, notably through its Bug Resilience Program.[4]

12. The European Union should play a key role in helping government setting up such Funds and in facilitating their networking.

Open Source Software Funding Policy

13. When funding open source projects, funding bodies should observe some "simple rules."[5]

14. Examples of such rules include, but are not limited to: "Incorporate diversity, equity, inclusion, and belonging throughout the project" (improving diversity in software teams leads to better software, as a growing body of evidence supports that diverse teams increase novelty and impact of scientific outputs);[6]

15. "Elevate nontechnical contributions as essential to the project" (acknowledge contributions that are not focused on writing code, such as improving software design, writing documentation, developing tutorials, advocating for the project, and formal testing of new product features);

16. "Fund work that supports project contributors and community" (OSS is only relevant because of the community surrounding it, and that community requires investments to properly develop and thrive);

17. "Ensure that software is usable into the future" (with regard to technical choices, encourage OSS maintainers to build on existing technical successes, adding to the ecosystem rather than creating a new one).

Procurement

18. Governments should follow the French State's lead in supporting and incentivising digital commons initiatives through government procurement processes.

19. A notable, while still experimental, French initiative in this regard is the "appels à commun," open calls or tenders for commons.[7]

Public Service Policy

20. Governments should be inspired by counterparts which have created Open Source Program Offices (OSPOs). Examples include the Free Software Unit within DINUM (France), Digital Iceland, and Red.es (Spain). The purpose of these OSPOs is to define and operationalise a strategy for the use and maintenance of open source software in public administrations. Governments should set up such an entity and provide it with adequate resources in order to enable their public services to achieve digital sovereignty.

21. Governments should establish an enforceable right for public servants to contribute to the digital commons: those wishing to contribute should be able to do so.

22. Governments should initiate and support digital commons networks across the public sector to facilitate knowledge exchange and new collaborations.

Trust

23. When governments rely on digital commons communities to elaborate solutions against emergencies, clear communication is key to build public trust in the solution.[8]

Source: https://dcpc.info/publications/best-practices-guide-for-digital-commons-government-relations/

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[1] See Best Practices Guide pp. 50-52.

[2] See https://www.gov.uk/guidance/public-sector-procurement-policy

[3] See https://www.sovereigntechfund.de/

[4] For a detailed presentation of the Sovereign Tech Fund, see Appendix A.

[5] Strasser, C. et al., Ten simple rules for funding scientific open source software. PLoS Comput Biol 18(11): e1010627, 2022. https://doi.org/10.1371/journal.pcbi.1010627

[6] Yang, Y. et al., Gender-diverse teams produce more novel and higher-impact scientific ideas. Proc Natl Acad Sci. 119(36):e2200841119, 2022. https://doi.org/10.1073/pnas.2200841119

[7] See Best Practices Guide pp. 38-40.

[8] See section 1.

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Incorporating digital commons into government policies: An introduction to the Digital Commons Policy Council's Best Practices guide

By Angela Daly (University of Dundee), Gary Leeming (Liverpool City Region Civic Data Cooperative), Riccardo Nanni (Fondazione Bruno Kessler) and Mathieu O'Neil (University of Canberra)

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What are the digital commons and how can they be supported and promoted in government policy?

In order to implement technology for social good, we need to understand how technologies fit within the social order, the values they embody and who has the power and ability to improve them. One major player in this scenario is the public sector - such as the national, devolved, and local

INCORPORATING DIGITAL COMMONS INTO GOVERNMENT POLICIES: AN INTRODUCTION TO THE DIGITAL COMMONS POLICY COUNCIL'S BEST PRACTICES GUIDE

WHAT ARE THE digital commons and how can they be supported and promoted in government policy?

In order to implement technology for social good, we need to understand how technologies fit within the social order, the values they embody and who has the power and ability to improve them. One major player in this scenario is the public sector - such as the national, devolved, and local governments in the UK - which through their procurement processes, industrial policies, and public service policies can support and incentivise technologies for social good, starting with the software they themselves buy and use.

Currently much of that software comes from 'Big Tech' companies such as Microsoft, Google and Amazon, all headquartered in the US, but these are not the only options. The digital commons presents a cheaper and more ethical alternative, as we propose in the *Best Practices Guide for Digital Commons-Government Relations* we published recently with the Digital Commons Policy Council (DCPC).

DCPC is an international think tank which aims to increase the recognition of the benefits of digital commons and of the volunteer labour which produces these common goods.

Digital commons are community-developed resources such as software, data, information, culture and knowledge which are created, shared and maintained by communities. Examples include free and open source software (FOSS) and open content and data resources such as Wikipedia and Wikidata, which can be used by anyone without needing to seek the permission of intellectual property owners, unlike 'proprietary' alternatives. While much of the digital commons is more technical, such as software, the arts and culture sector makes important contributions to the commons too, especially as regards to free culture and knowledge, with Creative Commons licensed content (such as images, literature and music) being an example of the former and Wikipedia being an example of the latter.

As we identify in the *Best Practices Guide,* digital commons have a number of advantages over their proprietary rivals. If used by governments, they can save the public purse money and improve national sovereignty by reducing dependence on Big Tech. The open and transparent nature of digital commons can also help restore public trust in government technology, as the experience of open and closed COVID apps, including in the UK, demonstrated. The use of digital commons can furthermore increase the public's democratic participation and access to data.

Governments can assume an important role in adopting digital commons solutions in the public sector, and support the digital commons more widely through industrial policies, as France and Germany have done. However, such connections between governments and digital commons projects are not well known, or documented.

To remedy this, on 30-31 May 2024 the DCPC-CIS 2024 Policy Lab was held in Paris at the Centre Internet et Société (CIS) of the French National Center for Scientific Research (Centre National de la Recherche Scientifique, CNRS). The event brought together thirty digital commons experts from Australia, Belgium, France, Germany, Italy, the Netherlands, Norway, Sweden and the UK. They included representatives from academia, civil society organisations, digital commons communities and projects and public sector organisations. A key Policy Lab output is the *Best Practices Guide for Digital Commons – Government Relations* which aims to provide interested policymakers and public service officials with best practices to support digital commons projects. Our guide draws on existing cases of government-digital commons interactions, points out where improvements can be made, and provides interested policymakers and officials with best practices for supporting digital commons projects.

We have devised 23 recommendations for governments, across procurement processes, industrial policy and public service policy. Some of these are somewhat technical and technocratic whilst other recommendations are relevant from an arts and culture perspective, as digital commons' success and support is not just a question of software and hardware, but have broader societal implications, which require interdisciplinary and practical approaches. Key points include:

- Governments need to include knowledge of digital commons, especially FOSS, as part of education policy. A key aspect of this will be in technical skills for future developers, but these are not enough. Education policy for the digital commons also needs to include interpersonal skills for effective and inclusive communication and ethics, notably sharing, transparency and openness. Arts and cultural perspectives can play an important part in shaping these interpersonal and ethical skills.

- Drawing on Strasser et al (2022), funding bodies supporting open source should stipulate rules for funding recipients, including embedding EDI throughout the project, and recognise non-technical contributions (e.g., documentation) as well as technical ones.

- Governments need to adopt clear communication to build public trust in digital commons solutions, especially during public emergencies such as the COVID-19 pandemic. While the Guide does not specify what this communication would look like, it could (and perhaps should) involve creative and engaging ways of disseminating information about the digital commons to the general public.

As an interdisciplinary group of scholars from the humanities, arts, social sciences and computer science, we strongly believe that the digital commons and policies to support them need to draw on more than technical perspectives, and that successful acceptance and promotion of technical solutions requires adopting a richly diverse set of methods to engage with wider publics.

Source: https://ncace.ac.uk/2024/10/14/incorporating-digital-commons-into-government-policies-an-introduction-to-the-digital-commons-policy-councils-best-practices-guide/

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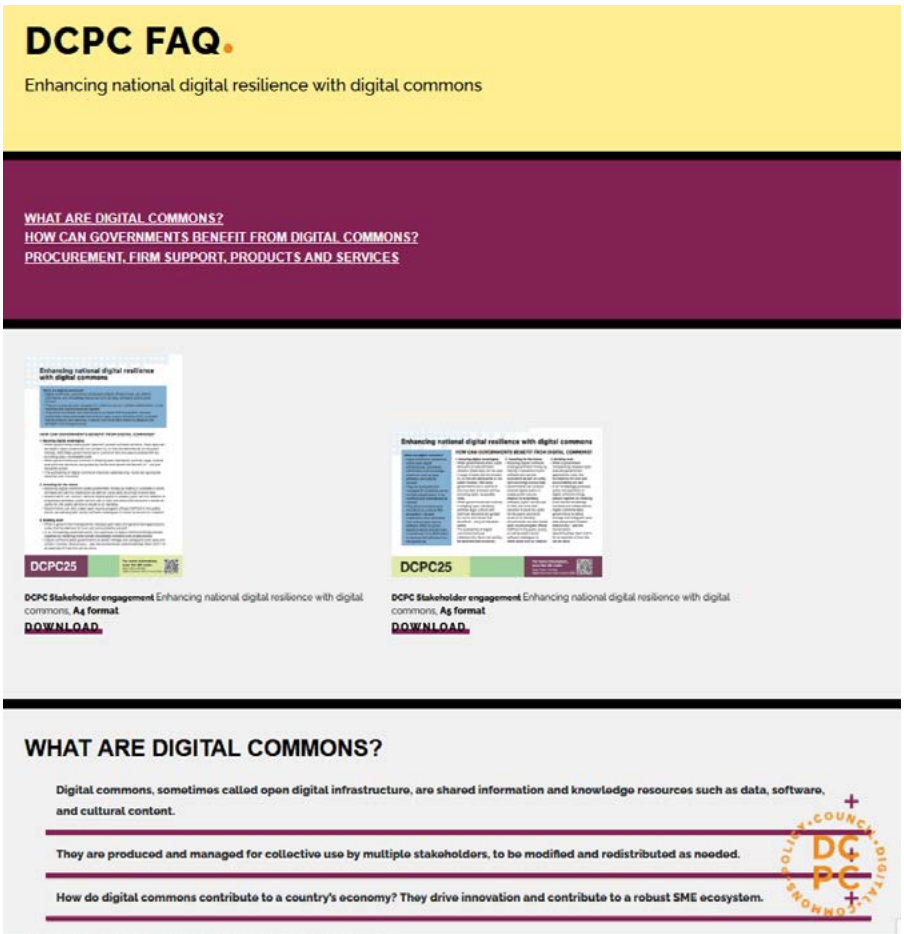

Please note – links to references available from https://dcpc.info/faq/

ENHANCING NATIONAL DIGITAL RESILIENCE WITH DIGITAL COMMONS

WHAT ARE DIGITAL COMMONS?

Digital commons, sometimes called open digital infrastructure, are shared information and knowledge resources such as data, software, and cultural content.

Famous examples include Linux (open source software), Firefox (Web browser), Wikipedia (online encyclopedia), OpenStreetMap (geographic database) and LibreOffice (office suite). Open source software (OSS) pretty much runs the Internet. Consider the 'LAMP' open source web application acronym (Linux, Apache, MySQL, Perl/PHP/Python): Google owes its dominance to Linux (used in Android and Chrome); Apache powers 25% of the Internet's Web servers; without the MySQL database, there would be no online commerce (Amazon, Paypal), social media (Facebook, LinkedIn, X), or so-called 'sharing economy' (Uber, Yelp); Perl/PHP/Python are popular programming languages. Moreover open source Python libraries such as PyTorch, Scikit-learn and TensorFlow are key to AI development.

They are produced and managed for collective use by multiple stakeholders, to be modified and redistributed as needed.

The collaborative co-creation of digital commons illustrates how people from all over the world can work together to create valuable resources which anyone can use. The shape of these resources is directed by the requirements of the producing community: the objectives and outcomes of projects primarily reflect the demands of their initial contributors, who are also its prime beneficiaries. On the one hand this means resources are not always, in the first instance, 'user-friendly', so they may be reserved for a technically-proficient minority. On the other hand, this integrity of product and process results in exceptional robustness, and digital commons have been widely adopted by industry and society. Digital commons communities develop governance mechanisms and rules (such as licences) which prohibit the resources' enclosure: this allows anyone to access them and improve them. Since no one organisation or person controls the resource, there is transparency over its functioning and, usually, no payments are required to use it.

How do digital commons contribute to a country's economy? They drive innovation and contribute to a robust SME ecosystem.

Harvard researchers have estimated that without open source software (OSS) to power digital products and services, it would cost firms $8.8 trillion

to develop this software from the ground up.

A global study shows that countries that contribute more to open source software (OSS) have more high-quality entrepreneurship, with positive socioeconomic effects on skills development.

HOW CAN GOVERNMENTS BENEFIT FROM DIGITAL COMMONS?

1. Securing digital sovereignty

When governments share public data with private software vendors, these data can be used in ways citizens did not consent to, or that are detrimental to the public interest (for example,because they disregard data protection rules).

Big Tech products generally originate from companies headquartered in China or the USA. In order to buttress national security and sovereignty, dependence on proprietary products and services controlled by other countries should be minimised. The digital commons offer a decentralised alternative.

India clashed with Microsoft over a proprietary document format in 2008 to make it ISO-compliant. The Document Foundation (TDF) has developed and promoted the alternative, yet compatible, open document format (odf) and the free office suite LibreOffice to provide a financially accessible, transparent and interoperable product.

Seventy leading experts and civil society groups in Canada are urging the Prime Minister to protect Canada's digital sovereignty from Trump administration policies.

When governments become over-reliant on a single vendor, their ability to enforce data protection regulation is severely diminished. Some have decided to disengage from firms which do not respect national sovereignty, and adopt open source software to ensure data is better protected.

In 2025 the Danish government announced it would move from Microsoft Office to LibreOffice.

Also in 2025, France's second largest city, Lyon, elected to cease relying on Microsoft services as Microsoft declared it cannot protect French data from US access.

When governments are involved in shaping open standards, political, legal, cultural and technical decisions are guided by norms and values that benefit all - not just industrial actors.

A recent report by Amnesty International, 'Breaking up with Big Tech,' argues that the market dominance of Big Tech firms has enabled them to 'exert disproportionate influence over regulatory processes.' This is particularly salient in the case of open source software, which has been adopted in multiple sectors such as the automotive industry. The Linux Foundation is a governance hub

where key decisions are made about open source software. Its supporters says it helps to create open technical standards and fosters innovation and growth by pooling the costs of developing underlying infrastructure. But critics argue it primarily represents the interests of its corporate sponsors, not the general public. Whatever the case may be, governments should not leave decisions about critical digital infrastructure to industry alone.

2. Investing for the future

Adopting digital commons saves government money by making it possible to avoid software and service duplication as well as expensive and recurring licence fees.

Most open source software (OSS) can be used without a fee. By supporting its development, governments favour the growth of software that can be reused, thus avoiding costly duplications. And when governments adopt OSS in the everyday running of public administrations, they free themselves from proprietary vendor lock-in.

For example, CKAN, or the Comprehensive Knowledge Archive Network, is an open-source data management system which powers the open data portals and data hubs of local, regional and national government agencies and enterprises in the EU, the USA, Singapore, Australia, and Canada.

A study in India measured the economic impact of using OSS in public and private sector organisations, finding significant cost savings of hundreds of millions of dollars. In addition to these tangible benefits, when the Indian state of Kerala replaced all its primary school computing with OSS it resulted in all the teachers (and subsequently students) gaining programming expertise that resulted in intangible but significant benefits: a highly technically competent teaching staff, and students entering university with programming skills.
By releasing open government data and encouraging the release of open data by private actors, governments can ensure data is reused to create data-driven services and to adopt data-driven decisions. This reduces time and costs in the provision of services as data is readily available, rather than needing to be collected. For example, the Municipality of Rio de Janeiro organised hackathons for people to build apps for City Hall using open government data. Similarly private actors can reuse open government data to build data-driven services. For example, open data on bike sharing can support the efficient planning of public transport. .

The auditability of digital commons improves cybersecurity: faults can quickly be detected and corrected. Although firms such as Google and Microsoft are major contributors to open source development, they typically only fund projects that support their products. Because digital commons are public goods, many other firms do not contribute at all: they are engaging in ‘free riding.’ This means that ongoing maintenance or timely application of new security patches is sometimes lacking. Consequences of firm lack of support have global impacts, such as the Heartbleed bug in 2014 or vulnerabilities within a Java logging library, Apache Log4j, in December 2021.

Governments can provide financial

support to digital commons to enhance security. For example, Germany created the Sovereign Tech Agency to fund OSS development. OSS relies on community development. Well-supported OSS communities result in increased transparency, independence from Big Tech, and enhanced security through community supervision of code development and troubleshooting.

How can governments be supported to engage with digital commons projects? Here are some examples of available funding schemes.

The EU has built programmes to support OSS such as the EU Open Source Observatory seeks to establish OSPOs in government.

A recommendation of the European Working Group on Digital Commons report in 2022 was to establish a European Digital Infrastructure Consortium.

The European Commission's Next Generation Internet Initiative develops long-term support for digital infrastructure.

The Free and Open Source Software Solutions for European Public Services project is mapping OSS dependencies in European public institutions.

After the economic and social success of its OSS in schools program, the Indian state of Kerala is now a world leader in implementing and supporting digital commons internationally.

Governments can conduct national digital audits to assess public service reliance on proprietary software, public service use of OSS, and what OSS solutions it would be useful for the public service to reuse or co-develop.

Digital sovereignty mandates conducting periodic audits of all public and private stakeholders in critical sectors, in addition to the possibilities of the Digital Services Act and to strengthen its applicability, by mapping (EU) government dependence in sectors not covered by European regulations. With a view to a DSA V2, governments can anticipate European developments by experimenting with expanded digital sovereignty criteria. This audit would assess several criteria complementary to the DSA, e.g. (a) Reversibility of solutions and data portability; (b) Absence of extraterritorial laws applying to suppliers; (c) Data hosting in the European Union; (d) Open source nature of critical solutions; (e) Strengthened compliance with the GDPR and European standards. The audit would also include an assessment of the tangible benefits associated with migrations to sovereign digital commons solutions: reduced legal risk, operational efficiency gains, societal benefits, and local economic spinoffs. These indicators would guide budgetary choices and serve as tools to convince stakeholders.

Governments can also create open source program offices (OSPOs) in the public sector, as well as public sector software catalogues to foster reuse and co-creation.

Governments can draw inspiration from counterparts which have created Open Source Program Offices (OSPOs). Examples include the Free Software Unit within DINUM (France), Digital Iceland, and Red.es (Spain). The

purpose of these OSPOs is to define and operationalise a strategy for the use and maintenance of open source software in public administrations. Other governments would do well to set up such an entity and provide it with adequate resources in order to enable their public services to achieve digital sovereignty.

Additionally, governments can also create a national software repository for the hosting and collaborative development of public sector open source software projects, and they can foster increased awareness of networking opportunities amongst public servants.

3. Building trust

Digital commons allow governments to safely manage and safeguard open data that citizens can trust. It can also protect citizens' data privacy.

OpenStreetMap is a world map based on open data provided by volunteer mappers. Data is bulk-downloadable for analysis in most common formats. During humanitarian catastrophes such as the 2010 Haiti earthquake and the 2013 Typhoon Yolanda in the Pacific, volunteers provided and validated data to OpenStreetMap to map the aftermath of the two catastrophic events. The Humanitarian OpenStreetMap Team (HOT) coordinates the data collection and validation work. Civil protection and other rescue bodies relied on OpenStreetMap data in their rescue operation, successfully showcasing collaboration between public authorities and civil society.

Several European countries adopted an open source approach, relying on mass collaboration, to develop COVID-19 contact tracing applications. Countries that adopted this approach include Germany (Corona Warn App) and the UK (UKHSA-Collaboration). These apps were developed to interact with Apple and Google software components, rendering them fully interoperable across Android and iOS systems. Many such apps adopted a privacy-preserving decentralised data storage system, with contact data being stored on distributed devices rather than on a centralised database.

When a government transparently releases open data and government applications code, the foundations for trust and accountability are laid.

Because the code of open source COVID-19 apps was published, users were able to understand how the apps worked, and what data was collected. This increased public confidence at a crucial time, since misinformation about the pandemic had eroded trust in public health measures. As members of the Demos UK think tank wrote in 2010: 'Conspiracy theories are a reaction to the lack of transparency and openness in many of our institutions. The more open our institutions, the less likely we are to believe we are living in a conspiring world.' Open data can thus provide assistance in the fight against climate change or health disinformation.

In an increasingly polarised world, the openness of digital commons brings people together by fostering cross-border knowledge transfers and collaborations.

Wikipedia is far from perfect. Nonetheless its immense importance stems from its universal adoption: all over the world, millions of people understood and embraced qualities foreign to traditional encyclopedias, such as unlimited access to knowledge; the transparency of the editing process afforded by the wiki platform - a wiki is an online database where people can work collaboratively and where all modifications are systematically recorded (every Wikipedia article has a 'History' page) - and the collective, mostly peaceful resolution of disputes over the content of articles: each article in the online encyclopedia also has a 'Discussion' page where Wikipedians debate according to editorial rules such as the need to use reliable sources and to have a neutral point of view.

PROCUREMENT, FIRM SUPPORT, PRODUCTS AND SERVICES

4. Procurement and firm support

You've convinced me! What key clauses and considerations should be in my public sector organisation's public procurement documents so we can successfully include digital commons?

An article on the French government's Digital Society Lab, 'How to secure the use of digital commons in a public procurement contract?' suggests the following:

- defining the meaning of 'digital commons' and related concepts (e.g., 'documentation,' 'open licences,' 'open source code')
- specifying how the outputs are to be shared (e.g., appropriate licences)
- anticipating the management of prior knowledge (e.g., under what licences previous contributions to the digital commons were made)
- indicating shared governance requirements (e.g., setting up wikis and code management tools)
- providing for reversibility (e.g., use of open standards)

How can public administration staff gain a deeper understanding of the digital commons and of these commons' cultural and ethical values of openness and transparency?

To successfully support the digital commons, before any tendering can occur, public procurement mechanisms need to include training programs enabling public sector organisation staff to familiarise themselves with digital commons principles and how to best support communities.

Public sector organisations could also:

- train legal experts regarding the legal challenges posed by digital commons and free, libre and open source software (e.g., explain that a public tender can explicitly require OSS, be aware of issues related to trademarks, etc.)
- train project managers regarding the concrete challenges of governance (e.g., how can a public organisation

act as a useful contributor to digital commons which follow an open governance model)

- facilitate mediation between technical, legal and project management teams, for example by setting up digital commons hubs within organisations, such as Open Source Program Offices (OSPOs)

- factor in regular project support and follow-up, and not just focus on the upstream phase of the contract award

How can governments support firms contributing to the digital commons?

Creating an Open Source Software Tax Credit recognises these firms' contribution to digital sovereignty and open innovation.

The scheme would rely on several incentive mechanisms:

- Enhanced research tax credit for contributions to open source software

- Tax deduction for open source development costs

- Tax exemptions for companies publishing their innovations using an open source licence

- Specific legal recognition of the status of 'contributor to the digital commons'

This measure would aim to create a national competitive advantage for companies adopting open models, as well as strengthening the European and/or global digital commons ecosystem.

5. Products and services

You've convinced me! What digital commons products and services can I use right now in my organisation? Glad you asked. Here are some examples. Additional information can be found in our B*est Practices Guide for Digital Commons - Government Relations*.

Social need	**Proprietary product**	**Digital commons product**
Encrypted chat	WhatsApp	Delta Chat Signal
Operating system	MS Windows Mac OS	Debian FreeBSD
Data management system for open data portals	Socrata	CKAN
Object–relational database	IBM Db2 Oracle Database Microsoft SQL Server	PostgreSQL
Social media	X	Mastodon
Surveys	Google Forms Survey Monkey	Framaforms Lime Survey
Collaborative real-time text or graph editor	Google Docs	Framapad Hedgedoc
Meeting scheduler	Doodle	Framadate
Reliable urban data for public service provision	Google Maps (API)	Open government data
Geographic data for emergencies	Google Maps (API)	OpenStreetMap
Web browser	Google Chrome MS Edge	Chromium GNU Ice Cat Mozilla Firefox

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FREEDOM WITHOUT JUSTICE IN THE DIGITAL COMMONS: TOWARDS A NEW TAXONOMY

DIGITAL COMMONS HAVE become central to our technological infrastructures. Alongside the coercive power of hierarchies and governments, and the enticing pull of privatisation and competition, non-exclusive forms of property and collaborative production have long played a key role in the design, development, and maintenance of digital technologies (Dulong De Rosnay and Stalder 2020; Berlinguer 2022). Born out of community-driven projects, where contributors experimented with their own rules and governance structures (Kelty 2008), digital commons have since been streamlined and reengineered to meet the growing needs of an industry that increasingly depends on them. Today, open source software runs in over 90% of all software products (Synopsys 2023). Access to data from the open web powers the development of generative AI models (Amarikwa 2024). Open standards underpin the critical infrastructures of our digital systems and networks, and foremost the Internet itself (Russell 2014).

Scholars and activists have invested digital commons with strong political expectations for a long time (Benkler 2006; Bollier et al. 2012). Increasingly, policy makers are projecting them as vehicles for sovereignty, autonomy, and democratic agency through collective control of technology (Report of the European Working Team on Digital Commons 2022). Beyond economic rationales of cost reduction and innovation via mutualisation, commons are sometimes framed as remedies to capitalism's pathologies—market concentration, wealth extraction, privacy violations, and the erosion of labor protections (Hardt 2018; Bühler et al. 2023) —while also being credited with ecological and participatory virtues, from Green IT practices (Körbächer 2023) and energy-efficient AI (Abraham 2025) to governance models that incorporate social and environmental stakeholders excluded from state and corporate decision-making (Bauwens et al. 2019). These narratives have materialised in policy for a certain conception of

digital commons: within the European Union for instance, policies have promoted open access regimes or procurement preferences for open source (Thévenet et al. 2024), but also collective infrastructure management (Krewer 2025), while carving out favorable liability regimes for open and non-commercial projects under instruments like the AI Act (Liesenfeld and Dingemanse 2024) and Cyber Resilience Act (Schip 2025). Yet this institutionalisation raises a critical question: what forms of accountability and responsibility should be demanded of digital commons once they are embedded in industrial practice and public policy?

The political hopes associated with digital commons still rest on an underlying ambiguity: digital commons designate a mode of collective action articulated through heterogeneous social and technical *agencements* (Jullien and Roudaut 2020), sometimes operating alongside hierarchical or market coordination, sometimes embedded within them (Broca 2021; 2025). To grasp both the limits of political expectations and the conditions of their realization, it is necessary to recall the fractured conceptualisations of digital commons that have emerged over time. Ostrom and Hess's early work on knowledge commons highlighted the plurality of institutional arrangements, the role of communities in defining access and exclusion, and the embeddedness of knowledge practices in biophysical boundaries and technical dependencies (Hess and Ostrom 2005; Frischmann et al. 2014). But a significant strand of scholarship and advocacy has since abandoned the analytical frameworks inherited from material commons to foreground supposedly immaterial technical components (Maurel 2019), and privilege licensing regimes as guarantors of openness and freedom of reuse, or 'permissionless' (Benkler 2014; Broca and Coriat 2015). In this reframing, the focus on openness eclipsed other dimensions of collective governance (Guerry 2021), such as the distribution of power, equity and inclusion, or value sharing—an omission that has generated several areas of contestation within the 'open' movement (Open Knowledge Foundation et al. 2023; Litta and Bihr 2025).

First, power relations: despite the rhetoric of horizontality and openness, peer production communities frequently reproduce entrenched hierarchies and informal modes of domination, where the myth of meritocracy (Ehmke 2015), but also the absence of structured deliberation or democratic procedures, function as a gatekeeping strategy for those already in positions of influence (Schneider 2022). Second, exclusion and epistemic justice: feminist and decolonial critiques have demonstrated how commons in software, data, and science replicate systemic biases, marginalising women, racialised groups, and communities from the Global South (D'Ignazio and Klein 2020; Dunbar-Hester 2020; Gardner et al. 2020; Joshi and Singh 2021; Kohtala et al. 2019). Here, the promise of universality can conceal economic, legal and epistemic asymmetries that silence alternative knowledge and adversely impact participation (Krikorian and Kapczynski 2010; Piron et al. 2016; Bezuidenhout et al. 2017). Third, exploitation and value sharing:

the political economy of openness has enabled the large-scale appropriation of collectively produced resources by dominant firms, generating a paradox in which 'freedom' serves extractive capitalism rather than collective empowerment (Kleiner 2010; Mirowski 2018; Keller and Tarkowsky 2021; Kilic and Knodel 2025). This has sparked calls for new licensing and governance models grounded in reciprocity, community benefit, and solidarity, especially in the case of data commons vulnerable to commercial capture (Benhamou and Dulong de Rosnay 2023; Chandrasekhar 2025). Such calls remind us that freedom without justice is hollow: when power imbalances, exclusion, and inequitable value capture go unaddressed, the commons risks serving only the strongest, rather than enabling shared stewardship and collective empowerment (Johnson 2014).

Finally, the focus on openness is deeply rooted in a Western, modernist imaginary of disembodied and commodified knowledge, and especially in the liberal and cybernetic turn after the Second World War (Arora 2014; Loveluck 2015). This obscures the historical and material conditions of digital and knowledge infrastructures—not only the labor and social processes that sustain knowledge production (Fia and Maanen 2025), but also the material inscription of computing itself (Ensmenger 2018). This narrow conception of digital commons as "open" can be attributed to the departure from the specific and strategic focus on materialities of digital commons as in Ostrom and Hess' early framework. Instead, the "open" paradigm strategically foregrounded the abundance and frictionless circulation of information (Shulz et al. 2024). In doing so, it brackets its own ideological, infrastructural, and ecological conditions of possibility. The blind spots of openness are thus not accidental but functional, aligning the commons imaginary with the political economy of digital capitalism (Golumbia 2024). Today, these blind spots are generating new contradictions: the very digital commons on which digital capitalism relies are revealing their limits, as labor issues around the maintenance of critical open source infrastructure by groups of individual volunteers become increasingly visible (Eghbal 2016; Pennington 2019; Curto-Millet and and Corsín Jiménez 2023).

As a result of these observations and to account for these contradictions, we are launching a collaborative effort to develop a new taxonomy of digital commons. We define digital commons as heterogenous forms of distributed and communal production, ownership and governance for digital systems, tools and infrastructures. Existing taxonomies, typically centered on technical components or licensing regimes, look at social collectives only from an extractive and machinic gaze and therefore fail to capture their political, ecological, and social dimensions. By contrast, our taxonomy will be conceived as an iterative and pragmatic tool, designed to make contested areas visible and to reclaim the commons beyond openness — showing the diversity of models with sometimes contradictory logics. It aims to help scholars and practitioners better analyze (as well as preserve) the heterogeneity of digital commons. It also aims to equip civil society and policymakers to distinguish, for example, between grassroot open

designs for decentralised energy production and permissively licensed AI models released by Big Tech, and thereby advocate for the sustainability of both the resources and the collectives involved, against exclusive use, exclusive profit or value extraction. It should help communities recognise that strategic choices need to be made to resolve the tensions between different models of digital commons, not all of which are, can be or should be 'open' (Broca, 2025).

Following on from the workshop organised by the Digital Commons Policy Council and the Liverpool Civic Data Cooperative in May 2025, we - together with other workshop participants - began creating this new taxonomy of digital commons. Taking as our starting point the fracture of digital commons away from its socio-material aspects and towards openness, which has resulted in little to no commitment of digital commons to social and environmental justice and strong sustainability, we united in an effort to imagine and build an alternate taxonomy (Mohai et al. 2009; Johnson 2014; Taylor 2017; Fuchs 2020; Godin et al. 2022; Fia and Maanen 2025). We therefore seek to inaugurate a continuing research agenda to mobilise literature and expertise on social justice, environmental justice and strong sustainability to support more informed and just choices in shaping and growing the digital commons.

To this end, our taxonomy will be organized around four interrelated categories: the artefacts and their infrastructural and biophysical dependencies, de jure dimensions such as licensing and techno-legal frameworks, the de facto dimensions of community and governance practices, and the ways commons are embedded within broader societal systems, including business models, modes of production, sectoral contexts, and underlying values. Rather than producing a complex and rigid classification requiring extensive data collection, we aim to design simple guiding questions that allow users to generate nominal categories and address key issues with clarity.

We are committed to including the Majority World so our geographical scope is as broad as possible, starting with a day-long online workshop with selected experts next year to collectively refine the framework. In doing so, we aim to reclaim the commons as more than openness, insisting that freedom without justice is hollow—freedom only for the powerful.

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BACKGROUND

THE INVITATIONS SENT to prospective 2025 DCPC workshop attendees read (in part):

> *'The Digital Commons Policy Council (DCPC) and the Liverpool City Region Civic Data Cooperative (CDC) are working together to change the conversation about data and digital tools in the UK and other countries, towards more participative approaches to the design, governance and financing of digital commons initiatives.*
>
> ***Liverpool Workshop Day 01 (hybrid): Towards universal principles for the digital commons***
>
> *To draft universal principles for the digital commons, everyone must be included. What are the experiences, needs, challenges and proposals which emanate not just from the Global North but also from Global South and First Nations / Indigenous perspectives? The first day of the workshop will bring together representatives from global communities and organizations. To enable the greatest possible participation it will be held in hybrid format, combining face-to-face and remote interactions via video-conference.'*

During the debates on the first day of the workshop, some participants decided to explore the development of such universal principles. Moving beyond the classic definition of digital commons as information and knowledge resources that are collectively created and owned or shared between or among a community and that tend to be non-exclusive, the participants elected to orient their deliberations towards *global* commons.

Global commons are large resource domains which fall outside national jurisdictions and to which all nations have access. International law identifies four global commons, namely the high seas, the atmosphere, Antarctica and outer space.

Defining digital commons as 'global commons goods' in preference to other terms such as 'digital public infrastructure' or 'digital public goods' would help to emphasise the universal character of the benefits they bring, and - by aligning them with the other four global commons - highlight their importance, particularly for governments.

Participants decided the principles for global commons goods should provide clear answers to questions such as: How could digital commons better serve the global common good? And how could they prevent 'commons-washing' by Big Tech (similarly to green-washing, commons-washing describes for-profit firms' efforts to 'seek mental association with or directly frame their activities under the umbrella of the commons [...] without actually respecting their fundamental principles').[1]

To inform principles for governments to support digital commons and interactions with corporations, participants considered multistakeholder initiatives like the UN Global Digital Compact.[2] Other relevant resources which informed the Principles are listed below.

A final suggestion was to connect the principles to other workshop outputs. For example, the principles should advocate for digital commons for the global common good, underpinned by social and environmental justice. To this extent, these principles can be operationalised using the digital commons taxonomy (see page 46 of this report), to create ecosystems based on values of social and environmental justice.

ADDITIONAL RESOURCES

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[1] Dulong de Rosnay, M (2020) Commonswashing – A Political Communication Struggle. Global Cooperation Research - A Quarterly Magazine 2(3): 11-13. hal-02986722

[2] 'The Global Digital Compact is a comprehensive global framework for digital cooperation and governance of artificial intelligence. Twenty years after the World Summit on the Information Society, it charts a roadmap for global digital cooperation to harness the immense potential of digital technology and close digital divides.' See United Nations. (2024). *Global Digital Compact*. New York: United Nations. https://www.un.org/digital-emerging-technologies/global-digital-compact

PRINCIPLES FOR GOVERNMENTS TO SUPPORT INCLUSIVE GLOBAL DIGITAL COMMONS

1. Equity and Equality

- Ensure universal, accessible, and high-quality access to digital commons.
- Actively promote the inclusion of marginalized populations, linguistic minorities, and persons with disabilities.
- Recognize and value local knowledge and technologies, avoiding one-size-fits-all or centralized models.

2. Digital Sovereignty and Self-Determination

- Guarantee that countries—especially those in the Global South—maintain control over their data, infrastructure, and algorithms.
- Avoid digital neocolonial practices, such as imposing norms or standards that favor Global North interests.

3. Fair Benefit-Sharing

- Implement concrete mechanisms to distribute the economic, social, and scientific benefits generated by digital commons.
- Ensure that data used for innovation (e.g., in AI or health) results in tangible benefits for the communities from which it originated.

4. Transparency, Accountability, and Participatory Governance

- Develop open, multilateral, and participatory governance structures.
- Involve local communities, civil society organizations, and Global South representatives in decision-making processes.

- Demand accountability from both public and private actors.

5. Interoperability and Respect for Local Specificities

- Promote open, interoperable technical standards without enforcing uniformity.
- Allow systems to be adapted to different cultural, linguistic, and technical contexts.

6. Sustainability and Intergenerational Responsibility

- Ensure that digital commons are sustainable over time, both financially and environmentally.
- Apply the precautionary principle in emerging technologies that impact the digital commons.

7. De-commodification of the Digital Commons

- Protect Digital Commons from exclusive commercial appropriation or restrictive intellectual property regimes.
- Promote shared funding models that do not rely solely on monetization by large platforms.

8. State Responsibility to Enforce the Principles

- It is the duty of States—especially those where major tech companies are based or operate—to ensure that these corporations adhere to the principles outlined above.
- Governments must adopt legal, fiscal, and regulatory tools to uphold fairness, transparency, and the equitable redistribution of digital value. This includes tax policies, data protection frameworks, and binding benefit-sharing obligations.
- Multilateral coordination is essential to prevent regulatory arbitrage and to ensure that corporations cannot avoid their responsibilities by relocating or exploiting jurisdictional loopholes.

3.

BEFORE

THE WORK SHOPS

INCREASING THE RECOGNITION AND SUSTAINABILITY OF DIGITAL COMMONS

DIGITAL COMMONS, BASICALLY USEFUL

DIGITAL COMMONS ARE resources produced and democratically managed by communities and projects composed of diverse actors. The best known are Wikipedia, FLOSS (Free, Libre & Open Source Software) like the Linux operating system and Firefox (web browser), as well as Open Street Map (geographic database). They are called digital commons because, like traditional commons (rivers, fields) they are governed by rules which guarantee their collective and shared character. 'Copyleft' free software licenses such as the General Public Licence (GPL) grant users the rights to use, copy, modify and distribute computer code, on condition that these freedoms are preserved in all derivative versions of the software.

In certain free software projects, participatory democracy is real. For example, Debian members have a constitution, a social contract and a code of conduct, and each year elect the 'Debian Project Leader'. Other projects mimic openness: access to the code is permitted but important decisions are the prerogative of a minority, employees of a firm, or representatives of industrial interests. In these open source projects, the technical benefit brought by the possibility of massively increasing the number of developers takes precedence over the values of sharing and transparency.

Unlike strictly private digital technologies where access to code is restricted or non-existent, the collaborative creation of digital commons demonstrates that people around the world can work together to create useful resources that everyone can use. The digital commons are therefore, by definition, forces of unity and inclusion, working concretely for the good of humanity.

In participatory and democratic projects, the form of resources is, initially, determined by the demands of the producing community: the objectives and results of a project reflect the demands of its initial contributors, who are also its main beneficiaries. These resources are therefore not always, at first glance, very easy to use, and sometimes remain reserved for a technically competent minority.

But the integrity between product and process also results in exceptional simplicity and robustness – no unnecessary and costly additions – and it is therefore not uncommon for these resources, initially minor alternatives, to outperform eventually commercial products, leading to their integration into dominant industrial ecosystems.[1]

STRATEGIC PRINCIPLES

If a resource is useful to everyone, those who produce this resource should be recognized for their work, why not compensated, in any case have the guarantee that the product of their labour will not be alienated – privatized, closed, banned.

Neither the economic and social utility, nor the cultural value of digital commons, nor the work of those who produce them are recognized. On the contrary, the digital commons are frequently plundered or discredited: firms use FLOSS without contributing in return, or re-enclose open software; many schoolteachers ban the use of Wikipedia in classrooms.

The Digital Commons Policy Council aims to direct the scientific work of the Journal of Peer Production towards practical and concrete achievements. Rather than imagining a better future system, it is a matter of nibbling away at the market territory here and now by extending the area of common goods. In the long term, an increasingly large sector of free public goods and services will be able to coexist in a plural economy with paid self-employment, employment in cooperatives and salaried employees in the commercial sector.[2]

These long-term objectives have no chance of materializing if, in the immediate future, the material value of the digital commons is not protected against predation and appropriation, and if their symbolic value is not appreciated its fair value by the greatest number. To achieve these immediate and distant objectives, allies are needed.

The anti-authoritarian roots of peer production led its advocates to focus on local or municipal political engagement. The local level is essential, but as Graham Murdock wrote in response to a proposal for a 'post-capitalist commons transition' from Michel Bauwens and Jose Ramos:

> The self-management practices of local urban commons continually clashed with the paternalism, bureaucratization and desire for control that animated the hierarchical administration of public goods, but it was state intervention that placed limits on commercial enclosures and guaranteed access to the spaces and resources that allowed the commons to exist. The democratic knowledge commons could not have developed without the system of public libraries and universal access to education.[3]

Whether or not we wish to qualify it as a 'partner state', any action in favour of common goods will have to engage to a certain extent with the state, otherwise it will remain in culturally elitist and politically marginal enclaves.

While there is no alternative to the government, it is not simply a matter of working to complete funding applications more efficiently.

What is needed is to extend the generative capacity of the commons to establish moral relationships, postulated by Yochai Benkler, between participants. Collaborating with a state entity implies that there is an agreement on the transparency of information and the democratization of decisions.

ACTIONS OF THE DCPC AGAINST THE PREDATIONS SUFFERED BY FREE SOFTWARE

The near omnipresence of open source software in a growing range of applications means that all businesses today, not just IT companies, freely benefit from labour that is either voluntary or paid by other firms than themselves. These non-IT companies purchase data storage and processing services - we speak of cloud computing and Software as a Service (SaaS) - from large technology companies. These services, Amazon Web Services in the lead, are based on free software, but in a way that closes them. Indeed, most copyleft licenses, including the General Public License (GPL), only guarantee access, modification, and redistribution of software source code if they are distributed to users, i.e., transferred and installed on their computers. However, the GPL does not operate when the software runs in SaaS mode from Big Tech servers, because no software is downloaded or executed on the client's machine. Our denunciation of this predation (and of other similar activity), accompanied by an analysis of the inability of free licenses to combat it, has been widely disseminated internationally: an article in French in *Le Monde Diplomatique* in January 2022 was translated and published in the German, English, Spanish, Farsi, Kurdish, and Norwegian versions of this magazine.[4]

EXPOSING THE CONDITIONS OF PRODUCTION OF DIGITAL INFRASTRUCTURE

The first DCPC report mapped the co-production of FLOSS by large firms and projects.[5] Our analyses of firm contributions to the 20 most active repositories on GitHub revealed the involvement of digital giants in the production of FLOSS, with the existence of distinct contributing territories: Microsoft and Google, the two biggest employers, firms never contribute to the same deposits. We also analysed speeches from employees of technology firms and foundations at three professional conferences. The speeches of employees of large IT companies position the efficiency of development processes and professionalization as the key values supposed to guide the practices of open source projects, with the main demand being the development of a technically neutral and centralized infrastructure. In the same way these speeches, like those of the Linux Foundation, promote the idea that large companies and collaborative projects form a 'community' by insisting on the convergence of interests between volunteers and employees within the same project. In reality, a multitude of distinct communities are associated with specific projects, which differ in their values and economic models.[6]

To counter the idea that only start-ups and private capital generate innovations, we are currently analysing the role of university researchers and state actors in the production of R software (a popular free software

ecosystem for data scientists), and plan to map the use of R by industrial actors. That being said, the usefulness of these methods for forcing technology firms and free riders to acknowledge their debts is questionable: a precise econometric analysis of the benefits an entity derives from using free community products could certainly serve to exert pressure on that entity, but these methods are difficult to generalize.

SURVEYING THE COMMUNITIES

The second DCPC report presented the results of the first Debian survey, a historic FLOSS project carried out in 2016, on developer employment.[7] Here we present preliminary results from a second survey carried out in 2023, which aimed to lay the foundations for a debate in the free software community on the economic and environmental sustainability of FLOSS. While this second edition did not obtain as many responses as in 2016, certain results are clear, such as the rejection of restrictive licenses. What's more, the qualitative results, in the form of comments made to certain questions, provide valuable insight into the obstacles to the ecological transition.

WIKIPEDIA SHOULD BE INCLUDED IN UNESCO'S WORLD HERITAGE LIST

Like FLOSS, Wikipedia represents a free resource for digital platforms and infrastructures. But the online encyclopedia is also an invaluable educational resource and an essential tool to promote fact-checking.

Wikipedia is far from perfect. Nonetheless its immense importance stems from its universal adoption: all over the world, millions of people understood and embraced qualities foreign to traditional encyclopedias, such as unlimited access to knowledge; the transparency of the editing process afforded by the wiki platform (a wiki is an online publication where people can work collaboratively and where all modifications are systematically recorded); and the collective, mostly peaceful resolution of disputes over the content of articles. Each article in the online encyclopedia has a 'Discussion' page where Wikipedians debate according to editorial rules such as the need to use reliable sources and to have a neutral point of view.

Information literacy is always conceived in terms of individual responsibility, but 'a shared sense of truth requires societal trust, especially institutional trust, at least as an ideal.'[8] The combination of insistence on fact-checking and absolute transparency makes Wikipedia a generator of epistemic trust and a potent war machine against manipulators who rely on invented sources to stir up hatred.

The outstanding universal value of Wikipedia means that it fully satisfies the first criterion necessary for inclusion on the UNESCO World Heritage List: 'representing a masterpiece of human creative genius'.[9] Its inclusion would force the Wikimedia

Foundation to explain what it is doing to protect Wikipedia against the large-scale infiltration and manipulation attempts that threaten it.[10]

At the very least, the value of Wikipedia should be taught in schools. But the online encyclopedia is viewed with suspicion by many primary and secondary school teachers, who only have a partial understanding of its internal control mechanisms, and prohibit its use.

EXPANDING DIGITAL COMMONS THROUGH MEDIA AND INFORMATION LITERACY

The need to equip schoolchildren with tools against disinformation has provided us with the opportunity to combat these outdated prejudices: we have developed information literacy methods adapted to the contemporary attention economy.[11] When epistemic pollution is generalized, the use, in uncertain epistemic environments, of critical, in-depth reading is not a good strategy. Our method combines the use of Wikipedia (to verify historical or scientific claims) with that of 'lateral reading' (I don't elucidate a message by diving into it, I look sideways, I perform a search, and I check on a trusted site).[12]

The results are encouraging: we put these methods into practice in four primary schools in Canberra in 2021-2022,[13] and are currently working on creating methods for year 11 and 12 students with the help of school librarians. These methods were also the subject of two Submissions to the Australian Parliament. We include extracts from that made to a Select Committee of the Senate in 2023 in this Report.[14] Another submission to the Permanent Joint Committee on Electoral Matters made in May 2024 recommends setting up a large-scale information campaign comprising four cognitive stages:

[1] *Reacting* according to the epistemic environment
[2] *Choosing* how to read (vertically or sideways)
[3] *Verifying* using reliable sources
[4] *Questioning* emotional manipulation

COOPERATING WITH THE STATE

To encourage state entities to collaborate with digital commons projects, we propose two distinct justificatory principles, based on environmental sustainability and network security.

STATE ENGAGEMENT FOR TECH SOBRIETY

Digital commons' integrity of product and process (the shape of these resources is directed by the requirements of the producing community) results in exceptional technological sobriety, since only necessary components are included. This 'digital sobriety', aiming to reduce the production and use of digital technologies, while maximising their efficiency and recycling capacity, may

help to position digital commons as attractive alternatives to unsustainable firms (we must note that digital commons' ecological viability is limited: many remain dependent on Big Tech products, and in some cases on significant material and energy resources).[15]

In any case presenting digital commons projects as credible alternatives to unsustainable firms is hampered by existing funding models and legislative frameworks which favour digital capitalist firms. Additionally, the lobbying resources mobilized by capitalist firms far outweigh those of the digital commons movement, and class homologies facilitate connections between political and economic elites.

Political support for digital commons is thus negligible. This accords with the ideological focus of some digital commons actors who refuse to scale up because of their ideological principles favouring degrowth and decentralisation. In light of this situation, what can be done? In France, the digital commons movement is trying to address these limitations. Mobicoop's Director is leading a coalition of cooperatives seeking to raise a billion Euros to finance social businesses engaged in the ecological and post-capitalist transformation of the economy. Together with other digital commons movement entities such as Wikimedia France, Framasoft's Director is attempting to secure funding for a full-time 'spokesperson' who could represent the movement's interests when dealing with public authorities.[16]

PUBLIC/COMMONS PARTNERSHIP OPTIONS

What kind of financial and material support can public authorities offer towards eco-friendly alternatives? Some public entities have already become primary clients of cooperative enterprises that develop eco-friendly digital commons. Public procurement represents a key lever for supporting specific economic actors and practices.[17] Local and national public authorities are experimenting with economic policies in favour of digital commons, as demonstrated by successful implementations in Brussels and Barcelona.[18] National and transnational public investment funds (e.g., European funds) could also direct their investments towards eco-friendly alternatives to digital capitalism.

These practices are already in use and could be expanded. Examples include the French Banque des territoires participation in a fundraising effort for Mobicoop; the 'citizen initiatives accelerator fund' of the Ministry responsible for digital affairs, which since 2021 has supported the upscaling of nine digital commons including OpenFoodFacts, an open database aiming to develop a metric for the health impacts and carbon footprint of food products;[19] and the 'Manufacture de proximité' economic policy, endowed with €30 million, which has funded a hundred productive shared workspaces to foster the relocalisation of small-scale manufacturing industries based on commons-based peer production.[20]

Beyond financial support, public actors can actively contribute to the development of eco-friendly

digital commons. They can become shareholders in cooperative platforms. By joining and promoting shared governance models, public entities contribute to the development of economic activities that are deeply embedded in the socio-political fabric of local communities. These public-commons partnerships represent an alternative to public-private partnerships.

Public entities can also make public resources available to digital commons projects. This could take the form of local authorities or public universities providing space to host distributed manufacturing collective workshops based on digital commons, as already happens for some French FabLab's and makerspaces. In the same spirit, offering free parking for delivery or carpooling services that rely on cooperative platforms is a tangible form of public contribution. Public entities can also allocate space on Web Servers to hosting ecologically-conceived open-source software.

STATE ENGAGEMENT FOR NET SECURITY

Open Source Software's adoption by industry has resulted in increased instances of security issues owing to insufficient maintenance. Recent cases of security breaches including Equifax, Log4Shell or Open SSL are a direct consequence of many firms 'free riding' or benefiting from this digital infrastructure gratis whilst not contributing to its development or maintenance. Since multiple firms are involved, none feel responsible, resulting in a 'tragedy of digital commons'.[21] In the US context, an argument can be made that government considers private nuclear power or telecommunications as critical infrastructure – why should digital infrastructure be any different? one way to do this would be to require firms using open source components to provide Compelling firms to provide Software Bill of Materials (SBOM) may represent a way to increase the recognition of FLOSS in this space.

Possible disadvantages of security-driven government support include the introduction of stringent compliance requirements about the quality of released software which do not take into account the volunteer status of some participants or the ad hoc nature of some projects. This concern surfaced during discussions around the EU Cybersecurity Resilience Act (CRA) in 2023. In order to increase the security of critical infrastructure, the Act's initial version placed undue burdens on developers and projects. For example, this version stated that products with digital elements should be released only if their 'conformity assessments' state that essential cybersecurity requirements are met. The Act's Annex 1 even mentioned delivery 'without any known exploitable vulnerabilities'.[22] Vulnerabilities frequently emerge post-release: this would have had a chilling effect on development. These concerns were effectively communicated to EU stakeholders and the Act was amended, so that most of the risks to individual developers and to Open Source foundations were mitigated.[23]

2024 DCPC/CIS POLICY LAB

In 2022 the Société des Communs held two Policy Labs bringing together digital commons project representatives, activists, researchers, elected representatives and public officials.[24] This led to the establishment of a 'French digital commons coalition' comprising representatives from about fifteen digital commons organizations (such as Wikimedia France, Framasoft, etc.) aiming to advocate for digital commons. The Digital Commons Policy Council and the Centre Internet et Société of the CNRS are building on this work by organising a Policy Lab in May 2024 in Paris, France. This will be an outcome-oriented event held in both French and English. It will result in the production and free dissemination of two practical guides: (a) a how-to guide for local, regional, national or supra-national government employees wishing to engage with and support the development of digital commons projects; (2) a how-to guide for digital commons project participants wishing to engage with and be supported by government organisations. A particular point of interest will be to examine the role of licenses when sharing common-pool resources with state entities.

For the DCPC: Braybrooke, Broca, Daly, O'Neil, Rikap, Thwaites, Zacchiroli

Source: https://dcpc.info/publications/rapport-sur-laction-du-digital-commons-policy-council-en-faveur-de-la-reconnaissance-des-communs-numeriques/

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[2] Zin, J. (2011) Changing the system of production, *Journal of Peer Production* #1. http://peerproduction.net/issues/issue-1/invitedcomments/changing-the-system-of-production/

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[4] See p. TBC.

[5] O'Neil, M., Cai, X., Muselli, L., Pailler, F. et Zacchiroli S. (2021) *The coproduction of open source software by volunteers and big tech firms*. DCPC/NMRC, University of Canberra. DOI:10.25916/r8vg-hd09. All DCPC reports are available at https://dcpc.info/

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[17] Le Crosnier, H. (2021) Commentary: The ethics of open source must be enacted across the online service economy. In O'Neil et al., *The coproduction of open source software by volunteers and big tech firms*, op. cit.

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DIGITAL COMMONS POLICY COUNCIL

The DCPC is an international think tank established in 2021. It advocates for the recognition of digital commons and the voluntary work that creates these common goods. It also seeks to support initiatives that use digital commons to accelerate the transition to a more ecologically sustainable and fair society. It does so by publishing public reports based on empirical data, educational resources for schools and scientific articles, and by making submissions and recommendations to government.
Publications: https://dcpc.info/publications/
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The News and Media Research Centre (N&MRC) advances public understanding of the changing media environment. N&MRC is Australia's nationally recognised research centre for the study of news media industries, audiences and public discourse. At a time of epistemic crisis for the media industries, we research and advocate for a media system that builds trust, inclusivity and diversity, to defend and repair the social fabric. The Centre conducts both critical and applied research projects with partners and institutions in Australia and internationally.
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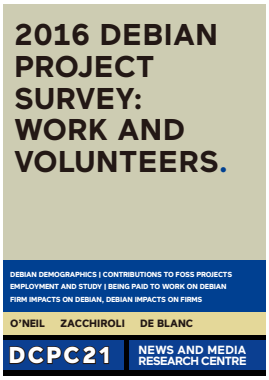
2021



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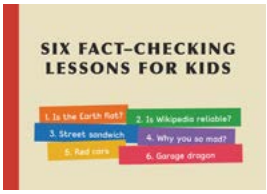

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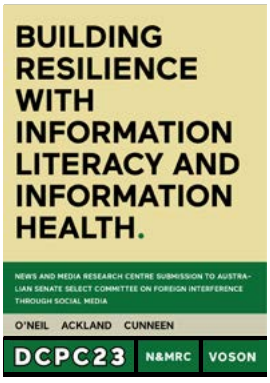

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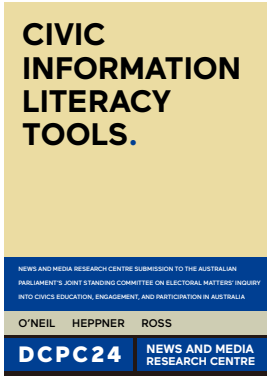

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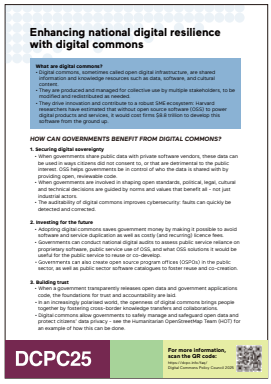

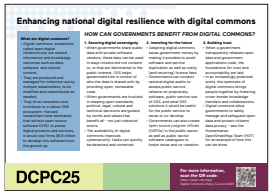

REFLECTIONS AND OUTPUTS FROM THREE DIGITAL COMMONS POLICY COUNCIL WORKSHOPS HELD IN PARIS, LIVERPOOL AND VITORIA-GASTEIZ IN 2024 AND 2025