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Open Source Software Country Intelligence Report

Japan

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Japan

Executive Summary

Japan has a long history of using and supporting open source software (OSS). Both the Japanese government and the private sector collaborated in the development and implementation of OSS in Japanese society in the early 2000s.[1] However, this participation has decreased since then and has been replaced by increased efforts in digital infrastructure standardisation and software development. The Japanese government does not actively promote OSS in the public sector at the national level, but the recently established Digital Agency could be a new player in this field. The Ministry of Economy, Trade and Industry (METI) is active on the issue of OSS cybersecurity and supports and provides advice on measures taken by private actors in this regard.

There is no national policy promoting or regulating the use of OSS for public administrations, but local governments, such as the Tokyo Metropolitan Government, are promoting it as part of their digital strategy. Local governments have shown more interest in the use and reuse of OSS, particularly in the area of emergency preparedness. Their efforts have been supported by various associations and initiatives promoting OSS, which has gained momentum in recent years. The OSS community network in Japan is growing in relation to the need for greater transparency and participation in governance.

Japan has also long cooperated with regional and international partners on the issue of OSS. The OSS Promotion Forum for Northeast Asia, established in 2004, is still active and has been instrumental in coordinating local private actors in the development and maintenance of OSS.

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 of OSS.

Policy makers

- Ministry of Economy, Trade and Industry (METI)[2]: METI is the Japanese ministry in charge of the development of Japan's economy and industry through promotion of economic vitality in private companies. For this mission, METI is an active user of OSS and works on organising and securing open source efforts in Japan. It also collaborates with local and international organisations related to open source.

[1] Blind, K.; Böhm, M., Grzegorzewska, P., Katz, A., Muto, S., Pätsch, S., Schubert, T. (2021). The impact of Open Source Software and Hardware on technological independence, competitiveness and innovation in the EU economy, Final Study Report. Brussels.

[2] METI's Mission / METI Ministry of Economy, Trade and Industry

- Digital Agency[3]: Japan's Digital Agency was created in 2021 with the mission of creating public and private infrastructure for the digital age.[4] It produced a plan for the digitalisation of Japanese society and a policy program.[5]

Strategic players

- Japan OSSForum: Established in 2004 by OSS users, vendors and academics with METI as an observer. Its creation was part of the objective agreed on during the first Northeast Asia OSS Promotion Forum. Reorganised in 2014 to achieve a bottom-up approach focused on OSS practitioners, the forum is composed of more than a hundred organisations from both the public and private sector. Its activities involve promotion of open source solutions, organisation of the Northeast Asia OSS Promotion Forum and dissemination of content on Web3.[6]

- Code For Japan[7]: Established in 2013, Code for Japan promotes the use of open source in Japan's public sector as a tool for citizens to be engaged in social and democratic changes. The organisation is part of the wider Code for All network.[8] They are engaged in various projects related to open source and the public sector at national and local level.[9] Code for Japan has an important network of more than 90 local and thematic organisations which span the entirety of Japan.[10] The network of organisations has developed numerous projects for citizens and local communities, they collaborate together by sharing and reusing these solutions between regions.

Policy and legal framework

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

- "Future Tokyo" strategy, 2023[11]: An updated version of the 2021 strategy, Future Tokyo formulates the policy priority of the metropolis.[12] Part of this strategy addresses the promotion of barrier-free software and hardware. This point was formulated following Covid-19 related open source collaboration on software development.

- Priority Plans for Realising a Digital Society, 2022[13]: Led by the Digital Agency, this plan structures the policy efforts for the digitalisation of Japan. While the plan doesn't specifically

[3] 組織情報 | デジタル庁
[4] Act on the Establishment of the Digital Agency - Japanese/English (translated by the Ministry of Justice)
[5] デジタル社会の実現に向けた重点計画
[6] 技術部会 | 日本OSS推進フォーラム
[7] https://www.code4japan.org/en/aboutus
[8] Our Global Network | Code for All | The largest civic tech network in the world
[9] 活動 | Code for Japan
[10] ブリゲード | Code for Japan
[11] 「未来の東京」戦略|都の基本計画
[12] Future Tokyo : Tokyo's Long-Term Strategy Version Up 2023 (in English)
[13] デジタル社会の実現に向けた重点計画

focus on open source solutions, it sets up the main principles and objectives of the digitalisation program of Japan. Among these principles are openness and transparency.

- Basic Act on the Formation of a Digital Society (Act No. 35 of 2021)[14]: This act creates the Digital Agency and creates basic principles and policies to determine a governance structure for the digitalisation of Japan.

- Compilation of case studies on the use of open source software, as well as management methods to ensure its security, 2021[15]: The Ministry of Economy, Trade and Industry (METI) has published a "Casebook on the utilisation of OSS and management methods to ensure its security", which summarises what should be considered when using open source software (OSS). It also compiles case studies of companies that are implementing relevant initiatives. The compilation was extended in 2022 with five new case studies.[16]

- METI's OSS security initiative, 2019: METI established a Task Force for Evaluating Software Management Methods with the aim of improving cybersecurity.[17] Part of the Industrial Cybersecurity study group, this Task Force discusses how to further secure the software supply chain.[18] It also introduced a draft reference for a guidebook on software bill of material.[19]

Open source software initiatives

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

- Tokyo Metropolitan Government Open Source Software Release Guidelines, 2021[20]: Following the March 2021 "Future Tokyo" strategy for the Tokyo Metropolitan Government[21], the city decided to actively participate in the development and use of open source software. Therefore, it published guidelines on releasing open source software in order to foster similar efforts around Japan. This effort was motivated by the excellent results of the Stopcovid19 collaboration, which reduced development costs and times.

- Tokyo OSS Party!!, 2021[22]: Organised by the Tokyo Metropolitan Government, this yearly event aims at creating collaborative open source solutions to existing social problems (welfare,

[14] Basic Act on the Formation of a Digital Society - Japanese/English (translated by the Ministry of Justice)
[15] オープンソースソフトウェアの利活用及びそのセキュリティ確保に向けた管理手法に関する事例集を取りまとめました （METI/経済産業省）
[16] オープンソースソフトウェアの利活用及びそのセキュリティ確保に向けた管理手法に関する事例集を拡充しました（METI/経済産業省）
[17] サイバー・フィジカル・セキュリティ確保に向けたソフトウェア管理手法等検討タスクフォース（METI/経済産業省）
[18] サイバー・フィジカル・セキュリティ対策フレームワーク（CPSF）とその展開（METI/経済産業省）
[19] 第9回 サイバー・フィジカル・セキュリティ確保に向けたソフトウェア管理手法等検討タスクフォース（METI/経済産業省）
[20] tokyo-oss-guideline/東京都オープン・ソース・ソフトウェア公開ガイドライン.md at main
[21] https://www.seisakukikaku.metro.tokyo.lg.jp/basic-plan/shintosei/book.pdf
[22] https://github.com/HackCamp/TokyoOSSParty

disaster prevention..). Through this event, the local government attempts to develop co-creation between citizens and the public sector.[23]

- Bichiku-navi, 2021[24]: An open source platform developed by the Disaster Management Division from the Tokyo Metropolitan Government, Bichiku ("stockpile") navi recommends tailored stockpiling instructions in case of disasters. The website also redirects to related initiatives such as hazard maps and was created during the Tokyo OSS Party!! 2021.

- Shikuchoson Hazardmap Template, 2021[25]: Winner of the grand prize of the 2021 Tokyo OSS Party!!, this template facilitates the process of uploading paper-based hazard maps (typically created for natural hazards, such as earthquakes) online.[26] The tool was reused in several municipalities around Japan.[27] A developer released an open source web platform allowing for overlapping of these maps, giving an overview of hazard maps all over Japan.[28]

- MetaDecidim, 2020[29]: The first Japanese version of the Decidim platform[30] was implemented in 2020 by Professor Yoshimura of the University of Tokyo's Research Centre for Advanced Science and Technology and Hal Seki, Representative Director of Code for Japan. It was shared on Code for Japan's Github, making it available to local communities. Since its adoption by Kakogawa City Hall in Hyogo Prefecture in October 2020[31], Decidim has been used in the following initiatives: Yokohama City Engagement Platform Initiative[32], Cabinet Office (National government of Japan), Smart City Guidebook Subcommittee[33], Hyogo Prefecture version of Decidim[34], and Liberal Democratic Party of Yokohama City Councilors' Mirai Creative Platform.[35]

- Tokyo Metropolitan Government Stopcovid19, 2020[36]: Developed by the metropolitan government, the website Stopcovid19 displays information on the Covid pandemic. After being released as open source it received more than 2,000 improvement requests.[37] The source code has been reused all over Japan and as of 20 April 2021 - 63 sites using the source code were built in 54 regions. In addition, 13 prefectures and cities among them have operated as official websites of their respective local governments, contributing to the strengthening of cooperation among local governments on issues facing Japan as a whole.

[23] DXな日常・OSS共創サービスを始めましょう！！
[24] https://github.com/Tokyo-Metro-Gov/bichiku-navi/
[25] https://github.com/Tokyo-Metro-Gov/shikuchoson-hazardmap-template
[26] DXな日常・OSS共創サービスを始めましょう！！
[27] https://github.com/sankichi92/shikuchoson-hazardmap-template/wiki
[28] https://sankichi.net/shikuchoson-hazardmap-template/
[29] MetaDecidim Japan
[30] Decidim
[31] 加古川市 市民参加型合意形成プラットフォーム
[32] 横浜で市民参加型合意形成プラットフォーム「Decidim（ディシディム）」の実証実験を開始（2020年12月25日） | ニュースリリース | 電通国際情報サービス（ISID）
[33] スマートシティガイドブックの検討 - Society 5.0 - 科学技術政策 - 内閣府
[34] 兵庫県／策定のプロセス
[35] 横浜みらい創生プラットフォーム
[36] 東京都 新型コロナウイルス感染症対策サイト
[37] GitHub - tokyo-metropolitan-gov/covid19: 東京都 新型コロナウイルス感染症対策サイト / Tokyo COVID-19 Task Force website

- OSS Bird's-eye View, 2012[38][39,40]: First published in IT magazine "IT Leaders", the OSS Bird's-eye View was created to provide an overview of the existing open source solutions used in Japan.[41] It has been updated annually since 2014 and acts as a guide to new OSS users when introducing them to their IT systems. This document was reused by METI in its 2021 report on "Case studies on OSS utilization and management methods for ensuring security"[42].

- Geospatial Information Authority of Japan (GSI), 2010[43]: The GSI started a project to rebuild the Electronic National Land Web System using the Open Source Geospatial Foundation software tools as the core of its system.[44] In 2011, the source code was made available as open source.[45] GSI has released various components, scripts, and data related to their work to the public. This led to their collaboration with the United Nations Open GIS on broader projects related to the development of more open geospatial information tools.[46] The UN Vector Tile Toolkit has been developed in collaboration with the team from the GIS and based on the prior experience of the Japanese authorities.[47]

- IT-DG OSS Meeting & Northeast Asia OSS Promotion Forum, 2004[48]: Established to promote active collaboration on development of OSS initiatives in Northeast Asia, the annual Forum gathers initiatives and governments from Japan, China, and South Korea. It is held in parallel to the trilateral IT directors-general meeting between these governments.[49] During the first edition of this forum, the countries agreed to set up three working groups, which have since produced several projects and standards to harmonise development of OSS among the three countries.[50] It is through this initial cooperation that the Japan OSS Promotion Forum and the equivalent groups in China and South Korea were created.[51] The forum held its 20th edition in 2022[52].

[38] An English translation of the 2023 version was kindly provided by the Japan OSSForum for the purpose of this report. English translation of OSS Bird's-eye View
[39] 鳥瞰図ワーキンググループ | 日本OSS推進フォーラム
[40] This repository is related to Choukanzu WG of the Japan OSS Promotion Forum.
[41] 10歳を迎えたOSS鳥瞰図を振り返ってみる：OSS 貢献活動 | NEC
[42] オープンソースソフトウェアの利活用及びそのセキュリティ確保に向けた管理手法に関する事例集を取りまとめました（METI/経済産業省）
[43] Welcome to GSI | GSI HOME PAGE
[44] 電子国土 Web システムのオープンソースソフトウェアを利用した改良 及びソースコードの公開
[45] Information Access Division, Geospatial Information Authority of Japan · GitHub
[46] United Nations open source tool for global mapping | Joinup
[47] (PDF) DESIGN AND DEVELOPMENT OF THE UN VECTOR TILE TOOLKIT
[48] https://www.tcs-asia.org/en/cooperation/mechanism.php?topics=20
[49] https://www.tcs-asia.org/en/cooperation/overview.php?topics=20
[50] Chair's Statement of the 2nd Northeast Asia OSS Promotion Forum, July 28th, 2004 Sapporo, Japan
[51] Yoshimatsu, 2010, Regional Governance and Cooperation in Northeast Asia: The Cases of the Environment and IT,RCAPS Working Paper No. 09-9.
[52] 第二十届中日韩三国IT局长OSS会议暨东北亚开源软件推进论坛-CSDN直播