



DG DIGIT

Unit.B2 (Interoperability & Digital Government)

# Open Source Software Country Intelligence Report

Slovakia

2023

This research was carried out by OpenForum Europe for the Interoperable Europe initiative under the Digital Europe Programme. The report provides an overview of open source software (OSS) in Slovakia as of October 2023. This report was enriched with the kind contribution of local open source activists: Ján Suchal, Jan Gondol, Peter Hanecak and Martin Šechný.



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*Updated in October 2023*

# Table of Contents

Executive Summary	3
Actors	4
Policy and legal framework	5
Open source software initiatives	6

# Slovakia

## Executive Summary

In Slovakia, the main body responsible for drafting Open Source Software (OSS) policies and strategies is the Ministry of Investments, Regional Development and Informatization of the Slovak Republic (MIRRI). This governmental agency and its units play a critical role in shaping and implementing laws related to OSS. The Digital Agenda Unit focuses on aligning government goals with the Digital Europe Program, the OECD, and UN inclusive development principles, while also executing the Action Plan for Digital Transformation of Slovakia 2023-2026. Additionally, the Public Administration Information Technologies Unit is responsible for legislative content in the area of informatisation and IT usage by public administration, the issuing of IT system standards, and coordinating national and international cooperation.

In terms of the legal framework, Slovakia has enjoyed mixed progress in promoting OSS. The 2021 National Concept of Informatisation of Public Administration explicitly mandated an increased use of OSS and encouraged the free reuse of source code within public administration, aiming to reduce development costs and prevent vendor lock-in. Act 95/2019, which has been in force since 2019, also mandates the reuse of software developed by public administration. Many reusable components are supplied by non-governmental actors, like Slovensko.Digital, who support the implementation of the country's digitisation goals. However, the 2021 changes introduced in the National Concept of Informatisation also point to fragility of political commitments. While the codification of open source principles demonstrates Slovakia's commitment to embracing the benefits of open source in public administration, there is still a long way to go with regards to adoption of open source solutions.

In addition to the government-driven actions, civil society organisations, such as the Society for Open Information Technologies (SOIT) and the aforementioned Slovensko.Digital, play a crucial role in fostering transparency and efficiency in the use of public resources and in advocating for and promoting the use of open source. Several OSS initiatives are also making an impact in Slovakia, with events like PyCon SK and OpenSlava popularising open source technologies among developers. On the municipal level, Bratislava has been leading the charge by developing its open source digital services ecosystem, while Košice adopted an open source management system for its city administration. During the Covid-19 pandemic, several initiatives, both on a ministerial and non-governmental level, made use of open source solutions to enable tracking and modelling of the spread of Covid-19. Overall, Slovakia is incrementally recognising the value of OSS in digital progress and both governmental and non-governmental actors are working to advance the digitalisation of public administration and enhance digital literacy.

## Actors

This section presents the key governmental bodies responsible for setting OSS policies and the main strategic players that work together with the government at all levels to raise awareness of OSS. In Slovakia, there is no governmental body that is specifically responsible for OSS policies.

### *Policy makers*

- The Ministry of Investments, Regional Development and Informatization of the Slovak Republic (MIRRI) is the governmental body responsible for the design and implementation of the policies related to digital services for the Slovak government. MIRRI was established in July 2020 and replaced the Office of the Deputy Prime Minister for Investments and Informatisation, which had been responsible for the digital portfolio.<sup>1</sup> Within the MIRRI, several units are responsible for the delivery of policies that have an impact on OSS:
  - Digital Agenda Unit (*Sekcia digitálnej agendy*) carries out the goals of the 2030 Digital Transformation Strategy<sup>2</sup>, the long-term digitisation strategy that aligns the government's goals with those of the Digital Europe Program as well as the OECD and UN Sustainable Development Goals. Moreover, it is responsible for the execution of the updated Action Plan for Digital Transformation of Slovakia 2023-2026.
  - Public Administration Information Technologies Unit (*Sekcia informačných technológií verejnej správy*) is the coordinating division tasked with preparing the substantive content of legislation in the area of informatisation and IT of public administration. Moreover, it creates methodological guidelines for eGovernment, issues standards for the public administration's IT systems, and coordinates national and international cooperation on these matters.
- The National Agency for Network and Electronic Services (*Národná agentúra pre sieťové a elektronické služby* or *NASES*) is an agency body overseen by the MIRRI. The Agency launched an open data portal, [data.gov.sk](https://data.gov.sk), which emphasises openness and promotes the sharing of government data as open data.<sup>3</sup> As part of the portal, the Agency also encourages creating ICT services using open application programming interfaces (APIs).

### *Strategic players*

- Society for Open Information Technologies (*Spoločnosť pre otvorené informačné technológie in Slovak* or SOIT) is a Slovak non-profit civic association that advocates for the use of open information technologies in diverse areas of the society.

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<sup>1</sup> [Law of May 14, 2020, which amends Act no. 575/2001 on the organisation of government activities and the organisation of the central state administration](#)

<sup>2</sup> [Stratégia digitálnej transformácie Slovenska 2030](#)

<sup>3</sup> [data.gov.sk](https://data.gov.sk)

- Slovensko.Digital is a Slovak civic association promoting transparency and efficiency in the use of public resources as well as the digitalisation of public administration. Its members include both organisations and individuals “who care about better state services and a better [quality of life] in Slovakia.” Slovensko.Digital offers e-government services while also acting as a watchdog that reviews state projects. The association promotes and develops OSS solutions in cooperation with the Slovak public administration.

## Policy and legal framework

This section summarises the main OSS-related policies and legal acts of the last ten years, including the first known milestone in this domain. The list is presented in chronological order, starting from the most recent milestone.

National Strategy for Digital Skills of the Slovak Republic, 2023<sup>4</sup> shows insights into the digital upskilling of the Slovak population, which is needed to ensure the country’s readiness for the Digital Decade. While the Strategy does not refer to OSS explicitly, it advocates for open science and open data. The National Strategy also promotes the goals of the EU’s Digital Competences Framework 2.2<sup>5</sup> (DigComp 2.2) for cross-curriculum digital literacy. DigComp 2.2 supports the use of OSS, and its principles of cross-curriculum digital literacy are used as a blueprint for the ongoing primary education curricular reform.

- National Concept of Informatisation of Public Administration, 2021<sup>6</sup> explicitly mandates, in Chapter 2, an increased usage and free reuse of OSS by the public administration. By implementing reusable OSS source code, “public administration can help save development costs, avoid the effect of vendor lock-in and allow rapid adaptation to specific needs of public administrations.” It is an amended version of the 2016 National Concept for Informatisation of Public Administration (below).
- Act 95/2019 on information technologies in public administration and on amendments to certain laws, 2019<sup>7</sup> is the law which mandates the reuse of software developed by public administration. While the law has been in force for four years, it has not yielded many reusable components or solutions from the public administration. Most of the openly shared code was supplied by Slovensko.Digital and similar actors.
- Decree 78/2020 on standards for information technologies of public administration, 2020<sup>8</sup> sets up the ICT standards guide for public sector organisations. It mandates them to make future desktop software solutions, new browser plug-ins and client applications available as OSS.
- Open Government Partnership National Action Plan of the Slovak Republic, 2017-2019:<sup>9</sup> Within

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<sup>4</sup> [Národná Stratégia Digitálnych Zručností Slovenskej Republiky A Akčný Plán Na Roky 2023–2026](#)

<sup>5</sup> [DigComp 2.2: The Digital Competence Framework for Citizens - With new examples of knowledge, skills and attitudes](#)

<sup>6</sup> [Národná koncepcia informatizácie verejnej správy Slovenskej republiky 2021](#)

<sup>7</sup> [95/2019 Z. z. Časová verzia predpisu účinná od 01.07.2020 do 31.12.2020](#)

<sup>8</sup> [78/2020 Z. z. Časová verzia predpisu účinná od 01.05.2020 do 22.06.2021](#)

<sup>9</sup> [Open Government Partnership National Action Plan of the Slovak Republic 2017–2019](#)

the framework of the Open Government Partnership, the Slovak government's Action Plan outlines the implementation and development of OSS solutions in public administration. The government committed to disclosing the source code and to development using open methods for newly developed plug-ins and extensions of web browsers and client applications.<sup>10</sup> Moreover, the government declared its intention to explore the possibility of publishing parts of the code and documentation related to its custom-made information systems under open source licences in addition to publishing their open source solutions on the Open Data Portal. These commitments call for studies to be conducted in order to document the possibilities, advantages and disadvantages of using open source solutions and other licensing models.

- The National Concept of Public Administration Informatics, 2016<sup>11</sup>: A strategic document prepared by the ODPMII in 2016 which dealt with the principles of eGovernment-building in Slovakia. This strategic document set a 2020 target for the use of open source ICT systems by Slovakia's public administrations at 40%. It has since been replaced by the 2021 National Concept (above). The 2016 version included high-impact compromises favourable to OSS that were removed in the 2021 version.
- Implementing Decision of the Finance Ministry No 55/2014 on Standards for Information Systems in Public Administration, 2014<sup>12</sup> led to the ICT standards guide from 2020.<sup>13</sup> The guide sets the data provision standards for public sector organisations and lists the quality assurance conditions that need to be met when designating data as open.

## Open source software initiatives

This section presents an overview of the main OSS-related initiatives in Slovakia. The list is presented in chronological order, starting with the most recent initiative.

- PyCon SK, 2024<sup>14</sup>: A biennial gathering of Python users and developers organised by SPy, the Slovak Python User Group. This civic association focuses on the promotion and dissemination of the Python programming language and other open source technologies and ideas.<sup>15</sup> The association uses the community gathering to pursue its mission of expanding the Slovak and international community of Python programmers. The event also provides an opportunity for the group to connect and inspire one another. The 2022 edition spanned three days and featured 54 speakers, multiple workshops for beginners and advanced users, and a hackathon. The next edition of PyCon SK is taking place on 15-17 March 2024.

<sup>10</sup> Commitment No. 17 of the Open Government Partnership National Action Plan of the Slovak Republic 2017–2019

<sup>11</sup> [Národná koncepcia informatizácie verejnej správy Slovenskej republiky](#) (2016)

<sup>12</sup> [Predpis bol zrušený predpisom 179/2020 Z. z. 55/2014 Z. z.](#)

<sup>13</sup> [Vyhláška Úradu podpredsedu vlády Slovenskej republiky pre investície a informatizáciu zo 16. marca 2020 o štandardoch pre informačné technológie verejnej správy](#) (2020)

<sup>14</sup> [PyCon SK 2024](#)

<sup>15</sup> [Python.SK](#)

- OpenSlava, 2023<sup>16</sup>: OpenSlava is an annual open source IT conference which focuses on trends and emerging technologies. The event started in 2013 and is supported by the Slovak University of Technology in Bratislava.<sup>17</sup> The 2023 edition took place on 18-19 October and focused on generative AI foundation models.
- GLPI implementation in Košice, 2023: In July 2023, the city of Košice implemented GLPI,<sup>18</sup> an open source service management solution, released under the GNU GPLv3, to improve the management of IT services for the city and its organisations.<sup>19</sup> The migration was successful and concluded within 7 months (two months ahead of schedule), with Košice enjoying a well-functioning open source management software which is also in line with the ITIL 4 best practices.<sup>20</sup>
- City of Bratislava, 2022: The city has built an ecosystem of open source digital services that its organisations and, eventually, all its 17 city boroughs, can use to make access to their digital services easier, faster, more trustworthy and more transparent.<sup>21</sup> The service can be accessed through the city's website, bratislava.sk,<sup>22</sup> which is set up with an open API.<sup>23</sup> Citizens can access all their municipal services online, including paying their taxes, buying swimming pool tickets, and following the status of their requests. The services have been available to physical and legal persons since 2023. Other Slovak cities are expected to take up the solutions, and their open nature means that they can also be adopted by foreign municipalities.
  - PlatbaDane,<sup>24</sup> one of the solutions developed by the city of Bratislava as part of the eID move, is an easy GDPR-compliant web app for citizens to pay their taxes online, which has improved the experience for the residents and made paying taxes faster. In the first 72 hours of the solution being online, 54,3% of taxpayers paid their taxes, with 69% using a QR code and the rest using a payment gateway. That is a significant year-on-year increase as in 2021 only 39% of taxpayers submitted their forms within that same time period. According to the feedback collected by the city administration, 93% of residents would recommend this service to a friend.
- Slovensko.Digital is responsible for several OSS-based projects whose aim lies in increasing accessibility and transparency of governmental services, leading to their better functioning.
  - Slovakia's Central Government Portal,<sup>25</sup> slovensko.sk, was recreated by

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<sup>16</sup> [OpenSlava 2023](#)

<sup>17</sup> [Slovak University of Technology in Bratislava](#)

<sup>18</sup> [GLPI Project](#)

<sup>19</sup> [Success story: City of Košice \(OMNICOM partner\)](#)

<sup>20</sup> [ITIL | IT Service Management](#)

<sup>21</sup> See previous report on OSS developments in Bratislava published on OSOR (19 April 2022): [New open source digital services for the residents of Bratislava](#)

<sup>22</sup> [Bratislava.SK](#)

<sup>23</sup> [Bratislava.SK · GitHub](#)

<sup>24</sup> [Digitálna platba dane z nehnuteľností](#)

<sup>25</sup> [Slovensko.sk Portal](#)



Slovensko.Digital using an open API in 2021.<sup>26</sup> The portal focuses on integrating information such as queries, guides, or descriptions, along with electronic public services, and provides them to users through a single entry point in an accessible and comprehensive way. The main purpose of the portal is to guide users to the correct public e-service and to assist in the use of relevant information resources. The website's provider and webmaster is the National Agency for Network and Electronic Services.

- Better Services (*Lepšie Služby*)<sup>27</sup> is a website based on an open API<sup>28</sup> that was set up by Slovensko.Digital in collaboration with one of their members, EEA – an IT services company.<sup>29</sup> The website constitutes a space where citizens, entrepreneurs, and officials can “get involved and draw attention to the problems of the state's electronic services, or send suggestions in the form of proposals for their improvement.”<sup>30</sup>
- Guides.Digital (*Návody.Digital*)<sup>31</sup> is a community project based on an open API,<sup>32</sup> led by Slovensko.Digital. On the portal, users find clear and interactive instructions on how to handle official matters electronically, with the guidelines provided partially on the basis of real user experience and information pulled from official government websites.
- Covid-19 data collection and modelling, 2020: The Institute for Healthcare Analytics (*Inštitút zdravotných analýz* or *IZA*), which functions as an analytical and advisory unit of the Ministry of Health of the Slovak Republic, publicly shared a number of open source-based projects related to tracking and modelling the spread of Covid-19 in Slovakia.<sup>33</sup> These include a pandemic wave agent-based model with intervention simulation,<sup>34</sup> an algorithm used to optimally assign hospital stays to specific medical services within the hospital network<sup>35</sup> and forecasts for the spread of the pandemic.<sup>36</sup>
- Slovensko.Help,<sup>37</sup> an initiative within the IT sector, organised resources to aid the government in reducing the spread of the Covid-19 pandemic. The collective produced a central database accessible via IZA's GitHub which contains data sets related to the Covid-19 pandemic.<sup>38</sup> The

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<sup>26</sup> [Slovensko.SK API · GitHub](#)

<sup>27</sup> [Lepšie služby](#)

<sup>28</sup> [lepsiesluzby.sk | GitHub](#)

<sup>29</sup> [EEA.sk](#)

<sup>30</sup> [LepšieSlužby.sk | Slovensko.Digital](#)

<sup>31</sup> [Navody.Digital](#)

<sup>32</sup> [slovensko-digital/navody.digital · GitHub](#)

<sup>33</sup> [Inštitút zdravotných analýz / Institute for Healthcare Analyses · GitHub](#)

<sup>34</sup> [Covid-19 Model by IZA · GitHub](#)

<sup>35</sup> [OSN-MedicalServiceGrouping by IZA · GitHub](#)

<sup>36</sup> [Covid 19 Forecasts · GitHub](#)

<sup>37</sup> [slovensko.help](#)

<sup>38</sup> [Covid-19 Data by IZA · GitHub](#)

organisation also put together the “Covid.chat” web app which provides people with up-to-date information about the situation, prevention and diagnostics of Covid-19.<sup>39</sup> The app is open source, with the code made available through the organisation’s GitHub page.<sup>40</sup>

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<sup>39</sup> [Covid.chat](#)

<sup>40</sup> [slovensko-help/projekty/chatbot.md at master · GitHub](#)

