

# State Imagery, Elevation, and Beyond

Andrew Herbst

*Alaska Geospatial Office, State of Alaska*

*USGS IPA Detailee*

*Imagery and Elevation Portal Manager*

*Co-Chair, AGC Imagery and Elevation Technical  
Working Group*



# Program Goals

---

## Access

Provide open access to elevation and imagery data for Alaska, in compliance with **FAIR** principles. Data must be *Findable, Accessible, Interoperable, and Reusable*.



## Accountability

Establish and maintain an accurate account of all imagery and elevation assets across multiple agencies and organizations.



# Previous Measures

## The Best Data Layer (BDL)

The BDL provided a snapshot of imagery from multiple sources.

### Access:

In some cases, provided higher quality imagery than what was available in our statewide imagery datasets, google earth, etc. However, it contained little metadata for what was included. Data were mosaiced according to a set of rules which may have not been “best” for everyone.

### Accountability:

Contributing to the dataset was voluntary, and nobody was tasked with ensuring everything went into it.



# Previous Measures

## DGGS Elevation Portal

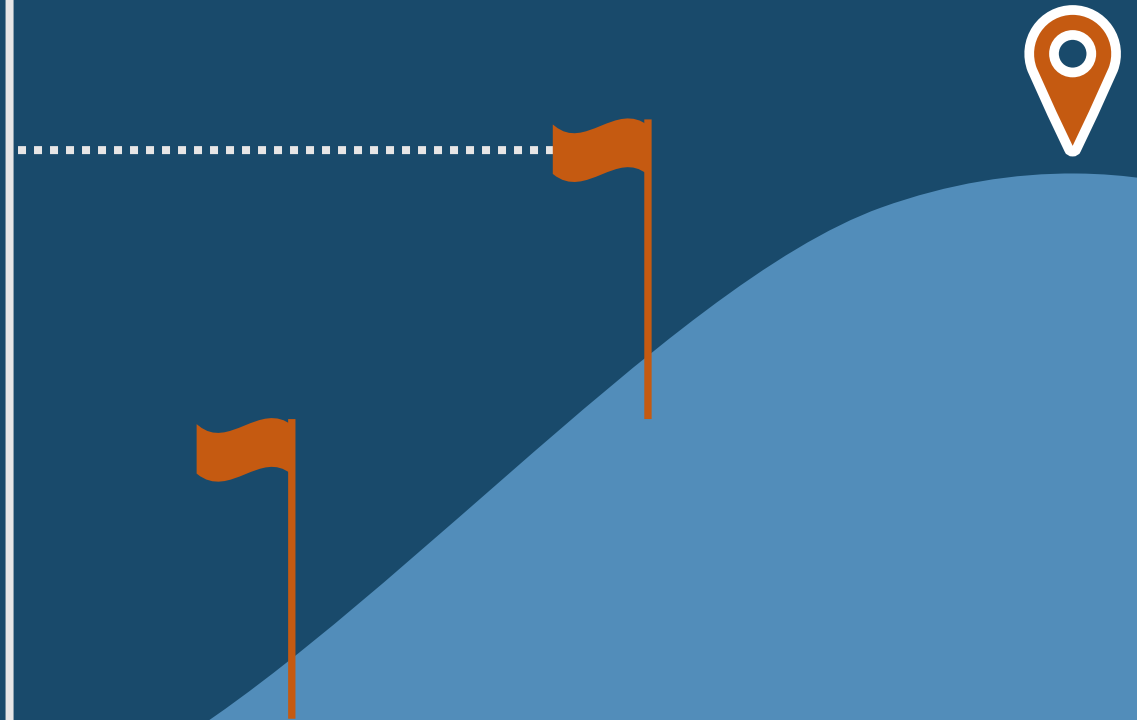
Has been providing downloadable elevation and *some* imagery since 2011.

### Access:

Snappy interface and fast downloads. Includes previews off all datasets in an interactive web map. Getting long in the tooth and could use a refresh.

### Accountability:

Currently unequipped to handle the remaining volume of existing state data, nor the expected volume over the next ten years. Will also require more filtering/querying functionality as more data types are included.



# Our Four-Point Plan

## Dynamic Best Data Layers

Queryable, sortable, metadata-driven image services, providing users with the information they need to make the most of their data.



**New Download App for Imagery/Elevation/More** Redesigned from the DGGs Elevation Portal, built on more scalable foundation.



## Single Access-Point Web Page

One website to link everything together. No more hunting through several sources to find everything.



## Integrated Accountability System

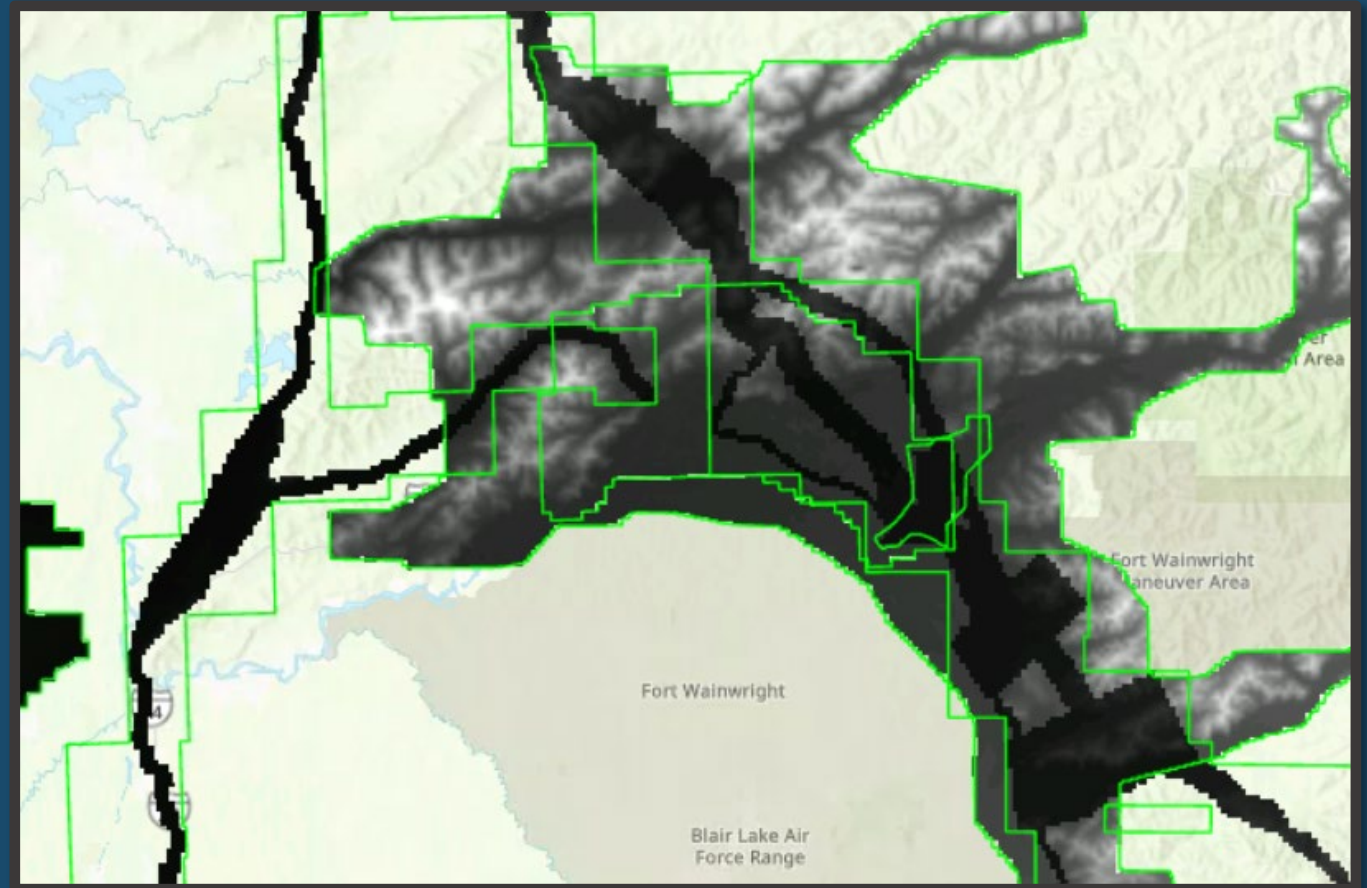
An intuitive and unobstructive pipeline for tracking projects in the planning and in-progress stages. Completed projects are marked for ingestion into our services. Contributors update their holdings during quarterly AGC technical working group meetings.



# BDL(s)

## Image Services

- Built from many mosaic datasets
- More functionality/flexibility
- Sortable and queryable
- Layers for imagery, elevation, intensity, and more

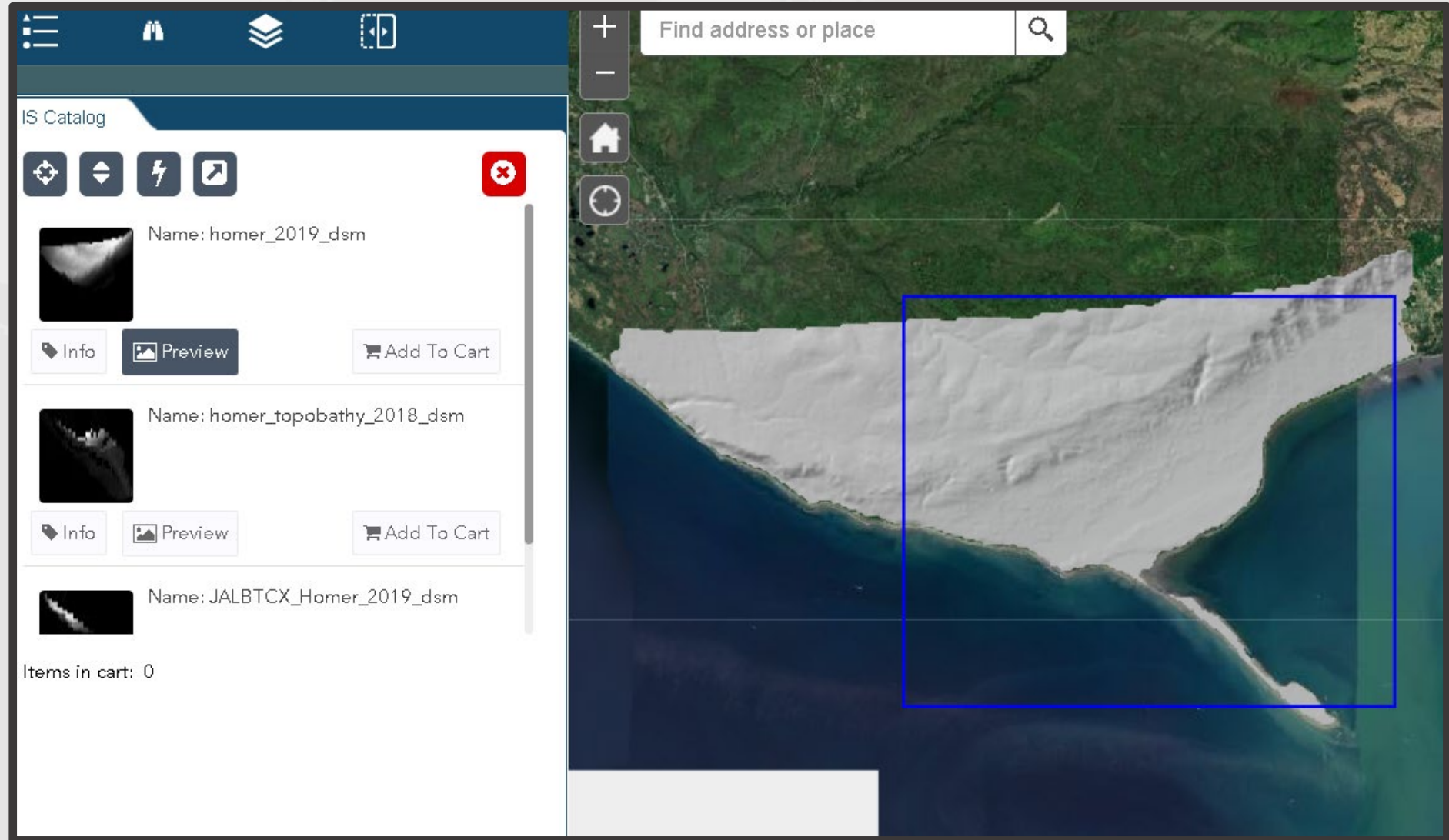


# New Download App

Built on image services.

Allows use of processing templates.

Key metadata viewable in app.





# New Web Page

## <https://gis.data.alaska.gov/pages/imagery>



The screenshot displays the website interface for the State of Alaska Open Data Geoportal. At the top left is the logo for 'THE GREAT STATE of ALASKA'. To the right of the logo are navigation links for 'State Employees', 'Departments', and 'myA'. Below the logo is the 'State of Alaska Open Data Geoportal' title and a navigation menu with links for 'Home', 'Imagery', 'Elevation', 'Partnerships', 'Alaska Geospatial Council', 'Get Involved', and 'Terms'. The main content area features a section titled 'Alaska High Resolution Imagery (.5m)'. Below this title, a paragraph explains that the service endpoints provide access to 50cm resolution imagery, with WMS and WMTS services licensed for federal, state, local, tribal, and non-commercial use. A link to the 'End User License Agreement' is provided. At the bottom, three images are shown: a satellite view of a landscape, a false-color satellite image, and a map of Alaska with numerous small colored rectangles indicating the locations of the high-resolution imagery tiles.

THE GREAT STATE  
of ALASKA

State Employees Departments myA

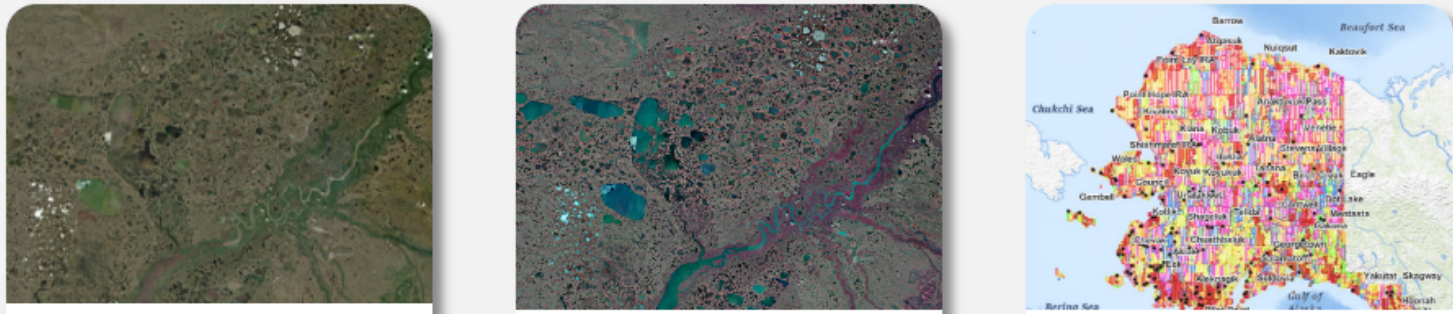
THE SEAL OF THE STATE  
OF ALASKA

State of Alaska  
Open Data Geoportal

Home Imagery Elevation Partnerships Alaska Geospatial Council Get Involved Terms

### Alaska High Resolution Imagery (.5m)

The following service endpoints provide access to Alaska High Resolution Imagery (50cm). The Alaska High Resolution Imagery (50cm) Web Mapping Services (WMS) and Web Mapping Tile Services (WMTS) are licensed for Federal, State, Local, Tribal, and non-commercial use. [End User License Agreement](#)







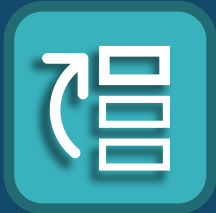
## Planned Projects

We start tracking elevation and imagery projects at the planning stage, by circulating a Survey123 questionnaire through AGC partners.



## Project Tracking Dashboard

The feature class output from our survey is pushed into a dashboard application for more effective communication.



## Planning and Prioritization Tools

Stakeholders can integrate published data from questionnaire and dashboard into planning and prioritization tools to guide decision making when allocating resources.



## Public Apps and Services

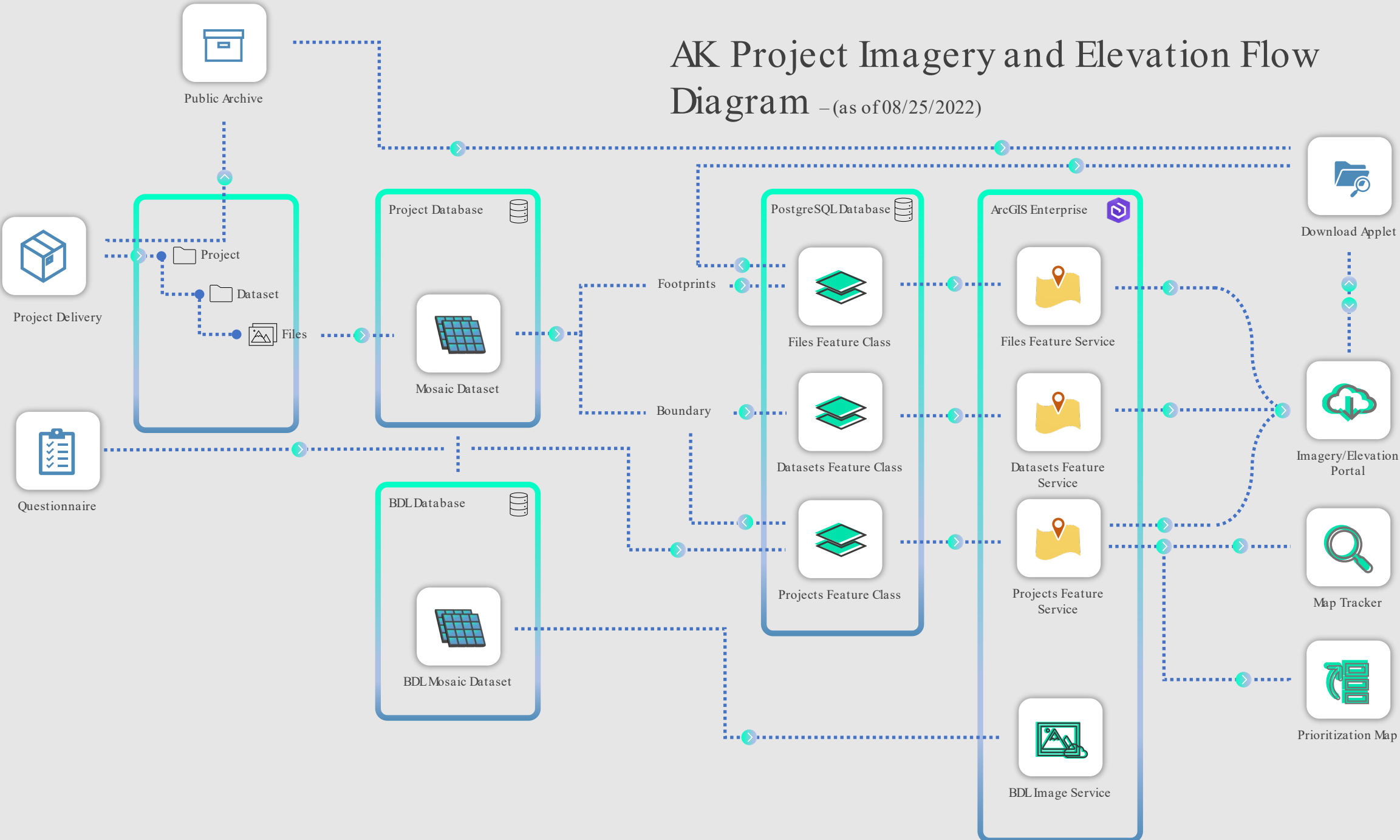
Data from completed projects are incorporated into the Open Data Geoportal and made publicly accessible. Portal database can be queried and filtered to help users find data to suit their needs.

# Integrated Accountability

Project details come to us via a questionnaire.

These details are later joined to raster data deliveries using mosaic dataset footprints.

# AK Project Imagery and Elevation Flow Diagram –(as of 08/25/2022)



# Typhoon Merbok

Over 30 communities affected

Rapid, inter-agency response  
created immediate demand for  
imagery

9 communities with UAS data

36 communities tasked for SkySat

24hr turn-around on delivery to  
service



Thank You!

# Federated Data Governance



Centralized

Federated

Decentralized

