# State of Open Source in Canada 2026

## Research Report

Linux Association of Canada

June 2026

### Focus areas

Open source in public services and digital government

Technology workforce and open skills

Open source AI, sovereignty, security and commercialization

Community infrastructure and directory verification

# Executive Summary

Canada's open source ecosystem is entering a more strategic phase. Open source is no longer only a developer preference or a cost-saving approach; it is now tied to digital government, workforce development, AI adoption, security, procurement, transparency and national digital capacity.

This first Linux Association of Canada report brings together public-sector guidance, technology workforce signals, global open source research and Canadian-specific open source AI analysis. It is intended as a starting point for annual tracking, not as a complete census of every Canadian open source project or community.

## Key findings

- Open source is explicitly recognized in Government of Canada digital guidance, including open standards, open solutions, and guidance for evaluating and publishing open source software [1][2][3].
- Canada's digital economy is increasingly software-heavy: ISED reports the ICT workforce reached 802,900 in 2024, with software and computer services representing 74% of ICT employment [8].
- Open source AI is now a strategic issue for Canada. Linux Foundation research argues it can support commercialization, adoption, sovereignty, transparency, customization and security [5].
- Security, sustainability and funding remain core risks. Open source creates public value, but widely used projects often depend on invisible maintenance labour and uneven funding [11][12].
- A stronger Canadian open source ecosystem requires verified directories, current job intelligence, community group visibility, education resources and more intentional collaboration.

## How to read this report

The report combines secondary research with the Linux Association of Canada's early platform observations. The Association's verification work should be seen as infrastructure for future evidence-based reporting.

# 1. Why Open Source Matters in Canada

Open source software underpins modern computing. It is present in cloud infrastructure, cybersecurity tooling, software development, AI systems, data science, web services, embedded systems and public digital services. For Canada, open source has at least five policy and economic dimensions: technology sovereignty, skills development, public-sector modernization, innovation capacity and community resilience.

Government of Canada digital standards describe open solutions as software whose source code is publicly available and freely usable, while open standards are non-proprietary rules that support interoperability [2]. This frames open source not only as a licensing model but as a practical foundation for transparent, interoperable digital systems.

The Government of Canada open source standards project states that the GC has used open source software for years and is increasingly relying on it for service delivery, while seeking to contribute back and release its own source code under open source licences where appropriate [3].

## Quick indicators

| Theme | Evidence from public sources |
|---|---|
| Digital economy & workforce | Canada's ICT workforce reached 802,900 in 2024; software and computer services employment grew 33.1% from 2019 to 2024 [8]. |
| Open source in government | Government of Canada guidance says departments should actively and fairly consider open source software and evaluate community, documentation and security factors [1]. |
| Open source AI | Linux Foundation research argues open source AI can lower barriers to adoption and support sovereign, transparent and customizable AI development in Canada [5]. |
| Security & trust | OpenSSF frames open source security as a public-good effort involving developers, security engineers and organizations [11]. |

## Implication for the Linux Association of Canada

A national open source organization can add value by making open source more discoverable and trustworthy. Verified directories of community groups, software projects and Linux distributions are not just website features; they are public infrastructure for education, participation, workforce development and media awareness.

# 2. Public Sector and Digital Government

Canada's federal digital guidance creates a meaningful opening for open source. The Government of Canada guide for using open source software asks departments to actively and fairly consider open source and to evaluate factors such as user community, developer community, documentation and security assessments [1].

This matters because procurement and architecture choices can either expand or restrict the space for open technologies. Open source is strongest when it is evaluated seriously rather than treated as an informal alternative to proprietary procurement.

The GC Digital Talent Strategy also identifies a need for the public service to have the digital talent, processes and culture required to design and deliver digital services [4]. Open source skills align with that need because many modern digital services depend on Linux, containers, cloud-native tooling, scripting, DevOps practices, automation, data platforms and collaborative software development.

## Case signal: Statistics Canada

Statistics Canada's 2024-25 Departmental Results Report states that the agency continued developing its secure, open-source platform for data processing, and that 65% of intended users were using the platform as of 2024-25 [10]. This is an important example of open source appearing not as ideology but as operational modernization.

## Opportunities

- Create clearer Canadian examples of successful open source adoption in government and public-interest technology.
- Support public servants and community contributors with practical education on Linux, licensing, security and project governance.
- Promote reusable open code and standards where they improve transparency, interoperability and long-term maintainability.
- Develop a public index of Canadian open source initiatives that distinguishes verified active resources from inactive or stale listings.

# 3. Workforce and Skills

Open source is inseparable from Canada's technology workforce. Linux administration, cloud infrastructure, cybersecurity, DevOps, data engineering, AI operations and software development all depend heavily on open source tools and collaborative development practices.

ISED's Canadian ICT Sector Profile reports that the total ICT sector workforce grew from 670,425 in 2019 to 802,900 in 2024. It also reports that software and computer services grew faster than overall ICT employment from 2019 to 2024 and increased its share of sector employment from 67% to 74% [8].

CompTIA's State of the Tech Workforce Canada 2025 estimates net tech employment at 1,445,188 workers in 2024, with forecast growth to 1.46 million in 2025 and an estimated 290,500 new jobs since 2019 [9].

## Why this matters for open source

- Open source skills are marketable workforce skills, especially in Linux, cloud, DevOps, cybersecurity, data and AI roles.
- A current, validated job database can reduce friction for job seekers by removing expired or unavailable postings.
- Community groups and events can create informal learning pathways, mentorship opportunities and local networks.
- Employers benefit from candidates who can demonstrate real contributions, practical tooling experience and collaborative workflows.

## Recommendation

The Linux Association of Canada should connect its National IT Job Database to education pathways: every job category should eventually map to recommended Linux and open source skills, learning resources, certifications, projects and community groups.

# 4. Open Source AI and Digital Sovereignty

AI has become one of the most important open source questions for Canada. The issue is not simply whether models are open; it is whether Canada has the capacity to inspect, adapt, deploy and govern technologies that increasingly affect productivity, public services and economic development.

Linux Foundation Research's Canada-focused open source AI report argues that Canada has early momentum in policy development, funding and academic excellence, but faces challenges in commercialization. It says open source AI can lower barriers to access and market entry while enabling sovereign development through security, transparency and customization [5].

The global open source picture is also shifting. Linux Foundation's 2025 global report states that open source AI technologies had 40% current adoption, up five percentage points from 2024, and identifies AI as a technology area that benefits strongly from open source [6].

## Strategic implications for Canada

- Open source AI can lower the cost of experimentation for startups, universities, public agencies and small organizations.
- Transparent tooling can support explainability, auditability and public trust when used responsibly.
- Canada needs talent who understand open models, Linux infrastructure, MLOps, data governance and security.
- Open does not automatically mean safe; governance, evaluation, licensing, privacy and security review remain essential.

## Role for the Association

The Linux Association of Canada can help translate open source AI from a policy concept into practical public knowledge: workshops, plain-language explainers, verified resource lists, and job-skill mappings would be valuable starting points.

# 5. Security, Sustainability and Trust

The security of open source software has become a public-interest issue because open components are deeply embedded in commercial, government, educational and non-profit systems. Visibility is a strength, but maintenance burden, dependency risk and uneven funding remain persistent challenges.

The Open Source Security Foundation describes itself as a community of software developers, security engineers and organizations working together to secure open source software for the greater public good [11]. That framing is important: open source security is not only a vendor issue; it is ecosystem infrastructure.

The 2024 Open Source Software Funding Survey, a collaboration involving GitHub, the Linux Foundation and Harvard researchers, examined how organizations fund, contribute to and support open source software [12]. Funding and contribution practices matter because critical projects can be widely used without receiving proportional maintenance support.

## Practical risks

- Unmaintained dependencies remain in production systems after upstream support slows or stops.
- Organizations may use open source heavily without budgeting for maintenance, security review or contribution.
- Smaller projects may lack governance structures, release discipline or vulnerability disclosure processes.
- Canadian community groups may become hard to discover if their online information becomes stale.

## Trust infrastructure

The Association's verification program should become more than a badge. Over time, each verified resource should have a reviewed date, source URL, maintainer/contact status, activity indicator and clear criteria.

# 6. Community Infrastructure

Open source grows through communities as much as code. Local Linux user groups, workshops, university projects, civic technology groups, meetups and online communities help people learn, contribute and find peers. However, community information is often fragmented and outdated.

The Linux Association of Canada's current verification phase directly addresses this problem: a directory is only useful if people can trust that links, contacts and descriptions are current.

## The Association's role

- Maintain verified public directories for community groups, open source software and Linux distributions.
- Create a regular review cycle so stale resources are identified and updated.
- Promote community events and learning opportunities, not only software listings.
- Build bridges between community volunteers, employers, educators, public agencies and media.

## Suggested annual metrics

- Number of verified community groups and verified open source projects.
- Number of public events listed and regions represented.
- Number of current job postings monitored and expired postings removed.
- Website unique visitors and media kit downloads.
- Newsletter subscribers and press release distribution reach.
- Number of educational resources, workshops or partner events.

# 7. Recommendations for 2026-2027

## For the Linux Association of Canada

- Publish a quarterly open source ecosystem snapshot using verified directory data.
- Add methodology notes to every public metric and distinguish verified, submitted and unreviewed records.
- Build a bilingual open source learning pathway tied to job categories: Linux, cloud, DevOps, cybersecurity, data and AI.
- Create a public vulnerability and maintenance awareness guide for small organizations using open source software.
- Launch a national survey of Linux users, open source contributors and technology employers before the 2027 report.

## For public institutions

- Treat open source as a serious architecture and procurement option, with lifecycle planning and security review.
- Where appropriate, release reusable code and contribute improvements upstream.
- Invest in digital talent pathways that include Linux, open standards, DevOps, security and open collaboration skills.

## For employers and communities

- Recognize open source contribution as practical experience in hiring.
- Support employee contribution to critical open source dependencies where business operations rely on them.
- Keep project and group information current so newcomers can participate.
- Document governance, maintainers, contribution guidelines and licensing.

# Methodology and Limitations

This report uses secondary research from public sources, including Government of Canada digital guidance, federal reporting, technology workforce profiles, Linux Foundation research, GitHub's global open source reporting, and open source security/funding resources. It also incorporates the Linux Association of Canada's early platform priorities, including verification, media resources and the National IT Job Database.

## Limitations

- This is not a complete census of all Canadian open source projects, contributors or communities.
- Several open source indicators are global rather than Canada-specific because public Canada-specific datasets remain limited.
- The Association's own directories are still in verification, so internal data is not yet used as a formal statistical source.
- Future reports should include surveys, verified directory growth, regional breakdowns, community interviews and longitudinal metrics.

# Conclusion

Open source is now part of Canada's digital infrastructure, workforce development and innovation capacity. The opportunity is clear: Canada can benefit from open technologies when they are supported by strong communities, skilled workers, trustworthy directories, security practices and sustained public-interest infrastructure.

The Linux Association of Canada's immediate contribution is practical: verify information, connect communities, publish resources, monitor current opportunities and make open source visible to Canadians who can learn from it, build with it and contribute to it.

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