

Data Sharing Pilot Project

Purpose

A data sharing pilot project will test the governance, management, concepts and tools necessary for sharing geospatial Framework data between all public bodies through a central hub. The results of the pilot project will provide information needed to inform the Legislature, the Governor's office, the State Chief Information Officer, and other stakeholders about how geospatial Framework data sharing will work, policy decisions required to make it work, the level of effort required, and how much it will cost. Because much of the Framework data that is currently not available would come from the local government level, an important part of the pilot project will be to find out the data development and data sharing needs of local governments.

Project Elements

There are several concepts and tools to be tested, including:

- Governance of Framework themes
- Central hub capabilities, capacity and technology
- Data provider capabilities, capacity and technology
- Data aggregator capabilities, capacity and technology
- Work flow to enable sharing
- Tracking costs and benefits

Governance of Framework themes is the way in which collaborative decisions are made about what data will be shared, the standards that will be set, how it will be shared, the processes and work flow for sharing it, when it will be shared, how to fund the development and sharing of the data, etc. Testing the governance mechanisms related to one of the Framework themes will provide significant information about how to proceed for all other themes.

The central hub technology will be managed by the Office of the State CIO (OSCIO) Oregon Geospatial Enterprise Office (GEO) and will primarily be located at the OSCIO State Data Center (SDC) and the Institute for Natural Resources (INR) at Oregon State University. The existing Spatial Data Library and data holdings are physically stored at the SDC, and the portal that provides a user interface is administered and maintained by INR. The existing architecture will likely need to be improved in various ways to handle a large influx of Framework data, in addition to making that data easily and securely accessible by a much larger group of power users than has previously been the case. In addition to technology improvements, it will likely be necessary to develop and use a single Framework information model that accommodates all Framework data elements and map services, similar to the Esri local government information model. The capacity of GEO and INR to handle this additional workload will need to be evaluated and likely improved by adding staff. In addition, the functionality and capabilities offered by GEO related to a central data hub will have to be significantly improved.

The data provider technology is a set of tools and processes that are placed on the desktop, or made available via the Web, for those public bodies that create or collect Framework data. These tools and processes will, at least in some cases, enable data providers to create data in a standardized format that can be consumed by data aggregators or directly by the central hub. This technology may also need to enable the data provider to manage the confidentiality and privacy requirements for certain data sets.

Many data providers at the local government level do not now have the capability or capacity to create digital data, whether in a standardized form or not. Improvements will have to be made to augment their capacity and increase their capabilities.

The data aggregator technology is a set of tools and processes that are available to the relatively small group of data aggregators that compile Framework data from many data providers to create a Framework data set covering a larger geographic area. The data aggregator technology exists to some extent at Metro, LCOG and a few other existing aggregators. However, this technology will likely need to be augmented with additional functionality and will need to be made available more broadly to other aggregators that may or may not currently exist or currently perform aggregation for Framework data. Additional aggregators may be needed to help with the capacity and capability deficiencies noted in the local government sector

The work flow to enable geospatial Framework data sharing is in place for a few data elements and is supported by the existing Framework Implementation Team (FIT) and standards-setting concepts and processes. We can learn something by examining the details of how this happens for those data elements. But it will also be helpful as part of a pilot project to design a work flow specifically for a particular Framework data set. The existing work flows have primarily developed organically, rather than being intentionally developed to enable efficient data sharing. In addition, we should pay attention to how work flows for multiple Framework data elements align to enable a coherent Framework information management model.

It will be necessary and useful to track the costs of Framework data development and sharing, as well as the benefits to the extent they can be reasonably estimated. Customizing the benefit-cost model developed for King County, and subsequently used to analyze the Oregon RAPTOR program, would be an efficient way forward. That model, developed by a senior economist at the University of Washington's Evans School of Public Affairs, measures the cost of implementing and using GIS over time and compares it to the cost that would have likely been incurred without GIS. Whether we use that system or not, we need to track costs and benefits of the pilot project. Based on earlier studies in Oregon and around the country, it is believed that significant benefits will accrue to local governments, as well as other stakeholders, as a result of developing statewide Framework data and making it readily accessible to public bodies.

Project Structure

The pilot project will test one or more Framework themes with regard to the concepts of governance, central hub, data providers, aggregators, work flow and cost/benefit tracking. It would be desirable to test multiple themes of data, so as to learn what does and doesn't work regarding each. It should be possible to test multiple themes simultaneously, using teams that are following the same process. That will provide compelling evidence for ongoing participation by many constituencies.

Designing the pilot projects for each Framework theme will be an essential part of the planning process before the projects are undertaken. If possible, we should consider at least one project that fills some data gap, to demonstrate the possibilities to stakeholders. It is understood, however, that filling an existing data gap is a large task for a pilot project, so that idea will have to be carefully considered before proceeding.

The pilot project will require some funding. It is possible that we could get some of the funding from the Framework Implementation Teams through OGIC. It is also possible that we could request some funding directly from the Legislature based on recommendations from the JLCIMT. There may be parts of the pilot project, particularly related to governance and work flow, that we could initiate over the course of the next year. The rest of the pilot project would be initiated when funding becomes available, likely July 1, 2017. The pilot project would need to be completed in July 2018 to enable any funding requests related to the results of the pilot project to be included in the 2019-21 budget cycle.