European Commission

DG DIGIT

Unit.D2 (Interoperability Unit)

Open Source Software Country Intelligence Report

Brazil

2021

This research was carried out for the ISA[2] Programme by Wavestone's European Services team.

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Updated in September 2021

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Executive Summary

The Secretariat for Logistics and Information Technology of the Ministry of Planning, Budget and Management was the government body responsible for many of the legal acts and developments on open source software (OSS), better known as free software (*software livre*) in Brazil. Currently, the Ministry of Economy[1] oversees the repositories of the open source solutions developed and managed by government bodies.

In 2004, after listing OSS as one of the principles for the implementation of the policy on Electronic Government, the Brazilian federal government developed the Open Guide[2] to support the migration process of public administrations to OSS. This guide was followed by Normative Instruction n°1, which introduced the concept of 'public software', applicable to all software developed by the public sector and shared at no cost for the benefit of all Brazilian public administrations.

In addition to the national and state events organised by members of various open source communities in Brazil, important initiatives to highlight are the LPM license applied to all OSS developed by public institutions[3], and the Brazilian Public Software portal[4], a government portal that formerly hosted public repositories and discussion boards for all members of the platform.

Actors

This section presents the policy makers who are active in digitalisation efforts and influence the status of open source in public sector, as well as the main strategic players that work together with the government at all levels to raise awareness on OSS. In Brazil, there is no governmental body that is specifically responsible for OSS policies.

Policy makers

- The Secretariat for Digital Government (*Secretaria de Governo Digital*)[5] of the Ministry of Economy (*Ministério da Economia*)[6] is the government body responsible for hosting, managing and sharing the Brazilian Public Software catalogue[7].

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[1] https://www.gov.br/economia/pt-br
[2] https://guia-livre.readthedocs.io/pt/latest/index.html
[3] https://softwarepublico.gov.br/social/spb/noticias/a-licenca-publica-de-marca-lpm-e-aplicada-em-quatro-solucoes?view=true
[4] https://www.gov.br/governodigital/pt-br/software-publico/catalogo/catalogo
[5] https://www.gov.br/economia/pt-br/acesso-a-informacao/institucional/quem-e-quem/secretaria-especial-de-desburocratizacao-gestao-e-governo-digital/secretaria-de-governo-digital
[6] https://www.gov.br/economia/pt-br
[7] https://www.gov.br/governodigital/pt-br/software-publico/catalogo/catalogo

- The Secretariat for Logistics and Information Technology (*Secretaria de Logística e Tecnologia da Informação*) of the former Ministry of Planning, Budget and Management (*Ministério do Planejamento, Orçamento, e Gestão*) was the first government body responsible for introducing legal acts and supporting documents on OSS between 2002 and 2015, such as the Open Guide – Migration Reference for Open Software[8]. The Secretariat's responsibilities were later transferred to the Secretariat for Information Technology *(Secretária de Tecnologia da Informação),* the government body responsible for Ordinance n°46 of September 2016[9] on the rules for the development and publication of OSS for the public sector. The Ministry was dissolved in 2019 and replaced by the Ministry of Economy.

Strategic players

- The Open Source Association[10] (*Associação Software Livre*) is a non-profit organisation responsible for fundraising and sponsoring the development of events promoting OSS in cooperation with the government, such as the International Free Software Forum[11]. The association is also responsible for maintaining the Open Source Brazil (*Software Livre Brasil*)[12] project, a network composed of universities, businesses, the public sector, users, hackers, NGOs, and activists.

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.

- Ordinance *(Portaria)* N°46 from September 2016[13] presented the rules for the development and publication of OSS for the public administration. This legal act also redefined Brazilian Public Software (*Software Publico Brasileiro*) as OSS which responds to the modernisation needs of all branches of the public administration, the states, federal districts, and municipalities, and is meant to be shared at no cost in the Brazilian Public Software Portal. This ordinance sought to help improve the efficiency of the public sector and repeal Normative Instruction n°1 of 2011[14] and Decree n°8 of 2003[15].

- The Normative Instruction (Instrução Normativa)[16] n°1 of 2011 established the concept and facilitated the implementation and subsequent access to Brazilian Public Software. Brazilian

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[8] More information available in Policy and legal framework section.
[9] https://www.gov.br/governodigital/pt-br/software-publico/portaria-46.pdf
[10] https://www.linkedin.com/company/softwarelivre/
[11] http://fisl.softwarelivre.org/
[12] http://softwarelivre.org/
[13] https://www.gov.br/governodigital/pt-br/software-publico/portaria-46.pdf
[14] https://www.gov.br/governodigital/pt-br/legislacao/IN_SPB.pdf
[15] http://www.planalto.gov.br/ccivil_03/dnn/2003/dnn10007.htm
[16] https://www.gov.br/governodigital/pt-br/legislacao/IN_SPB.pdf

Public Software was defined as a specific type of software that adopts open source licenses and is made available on the internet for the benefit of society, citizens, and the market.

- The Open Guide – Migration Reference for Open Software (*Guia Livre – Referência de Migração para Software Livre*).[17] launched in 2004, was the first version of the document developed by the Secretariat for Logistics and Information Technology in cooperation with various stakeholders such as Ministries, the private sector, organisations, and the Brazilian open source community. The document used the European Commission's "IDA Open Source Migration Guidelines" of 2003.[18] as a reference and presented guidelines to help the federal public administration migrate to OSS within its departments and agencies. This document was frequently updated between 2004 and 2006 with the inclusion of new case studies detailing the experiences of various agencies during the migration stage, until the final version was released in 2006.[19].

- The Decree n°8 of 2003.[20] established the Executive Committee for the Electronic Government, responsible for coordinating and implementing the projects and actions developed to support the implementation of OSS. The Committee was dissolved through Decree n°8.238 of 2016.[21].

- Between 2003 and 2008, the states of Ceará.[22], Goiás.[23], Maranhão.[24], Mato Grosso.[25] and Mato Grosso do Sul.[26] approved legislative acts to encourage the use of OSS in the government agencies and departments of the states. The references to the respective decrees are grouped as all are focussed on transposing the central Government instructions regarding the prioritisation of OSS considering the 2002 Electronic Government in the Country policy.[27].

- The 2002 Electronic Government in the Country policy (*Governo Electronico no Pais*).[28] set seven principles for its implementation, with the third principle focusing on the use of OSS as a strategic tool for the policy. This policy was the start of open support of the government for OSS.

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[17] https://guia-livre.readthedocs.io/pt/latest/index.html

[18] https://joinup.ec.europa.eu/sites/default/files/document/2012-02/ida-open-source-migration-guidelines-en.pdf

[19] https://guia-livre.readthedocs.io/pt/latest/prefacio/capa.html#mensagem-do-presidente-lula-para-o-guia-livre-referencia-de-migracao-para-software-livre-do-governo-federal

[20] http://www.planalto.gov.br/ccivil_03/dnn/2003/dnn10007.htm

[21] http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2016/Decreto/D8638.htm#art15

[22] https://www.seplag.ce.gov.br/wp-content/uploads/sites/14/2020/01/Decreto-29.255-Pol%C3%ADtica-de-Software-Livre-e-o-Comit%C3%AAGSL.pdf

[23] https://legisla.casacivil.go.gov.br/pesquisa_legislacao/80514/lei-15425

[24] https://seati.ma.gov.br/decreto-no-23-513/

[25] http://app1.sefaz.mt.gov.br/Sistema/Legislacao/legislacaointg.nsf/9469828df55781758425671600014c894/bb20fa23547abb4704256d80007481ef?OpenDocument

[26] http://pedrokemp.com.br/leis-e-projetos/uso-preferencial-de-softwares-livres-de-restricoes-proprietarias-pelo-governo-de-mato-grosso-do-sul-2/

[27] http://www.cest.poli.usp.br/wp-content/uploads/2017/02/Artigo-Governo_Eletronico_-24-10-16.pdf

[28] http://www.cest.poli.usp.br/wp-content/uploads/2017/02/Artigo-Governo_Eletronico_-24-10-16.pdf

Open source software initiatives

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

- Since 2000, various events have taken place to encourage the promotion of OSS as follows:

  o Latin American Festival of Free Software Installation (*Festival Latino-americano de Instalação de Software Livre* (FLISoL)), 2021[29]: The Latin American Festival of Free Software Installation is a yearly event hosted and promoted by several cities around Brazil. It aims to not only promote OSS and share the philosophy, scope, and development of OSS, but also install free software on the computers of participants. In 2021, the event will be hosted in the states of Alagoas, Bahia, Distrito Federal, Maranhão, Mato Grosso, Minas Gerais, Parà, Paranà, Rio de Janeiro, Rio Grande do Sul, Santa Catarina and São Paulo.

  o Latin American Congress on Free Software and Open Technologies (*Congresso Latino-Americano de Software Livre e Tecnologias Abertas*), 2004-2020[30]: Described as the biggest event in Latin America on OSS, participants are offered lectures, sessions and workshops on new tools and success stories from both the public and private sectors. The 2020 edition occurred virtually and for free and was hosted by the state of Paraná.

  o Goiano Free Software Forum *(Fórum Goiano de Software Livre)*, 2003-2018[31]: The open source community of the state of Goiás organised yearly events focused on discussing the use, development and sharing of OSS in the region.

  o International Free Software Forum (*Fórum Internacional de Software Livre*), 2000-2018[32]: The International Free Software Forum is an event organised by the Free Software Association in the state of Rio Grande do Sul, focused on discussing and sharing the advantages of OSS.

  o Free Spirit Forum (*Fórum Espírito Livre*), 2002-2017[33]: Organised by the Federal Instituto of Espírito Santo, this event offered participants the chance to discuss OSS and its technical, political, sociological, and technological aspects.

  o Northeast Free Software Meeting (*Encontro Nordestino de Software Livre*), 2006-2011[34]: The Northeast Free Software Meeting joined all open source communities of

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[29] https://flisol.info/FLISOL2021/Brasil
[30] https://latinoware.org/
[31] http://www.ifgoias.edu.br/ultimas-noticias-campus-goiania/11017-abertura-do-forum-goiano-de-software-livre-ocorre-hoje-no-campus-goiania
[32] http://fisl.softwarelivre.org/
[33] https://www.ifes.edu.br/noticias/17629-inscricoes-abertas-para-15-forum-espirito-livre
[34] https://softwarelivre.org/nataliajulieta/blog

the region to promote OSS and establish connections between different groups. The event was organized in the states of Alagoas, Bahia, Paraiba, Rio Grande do Norte and Sergipe.

  o Free Software Bahia, 2009.[35]: Besides showcasing the maturity of OSS use and development, the event organised in the state of Bahia revealed the number of monetary resources saved by both the public and private sector on account of the migration to open source.[36].

- Brazilian Public Software Catalogue (*Catálogo de Software Público Brasileiro*), 2020.[37]: The new catalogue for Brazilian Public Software is currently available on the institutional page of the Digital Government initiative. The Ministry of Economy currently manages the GitHub repository[38] where all listed solutions are made available for public access, such as the Coronavírus – SUS.[39] mobile application.[40], modules.[41] for the Electronic Information System (*Sistema Eletrônico de Informações*).[42], a free platform built to help improve administrative efficiency by transferring document management and electronic administrative processes into the same virtual environment, and software for project and staff management such as GEPNET.[43] and SUSEP.[44].

- Brazilian Open Data Portal (*Portal Brasileiro de Dados Abertos*), 2012.[45]: The Brazilian portal for open data was launched by the Ministry of Planning, Budget and Management and built with OSS provided by the Open Knowledge Foundation (OKFN).[46]. It uses Comprehensive Knowledge Archive Network (CKAN).[47], an open source data portal for storage, management and sharing of data. Its development process involved citizens and open discussions.[48].

- Public Trademark License (*Licença Pública de Marca* [LPM]), 2011.[49]: The federal government launched the LPM license for all OSS developed by public institutions. It was based on the open source GNU General Public License (GPL).[50] and applied to all solutions available through the

[35] https://www.serpro.gov.br/menu/noticias/noticias-antigas/free-software-bahia-tecnologia-aberta-tornou-se-realidade
[36] https://www2.ufrb.edu.br/linklivre/noticias/6-free-software-bahia-2009
[37] https://www.gov.br/governodigital/pt-br/software-publico/catalogo/catalogo
[38] https://github.com/spbgovbr
[39] https://www.gov.br/pt-br/apps/coronavirus-sus
[40] https://github.com/spbgovbr/aplicativo-coronavirus-sus
[41] https://www.gov.br/governodigital/pt-br/software-publico/catalogo/modulosSEI
[42] https://www.gov.br/economia/pt-br/assuntos/processo-eletronico-nacional/conteudo/sistema-eletronico-de-informacoes-sei
[43] https://github.com/spbgovbr/gepnet
[44] https://github.com/spbgovbr/Sistema_Programa_de_Gestao_Susep
[45] https://dados.gov.br/
[46] https://okfn.org/
[47] https://ckan.org/
[48] https://blog.okfn.org/2012/05/10/new-brazilian-portal-dados-gov-br-made-by-citizens/
[49] https://softwarepublico.gov.br/social/spb/noticias/a-licenca-publica-de-marca-lpm-e-aplicada-em-quatro-solucoes?view=true
[50] https://softwarepublico.gov.br/social/spb/publicacoes/licenca-publica-de-marca

Brazilian Public Software Portal. It could also be applied to OSS developed by private companies who wish to adhere to this license.[51].

- International Free Software Congress and Electronic Government (*Congresso Internacional Software Livre e Governo Eletrônico*), 2008-2013[52]: Organised by the Ministry of Planning and the Committee for the Implementation of Free Software, the International Free Software and Electronic Government Congress was an event facilitating debate on the policies and management of OSS in the country and the sharing of experiences between public administrations.

- Brazilian Public Software (*Software Público Brasileiro*), 2007[53]: The Brazilian Public Software Portal developed and managed by the former Ministry of Planning, Budget and Management is the former public platform for all public software licensed under LPM. The portal offers OSS to help improve the work in the public sector, with a total of 69 solutions[54], and it features repositories, collaborative tools, and discussion boards for the community members. The services have been accessed by other South American countries and Portugal[55] and the platform was promoted in events such as the 2011 National Conference for Information Technology (*Encontro Nacional de Tecnologia da Informação*) [56].

- InVesalius, 2007[57]: The Renato Archer Information Technology Center (CTI - Brazil) started the development of the open source medical solution for the reconstruction of computed tomography and magnetic resonance images in 2001. The software has been improved and redesigned as part of an agreement with the Brazilian Ministry of Health[58].

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[51] https://softwarepublico.gov.br/social/spb/noticias/a-licenca-publica-de-marca-lpm-e-aplicada-em-quatro-solucoes?view=true
[52] http://funag.gov.br/biblioteca/index.php?route=product/product&product_id=98
[53] https://softwarepublico.gov.br/social/search/software_infos
[54] https://softwarepublico.gov.br/social/search/software_infos
[55] https://softwarepublico.gov.br/social/spb/sobre-o-portal?version=9
[56] https://softwarepublico.gov.br/social/spb/noticias/ministra-abrira-nesta-terca-feira-o-encontro-nacional-de-tecnologia
[57] https://www.cti.gov.br/pt-br/invesalius
[58] https://invesalius.github.io/about.html