Deploying ArcGIS at an Electric Utility

Previn Wong

Patrick Demer

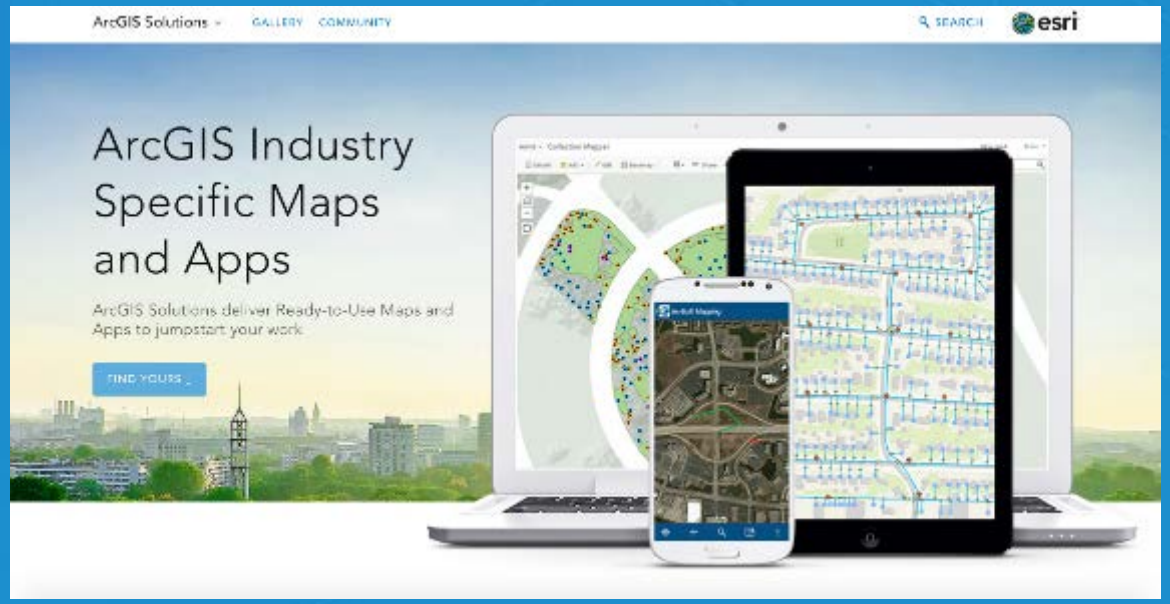
Patrick Dolan

Deploying ArcGIS at a Electric Utility

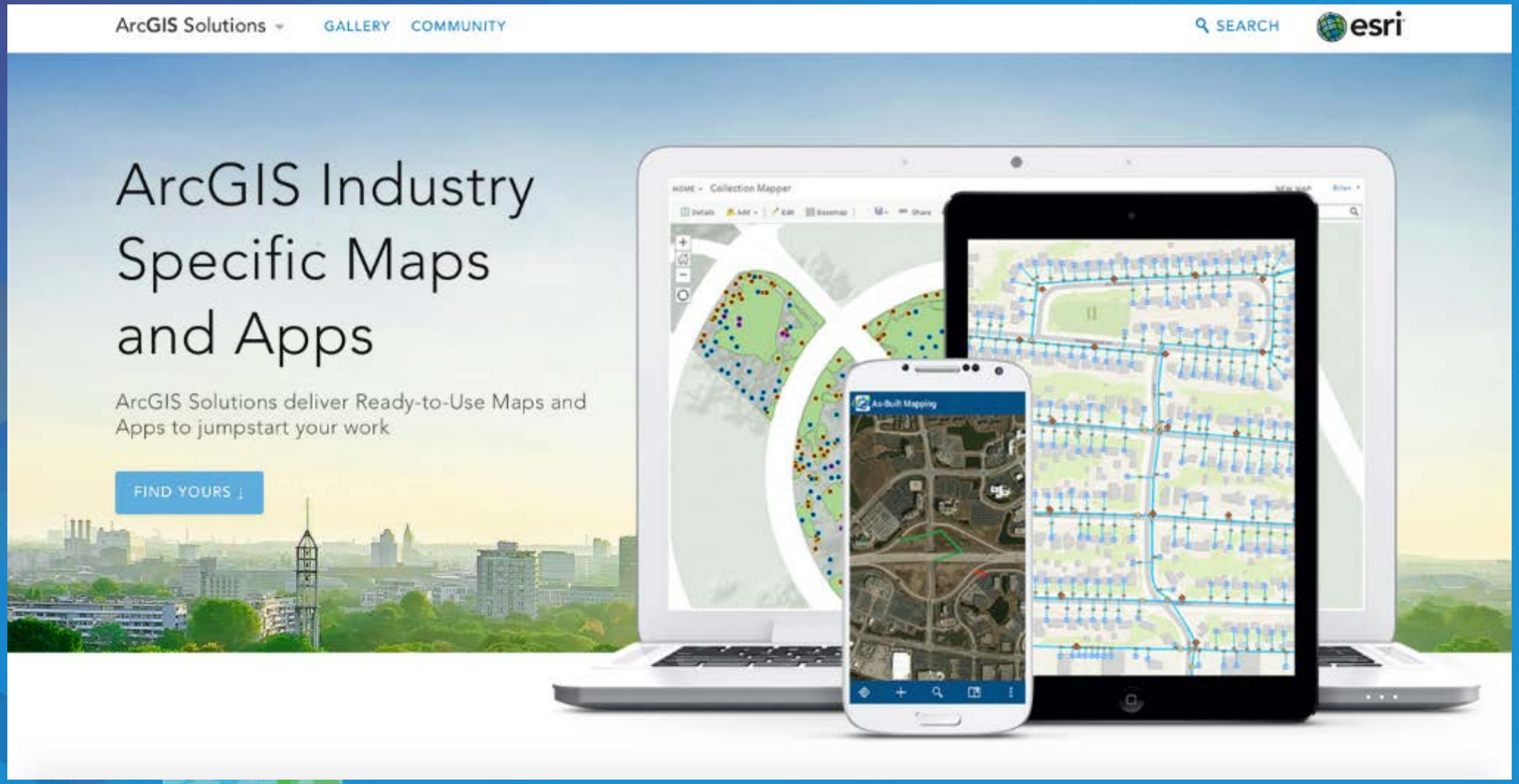
- Start from scratch
- Start with a data model
- Start with business problem
  - Use Solutions as a jumpstart

Deploying ArcGIS at a Electric Utility

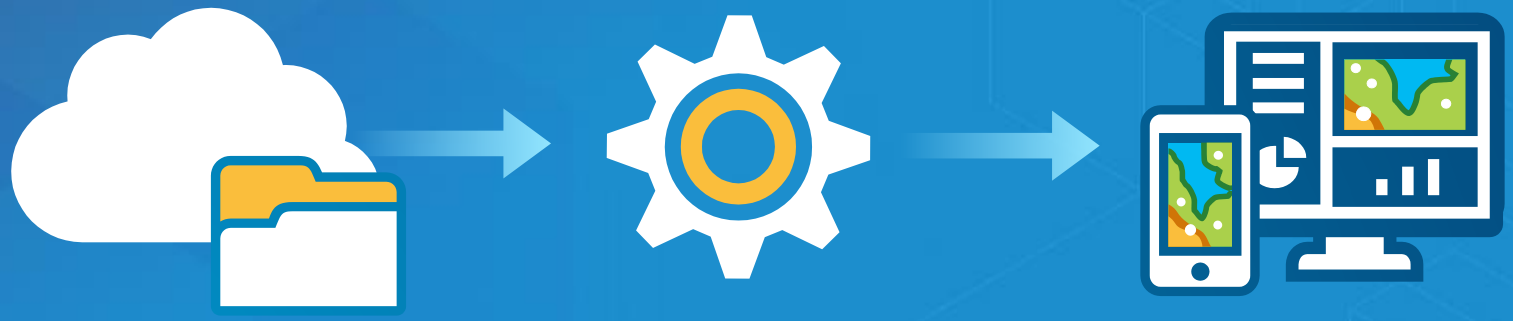
- Start from scratch
- Start with a data model
- Start with business problem
  - Use Solutions as a jumpstart
    - To the Field
    - In the Office
    - To the Customer



ArcGIS Includes Ready-to-Use Maps and Apps



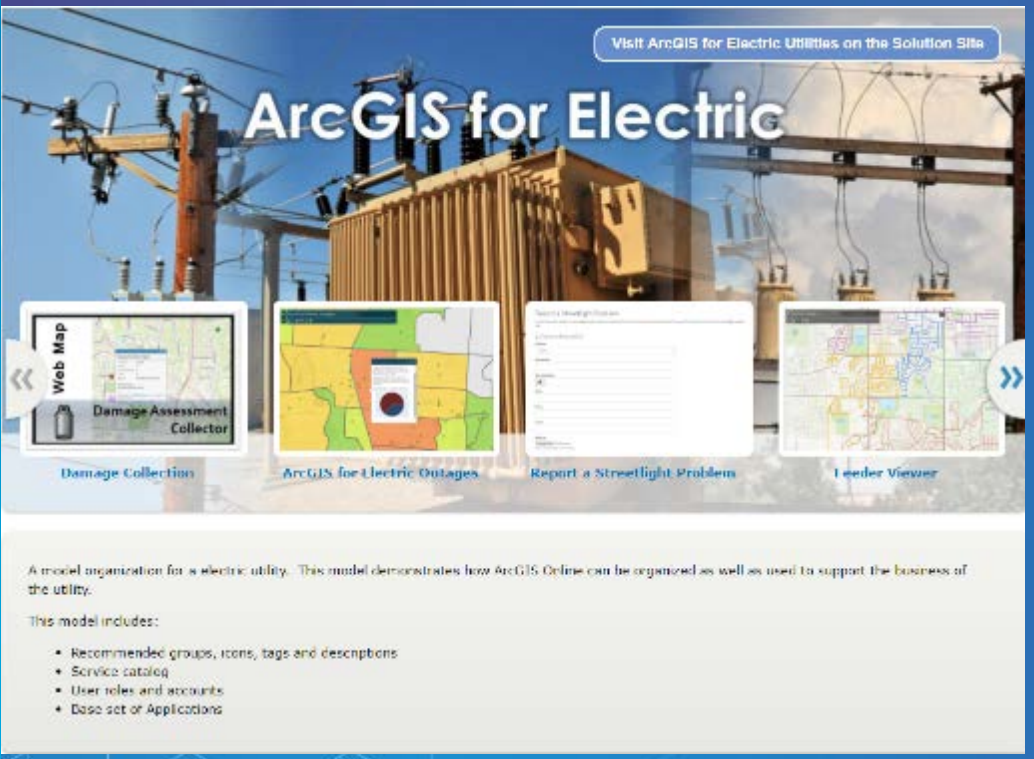
Deployment Pattern



Download
or
Clone

Configure

Deploy



Deploying ArcGIS for Electric

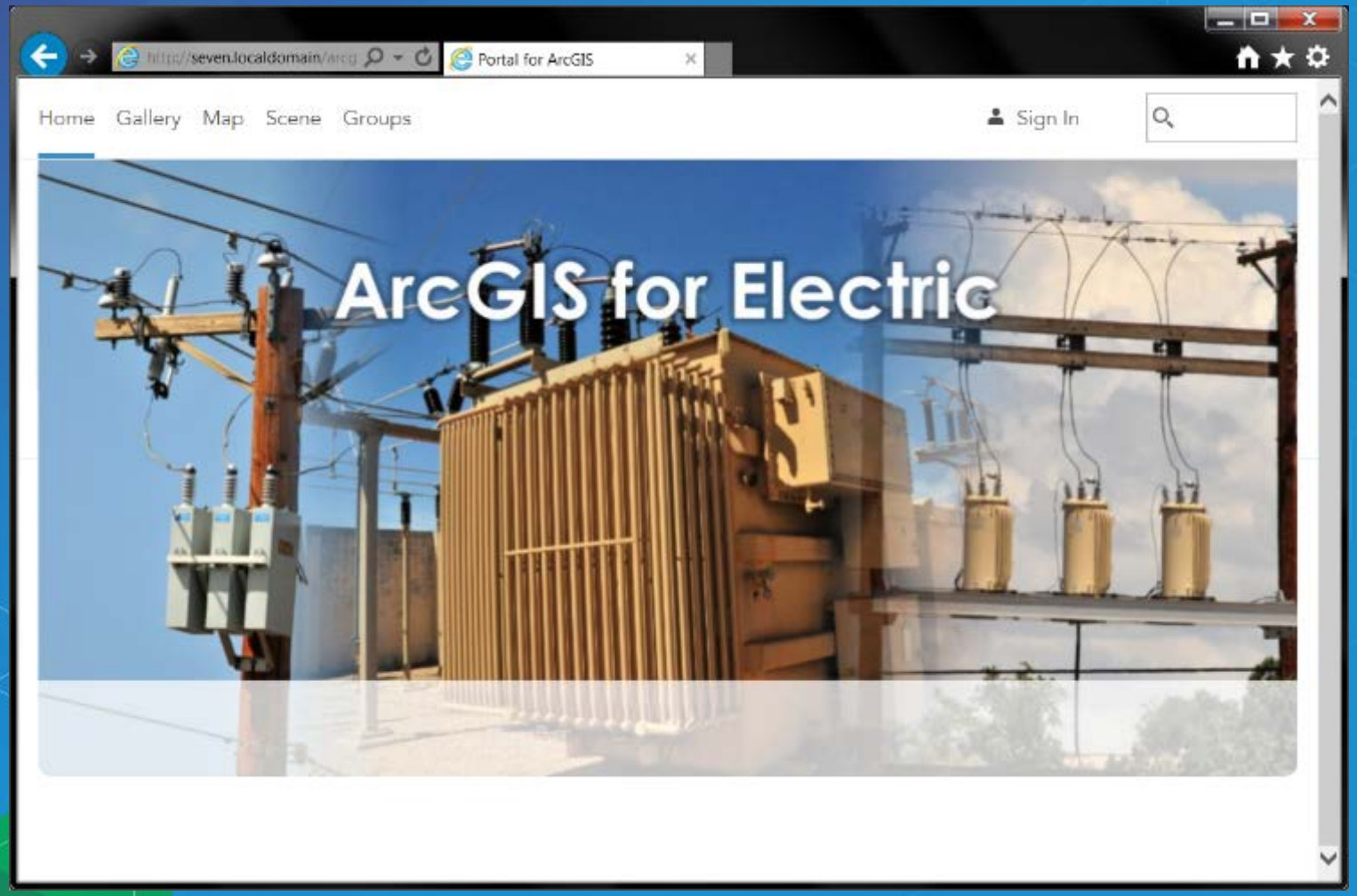
Deploying ArcGIS for Electric

1. Configure Your Mapping Portal
2. Configure Initial Apps
3. Continue to Innovate

Configure your Portal

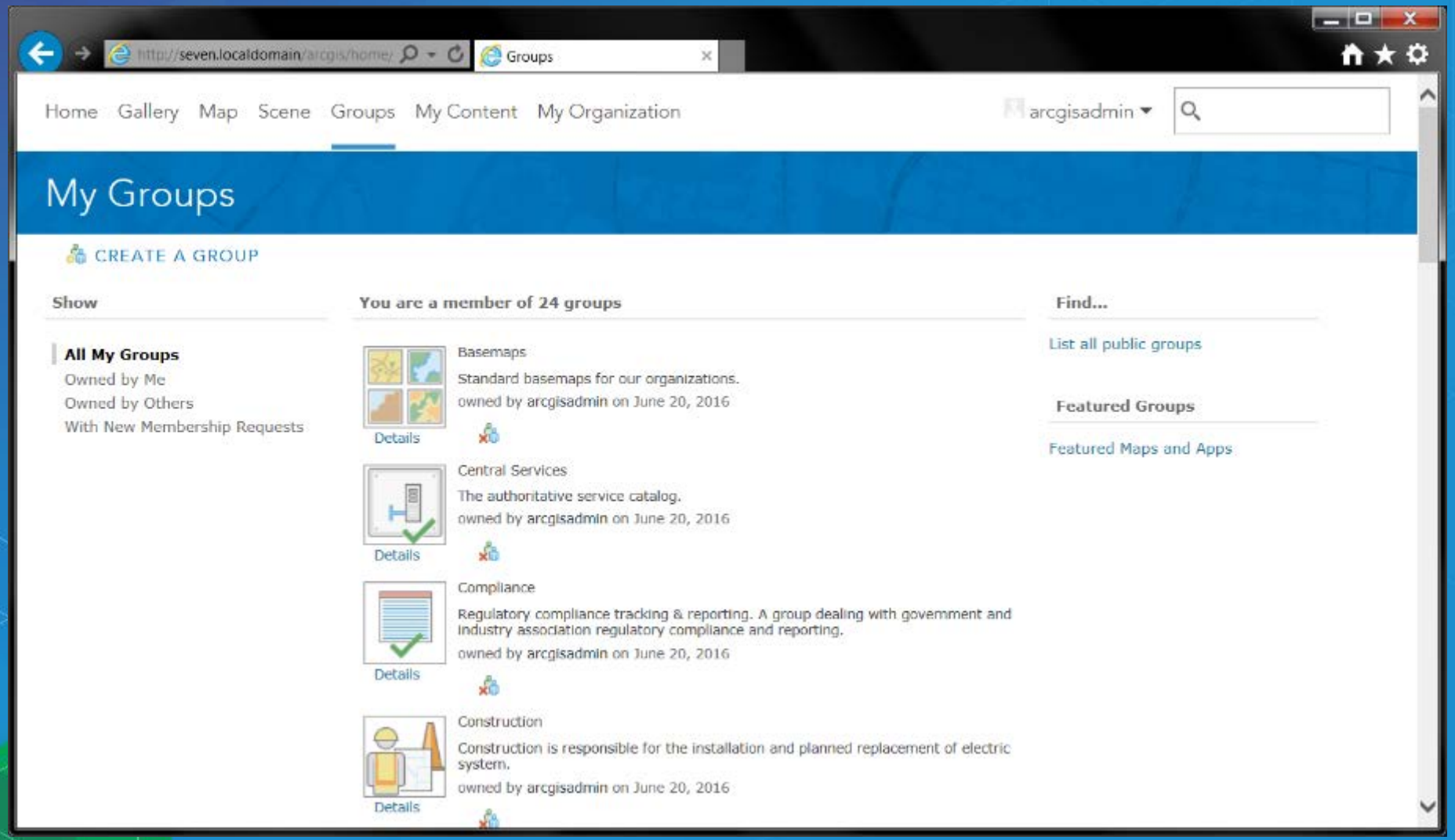
Configure your Portal

Brand



Configure your Portal

Organize



Configure your Portal

Content

Gallery

My Favorites | My Organization's Featured Content | Esri Featured Content

ArcGIS for Electric Featured Content

Sort By: Title

Show

All

Maps
Layers
Scenes
Apps
Tools
Files

Search the website or visit the ArcGIS Marketplace

ArcGIS for Electric Outages

Damage Collection

Hazard Reporting Collection

Map Change Request

Map Change Request

Map Note

Map Notes

Model Organization for Electric Utilities

Report a Streetlight Problem

Social Media Sentiment Viewer

Storm Vulnerability Viewer

System Improvement

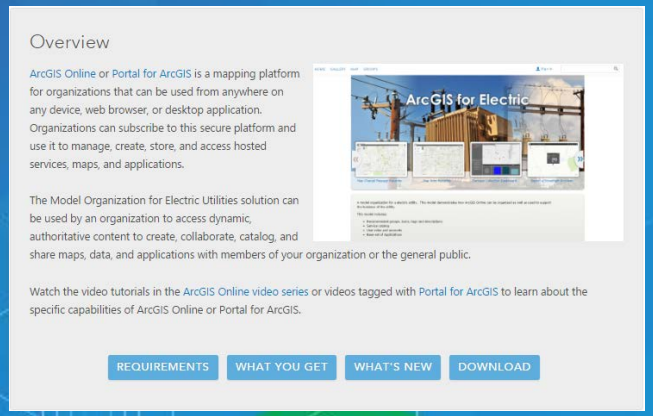
Deployment - Recap

Download or Clone

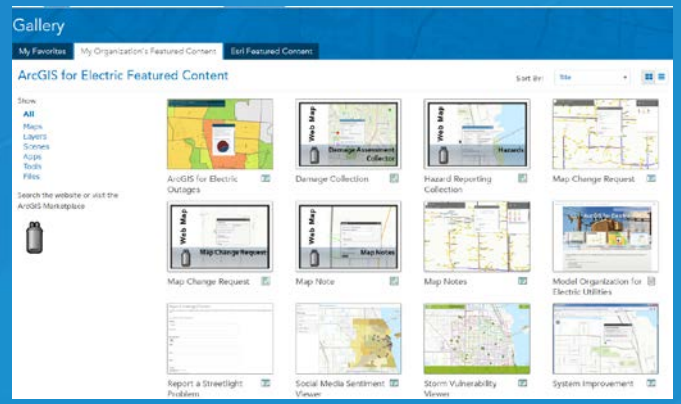
Configure

Deploy

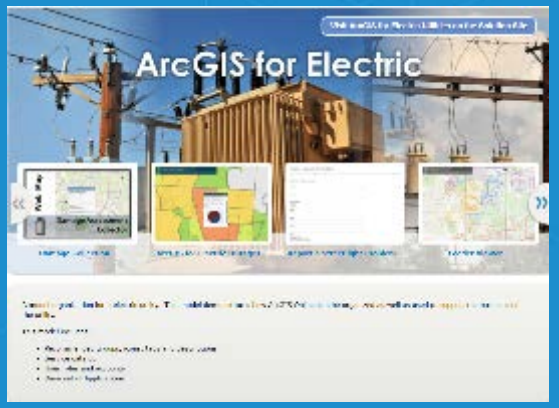
Electric Model Org



Portal (Brand / Organize / Content)



Your Mapping Portal



Configure your Portal

To learn more

Model Org

Overview

ArcGIS Online or Portal for ArcGIS is a mapping platform for organizations that can be used from anywhere on any device, web browser, or desktop application. Organizations can subscribe to this secure platform and use it to manage, create, store, and access hosted services, maps, and applications.

The Model Organization for Electric Utilities solution can be used by an organization to access dynamic, authoritative content to create, collaborate, catalog, and share maps, data, and applications with members of your organization or the general public.

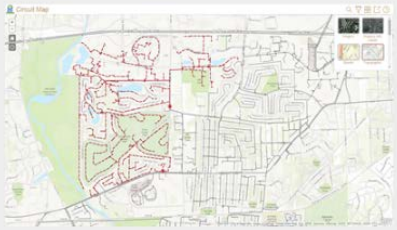
Watch the video tutorials in the ArcGIS Online video series or videos tagged with Portal for ArcGIS to learn about the specific capabilities of ArcGIS Online or Portal for ArcGIS.

REQUIREMENTS | WHAT YOU GET | WHAT'S NEW | DOWNLOAD

Electric Facility Maps

Overview

This series of maps enables utility staff, from field technicians to customer service representatives, access to basic geographic utility information. These core electric utility maps are designed to be accessible to the organization using a web browser or native client.



This solution includes the following maps:

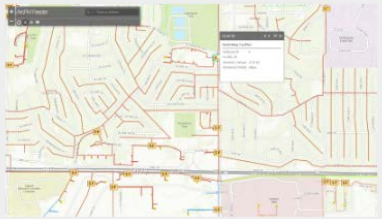
- Facility map
- Circuit map
- Main Line Switching Diagram map
- Service Territory map

REQUIREMENTS | WHAT YOU GET | WHAT'S NEW | DOWNLOAD | TRY IT NOW

ArcFM Feeder Map

Overview

Schneider Electric's ArcFM Feeder map provides an overview of the electric network with conductors thematically mapped by feeder ID. This solution provides planning, operations, and contractors with a map showing the locations of substations, circuit breakers, open tie points, switchable devices, primary overheads, and underground conductors.



ArcFM Feeder map enables organizations to view the electric network on a browser, desktop, or mobile device.

REQUIREMENTS | WHAT YOU GET | WHAT'S NEW | DOWNLOAD | TRY IT NOW

Configure Initial Apps

Configure Your Initial Set of Apps

To the Field

- **Business Challenge**
  - **Support Contractors / Foreign Crews**
  - **Short timeline**
  - **Data validation**

Damage Assessment

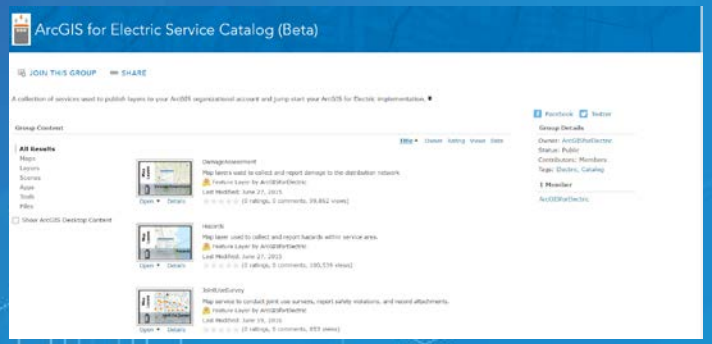
Deployment - Recap

Download or Clone

Configure

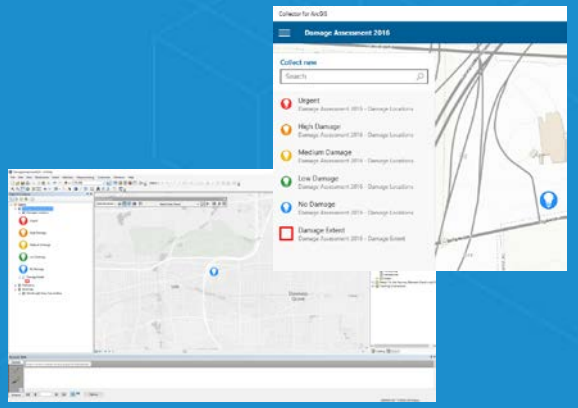
Deploy

Service Catalog



Portal

Collector



Data Reviewer

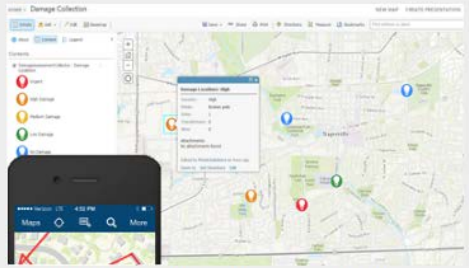
Configure Your Initial Set of Apps

To learn more

Damage Assessment Collector

Overview

In the event of a natural disaster, the Damage Assessment Collector solution can be used by field crews to record the location, severity, and photos of damages from a mobile device. Once damages are collected from the field, managers and other office staff can view the scope of damage and impacts on the electric network in real time.



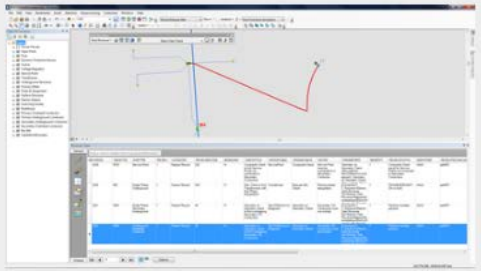
The Damage Assessment Collector is a configuration of ArcGIS Online or Portal for ArcGIS. Once configured, the Damage Assessment Collector can be used to collect damages using the Collector for ArcGIS app on a mobile device.

REQUIREMENTS | WHAT YOU GET | WHAT'S NEW | DOWNLOAD

Data Reviewer for Electric

Overview

Data Reviewer for Electric Utilities provides preconfigured ArcGIS Data Reviewer for Desktop batch jobs (.rbj) that can be used to validate, maintain, and improve the integrity of electric distribution data.



Data Reviewer provides a set of tools to simplify many aspects of automated and visual data quality control. Data Reviewer provides over 40 out-of-the-box checks that can be run individually, grouped into batch jobs (.rbj files), or run as a scheduled service. The batch jobs provided with Data Reviewer for Electric Utilities are configured to work with the provided electric distribution data model.

REQUIREMENTS | WHAT YOU GET | WHAT'S NEW | DOWNLOAD

Configure Your Initial Set of Apps

To the Office

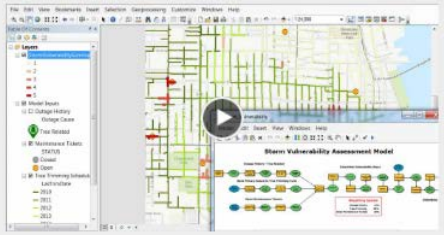
- **Business Challenge**
  - **Assess vulnerability of infrastructure**
  - **Access authoritative data**
  - **Share analysis to the organization**

Storm Vulnerability Analysis

Storm Vulnerability Assessment

Overview

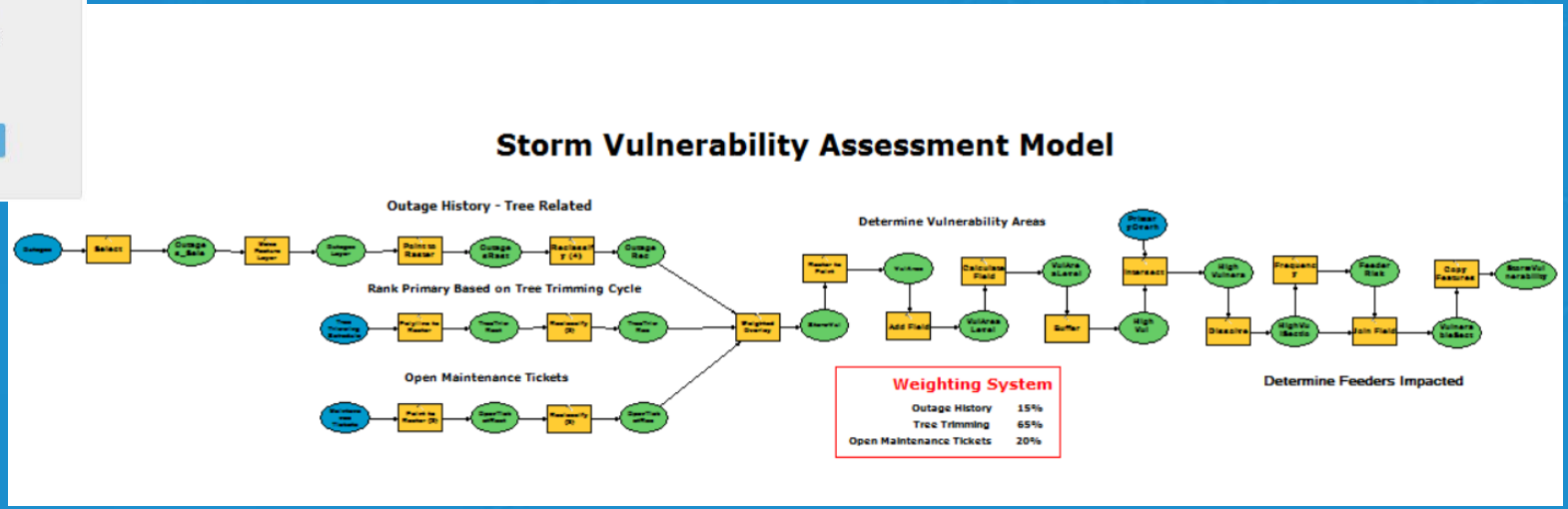
The Storm Vulnerability Assessment solution is used to assess the impact of major storms on the electric distribution network and where to reinforce the electric network to minimize that impact. These electric network vulnerabilities are calculated using risk factors like outage history, open maintenance tickets, and tree trimming schedule.



This solution provides a sample geodatabase and geoprocessing model to identify vulnerable sections along the electric distribution network. After reviewing the model, you can configure it for your utility data and any additional vulnerability factors. The result can then be shared with the planning and operations departments to help improve reliability and prioritize capital improvement projects.

REQUIREMENTS | WHAT YOU GET | WHAT'S NEW | DOWNLOAD | TRY IT NOW

Geoprocessing Model



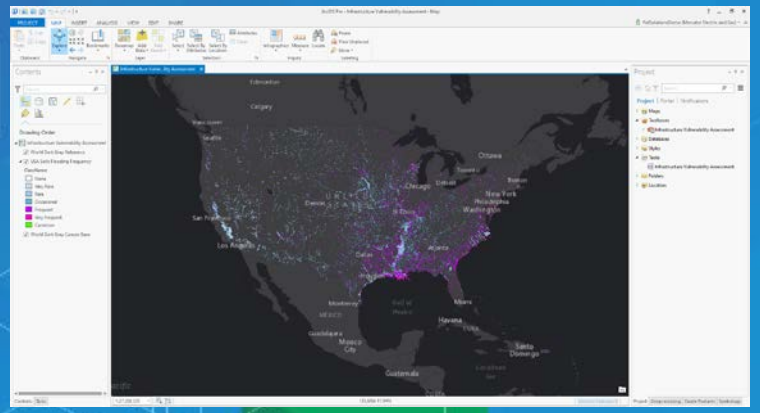
Deployment - Recap

Download or Clone

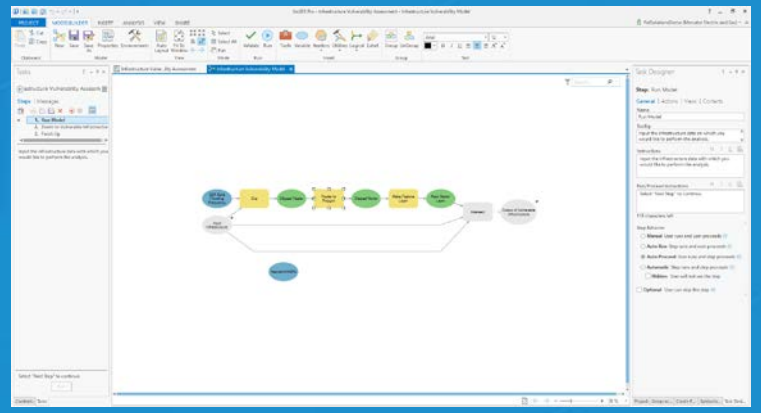
Configure

Deploy

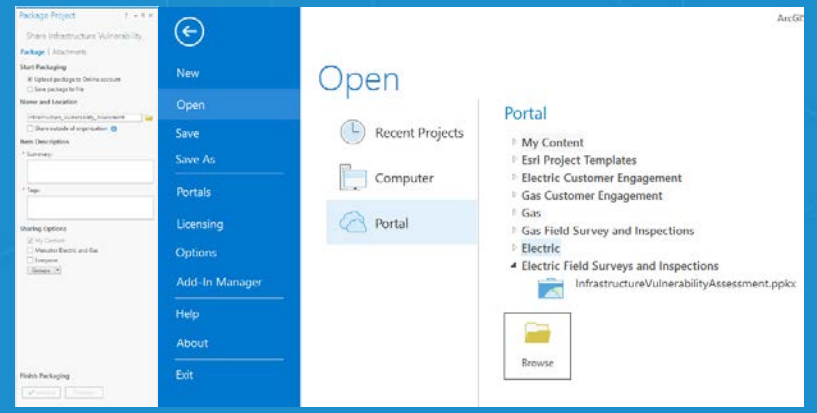
ArcGIS Pro Project



Project (Geoprocessing Model / Tasks)



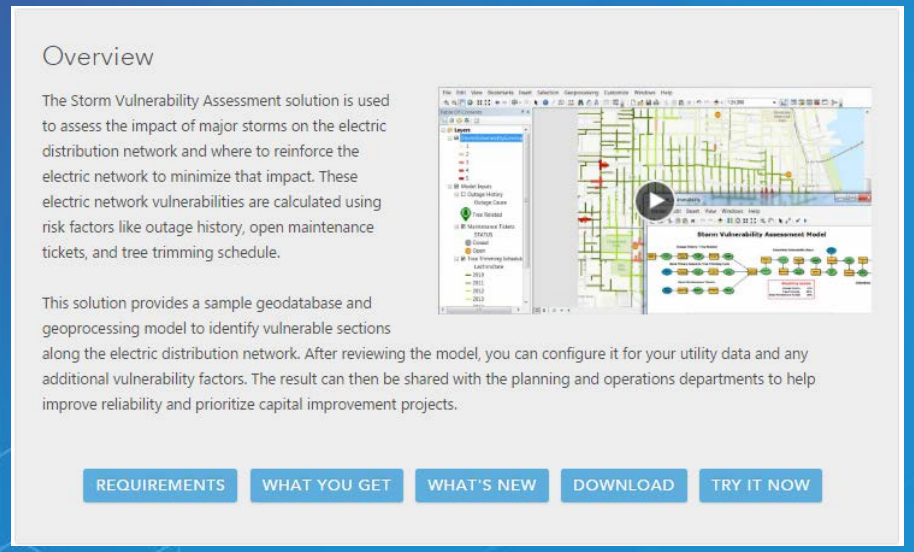
Share Project



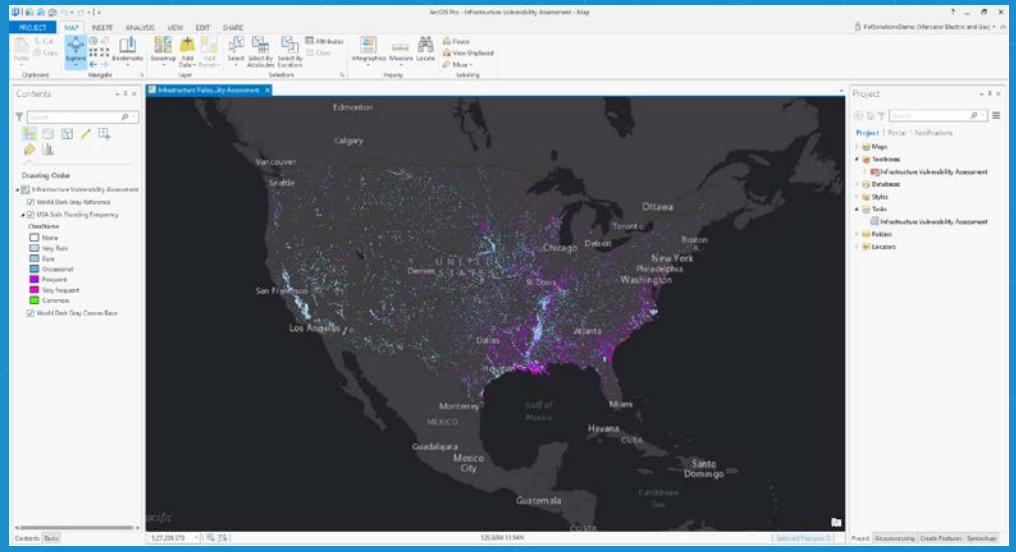
Configure Your Initial Set of Apps

To learn more

Storm Vulnerability Assessment



Infrastructure Vulnerability - Beta in August



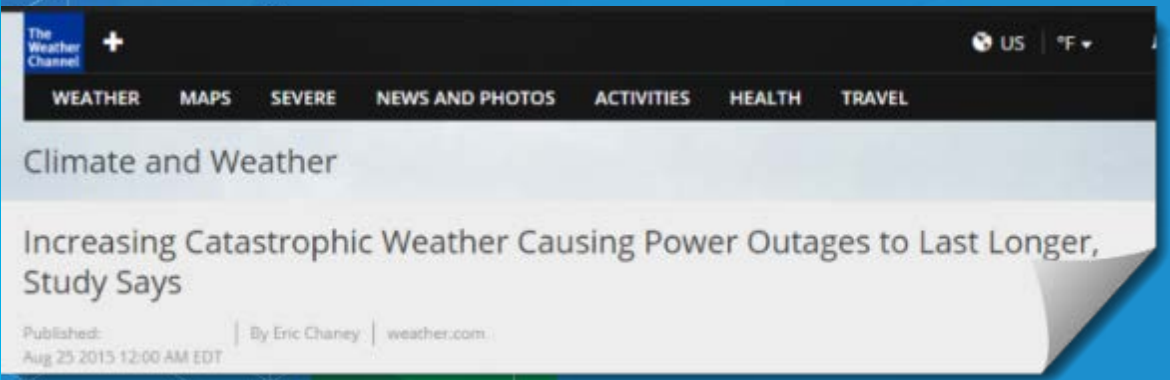
Configure Your Initial Set of Apps

To the Customer

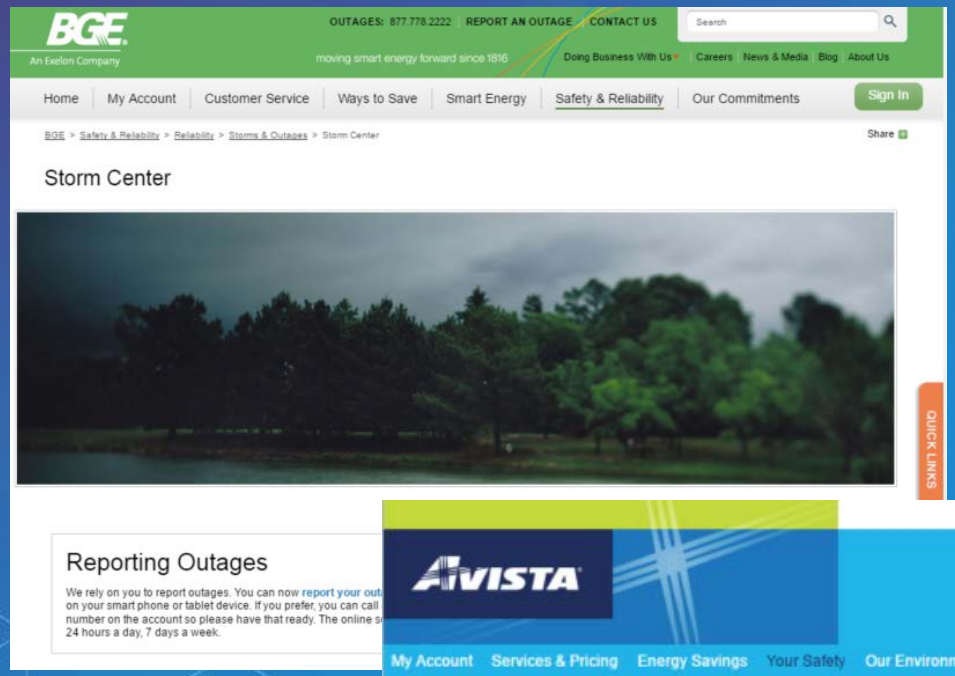
- **Business Challenge**
  - **Sharing Outage Information**
  - **Provide feedback**
  - **Communicate additional services**

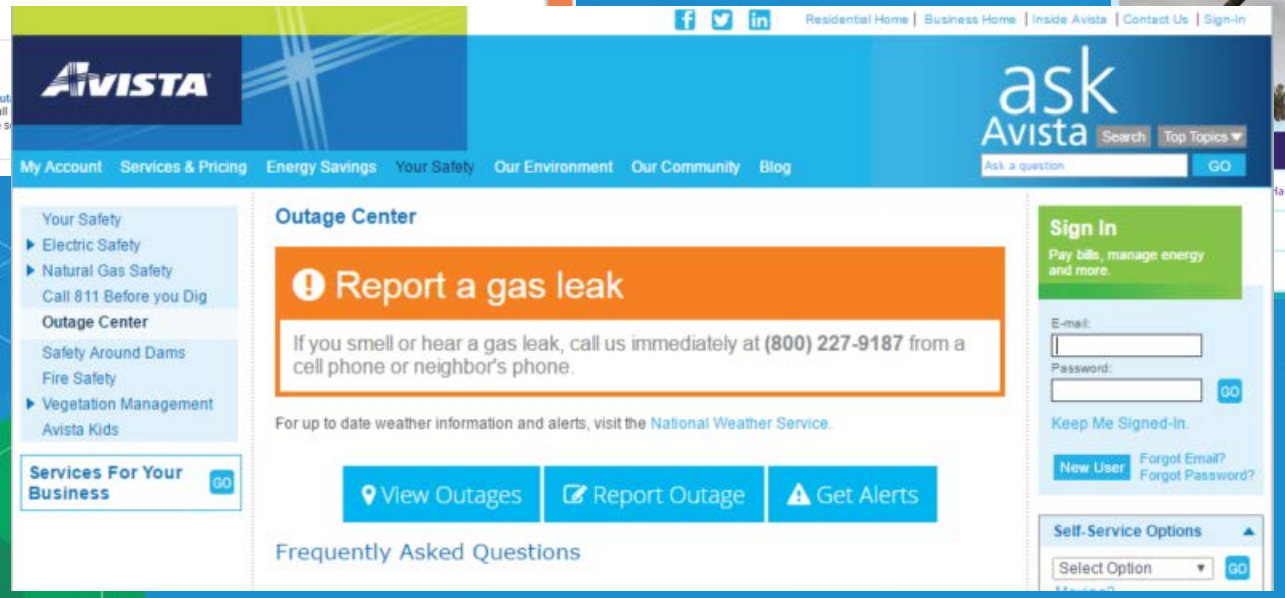
Outage Center

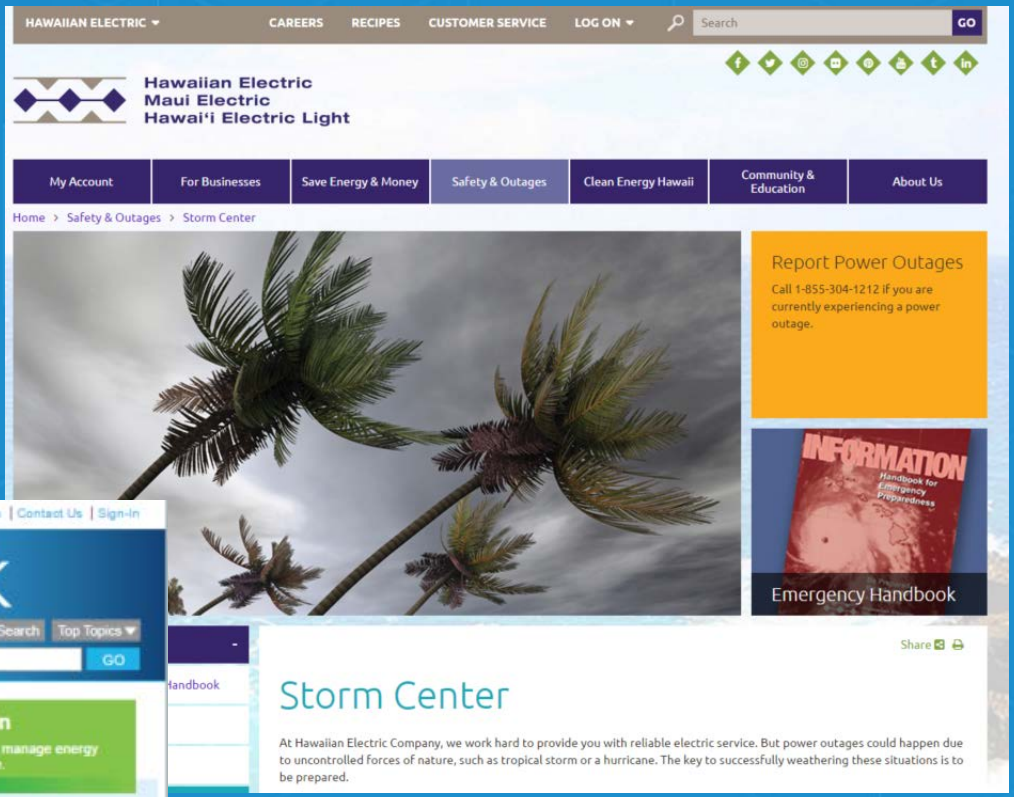
Across Utilities, Service Outage /Storm Response is on the Rise



Storm or Outage Centers (One Stops) are on the Rise







Deployment - Recap

Download
or
Clone

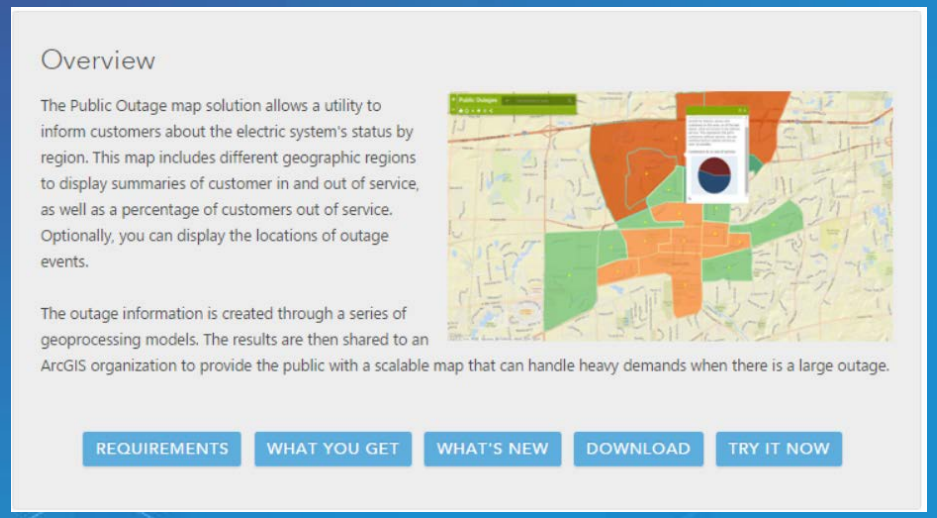
Configure

Deploy

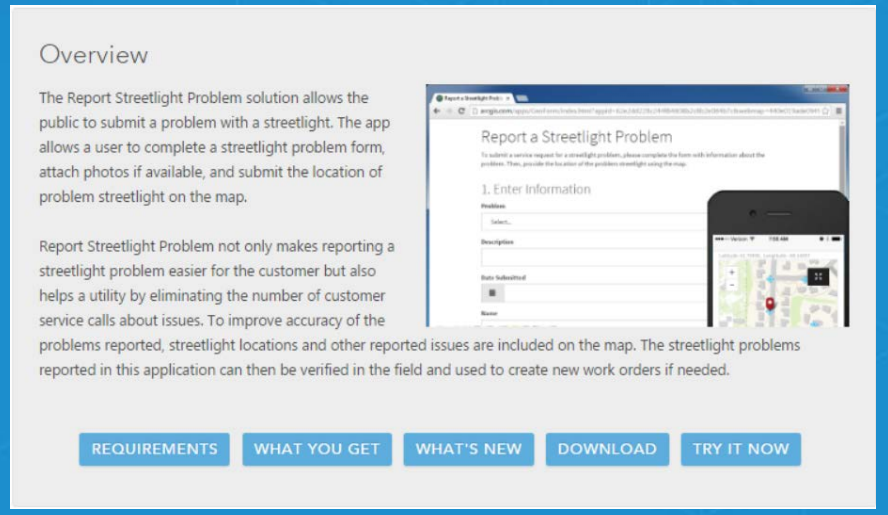
Configure your Initial Set of Apps

To learn more

Public Outage Map



Report Streetlight Problem



Innovate

Modernize Your Apps

Flex Viewer

Final release November 2014

The latest release of ArcGIS API for Flex is significant in that it is the **last planned release** of this technology.

While technical support will be available through **June of 2016**, maintenance will be discontinued.

Silverlight Viewer

Final release January 2015

3.3 marks the **last planned releases** of the ArcGIS API for Silverlight and ArcGIS Viewer for Silverlight.

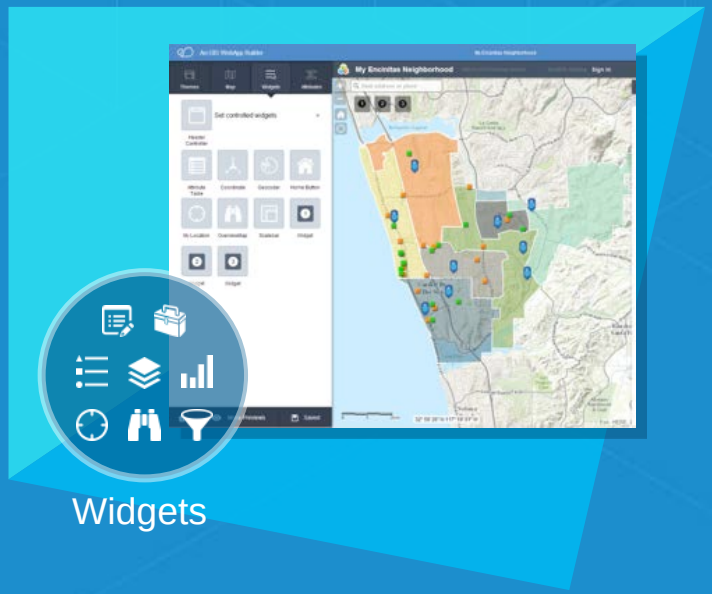
Technical support for both products will continue to be available through **June of 2016**.

Ways to Modernize

Providing Easy, Configurable, and Extensible Tools

Configurable Templates

Web AppBuilder



HTML5/JavaScript

Design Once, Run Everywhere . . .

Configurable Templates

Decrease Development Time

35

Templates

Crowdsource Suite

Map Tour

Simple Scene Viewer

Photo Survey

Map Gallery

Simple Viewer

Story Maps

Impact Summary

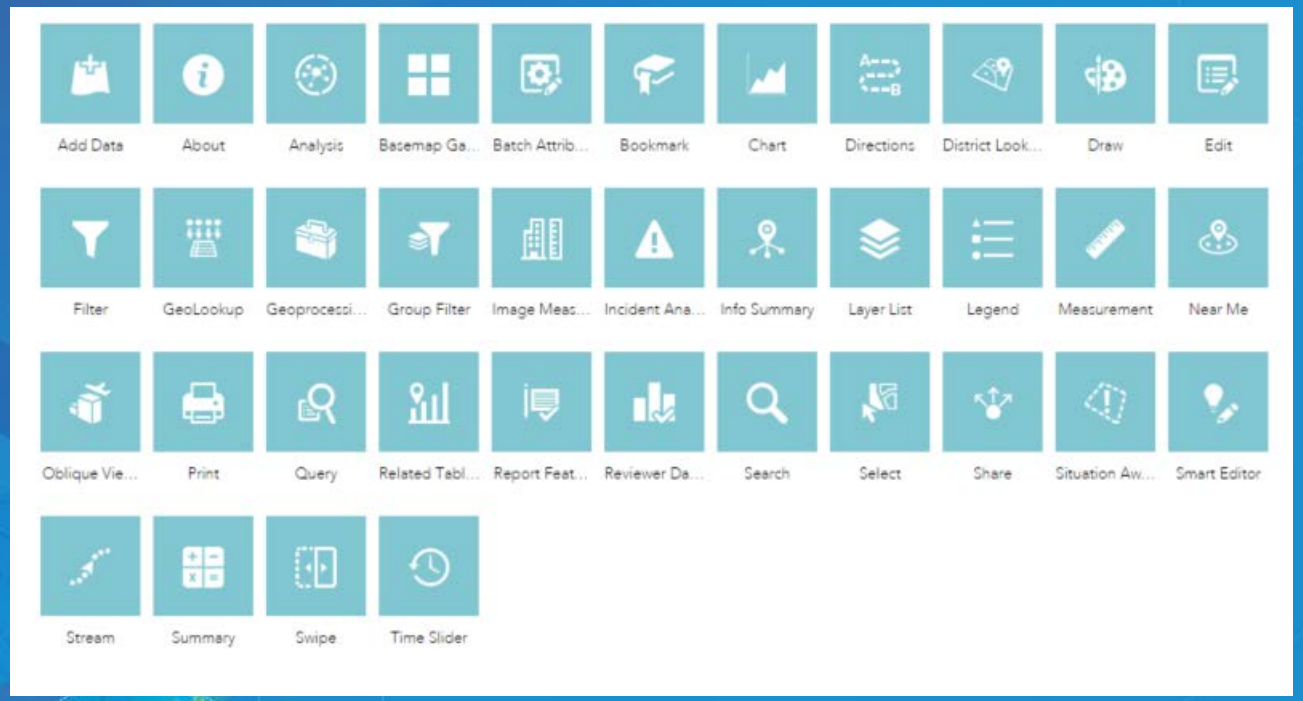
Local Perspective

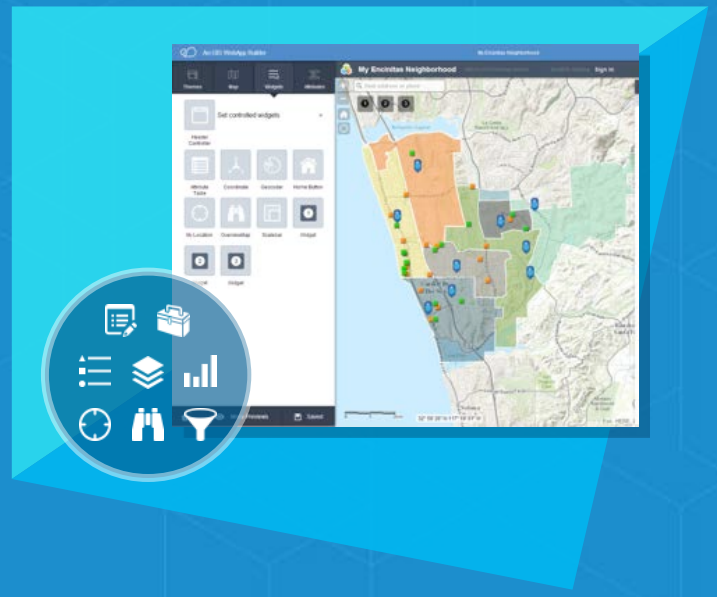
GeoForm

Information Lookup

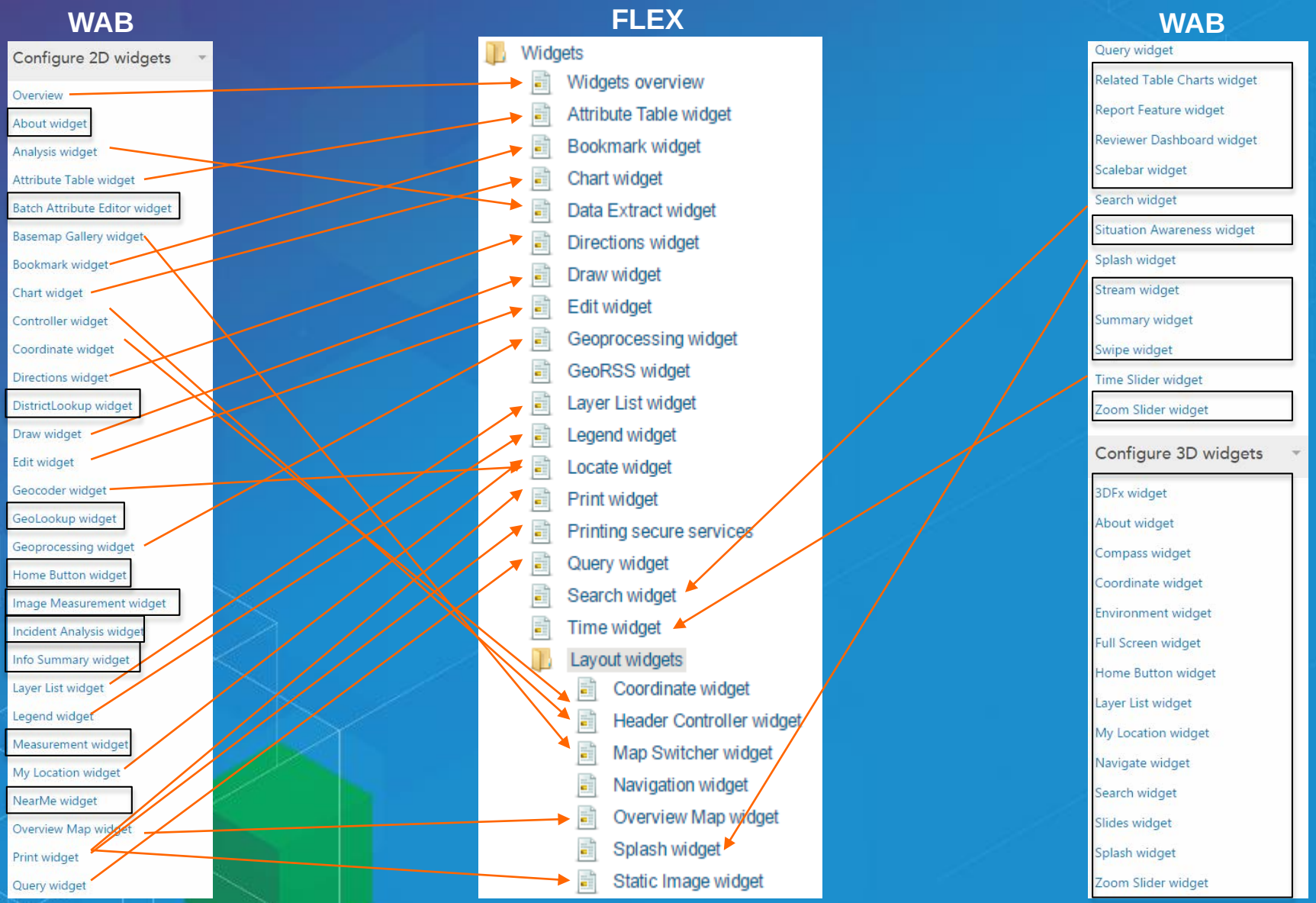
Web AppBuilder

Deploy your focused app, your way.





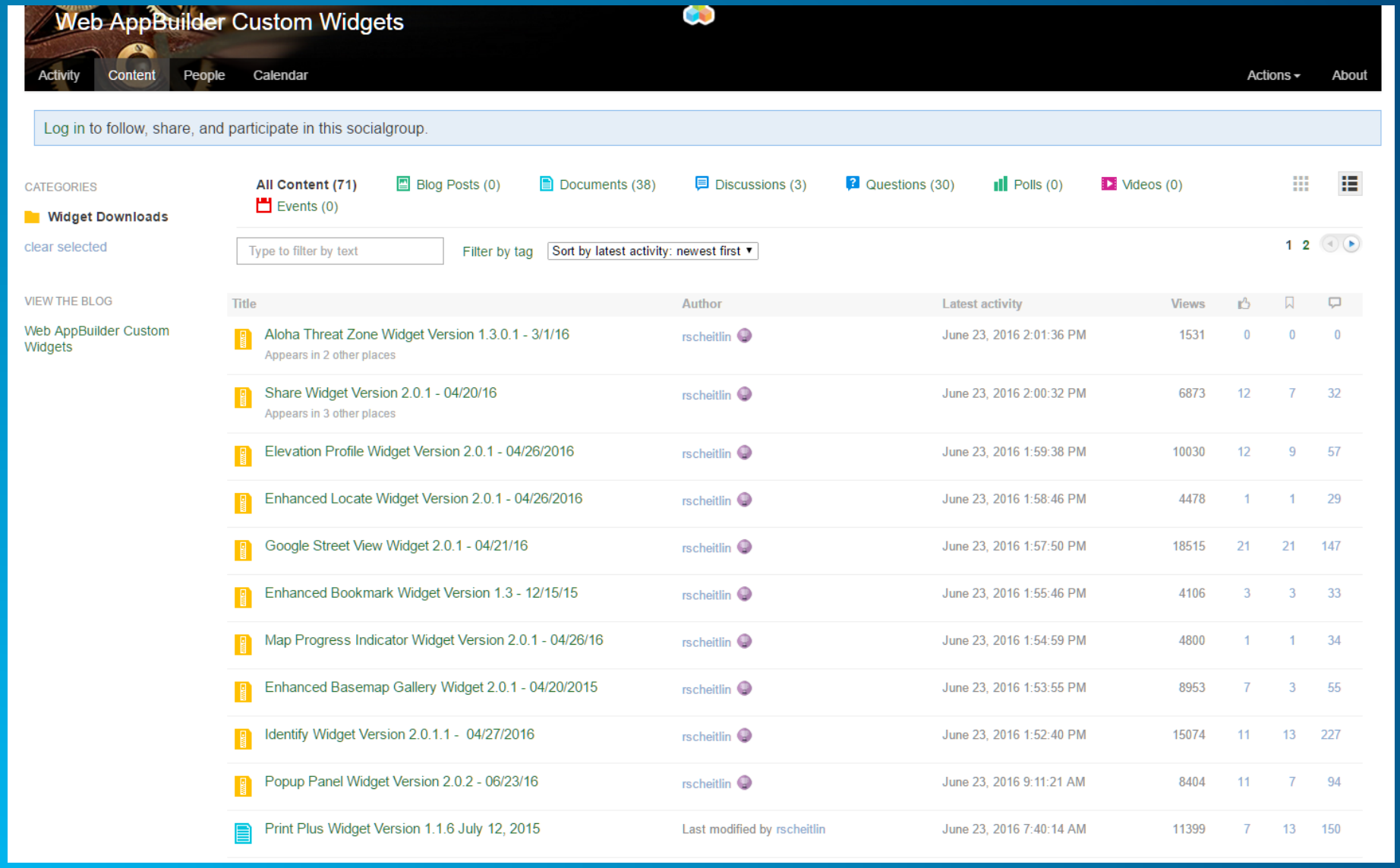
Widgets



7 new core widgets Released In June

9 widgets in Solutions for local deployment

GeoNet Web AppBuilder Community



- **20+ widgets in the community.**

Summary

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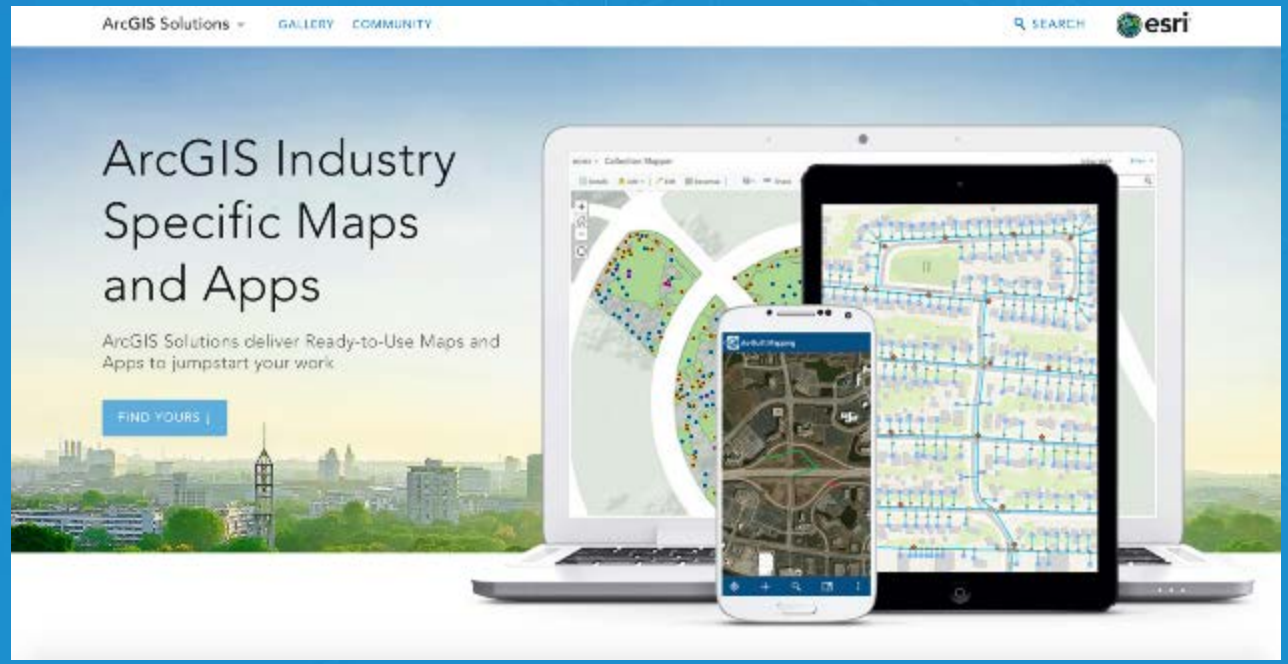
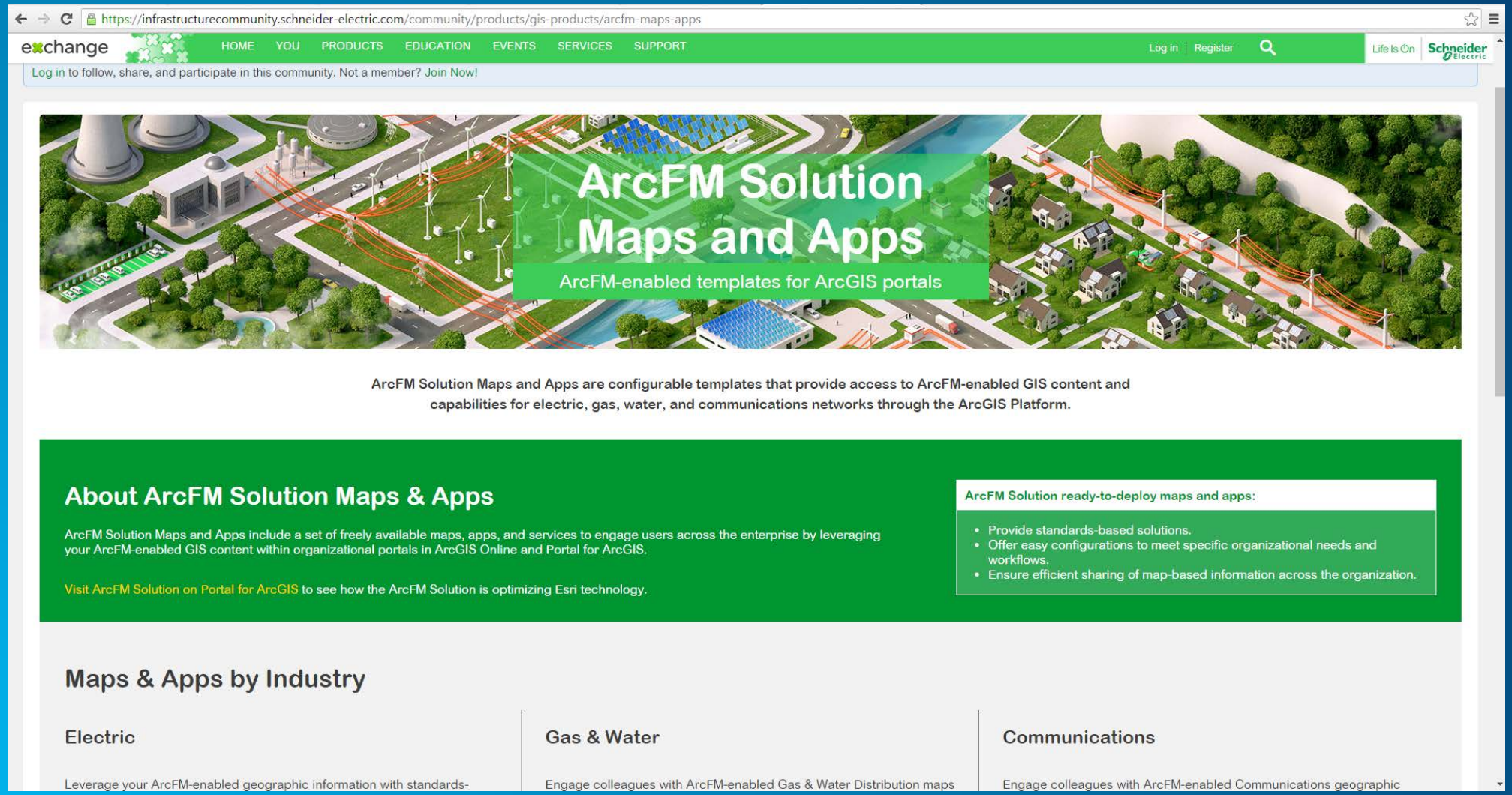
1. Configure Your Mapping Portal
2. Configure Initial Apps
3. Continue to Innovate



ArcFM Templates



Remember:
Dates, names, products, functionality and backlog items will change.

ArcGIS for Electric Roadmap

February 2016

Enhanced

- ArcGIS Model Organization
- Damage Collection Dashboard
- Pole Reports

June 2016

New

- Group Filter Widget
- Smart Editor Widget

Late Summer 2016

Utility Network

ArcFM Feeder Map

Fall 2016

Infrastructure Vulnerability Assessment

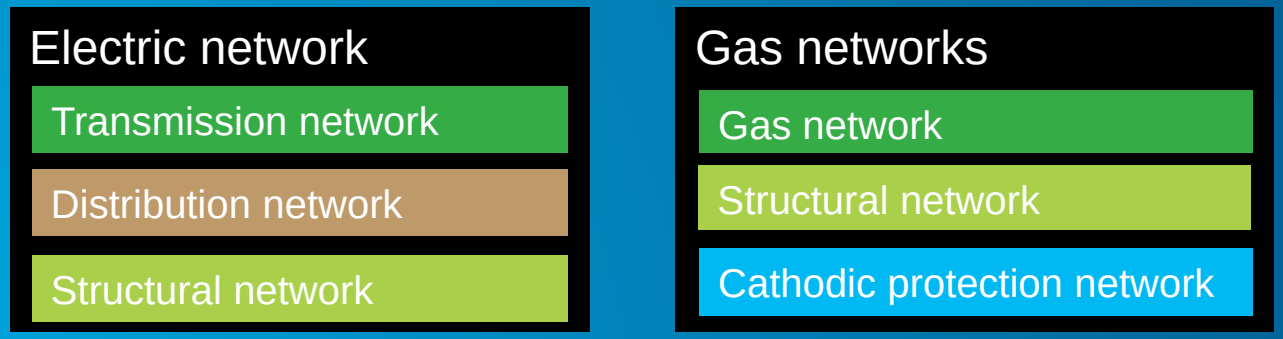
Data Reviewer

Early Winter 2016

ArcGIS for Electric Roadmap

Utility Network

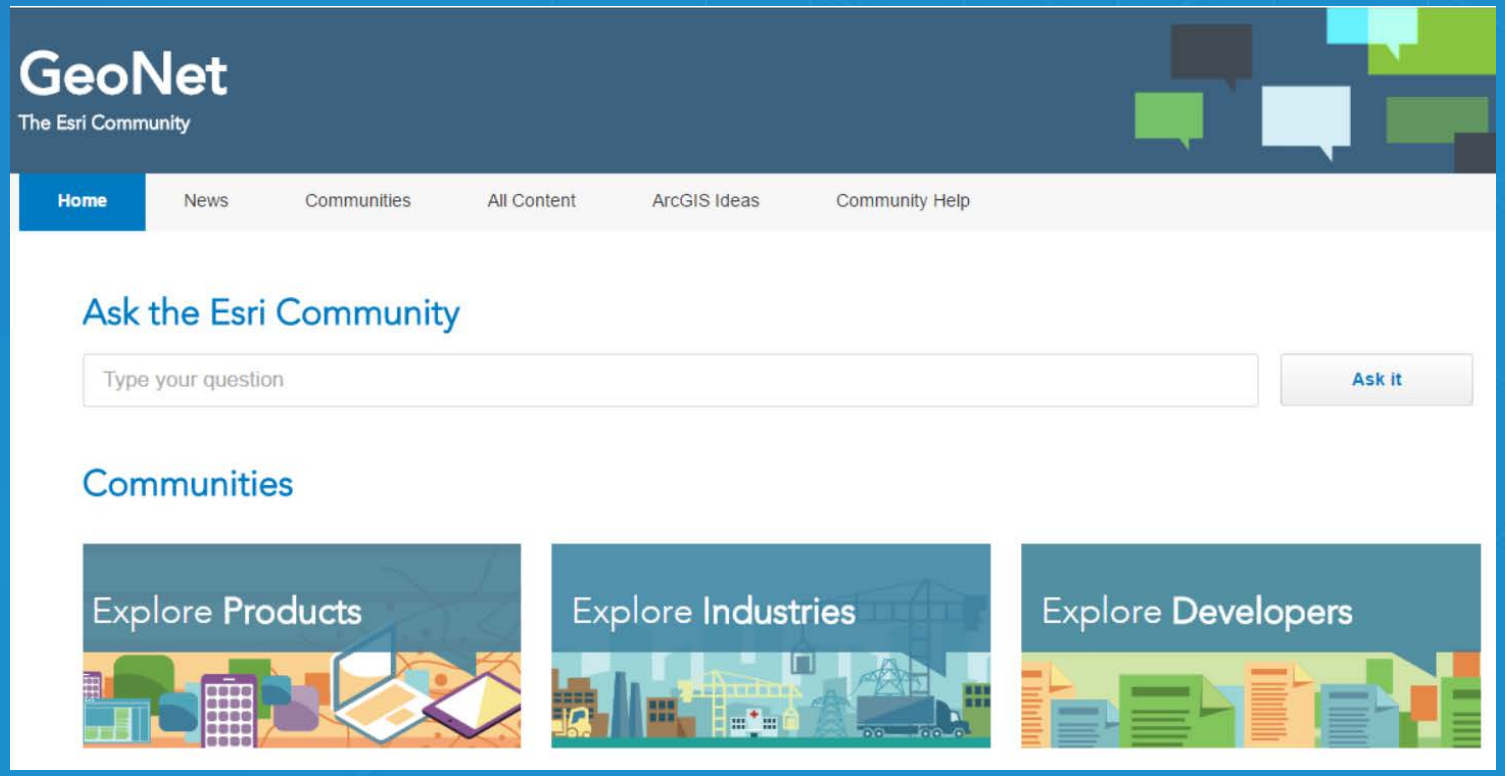
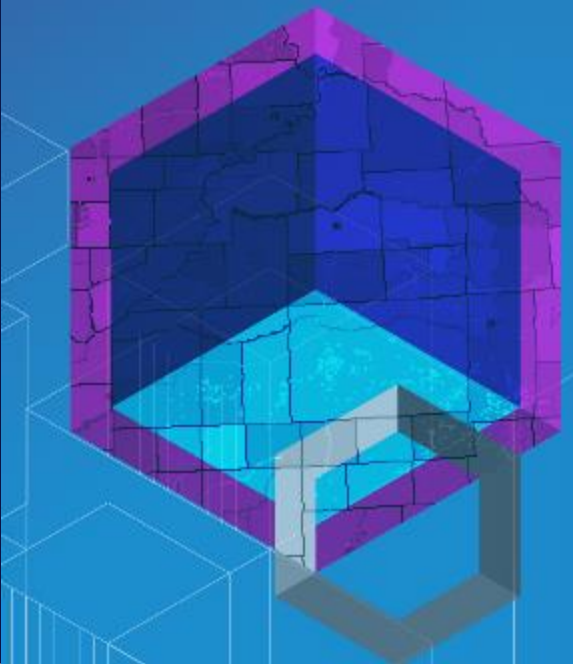
- **Base industry data models**
- **Data loading scripts for the Utility Network**
- **Configuring the Maps and Apps on the Utility Network**



Staying Connected

Supporting Links and Resources

- Contact Esri Support
- Participate in the user community
  - GeoNet
  - Esri Events
- Configuration Assistance
  - Esri Business Partners



Questions?