

Memorandum

U.S. Department of Transportation
Office of the Secretary
of Transportation

Subject: Departmental Source Code Management

Date: August 11, 2017

Reply to: Dan Morgan, OCIO

From: Daniel Morgan
Acting Chief Technology Officer
Office of the Chief Information Officer

To: Component Chief Information Officers
Component Enterprise Architects

SUMMARY

This implementation instruction is issued under [DOT Order 1351.27, Enterprise Architecture Policy](#) and addresses the requirements set out in the Office of Management and Budget (OMB) Memorandum 16-21 (M-16-21), “Federal Source Code Policy: Achieving Efficiency, Transparency, and Innovation through Reusable and Open Source Software” (August 8, 2016). M-16-21 seeks to “ensure that new custom-developed Federal source code be made broadly available for reuse across the Federal Government” and establishes “a pilot program that requires agencies, when commissioning new custom software, to release at least 20 percent of new custom-developed code as Open Source Software (OSS) for three years, and collect additional data concerning new custom software to inform metrics to gauge the performance” of the pilot program.

SCOPE

This implementation instruction applies to source code that is custom-developed for DOT but does not apply retroactively to source code that was created prior to this implementation instruction’s effective date. With respect to source code developed between August 8, 2016 and this implementation instruction’s effective date, DOT expects that Components made their best efforts to comply with M-16-21 and that Components have been participating in the source code inventory process.

BACKGROUND

Source code management is a key component of the Department’s Enterprise Architecture Program. To ensure that the Department and other Federal agencies are able to identify and

leverage custom-developed software from all components of the agency, source code must be properly inventoried. Furthermore, Components must ensure that custom software development projects are managed in a way that ensures the Department has legal rights to the source code.

When effectively implemented, source code management has the potential to:

- Reduce the cost of information technology development efforts by offering low- to no-cost access to source code developed by other DOT Components and Federal agencies;
- Reduce time to implement a working solution by leveraging and minimally modifying existing source code;
- Prevent duplication of custom software development projects; and
- Promote the open sharing of software with the general public and non-Federal partners, potentially reducing their costs and speeding their implementation timeframes.

IMPLEMENTATION REQUIREMENTS

The US Department of Transportation will:

- Obtain appropriate data rights to custom-developed code, including at a minimum, rights to Government-wide reuse and rights to modify the code, and makes its custom-developed Federal source code broadly available for reuse across the Federal Government;
- Maintain an enterprise code inventory on www.code.gov
- Use existing code repositories and common third-party repository platforms as necessary;
- Append appropriate Open Source Software (OSS) licenses that comply with the definition of “Open Source” provided by the [Open Source Initiative](#) and/or that meet the definition of “Free Software” provided by the [Free Software Foundation](#) to the source code when releasing custom-developed code as OSS;
- Conduct appropriate alternatives analysis before considering the acquisition of an existing commercial software solution or a custom-developed software solution;
- Participate in OMB’s pilot program to release at least 20 percent of new custom-developed code (based on the number of software projects) as Open Source Software (OSS) through August 8, 2019, collecting additional data concerning new custom software to inform metrics to gauge the performance of this pilot; and
- Select software solutions that best meets the operational and mission needs of the agency, taking into consideration factors such as performance, total life-cycle cost of ownership, security and privacy protections, interoperability, ability to share or reuse, resources required to later switch vendors, and availability of quality support. DOT will use OMB standards and guidance in support of this process.
- Establish processes for the review and approval of all requests to release custom-developed code as OSS.

OCIO will develop detailed guidance in support of this implementation instruction that outline standard elements of a sound source code management program for the Department. These will include, but not be limited to:

- Processes and standards for inventorying, storing, and managing source code;

- Best practices for developing acquisitions that ensure the Department conducts appropriate alternatives analysis and market research;
- Best practices for ensuring the Department obtains appropriate legal rights in source code;
- Guidance on how to ensure appropriate data deliverables are defined in each acquisition to allow leveraging the government's data rights, and
- Processes and standards for reviewing and releasing source code as open source software

ACTION REQUIRED

All OAs and OST offices must ensure this directive is appropriately disseminated to those in its organization that perform the responsibilities listed in the Policy. To achieve the expected outcomes of the source code management processes, the following tasks are required upon issuance of this directive:

- Within 30 days, Operating Administrations should complete a review of their source code inventory and develop an action plan to close any gaps.
- Within 90 days of DOT issuing standards, Operating Administrations should establish processes for reviewing and releasing source code as open source software.

Should you have any questions, please contact Dan Morgan at (202) 366-4308 or Daniel.Morgan@dot.gov.