Distributed GIS - Establishing a Trusted Collaboration

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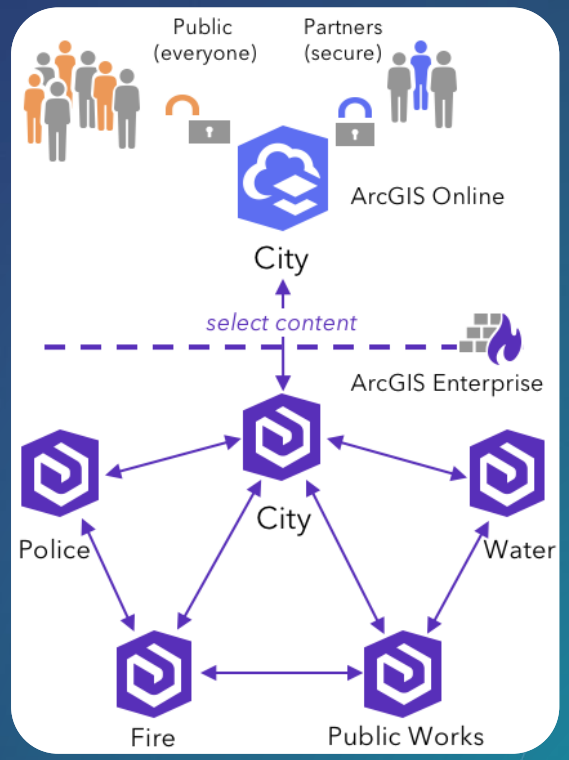
Best Practice: Distributed GIS

An integrated set of geographic information systems working together as part of a trusted collaboration

- Model after the organization
- Preserves departmental control
- Supports enterprise needs

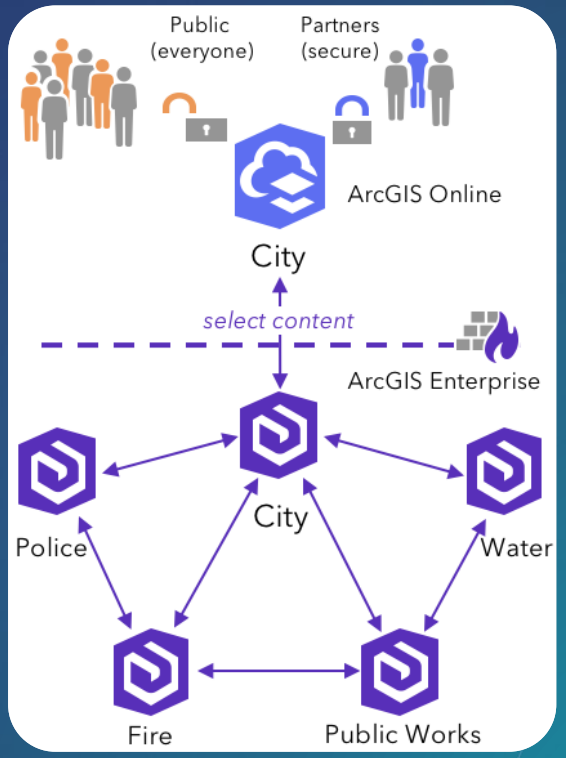


Preserve control and access within individual departments while supporting the broader needs of the enterprise.

Distributed GIS is a modern approach that supports a new type of sharing

Distributed GIS | Distributed Collaboration

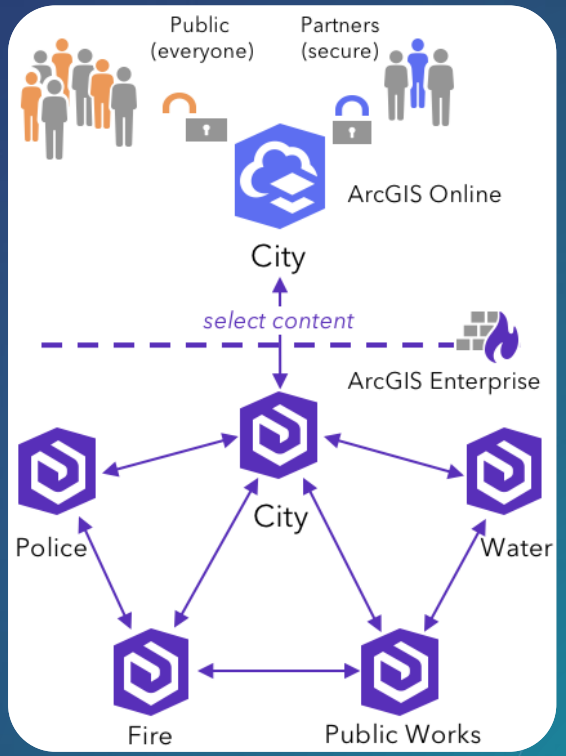
A trusted network of Web GIS systems



.. integrated set of deployments working towards shared goals

Distributed GIS | Distributed Collaboration

New, simpler way to share and collaborate!



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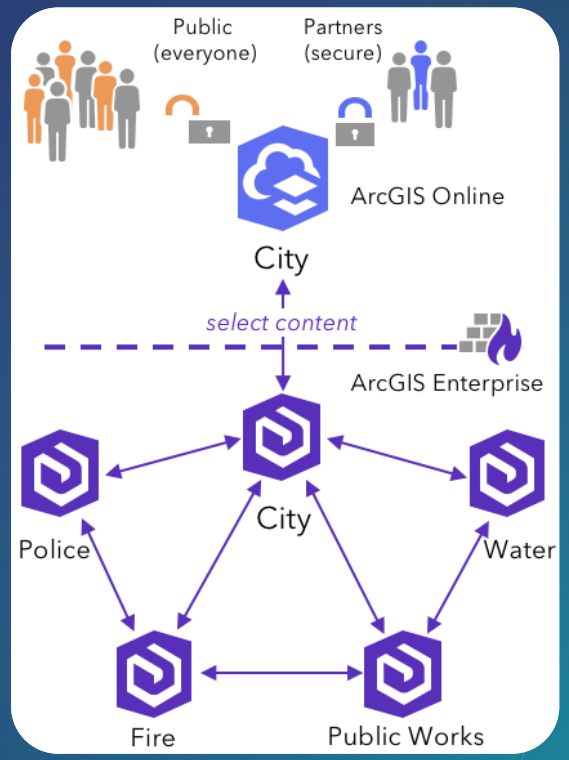
Is it for me?



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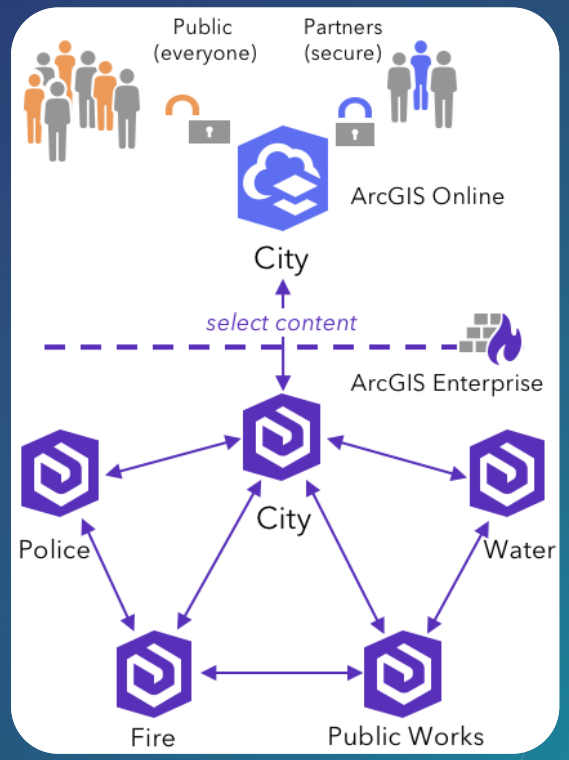

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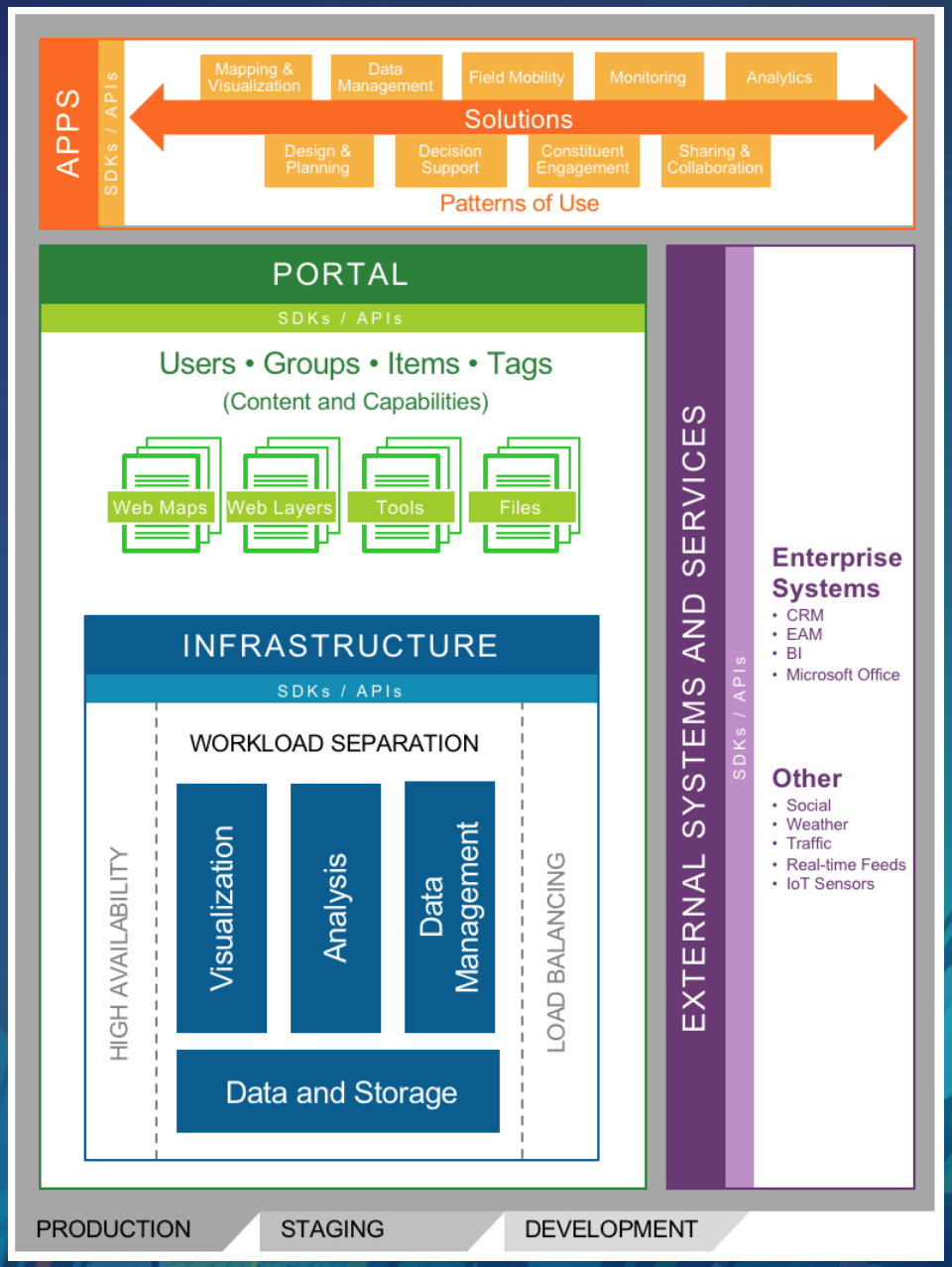
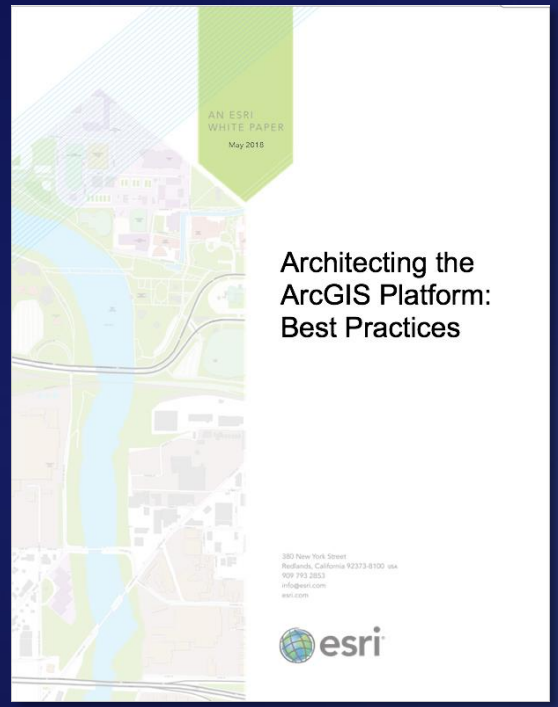
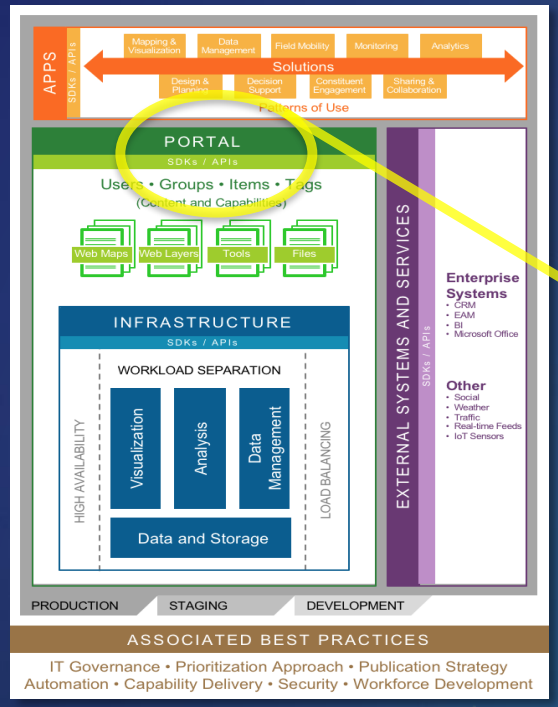
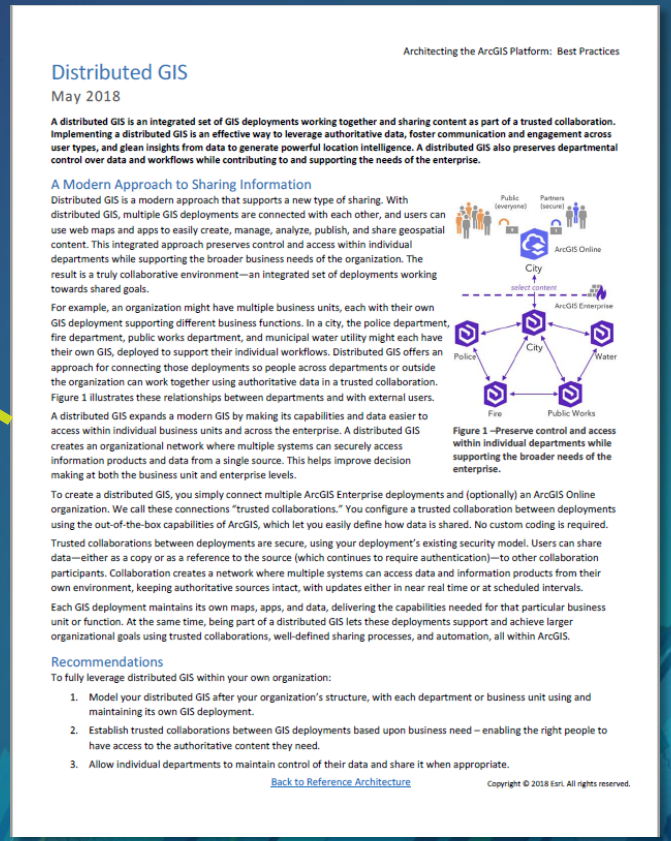
The ArcGIS Conceptual Reference Architecture









Architecting the ArcGIS Platform: Best Practices

Distributed GIS

May 2018

A distributed GIS is an integrated set of GIS deployments working together and sharing content as part of a trusted collaboration. Implementing a distributed GIS is an effective way to leverage authoritative data, foster communication and engagement across user types, and glean insights from data to generate powerful location intelligence. A distributed GIS also preserves departmental control over data and workflows while contributing to and supporting the needs of the enterprise.

A Modern Approach to Sharing Information

Distributed GIS is a modern approach that supports a new type of sharing. With distributed GIS, multiple GIS deployments are connected with each other, and users can use web maps and apps to easily create, manage, analyze, publish, and share geospatial content. This integrated approach preserves control and access within individual departments while supporting the broader business needs of the organization. The result is a truly collaborative environment—an integrated set of deployments working towards shared goals.

For example, an organization might have multiple business units, each with their own GIS deployment supporting different business functions. In a city, the police department, fire department, public works department, and municipal water utility might each have their own GIS, deployed to support their individual workflows. Distributed GIS offers an approach for connecting those deployments so people across departments or outside the organization can work together using authoritative data in a trusted collaboration. Figure 1 illustrates these relationships between departments and with external users.

A distributed GIS expands a modern GIS by making its capabilities and data easier to access within individual business units and across the enterprise. A distributed GIS creates an organizational network where multiple systems can securely access information products and data from a single source. This helps improve decision making at both the business unit and enterprise levels.

Figure 1 –Preserve control and access within individual departments while supporting the broader needs of the enterprise.

To create a distributed GIS, you simply connect multiple ArcGIS Enterprise deployments and (optionally) an ArcGIS Online organization. We call these connections "trusted collaborations." You configure a trusted collaboration between deployments using the out-of-the-box capabilities of ArcGIS, which let you easily define how data is shared. No custom coding is required.

Trusted collaborations between deployments are secure, using your deployment's existing security model. Users can share data—either as a copy or as a reference to the source (which continues to require authentication)—to other collaboration participants. Collaboration creates a network where multiple systems can access data and information products from their own environment, keeping authoritative sources intact, with updates either in near real time or at scheduled intervals.

Each GIS deployment maintains its own maps, apps, and data, delivering the capabilities needed for that particular business unit or function. At the same time, being part of a distributed GIS lets these deployments support and achieve larger organizational goals using trusted collaborations, well-defined sharing processes, and automation, all within ArcGIS.

Recommendations

To fully leverage distributed GIS within your own organization:

1. Model your distributed GIS after your organization's structure, with each department or business unit using and maintaining its own GIS deployment.
2. Establish trusted collaborations between GIS deployments based upon business need – enabling the right people to have access to the authoritative content they need.
3. Allow individual departments to maintain control of their data and share it when appropriate.

Back to Reference Architecture

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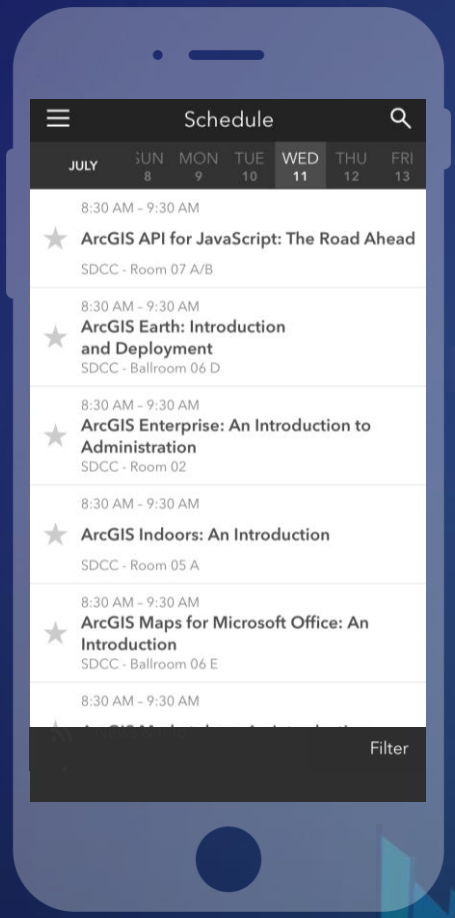

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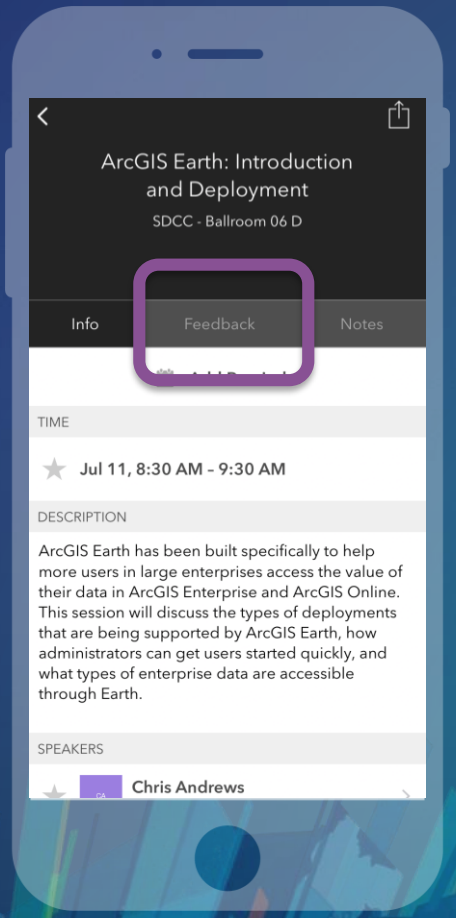

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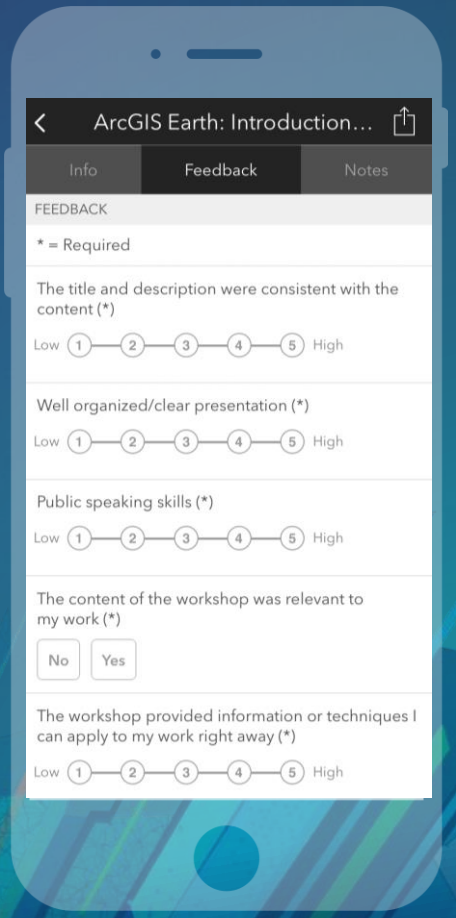


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