



DG DIGIT

Unit.B2 (Interoperability & Digital Government Unit)

# Open Source Software Country Intelligence Report

Finland

2025

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*Updated in April 2025*

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# Finland

## Executive summary

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Finland is a pioneer in the development of open source software (OSS). It was a Finnish student, Linus Torvalds, who created Linux in 1991, which has since become one of the largest OSS projects in the world. Finland has extensively adopted OSS in the public sector, with the first policies encouraging the use of OSS as an alternative to proprietary software implemented as early as in 2003. Various policies and legal frameworks were introduced around 2019, reflecting a surge in Finland's open source ecosystem. However, the latest government programme makes no mention of OSS.

Despite a strong tradition of OSS use, development and maintenance in the public sector, not many major new initiatives have emerged since 2020. Moreover, while use of OSS in the Finnish public sector is high compared to other countries, there is no central governmental body responsible for OSS policymaking. Instead, various governmental agencies run OSS initiatives in a decentralised manner, which highlights an opportunity for better OSS development and governance in the public sector. In addition to the strong support for OSS from the various Finnish government bodies, associations such as COSS, Open Knowledge Finland, and the Finnish Unix Users Association collaborate to promote and advocate for OSS adoption across the country.

Although the development of the open source ecosystem has slowed down in recent years, with fewer new initiatives and coordinated efforts to advance open source for the public sector, Finland's rich tradition and extensive experience in this field offer a promising foundation for the future. With its strong track record in OSS adoption and development, the country is well-positioned to reignite momentum and set a positive example for the public sector and open source moving forward.

## Actors

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This section presents the key governmental bodies and strategic players influencing awareness and uptake of OSS within Finland's government and the public sector.

### *Policymakers*

- Ministry of Finance<sup>1</sup>: There is not one central policymaker for OSS, but rather different governmental agencies running open source initiatives in a decentralised manner. Nevertheless, the Public Sector ICT Department of the Ministry of Finance guides public sector information management, structural development, joint services, and service provision. It coordinates the general criteria for e-services and information security and prepares information and governance policies and related legislation. It is also responsible for the performance guidance of the Digital

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<sup>1</sup> [Ministry of Finance-departments](#)

and Population Data Services Agency<sup>2</sup> and the Government ICT Centre Valtori<sup>3</sup>, two governmental agencies that also promote digital transformation.

- Ministry of Transport and Communications (MTC)<sup>4</sup>: The MTC is responsible for publishing the Digital Decade reports (see below) and has also in the past published policy content for OS<sup>5</sup>. It also controls the state-owned company Fintraffic Ltd<sup>6</sup>, which is responsible for open source initiatives such as Digitransit<sup>7</sup>.

#### *Strategic players*

- Centre for Open Systems and Solutions (COSS)<sup>8</sup>: COSS is a trade association that promotes open source, open data, open standards, and APIs. COSS aims to enhance the competitiveness of Finland's software-intensive industries, drive the growth and cross-border expansion of open source businesses, and support the development of the Finnish information society through open technologies and communities. It facilitates networking, fosters international collaboration, and provides legal expertise including support for open source licensing. Additionally, COSS coordinates OSS groups nationwide, supports research and develops OSS solutions for educational use.
- Association of Finnish Cities and Municipalities (Kuntaliitto)<sup>9</sup>: The Association of Finnish Cities and Municipalities promotes local self-government and the modernisation of municipal services. The Association plays a coordinating role, promoting the growth and interests of municipalities and their partner organisations, while offering essential services to support their development.
- Open Knowledge Finland (OKFI)<sup>10</sup>: OKFI supports projects, communities, and working groups focused on open knowledge, science and culture. They engage in discussions to shape the future digital society to ensure that it is fair, sustainable and open.
- The Finnish Unix Users Association (FUUG)<sup>11</sup>: FUUG was founded in 1984 and is the oldest association of open system users in Finland. The Fuug Foundation also distributes grants to promote open information systems.

## Policy and legal framework

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This section summarises the main digital and public services policies relating to open source software in Finland, including landmark strategies documents and implementation frameworks. The list is presented in a chronological order, starting from the most recent milestone.

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<sup>2</sup> [Digital and population data services agency](#)

<sup>3</sup> [Valtori Government ICT Centre](#)

<sup>4</sup> [MTC](#)

<sup>5</sup> [Publication of the Ministry of Transport and Communications](#)

<sup>6</sup> [Fintraffic](#)

<sup>7</sup> [Digitransit](#)

<sup>8</sup> [COSS](#)

<sup>9</sup> [Kuntaliitto](#)

<sup>10</sup> [Open Knowledge Finland](#)

<sup>11</sup> [FUUG](#)

- Strategic Roadmap for the Digital Decade, 2024<sup>12</sup>: Developed by the MTC, this document sets out digital policy goals to be achieved by 2030. While it does not explicitly address open source, its emphasis on digital transformation, interoperability, and public sector innovation aligns with the principles of open source adoption.
- Report on the ICT sector, climate and the environment, 2020<sup>13</sup>: In this interim report, prepared by the working group developing a climate and environmental strategy for Finland's ICT sector, the MTC highlighted the connection between rapid, high-quality software production for public sector services and OSS. The report emphasised that Finnish service providers must be able to swiftly adapt their services to meet the diverse needs of various stakeholders while ensuring high standards of quality. It also pointed out that the availability of general functionalities as open source code has significantly boosted the efficiency and speed of software development.
- Programme of Prime Minister Sanna Marin's Government, 2019<sup>14</sup>: The government programme of 10 December 2019 outlined plans to improve the management of information policy, stating that openness in public information will become its guiding principle. The government aimed to prioritise the use of OSS in public information systems and related procurement processes. To support this goal, it promoted the establishment of regulations mandating the purchase of OSS for public information systems, unless there were compelling reasons to choose otherwise.
- Programme of Prime Minister Antti Rinne's Government, 2019<sup>15</sup>: The previous government's program of 6 June 2019 served as the foundation for the subsequent program released on 10 December, and makes the same points regarding OSS as the subsequent document.
- General terms and conditions of IT procurement, 2015<sup>16</sup>: Annex 2 and Annex 3 of this legislation, written by the Digital and Population Data Services Agency, describe the terms and conditions for the procurement of open source software and proprietary software in Finland, clearly mentioning and differentiating the procurement regulations between these two types of software.
- Public Administration Recommendation on the use of OSS in public administration, 2009<sup>17</sup>: In February 2009, COSS published the document "The Use of Open Source Software in Public Administration", which was officially adopted as a Finnish public administration recommendation. Its objectives are to lower the threshold for IT buyers to adopt OSS in public sector procurements, enhance their knowledge about OSS, provide guidance on addressing legal and commercial challenges related to its acquisition, and promote best practices in OSS procurement.

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<sup>12</sup> [Digital Decade Strategic Roadmap](#)

<sup>13</sup> [Publication of the Ministry of Transport and Communications](#)

<sup>14</sup> [Government program December 2019](#)

<sup>15</sup> [Government program June 2019](#)

<sup>16</sup> [JHS-suositukset | Digi- ja väestötietovirasto](#)

<sup>17</sup> [Use of OSS in the Public Administration](#)

- Public Administration Information Management Advisory Board’s (JUHTA) Open Source Procurement Guide for public administrations, 2008<sup>18</sup>: Serving as an appendix to its national recommendation on public IT procurement terms and conditions, this guide outlines specific conditions relevant to the acquisition of OSS in procurement processes and provides detailed guidance for public sector entities on how to address legal issues related to open source licences, manage risks, and mitigate them effectively. In 2015, the guidelines were updated to reflect developments in agile software development practices and to integrate OSS considerations into the main document. Between 1992 and 2019, the JUHTA acted as a supporting body to the Ministry of Finance.
- Recommendation on the Openness of the Code and Interfaces of State Information Systems, 2003<sup>19</sup>: This paper, published by the Ministry of Finance, called for government agencies to consider OSS alternatives.
- Act on the Openness of Government Activities, 1999<sup>20</sup>: Originally published by the Ministry of Justice in 1999 and amended in 2015, this act does not explicitly mention OSS but is regarded by the 2019 government programmes as the foundational legislation enabling publicly owned companies to develop and release OSS, by requiring them to “open up” information resources.

## Open source software initiatives

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This section presents an overview of the main open source software-related initiatives in Finland. The list is presented in a chronological order, starting with the most recent initiative.

- OpenEuroLLM initiative, 2025<sup>21</sup>: In February 2025, the EU announced that it aims at developing a European open source AI model<sup>22</sup>. The project is co-funded by the EU and involves a consortium of nine project partners, including European universities such as the University of Helsinki and the University of Turku, as well as Finnish organisations like Silo AI<sup>23</sup> and the TurkuNLP research group<sup>24</sup>. Seeking to strengthen Europe’s digital sovereignty by ensuring that foundational AI technologies are developed in line with European values, data privacy standards, and languages, OpenEuroLLM strives to become the European counterpart to the large language models developed in the US and China.

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<sup>18</sup> [Open source procurement guide for public administrations](#)

<sup>19</sup> [Recommendation on the openness of the code](#)

<sup>20</sup> [Act on the Openness of Government Activities](#)

<sup>21</sup> [OpenEuroLLM](#)

<sup>22</sup> [EuroLLM-OSOR](#)

<sup>23</sup> [Silo AI](#)

<sup>24</sup> [TurkuNLP research group](#)

- Digital and Population Data Services Agency, 2025<sup>25</sup>: The agency has its own GitHub page<sup>26</sup> with 115 repositories for all of its services such as open data or geospatial open source APIs that are still being updated today.
- Finnish National Agency for Education, Koodisto, 2024<sup>27</sup>: This agency has its own GitHub page with 177 repositories. The most recent repository is that of the open source application<sup>28</sup> Koodisto, which manages and distributes common codecs to ease intercommunication between different services using the PostgreSQL database as persistent data storage.
- eVaka, 2020<sup>29</sup>: Deployed firstly by the city of Espoo, the OSS<sup>30</sup> eVaka is an ERP system providing citizens with information and functionalities on kindergartens and early childhood education centres. Specifically, eVaka allows guardians to apply for early childhood and pre-primary education, communicate securely with staff, and manage attendance. It also supports daycare operations, handling client data, fees and decision-making<sup>31</sup>. It is still active in 2025 and is being developed together with the cities of Tampere<sup>32</sup>, Oulu<sup>33</sup>, and Turku<sup>34</sup>.
- KOHA library system, 2019<sup>35</sup>: KOHA is an open source library system<sup>36</sup> composed of various open source features. It has been adopted in different libraries across Finland from 2019 onwards, starting with the University of Jyväskylä, as well as the National Library of Finland<sup>37</sup>.
- Kuntaliitto and COSS joint effort for open source in the local government, 2019<sup>38</sup>: Kuntaliitto collaborated with COSS through AvoinKoodi.fi, to work on their common goal of promoting OSS and making existing OSS applications available to citizens. Kuntaliitto supported and promoted municipalities in Finland to adopt the use of OSS to transform their services.
- AvoinKoodi.fi, 2017<sup>39</sup>: Translating into OpenCode.fi, the AvoinKoodi.fi website and GitHub page<sup>40</sup>, a collaborative creation of COSS and the company Solita Oy<sup>41</sup>, brings together a list of IT systems and open source initiatives in the domestic central government, municipal sector and education sector, whose source code is publicly available<sup>42</sup>. The purpose of the site is to facilitate information

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<sup>25</sup> [DVV](#)

<sup>26</sup> [DVV- GitHub](#)

<sup>27</sup> [Finnish National Agency for Education](#)

<sup>28</sup> [Koodisto- GitHub](#)

<sup>29</sup> [eVaka- OSOR](#)

<sup>30</sup> [eVaka- GitHub](#)

<sup>31</sup> [eVaka- Operations](#)

<sup>32</sup> [eVaka- Tampere](#)

<sup>33</sup> [eVaka- Oulu](#)

<sup>34</sup> [eVaka- Turku](#)

<sup>35</sup> <https://www.kiwi.fi/pages/viewpage.action?pagelId=93197824>

<sup>36</sup> [KOHA library system](#)

<sup>37</sup> [OSOR Article on KOHA in Finland](#)

<sup>38</sup> [Local Government & Open Source](#)

<sup>39</sup> [AvoinKoodi.fi](#)

<sup>40</sup> [AvoinKoodi.fi- GitHub](#)

<sup>41</sup> [Solita Oy](#)

<sup>42</sup> <https://github.com/cossfi/avoinkoodi>



discovery and mapping existing solutions, not to provide a comprehensive service platform or instructions to start projects. The website is maintained by the COSS association and its information is freely available.

- X-Road and the Nordic Institute for Interoperability Solutions (NIIS), 2017<sup>43</sup>: X-Road<sup>44</sup>, the data exchange layer for information systems used by Estonia<sup>45</sup> and Finland<sup>46</sup>, is a technological and organisational environment that enables secure Internet-based data exchange between information systems. It was launched by the Estonian government in 2001 to provide the public sector with a standardised and secure way to exchange information between its various departments and systems. X-Road was initially developed on a closed model, but after a pilot introduction of the project in Finland and the United Kingdom led to a long-term collaboration between Finland and Estonia, an open source licence was chosen in 2014<sup>47</sup>. In 2017, the two countries established the Nordic Institute for Interoperability Solutions (NIIS) to formalise their cooperation and jointly manage the development of X-Road 2.0. The entire X-Road source code is publicly available for anyone to use<sup>48</sup>. The X-Road technology is used nationwide in the Estonian public administration and in the Suomi.fi Data Exchange Layer service of the Finnish Digital and Population Data Services Agency, a Finnish API catalogue that enables organisations to build secure digital services for citizens, businesses and authorities<sup>49</sup>.
- Oskari, 2017<sup>50</sup>: Oskari is a Finnish open source<sup>51</sup> map platform, developed in 2017 by the National Land Survey of Finland<sup>52</sup>, which is subordinated by the Ministry of Agriculture and Forestry<sup>53</sup>. Oskari shares best practices and highlights the benefits of sharing government IT solutions. The use of OSS means that the system is continuously updated to a high quality and there is no concern of it being locked into one technical vendor. The software is active on GitHub.
- The City of Hämeenlinna, 2017<sup>54</sup>: The City of Hämeenlinna has its own GitHub repository<sup>55</sup> with several open source applications that it uses for its administration. For example, it uses Respa<sup>56</sup>, a backend service for reserving and managing resources.

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<sup>43</sup> [NISS](#)

<sup>44</sup> [X-Road](#)

<sup>45</sup> [OSOR-Country Intelligence-Estonia](#)

<sup>46</sup> [DVV-Xroad-GitHub](#)

<sup>47</sup> [X-Road Global History](#)

<sup>48</sup> [X-Road- GitHub](#)

<sup>49</sup> [Suomi.fi](#)

<sup>50</sup> [OSKARI-OSOR](#)

<sup>51</sup> [OSKARI- Github](#)

<sup>52</sup> [National Land Survey of Finland](#)

<sup>53</sup> [Ministry of Agriculture and Forestry](#)

<sup>54</sup> <https://www.hameenlinna.fi/en/>

<sup>55</sup> [Hameenlinna](#)

<sup>56</sup> [Respa](#)

- City of Turku's GitHub organisation, 2016<sup>57</sup>: The City of Turku offers its online open source service under a shared use agreement with the original licence. This open approach allows anyone to access and utilise the source code for features such as the news functionality and event calendar. Originally launched in 2016, the service is developed with a customer-centric and agile methodology to effectively meet user needs. The Turku region's event calendar<sup>58</sup> continues to operate, with an ongoing use and maintenance of open source components<sup>59</sup>. Additionally, Turku's GitHub organisation hosts various repositories related to its digital services, which can be explored at its GitHub repository. It includes several projects like the developers' handbook<sup>60</sup>, providing guidelines for software development within the city, eVaka, and Decidim<sup>61</sup>, an OS related to participatory budgeting initiatives<sup>62</sup>.
- Digitransit, 2016<sup>63</sup>: Digitransit is an open source<sup>64</sup> journey planning platform that combines various OS components into a route planning service. Digitransit is a joint venture between Fintraffic, the Helsinki Region Transport HSL<sup>65</sup>, and Waltti Solutions<sup>66</sup>. For the platform to be fully operational, route planning algorithms and APIs are provided by Open Trip Planner (OTP), which is an open source<sup>67</sup> multi-modal trip planner. The Digitransit platform enhances this with a mobile-friendly user interface, map tile serving, geocoding, and various data conversion tools. Other open source projects outside Finland such as the Stadtnavi project in Germany<sup>68</sup>, which aims to improve urban air quality by promoting sustainable mobility, are based on Digitransit.
- Helsinki Region Infoshare (HRI) Loves Developers initiative, 2015<sup>69</sup>: The HRI is an open data service of the cities of Helsinki, Espoo, Vantaa and Kauniainen. The service provides data on the cities of the Helsinki Metropolitan Area and the entire region, free of charge and free to access. More specifically, Helsinki has launched a developer's portal which has been operated by the city's OSS development team since 2015. The initiative is still active.
- The Advisory Committee on Information Management in Public Administration (JUHTA), 2013<sup>70</sup>: JUHTA is a body that promotes cooperation on information management between central and local government authorities. As a supporting body for the Ministry of Finance, it was in charge of giving recommendations on public administration information management, including the use of

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<sup>57</sup> [City of Turku- Github](#)

<sup>58</sup> [Turku's event calendar](#)

<sup>59</sup> [Kada-events](#)

<sup>60</sup> [Turku's developers handbook](#)

<sup>61</sup> [Decidim-Turku](#)

<sup>62</sup> [Decidim.org](#)

<sup>63</sup> [Digitransit](#)

<sup>64</sup> [Digitransit- GitHub](#)

<sup>65</sup> [HSL community](#)

<sup>66</sup> [Waltti Solutions](#)

<sup>67</sup> [OTP](#)

<sup>68</sup> [Stadtnavi-Germany-OSOR](#)

<sup>69</sup> [HRI Loves Developers](#)

<sup>70</sup> [JUHTA-OSOR](#)

OSS<sup>71</sup> in public administrations. It was appointed by the Finnish Government every three years, but its mandate has not been renewed since 2022<sup>72</sup>.

- Open Kvarken, 2008<sup>73</sup>: The cities of Umeå in Sweden and Vaasa in Finland collaborated on the Open Kvarken Project from 2008 to 2011. During the project, they tested, introduced and marketed different OSS solutions in the region.
- Joint Venture on the Applied Linux Institute, 2003<sup>74</sup>: The Applied Linux Institute, a collaboration between the Department of Communications, the Institution of Adult Education in Vantaa (University of Helsinki), and the Department of Schooling and Education of the City of Vantaa - all public institutions - focused on research and development of open source applications. There is currently no data available to confirm whether the institute is continuing its activities. Digitraffic, 2002<sup>75</sup>: Digitraffic is a service that offers real-time traffic information. It is active in 2025 and is operated by Fintraffic Ltd<sup>76</sup>, a state-owned company that works under the ownership steering of the MTC. The group provides and develops traffic control and management services in all traffic forms on land, in the air, and at sea. The information of Digitraffic is open data, which is distributed through open APIs<sup>77</sup> and licensed under the Creative Commons 4.0 BY licence, which supports the use of this data in service and software development. The development of Digitraffic started in 2002 as a joint project between VTT Technical Research Center of Finland<sup>78</sup> and Aalto University<sup>79</sup>, intending to produce improved services for traffic telematics.
- Mindtrek, 1997<sup>80</sup>: Mindtrek is an international technology conference organized annually in the city of Tampere that offers a horizontal view into the field of future technology. The themes of the conference vary each year and can cover topics such as open source, open data, smart city, immersive tech, eHealth, IoT, AI and more. The first Mindtrek conference in Finland was held in 1997, initially known as the "Tampere Multimedia Competition." The next conference will take place in October 2025.
- COSS Avoin kunta<sup>81</sup>: Translating into COSS Open Municipality, the Avoin kunta is a movement started by COSS and its members to improve municipalities' functioning and data handling. There is no data on the exact date the movement started, but it remains active today.

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<sup>71</sup> [IP Management by Government in Finland - WIPO](#)

<sup>72</sup> [JUHTA-term](#)

<sup>73</sup> [Open Kvarken](#)

<sup>74</sup> <https://www.linuxjournal.com/article/7110>

<sup>75</sup> [Digitraffic](#)

<sup>76</sup> [Fintraffic](#)

<sup>77</sup> [Digitraffic - GitHub](#)

<sup>78</sup> [VTT](#)

<sup>79</sup> [Aalto University](#)

<sup>80</sup> [Mindtrek](#)

<sup>81</sup> [Coss Avoin Kunta](#)

