

2025

Open Source Congress Report

Open source rises to new challenges
inherent with global ubiquity



Sponsored by:



Table of contents

Introduction	3
Inside the Open Source Congress: a global forum for collaboration	4
Open source: mission critical	6
Geopolitics and digital sovereignty	7
Policy engagement	14
Project sustainability	21
Securing the future of open source	28
Conclusion: shaping the next 20 years of open source together	32
Acknowledgements	33

Introduction



By Mike Milinkovich
Executive Director, [Eclipse Foundation](#)

When the Eclipse Foundation was founded in 2004, the technology world was a very different place. The open source movement was still on the fringes, viewed by industry as a cottage community of hobbyists. Today, open source is the foundation of around 90% of all digital infrastructure. Open source powers every facet of everyday life, from healthcare, finance, and education, to entertainment and transportation. It has become mission critical to society.

Embedded so deeply in the open source movement, it's often hard as stewards of this ecosystem to see just how far we have come. We strove together for an open, human-centric, trustworthy, and transparent tech ecosystem, and our efforts have made open source ubiquitous. Yet with growing maturity and widespread adoption comes a natural increase in external scrutiny. Like a successful startup transitioning to unicorn status, the world is now watching.

Today, the open source community must navigate a changing landscape and adapt to new paradigms. In 2025 alone we've witnessed an amplification of geopolitical issues that directly impact open source

infrastructure and projects, meanwhile the volume of relevant regulation has increased sharply. Against this backdrop, we must also encourage government support of, and reliance on, open source software

Technology has brought us together, but it has also divided us into those who understand the open source world, and those who seek to. Indeed, the stakeholders that we must work with today, those who ultimately determine the framework of global markets, do not fundamentally understand the open source ecosystem.

One message stood out clearly from the Open Source Congress: the unity of the open source community. Our strength as technical innovators lies in our ability to collaborate across borders, bringing together local communities to create global solutions for increasingly complex challenges. While the next 20 years present new hurdles, by doubling down on our strength of working together for the common good, the OSS community is well placed to drive innovation into a new era.

// SETTING THE STAGE //

The following report represents a general summary of the discussions in context so that readers may better understand the challenges of the open source ecosystem. As such, it may not necessarily represent the views of individual participants and their organisations, but rather offers a helpful contextualised overview.

Inside the Open Source Congress:

A global forum for collaboration



Since 2023, the Open Source Congress (OSC) has brought together open source software (OSS) leaders from foundations across the globe to shape the future of open source. These foundations are the stewards of the open source ecosystem, providing the critical infrastructure required to maintain and build OSS.

The inaugural 2023 OSC in Geneva, hosted by the Linux Foundation, was a seminal event at a critical moment in time, responding to intensified regulatory scrutiny, geopolitical shifts towards technology nationalism, and the urgency of securing open source infrastructure. The 2024 event, held in Beijing, hosted by the OpenAtom Foundation, tackled the evolving challenges facing the OSS ecosystem, and the growing influence of open source solutions across regions and industries, with a focus on open source artificial intelligence, cybersecurity, decentralised infrastructure, and global collaboration.

Hosted in Brussels, home of the European Parliament, OSC 2025 highlighted shifting policy discussions and the global impact of new standards on the open source ecosystem, most notably those

of the EU. Distinct in its European character, yet global in reach, the event brought together leaders from around the world, underscoring the warm bonds, mutual respect, and spirit of collaboration that continue to define the open source movement.

The 2025 OSC also introduced a new dynamic with the Open Source Stakeholders Day, a one-day conference immediately following OSC, which marked the first time leaders in end user industries and public policy joined the dialogue addressing the most pressing concerns and opportunities for the OSS ecosystem.

OSC 2025 made clear that open source is recognised and respected as a fundamental part of society, underscored by the United Nations' ambition to establish open source programme offices (OSPOs) in all 193 member states. However, OSC also highlighted that all stakeholders are united in similar challenges, no matter their geographic location or government policies — those of geopolitical dynamics affecting international trade and markets, uniting OSS values with regulatory requirements, and securing long-term OSS sustainability.



Open source:

The mission-critical backbone of modern technology

From the early days of the free software movement in the 1980s, led by the GNU Project and Free Software Foundation, the open source movement has taken a quantum leap from the shadows into the spotlight. Today, OSS is found in every business, every government, and every home on the planet, and beyond. Indeed, projects like RISC-V semiconductors and container orchestration system Kubernetes are already proving their value for space exploration.

OSS has come so far that it now forms the foundation of some of the world's most valuable businesses, from Alibaba to AWS. In fact, according to [The State of Commercial Open Source 2025](#), by the Linux Foundation, COSSA, and Serena, Commercial Open Source Software (COSS) organisations are seven times more valuable than non-open source counterparts when they go public. That rises to 14x more valuable if that organisation is part of an acquisition.

Meanwhile, the 2024 Harvard study, [The Value of Open Source Software](#), poses that the supply-side value of widely used OSS is estimated to top \$4.15 billion, while the demand-side value has reached \$8.8 trillion.

With this ubiquity comes immense responsibility. Stakeholders who build, and build on, OSS wield enormous influence — from trade and financial markets, to cybersecurity and education — not to mention a responsibility to sustain the projects underpinning their success. With this in mind, it's important to note that open source's influence is not seen as a panacea by all stakeholders, especially those without technical expertise. For those entering the OSS bazaar for the first time, open source is a black box. Misunderstanding, or lack of understanding, remains a challenge, shaping investigations and sweeping regulations that seek to align OSS with national

policies, often in conflict with the borderless nature and community-driven innovation of the open source movement.

This report seeks to explain the challenges faced by the modern open source movement and to propose solutions that could align the increasing requirements on a mature, global industry, without stifling research, development, and innovation, reducing the socio-economic value and transboundary nature of open source collaboration, or placing undue burden on individual maintainers.

Geopolitics and digital sovereignty

Code local, think global

Key takeaways

- ↳ The OSC underscored that open source communities must adapt to an increasingly complex geopolitical and regulatory environment. However, digital isolationism is not only counterproductive for furthering states' interests in OSS, but also contrary to the ethos and practice of open source. Open source has consistently proven to be the best model to collaborate, within and across borders, and thus the most efficient way of building software platforms and products.
- ↳ Participants stressed that OSS must remain global, collaborative, and resilient, with communities actively shaping governance, educating and consulting decision-makers, and safeguarding against fragmentation or politicisation to the detriment of open source.
- ↳ Participants discussed how there is no cohesive, internationally aligned framework for open source policy and regulation, even as governments around the entire world grapple with similar challenges in navigating questions of security, funding, and governance. While more regulation is not necessarily the answer, international multi-stakeholder cooperation across the open source ecosystem may address some of these issues.

Open source: a global mandate

The [Global Digital Compact](#) is a UN-led 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 in realising the UN Sustainable Development Goals (SDGs). On 22 September 2024, world leaders convened at the UN Headquarters in New York for the Summit of the Future, where they adopted a Pact for the Future that includes a Global Digital Compact.

United Nations Global Digital Compact

Paragraph 17.

We commit by, 2030, to:

- A. Develop, disseminate and maintain, through multi-stakeholder cooperation, safe and secure open-source software, open data, open artificial intelligence models and open standards that benefit society as a whole (SDGs 8, 9 and 10);
- B. Promote the adoption of open standards and interoperability to facilitate the use of digital public goods across different platforms and systems (all SDGs);
- C. Develop and decide on a set of safeguards for inclusive, responsible, safe, secure and user-centred digital public infrastructure that can be implemented in different contexts (SDG 16);
- D. Exchange and make publicly available best practices and use cases of digital public infrastructure to inform Governments, the private sector and other stakeholders, building on existing United Nations and other repositories (SDGs 16 and 17);
- E. Increase investment and funding towards the development of digital public goods and digital public infrastructure, especially in developing countries (SDG 17);
- F. Encourage the formation of partnerships that bring together Governments, the private sector, civil society, technical and academic communities and international and regional organisations to design, launch and support initiatives that leverage digital public goods and digital public infrastructure to advance solutions for the Sustainable Development Goals (SDG 17).

“Open Source has been enshrined in the UN’s Global Digital Compact. All the UN Member States adopted this compact to commit building open source software that is inclusive, transparent, secure, and part of the wider digital public good.”



OMAR MOHSINE

Open Source Coordinator, United Nations
Office of Digital and Emerging Technologies

Digital sovereignty is not isolation

It is hard to imagine any time in history where a movement has united the world in the way that open source has. Neither has any other movement created such a profound impact on economics and global trade — enabling markets in ways that were inconceivable just 20 years ago and giving rise to new business models.

OPEN SOURCE: A GLOBAL BAZAAR
5.2 billion contributions to 518 million open source, public, and private projects

– GitHub’s [Octoverse 2024 report](#)

Today, governments across the globe are realising how their use of technology affects strategic autonomy, resilience, and digital sovereignty. While some see digital sovereignty as increasing resilience through their self-determined use of technologies, and leverage OSS to achieve this end, others view regulation as a way to exercise control over technology providers. However, this approach can also prove a source of unintended consequences for the open source ecosystem — potentially stifling innovation and prosperity, and driving fragmentation.



Digital sovereignty is not isolation

“While the post-World War II multilateral order has ushered in a prolonged period of relative peace, security, and development, we are now witnessing a backlash against many of those principles and institutions in favour of a zero sum approach. Open source software has both driven and benefitted from forces of globalisation, and remains a powerful tool for driving equitable access to digital technology and bridging digital divides.

Invoking digital sovereignty is a way that some states hope to decrease deep dependencies on foreign technology, build resilience, and futureproof their own endeavours, including through open source software. However, sovereignty should not mean isolationism. The UK Compute Roadmap is a great example of how digital sovereignty is not defined as isolation. Meanwhile, Germany’s Sovereign Tech Agency actively funds the maintenance of diverse global projects, regardless of where in the world those contributors are based – recognising that Germany benefits immensely from this collective knowledge.”



JENNIFER TRIDGELL

Independent Consultant
and PhD Candidate in
International Law,
University of Cambridge

The UK’s approach to sovereignty in compute is pragmatic, strategic, and uniquely shaped by our place in the world. As a deeply connected country with long-standing partnerships with the United States, the European Union, and other global allies, we do not define sovereignty as isolation or self-sufficiency.



UK COMPUTE ROADMAP, UNITED KINGDOM

With the Sovereign Tech Fund, we invest globally in the open software components that underpin Germany’s and Europe’s competitiveness and ability to innovate. By targeting core digital infrastructure, our investments scale across many sectors and benefit a broad range of users. Improving the security, stability, and reusability of open software components directly enhances the productivity, competitive edge, and capacity for innovation of startups and small and medium-sized businesses.



SOVEREIGN TECH AGENCY, GERMANY

Restriction versus innovation

Striking a balance among regulations that effectively empower open source innovation is challenging. An example given at the OSC was the 2019 trade restrictions placed on Chinese tech organisation Huawei, which barred Huawei's access to Google's Android operating system and related services. Cut off from Android, Huawei developed its own operating system, HarmonyOS, and donated an open source version, OpenHarmony, to the OpenAtom Foundation. Today, the OpenHarmony community boasts almost 490 community partners, with more than 1300 OpenHarmony-based products from 450 manufacturers available. Digital isolationism has the potential to drive innovation, and the resulting profits, elsewhere.

The trickle-down effect of similar broad restrictions has caused immense issues for open source projects whose maintainers are employed by "closed organisations" but whose contributions form the foundation of national economies. Already, individuals have been barred from contribution because of the entities that they work for. Some OSC participants stressed that it is typically organisations, and not individuals, who are excluded from participation where restrictions are in place, and individuals should still be able to contribute outside of working hours.

Open source projects have also witnessed a concerning rise in patent trolls: individuals or organisations that attempt to enforce patent rights against accused infringers far beyond the patent's actual value or their contribution to the project, if any. These entities are placing undue burden on OSS maintainers to defend their projects against well-funded disruptors who aim to capture innovation for profit.



Open source on the agenda

Faced with these challenges, the open source ecosystem has invested significant time and effort participating in legislative procedures in the EU, such as the Chips Act, AI Act, and Cyber Resilience Act. Beyond compliance, participants expressed interest in creating structures to strengthen certain aspects of the ecosystem. Meanwhile, existing mechanisms, such as the UN Sustainable Development Goals, Global Digital Compact, and EU Sovereign Tech funds, are setting the stage for deeper, sustained collaboration.

OSC participants emphasised the need for open source to be part of the digital agenda, rather than an afterthought, in order to avoid potentially burdensome policies incompatible with the global, collaborative nature of open source. Instead, focus should shift to building and sustaining resilient ecosystems that blend public and private investment, avoid regulatory fragmentation, and promote interoperability through shared standards and digital public goods.

There was also cause for celebration at the OSC, as the culmination of years of careful engagement and education resulted in the Cyber Resilience Act (CRA) explicitly acknowledging the role of the open source community — designating “open source stewards” as economic actors and making OSS consultation mandatory.

The OSC equally made clear that it is imperative that open source stewards and end users of open source technology recognise that OSS is not above the law. Despite being a global movement, OSS must obey local laws and regulations.

OSC also revealed that, from ongoing open source stakeholder engagement with policymakers, a knowledge chasm is growing. OSS is a steep learning curve, demanding not just a basic level of technical fluency, but a fundamental shift in working culture — moving from projects being built by one in-house team, to global asynchronous collaboration with multiple stakeholders. Here, education and awareness were identified as critical enablers of OSS, ensuring policymakers understand open source supply chains and culture, so they are best placed to create open source strategies around national priorities. Further, it was posited that open source should be recognised as central to digital sovereignty, not only in policy and regulation, but also in procurement, funding, and education — ensuring global governments see OSS as a public good that supports transparency, accountability, and resilience.

“Open source helps us move the needle from ‘the need to negotiate access to proprietary IP’ to ‘the requirements to develop the skills to run, study, and improve OSS components’. Actively involving and training citizens earns you digital sovereignty.”



GAËL BLONDELLE
Chief Membership Officer,
Eclipse Foundation

Future steps

Deeper collaboration

To ensure the ongoing success of the open source movement, the OSC emphasised the need for deeper international collaboration, stronger governance, and proactive community building.

Partnerships between foundations, governments, and industry could move beyond talk and into concrete actions, such as developing usable platforms for global contributors, supporting multilingual ways to share knowledge, and fostering developer ecosystems in emerging markets.

Organisations could equally strive to leverage their member networks to influence policy discussions in seeking to safeguard open source, ensure compliance with international and domestic law, and improve communication within large companies to align on OSS strategy.

Building trust

Building trust through transparency and usability for different regions is essential, as is reinforcing the principles of neutrality, openness, and sharing while supporting mobility of talent and knowledge across borders.

At the same time, sustained educational outreach to policymakers is required to bridge technical knowledge gaps. Open source stewards should consider developing a consistent narrative of digital sovereignty framed around resilience rather than control, to form a collective defense against risks like patent trolls, sanctions, and regulatory overreach to ensure ongoing innovation.



Policy engagement:

Open source takes a seat at the table



Key takeaways

- ↳ The OSC highlighted that open source stewards, maintainers, and policymakers show clear willingness to engage, but face considerable challenges due to vastly different ways of working.
- ↳ Structured, coordinated OSS advocacy could help to bridge the cultural gap with policymakers, sustain constructive relationships, and ensure regulation strengthens rather than weakens open collaboration.

The rise of open source into ubiquity is taking place concurrently to a fundamental change in the legal environment for software. Whereas in the 1980s and 1990s, the ecosystem's legal context was defined by its own texts in the form of definitions, licences, and per-project policies, today policy is the new licensing.

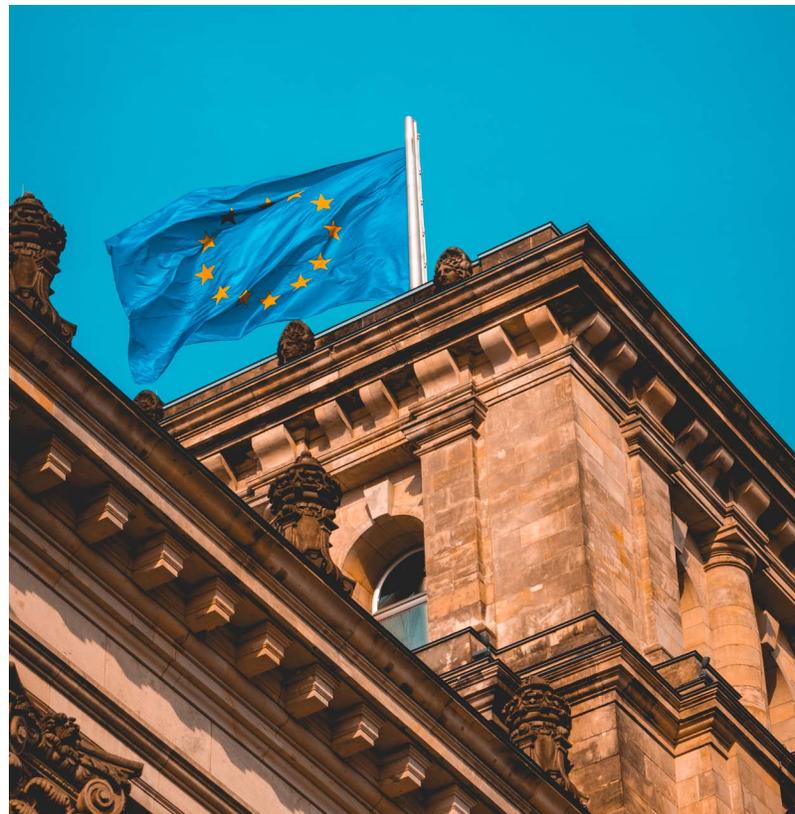
Software is becoming increasingly regulated, and the bulk of the work by stakeholders interested in the legal framework of OSS is now focused on legislation and public policy, instead of licensing. This policy work includes both participating in legislative procedures and developing internal and shared procedures to manage the burden of regulation.

While public policy was previously dealt with by occasional bursts of attention from developers, legal experts, and managers, the OSC highlighted that the current volume requires dedicated policy specialists to interface with policymakers.

With influential policymakers in attendance on day two, the OSC presented a unique opportunity to align the political and open source worlds, deepening understanding of procedures, engagement strategies, and how to best influence outcomes that support long-term OSS sustainability.

A community mobilised, but overwhelmed

Still fresh from the table in Brussels, the CRA understandably dominated discussion at the OSC. While many stakeholders agreed that opportunities had been missed, and significant communication and engagement improvements are needed, it was clear that the CRA has mobilised the OSS ecosystem. As we enter a new era of regulation, stewards are expected to step up, influencing the form regulation takes, defining stakeholder roles in the process, exploring alignment between the interests of OSS and policymakers, and ensuring that obligations fundamentally correspond with how OSS is built and maintained.



On a practical level, this presents a monumental challenge. Foundations have often performed administrative and compliance work for the projects they steward, but appreciation for this work has been variable, and sometimes negative. If the greatly increased volume of compliance work is to be assisted by the foundations, support will be needed. Further, certain elements of policy work, such as drafting should not be done collectively, which is an antithesis to the way OSS has mobilised and worked for decades.

Open source stewards, particularly those actively engaged in policy work, are currently consulting on:

- Implementation of the CRA, Digital Markets Act (DMA), Product Liability Directive (PLD), and AI Act.
- Creation of standardised procedures, for EU approval, for compliance with the CRA and AI Act.
- Providing input for upcoming proposals on a Cloud & AI Development Act, the EU long-term budget (MFF), the new Public Procurement Directives, and a position of the European Parliament on “technological sovereignty”.
- Reviewing the EU’s product terminology & clarifications (NLF), the regulation for how the EU produces standards (Regulation (EU) No 1025/2012), the Cybersecurity Act, and the Chips Act (which will decide whether the EU supports open hardware).

Beyond this work, the OSS ecosystem is also building internal compliance procedures for these regulations, as well as monitoring topics that are being discussed in the halls of Brussels but are not currently part of an official procedure, and organising and participating in events to ensure OSS voices are heard.

Despite active engagement, many open source stewards also reported feeling “locked out” of standards organisations that are setting binding standards without meaningful consultation from OSS.

Finding common ground

On the other hand, policymakers reported that engagement with the OSS ecosystem has been uneven, with OSS voices often coming across as alarmist. While this can mobilise OSS communities, it does not always resonate with policymakers, who underscored the need for structured, timely, and detailed input.

Policymakers also likened open source to a “black box”. Despite seeking to understand the open source ecosystem, without technical knowledge, policymakers may face immense challenges in comprehending OSS. For example, when OSS communities disagree on an approach for policy implementation or feedback, policymakers are not necessarily in a position to understand the weight of potential solutions. Silos across foundations and projects make it harder still to present a unified message to governments. The sheer technicalities of OSS render it less accessible.

Compounding these engagement issues is the cultural gap between governments and the nebulous OSS ecosystem — governments work slowly and methodically, driven by standard processes and hierarchy, where OSS works quickly and iteratively across a flat culture, dynamic and de-formalised, where no single person or organisation can claim to speak for the entire community. The OSC underscored that bridging this gap will require more than educating policymakers about technology; it calls for dedicated communication strategies, expertise, and specialised policy staff.

Indeed, as the OSS ecosystem continues to evolve, it’s clear that specialisations are required to effectively manage the next era. Policy engagement is a distinct, emerging sector within the ecosystem, focusing solely on engagement at the policy level, managed by experienced practitioners.



Despite mounting challenges, the OSC made clear that policymakers are eager to engage. Already, article 34 of the CRA — the mutual recognition agreements — aims to reduce regulatory fragmentation, by setting out a framework for technical development and an approach on conformity assessment through which the European Union can promote and facilitate international trade.

While the current status quo can easily be perceived as gloomy, the European Union is by far in a stronger, more organised situation than other regions. This in itself presents a truly open source opportunity: documenting what went right and sharing good practices with other state stakeholders so they, too, can mobilise to solve modern policy issues.

“We also need to avoid letting perfect be the enemy of good. Even if you cannot achieve perfect alignment among all open source stakeholders, it is still valuable to communicate with policymakers to keep things moving forward. We need to keep these channels of conversation open to exchange our arguments and advance for the benefit of everyone.”



FELIX REDA

Director of Developer Policy, GitHub

Learning from fellow global communities

Successful lobbying by the open access and open science communities significantly transformed the landscape of public access to federally funded research in the United States.

Prior to 2013, many US scientific publications and corresponding data were hidden behind paywalls — a significant impediment to research and innovation. The [2013 Holdren](#)

[memo: Increasing Access to the Results of Federally Funded Scientific Research](#), issued by the White House Office of Science and Technology Policy (OSTP) laid the groundwork for expanding public access.

This was followed in 2022 by the [Nelson memo: Ensuring Free, Immediate, and Equitable Access to Federally Funded Research](#), which introduced more comprehensive requirements, including applying to all federal agencies, and ensuring all publications and supporting data from federally funded research be made publicly accessible without any embargo period.

“It took years of community building and leveraging clear voices at strategic times in the face of intense advocacy from the for-profit publishing industry to achieve this openness. Like the open source ecosystem, open science and open access communities are also decentralised and often siloed, but they were able to harness a unified voice, carefully tailoring messages to different policymaker audiences. The open source community could well benefit from a similar strategy of engagement.

Open source foundation members can also be an excellent source of policy support. By embedding open source messaging in their broader remits for government engagement and relations, powerful members can ensure that open source is always on the agenda at the highest levels of government.”



KATIE STEEN-JAMES

Senior US Policy Manager, Open Source Initiative

Future steps

Adapting to a new engagement paradigm

The OSC highlighted that the OSS ecosystem should move from monitoring to acting — pooling expertise while respecting capacity, so OSS voices can shape and inform regulation. Suggested solutions included forming subgroups to track specific issues, creating shared analysis that can be repurposed across communities, and developing a collective policy plan for the year ahead. Building alliances with industry, borrowing models from other open knowledge movements, and focusing on communication and prioritisation could prove useful.

Meeting policymakers where they're at

The EU has shown great willingness to listen and engage, but effective influence requires presence in Brussels, coordination across foundations, and clear messaging tailored to the political audience. Open source stewards and foundations will have a fundamental role to play in raising awareness, translating between legal language and engineering realities, and ensuring developers feel reassured rather than burdened. While not ideal, there is no other option but to join the table in Brussels, and dedicated policy specialists will prove key to progress.

Learning from lobbyists

OSS can potentially learn from lobbying practices in the US and EU to better align and present its value to governments. Legislators often do not fully understand OSS, so a great part of the work to be done is educational.



Project sustainability

Building the new models needed for a new age

Key takeaways

- ↳ Participants discussed how OSS sustainability goes far beyond money — true sustainability ensures long-term maintenance, healthy communities, and a pipeline of new contributors.
- ↳ While industry and governments increasingly depend on OSS, according to participants, funding models are outdated, with many maintainers still working unpaid in their free time, fuelling a widening gap between widespread use and insufficient investment.

Open source has long been perceived as a free-of-cost exercise that drew people together to work on projects that transcend borders and politics. However, creating and maintaining open source projects and infrastructure is far from a no-cost endeavour, especially as adopters call for industry-grade solutions. Meanwhile, the illusion of “free and infinite” infrastructure is encouraging increasingly wasteful usage of open source AI and LLM tools. The immense success and ubiquity of OSS has not yet translated into stable and reliable funding that ensures the ongoing stability of open source projects essential to society.

“We have to acknowledge the fact that open source is no longer just a hobbyist movement – it’s the backbone of our digital lives. Digital public goods and digital public infrastructure are getting stronger by the day, and open source plays a critical role. Everything from the internet’s infrastructure, your government services, and critical industries depend on open source solutions. We need to pay more attention to who is maintaining this and give them credit where it’s due, and perhaps incentivise that as well. The culture and concept of maintaining these solutions really needs to be strengthened and I think that has to be a joint effort through stakeholders, including the open source community, governments, and multilateral organisations. Everybody has to come together to reward maintaining solutions as much as we reward innovation.”

**AMREEN TANEJA**

Standards Lead, Digital Public Goods Alliance



Sustainable funding

It's no secret that in 2025, open source foundations are tackling slower growth in memberships and sponsorships, i.e., their main source of financial support. This has only been compounded by industry shareholder and market pressures, which saw [more than 150,000 tech job cuts](#) across 549 companies in 2024, according to independent layoffs tracker [Layoffs.fyi](#). At the time of publication, more than 175,000 employees had been swept up in reductions across the tech industry in 2025 — individuals who may well have been actively contributing to OSS as part of their roles.

Existing funding models are clearly not supporting long-term sustainability. In fact, some initiatives, like bug bounties, can even negatively impact communities by keeping bad systems afloat. Developers certainly can't live off the winnings from bug bounties alone. Indeed, if a project is reliant on a single, unfunded maintainer, donating small change for reporting bugs is tantamount to a bandaid on a broken bone — delaying the creation of impactful, meaningful solutions that would sustain that project. Sustainability should instead rely on long-term mechanisms that raise open source visibility to key stakeholders.

At the OSC, open source stewards stressed that OSS is not an endless, free resource. Indeed, as compliance requirements grow in line with adoption, there is growing recognition from policymakers and industry stakeholders that OSS foundations should not bear the entire burden for free. This emerging dynamic holds huge potential and could create space for intermediary markets, new business models, and clearer responsibilities for sustainability.

Conversely, growing compliance requirements may soon see policymakers among the greatest champions of open source sustainability. Regulations like the CRA have the potential to become a key source of support — clarifying that end users (manufacturers), and not maintainers of open source projects, hold responsibility for security. However, OSC participants stressed, at this early stage, it's clear that another opportunity has been missed: linking the CRA to sustainable funding mechanisms, such as levies or tax incentives. As discussed in the policy engagement section, these loops can be closed by OSS communities actively shaping how compliance is implemented, but this too requires financial funding for engagement specialists.



The recognition of open source's value within industry and at the government level is a clear indication that the needle on funding is beginning to move. Meanwhile, initiatives like the Eurostack, NCI Zero Commons Fund, and Germany's Sovereign Tech Agency — focussed on improving and maintaining foundational digital technologies that enable the creation of software — are already shoring up open source infrastructure and projects for long-term success.

“While there's great political attention paid to open source in terms of sovereignty, only a few people are actively thinking about sustainability. There are initiatives aimed at bringing a structured approach to sustainability, but they come with challenges. For example, Eurostack is highly visible, easy to understand, and backed by strong communications campaigns, but it doesn't provide a clear path for implementation.

Research projects funded under Horizon Europe produce technically excellent and appealing projects, but many fail to gain critical momentum after the funding period has ended. One reason is that too little attention is paid during the project to strategic positioning within the wider technology ecosystem, taking into account commercial alternatives. Another is underinvestment in communications strategies — building communities who provide not just contributions, but active feedback on the direction of the project, increasing visibility and, in turn, increasing adoption.”



ROLF RIEMENSCHNEIDER

Head of Sector, Internet of Things,
DG CNECT, European Commission

“Often, policymakers think that open source is struggling when they hear the ecosystem is looking for public funding. While it’s true that OSS should receive public funding in recognition of the digital public infrastructure that it is – that society and governments rely on – the open source landscape is very diverse, and it’s not true that OSS is struggling.

What we need is a level playing field for open source companies to benefit more from the business opportunities that are there. We need to build awareness in the private sector in particular, where open source uptake is not so high, to highlight that businesses would very much profit from investing into open source technology that gives them independence from proprietary vendors.

One way of building more trust in the private sector is for public authorities, governments, and administrations to buy more open source. About 60% of investments into the IT sector come from public procurement. So the open source ecosystem doesn’t need more public funding in the form of handouts, instead it would benefit from government contracts. If that money – already earmarked for investment into IT products – goes into open source, everybody wins: we build an open source ecosystem that can sustain itself, that’s more attractive to the private sector, and that helps public authorities, governments, and administrations fulfil their digital sovereignty goals.”

**SEBASTIAN RAIBLE**

Director EU Government Affairs, APELL



Attracting a new generation

The open source ecosystem requires a flow of consistent new talent, not just to expand and drive innovation, but to maintain the mission critical infrastructure of society. As early pioneers and long-term maintainers of the modern open source community look to (at least somewhat) retire, a critical gap is widening. The open source ecosystem does not have replacement talent where it is most needed.

OSC participants attributed this to the sheer complexity of mature projects, which makes it difficult for less experienced engineers to actively get involved. Indeed, newer maintainers are more attracted to less mature projects, which can be clearly seen in the Rust community, which skews to around 30-40 years old. It is also partly attributed to the physical and financial strain carried by project maintainers, many of whom contribute in their own time, for no financial compensation, alongside stressful, full-time engineering roles at major corporations. It's no wonder engineer burnout is rife. According to the LeadDev Engineering Leadership Report 2025, 22% of engineers face critical levels of burnout, while 24% feel moderately burned out.

Open source stewards and stakeholders alike identified attracting and supporting the next generation of maintainers as a critical theme. While ongoing mentorship, education, and programs like Google Summer of Code and Outreachy are proving vital to educating new maintainers, each requires sustained funding. Moving forward into a sustainable future requires policymakers and industry stakeholders to make systematic changes to funding at all levels, but equally requires the ongoing support and mentorship from open source stewards and the wider community.



Future steps

Reinvestment is key

Visibility and improved communication about OSS's impact could help mobilise policymaker support. However, it is clear that governments and corporations that rely on OSS must actively reinvest in its maintenance.

OSS ecosystem should join forces

The OSC showed that collaboration across foundations, academia, industry, and governments is essential to build resilience, share expertise, and ensure that critical OSS infrastructure is maintained. Indeed, open source stewards could explore collaborative resource-sharing among foundations, to maximise the impact of critical engagement with policymakers. Ultimately, long-term sustainability requires all stakeholders to create and uphold a system where both innovation and maintenance are valued, supported, and integrated into long-term strategies at every level.

Leverage policy to support sustainability

Regulations such as the CRA could become catalysts for ongoing OSS sustainability by incentivising manufacturers to contribute downstream. But to seize this opportunity, OSS stakeholders would need to find ways to standardise their own engagement, develop a joint narrative, and collaborate with governments to align regulations with the realities of open collaboration. Done well, regulation could strengthen both security and sustainability, but it requires all sides to be proactive, organised, and visible in shaping the process.



Securing the future of open source

A shared responsibility

Key takeaways

↳ The CRA negotiations proved that OSS is critical to the EU commission and that the OSS ecosystem has a clear role to influence and shape the policies of the modern world. However, the future implications are still uncertain. A question remained open: do all stakeholders understand its parameters, such as the fact that the CRA places the security burden on manufacturers, rather than individual projects and developers?

↳ The OSC discussed how the ecosystem can try to balance pragmatic compliance with preserving openness, and anchor security in shared principles like transparency and privacy. Further, how stewards can transform reactive responses into proactive engagement, ensuring that security strengthens rather than stifles innovation.

The recent *Open Letter from the Stewards of Public Open Source Infrastructure* laid bare the security challenges facing OSS stewards:

“Not long ago, maintaining an open source project meant uploading a tarball from your local machine to a website. Today, expectations are very different: [...] Security tooling expects an immediate response from public registries.”

Given the ubiquity of OSS, the chasm between open source consumption and open source contribution, and the engagement gap between policymakers and open source stewards, the question of open source security is profound.



Secure at the core

The success of OSS has become a double-edged sword. Open source undeniably moves under incredible momentum, but end users have long pursued this innovation and growth (and the corresponding financial rewards) over security and compliance. As adoption continues to rise alongside compliance and regulations, maintainers cannot keep pace with the security needs of industry.

Sustainable funding, stronger governance, and unified advocacy are critical to protecting the future of open source. Initiatives like Alpha-Omega are working to normalise investment in OSS security, funding areas such as package managers, audits, and infrastructure, but scaling these efforts requires more consistent organisational commitment.

With small teams and individual maintainers shouldering global dependencies, it's time end user organisations audit their supply chains, support upstream communities, and help secure funding and staffing for critical work.

Alpha-Omega: Normalising investment in OSS security

Alpha-Omega is a first-of-its-kind project which aims to protect society by catalysing sustainable security improvements to the most critical open source software projects and ecosystems.

It has evolved a four point approach to open source spending, which could be applied to other specialist areas within the open source ecosystem.

- 1. Staffing** – by making security a dedicated job, valuable work is delivered quickly, to the highest standards.
- 2. Creating a point of leverage** – making security a default to prevent organisations inadvertently adding insecurities to supply chains.
- 3. Auditing** – to incubate a culture of security and prioritise improvement efforts.
- 4. Experimenting** – to see where work and processes can be replicated across the ecosystem.

“Too often, donations to open source projects are treated as charity giving, and very rarely are these donations earmarked for security. Yet dedicated security experts are force multipliers in open source projects. We’ve witnessed that security funding has a powerful trickle-down effect – generating high-quality resources, engineering commitments, and a better prioritisation of work, which drives cultural transformation, not to mention the cyclical effect of attracting more funding. Everybody benefits, both upstream and downstream. This is why it’s essential that we normalise spending on key engineering efforts.”



MICHAEL WINSER
Founder, Alpha Omega

Security without silos

Stronger collaboration among the OSS community, industry, and policymakers to shape how regulations like the CRA are implemented is no longer a nice-to-have, it's critical. After all, the global nature of OSS renders security a global issue. Therefore the OSC highlighted the urgent need to align global practices with standards and regulations, in order to translate security frameworks across jurisdictions.

The EU has shown willingness to engage with open source security experts, but openly admits that it is still learning how OSS operates — underscoring the need for clear, unified input from the community. At the same time, policymaker stakeholders recognise that fragmentation, a sustained lack of funding, and reliance on volunteers leave open source voices underrepresented in critical policy discussions.

However, while foundations, maintainers, and contributors bring critical expertise, their perspectives are too often missing in the EU standardisation processes, which remains inordinately difficult for OSS communities to access. Without this access, decisions will be made without OSS voices, creating friction and potentially harmful compliance burdens.

The OSC revealed that the open source ecosystem cannot afford to act in silos — manufacturers, contributors, and regulators must work together to improve security and ensure that obligations reflect how OSS is actually developed. While creating additional work for an already stretched community, open source stewards must proactively engage in EU-led standardisation efforts (which are likely to shape international policies), ISO processes, and cross-regional harmonisation to ensure OSS perspectives shape outcomes rather than standardisation being imposed upon them.

“We need to shift from the patchwork culture that we have currently in the security landscape and supplement it with a privacy-by-design or security-by-design approach. This could improve production of safer, more trustworthy projects that are easier to scale. It would also place less burden on maintainers, and, more widely, less burden on infrastructure, especially when we consider national deployments where local infrastructure might not be adept enough to handle security requirements without enterprise-level support.”



AMREEN TANEJA

Standards Lead,
Digital Public Goods Alliance

Future steps

A unified voice

The OSS ecosystem could try to unify its voice — building grassroots structures to represent developer concerns, and maintaining open channels with policymakers and stakeholders to ensure support for overburdened upstream communities, and secure funding and staffing for critical security work.

A call to action

Meaningful financial support and collaboration from industry that benefits from open source could secure long-term sustainability of global open infrastructure and projects. More support is needed to ensure a healthy and sustainable future.



Conclusion

Shaping the next 20 years of open source together

The presence of key policymakers and stakeholders at the Open Source Congress illustrated that open source is recognised as fundamental to modern society. Yet with ubiquity comes new challenges and pressures — ones that the OSS community must rise to. Open source is undoubtedly here to stay, but so too are international and domestic laws.

A new era of open source brings with it new demands. Education will be essential. Bridging the knowledge gaps between open source technology, end users, and policymakers will make or break OSS influence on regulations worldwide. The difference between burdensome and prescriptive regulations versus ones that support open source sustainability and promote innovation hangs in the balance.

Specialisations are coming. As the open source ecosystem adapts to a new paradigm, the role of specialists becomes ever more important. Policy staff who can engage with policymakers at every level of the regulation process will prove critical.

Meanwhile security experts and practitioners of international law will play key roles in securing the future sustainability of the ecosystem. The open source community must embrace deeper specialisations, and ultimately acknowledge specialised work as a key enabler of growth, sustainability, and security.

It is by being part of the solution that the OSS community can shape the future with a focus on public good. Fortunately, the values of open source — openness, transparency, and trust, rooted in human-centric policies — sets us up for success. The heavy lifting will be worth it. In an increasingly polarised world, OSS remains a uniting force that translates across all languages and cultures. How open source stewards influence and shapes the future of our industry, and indeed the world, is up to us.

Acknowledgements

The Eclipse Foundation would like to sincerely thank sponsors GitHub and Red Hat, and the participants of the OSC who openly shared such a rich tapestry of experience, insights, and ideas that made the 2025 Open Source Congress a productive and illuminating event.



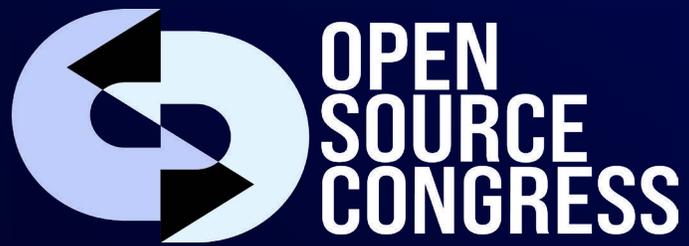
Red Hat



GitHub

The Eclipse Foundation logo, featuring a stylized orange and white 'E' icon to the left of the text 'ECLIPSE' in white and 'FOUNDATION' in orange below it.

ECLIPSE
FOUNDATION



2025 OPEN SOURCE CONGRESS REPORT

Copyright © Eclipse Foundation AISBL and contributors.
Made available under CC-BY-SA 4.0 International