Rethinking Collaboration and Project Coordination

David Reeves

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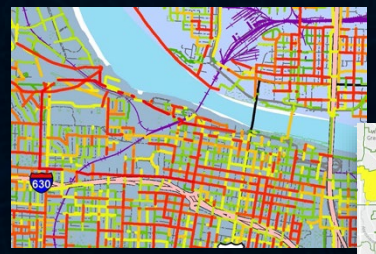
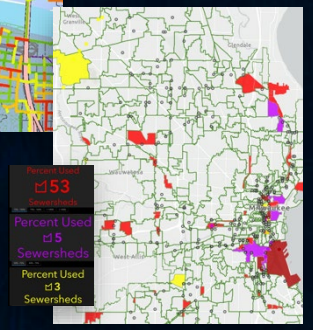
Esri Infrastructure Management &
GIS Conference

Age of Network



CAW
Little Rock, Arkansas

Sewer Capacity



Milwaukee Metropolitan Sewage
Wisconsin

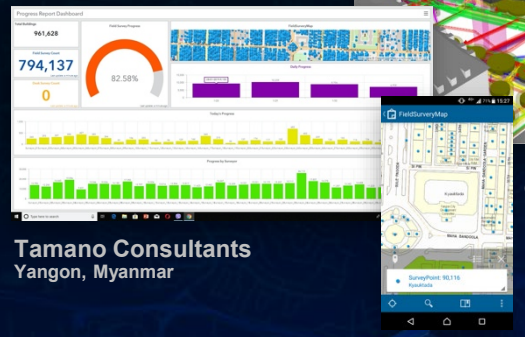
Pipeline Construction Management

Tetra Tech
US

Work Order Management

Cityworks
Round Rock, Texas

Citywide Building Survey

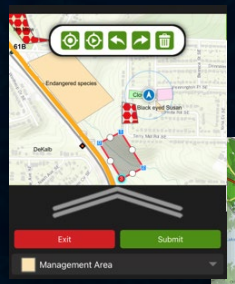


Tamano Consultants
Yangon, Myanmar

Visualizing Underground Utilities

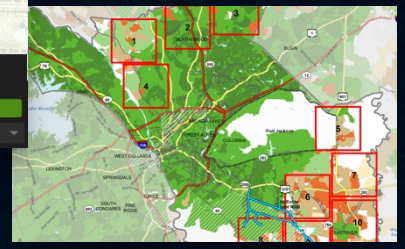
Topomat
Geneva, Switzerland

Habitat Protection in Public Right-of-Way



Clearion
US

Targeting Infrastructure Investment

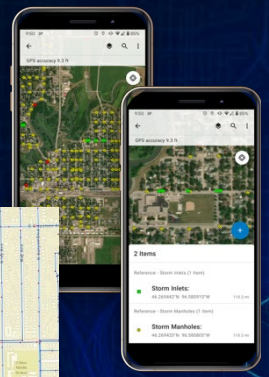


Revolution D
Columbia, South Carolina

Condition Survey & Analysis

ITpipes
California

Field Assessments



Breckenridge, Minnesota

BIM & GIS Integration

HDR
Ontario, Canada

ARC-GREENLAB
Autobahn A100, Berlin, Germany

Why do we share?

Internal team members need the data

Public needs access to the data

Customers are asking for it

Operations and maintenance of that asset

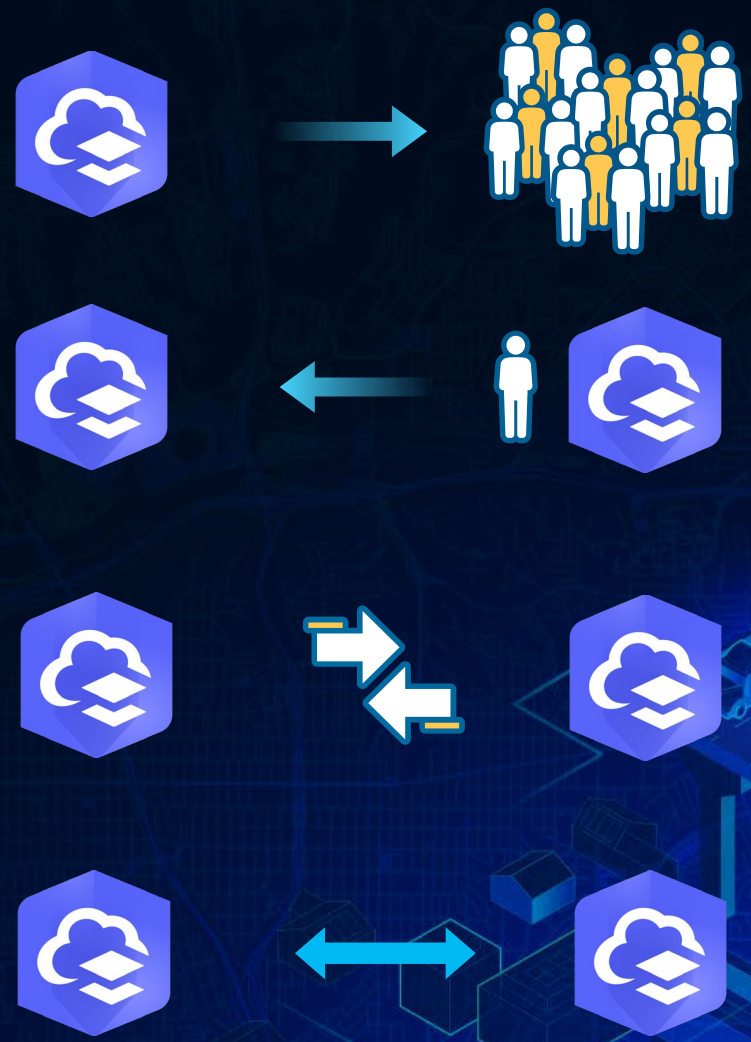
Project requirement

To stand out among competitors

Why don’t we share?

Collaboration workflows

- Public share
- Secure Invite
- Partnered
- Distributed
  - Sync by copy
  - Sync by reference



Public Share

Project Considerations

- Deliverables can/need to be shared publicly
- Where is your data stored?

Scenario

- AEC firm wants to share an ArcGIS StoryMap showing the location of a construction project and any potential traffic impacts.

Secure Invite – Client is existing ArcGIS Online user

Project Considerations

- AEC firm wants to share a group of datasets, maps, and apps to another party
- Both parties have ArcGIS Online accounts
- Who owns the data?

Scenario

- An AEC firm doing an environmental assessment for a freeway extension undertaking an ecology study needs additional support to finish the project in time. Subcontractors are invited into the org to collect data.

Partnered Collaboration – new in ArcGIS Online

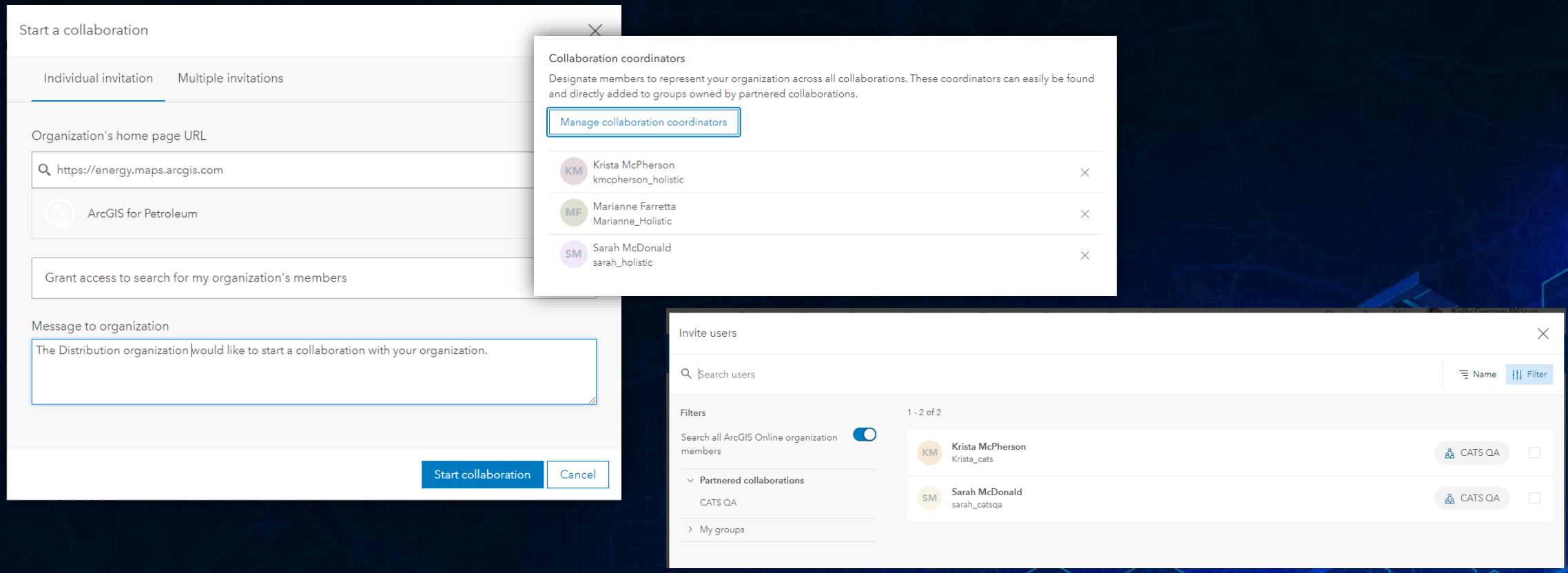
Project Considerations

- Trusted connection between two ArcGIS Online organizations
- Top-level business connection
- Two-way collaboration is necessary
- Plan and outline your collaborative workflows
- Can support many projects

Scenario

- AEC firm has entered a long-term, significant relationship with another entity (MSA) with both sides needing to work together as a single organization.

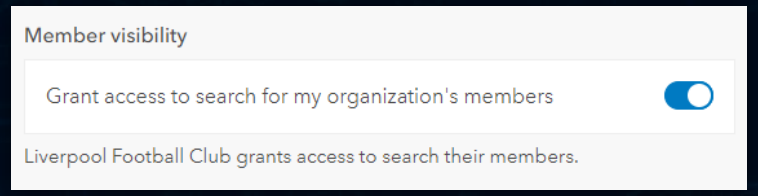
Partnered Collaboration

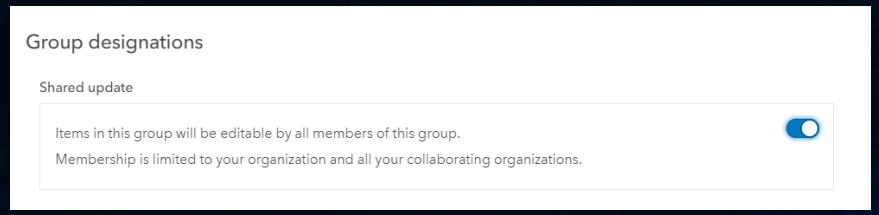


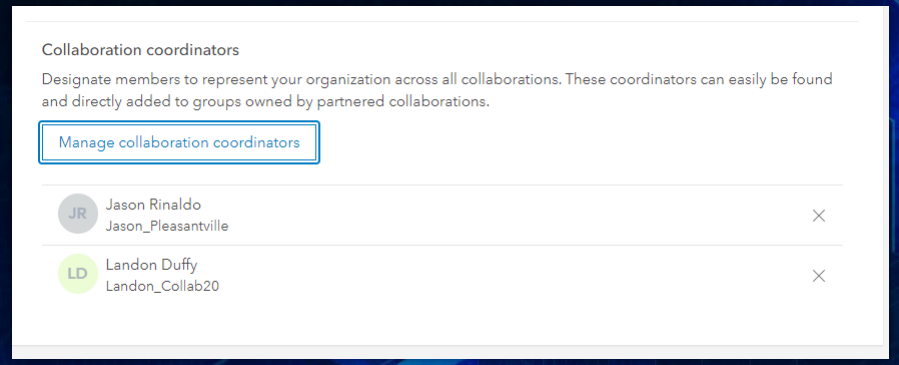
Partnered Collaboration

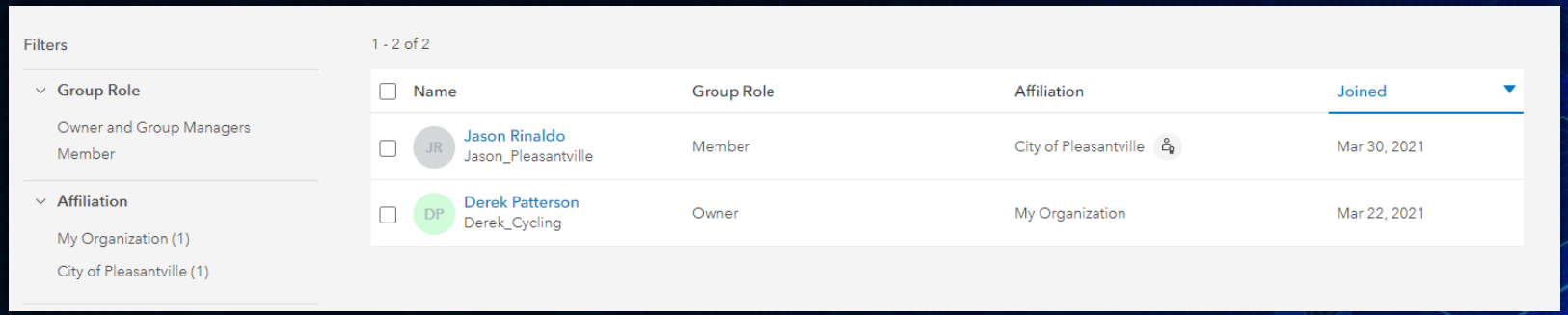
- **Advantages of a Partnered Collaboration**

  - Ability to **search** members in partnered organization.
  - Use a **shared update group** with members from a partnered organization shared update group.
  - Improved member and content management with **Collaboration Coordinators**.
  - Ability to view **organization affiliation** for external members who belong to partnered organization.









Great! Let's Collaborate!

Groups

Add member Directly to Group

Collaboration Coordinators

Rules!!!

Sharing

Partnership

Update Capabilities

Facilitator

What happens when it ends?

Security

Group Owner

Group Manager

External members

Roles and Privileges

Editing

Partnered Collaboration

- **Lots of problems to solve**

I want to:

- See the neighboring city's road construction data.
- Work with the Boston region on a web application.
- See statewide evacuation layers.
- Work on secure projects with members from other organizations.
- Enable the recreation department to see my data, but I don't want them to share it publicly.
- Use the same national water dataset.
- Easily create and share data about this event with many organizations.
- Share my student's work with another institution.

Distributed Collaboration

Workflow Considerations

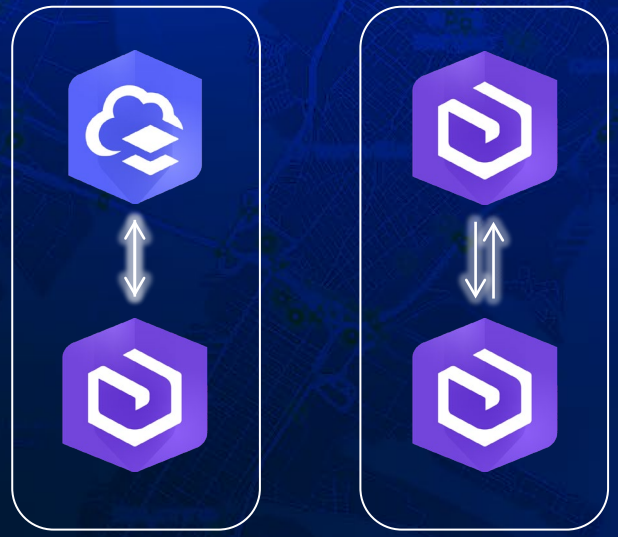
- Sync and share data between 2 systems
  - ArcGIS Online and ArcGIS Enterprise
  - ArcGIS Enterprise to ArcGIS Enterprise
- Based on a foundation of trust
- No coding or scripting knowledge is required
- *Sync by copy or by reference*

Scenario

- AEC firm needs to share data to ArcGIS Online so that an ArcGIS Hub can be constructed for a public project.

Patterns of collaboration

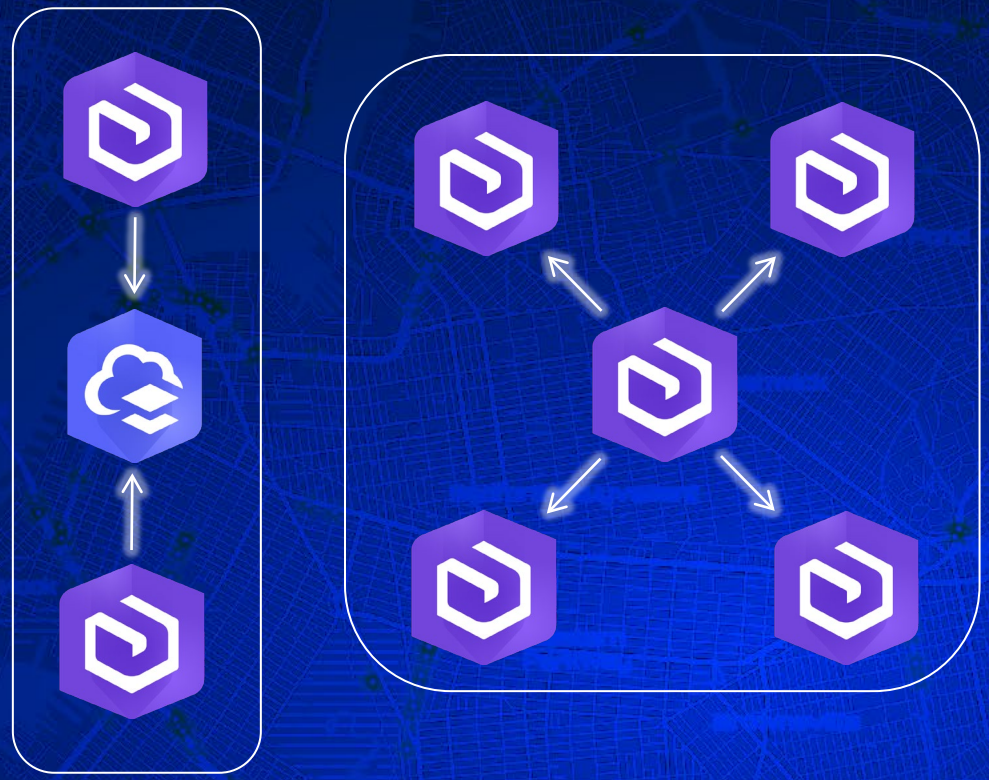
Collaboration between ***two participants***



ArcGIS Enterprise

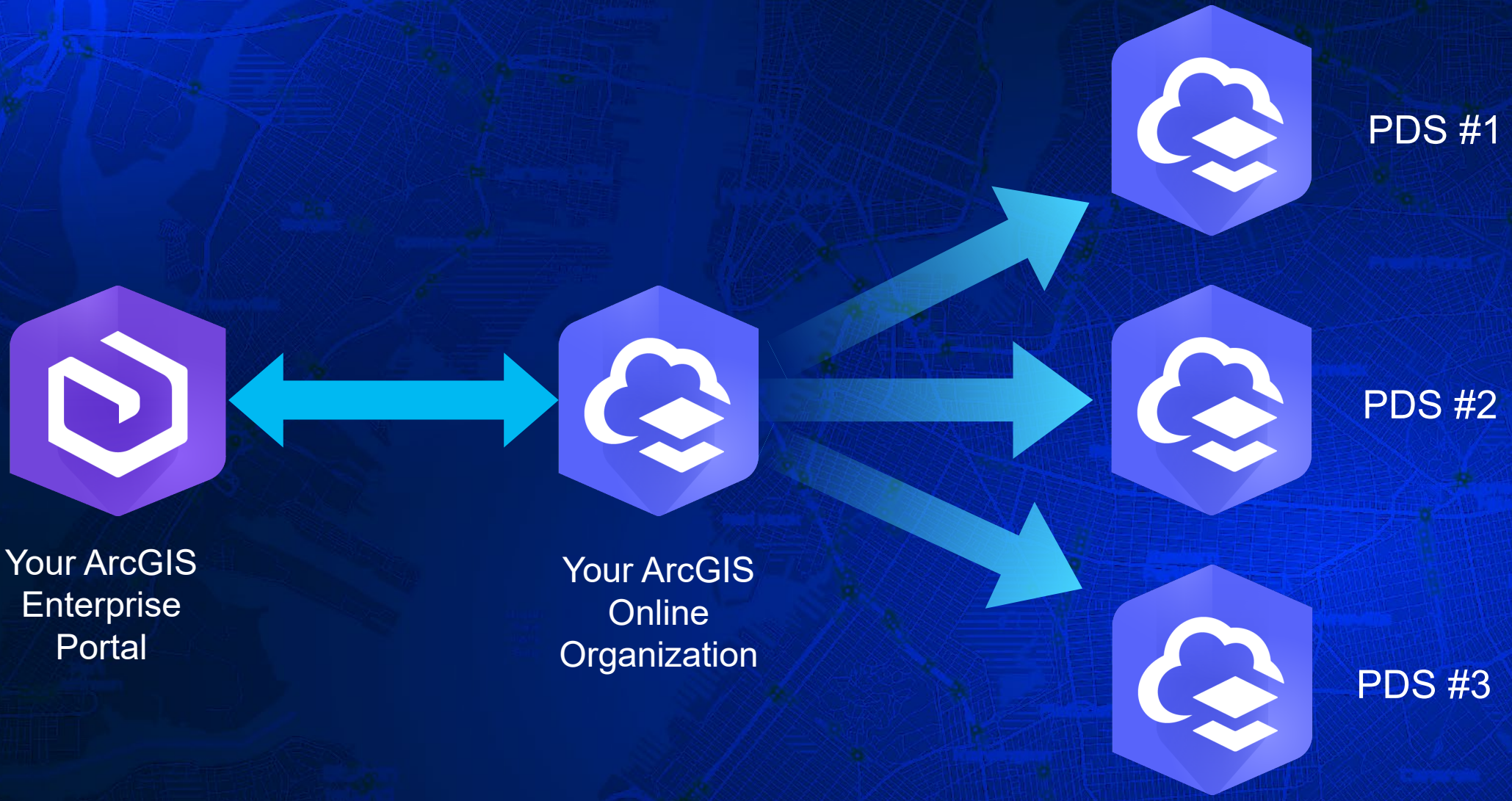
ArcGIS Online

Direction of content transfer



Collaboration between ***many participants***

AEC Project Delivery Subscription



Partner Network and PaaS

ArcGIS Pro

Software

ArcGIS Online

Apps

Software-as-a-Service (SaaS)

ArcGIS Enterprise

Apps

Server Software

Location Services & Content

NEW

ArcGIS Platform

Platform-as-a-Service (PaaS)

A New Developer Experience

Supports Open-Source Mapping Libraries

Mapbox GL JS, Leaflet, Open Layers

Authenticate with API Keys

Location Services (Content & Capabilities)

Where do I start?

1. **Learn** about collaboration capabilities.
2. **Talk** with your peers and other organizations who have set up collaboration (Esri Community).
3. **Plan** ahead! Identify your goals and build around them.
4. **Design** and draw out your architecture – this will help you when you set up your collaboration and groups.
5. **Test** a collaboration in advance and adjust settings as necessary.
6. **Revisit** goals and architecture periodically to make sure it is still meeting your goals.

Communicate!

- Which organizations will be involved?
- Who will share content?
- What kind of content will be shared?
- Who will have access to shared content?
- What kind of editing will be supported?
- What version is everyone on?
- How often are updates needed?
- Etc, etc…

All of this comes back to your goals

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