



# Enterprise GIS Program at the City of Portland

Matthew Freid  
Corporate GIS Program Manager  
Bureau of Technology Services – City of Portland

The background of the slide is a stylized map of a city. It features a prominent blue river winding through the center. The city's layout is represented by a light gray grid of streets. Green areas represent parks or green spaces, and yellowish-tan areas represent urban or developed land. The overall aesthetic is clean and modern, typical of a digital map application.

# Program Objectives

Provide an authoritative source for spatial and related tabular datasets to city staff and external users

Make the data discoverable and accessible through desktop and web applications



# Who We Serve

City of Portland has 30 bureaus providing water, sewer/storm water, transportation, planning, police, fire and permitting services.

6500 employees with 2000 GIS desktops and about 500 active users

Web based access at [www.Portlandmaps.com](http://www.Portlandmaps.com) provides data to thousands of citizens and business daily.



# Data Collection and Publishing

The HUB Model – Collect data from across the enterprise and load it to a read-only SQL tier.

Building on this model we also publish a subset of this data to ArcGIS Server for web mapping services and open data

Metadata is publicly available at <https://www.portlandmaps.com/metadata/>. Working on integrating metadata, open data, web mapping services.



# Accessing GIS Data

ESRI ELA customer for over 20 years

Extensive use of ArcMap by internal staff, as well as our MapWorks application built in house using ESRI stack.

Publicly available web application [www.Portlandmaps.com](http://www.Portlandmaps.com) has been in production for over 15 years. Major upgrade in 2016 focused on mobile users, data access through API's and ArcGIS server for maps

Increasing usage of ESRI mobile apps as well as ArcGIS Online for both outward facing web applications as well as more traditional GIS functionality like editing



# CGIS Structure & Governance

Staff consists of nine members – Programmers, DBA, Systems Analyst, GIS Analysts and Technicians.

Funded through a rate model that distributes our cost to bureaus based on their size and use levels

ESRI ELA makes software available to all city users without direct charges as well as access to HUB and API's

Stakeholders team of bureau IT / GIS managers meet bi-monthly to discuss progress and priorities



# Near term challenges

Big data, IoT and mobility moving from buzzword status to actual projects.

- AVL integration with snow plows
- Analysis of data from rideshare, air quality monitoring
- Rapid expansion of mobile devices within city

Web GIS moving from external to internal use cases

- Portal coming for internal web applications

Expansion of our services over last few years and next few years is adding new things rather than replacing existing ones. This is increasing efforts for our support, data publishing, upgrades, monitoring, etc.



# Open Data

First Wave of Open Data was the package and distribute model –

- Used ftp to make shapefiles or dbf files available through custom web site
- Exposed more data but often didn't follow through on data currency and documentation

Second Wave is focused on API's and Web mapping services

- Fits our model of being an authoritative source of data, providing metadata
- Users can download but are increasingly accessing endpoints directly so data is up to date
- Using ArcGIS Online Open Data for downloads, as well as our API's and services at <https://www.portlandmaps.com/arcgis/rest/services/Public> and <https://www.portlandmaps.com/development/>

City working on enterprise data governance and open data strategy





Questions ?

[matt.freid@portlandoregon.gov](mailto:matt.freid@portlandoregon.gov)

[maps@portlandoregon.gov](mailto:maps@portlandoregon.gov)

[www.portlandmaps.com](http://www.portlandmaps.com)

[www.portlandoregon.gov/gis](http://www.portlandoregon.gov/gis)

[www.linkedin.com/in/matthewfreid](http://www.linkedin.com/in/matthewfreid)