



Position Paper · April 2026

# Open Source Technologies: *A Strategic Imperative* for Jordan's Digital Future

# Table of Contents

<b>1.</b>	<b>Introduction</b>	<b>3</b>
<b>2.</b>	<b>The Global Open Source Landscape: A Market in Ascendancy</b>	<b>4</b>
	Market Size and Growth Projections	4
	Economic Impact: The Multi-Trillion Dollar Value of Collaboration	5
	Dominant Trends Shaping the Future	5
<b>3.</b>	<b>International Benchmarking: Case Studies in Open Source Adoption</b>	<b>6</b>
	Germany: A Model of Digital Sovereignty	6
	France: A Commitment to Digital Commons	6
	India: A Story of Large-Scale Savings and Adoption	7
	Brazil: A Pioneer in Public Sector Open Source	7
<b>4.</b>	<b>The Jordanian Context: A Nation on the Brink of Digital Transformation</b>	<b>8</b>
	The National Digital Transformation Strategy	8
	The Role of the Jordan Open Source Association (JOSA)	8
	Opportunities and Challenges	8
<b>5.</b>	<b>Detailed Recommendations for Jordan</b>	<b>9</b>
	Policy and Governance	9
	Economic and Private Sector Development	10
	Education and Skills Development	10
	Implementation Roadmap	10
<b>6.</b>	<b>Conclusion</b>	<b>11</b>
<b>7.</b>	<b>References</b>	<b>12</b>
<b>8.</b>	<b>Biography</b>	<b>13</b>

## Section 01

# Introduction

The global economy is in the midst of a profound transformation, driven by the relentless pace of digital innovation. At the heart of this revolution lies a powerful and often underestimated force: open source technology. From the operating systems that power the majority of the world's servers to the frameworks that underpin the most advanced artificial intelligence, open source has become the invisible backbone of the digital age. It is a testament to the power of collaboration, a catalyst for innovation, and a critical enabler of economic growth and digital sovereignty.

This paper will provide a comprehensive analysis of the global open source landscape, including detailed market data, economic impact assessments, and international case studies. It will then delve into the specific context of Jordan, examining the existing policy landscape, identifying key opportunities and challenges, and offering a set of detailed, actionable recommendations.

This position paper, co-published by the Jordan Open Source Association (JOSA) and the Information and Communications Technology Association Jordan (intaj), advocates for the strategic and wholehearted adoption of open source technologies across Jordan's public and private sectors. It argues that embracing open source is not merely a technical choice, but a strategic imperative that will be instrumental in achieving the ambitious goals of Jordan's Economic Modernization Vision and its National Digital Transformation Strategy. By leveraging the global momentum of the open source movement, Jordan has a unique opportunity to accelerate its digital development, foster a vibrant local technology ecosystem, and secure its position as a regional leader in the digital economy.

## Section 02

# The Global Open Source Landscape: A Market in Ascendancy

## Market Size and Growth Projections

The adoption of open source software is no longer a niche phenomenon confined to startups and tech enthusiasts. It is a global megatrend, a multi-billion dollar market, and a fundamental pillar of the modern digital economy. Understanding the scale and trajectory of this landscape is essential for any nation seeking to formulate a forward-looking digital strategy.

The global open source software market is experiencing explosive growth. According to a 2025 report by The Business Research Company, the market is expected to grow from \$41.83 billion in 2024 to \$48.54 billion in 2025 at a CAGR of 16.0%, reaching \$85.6 billion by 2029 [1].

This growth is fueled by a confluence of factors, including the increasing demand for collaborative and flexible software solutions, the rising cost pressures on businesses, and the growing number of government initiatives promoting the use of open source. The increasing shift towards cloud-based infrastructure and the rising availability of open APIs are also significant drivers of this trend.

**\$48.54B**

Global OSS market size in 2025  
(CAGR 16.0%)

**\$85.6B**

Projected market size by 2029  
(CAGR 15.2%)

## Economic Impact: The Multi-Trillion Dollar Value of Collaboration

A groundbreaking 2024 study from Harvard Business School estimates the demand-side value of open source software to be a staggering \$8.8 trillion [2]. This figure represents the cost firms would incur recreating all the open source software they use from scratch. The study also found that firms would pay an estimated 3.5 times more to build the software and platforms that run their businesses without open source.

### \$8.8T

Demand-side value of OSS globally (Harvard Business School, 2024)

### 3.5x

What firms would pay to build without open source

A 2021 EU study found the €1 billion invested in open source in 2018 generated €65–95 billion in economic impact. A 10% increase in contributions could add 0.4–0.6% GDP annually and create 600+ new ICT startups [3].

## Dominant Trends Shaping the Future

- ▶ **Cloud-Native Open Source:** Technologies like Kubernetes and Docker underpin modern cloud infrastructure. These converge with open IaaS platforms to enable sovereign, standards-based clouds — allowing governments to meet data residency and auditability requirements while avoiding lock-in.
- ▶ **AI and Machine Learning on Open Platforms:** Openness in AI accelerates innovation and enables independent auditing. Frameworks like TensorFlow and PyTorch are open source, enabling researchers and businesses worldwide to build sophisticated AI applications.
- ▶ **Security and the Open Software Supply Chain:** The EU's Cyber Resilience Act (CRA), in force since December 2024, introduces mandatory security requirements for commercial products incorporating open source. Jordanian exporters targeting the EU market will need to comply, and the CRA offers a legislative model for Jordan's own policy framework.
- ▶ **Open Source Program Offices (OSPOs):** 77% of large organizations now have an OSPO, providing a centralized function for managing open source licenses, security, and community engagement [4].

## Section 03

# International Benchmarking: Case Studies in Open Source Adoption

Nations around the world are increasingly recognizing the strategic importance of open source software. From promoting digital sovereignty to achieving significant cost savings, the benefits are clear. This section examines the experiences of four leading nations as benchmarks for Jordan.

## Germany: A Model of Digital Sovereignty

- ▶ **ZenDiS and openDesk:** The Center for Digital Sovereignty developed openDesk — an integrated suite of open source enterprise tools providing a viable alternative to proprietary suites, reducing vendor lock-in across German public administration [5].
- ▶ **The Sovereign Tech Fund:** Launched in 2022, this fund invested ~€23.5M by late 2024 in critical open source infrastructure projects, ensuring long-term sustainability of key open source commons [6].
- ▶ **Legal Framework:** Federal law now favors open source in public procurement, combined with a multi-year digital transformation strategy.

## France: A Commitment to Digital Commons

- ▶ **DINUM and Etalab:** The Interministerial Directorate for Digital Services (DINUM) coordinates open source across all government ministries through its Etalab unit, ensuring a coherent national strategy [7].
- ▶ **Open by Default:** The 2016 Digital Republic Bill mandated open source publication of publicly funded software, enshrining net neutrality and data portability into law.
- ▶ **The SILL Repository:** A curated catalogue of vetted open source solutions recommended for public sector use, lowering adoption barriers for government agencies.

## India: Large-Scale Savings and Adoption

India has emerged as a global leader in public sector open source adoption, driven by potential for cost reduction and local innovation.

- ▶ **Kerala State Government:** By migrating 16,000+ public schools to open source, Kerala saved an estimated \$360–430 million [8].
- ▶ **Public Sector Undertakings:** LIC saved \$8.75 million replacing proprietary software with open source alternatives [8].
- ▶ **National Potential:** An IIM Bangalore study estimated India could save \$1.8 billion by replacing just 50% of its proprietary software with open source [8].

### \$360–430M

Savings from Kerala's open source migration across 16,000+ schools

## Brazil: A Pioneer in Public Sector Open Source

Brazil has a long history of government open source support, recognizing its potential for digital inclusion and reducing dependence on foreign vendors.

- ▶ **High Adoption Rates:** 93% of federal government organizations and 78% of state bodies use open source, making Brazil a global leader [9].
- ▶ **Legal Framework:** Rio de Janeiro mandates open document formats (ODF) across all public entities, driving open source office suite adoption [10].
- ▶ **Economic Benefits:** Open source adoption has grown a local IT market and reduced Brazil's trade deficit in software.

These case studies provide Jordan with a set of valuable lessons as it embarks on its own open source journey.

## Section 04

# The Jordanian Context: A Nation on the Brink of Digital Transformation

## The National Digital Transformation Strategy

Jordan is at a pivotal moment. With a young, tech-savvy population, a dynamic startup ecosystem, and a government committed to digital transformation, the kingdom is well-positioned to become a regional digital leader.

Jordan's Digital Transformation Strategy encourages open-source solutions and open standards, including the JAAP Open APIs Policy [11]. The SANAD portal — a digital government services platform built entirely on open source — is a powerful testament to its viability [12].

## The Role of JOSA

The Jordan Open Source Association (JOSA) is a non-profit dedicated to promoting openness in technology and defending technology users' rights. With its focus on open source software, hardware, open internet, and open government, JOSA is a key government partner for driving adoption [13].

## Opportunities and Challenges

Jordan has a unique set of opportunities and challenges as it embarks on its open source journey. By addressing these challenges and capitalizing on its opportunities, Jordan can unlock the full potential of open source.

### OPPORTUNITIES

- ▶ **A Youthful, Tech-Savvy Population:** Jordan has one of the youngest populations in the world, with a high level of digital literacy. This provides a large and eager talent pool for a vibrant open source ecosystem.
- ▶ **A Clear Government Mandate:** The National Digital Transformation Strategy provides a clear mandate for open source adoption, giving a strong policy foundation for change.
- ▶ **A Vibrant Startup Ecosystem:** Jordan has a thriving startup scene, with innovative companies already leveraging open source to build their products and services.

### CHALLENGES

- ▶ **Skills Gaps:** There is a need to develop more specialized skills in open source development, administration, and security.
- ▶ **Bureaucratic Hurdles:** A streamlined procurement process with clear guidelines for preferring open source will be needed to facilitate public sector adoption.
- ▶ **Budget Limitations:** Upfront costs associated with migration, training, and support will require a clear and sustainable funding model.
- ▶ **Security Concerns:** A robust security framework will be needed to ensure open source software is deployed securely.

## Section 05

# Detailed Recommendations for Jordan

To fully harness the transformative power of open source, Jordan needs a comprehensive national open source program covering policy, economic development, and education.

## Policy and Governance

**1 Establish a National OSPO:** Jordan should establish a national Open Source Program Office within the Ministry of Digital Economy, serving as the central coordinating body for all public sector open source activities.

- Develop and maintain a national open source policy.
- Manage a national repository of recommended OSS (a Jordanian SILL).
- Provide training and support to government agencies.
- Collect and publish metrics on adoption and cost savings.
- Maintain a list of vetted OSS developers and providers.

**2 Develop a National Open Source Policy:** Building on the Digital Transformation Strategy mandate, develop a policy that mandates open source where feasible, requires government-developed software to be released openly, and establishes license and security management frameworks.

**3 Mandate Open Standards and Open Document Formats:** Require the use of open standards and ODF across all government entities, ensuring citizens and businesses can access government services without being forced into proprietary software.

**4 Implement Open Cloud and Cloud-Native Infrastructure:** Actively deploy open cloud technologies across government systems to ensure data residency, reduce vendor lock-in, and build sovereign digital infrastructure supporting both public services and private-sector innovation.

## Economic and Private Sector Development

- 1 **Jordanian Sovereign Tech Fund:** Following Germany's model, create a sovereign tech fund to invest in local open source projects and startups, providing early-stage funding for innovative open source companies.
- 2 **Private Sector Migration Program:** Launch a national program supporting SMEs in migrating to open source, including financial incentives, technical assistance, and training programs.
- 3 **Public-Private Partnerships:** Foster partnerships with local IT companies and international open source foundations to ensure a domestic supply of open source solutions and shared capacity building.

## Education and Skills Development

- 1 **National Education Curriculum:** Integrate open source principles at all levels — from primary school to university — to cultivate the next generation of contributors.
- 2 **National Upskilling Program:** Train the existing workforce in open source development, administration, and security through universities, vocational centers, and private providers.
- 3 **University Partnerships:** Create specialized open source programs and certificates to build a pipeline of highly skilled professionals.

## Implementation Roadmap

A phased approach will be critical to the success of Jordan's national open source program.

PHASE 1  
1–2 Years

### Foundational Setup

Establish the national OSPO, draft the policy and legal framework, and launch pilot projects demonstrating open source benefits in the public sector.

PHASE 2  
3–5 Years

### Scaling and Expansion

Launch the Sovereign Tech Fund, roll out private sector migration support, expand open source in education, and mainstream open standards across government.

PHASE 3  
5+ Years

### Maturity and Leadership

Foster a self-sustaining ecosystem, export open source products and services, and establish Jordan as a recognized regional leader in open source innovation.

Section 06

# Conclusion

The adoption of open source technology is not a matter of if, but when and how. For Jordan, the time to act is now. By embracing open source with a clear and strategic vision, Jordan can unlock a new wave of innovation, economic growth, and digital sovereignty. The recommendations outlined in this paper provide a comprehensive roadmap for this journey.

The journey will require a concerted effort from all stakeholders: from government and industry to academia and civil society. A Jordan powered by open source will be a more innovative, more competitive, and more prosperous Jordan — a creator and contributor to the global digital commons, truly in control of its digital destiny.

## KEY TAKEAWAYS

### **Open source is a strategic imperative, not a technical preference**

Jordan's digital transformation goals cannot be achieved without a structured national open source program.

### **Jordan has the foundations in place**

The Digital Transformation Strategy, JOSA, and a youthful tech-savvy population create a strong starting point.

### **The global evidence is unambiguous**

Germany, France, India, and Brazil demonstrate measurable economic and sovereignty benefits from strategic adoption.

### **A national OSPO is the critical first step**

Centralizing open source governance enables coherent policy, reuse, and accountability across government.

## Section 07

# References

- [1] The Business Research Company. (2025). *Open Source Software Global Market Report 2025*. [thebusinessresearchcompany.com](https://thebusinessresearchcompany.com)
- [2] Nagle, F., Hoffmann, M., & Zhou, Y. (2024). *The Value of Open Source Software*. Harvard Business School. [library.hbs.edu](https://library.hbs.edu)
- [3] European Commission. (2021). *Study on the impact of Open Source Software and Hardware on technological independence, competitiveness and innovation in the EU economy*. [digital-strategy.ec.europa.eu](https://digital-strategy.ec.europa.eu)
- [4] The Linux Foundation. (2024). *The 2024 State of OSPOs and Open Source Management*. [linuxfoundation.org](https://linuxfoundation.org)
- [5] All Things Open. (2024). *Zendis, openDesk, and openCode: Open Source in the German Public Sector*. [allthingsopen.org](https://allthingsopen.org)
- [6] Sovereign Tech Fund. (2024). *Homepage*. [sovereign.tech](https://sovereign.tech)
- [7] European Commission (2023). *Open Source Software Country Intelligence Report France 2023*. [interoperable-europe.ec.europa.eu](https://interoperable-europe.ec.europa.eu)
- [8] The News Minute (2019); KITE Annual Report (2021–22). [thenewsminute.com](https://thenewsminute.com)
- [9] ZDNet. (2018). *Brazilian federal government leads in open source adoption*. [zdnet.com](https://zdnet.com)
- [10] Open government data use: The Brazilian states and federal district cases. [opensource.org](https://opensource.org)
- [11] Ministry of Digital Economy and Entrepreneurship. (2020). *Jordan Digital Transformation Strategy 2020*. [modee.gov.jo](https://modee.gov.jo)
- [12] The World Bank. (2022). *Jordan: The SANAD Portal for Digital Government Services*. [documents1.worldbank.org](https://documents1.worldbank.org)
- [13] Jordan Open Source Association. (2026). *Homepage*. [josa.ngo](https://josa.ngo)

## Section 08

# Biography

## Jordan Open Source Association (JOSA)

The Jordan Open Source Association (JOSA), founded in 2011, is a non-profit organization that advocates for openness in technology and defends the rights of technology users in Jordan. JOSA works to maximize the impact of local open technologies, leverage innovative open source tools for social impact, and support a safe and open tech ecosystem through research, advocacy, capacity building, and policy engagement.

### OUR VISION

A technologically open and capable Jordan.

### OUR MISSION

To promote openness in technology and defend the rights of technology users in Jordan.

[www.josa.ngo](http://www.josa.ngo) | [info@josa.ngo](mailto:info@josa.ngo)

## Information and Communication Technology Association – Jordan (intaj)

Founded in 2000, intaj is a membership-based ICT and Digital industry advocacy, support and networking association. intaj serves as the collective voice of the industry, advocating on behalf of stakeholders and seeking to maximize the contribution of the ICT sector towards the national economy.

### OUR VISION

Inspire innovation, collaboration, and digital excellence transforming and shaping Jordan's sustainable digital future.

### OUR MISSION

Drive the growth of Jordan's digital economy through policy advocacy, ecosystem connectivity, a strong pipeline of highly skilled and innovative talent, and empowering businesses of all sizes to compete locally, regionally, and globally.

[www.intaj.net](http://www.intaj.net) | [info@intaj.net](mailto:info@intaj.net)

**Disclaimer:** The views and recommendations expressed in this position paper are those of the authors and do not necessarily reflect the official positions of any government entity or organization mentioned herein.