esri

Building Smart Communities with ArcGIS
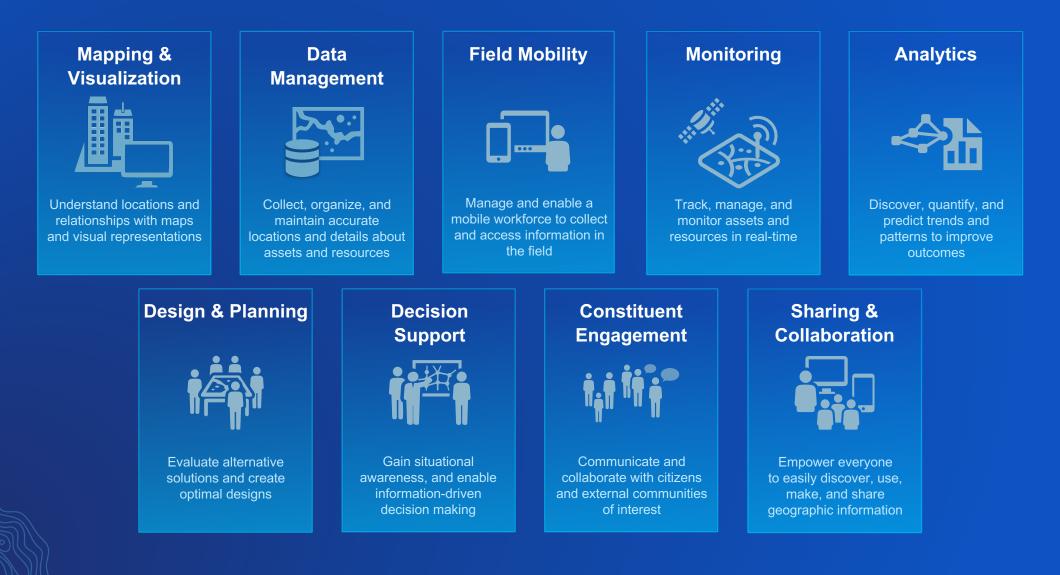
Michele Lundeen, Esri
Solution Engineer - Local Government

SEE
WHAT
OTHERS
CAN'T

GIS & Technology Trends

- Rapid Technology Advances
- Expanding Usage (mobility)
- Data Driven Decision Making
- Citizen Services, Engagement & Crowdsourcing
- Enterprise Integration (CAMA, EAM, ERP)

IoT sensor networks

mobility

web services

big data collections

business systems

analytics

AI, Machine Learning & Deep Learning

spatial data

cloud

what was complicated and inaccessible
is now easy and accessible

GIS | Common Patterns of Use

Mapping & Visualization

Understand locations and relationships with maps and visual representations

Data Management

Collect, organize, and maintain accurate locations and details about assets and resources

Field Mobility

Manage and enable a mobile workforce to collect and access information in the field

Monitoring

Track, manage, and monitor assets and resources in real-time

Analytics

Discover, quantify, and predict trends and patterns to improve outcomes

Design & Planning

Evaluate alternative solutions and create optimal designs

Decision Support

Gain situational awareness, and enable information-driven decision making

Constituent Engagement

Communicate and collaborate with citizens and external communities of interest

Sharing & Collaboration

Empower everyone to easily discover, use, make, and share geographic information

GIS Pattern Matrix | Example City

Legend:
- ⚪ Expressed Need
- 🟠 Partial Use
- 🟢 Near Complete Use

	Mapping & Visualization	Data Management	Field Mobility	Monitoring	Analytics	Design & Planning	Decision Support	Constituent Engagement	Sharing & Collaboration
City Administration Executives	⚪			⚪	⚪	⚪	⚪	⚪	⚪
Human Services	⚪	⚪	⚪		⚪		⚪	⚪	⚪
Code Compliance	⚪	⚪	⚪	⚪	⚪			⚪	⚪
Zoning	🟢	⚪	⚪		⚪	⚪			⚪
Resilience	⚪	⚪			⚪		⚪		⚪
Public Works	🟠	🟠	🟠	⚪	⚪	🟠	⚪		⚪
Fire Department	🟠	🟠	🟠	⚪	⚪	🟠	🟠	⚪	⚪
Parks	⚪	⚪	⚪	⚪	⚪	⚪	⚪		
Buildings	🟠	🟠	⚪			⚪	⚪	⚪	⚪
Planning	🟠	🟠	🟠	⚪	⚪	🟠	🟠	🟠	🟠
Community & Economic Development	🟠	🟠	⚪		🟠	⚪		⚪	🟠
Police Department	🟠	🟠	🟠	⚪	🟠	🟠	🟠	⚪	⚪
Capital Improvements	🟠	🟠		⚪	⚪	⚪	⚪	⚪	🟠

GIS Pattern Matrix | Example City

Legend:
- ⚪ White — Expressed Need
- 🟠 Orange — Partial Use
- 🟢 Green — Near Complete Use

Department	Mapping & Visualization	Data Management	Field Mobility	Monitoring	Analytics	Design & Planning	Decision Support	Constituent Engagement	Sharing & Collaboration
City Administration Executives	⚪			⚪	⚪	⚪	⚪	⚪	⚪
Human Services	⚪	⚪	⚪		⚪		⚪	⚪	⚪
Code Compliance	⚪	⚪	⚪	⚪	⚪		⚪	⚪	⚪
Zoning	🟢	⚪	⚪		⚪	⚪			⚪
Resilience	⚪	⚪			⚪			⚪	⚪
Public Works	🟠	🟠	🟠	⚪	⚪	🟠	⚪		⚪
Fire Department	🟠	🟠	🟠	⚪	⚪	🟠	🟠	⚪	⚪
Parks	⚪	⚪	⚪	⚪	⚪	⚪	⚪	⚪	
Buildings	🟠	🟠	⚪				⚪	⚪	⚪
Planning	🟠	🟠	🟠	⚪	⚪	🟠	🟠	🟠	🟠
Community & Economic Development	🟠	🟠	⚪		🟠	⚪		⚪	🟠
Police Department	🟠	🟠	🟠	⚪	🟠	🟠	🟠	⚪	⚪
Capital Improvements	🟠	🟠		⚪	⚪	⚪	⚪	⚪	🟠
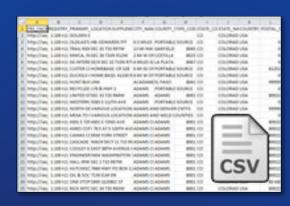
A few tips regarding Web GIS…
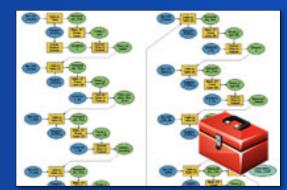
Make it easy to find data

- **ArcGIS services**
- **Shapefiles, spreadsheets**
- **Business system data**
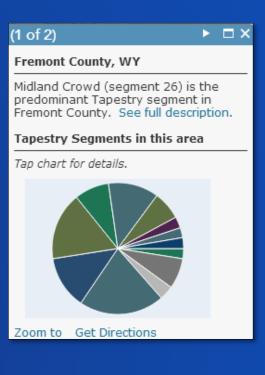- **Publish new hosted layers as needed**

Registering your ArcGIS services

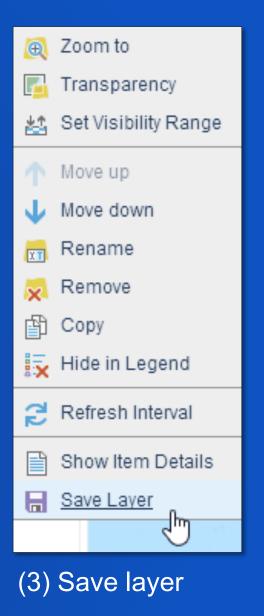**Add Item**

Add an item from your computer or reference an item on the Web.

The item is: `On the web`

- ● ArcGIS Server web service   ○ KML
- ○ OGC (WMS)   ○ Document

URL: `http://services.arcgisonline.com/arcgis/rest/services/Demographics/USA`

Supported Items

Title: `USA 1990-2000 Population_Change`

Tags: United States ✕   2010 ✕   population ✕   demographics ✕

`Add tag(s)`

ADD ITEM   CANCEL

(1) Add service

(1 of 2)   ▶ ◻ ✕

Fremont County, WY

Midland Crowd (segment 26) is the predominant Tapestry segment in Fremont County. See full description.

Tapestry Segments in this area

Tap chart for details.

Zoom to   Get Directions

(2) Configure

🔍 Zoom to

🖥 Transparency

Set Visibility Range

↑ Move up

↓ Move down

Rename

✕ Remove

Copy

Hide in Legend

🔄 Refresh Interval

Show Item Details

💾 Save Layer

(3) Save layer

Optimize services for use

- ☑ Airport Areas
- ☑ Heliports
- ☑ Bicycle Lanes
- ☑ Bike Trails
- ☑ Bike Share Locations
- ☑ Signed Bike Routes
- ☑ Bridge Points
- ☑ Bridge Polygons
- ☑ Bridge and Tunnel Entrances
- ☑ Alley Maintenance
- ☑ Budgeted Construction Point
- ☑ Budgeted Construction Line
- ☑ Completed Construction Point
- ☑ CCTV Street Cameras
- ☑ Park Furniture

→

- ☑ Airport Areas
- ☑ Heliports

- ☑ Bicycle Lanes
- ☑ Bike Trails
- ☑ Bike Share Locations
- ☑ Signed Bike Routes

- ☑ Bridge Points
- ☑ Bridge Polygons
- ☑ Bridge and Tunnel Entrances

Make it easy to find locations

Locator view settings

In ArcGIS Online, you can create a new view of ArcGIS World Geocoding Service to search only for specific types of locations within an area of interest. Once the locator view is created, you must configure it in the **Locator (view) Settings** section of the **Settings** tab. If you share it with your organization or with the public, an administrator can then make your locator view available for members to use in geosearches and batch geocoding.

Authoritative content badge

- **Verify your organization via Esri customer service**
- **Public content marked authoritative will get badge**
- **Publicly searchable via Status**

✓ *Note that link goes back to org home*

Field Operations | Location-enable all phases of field work

Plan & Coordinate
Workforce for ArcGIS

Navigate
Navigator for ArcGIS

ArcGIS **Indoors**

Drone2Map

Monitor
Operations Dashboard (web app)
Explorer for ArcGIS

Capture
Collector for ArcGIS
Survey123 for ArcGIS
ArcGIS **QuickCapture**

Tracker for ArcGIS

Enhance workflows by pairing apps

Maps + Forms

Collector → Survey123

Collect and Monitor

Operations Dashboard

Survey123   Collector

Workforce Launchpad

Navigator

Survey123   Collector

Workforce

Forms + Maps

Survey123 ← Explorer

Prepare - Field

Collector

Pro   Navigator

Explorer

Third Party Integrations

Custom App
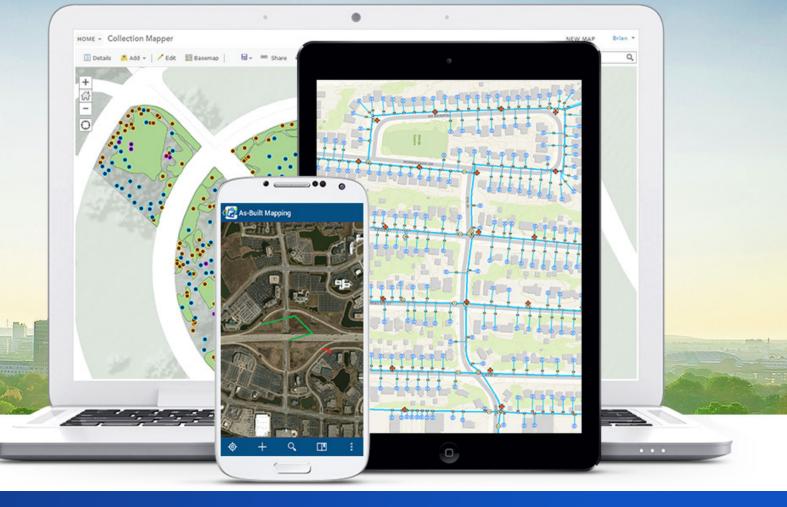
ArcGIS Solutions

Free industry-specific configurations for ArcGIS

FIND YOURS ↓

Community

ArcGIS Solutions

Connect with your peers, Esri Partners, and the teams at Esri dedicated to helping you increase the value of GIS in your organization.

Local Government

- 📍 GeoNet
- 💡 ArcGIS Ideas
- 💬 Blog
- GitHub
- 🎥 Videos
- 🐦 Twitter

Join our Meetup community

State Government

- 📍 GeoNet
- 💡 ArcGIS Ideas
- 💬 Blog
- GitHub
- 🎥 Videos
- 🐦 Twitter

Join our Meetup community

❓ Esri Support

If you need help implementing one of the solution maps or apps in your organization, contact Esri Technical Support via live chat, phone, or email.

Esri Technical Support

👥 Professional Services

Esri Professional Services can help you quickly configure and deploy solution offerings and the ArcGIS Platform necessary to support the solutions.

Esri Professional Services

Rent a Tech Services

Project Services

🔭 Partners

Gallery

Local Government

Search Solutions Gallery 🔍

Show Me

All

Industries   Reset

▶ **Local Government**
▶ State Government
▶ Electric
▶ Gas
▶ Water
▶ Telecommunications
▶ Emergency Management
▶ Defense
Business
Intelligence

Products/Applications

ArcGIS Desktop
ArcGIS Runtime
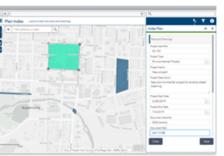Collector for ArcGIS
Esri Maps for Office
GeoEvent Server
Operations Dashboard for ArcGIS

Local Government

Local Government: Improving local government operations and enhancing services provided to the public

Target Hazard Analysis
Local Government

Road Maintenance Agreements
Local Government

Road Closures
Local Government
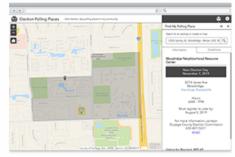
Homeless Point-in-Time Counts
Local Government

Plans and Drawings
Local Government

Incentive Zones
Local Government

Election Management
Local Government

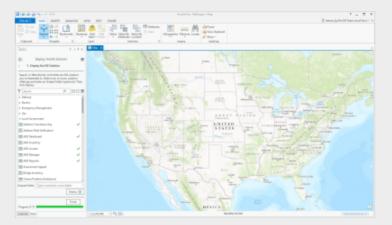**Election Outreach**
Local Government

ArcGIS Solutions Deployment Tool

Home   Get Started

Overview

The ArcGIS Solutions Deployment Tool is an ArcGIS Pro Add-in that allows you to browse a catalog of ArcGIS Solutions and deploy them to an ArcGIS Online organization or Portal for ArcGIS. During deployment the tool will create the items, groups, feature layers, maps, and applications that make up the ArcGIS Solution. Once deployed, the solution can be configured to meet specific needs in your organization by modifying the items created during deployment. If required, existing data can then be loaded into the new feature layers deployed to your ArcGIS organization.

REQUIREMENTS   WHAT YOU GET   DOWNLOAD   WHAT'S NEW

Modernize Existing Solutions

- Incorporate new ArcGIS capabilities
  - Arcade, Tracker, IoT, etc.

- Complete information workflows

- Update layers and associated cartography
  - Well designed pop-ups w/ arcade
  - Feature layer views

- New ArcGIS Pro data management solutions
  - Address Data Management, Tax Parcel Editing, PLSS Data Management, Road Network Management, Flood Planning, etc.
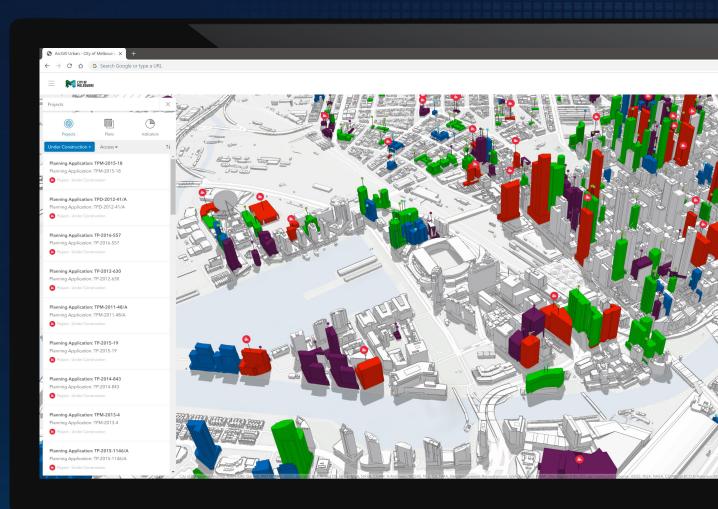
New Solution Offerings in these focus areas

- Land Records
- Conservation
- Natural Resources, Fish and Wildlife, Agriculture
- Public Safety
- Performance Management
- Public Works / Transportation
- Transit

Roadmap

- January 2020
  - New solutions (Address Data Management, Transit, Conservation, Road Network Management, Flood Impact Analysis)
  - Solution updates (Natural Resources, 3d Basemaps, Adopta, Emergency Management, etc.)
- March 2020
  - New solution (Special Event Permitting and Safety Operations)
  - Solution updates (TBD)
- June 2020
  - New solution site and enablement materials, ArcGIS Solutions Web App
  - Solution updates (TBD)

Visualize Projects Citywide

Visualize, track, and review development projects throughout their lifecycle.

boston planning & development agency

Improve Planning Productivity

Streamline the creation and sharing of zoning and land use plans directly in the web browser, in 3D.

Dashboard

Capacity Indicators
Progress of selected performance r

Population

530	8,71
Existing	New

Away From Ta

Households

200	4,70
Existing	New

Away From Ta

Jobs

–	2,37
Existing	New

Away From Ta

Building Space Use
Summary of total floor area per spa

New

% of tot

CITY OF MELBOURNE

OFF   Office

PKG   Parking

Increase Transparency and Understanding

Report on citywide performance indicators and disseminate trends to public and private stakeholders.

San Francisco Planning

Better Engagement

Simplify community involvement to gain early buy-in.

CITY OF PASADENA
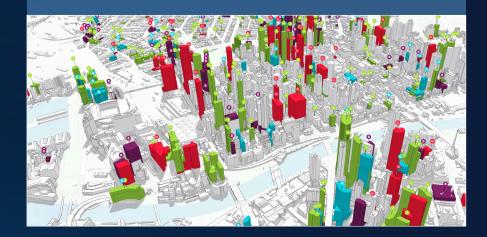PLANNING AND COMMUNITY DEVELOPMENT

Getting Started

Let us know if you are interested in using ArcGIS Urban for your own work. We'd be happy to schedule time to discuss how you can get started.
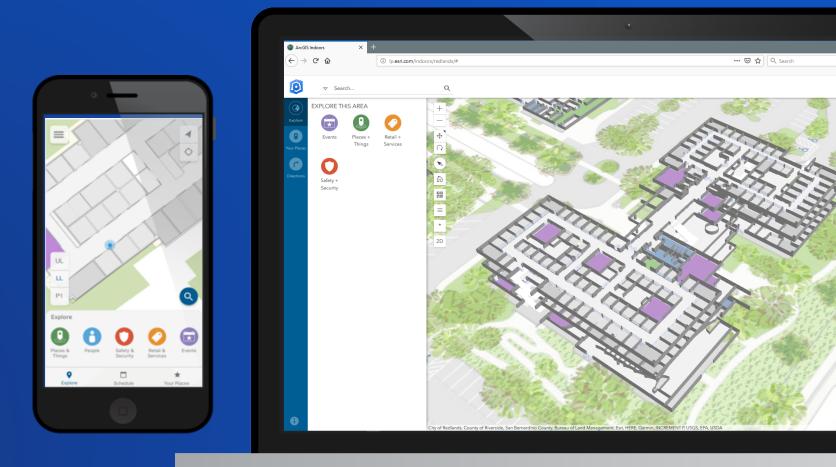
ArcGIS Urban Launch Kit

An ArcGIS Urban initial operating capability (IOC) deployed within your own ArcGIS environment.

- Kick-off and Data Preparation

- ArcGIS Urban Deployment

- Configuration of Example Scenarios

- Knowledge Transfer

ArcGIS Indoors

A Complete Indoor Mapping System

Indoor Positioning Systems

Indoors Mobile

Indoors Web

3rd Party System Data

Work Orders

Assets

Indoors Pro add-in

ArcGIS Enterprise

Incidents

CAD / BIM

Indoors Information Model

Indoors Information Model

Floor Plan Features

Routable Network

POIs

Events

Tracking Zones

Site (Campus)

↓

Facility (Building)

↓

Level (Floor)

↓

Sections (Wing)

↓

Zones (Restricted Areas, ...)

↓

Units (Office)
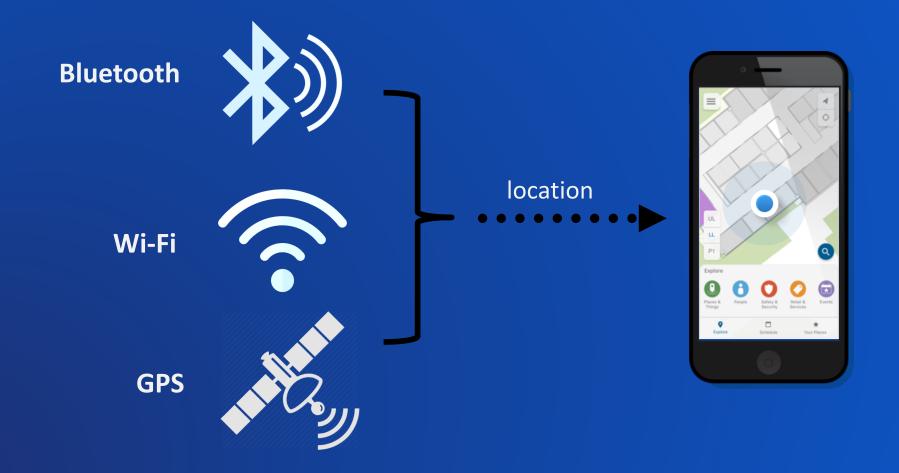
...organizing your smart workplace information

ArcGIS Indoors Positioning Systems

Bluetooth

Wi-Fi

GPS

location

…or use Indoors without positioning

ArcGIS Indoors Roadmap

- Operational System Integration
- Web & Mobile Editing
- Additional Indoor Positioning Systems
- Dashboarding
- Advanced Tools for Indoor Map Creation
- Indoor Positioning API
- BIM Floorplan Support
- Enhanced Routing, Visualization, and Printing

esri | THE SCIENCE OF WHERE