

GIS Architecture Project Overview
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Overview

The Montana State Library (MSL) needs a GIS architecture that is adequate for current and (near) future needs given our changing requirements and the rapidly changing technology. The current GIS architecture is largely based on a system review that was performed in 2014 and focused primarily on GIS Server and Database Server configuration.

Since that time several major changes have happened that are driving the need for an updated architecture.

Major changes since the existing GIS architecture was designed.

- ArcGIS desktop software has changed from ArcGIS Desktop to ArcGIS Pro.
- ArcGIS Online has matured as an online web mapping environment.
- MSL staff had to work remotely through the pandemic.
- The Governor has pushed agencies to be more mobile ready.
- ArcGIS Server software has changed to ArcGIS Enterprise.
- Cloud computing has matured and become more mainstream and more widely used withing Montana state government.
- Virtual desktops have matured and become more mainstream.
- Datasets have grown exponentially.

Needs of an updated GIS architecture

- Designed to optimize use of updated GIS desktop and server software.
- Flexible workstation models are needed to support remote staff and possibly more.
- Workstations that are “close” to the data and minimize network traffic are needed.
- Efficient storage of very large datasets and flexibility to handle growth.
- Common platform sized for our needs and flexible to meet ongoing/future needs.
- A more efficient model to procure and use expensive computing resources.
- Alignment with State of Montana IT vision:
 - o Similar to what other state agencies have done (DEQ) or are planning (MDT).
 - o Offset local system administration needs.
 - o Reduce technical debt.

Project planning timeline

2021 – System Architecture Design
2022 – Develop and post Request for Information (RFI)
2023 – Seek funding and explore procurement models
2024 – Seek long term funding and perform initial buildout
2025 and beyond – continue buildout and work in the new architecture.

Questions or Comments?

- Please reach out to Evan at ehamer@mt.gov or 406-444-5355