Open Source Software Country Intelligence Report

Iceland

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Executive Summary

In Iceland, the use of open source software (OSS) is currently promoted by the Ministry of Finance and Economic Affairs. With an emphasis on increasing efficiency, transitioning into e-services and more interoperability, the task of expanding the Icelandic information society is rooted in the use, transformation and share of data for the development of IT systems for the government.

The 2007 Policy of Free and Open Software set in motion the increased use of OSS in the public sector, encouraging public institutions to evaluate open source solutions in all new software purchases and implementation. It was followed by the 2011 Action Plan that expanded the support given to public institutions willing to make the transition.

Initiatives that reuse e-government tools from other countries (such as X-Road) and open up the source code of the government's service portal Ísland.is to contributors are examples of the use of OSS in the Icelandic public sector. Both projects are currently being managed by the Minister of Finance and Economic Affairs and align with the e-Power Expansion of 2013-2016 policy, which highlights the need to shift to e-services. The new Policy on Digital Public Services was published in June 2021, listing the use of open source as the foundation for increased transparency and innovation in the public sector.

Actors

This section presents the key governmental bodies that are responsible for setting OSS policies and the main strategic players that work together with the government at all levels to raise awareness on OSS.

Policy makers

- The Ministry of Finance and Economic Affairs (*Fjármála- og efnahagsráðuneytið*[1]) is currently responsible for overseeing the digital transition of the public administration. Within the task of developing the Icelandic information society, the use of OSS in the public administration is aligned with the promotion of digital freedom[2] and the individuals' rights to use digital resources through free and open tools. Alongside the provision of educational materials on digital freedom, free software, open standards and free knowledge, the Ministry of Finance and Economic Affairs offers a comprehensive list of OSS for different needs[3].

- The Digital Iceland project office (*Stafrænt Ísland*[4]) within the Ministry of Finance and Economic Affairs is currently charged with the responsibility of improving the communication between

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[1] https://www.stjornarradid.is/raduneyti/fjarmala-og-efnahagsraduneytid/
[2] https://www.stjornarradid.is/verkefni/upplysingasamfelagid/stafraent-frelsi/
[3] https://www.stjornarradid.is/verkefni/upplysingasamfelagid/stafraent-frelsi/listi-yfir-opinn-hugbunad/
[4] https://island.is/stafraent-island

citizens, companies, and public institutions[5]. The project office was established in 2018 to support public institutions in improving their digital services[6] and oversaw the release of the new portal for digital public services, whose code was made publicly available[7].

- The Ministry of Education, Science and Culture (*Mennta- og menningarmálaráðuneytið*[8]) has promoted the use of OSS in schools and universities since 2011[9]. This promotion occurred through conferences that presented case studies and the exchange of experiences and knowledge between schools[10]. In 2011 the national curriculum was also updated, putting emphases on democratic working methods and attitudes aligned with the use of tools and material with open licenses[11].

Strategic players

- Founded in 2008, the Icelandic non-profit organisation Citizens Foundation[12] works on creating open online engagement platforms that help connect public administrations and citizens. Citizens Foundation advocates for innovation and technology as tools that increase the performance and trust of public organisations, facilitate democratic debate and boost citizen participation in public matters. The foundation also provides consultancy services to governments.

Policy and legal framework

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

- The Policy on Digital Public Services[13], published in June 2021, lists the use and development of new open source solutions to increase the competitiveness of the public sector. Both OSS and web services will serve as the foundation to increase transparency, foster innovation and bridge the gap between the government and private sector.

- The Icelandic financial plan for 2021-2025[14] puts emphasis on continuing to use OSS as a tool for improving the performance and efficiency of public services. For the years 2020-2021, the improvement of the operation of web systems and digital services in the public sector relies on

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[5] https://island.is/stafraent-island#5PXcvoOcxqOhrX26kfNcTl
[6] https://island.is/stafraent-island/teymid-okkar
[7] https://github.com/island-is/island.is
[8] https://www.stjornarradid.is/raduneyti/mennta-og-menningarmalaraduneytid/
[9] https://www.stjornarradid.is/gogn/rit-og-skyrslur/stakt-rit/2011/08/23/Framhaldsskolar-innleida-frjalsan-hugbunad/
[10] https://www.stjornarradid.is/efst-a-baugi/frettir/stok-frett/2011/02/24/Frjalsi-dagurinn-25.-februar-2011/
[11] https://www.stjornarradid.is/raduneyti/fjarmala-og-efnahagsraduneytid/fyrri-fjarmalaradherrar/stok-raeda-fyrrum-fjarmalaradherra/2011/11/22/Radstefna-um-opid-menntaefni/
[12] https://www.citizens.is/
[13] https://island.is/s/stafraent-island/stafraen-stefna
[14] https://www.stjornarradid.is/verkefni/rekstur-og-eignir-rikisins/skipulag-og-stjornun-rikisstofnana/aherslur-i-rikisrekstri-/

open source software due to the increased opportunities it provides for collaboration and innovation[15].

- The e-Power Expansion - create, connect, participate (Icelandic State and Municipal Policy on the Information Society 2013-2016) policy[16] presented six principal goals for the development of the Icelandic Information Society and increased use of e-services and online authentication. This policy serves as a framework for the current task on information society and matters such as access to open data and the development of a single portal for administrative services, later materialised through the *Ísland.is* portal.

- In 2011, the government's working group for the implementation of OSS presented the Action plan for the introduction of free and open source software by public bodies[17]. The document shared the necessary steps for a smooth transition into the use of open source platforms within public administrations and focused on supporting public bodies who agreed to use and implement OSS. This support was offered through information and supporting materials and the provision of staff and external specialists. Additionally, the plan included goals on sharing and reuse through improved procurement.

- In 2007, the task-force for e-government of the Prime Minister's Office launched the Policy on Free and Open Source Software[18]. The policy was based on the 2005 Open Source Software (*Opinn hugbúnaður*) report[19], policies implemented in other countries and material from the European Union[20]. It highlights five courses of action, future steps, and ministries to involve for a seamless implementation and applies to all institutions and organisations operated with public funds. The policy aims to promote the selection and use of OSS, recommending for it to be equally considered when purchasing new software[21].

Open source software initiatives

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

- Rakning C-19[22], 2020[23]: The Rakning C-19 is a COVID-19 contact tracing mobile application and the result of a private initiative developed in collaboration with the Icelandic Directorate of Health and the Department of Civil Protection and Emergency Management. In May of 2020, it was reported that over 40% of the Icelandic population installed the application[24]. Provided

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[15] https://www.stjornarradid.is/default.aspx?pageid=4725b620-8559-4c26-b216-bf565c4d27a4#Tab5
[16] https://www.government.is/topics/information-society/
[17] https://www.stjornarradid.is/gogn/rit-og-skyrslur/stakt-rit/?NewsId=9e1baf68-bae5-11e6-8342-a4db302334b0
[18] https://www.stjornarradid.is/efst-a-baugi/frettir/stok-frett/?NewsID=4b774ec2-bad4-11e6-8342-a4db302334b0
[19] https://www.stjornarradid.is/media/forsaetisraduneyti-media/media/Onnur_Gogn_Innri/ParX_OS_Notkun_opins_hugbunadar_v0.20.pdf
[20] https://www.stjornarradid.is/efst-a-baugi/frettir/stok-frett/?NewsID=4b774ec2-bad4-11e6-8342-a4db302334b0
[21] https://joinup.ec.europa.eu/collection/open-source-observatory-osor/document/policy-free-and-open-source-software
[22] https://www.covid.is/app/en
[23] https://www.loc.gov/law/help/coronavirus-apps/iceland.php
[24] https://perma.cc/G22G-FQAK

under the MIT License[25], the choice to offer this tool as OSS was rooted in the desire to foster cooperation with other governments and improve the application with the work of contributors.

- Embla, 2020[26]: Embla is an Icelandic-language voice assistant application developed with the support of the Icelandic government initiative aimed at integrating the Icelandic language into digital technology. Described as a natural language processing product and provided as an open source product on Github[27], the core development the free mobile application was done by *Miðeind*[28].

- Ísland.is, 2019[29]: The public service portal of Iceland was created to become the single location for all communication between government institutions and citizens, increasing the autonomy of the latter. Presenting a new and improved design in September 2020, all the code used in the new official website has been publicly shared in a repository[30] to promote the development of more government services in the platform[31].

- X-Road on the Straumurinn, 2018[32]: Straumurinn is a solution adopted to simplify the communication and delivery of services between citizens and government institutions[33]. It uses X-Road, an OSS eGovernment tool whose purpose is to securely exchange data. Due to the cooperation between Iceland and the Nordic Institute for Interoperability Solutions (NIIS)[34] and the development of extensions, the platform was implemented in the Ísland.is portal[35]. It currently serves as a tool to improve the organization and efficiency of Icelandic public administrations[36].

- APIS.is, 2012[37]: The API.is website was developed with the purpose of aggregating all application programming interfaces (API) and making data readily available to developers who are interested in integrating it in their own applications. The available data covers subjects such as transportation, health and commercial services, sports, culture and weather.

- Your Priorities, 2008[38]: Your Priorities is a web app platform developed by Citizens Foundation[39], that provides a stage for citizen participation on public projects[40]. The platform is offered as an open source[41] solution and some of the key features include the provision of a social network

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[25] https://github.com/aranja/rakning-c19-app
[26] https://mideind.is/embla.html
[27] https://github.com/mideind/Embla_iOS
[28] https://mideind.is/english.html
[29] https://island.is/
[30] https://github.com/island-is/island.is
[31] https://island.is/stafraent-island
[32] https://x-road.global/iceland-joins-the-nordic-interoperability-league-with-straumurinn
[33] https://island.is/straumurinn
[34] https://www.niis.org/
[35] https://island.is/straumurinn
[36] https://x-road.global/iceland-joins-the-nordic-interoperability-league-with-straumurinn
[37] http://docs.apis.is/#about
[38] https://www.citizens.is/portfolio_page/your-priorities-yrpri/
[39] https://www.citizens.is/
[40] https://www.citizens.is/getting-started/
[41] https://github.com/CitizensFoundation/your-priorities-app

for citizen engagement, being a place for crowdsourcing of ideas for policymaking, and allowing for effective debate between participants with a design built to halt personal arguments[42]. In Iceland, the platform has been used to receive citizens' input on urban challenges, constitutional and policy revisions, participatory budgets of municipalities and the presentation and swift discussion on parliamentary bills and resolutions. It has been reused for similar purposes in other countries[43].

- Oskari in the Icelandic National Geoportal[44]: Oskari[45] is a tool for building web maps, which displays geospatial data and allows for in-depth analysis of geographical information. It was adopted by the National Land Survey of Iceland (*Landmælingar Íslands*)[46], the agency responsible for collecting, managing and disseminating geographical information, and implemented in the Icelandic National Geoportal (*Landupplýsingagátt*)[47], where users explore the administrative and geographic data of Iceland. The tool was originally launched by the Finnish National Land Survey (*Maanmittauslaitos*)[48] and used for similar purposes such as the geodata portal *Paikkatietoikkuna*[49].

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[42] https://github.com/CitizensFoundation/your-priorities-app
[43] https://www.citizens.is/portfolio/
[44] https://joinup.ec.europa.eu/collection/open-source-observatory-osor/document/oskari-case-studies-sustainability-public-sector-open-source-communities
[45] https://oskari.org/
[46] https://oskari.org/gallery/icelandic_geoportal
[47] https://kort.lmi.is/
[48] https://www.maanmittauslaitos.fi/en
[49] https://www.maanmittauslaitos.fi/en/e-services/geodata-portal-paikkatietoikkuna