Wikimedia Foundation Contribution to the European Commission Call for Evidence: Towards European Open Digital Ecosystems

The Wikimedia Foundation welcomes the European Commission's initiative to develop a strategic approach towards open digital ecosystems.

We are the nonprofit organization that hosts open-source-powered free knowledge projects such as Wikipedia, Wikimedia Commons, Wikidata, and others, and supports the volunteer communities that create, govern, and curate these projects in the public interest. For over 20 years, the Foundation has contributed to the development of MediaWiki, the free and open-source software (OSS) behind the Wikimedia projects. This open-source software makes it possible to distribute the content—e.g., text, images, data, media files—that hundreds of thousands of volunteers contribute monthly to our projects, free of charge and free to use under Creative Commons licenses. In addition, the Foundation facilitates the contribution of code and other technical input from a global community of volunteers. For the Wikimedia Foundation, the open digital ecosystem encompasses the open-source software, the volunteer contributor community who build on the software, as well as the freely licensed content that they share and sustain.

Wikipedia is the world's largest free and open encyclopedia, accessed more than 15 billion times every month by readers from around the world seeking knowledge. In 2025, Wikipedia and Wikidata were recognized by the Digital Public Goods Alliance (DPGA) as digital public goods: open-source software, data, AI models, standards and content created for the public interest that can help achieve the Sustainable

Development Goals and improve the lives of billions of people worldwide. These two repositories of open knowledge are of significant global importance and impact, and are powered by open-source software and content that volunteers develop and contribute from across the world, including in the European Union.

During more than 20 years of building and maintaining the technical infrastructure and supporting the volunteer community required to advance the Wikimedia projects, we have seen how open source contributes not only to technological development and information integrity, but also to resilience, transparency, and trust in the digital sphere. This submission aims to contribute evidence and perspectives on the role of open source as part of a broader digital public infrastructure ecosystem. It highlights the importance of openness in supporting technological capacity and information integrity, as well as in enabling a thriving and sustainable digital commons that serve the public interest alongside economic and innovation objectives.

1. What are the strengths and weaknesses of the EU open-source sector? What are the main barriers that hamper (i) adoption and maintenance of high-quality and secure open source; and (ii) sustainable contributions to open-source communities?

Strengthening the EU open-source sector

The strengths of the EU open source sector include certain legal and policy frameworks that enable the development of the open source ecosystem, and serving as the home to several important and foundational open-source software projects. The intermediary liability protections within the e-Commerce Directive are one such example. The EU's interest in technological independence and resilience fosters development of open

technologies and software that support the digital commons: digital resources, including content, that belong to and can be used by everyone.

Barriers in the EU open source sector

Barriers include regulatory compliance burdens that are often designed for well-resourced commercial software providers, but which disproportionately affect non-commercial, open-source software projects and the volunteer contributors and small organisations that sustain them as these often do not have the legal departments or compliance budgets which the design of the regulatory compliance assumes.

In addition, many of these large, commercial providers make heavy use of the resources—e.g., datasets, content, code scripts—that are created and shared by the open source ecosystem. Data and content in the public domain are often used by commercial providers to create closed product ecosystems with better resourcing that directly compete with the open source entities from which they drew. Without a marketplace model that rewards a commitment to open source development, the result is a commercial field that crowds out sustainment pathways intended to grow the projects and volunteer communities that underpin the open source ecosystem.

Finally, despite multiple efforts (for example: the Open Source Program Offices or OSPOs; the EU Sovereign Tech Fund [EU-STF]; the European Digital Infrastructure Consortium [EDIC]), there is not yet sufficient funding to build, develop and maintain the infrastructure required to sustain the abundance of open source projects in Europe.

2. What is the added value of open source for the public and private sectors? Please provide concrete examples, including the factors (such as

cost, risk, lock-in, security, innovation, among others) that are most important to assess the added value.

Open source as a driver of European technological capacity

A thriving open source sector is essential for European technical resilience. It helps develop technical skills in the region required to advance innovations such as cybersecurity resilience, and provides crucial ingredients for commercial technological development and investments. On the commercial side, open source is a force multiplier that enables Europe to do more with less.

A Linux Foundation report measuring the economic value of open source found Fortune 500 company respondents listed three key benefits of using open-source software: cost savings, faster development speed, and open standards and interoperability (p. 11). Cost savings were attributed to lower total cost of ownership and higher productivity, which are easy to understand considering that respondents estimated the use of proprietary solutions, including support and maintenance, would have cost four times or more than the investment required for open-source software (p. 14).

These report findings align with our own experiences. Our selections of Debian, PHP, and MariaDB have allowed Wikipedia and other Wikimedia projects to flourish and endure for 25 years, and have also enabled us to steer their future independently of the whims of commercial software vendors. For example, the Wikimedia Foundation took over the maintenance of an essential open source collaboration tool, Phabricator, when a commercial provider exited the market. Investing in open-source software has also nurtured a community of contributors who have developed significant technical expertise to the extent that they can advise the Foundation's product and technology innovations. As explained earlier, our own MediaWiki software regularly benefits from

volunteer contributions—i.e., code and other technical input—that add functionality and capability as well as help maintain the software.

Such independence is critical for a European Union facing significant geopolitical and economic pressures on its digital infrastructure. Investment in the open source ecosystem advances digital resilience because it can secure infrastructure independence as well as create the local talent necessary to continue to drive innovation and independence without sending big checks to large foreign companies.

Finally, a robust open source ecosystem is foundational for the existence of a flourishing digital commons, and that digital commons provides core open source building blocks that help EU companies develop their technology stacks. A robust open source ecosystem is characterized by a growing base of active contributors, sufficient funding, and is supported by a diverse community with the skills required to advance software and content quality by dealing with issue management, release processes, continuous integration, and contribution guidelines. When these conditions are in place, European companies and innovators can learn from, reuse, and adapt open source components from the digital commons such as openly licensed programming language and data repositories, as well as media and research reports. These conditions require governments to actively invest in the digital commons by encouraging the use of Creative Commons and other similar licenses, freely and openly distributing their own works and any publicly funded works, and providing public interest platforms and open-source software with the necessary liability and copyright exemptions.

Sustaining a healthy open source ecosystem requires a flourishing digital commons and championing of European values

Investment in a flourishing digital commons, when underpinned by a clear commitment to European values—including human rights, cultural diversity, transparency, and privacy—is an investment in essential infrastructure for the European open digital ecosystem.

Digital infrastructure should be based on open source so that the digital commons built on it can thrive and contribute to reinforcing EU technological resilience and cultural values. Free and open knowledge projects like Wikipedia and Wikidata have the capacity to help maintain information integrity thanks to their distributed and human-led content creation and moderation processes.

The volunteer communities behind the Wikimedia projects collaborate primarily along linguistic lines rather than national borders. This distributed governance model enables sustained scrutiny, transparent editorial processes, and the use of reliable sourcing standards, contributing to the provision of neutral and verifiable information at global scale. Such an approach has proven resilient to false and misleading information, and is at the core of the reliability of the information on Wikipedia, since volunteer contributors are able to collectively identify, contextualize, and address coordinated manipulation efforts through open discussion and consensus-building. Open source contributions and collaboration improve security through transparency as vulnerabilities can be detected and fixed more effectively than in closed, opaque systems. This is as true for false information in open source text as it is for vulnerabilities in code.

At the same time, the multilingual structure of the Wikimedia model promotes cultural and linguistic diversity by enabling communities to document knowledge in their own languages and cultural contexts, helping safeguard pluralism online.

Together, these characteristics illustrate how digital public goods can reinforce trust, resilience, and diversity in the information ecosystem, while providing shared infrastructure that supports Europe's broader digital autonomy and democratic objectives. Open source can make knowledge infrastructure more resilient, secure, and trustworthy, at the same time as they reduce costs and stimulate innovation.

3. What concrete measures and actions may be taken at EU level to support the development and growth of the EU open-source sector and contribute to the EU's technological sovereignty and cybersecurity agenda?

Recognition of open source technology as a distinct public good, apart and separate from other categories of software and their corresponding regulation, can create the foundation for broader public support of open source. Recognition and support of important public institutions that rely on open source technology, such as Wikipedia, can help to connect public investment in open source infrastructure with the general public's experience of digital goods and services.

Commercial entities that use open-source software should be incentivized to contribute back to the open source ecosystem, whether by opening up their own software or contributing to the projects that are critical to the success of these commercial entities: for example, through procurement processes that reward meaningful open source participation and contribution. This responsibility should not rest on the goodwill of companies. Continued and additional support for foundational open infrastructure technologies remains key to providing a healthy ecosystem of alternatives and choices. More choices creates better software in the entire marketplace, both open source and commercial.

Regarding the heavy use and potential exploitation of the digital commons and open knowledge by commercial actors training proprietary large language models (LLM), the EU can promote incentive structures that enable fair and sustainable compensation for resources created by the open source ecosystem that in turn benefit commercial aims. Fair compensation can be both financial and strategic. Strategic initiatives can include requirements to highlight the sources of content from which closed large language model systems benefit, as well as supporting the growth of the community of volunteer contributors to open source projects across the EU.

Financial initiatives should not take the form of complicated copyright licensing schemes that make sharing information online less accessible, but instead should find other ways to recognize and compensate for the outsized burden commercial use can put on these resources compared to private use. Wikimedia Enterprise is one example of a fair compensation system that encourages commercial entities to give back. Through Enterprise, the Foundation is able to offer contracts that benefit commercial entities like Pleias via higher volume data access, service level agreements, product-specific features, and open partnership work. These contracts do not diminish public availability of the Wikimedia projects' resources, and they provide remuneration for the level of data access that companies of Pleias' size and scope require.

4. What technology areas should be prioritised and why?

Prioritize technology that provides and promotes greater access to software tools and systems and that helps to safeguard and assure such systems. The greatest strength of open source is that it offers the opportunity for innovation to everyone. Security in well-supported open source projects is enhanced over private commercial software,

because there are more opportunities to inspect the code, find problems, and get fixes from contributors in the open source community. More participants in open source create innovations that benefit everyone: the general public, government agencies, nonprofit institutions, and commercial enterprises.

5. In what sectors could an increased use of open source lead to increased competitiveness and cyber resilience?

Cyber resilience is important at all levels of the technology stack, and so a multi-pronged effort is crucial. For the Wikimedia projects, cyber resilience includes tools that help us defend our infrastructure against Distributed Denial of Service (DDoS) attacks and indiscriminate scraping by content reusers, and also the tools that we use and provide to administrators in order to protect user privacy as well as freedom of contribution, and to defend and maintain the quality of information on the projects. In addition, tools that fight false and misleading information are critical for public knowledge consumption.

Conclusion

Open source plays a critical role in shaping a digital ecosystem that is resilient, secure, and oriented toward the public interest. As the European Union advances its technological independence and cybersecurity agenda, policies that recognise the structural value of open digital infrastructure will be essential to ensuring long-term sustainability, interoperability, and trust.

The Wikimedia Foundation encourages the European Commission to place open source and open digital infrastructure at the centre of its strategic vision. Doing so will help ensure that Europe's digital future is competitive and innovative, while remaining firmly grounded in openness, collaboration, and the public interest.