

Development of Learning Material on the Use of Open Source Software in Government

Presentation to Joint Councils

September 28, 2022

Outline

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Project Overview

- **The Context:** The federal government as well as numerous provincial and municipal governments have committed to open-first approaches to digital transformation that guides policy, standards and operations at all levels. This approach implicitly and explicitly points to Open Source Software as an important tool.
- **The Challenge:** Public sector agencies at all levels have made few steps toward adopting OSS. Uptake is hindered by specific barriers, such as procurement policy, but more importantly, by a lack of familiarity with OSS and common misconceptions about its use.
- **The Project:** Our project aims to develop learning materials that empower public sector executives across Canada to evaluate, procure, manage, and benefit from OSS.

Project Overview

- **Long-term Approach:** Unlike proprietary software, OSS depends on an active community of users and contributors. This course will lay a foundation for a collaborative peer group across jurisdictions.
- **Outcome:** Executives will be equipped to build teams that create or procure high-performing, transparent and cost-effective software. They will be empowered to manage their IT operations so that they retain control over data, software contracting, features and maintenance.
- **A Unique Partnership:** ICCS and Open North have a broad network in the public sector and technical expertise. Together, we are well positioned to create and distribute valuable courseware, and to animate an ongoing community of practice.

Project Overview

Deliverables:

- A course consisting of multiple modules
 - Course material will be available in accessible text format as well as hosted on Open North's e-learning platform.
 - All final materials will include the names and logos of ICCS and Open North.
- Supplemental resources:
 - One-pager summary for each course module
 - Resource lists, checklists for key processes

Process overview

Research & expert engagements <i>(June - July 2022)</i>	Community of Practice kick-off <i>(July - August 2022)</i>	Content development & user testing <i>(August - October 2022)</i>	Finalization of learning materials <i>(October 2022)</i>
Reviewed previously compiled OSS WG research Engaged with experts and OSS practitioners Assessed platform options	Set up and recruited members to OSS CoP Developed plan to create productive engagements with CoP members throughout content development and testing phases	Developed mock-up of 1st LMS course module to validate user experience Refined content based on CoP member feedback	Complete development remaining course module content Create accompanying 1-pagers, checklists, & resource lists Validate final materials with CoP and OSS WG Deliver final materials

Community of Practice

- Current membership: 7 public servants working in digital services at the federal and provincial levels
- Why a CoP?
 - Civil servants have real-world knowledge that is crucial for improving government operations.
 - Civil servants understand the most effective way to format and frame new ideas in a public sector context.
 - Co-creating learning materials with civil servants fosters a sense of ownership over the content.
 - The relationships built during the CoP can become the core of a long-term software stewardship community.

Community of Practice Workshops

Workshop 1 (Aug. 16)

- Presented proposed learning modules
- Solicited case studies from CoP members

Workshop 2 (Sept. 12)

- Reviewed user-testing feedback on LMS format
- Discussed content, references and case studies

Workshop 3 (TBD)

- Validate final content/format
- Discuss community development, governance and stewardship

Course Content

Course objectives

By taking this course, public sector executives will:

1. Develop basic knowledge of Open Source Software fundamentals, how it differs from conventional proprietary software, and what value OSS brings in a public sector context.
2. Learn to recognize the common barriers to using OSS in government, and identify strategies for overcoming them.
3. Develop an understanding of how an applied, operational framework for policy and management decisions can enable a well-balanced approach to software – whether Open Source or conventional proprietary.

Module 1: Introduction to Open Source Software

Learning Objectives:

- Review the general use cases for software in government and learn how government software is unique.
- Introduce licensing as the fundamental difference between OSS and conventional proprietary software.
- Explore the differences between OSS and proprietary software.
- Learn the origins and motivations of the Open Source Software movement, as well as the fundamentals of how OSS works today, and what it means to obtain and maintain OSS.
- Highlight the benefits of using OSS in government, identify the unique challenges associated with it, and introduce strategies for overcoming those challenges – strategies that will be elaborated in greater detail throughout the course.

Module 2: The Open Source Team

Learning Objectives:

- Discuss the wide variety of job functions, professional profiles and skill sets involved in implementing and maintaining OSS solutions in a government organization
- Review guidelines for hiring and leading a right-sized technical team
- Introduce strategies for sharing capabilities across different government jurisdictions

Module 3: Licensing, Procurement & Finance

Learning Objectives:

- Understand the differences between Open Source and Proprietary software licensing models.
- Understand the differences between Agile and Waterfall development approaches.
- Understand why government systems bias toward proprietary software and waterfall development.
- Understand the different software revenue models and how they affect government cost structures.
- Learn new approaches to procurement, contracting, licensing and staffing.

Module 4: Security & Privacy

Learning Objectives:

- Discuss key security and privacy considerations associated with OSS
- Address commonly held perceptions (and misconceptions) regarding the risks of OSS compared to commercial proprietary software
- Explore various tools and techniques for assessing and mitigating security and privacy risks within OSS

Module 5: Accessibility & Maintenance

Learning Objectives:

- Discuss key sustainability issues related to OSS
- Updates to meet changing policy requirements and standards
- Substantiating Open First approach
- Outline common challenges that organizations face in maintaining their OSS solutions
- Identify key elements of successful stewardship of OSS solutions

Module 6: Working with OSS Across Jurisdictions

Learning Objectives:

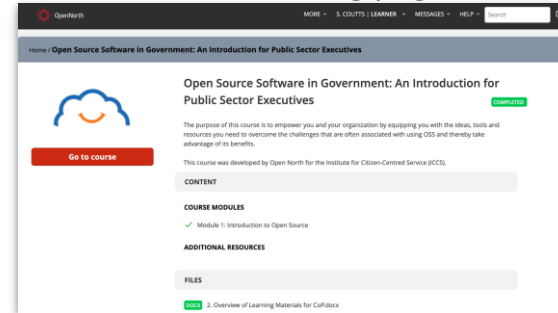
- Review the interjurisdictional issues raised in previous modules
- Discuss key considerations when forming multi-jurisdictional teams around a particular piece of software
- Discuss resource sharing between different levels of government
- Explore what it means to participate in a global community of codebase stewardship

Delivering Content to End Users

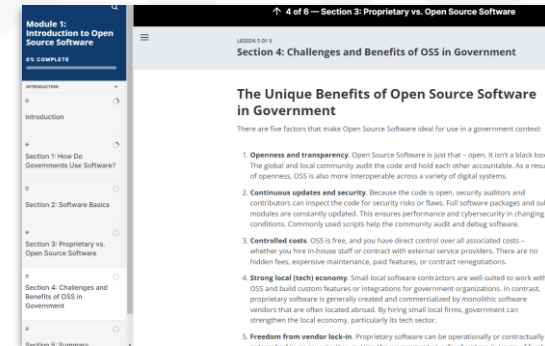
Two methods:

- Accessible text format
 - Includes one-pagers, checklists, resource lists
- Online course hosted on Open North's eLearning platform

Course landing page



Sample module start page, content page, & navigation menu



Next steps

Research & expert engagements <i>(June - July 2022)</i>	Community of Practice kick-off <i>(July - August 2022)</i>	Content development & user testing <i>(August - October 2022)</i>	Finalization of learning materials <i>(October 2022)</i>	Post-project: Ongoing iteration & animation of learning materials <i>(October 2022 -)</i>
<p>Reviewed previously compiled OSS WG research;</p> <p>Engaged with experts and OSS practitioners;</p> <p>Assessed platform options.</p>	<p>Set up and recruited members to OSS CoP;</p> <p>Developed plan to create productive engagements with CoP members throughout content development and testing phases.</p>	<p>Developed mock-up of 1st LMS course module to validate user experience;</p> <p>Refined content based on CoP member feedback.</p>	<p>Complete development of remaining course module content;</p> <p>Create accompanying 1-pagers, checklists, & resource lists;</p> <p>Validate final content with CoP and OSS WG.</p>	<p>Options:</p> <p>Live course animation</p> <p>Collaborate with Canadian and global partners on localized versions</p> <p>Develop additional modules, case studies and/or supplemental resources</p>

Discussion

- Initial reflections on the course module content...
 - Is the tone right?
 - Is the level of detail right?
 - Are we missing any key ideas?
 - Can you suggest compelling examples?
- How can we engage senior executives in user testing final materials?
- What are the Joint Council / ICCS's plans for promoting the course?
 - How can we align promotional efforts?
- What is the OSS-WG's plan for animating a community of practice?
 - How can we align software stewardship efforts?