Canada

Federal government

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Application Architecture
C.2.3.8 Use Open Standards and Solutions by Default
C.2.3.8.1 Where possible, use open standards and open source software first
C.2.3.8.2 If an open source option is not available or does not meet user needs, favour platform-agnostic COTS over proprietary COTS, avoiding technology dependency, allowing for substitutability and interoperability
C.2.3.8.3 If a custom-built application is the appropriate option, by default any source code written by the government must be released in an open format via Government of Canada websites and services designated by the Treasury Board of Canada Secretariat
C.2.3.8.4 All source code must be released under an appropriate open source software license
C.2.3.8.5 Expose public data to implement Open Data and Open Information initiatives

Source: https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=15249

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Open source software (OSS) tends to use and help define open standards and publicly available specifications. OSS products are, by their nature, publicly available specifications, and the availability of their source code promotes open, democratic debate around their specifications, making them both more robust and interoperable.

Using open source software means you can benefit from:

- *solving common problems with readily available open source technology*
- *more time and resource for customised solutions to solve the rare or unique problems*
- *lower implementation and running costs*

Source:

https://canada-ca.github.io/digital-playbook-guide-numerique/en/4-use-open-standards-solutions.html

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"The key thing is, I think everybody should realize it's a natural part of the market nowadays, so it's absolutely normal that the government look to that," said Courtois, president and CEO of the Information Technology Association of Canada.

Source: https://www.cbc.ca/news/technology/an-open-door-for-open-source-1.810739

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In 2012, the Ontario government switched over to Drupal to save costs. The Nunavut government also uses the free software as the foundation for several sites, as do various levels of government in B.C., Quebec and Nova Scotia.

Many federal sites are starting to switch over as well.

Source: https://www.cbc.ca/news/canada/north/yukon-government-new-website-1.4547521

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The Government of Canada actually leads the development of the Web Experience Tookit (WET), an award-winning open source front-end framework for building websites. It has been in use on EVERY Government of Canada website including Canada.ca for many years.

The project is renown around the world for accessibility and is also used in non-GoC organizations such as the city of Ottawa, University of Ottawa, Ontario Colleges, Nunavut General Monitoring Plan, the Open Government Platform just to name a few. This project integrates technology developed in many other open source projects.

Source: https://www.tngconsulting.ca/it-consulting-services/about-open-source/

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The Canadian government is taking a big lead in the use of open source. In 2009, it issued an official Request for Information on OS software to gather feedback and public guidance to help shape procurement policies. The move is seen as a prelude to broader adoption of free and open source software in the government's IT infrastructure.

Source:https://canadiangovernmentexecutive.ca/the-cost-benefit-of-open-source-government/

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> *Open source software refers to a software that is released under a license granting anyone permission to use, modify, change or redistribute its source code for any purpose. This open source process is an example of open collaboration where everyone benefits from the development of technological tools that solve real issues.*
>
> *Source: https://code.open.canada.ca/en/open-source-codes.html?wbdisable=truehttps://code.open.canada.ca/en/open-source-softwares.html*

"

> *OSS promotes openness and accountability while providing Canadians with more opportunities to participate in government.*
>
> *Open source software should be central to Canada's Action Plan on Open Government.*
>
> *Source: https://open.canada.ca/en/open_source_software*

Ontario

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> *Use open standards, open source software and common government platforms where available.*
>
> *Open standards are created through collaboration and consensus by an active community of experts, including many large technology companies. They aim for data operability between various products and services, as well as security and reliability.*
>
> *Open source software is published publicly, freely available for use by anyone, and are developed and maintained using a collaborative approach between users, organizations and large companies. There are many well-established open source tools and products that are considered industry standards.*
>
> *Source: https://www.ontario.ca/page/digital-service-standard#section-9*

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The increasing customizability and security offered by OSS, in combination with its low cost, is driving the growing adoption of OSS by businesses. It is expected that businesses will increasingly turn to OSS solutions in order to meet their business needs and remain competitive in the market.

Source: https://www.ontario.ca/page/open-source-software

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The government of Ontario, in particular, was noted in saying that they are creating a more open and transparent government by sharing their data and information and consulting directly with the people in Ontario.

Source: https://obj.ca/article/opin-software-case-open-source-government-democratic-approach

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Ontario's Government is putting the people first in everything it does by adopting new digital practices and technologies that will deliver simpler, faster, better services to Ontarians. As of August 6, 2019 the Simpler, Faster, Better Services Act came into effect. This new law will significantly improve how government works and the services it delivers to the people and businesses of Ontario.

Source: https://www.ontario.ca/page/ontario-digital-service

Québec

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Les logiciels libres et ouverts et le gouvernement du Québec : Guide de référence: "En décembre 2010, le gouvernement du Québec a rendu publique la Politique-cadre sur la gouvernance et la gestion des ressources informationnelles des organismes publics, dont l'un des objectifs est de doter les organismes publics d'outils leur permettant de tirer profit des logiciels libres. Le présent guide de référence constitue un élément important de cette stratégie, puisqu'il fournit des réponses à plusieurs des questions de nature juridique et opérationnelle auxquelles est confrontée l'administration publique en ce qui a trait à l'utilisation des logiciels libres et ouverts."
Source:
https://www.tresor.gouv.qc.ca/fileadmin/PDF/ressources_informationnelles/logiciels_libres/ll.pdf

British Columbia

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Open source systems are developed in an open, collaborative manner. Supporters can exert an influence on a system's direction. Users have direct input into improvements and setting priorities.

Source:
https://www2.gov.bc.ca/assets/gov/government/services-for-government-and-broader-public-sector/information-technology-services/standards-files/guidelines_on_the_use_of_open_source_software_2016.pdf

Nunavut

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The NRC is collaborating with the Pirurvik Centre and the Government of Nunavut to develop new technologies for Inuktut language learners and professionals, and to reinforce Inuktut's status as an official language in the province.
New open source parallel corpus of Inuktut-English aligned sentences available to computational linguists and other language professionals.
Source:
https://nrc.canada.ca/en/research-development/research-collaboration/programs/project-create-inuktut-language-software-perform-new-text-alignment-nunavut-legislative-assembly

Yukon

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Switch to open source software will reduce fees, staff time and pay for itself, says project lead.

The new website is built on a free system called Drupal — an open source, content management software that anyone can use to create, download and share codes to make websites and digital applications. It has no licensing fees.

Source: https://www.cbc.ca/news/canada/north/yukon-government-new-website-1.4547521

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Rural Yukon schools going online in bid to improve learning.
Yukon Education is investing in a program called blended learning. It allows students to pursue online courses offered through Moodle: an open-source website.

Source:
https://www.cbc.ca/news/canada/north/rural-yukon-schools-going-online-in-bid-to-improve-learning-1.2749645

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For them (Yukon), it was of the utmost importance that they were able to control their customers data in order to respect and safeguard their privacy. This was a primary reason why Drupal was chosen. Drupal's open-source, self-hosted nature gave the Government of Yukon complete control over their data.

Source: https://www.drupal.org/case-study/cannabis-yukon

Alberta

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Open Government Program, For Developers. The Government of Alberta is committed to publishing open data to third parties via data feeds through an application programming interface (API). The Government of Alberta encourages developers to deliver and innovate using open data.

Source: https://open.alberta.ca/interact/for-developers

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The open government portal is a collection of datasets and publications by government departments and agencies. The public can use and access this data freely to learn more about how government works, carry out research or build web apps.

Source: https://www.alberta.ca/open-government-program.aspx

Saskatchewan

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> Open source program to save U of R students $1.5M.
> For the past five years, the Government of Saskatchewan has given grants to the universities of Regina and Saskatchewan as well as Sask Polytechnic to develop open education resources.
>
> Source: https://www.ckom.com/2020/01/07/open-source-program-to-save-u-of-r-students-1-5m/

> "
>
> the Provincial Archives of Saskatchewan is pleased to announce the launch of its new online catalogue. This archival catalogue uses Access to Memory (AtoM) open-source software, allowing the Archives to easily share information with the public and with many other provincial and national archival catalogues.
>
> Source:
> https://www.saskatchewan.ca/government/news-and-media/2020/february/07/provincial-arch

UK

> "
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> Releasing government code under Open Source licenses increases transparency, collaboration and encourages good practices.
>
> The UK government made a commitment to making code open source by default at the Open Government Partnership Summit in Paris 2016.
>
> Source: https://www.gov.uk/government/publications/open-source-guidance

> "
>
> The Coalition Government believes Open Source Software can potentially deliver significant short and long term cost savings across Government IT.
>
> Source:
> https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7

8964/Open_Source_Options_v2_0.pdf

> "
>
> Be open and use open source
>
> Source: *https://www.gov.uk/guidance/be-open-and-use-open-source*

> "
>
> UK Universities in the main only do open-source, so its no surprise that open source remains the weapon of choice for the data scientists who leave academia behind them. It's simply what most are used to.
> A final indispensable component is open source software: it keeps the project within budget in the short-term, prevents costly and prohibitive vendor lock-in further down the road, and give scientists more freedom to experiment.
>
> Source: *https://techerati.com/features-hub/opinions/how-open-source-drives-innovation-in-the-uk-public-sector/*

India

> "
>
> The proliferation of OSS in India has led to the development of various forms of technological dialogues and the creation of universally accessible resources that are developed by communities for the benefit of the society.
>
> Source: *https://link.springer.com/chapter/10.1057/9781137469502_8*

> "
>
> As the world is moving towards the concept of digital government and e-governance, Prime Minister Narendra Modi has sketched out his vision for the Digital India model. This envisages transforming

India into a digitally empowered society. DigiLocker is perhaps the government's largest project based on open source technologies.

Source: http://opensourceforu.com/2016/10/government-leverages-open-source-build-digilocker-indian-citizens/

"

Open Source — an extremely important aspect of Digital India!

Source: https://www.digitalindia.gov.in/content/open-source-%E2%80%94-extremely-important-aspect-digital-india

"

Organizations worldwide have adopted innovative alternative solutions in order to optimise costs by exploring avenues of "Open Source Software". GoI has also been promoting the use of open source technologies in the eGovernance domain within the country in order to leverage economic and strategic benefits.

Source: https://meity.gov.in/sites/upload_files/dit/files/policy_on_adoption_of_oss.pdf

South Africa

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Open source software has emerged as a software model that is particularly viable in the developing world, providing local software developers with access to quality code generated by international experts, allowing users to escape from the cycle of ever-increasing international licensing fees, and facilitating the development of systems that address localised needs.

Source: https://www.brandsouthafrica.com/investments-immigration/science-technology/opensourcecentre

Brazil

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> Today, Brazil has a strong open source community allowing us to be at forefront of open source initiatives and it's up to us to continue to support candidates who understand the importance of open source.
>
> Source: https://opensource.com/government/12/8/brazil-forefront-open-source-initiatives

Australia

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> Open source software is an alternative to proprietary software that provides users with the ability to view, copy, modify and distribute the software, subject to licensing conditions. Open source software can offer benefits to both the Australian Government and wider community, such as improving interoperability and possible cost savings.
>
> Source: https://www.ghdonline.org/uploads/AGuidetoOpenSourceSoftware.pdf

"

> Open Source Initiative (OSI): A not-for-profit corporation formed to educate about and advocate for the benefits of open source software and to build bridges among different constituencies in the open source community. It also provides licences for open source software.Source: http://www.opensource.org (Pg. 55)
>
> Source: https://www.ghdonline.org/uploads/AGuidetoOpenSourceSoftware.pdf

New Zealand

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> In today's press conference, the Prime Minister mentioned that the New Zealand government is expressing interest in collaborating with Singapore while they "open source" their COVID-19 contact

tracing app that's Bluetooth-enabled.

An open source app allows all collaborating governments to make improvements, amplifying each other's investment. Most importantly however, the app's capabilities are able to be validated. Civil society is able to verify political promises that their data is safe. Open sources allows civil society to inspect the actions of the app. Using an open source model is a strong protection against the risks of devolving into a police state.

Source: https://nzoss.nz/what-jacinda-means-by-an-open-source-app

"

Open source licence guidance for the New Zealand Government through public participation.

Source: https://www.data.govt.nz/use-data/showcase/nzgoal-se-open-source-licensing/

"

There is a clear trend globally towards OSS in the public sector with over 40 governments creating positive policy environments for OSS. The USA 'Digital Services Playbook' for example encourages agencies to 'default to open' by considering the use of open source solutions across their 'technology stack'. This fundamental shift away from single use and proprietary software to more modularity, reuse, and a focus on interoperability (different bits of software playing together nicely) is driven both by the philosophy of Open Government and by a need to produce more innovative forms of citizen engagement With ever tightening government IT budgets, OSS is recognised as the best way to achieve these goals as it is better, cheaper, faster and more secure than proprietary software.

Source: https://www.scoop.co.nz/stories/HL1608/S00042/a-policy-win-for-open-source-software-in-new-zealand.htm

Netherlands

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In an open letter to the Parliament, the Dutch minister for internal affairs Raymond Knops commits to a "Free Software by default" policy and underlines its benefits for society. Current market regulations shall be reworded to allow publishing Free Software by the government.

Source: https://fsfe.org/news/2020/news-20200424-01.en.html

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>
> The City of Amsterdam has been carrying out a test of a complete switch to open-source software, including using Linux-based operating systems on all computers, in its housing department and one of its borough offices, Zeeburg.
>
> Source: https://www.technologyreview.com/2007/12/13/222821/dutch-government-moves-ahead-with-plans-to-promote-use-of-open-source-software/

> ❝
>
> The idea of open source in public procurement comes from the goals from the Dutch Cabinet concerning ICT, the goal to stimulate citizen participation, the reduction of costs, and to promote innovation.14 These policy goals are also approved and stimulated by the European Commission.
>
> Source: http://arno.uvt.nl/show.cgi?fid=113434 (Page 10)

> ❝
>
> The Dutch government promotes the use of Open Standards and Open Source Software within the Government.
>
> Source: https://books.google.com.pk/books?id=BFqtDwAAQBAJ&pg=PA102&lpg=PA102&dq=Open+source+software+in+Dutch+govt&source=bl&ots=i-xCsb_DlN&sig=ACfU3U0Njqfriv9-dgHoN5rddQBhHo8WyA&hl=en&sa=X&ved=2ahUKEwipp4-014bpAhWAA2MBHfEcATIQ6AEwBnoECAcQAQ#v=onepage&q=Open%20source%20software%20in%20Dutch%20govt&f=false

> ❝
>
> The Dutch government wants the country's public services to share as open source any software solutions that are written for or by them. "My appeal to public services is to release the source

code, unless they have good reasons not to," writes State Secretary for the Interior Raymond Knops in a letter to the Dutch parliament. "A public service that uses open source software can also be expected to actively share with society software that it develops itself."

Source:
https://joinup.ec.europa.eu/collection/open-source-observatory-osor/news/legal-barrier-be-removed

France

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The French government's national cybersecurity agency has released an operating system built using open source components internally over the course of more than 10 years for use by the French administration.
The OS was originally created to the meet the information security needs of the French administration, but ANSSI now believes it is ready to face public scrutiny and to receive contributions from the larger open source community.

Source:
https://securityboulevard.com/2018/09/french-government-open-sources-secure-operating-system/

"

At the Paris Open Source Summit, Axelle Lemaire said: "There is a huge focus on promotion, encouragement, obligation, priority to free software".

Source:
https://joinup.ec.europa.eu/collection/open-source-observatory-osor/news/open-france-has-move

Germany

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One year after the German Federal Ministry of the Interior agreed to a partnership with IBM to supply open-source software on new computers to federal, state and local governments as well as other government agencies, more than 500 groups have signed up for the service.
Minister Otto Schily referred to the agreement during a news conference in Berlin as a "milestone"

in the government's efforts to create a diverse, open software landscape in the public sector. "The numbers speak for themselves," he said in a statement released at the conference. "Demand is so great that we will offer an online registration service to speed up the process for all interested parties."

Source: https://www.infoworld.com/article/2679404/over-500-german-government-agencies-using-open-source.html

Israel

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Israeli Government Shifting Its Software Code to Open Source

Source: https://www.haaretz.com/israel-news/business/israeli-government-shifting-its-software-code-to-open-source-1.6009259

USA

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Making source code available as OSS can enable continual improvement of Federal custom-developed code projects as a result of a broader user community implementing the code for its own purposes and publishing improvements. This collaborative atmosphere can make it easier to conduct software peer review and security testing, to reuse existing solutions, and to share technical knowledge

Source: https://sourcecode.cio.gov/

Singapore

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Chua U-Zyn, Founder, Zynesis, said, "Open-sourcing encourages open innovation and collaboration

between the public and Government – a true quality of a Smart Nation, where anyone and everyone is able to contribute to the public good. I applaud GovTech's move to open-source Beeline, and hope this would encourage more software companies and individuals in Singapore to actively participate and open-source their work."

Source: https://www.opengovasia.com/govtech-singapore-to-progressively-open-source-code-for-cloud-based-smart-mobility-platform/

The World Bank

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Open source enables governments to collaborate on a win-win basis with start-ups and global digital economy players, while enabling sustained innovation.

Source: https://blogs.worldbank.org/governance/rise-open-source-spur-agile-digital-government

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Governments in the digital age are interested to learn how OSS solutions can help build open, robust, interoperable, and secure service delivery platforms. Digital technology is increasingly the way citizens interact with government. From submitting passport applications to paying parking tickets and registering for social assistance, prior in-person interactions are now occurring online.

Source: http://documents.worldbank.org/curated/en/672901582561140400/Open-Source-for-Global-Public-Goods

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At the Global Facility for Disaster Reduction and Recovery (GFDRR), the Open Data for Resilience Initiative (OpenDRI) team just reviewed more than seven years of strategic investment in open source in a new publication called OpenDRI and GeoNode: A Case Study for Institutional Investment in Open Source.
The report found that GFDRR has, conservatively, achieved at least a 200% return on investment in its open source software efforts. While meeting project goals, the GeoNode software also became a popular tool among dozens of organizations around the world from the public sector, private sector, academia and civil society.

Source:
https://blogs.worldbank.org/opendata/leveraging-open-source-public-institution-new-analysis-reveals-significant-returns-investment-open

The United Nations

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> The UN's Sustainable Development Goals focus on global challenges related to poverty, inequality, prosperity, and others. Digital technologies, which are increasingly driven by open source software and the collaborative innovation process it engenders, can help to provide awareness and education to the world's population, which can help to address these issues. For example, mobile technologies can be used in remote areas to access government services, banking, training, and other services that might not otherwise be available. These digital technologies are best delivered with software technologies that are trustable.
>
> Source:
> https://until.un.org/news/open-source-codes-and-challenge-sdgs-until-interview-amanda-brock

> "

> For developing countries, OSS can be an important source of innovation by fostering the realisation of value, either economic or social, through the introduction
> of new ways of doing things. In particular, by providing a low-barrier entry to software development, OSS allows countries to innovate in two ways: first, by creating a thriving ICT industry to supply OSS-based software applications and content, and/or second, by developing customized and localized applications and content that are better able to meet local needs and requirements. (Pg.3)
> Source:
> https://www.unjiu.org/sites/www.unjiu.org/files/jiu_document_files/products/en/reports-notes/JIU%20Products/JIU_REP_2005_7_English.pdf

> "

> The rationale for using OSS in the education sector has been developed in many reviews from different sources or government-sponsored policy papers. International Open Source Network (IOSN) issued an eprimer on the subject47 covering the use of FOSS from schools to university. It argues that "FOSS can play an important role in education, especially in developing countries" and

identifies the main reasons as being reliability, performance and security, building long-term capacity, open philosophy, encouraging innovations, an alternative to illegal copying of proprietary software, possibility of localization and learning from source code, and, last but not least, lower costs. (Pg.14)

Source:
https://www.unjiu.org/sites/www.unjiu.org/files/jiu_document_files/products/en/reports-notes/JIU%20 Products/JIU_REP_2005_7_English.pdf

European Union

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The European Commission has updated its strategy for internal use of Open Source Software. The Commission, which is already using open source for many of its key ICT services and software solutions, will further increase the role of this type of software internally. The renewed strategy puts a special emphasis on procurement, contribution to open source software projects and providing more of the software developed within the Commission as open source.

The Commission's strategy for the internal use of Open Source Software was first adopted in 2000.

Source: https://ec.europa.eu/info/departments/informatics/open-source-software-strategy_en

> "

About 61% of the active IP sites have Open Source web servers and about 40% have Open Source operating systems. Without any contestation, the Internet (web servers, and now application servers, tomorrow office servers etc.) is the main demonstration area of the success of the Open Source development model. (Pg.12)

Source: https://ec.europa.eu/idabc/servlets/Doce420.pdf?id=1973

Related links

- https://www.csis.org/analysis/government-open-source-policies
- https://opensource.org/authority
- https://government.github.com/community/

- https://joinup.ec.europa.eu/collection/open-source-observatory-osor/news/united-nations-event-open-source