



OpenForum  
Academy



# OpenForum Academy Symposium 2025

**Open Technology Impact in Uncertain Times**

18-19 November 2025  
FGV Law Rio, Rio de Janeiro, Brazil

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## Programme Committee



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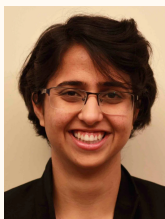
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Research



**Liv Marte Nordhaug**

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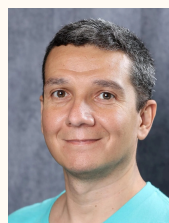
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**Paul Sharratt**  
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at the Sovereign Tech Agency



**Nicolo Zingales**  
Professor at FGV Law School



# Agenda

## Day 1

08:00 – 09:00 **Registration Period and Welcome Coffee**

09:00 – 09:10 **Opening Remarks: OFA Symposium 2025**

09:10 – 09:40 **Keynote #1: Building Digital Sovereignty with Open Source Technologies:**

**Lessons from the Global Majority**

- Luca Belli

### Track: Open Technologies and Geopolitics

09:40 – 10:10 **How Geopolitical Tensions Influence Collaboration in Open Technology Ecosystems:**

**Evidence from RISC-V and the Semiconductor Industry**

- Jan Krewer

10:10 – 10:30 **Securing Code, Fracturing Consensus? Governance of Free and Open-Source**

**Software Cybersecurity in the Age of 'Digital Sovereignty'**

- Jennifer Tridgell

10:30 – 10:50 **The Next Tripartite Governance Systems: Governments, Markets, and Commons**

- Marco Berlinguer

10:50 – 11:10 **Coffee Break**

11:10 – 11:40 **Principles and Practices for Governing Digital Public Infrastructure (DPI) as Commons**

- Ramya Chandrasekhar

11:40 – 12:10 **Curating Power: Open Source Infrastructures in the Service of National and**

**Geopolitical Agendas**

- Cassie Jiun Seo

12:10 – 12:30 **From Brazil to the World: Open Digital Infrastructure for Climate Cooperation**

- Raphael Pouyé

12:30 – 13:00 **Q&A Panel: Open Technologies and Geopolitics**

- Nicholas Gates

13:00 – 14:00 **Lunch**

## Track: Open Source and AI

- 14:00 – 14:30 **Fireside Chat: Interoperability as a Remedy**  
- Marcela Mattiuzzo
- 14:30 – 14:50 **A process for Open Definition v3**  
- Renata Avila
- 14:50 – 15:20 **Governing Algorithmic Justice: Open-Source AI and Legal Integrity in Latin American Courts**  
- Ettore Maria Lombardi
- 15:20 – 15:50 **Post-DeepSeek AI Governance Debates: Open vs. Closed, Large vs. Tiny, Bytes vs. Watts, Horizontal vs. Vertical, Innovative vs. Safe?**  
- Wayne Wei Wang
- 15:50 – 16:10 **Coffee Break**
- 16:10 – 16:40 **Legal Regulation of Open Artifacts: The Data–Software–AI Model Convergence**  
- Marco Germanò
- 16:40 – 17:10 **A Cartography of Collaboration in Open Source AI: Mapping Collaboration in the Development and Reuse Lifecycle of 12 Open Large Language Models**  
- Cailean Osborne,
- 17:10 – 17:40 **Towards Best Practices for Open Datasets for LLM Training**  
- Kasia Odrozek
- 17:40 – 18:10 **Q&A Panel: Open Source and AI**  
- Nicolo Zingales, Renata Avila, Ettore Maria Lombardi, Marco Germanò, Cailean Osborne, Wayne Wei Wang and Kasia Odrozek

## Day 2

08:00 – 09:00 **Registration Period and Welcome Coffee**

09:00 – 09:30 **Keynote #2: Openness at a Crossroads: Digital Infrastructures, AI, and the Quest for Democratic Governance**

- Fernanda Campagnucci

### Track: Economic Impact of Open

09:30 – 09:50 **The Value and Values of Openness: Open Source, AI Openness, and the Future of Digital Public Goods**

- Jennifer Barth

09:50 – 10:10 **The Value of Openness: Measuring the Total Benefit of Digital Public Goods**

- Gordon LaForge

10:10 – 10:30 **Bridging the Digital Divide: The Role of Free and Open Source Software in Strengthening Community ISPs**

- Nathalia Foditsch

10:30 – 10:50 **Mapping the Open Source Ecosystem for Climate Science and Sustainable Technology**

- Richard Littauer,

10:50–11:20 **Coffee Break**

11:20 – 11:40 **ThingData: Unlocking Economic Value in the Material Commons through Open Data as a Digital Public Good for SDGs**

- Felipe Schmidt Fonseca

11:40 – 12:00 **Standardizing Open Source Impact Metrics: A Framework for Academic Technology Transfer Offices**

- Andrew Wichmann

12:00 – 12:30 **Q&A Panel: Economic Impact of Open**

- Astor Nummelin Carlberg, Jennifer Barth, Gordon LaForge, Nathalia Foditsch, Richard Littauer  
Felipe Schmidt Fonseca and Andrew Wichmann

12:30 – 13:30 **Lunch**

### Track: Sustainability and Security

13:30 – 13:50 **One year later: Building the Open Source Endowment**

- Jonathan Starr

13:50 – 14:20 **Funding Europe's Open Digital Infrastructure A Study on the Economic, Legal, and**



**Political Feasibility of an EU Sovereign Tech Fund (EU-STF)**

- Nicholas Gates

14:20 – 14:40 **From Containers to Code: Applying Post-9/11 Trade Security Lessons to the Software Supply Chain**

- Stephanie Lieggi

14:40 – 15:10 **Networking Break**

15:10 – 15:30 **Can a Badge Save a Project? Rethinking Sustainability through Community Metrics**

- Ijeoma Onwuka

15:30 – 16:00 **Public sector open source software projects – How is development organized?**

- Johan Linåker

16:00 – 16:20 **An OSS-ential Understanding of Potential and Early Career OSS Contributors**

- Hana Frluckaj

16:20 – 16:50 **Q&A Panel: Sustainability and Security**

- Nicholas Gates, Jonathan Starr, Stephanie Lieggi, Ijeoma Onwuka, Jennifer Tridgell, Johan

Linåker and Hana Frluckaj

16:50 – 17:20 **Closing Plenary: OFA Symposium 2025**

- Nicholas Gates

# Papers and Talks

Jan Krewer

## How Geopolitical Tensions Influence Collaboration in Open Technology Ecosystems: Evidence from RISC-V and the Semiconductor Industry

● Paper

**Author(s):** Jan Krewer

### Abstract

This article examines how geopolitical tensions have shaped the emergence and stabilization of RISC-V, an open and royalty-free Instruction Set Architecture (ISA) that has rapidly expanded in the global semiconductor industry. Rather than treating geopolitics as an external constraint acting upon standardization, the study analyzes how geopolitical rivalry has actively contributed to RISC-V's development. The analysis combines Science and Technology Studies approaches with Ostrom's framework for commons-based governance to trace both the strategies of alignment of heterogeneous actors and the institutional arrangements devised to maintain cooperation. Drawing on document analysis, historical membership data, and interviews with key contributors, the study shows how RISC-V became articulated to divergent political projects: frontier innovation in the United States; technological autonomy in China; and digital sovereignty agendas in Europe. These agendas, while often contradictory, converged around RISC-V's value as an open foundation for processor design. At the same time, this convergence generated risks of fragmentation along political, economic, and technical lines. The RISC-V Foundation (now RISC-V International) responded by relocating to Switzerland to ensure geopolitical neutrality, progressively formalising rules of participation, restructuring membership and voting rights, and establishing transparent procedures for technical collaboration. These governance reforms produced better representation, reflected in the diversification of membership and board composition across the United States, China, and Europe between 2015 and 2025. The case of RISC-V demonstrates how open technological ecosystems can operate as stabilizing infrastructures under geopolitical tension, while also remaining vulnerable to capture and strategic instrumentalization.

### Presenter bio

Jan Krewer is a doctoral student at the Centre of Economics of the Sorbonne Paris North University. Jan's research is financed by the National Association for Research in Technology (ANRT) under an Industrial Agreement for Research Training with the French development agency – the "Agence française de Développement" (AFD) Group. His work contributes to AFD's multidisciplinary research department on commons and sustainable development. Jan holds a master's degree in international public management from Sciences Po Paris, where he studied political sciences. He previously served as an analyst and Deputy Secretary-General of the French Digital Council, contributing to the initial development of the Law for a Digital Republic. Jan lived in Senegal and Rwanda, where he joined the

Smart Africa Alliance as a strategic advisor to work on pan-African data governance and the federation of digital identities. Most recently, he worked as a Senior Policy Analyst at Open Future, helping to develop a European strategic agenda for digital commons as part of the Next Generation Internet (NGI) Commons project. Jan Krewer's research focuses on forms of collective ownership of technologies and their potential for the development of societies.

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**Jennifer Tridgell**

## Securing Code, Fracturing Consensus? Governance of Free and Open-Source Software Cybersecurity in the Age of 'Digital Sovereignty'

● Paper

**Author(s):** Jennifer Tridgell

### Abstract

Today, a timely and critical debate is emerging on governments' role in governing free and open-source software (FOSS) cybersecurity. Often, they have centred FOSS as a tool for 'digital sovereignty,' driving competition, innovation and interoperability. Budgets, policies and regulations are shifting, whether mainstreaming FOSS or institutional experimentation. China has embedded FOSS within its Five-Year Plan. The EU's Cyber Resilience Act introduces the novel category of 'FOSS stewards.' Highlighting the successes of Germany's Sovereign Tech Agency, advocates seek an EU-wide fund for FOSS maintenance.

Encouraging an evidence-based approach for policy development and digital diplomacy, this ongoing research undertakes a 'big picture' comparative analysis of FOSS cybersecurity policy and regulation from the EU, China, and the USA. The paper charts motivating principles and rhetoric behind their embrace (or lack thereof) of FOSS cybersecurity, encompassing their respective approaches as rights and consumer protection-driven, state-controlled, and market-based. It also compares key structures, features, and tools of those major powers' cybersecurity policies and regulations involving FOSS, to evaluate compatibility.

### Presenter bio

Jennifer is an independent legal consultant and PhD Candidate (International Law x Computer Science) at the University of Cambridge as a World Ramsay Scholar. She researches global governance of open-source software. An experienced Australian public international lawyer, she has advised on a broad range of matters at the intersection of technology, human rights and policy, including for public and private sectors. She has worked as Senior Legal Advisor to the UN Special Rapporteur on Freedom of Religion or Belief, for leading international law firms and served on the International Law Association's Global Board. Jennifer holds a LLM and BA/LLB (Hons.).

**Marco Berlinguer**

## The Next Tripartite Governance Systems: Governments, Markets, and Commons

 **Paper****Author(s):** Marco Berlinguer

### Abstract

This ongoing research explores the emerging approaches to the tripartite governance of open technology initiatives, which are the result of more structural and strategic forms of state involvement, driven by the growing infrastructural centrality of FOSS, the maturity and widespread adoption of this model of technological innovation, coupled with the broader crisis of neoliberalism and the resurgence of state activism in response to intensifying geopolitical and economic competition. This strategic involvement of governments signals a new stage of development for open technology initiatives and a transition toward novel governance configurations. The paper provides a significant sample of the ongoing projects and initiatives in which these forms of tripartite governance of ODI are taking their first steps and a structured, case-based taxonomy of the characteristics, tensions, and innovations that are emerging in these hybrid governance arrangements.

### Presenter bio

Marco Berlinguer is a senior researcher at CISL and principal investigator. Ph.D. from the Autonomous University of Barcelona. Expert in FOSS and Digital commons. CSIL's other participants in the research team are: Prof. Massimo Florio, D.sa Silvia Vignetti and D.sa. Martina Gazzo.

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**Ramya Chandrasekhar**

## Principles and practices for governing DPI as a commons

 **Paper****Author(s):** Ramya Chandrasekhar, Melanie Dulong de Rosnay, Renata Avila, and Andrew Rens

### Abstract

Digital Public Infrastructures (DPIs) are becoming essential to the delivery of public goods and economic prosperity. How DPIs are governed will determine whether that prosperity is shared or captured by a few. At present, the integration of open technologies into DPIs, such as open source software, open data and open AI models, is gaining traction. Non-discriminatory access is crucial in ensuring wide downstream economic benefits from DPIs. But in addition to openness of resources, we



argue for commons-based governance. A narrow focus on open licensing or open APIs does not, by itself, ensure democratic DPIs.

We first articulate three meta benefits of commons-based governance of DPIs - decentralisation of expertise and decision-making and the role of the state, sustainability of both resources and communities, and global cooperation. In order to support our claims, we provide case-studies of commons-based DPIs from France, India, South Africa and Brazil.

In addition, we articulate 10 normative principles for commons-based governance of DPIs, with a focus on minimising value extraction and improving sustainability, which can guide policymakers, funders and builders of DPIs. We argue that these 10 governance principles ensure collaboration between government or public entities and improving relations between public actors and the communities that DPIs serve. Effective commons governance also upholds the human rights of participants (including digital rights and online decision), requiring that digital public infrastructure is open to enable population-wide entrepreneurship, not only democratising access to public services, but catalysing active economic and social participation.

## Presenter bio

Ramya Chandrasekhar is a legal Researcher at the Centre for Internet and Society, CNRS, working on legal strategies for open data and data commons.

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**Cassie Jiun Seo**

## Curating Power: Open Source Infrastructures in the Service of National and Geopolitical Agendas

● Paper

**Author(s):** Cassie Jiun Seo, Signe Kossmann and Timothy Charlton

## Abstract

This paper examines the rise of open national digital infrastructures (DI) or “sovereign technology stacks” as instruments of geopolitical and security strategy. Across regions, states increasingly assemble layered “stacks” that integrate technology, governance, finance, and policy to project influence and advance national agendas.

Here, we introduce the concept of stack curation, defined as the intentional selection, configuration, and export of open-source components to serve geopolitical and security objectives. Even when built from ostensibly open technologies, curated stacks embed national priorities and reproduce power through infrastructural interdependencies.

Drawing on two comparative cases, China's Gitee platform and the U.S. Government's PEPFAR program

and its DHIS2-based health information systems, the paper proposes a typology of curatorial mechanisms (selection, canonization, gatekeeping, dependence, domestication) and examines their implications for global digital governance and the evolving politics of “openness” as an instrument of sovereignty.

## Presenter bio

Cassie Jiun Seo is a public-interest technology specialist focused on the sustainable use of technology in humanitarian, development, and migration nexus. She consults the World Health Organization on free and open-source solutions for epidemic preparedness, personal health records, and global interoperability of health credentials. Previously, she led the digital unit at the Norwegian Refugee Council, supporting large-scale humanitarian and emergency operations. She is an affiliate at the Minderoo Centre for Technology and Democracy at Cambridge University, where she researches technology practices in humanitarian contexts.

## Raphael Pouyé

# From Brazil to the World: Open Digital Infrastructure for Climate Cooperation

● Paper

**Author(s):** Raphael Pouyé and Camila Nadalini de Godoy

## Abstract

Just as India has helped shape the global conversation around DPI for financial inclusion, and Europe is advancing debates on technological sovereignty through initiatives like EuroStack, Brazil is well placed to lead the emerging agenda on DPI for climate, particularly through its space-earth observation capacities. From platforms like the Cadastro Ambiental Rural (CAR), INPE's DETER deforestation alerts, and MapBiomass's collaborative open-data initiative, Brazil's digital public goods showcase how sovereign, transparent infrastructures can support environmental action at scale.

This ongoing research examines the growing geopolitical potential of open source and digital public infrastructure (DPI) in advancing climate resilience and environmental governance. The paper highlights significant potential for international partnerships, especially between Brazil and the European Union. Synergies with the EU's Copernicus programme (Europe's flagship earth observation initiative) offer a concrete pathway to align open digital cooperation with climate monitoring, biodiversity protection, and green transition goals. In parallel, Brazil's leadership could underpin broader alliances with democratic partners such as India, South Africa, and others committed to a multipolar, open, and climate-oriented digital future. In the lead-up to COP30, this moment offers an opening to reimagine climate leadership through shared digital infrastructures.

## Presenter bio

Raphaël is a political analyst and public innovation expert with 20+ years of experience across more than 20 countries. He leads ECDPM's work on Brazil's digital public infrastructure and has co-authored recent reports on tech sovereignty and open-source governance. He is also currently working on a broad mapping of national and regional DPIs in the East Africa Community. A fluent Portuguese speaker and 2024 graduate of the AI4GOV Master's in Artificial Intelligence for Public Services, he also lectures at Sciences Po Paris on "Open Government and Democratic Innovations in the Age of AI." Raphaël was France's national lead with Democratic Society for climate policy design under the NetZeroCities action framework. He is also the co-founder of Plurall.cc (Paris-Kigali) a consultancy collective that helps turn policy challenges into opportunities for sustainable, community-driven digital infrastructures. He is a 2025 Fellow at ITS RIO (Institute for Technology and Society).

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## Renata Avila

### A process for Open Definition v3

#### Talk

**Author(s):** Renata Avila

## Abstract

This talk will present a proposal from the Open Knowledge Foundation (OKFN) for a comprehensive update to the Open Definition, originally developed in 2005 to define openness in relation to data and content. In light of profound changes in the technological landscape — including the rise of artificial intelligence, consolidation of cloud power, proliferation of digital public infrastructure efforts, launch of regional and national stack efforts, and the increasing politicisation of technology, OKFN is seeking to relaunch the Open Definition Council and initiate a global, inclusive process to develop Version 3 of the definition. While AI is a major focus, the updated definition will apply more broadly to a range of sociotechnical systems. The goal would be to ensure that openness continues to serve the public interest across domains where power, access, and control are increasingly contested. The effort will involve research, global dialogue, and consensus-building to ensure the new definition is technically sound, socially grounded, and resistant to misuse, thereby combating the pervasive phenomenon of openwashing. The effort aims at restoring clarity and purpose of openness as an effective framework for guiding technology policy and practice across countries and disciplines.

## Presenter bio

Renata Avila is an international human rights and technology lawyer specialising in data governance, open knowledge, and digital justice. As the CEO of the Open Knowledge Foundation (OKFN), she leads global efforts to unlock the power of open data and knowledge commons, enabling individuals and organisations to drive social change through transparent and equitable access to information,

knowledge, data and technical tools. With deep expertise in intellectual property and international trade policies shaping the digital economy, she actively analyses the intersection of intellectual property, data-driven innovation, and fair technology access, advocating for policies that prevent monopolistic control and foster open technologies. A vocal critic of restrictive digital trade agreements, she works to ensure that data sovereignty and emerging technologies contribute to economic justice rather than deepen inequalities.

A former fellow at the Stanford Institute of Human-Centered Artificial Intelligence, she is affiliated with the Center for Internet and Society at CNRS, France. She serves on the boards of Open Future, the Center for the Advancement of Infrastructural Imagination, and Whistleblower Network Germany. She is a member of the Working Group on Data Governance at all levels, established by the United Nations Commission on Science and Technology for Development (CSTD).

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**Ettore Maria Lombardi**

## Governing Algorithmic Justice: Open-Source AI and Legal Integrity in Latin American Courts

● Paper

**Author(s):** Ettore Maria Lombardi

### Abstract

Open technologies are crucial for transparency, resilience, and accountability, particularly in the face of rapid technological advancements and institutional vulnerabilities. This significance intensifies in politically and economically uncertain contexts. Focusing regionally on Latin America, this study emphasizes Brazil's judiciary as a regional leader in integrating artificial intelligence (AI). In Brazil, key AI initiatives, including CNJ Resolution No. 332/2020, mandate transparency, fairness, explainability, and the preservation of human oversight. National platforms such as Sinapses and Codex/DataJud exemplify collaborative and standardized approaches. However, proprietary solutions like the Supreme Federal Court's VICTOR underscore ongoing challenges concerning opacity, limited auditability, and due process.

This paper provides a comparative analysis of other Latin American countries, revealing varying transparency levels and governance frameworks. Argentina's Prometea and AymurAI platforms are open-source, emphasizing rights-based frameworks. In contrast, Colombia's mixed approach with tools like Copilot and ChatGPT reflects varying transparency standards, while Mexico's JullA initiative indicates limited accountability. Identified challenges across these contexts include algorithmic biases, inadequate oversight mechanisms, and regulatory gaps in data protection, particularly within Brazil's General Data Protection Law (LGPD) and Mexico's LFPDPPP. The paper proposes solutions to enhance AI governance: mandating open source development for publicly funded AI projects, implementing independent algorithmic audits, ensuring explainability through comprehensive documentation, and offering AI ethics education specifically tailored for judicial personnel.

## Presenter bio

Ettore Maria is Professor of Private Law at the University of Florence School of Law and founder and managing partner of Studio legale Lombardi (priorly he was of counsel at DLA Piper and than at Hage-Chahine Law Firm). Ettore Maria is an expert in Economic Regulation from CUTS C-CIER (Jaipur, India), a DAAD alumnus (Germany), and a former Visiting Fellow at the Robert Schuman Centre for Advanced Studies, European University Institute (Fiesole, Italy). He served two terms as Member of the Arbitro Bancario Finanziario appointed by the Bank of Italy (Bologna) and currently serves as President of the Supervisory Board on the "231 Model" at Nuovo Pignone Holding S.p.A., part of the Baker Hughes Company.

He has taught and conducted research at prestigious universities in the U.S., the U.K., and Germany. Ettore Maria is an attorney qualified in Italy and New York and actively involved in international legal associations, serving as Event Officer for the Harvard Law School Association of Europe and as a member of the Association Henry Capitant (Paris) and The London Centre for Commercial and Financial Law. His prolific publication record includes six books with esteemed global publishers and over sixty articles in leading international law reviews. His notable works address consumer goods warranties, financial market regulation, digital innovation and intellectual property rights (Copyleft), contractual authority, and financial innovation. His latest publications include "Alternative Acquisition Models and Financial Innovation" (2023) and "Digitalization, Copyright and the Law" (2025), both published by Routledge.

## Wayne Wei Wang

### Post-DeepSeek AI Governance Debates: Open vs. Closed, Large vs. Tiny, Bytes vs. Watts, Horizontal vs. Vertical, Innovative vs. Safe?

● Paper

**Author(s):** Wayne Wei Wang

## Abstract

The release of DeepSeek V3 and its open-source inference model R1 marks a consequential inflection point in the global political economy of artificial intelligence. Achieving near-frontier performance at an order of magnitude lower cost and compute intensity than its U.S. and European counterparts, DeepSeek disrupts prevailing assumptions about the institutional prerequisites and technical economies of advanced model development, provoking challenges and criticisms such as model distillation. DeepSeek is not merely a technical episode — it is a prompt. Its trajectory invites a fundamental reconsideration of how openness, sovereignty, and interoperability operate under conditions of structural inequality, and how cost-efficient, legally navigable AI systems may establish new normative baselines for global technological ordering post DeepSeek.

This paper situates the "DeepSeek moment" within a broader reconfiguration of AI sovereignty, emerging from jurisdictions across the Global Majority — states in Asia, Africa, Latin America, and the



Middle East—whose infrastructural agency and normative priorities remain peripheral within dominant transatlantic AI governance regimes. Employing a structural-institutionalist methodology, the paper analyzes how regulatory arbitrage, compute localization, and algorithmic adaptation converge in AI's developmental arc. The model's reliance on PTX-layer optimization, rather than full architectural overhaul, exemplifies an engineering strategy shaped less by maximalist innovation than by material constraint and jurisdictional heterogeneity. In doing so, it reframes openness not as a liberal universal but as a governance modality responsive to asymmetrical power.

## Presenter bio

Wayne Wei Wang is a Non-Resident Fellow at the FGV Center for Technology and Society (Brazil) and an ACCP Fellow at the African Center for Cyberlaw and Cybercrime Prevention (South Africa). He recently completed a Ph.D. in Law and Technology at the University of Hong Kong. With an interdisciplinary background in Engineering and Law, his research focuses on Intellectual Property, Data Protection, AI Governance, and Science & Technology Studies, with an emphasis on Law, Innovation, Sustainability, and Technology (LIST) in the Global South. His work appears in *Computer Law & Security Review*, *Journal of AI Law & Regulation*, and edited volumes from Oxford and Cambridge. Wayne holds an LLM from WIPO-QUT (Australia) and is an Associate Fellow of the UK Higher Education Academy. Wayne co-drafts the Chinese Model AI Law, deemed as one of the two emerging legislative proposals on AI in China. He received the 2025 PTC Emerging Scholar Award granted by Pacific Telecommunications Council and contributes to the UN IGF's Dynamic Coalition on Data and AI Governance.

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## Marco Germanò

# Legal Regulation of Open Artifacts: The Data–Software–AI Model Convergence

● Paper

**Author(s):** Marco Germanò and Benedict Kingsbury

## Abstract

Over the past few decades, open artifacts have flourished across distinct yet interrelated domains: open-source software, open data, open standards, and, more recently, open models. Each domain has developed within its own cultures and communities, producing divergent governance approaches. Technical and business factors are now melding these areas into partly-fused communities of practice. Open artifacts increasingly coexist within layered digital infrastructures in which each element reinforces and depends on the others: open-source software powers data pipelines; open datasets feed large language models; open models store and generate data while shaping software development practices. Innovations and vulnerabilities propagate across these layers; interventions in one domain ripple through the rest. The paper maps these technical and business drivers to foreground

how regulatory framings and legal requirements are consolidating this convergence, drawing previously separate domains under a shared governance optic. Regulatory pressure arises from both public and private actors. State-led interventions in the North Atlantic and beyond—often motivated by national-security and geopolitical priorities—are extending cybersecurity, liability, and transparency obligations across the open stack. Examples include the EU's Cyber Resilience Act and AI Act, the U.S. National Cybersecurity Strategy, and China's algorithmic regulation. Policy- and private-sector initiatives are likewise reshaping legal architectures for the open ecosystem: the World Bank's licensing framework for open-source software now formalizes software release as a component of broader data-governance strategies, while the Open Source Initiative's Open Source AI Definition seeks to stabilize what "openness" means when applied to models. We argue that these developments are not merely cumulative but indicative of a deeper reconfiguration in how open artifacts are articulated. Communities once grounded in distinct rationales for openness now confront shared practice environments and overlapping compliance demands. Whether to embrace this trajectory or defend differentiation remains an open question; responses so far being piecemeal. We further suggest that this flux calls for a collective and systematic rethinking of how openness is defined and contested, as silo-specific governance mechanisms appear increasingly inadequate for managing cross-domain claims and interdependencies.

## Presenter bio

Marco is a doctoral student at the University of Toronto and a Research Assistant with the Guarini Global Law & Tech team at NYU. He holds master's degrees from NYU (USA), Peking University (China), and the University of São Paulo (Brazil). Before joining UofT, Marco worked with various universities and policy think tanks internationally. His research focuses on the transnational regulation of emerging technologies, the agency of the Global South in shaping digital infrastructure, and the role of law in governing open-source environments.

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## Cailean Osborne

# A Cartography of Collaboration in Open Source AI: Mapping Collaboration in the Development and Reuse Lifecycle of 12 Open Large Language Models

● Paper

**Author(s):** Cailean Osborne, Johan Linåker, Jennifer Ding, and Ben Burtenshaw

## Abstract

The proliferation of open large language models (LLMs) is fostering a vibrant ecosystem of research and innovation in artificial intelligence (AI). However, the methods of collaboration used to develop open LLMs both before and after their public release have not yet been comprehensively studied, limiting our understanding of how open LLM projects are initiated, organized, and governed as well as what

opportunities there are to foster this ecosystem even further. We address this gap through an exploratory analysis of open collaboration throughout the development and reuse lifecycle of open LLMs, drawing on semi-structured interviews with the developers of 14 open LLMs from grassroots projects, research institutes, startups, and Big Tech companies in North America, Europe, Africa, and Asia. We make three key contributions to research and practice. First, collaboration in open LLM projects extends far beyond the LLMs themselves, encompassing datasets, benchmarks, open source frameworks, leaderboards, knowledge sharing and discussion forums, and compute partnerships, among others. Second, open LLM developers have a variety of social, economic, and technological motivations, from democratizing AI access and promoting open science to building regional ecosystems and expanding language representation. Third, the sampled open LLM projects exhibit five distinct organizational models, ranging from single company projects to non-profit-sponsored grassroots projects, which vary in their centralization of control and community engagement strategies used throughout the open LLM lifecycle. We conclude with practical recommendations for stakeholders seeking to support the global community building a more open future for AI.

## Presenter bio

Cailean Osborne is a Senior Researcher at the Linux Foundation, where he conducts strategic research and advocacy for promoting openness in AI. He has a PhD in Social Data Science from the University of Oxford, where he researched collaboration dynamics in the open source AI ecosystem. During his PhD, he was a visiting researcher at the Open Source Software Data Analytics Lab at Peking University. Previously, he was the International Policy Lead at the UK Government's Centre for Data Ethics and Innovation, where he co-authored the UK's National AI Strategy and served as a UK Delegate at intergovernmental AI governance initiatives at the OECD and Council of Europe. He is based in Berlin, Germany.

## Kasia Odrozek

# Towards Best Practices for Open Datasets for LLM Training

## Papers

**Author(s):** Kasia Odrozek, Stefan Baack, Aviya Skowron, and Stella Biderman

## Abstract

The proliferation of open large language models (LLMs) is fostering a vibrant ecosystem of research and innovation in artificial intelligence (AI). However, the methods of collaboration used to develop open LLMs both before and after their public release have not yet been comprehensively studied, limiting our understanding of how open LLM projects are initiated, organized, and governed as well as what opportunities there are to foster this ecosystem even further. We address this gap through an exploratory analysis of open collaboration throughout the development and reuse lifecycle of open LLMs, drawing on semi-structured interviews with the developers of 14 open LLMs from grassroots projects, research institutes, startups, and Big Tech companies in North America, Europe, Africa, and Asia. We make three key contributions to research and practice. First, collaboration in open LLM

projects extends far beyond the LLMs themselves, encompassing datasets, benchmarks, open source frameworks, leaderboards, knowledge sharing and discussion forums, and compute partnerships, among others.

Second, open LLM developers have a variety of social, economic, and technological motivations, from democratizing AI access and promoting open science to building regional ecosystems and expanding language representation. Third, the sampled open LLM projects exhibit five distinct organizational models, ranging from single company projects to non-profit-sponsored grassroots projects, which vary in their centralization of control and community engagement strategies used throughout the open LLM lifecycle. We conclude with practical recommendations for stakeholders seeking to support the global community building a more open future for AI.

## Presenter bio

Kasia Odrozek works at the intersection of research, policy, and community engagement to help turn ideas into action in the ethical tech space. A strategist and AI ethics expert, she focuses on open and ethical datasets for AI, the emergence of artificial intimacy, identity shifts in human-AI interaction, and the broader concept of Public AI. She advises a range of organizations—from international institutions to grassroots initiatives—on responsible technology development and governance.

Kasia currently leads the Business Council at UNESCO, where she supports the implementation of the Recommendation on the Ethics of Artificial Intelligence. She brings a cross-sector perspective, translating high-level AI ethics principles into tangible commitments and practice. Previously, she served as Director of Insights at the Mozilla Foundation, where she led research and policy efforts to advance Trustworthy AI and supported responsible tech initiatives. She has also advised public-interest funders, including the EU AI & Society Fund and the Prototype Fund.

Kasia's background spans open-source and open-knowledge communities, having worked with Wikipedia on open culture and software, and tech entrepreneurship, where she led product strategy at the podcasting platform TapeWrite. She also founded the Berlin chapter of Zebras Unite, a network promoting ethical, inclusive alternatives to traditional startup models. She holds qualifications in law, political science, and product management, and brings a multidisciplinary lens to complex challenges at the intersection of technology and society.

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## Jennifer Barth

### The Value and Values of Openness: Open Source, AI Openness, and the Future of Digital Public Goods

#### ● Papers

**Author(s):** Jennifer Barth

## Abstract

Open source software, along with open data, open hardware, and open standards, is foundational to today's global digital economy. Latest estimates show that over 90% of software in active commercial stacks have open source dependencies. In a world of geopolitical friction, we see increased focus on regulation and a sovereign stack, which is only possible with the inclusion of open source software. As shared digital infrastructure, open source software technologies function as digital public goods. Despite the importance of open source software, its economic contribution has consistently been underrepresented in traditional policy frameworks, national accounts, and innovation metrics. This ongoing research assesses the options in measuring the economic value of open source software and its contribution to our global economies. Drawing on macroeconomic modelling, international adoption metrics, and studies from the OECD, Stanford, and Harvard, it outlines how open technologies generate cost efficiencies, enhance productivity, and catalyse innovation across public and private sectors. To date, only Harvard and OpenUK have identified the value of open source software. The paper gives attention to the challenge of valuing open source software. It also considers the need to create a model that values AI that is distributed openly, such as open weights, open models, and open training data. It argues that defining and measuring these assets is a prerequisite for responsible regulation, funding, and standards development.

## Presenter bio

Dr. Jennifer Barth is Chief Research Officer at OpenUK and Research Director at Symmetry Insights. She has more than 15 years of experience leading independent research on the intersections of emerging technologies and socioeconomic change. She provides companies with independent thought leadership and media engagement opportunities on global issues impacting and shaping our current and future socio-cultural lives. Her work spans the digital through to social and economic change. Currently she is looking at sustainability, workforce skills and organisational competitiveness strategies through and beyond the pandemic with Microsoft and researching the role of open source software and its potential to fuel sustainable growth with OpenUK. She has experience working on the human impact of artificial intelligence (AI) through fieldwork experiments with IBM Watson and other providers, leading Digital Transformation research for Microsoft, Reinventing Loyalty with Adobe, and developing the Science of Common Ground for Heineken's award-winning Open your World campaign. She is skilled at research design, qualitative research and analysis, quantitative analysis, new methods using emerging technologies and working with people to bring to life the stories behind numbers. Dr Barth earned her DPhil in Geography from the University of Oxford.

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## Gordon LaForge

# The Value of Openness: Measuring the Total Benefit of Digital Public Goods

### Papers

**Author(s):** Gordon LaForge and Akash Kapur

## Abstract

How can we measure the total benefit that open technological solutions afford a society? As part of a larger study into countries' adoption of Digital Public Goods (DPGs) in their digital public infrastructure, this ongoing research puts forth a framework that seeks to capture the total value of DPGs relative to proprietary solutions. The paper draws on existing approaches to conceptualize the economic impact of 'open'. The framework combines Total Cost of Ownership, which captures the direct and indirect monetary costs of a technology, with an analysis of Broader Ecosystem Value, the harder-to-quantify gains in innovation, strategic autonomy, and social benefit that come from open technological solutions. The goal is to create a comprehensive, rigorous, and sound way to assess how open technologies benefit a society. The paper discusses the components of this framework, along with emerging evidence gathered from empirical work, and then discusses open questions and ways to develop and test the framework further.

## Presenter bio

Gordon LaForge is a senior policy analyst at New America working on the geopolitics and governance of emerging technologies like AI, international institutions, and the future of democracy. He is also a visiting faculty member at Stanford University's Leadership Academy for Development and at Arizona State University's Thunderbird School of Global Management.

LaForge was previously senior researcher at Princeton University's Innovations for Successful Societies program, where he wrote on institution-building in fragile states. He has been a freelance journalist in Southeast Asia, a researcher with the predictive analytics and geopolitical risk firm Predata Inc., and a graduate intern at the US Mission to NATO in Brussels working on nuclear policy planning in the Office of the Defense Advisor.

LaForge's analysis and reporting have appeared in Foreign Affairs, The New York Times, Foreign Policy, The Washington Quarterly, The Daily Beast, The Diplomat, and other publications. He is a Term Member of the Council on Foreign Relations and was awarded two Fulbright fellowships to Indonesia. He holds an MPA in international relations from Princeton University and a BA in literature from the University of Colorado at Boulder.

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## Nathalia Foditsch

### Bridging the Digital Divide: The Role of Free and Open Source Software in Strengthening Community ISPs

 Paper

**Author(s):** Nathalia Foditsch and Guilherme Flynn Paciornik

## Abstract

In Brazil, large incumbent Internet Service Providers (ISPs) often neglect remote or economically marginalized regions, leaving millions without affordable or reliable internet access. In response, an



ecosystem of over 11,000 small, community-focused ISPs has emerged to fill this gap. These providers play a critical role in bridging the digital divide but continue to face significant challenges, particularly around financial sustainability and operational efficiency. One key strategy some of these ISPs employ is the use of Free and Open Source Software (FOSS) to reduce network deployment and maintenance costs. However, widespread adoption remains limited due to barriers such as technical knowledge gaps, lack of user-friendly interfaces, and insufficient ongoing support from software communities. This ongoing research explores the extent to which community-focused ISPs in Brazil are currently leveraging FOSS technologies and identifies the steps needed to encourage broader adoption. By examining both the opportunities and the constraints, the paper highlights how targeted support for open technologies could strengthen the sustainability of small ISPs and expand affordable internet access to underserved regions. The findings contribute to ongoing policy and industry discussions about fostering inclusive, community-driven approaches to connectivity.

## Presenter bio

Nathalia Foditsch is Director of International Programs at Connect Humanity. She is a licensed attorney and an expert in technology and communications policy and regulatory issues, with over fifteen years experience. She has worked for some of the main international organizations and think tanks in Washington D.C., which she has represented in countless official missions to numerous countries in the Latin America, Caribbean, and Europe. More recently, Foditsch has served as a Senior Policy and Regulatory specialist for the Web Foundation's Alliance for Affordable Internet. She is a research fellow at Cornell University's Emerging Markets Institute (EMI), which is part of the Samuel Curtis Johnson Graduate School of Management.

Among other publications focused on technology and communications policy and regulation, Foditsch has co-edited and co-authored the book "Broadband in Brazil: Past, Present, Future", which was a finalist of the 2017 "Jabuti Awards" (the main literary award in Brazil). She is an adjunct professor at the University Jose Cela (Spain); and holds a master's in law (LLM) and a master's in public policy (MPP) and is a member of the advisory board of the Brazil-U.S. Legal and Judicial Studies Program at the Washington College of Law (WCL). She is fluent in Portuguese, English, Spanish, and German.

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## Richard Littauer

# Mapping the Open Source Ecosystem for Climate Science and Sustainable Technology

## Paper

**Author(s):** Richard Littauer, Tobias Augspurger, Alex Stinson, Pierre J.C. Vogler-Finch, Andrew Nesbitt, and Chris Harris

## Abstract

The climate crisis poses a severe threat to the natural systems that support modern civilization, disrupting essential cycles that provide freshwater, fertile soils, and stable weather patterns. These disruptions are projected to lead to widespread biodiversity loss and to upset local and global economies. To ensure that the scientific basis of these projections is transparent and credible, researchers globally are increasingly making climate data and models openly available, which supports informed decision-making and helps safeguard sustainable development from being compromised by short-term political or economic agendas. Despite this progress, the broader application of open source software and open data in climate and sustainability-related technologies remains limited. National governments, international organizations, academia, industry, and civil society have all played roles in both contributing to the crisis and proposing solutions, and fragmented, proprietary approaches persist. Open source offers a powerful alternative.

This ongoing research seeks to look at the development of OpenSustain.tech, the most comprehensive dataset of over 2,500 open source projects directly addressing the climate crisis. The paper details the transparent methodology used to curate this collection, including human expert review across multiple fields. It further analyzes the network of transitive dependencies among these projects, extending previous work in mapping the climate-focused open source ecosystem. The paper also discusses the strategic importance of open source in advancing climate solutions, including its potential economic and societal value, as well as its foundational role in digital infrastructure for climate mitigation, adaptation, and sustainable development.

## Presenter bio

Richard Littauer is a PhD student in Computer Science at Te Herenga Waka Victoria University of Wellington in Pōneke, Aotearoa New Zealand. He is also one of the two organizers of CURIOSS, the community for university and research institution open source program offices, and he is an organizer for SustainOSS, and has recorded hundreds of podcasts on open source sustainability there. He has been interested and involved in open source communities for decades.

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## Felipe Schmidt Fonseca

### ThingData: Unlocking Economic Value in the Material Commons through Open Data as a Digital Public Good for SDGs

● Talk

**Author(s):** Felipe Schmidt Fonseca

## Abstract

This talk will detail the groundwork and current development status of ThingData, a speculative prototype of distributed and open-source systems designed to address deep-seated asymmetries in

the availability of data needed to support the reuse of goods and materials. ThingData is part of ongoing, commons-oriented research comprising technologies, methods, and approaches geared at promoting an inclusive and fair circular economy. Its origins are associated with a European Union-funded PhD research (2019-2022) which resulted in the thesis *Generous cities - weaving commons-oriented systems for the reuse of excess materials in urban contexts*. It is currently incubated by the Reuse City studio and the Global Innovation Gathering (GIG). ThingData is explicitly designed to function as a Digital Public Good contributing to SDGs 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production), and 17 (Partnerships).

## Presenter bio

I am Dr. Felipe Schmidt Fonseca, an experienced Berlin-based Brazilian advocate for social-environmental innovation and free/open-source technologies turned researcher. I am the founder of Reuse City studio and a co-creator of *semente*, a toolkit for community projects; as well as the co-founder and lead articulator of the Tropixel network; and an active member of organisations such as GIG and Circular Berlin. Between 2019 and 2022, I was a Marie Curie Early Stage Research Fellow (Northumbria University / Mozilla Foundation). I have recently engaged in collaborations such as ID21, fonte.wiki, ALGO-BR, and CODE. I have a PhD in Design from Northumbria University (Newcastle-upon-Tyne, UK). The title of my thesis successfully defended in September 2023 is "*Generous cities - weaving commons-oriented systems for the reuse of excess materials in urban contexts*". Before that, I got an MA in Scientific and Cultural Dissemination from Labjor at the University of Campinas (UNICAMP) in Brazil, acquired with a dissertation about networked experimental labs.

## Andrew Wichmann

# Standardizing Open Source Impact Metrics: A Framework for Academic Technology Transfer Offices

## Paper

**Author(s):** Andrew Wichmann, Megan Forbes, and Iyer Ashwathi

## Abstract

As universities increasingly embrace open source software for knowledge dissemination and societal impact, technology transfer offices (TTOs) face a critical challenge: how to effectively measure and communicate the economic and social value of university-originated open source projects. Unlike traditional intellectual property metrics, open source initiatives require new frameworks that capture their unique pathways to impact, from community adoption to commercial spinouts. By establishing common measurement standards, TTOs can collectively demonstrate the substantial economic impact of university open source initiatives, justify investment in open source support infrastructure, and position themselves as essential enablers in the evolving landscape of academic innovation and knowledge transfer.

This ongoing research considers how to develop a standardized metrics framework specifically

designed for academic tech transfer contexts, addressing the urgent need for consistent measurement approaches across institutions. Drawing from multi-institutional case studies and industry partnerships, the paper presents current progress in developing a comprehensive set of quantitative and qualitative indicators that capture the impact of university open source projects. The paper will demonstrate how standardized metrics will enable TTOs to make data-driven decisions about resource allocation, identify high-potential projects for targeted support, and effectively communicate open source value to university leadership and external stakeholders. It will also discuss pathways for adoption of the standards across the academic tech transfer community.

## Presenter bio

Andrew Wichmann is a Senior Intellectual Property and Licensing Manager, Digital Technology at Johns Hopkins University, based in Baltimore, Maryland. By training, he is patent lawyer working to promote ethical innovation and ethical expression in digital technology and open innovation.

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## Jonathan Starr

# One year later: Building the Open Source Endowment

### Paper

**Author(s):** Jonathan Starr

## Abstract

The problem is well-known. Critical open source projects are often underfunded and maintained by a few volunteers. This creates fragility in our digital infrastructure, leading to security risks like Heartbleed and the XZ backdoor. Short-term grants and corporate budgets aren't enough to solve the deep, systemic issue. This talk provides a case study of turning the idea of a permanent endowment for open source software into a real, functioning organization and funded endowment.

The solution is the Open Source Endowment (OSE), which uses the endowment model, common in universities, to create a permanent, stable source of funding. Donations build a principal fund, and we only spend the investment income on grants. This approach is designed for the long run. In the past year, the OSE has moved from concept to reality. It has been incorporated as a US nonprofit, set up our financial infrastructure, and started building a community of founding donors. The response has shown that there is a significant appetite for this kind of support

This talk will share a practical look at our first year, covering the approach, the steps the founders took to get started, the challenges faced and learnings, and future considerations for providing sustainable OSS funding. The goal of the talk is to be transparent about what it takes to build a new funding institution for open source, showing that a systemic approach is both possible and effective.

## Presenter bio

Jonathan Starr stands at the intersection of open source and open science. As the program manager he drives work on The Map of Open Source Science and facilitates multiple long-duration "Innovation Sprints", tackling shared ecosystem-level challenges. As co-lead of SciOS and the Institute of Open Science Practices, Jonathan designs and facilitates multiple global annual events and workshops connecting technologists with researchers to develop numerous deep tech infrastructures enabling open-by-design in research. Additionally, he consults on various projects designing novel publishing, identifier, community, and incentive mechanisms for the scientific process. Burlington based.

## Nicholas Gates & Jennifer Tridgell

# Funding Europe's Open Digital Infrastructure A Study on the Economic, Legal, and Political Feasibility of an EU Sovereign Tech Fund (EU-STF)

### Paper

**Author(s):** Nicholas Gates, Jennifer Tridgell, Rosa Maria Torraco, Carsten Schwäbe, Felix Reda, Andreas Hummler, Thomas Streinz, Astor Nummelin Carlberg and Knut Blind

## Abstract

Chronic under-investment in open source technologies creates systemic risks – exposing Europe to (amongst other things) cybersecurity threats, supply chain vulnerabilities, and strategic dependencies on non-European technology providers. To maintain, secure, and improve existing open source technologies to meet the EU's public and industrial goals, it requires policymakers to understand the logics underpinning failures in investing in the maintenance of open source technologies as open digital infrastructure, prioritising the use of public policy towards the unlocking of financial and nonfinancial resources that support the open source ecosystem.

This paper reveals deep pockets of political will and momentum for the establishment of an EU Sovereign Tech Fund (EU-STF). It draws on conversations with two dozen policymakers, technologists, and advocates, as well as extensive economic and legal analysis. The EU-STF is envisioned as a scaled-up, pan-European, and mission-driven initiative with a proposed budget of at least EUR €350 million over seven years to invest in maintenance, security, and improvement of key open source components, as well as help identify and map dependencies and invest in ecosystem strengthening activities. The EU-STF must embody some key principles: pooled financing, low bureaucracy, political independence, flexible funding, community focus, strategic alignment, and transparency. Two active budgetary scenarios are worth considering for the EU-STF: (1) a standalone and centralised fund, and (2) a hybrid/shared management structure leveraging established EU institutional frameworks like the EDIC that allow for co-financing).

## Presenter bio

Nicholas (Nick') Gates is a Senior Policy Advisor at OpenForum Europe (OFE), where he works on

research and advocacy related to open source software and other open technologies. Nick leads the organisation's research efforts, including the OpenForum Academy (OFA) Symposium, its annual research conference. He also leads OFE's advocacy work on the NGI Commons and European Open Source Academy initiatives, which are focused on digital commons and public recognition of open source in Europe. Nick's expertise is in open source in the public sector, open source for social good, and the funding and sustainability of the open source ecosystem. His background is in digital government policy and research, particularly on open source but also public financial management, and digital service delivery. He enjoys supporting development partners, governments, and international organisations to deliver on their agendas through applied policymaking and research.

Before joining OFE, Nick helped launch ODI Global's Digital Public Finance Hub, a new learning initiative around the digital transformation of public finance, as a consultant at Public Digital. He began his career working on research, policy, and advocacy at the Digital Impact Alliance — conducting research on topics including national digital transformation processes, open source in government, and digital transformation policy — and was a Fellow at the Portulans Institute. Nick holds an undergraduate dual degree from the University of Massachusetts Lowell in Political Science and History, and graduated with an MSc in Global Development from the University of Copenhagen in 2018.

## Stephanie Lieggi

# From Containers to Code: Applying Post-9/11 Trade Security Lessons to the Software Supply Chain

### Paper

**Author(s):** Stephanie Lieggi, Juanita Gomez, Robert Shaw, Tekla Gagoshidze and Shayiq Shah

**Contributors:** Alvaro Cárdenas and Kenneth Jarrod Millman

## Abstract

This working paper examines how lessons from post-9/11 global trade security initiatives can inform current open source software supply chain security challenges. The authors argue that despite dealing with different domains—physical goods versus digital code—both face similar fundamental questions about managing risk in complex, multi-actor systems where trust is essential but vulnerable to exploitation. The ongoing research, funded by the Digital Infrastructure Insights Fund, analyzes successful trade security programs like C-TPAT and CSI, focusing on their incentive-based structures, public-private partnerships, and harmonized international standards, to develop actionable recommendations for software security policy. Rather than punitive regulatory approaches, the authors advocate for a framework that emphasizes positive incentives, investment in critical infrastructure, collaborative risk assessment tools, and international standards—moving beyond simple analogies like Software Bill of Materials to create trusted actor programs similar to those that succeeded in trade security.



Ijeoma Onwuka

## Can a Badge Save a Project? Rethinking Sustainability through Community Metrics

● Talk

**Author(s):** Ijeoma Onwuka

### Abstract

Open source projects are often measured by stars, forks, or downloads. While these metrics highlight popularity, they fail to capture whether a project's community is sustainable, inclusive, or resilient. This paper introduces the CHAOSS DEI Project Badging initiative as a framework for evaluating open source sustainability through people-centered metrics. Project Badging focuses on four areas: Project Access, Newcomer Experience, Inclusive Leadership, and Communication Transparency. By rethinking sustainability through community health, we argue that open-source success should not only be about growth in numbers, but also about how contributors feel, stay, and thrive.

### Presenter bio

Ijeoma Onwuka is an experienced Community Manager with over 3 years of building thriving communities for tech startups and non-profits. She currently leads programs at Scandium Systems Limited, creating engaging spaces for developers, technical writers, and tech enthusiasts. Passionate about open source, she actively contributes to projects like OpenSSF, DevRel Foundation, CHAOSS, and UNICEF, focusing on the intersection of technology and community.

Johan Linåker

## Public sector open source software projects – How is development organized?

● Papers

**Author(s):** Johan Linåker, Bjorn Lundell, Francisco Servant, Jonas Gamilelsson, Sachiko Muto and Greogrio Robles

### Abstract

**Context:** The adoption of Open Source Software (OSS) in Public Sector Organizations (PSOs) is on the rise, driven by benefits such as enhanced interoperability and transparency. However, PSOs encounter challenges stemming from limited technical capabilities and regulatory constraints in public procurement.

**Objective:** This study, based on a registered report, explores the organizational aspects of development

in public sector OSS projects, i.e., projects initiated, developed, and governed by PSOs. We conjecture that the development diverges significantly from the commonly adopted bazaar model, wherein development is carried out collaboratively within a broader community.

**Method:** A purposefully sampled set of six public sector OSS projects was investigated using mixed-methods and compared with previously reported cases of bazaar OSS projects.

**Results:** Among the cases, we note that most (80%) of development efforts typically involve a small group of developers (<15) and rely on formalised processes. Developers are commonly procured from national and local service suppliers. Projects are planned top-down by involved PSOs with funding and contributions to development enabled through centralized or decentralized sponsorship. Projects with a centralized sponsorship have one or a few main PSOs funding the major part of the development. Decentralized sponsorship implies multiple PSOs being mutually dependent on each other to pool the necessary resources for the development. All OSS are reported as being of high quality despite limited size and contributions from their communities.

**Conclusions:** Findings suggest that public sector OSS projects deviate from the typical bazaar model, highlighting the need for tailored approaches to address challenges and solutions specific to their context.

## Presenter bio

Johan Linåker is a senior Researcher at RISE Research Institutes of Sweden and an Adjunct Assistant Professor at Lund University

## Hana Frluckaj

# An OSS-ential Understanding of Potential and Early Career OSS Contributors

● Paper

**Author(s):** Hana Frluckaj

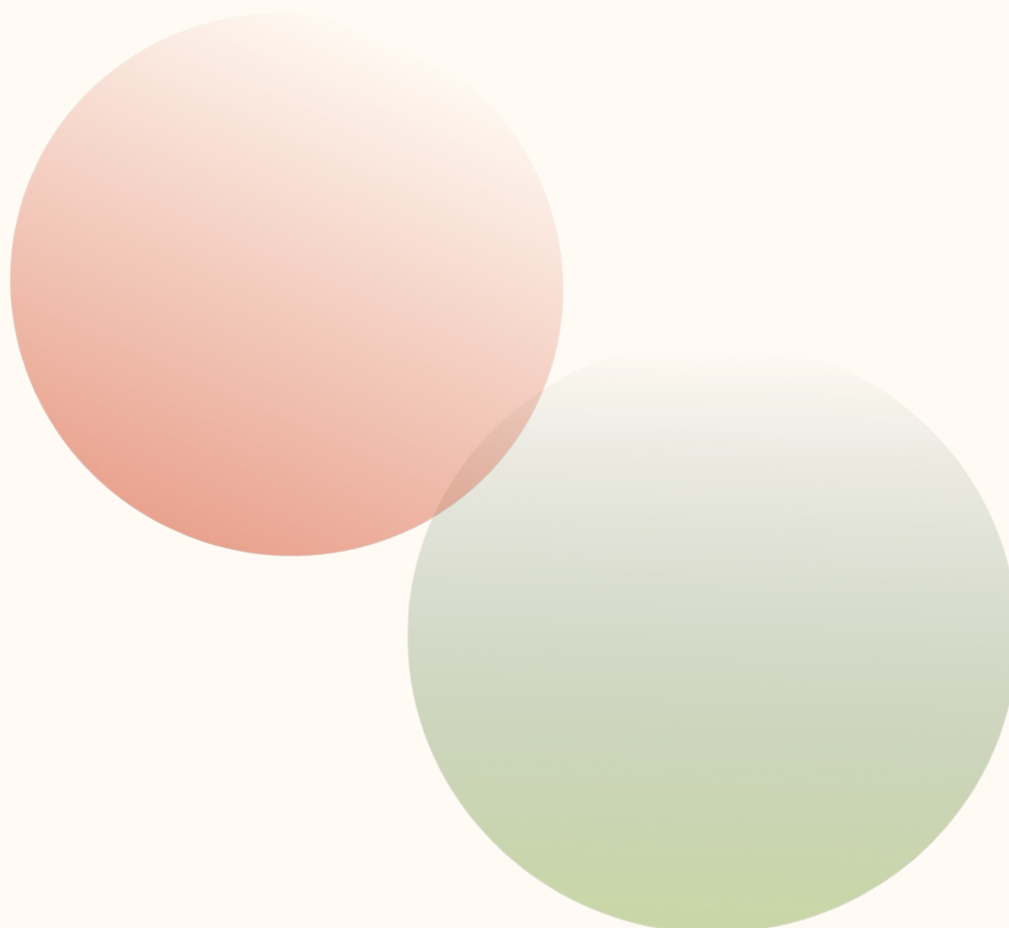
## Abstract

Open source software (OSS) underpins modern digital infrastructure globally, yet its contributor base is strikingly homogeneous. OSS is dominated by White men from Europe and North America, with only 10% women and an underrepresentation of Black, Hispanic, Indigenous, and multiracial contributors. Furthermore, while younger contributors continue to join OSS, OSS contributors are skewing older, as fewer and fewer younger developers choose to join and remain in OSS, and the percentage of maintainers under the age of 26 has dropped from 25% in 2021 to 10% in 2024. Younger developers aren't advancing to maintainership roles, compounding concerns for the longevity of OSS, and thus for digital infrastructure writ large. Diversity is critical for effective OSS, yet non-diverse projects risk exclusionary outcomes, sustainability issues, and neglect of community health. The aging maintainer pool, coupled with a lack of diverse representation, threatens OSS sustainability.

Understanding younger contributors is crucial—tracking their entry, engagement, and barriers to leadership could enhance diversity. In tackling these issues, this ongoing research seeks to develop a richer understanding of potential OSS newcomers, their concerns and experiences, and how their participation evolves over time, building on a survey study of undergraduate introductory programming students across the US. The paper discusses the implications of this research for OSS sustainability and diversity, for the distribution of OSS benefits amongst different groups, and for encouraging broader participation in online communities.

## **Presenter bio**

Hana Frluckaj is interested in researching social aspects of modern technology collaboration in the context of open source software communities and participation. My research goals are to promote diversity and inclusion in open source software and other software development communities, facilitate welcoming and equitable online collaboration, and understand how personal identity impacts software use and development.



## The Basil Cousins Awards

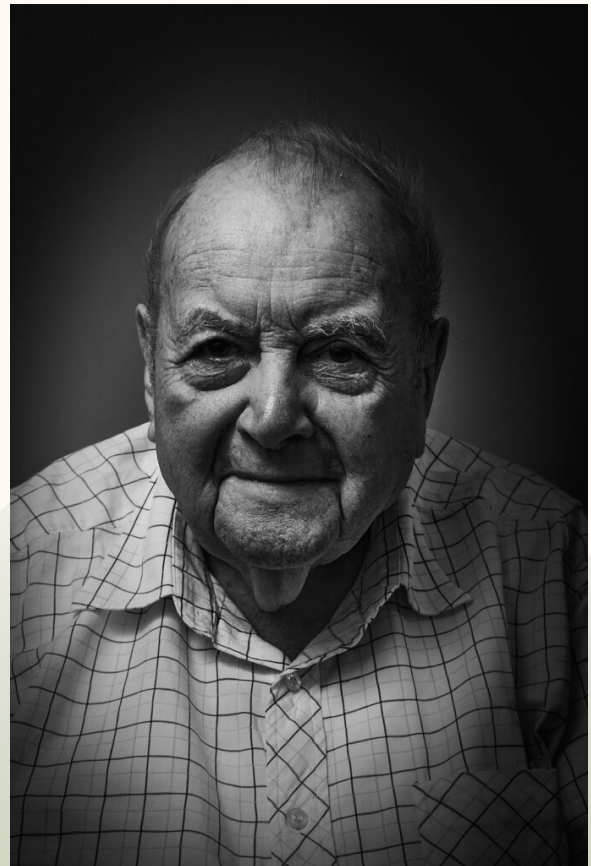
# Honouring a Pioneer at the OFA Symposium

In memory of the late OFE co-founder Basil Cousins we have instituted the Basil Cousins Award, which will go to a young, promising academic researching the societal effects of open innovation and open technologies.

Jérémie Haese was the inaugural recipient of the 2023 Basil Cousins Award, presented at the OFA Symposium 2023 at Technische Universität Berlin. He received the award for his research on how proprietary firms adopt open source, exploring the impact of this shift on both open source communities and firms' internal engineering teams, and contributing to understanding the interaction between technology, management, and society.

Jennifer Tridgell received the 2024 Basil Cousins' Award, presented at the OFA Symposium 2024 at Harvard, for her outstanding doctoral research on the global governance of free and open-source software (FOSS), which bridges law and computer science to address critical issues of international collaboration, regulation, and sustainability in the open-source ecosystem.

This year's winner will be selected among the participants of the Symposium and will receive a cash prize of €5000. Join us in celebrating the legacy of Basil Cousins and the future of open innovation and open technologies!



## Open Technology Impact in Uncertain Times

In an era defined by geopolitical shifts, economic instability, and rapid technological evolution, open technologies play a crucial role in shaping a more transparent, resilient, and equitable digital future. The OFA Symposium 2025, themed 'Open Technology Impact in Uncertain Times', will bring together leading academic researchers and practitioners – including policymakers, industry experts, and civil society – to explore the tangible impact of open technology in navigating complex geopolitical uncertainties.

Through expert panels, case studies, and collaborative discussions, the OFA Symposium 2025 will consider the transformative potential of openness in a world where certainty is no longer guaranteed. It will ask (and offer some answers to) questions like: What is the economic impact of open source software and other open technologies? How do open source software, open standards, and open data contribute to digital sovereignty, sustainability, and innovation? What challenges arise in sustaining and securing open technologies? And how can we understand the role of open source AI in upending the geopolitical landscape?

To join the Symposium as a speaker, participants need only submit an abstract for consideration of the Programme Committee. Should a paper be accepted, participants will need to submit a full paper, summary, or abstract summary (depending on the submission type, see Paper Categories and Timeline for more details and dates).

Find out more at [symposium.openforumeurope.org](https://symposium.openforumeurope.org)

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