

Sharing Services

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Need

- ▶ Midcontinent Independent System Operator (MISO) provided a long-range transmission plan
- ▶ Great River Energy (GRE) and Minnesota Power (MP) are partnered for Tranche 1
- ▶ The project is 180 miles of new and rebuilt transmission and is named the Northland Reliability Project (NRP)
- ▶ Project started in 2022 with an in-service date of 2030

Northland Reliability Project



Need cont.

- ▶ Project runs from the Monticello, MN area to just east of Grand Rapids, MN
- ▶ Two segments to the project
 - Segment one in orange, some greenfield and following existing lines
 - Segment two in green, rebuild two of GRE's existing transmission lines



Need cont.

- ▶ With the large scope of the project and the duration of the project, the team needed a way to organize and view data

Northland Reliability Project



Solution

- ▶ Project owners were looking for a way to have the data that would be provided by outside entities centralized and have one source of truth
- ▶ Needed to make sure project owners had the most current data at the tip of their fingers as they made important decisions
- ▶ It was agreed upon to share web services and GRE would house the data
 - Shapefiles are out of date as soon as they are exported
 - Service data will be updated when the data is updated by the owner

Solution

- ▶ It was decided to use ArcGIS Online vs Enterprise
 - Pros
 - Most entities have users in their own AGO site
 - GRE doesn't have to provide users
 - Data is edited/managed by data owner
 - Cons
 - Learning for everyone involved
 - Added training
 - Multiple GIS sites

Data Providers/Users

- ▶ Many different data providers with different genres of data, which will need to be maintained throughout the project
 - Project data, environmental/permitting, Land Rights, cultural, GRE provided
- ▶ Responsibility is on the data provider, we are providing the repository for the data
- ▶ Communication with data providers is very important



Data

- ▶ Data must be a feature service
 - Allows offline capability
 - Allows the most flexibility when adding the service to a map

Group setup

- ▶ Need to make sure outside entities can join the group
- ▶ The group owner can now invite people from outside their organization
- ▶ Usernames and licensing are important

The screenshot displays the 'Group membership' configuration page in ArcGIS Online. It includes several sections with radio button options:

- Who can view this group?**
 - Only group members
 - All organization members
 - Everyone (public)
- Who can be in this group?**
 - My organization's members only
 - Partnered collaboration and my organization's members only
 - Any organization's members
- How can people join this group?**
 - By invitation
- Who can contribute content?**
 - All group members
 - Group owner and managers

Below the settings is the 'Invite members' section, which features a search bar and a filter for 'Who can be in this group?' set to 'Any organization's members'. A toggle switch for 'Search all ArcGIS Online organization members' is turned on. The user interface shows the user 'Maegan Caouette - GRE' with a profile card containing links for 'My profile', 'My settings', and 'Help', and buttons for 'Switch Accounts' and 'Sign Out'.

Groups

- ▶ We decided to go with two groups
 - One for all users, project owners, consultants, contractors
 - One for confidential/sensitive data

The screenshot displays a list of groups in a user interface. The first group is 'NRP', described as 'Group for all non-GRE users to access content'. It was last updated on Mar 14, 2024, is viewable by group members, and is distributed across any organization. The second group is 'NRP - Permitting', described as 'Group for restricted data'. It was last updated on Mar 13, 2024, is viewable by group members, and is available to any organization. Both groups are managed by 'AGO Admin'.

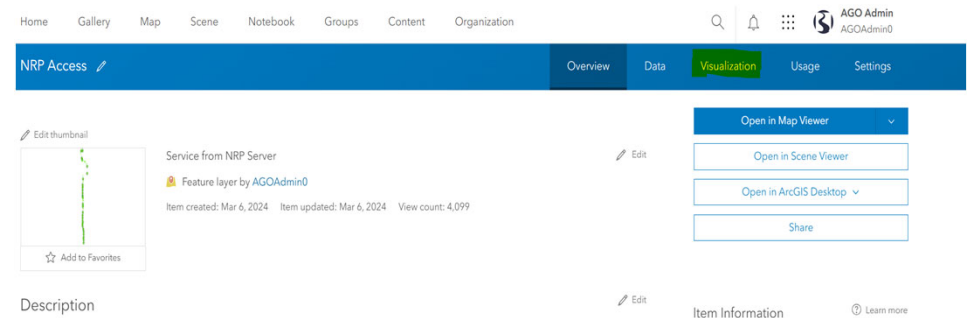
Group Name	Description	Last Updated	Viewable by	Organization	Admin
NRP	Group for all non-GRE users to access content	Mar 14, 2024	Group members	Distributed, Any organization	AGO Admin
NRP - Permitting	Group for restricted data	Mar 13, 2024	Group members	Any organization	AGO Admin

Collaboration

- ▶ Collaboration could be another option, but we had already started the “groups” route
- ▶ We attempted to try a collaboration between our ArcGIS Online site and Enterprise site, but had a few hiccups with the outside data

Visualization/Views

- ▶ Can use a “view” to symbolize for confidential/sensitive areas without giving attribute information
- ▶ This is done in the web map
- ▶ Lessons learned: you can only create a view on your own data. The data provider may have to provide two services, one with full attributes and one view.



Construction Tracking

- ▶ Pilot project for us right now
- ▶ Data will be collected by GRE construction crews

The image displays three screenshots of a web application's layer style configuration interface, arranged horizontally. Each screenshot shows a 'Symbology' panel with a 'Show in map legend' toggle and a list of construction categories with corresponding symbols.

- Left Screenshot:** Shows the 'Symbology' panel for 'Construction ROW Clearing'. The 'Show in map legend' toggle is turned on. The legend includes:
 - Red line: Not Complete
 - Green line: Complete / NAAn 'Edit layer style' link is visible at the bottom.
- Middle Screenshot:** Shows the 'Symbology' panel for 'Construction Structures'. The 'Show in map legend' toggle is turned on. The legend includes:
 - Open circle: Survey
 - Filled purple circle: Foundation
 - Filled blue circle: Offload
 - Filled blue circle: Framed
 - Filled teal circle: Set
 - Filled teal circle: Clipping
 - Filled green circle: Splices
 - Filled yellow-green circle: CompleteAn 'Edit layer style' link is visible at the bottom.
- Right Screenshot:** Shows the 'Symbology' panel for 'Construction ROW Restoration'. The 'Show in map legend' toggle is turned on. The legend includes:
 - Grey bar: Not Complete
 - Green bar: Complete / NAAn 'Edit layer style' link is visible at the bottom.

Other Uses

- ▶ We had a contractor working on multiple projects for GRE
- ▶ We are providing the services, they are producing the end product

Learning

- ▶ We started out creating a Web App, but found because we had to use feature services it wouldn't work for our purposes
 - Could not group feature services
 - Made the map not user friendly
 - This prompted us to create an “experience”
 - Creating an “experience” was also a learning curve

Learning cont.

- ▶ We had planned to pass through the Web app to our Enterprise portal for GRE's users, unfortunately, that didn't work so we had to pivot.
 - Pivot to AGO for GRE users also
 - Learning curve for GRE employees that have not been exposed to AGO
 - Logging into two different sites on the web and on mobile applications

Learning cont.

- ▶ Desired functionality from Esri's experience builder not met
 - Related tables
 - Not available in pop-up in both web map and experience
 - Text tool
 - No add data button in enterprise

Conclusion

- ▶ Found that sharing services is a great workflow if there are many entities involved
- ▶ This will just keep growing and improving
- ▶ Need to be flexible
- ▶ Still a work in progress and a lot of learning to do



Northland Reliability Project



Questions??
