

Esri Developer Summit

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esri.com/events/devsummit



Introduction to ArcGIS for Water Utilities

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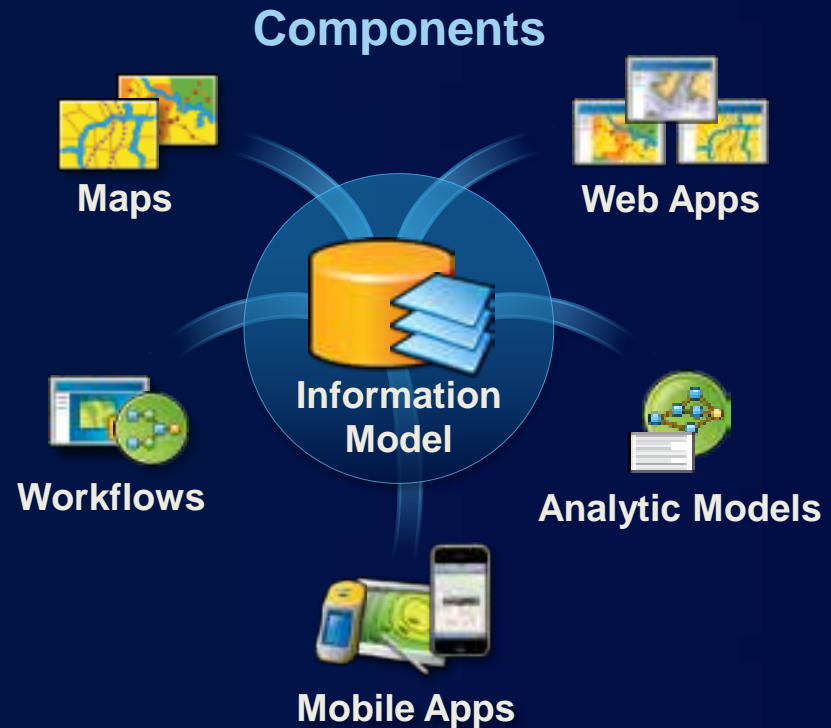
Agenda

- **ArcGIS for Water Utilities Overview**
- **Demonstrations**
- **Common deployment scenarios**
- **Participating in the ArcGIS for Water Utilities Community**
- **The road ahead**
- **Discussion**

Esri's Solution Initiative

ArcGIS Based Solutions Reflecting Best Practices

- Organized knowledge
- Accessible
- Easily configured
- Community driven
- Open source
- Leveraged by partners



ArcGIS for Water Utilities

- **Esri's industry specific configuration of ArcGIS**
 - **For the water, wastewater & stormwater community**
- **Maps & apps tailored for water utility work**
- **Freely available**
- **Fully supported**
- **Configurable & extendable**
- **A module of ArcGIS for Local Government**

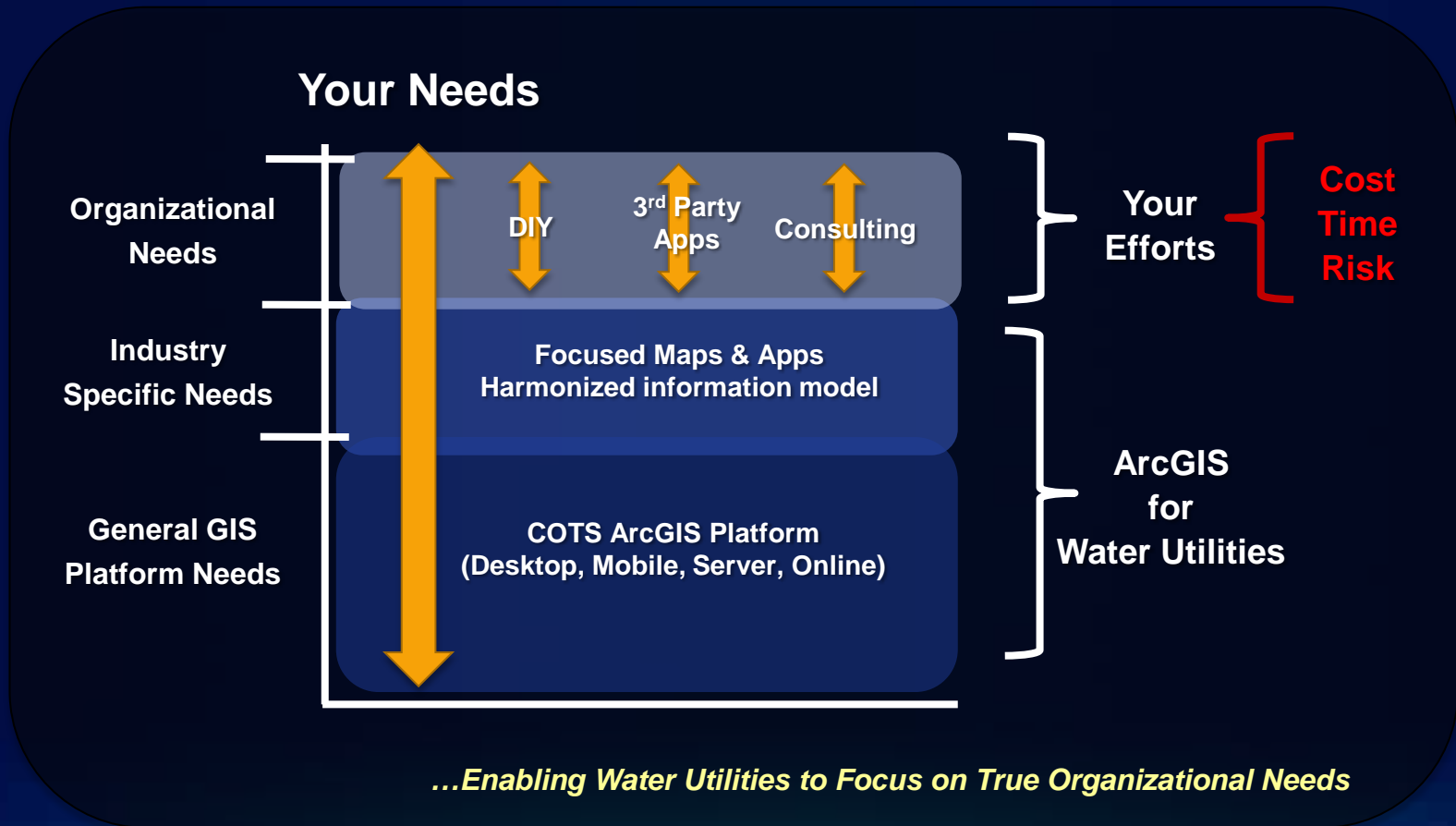
ArcGIS for Water Utilities Mission

Increase the value of GIS for water utilities

- **Make it easier to deploy ArcGIS**
 - Deliver applications quickly throughout your organization
 - Create a geospatial platform that can be leveraged by everyone
 - Stay current with future releases / avoid legacy technology
- **Address common constraints in water utilities**
 - Size and skills of staff
 - Budget and time available to implement
- **Empower the community to contribute**
 - Users
 - Partners
 - Distributors

The ArcGIS for Water Utilities Approach

Extends the ArcGIS Platform for Water Utility GIS



ArcGIS for Water Utilities Builds on Our Solution Patterns



ArcGIS for Water Utilities includes Maps and Apps



Operations Dashboard
Operational Awareness



Network Editing
Data Reviewer
Asset Information Management



Customer Interaction
Stakeholder Engagement



Mobile Map
Field Mobility



Capital Improvement Planning
Planning & Analysis



Local Government
Information
Model

...An evolution, not a revolution

The Local Government Information Model

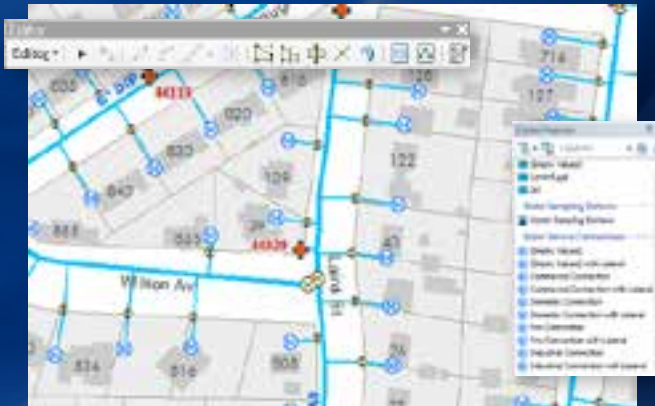
- Includes GDB schema, services & map documents
- Supports ArcGIS for Local Government maps & apps
 - Encompass water utility, base mapping & ancillary data
 - Easy to adopt and extend
 - Fully documented
- An evolution of Esri's Water & Wastewater Data Models



LocalGovernment
Address
AdministrativeArea
AssessmentInformation
CadastralReference
CapitalPlanning
CitizenService
Demography
ElectionAdministration
ElectionResults
Elevation
EmergencyOperations
FacilitiesStreets
FieldCrew
InfrastructureOperations
LandUseOperations
LandUsePlanning
ParcelEditing
ParcelPublishing
PublicSafetyPlanning
ReferenceData
SewerStormwater
Stormwater
WaterDistribution
CatchbasinInspection_ATTACH
ConsumptionInfo
DynamicValue
FiveMeterHillshade
FiveMeterSurface

ArcGIS for Water Utilities

Demonstration



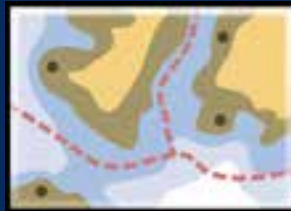
3 Parts of Ours Maps & Apps

Specifics Drive Actions Around These Parts

Geodatabase Schema



Maps



**Water Utility
Business**

Client Configuration



Geodatabase Schema

- **Includes:**
 - **Assets, operational, base, ancillary & reporting data**
- **Best Practices:**
 - **Data model for water, sewer & stormwater utilities**
 - **Consistently designed schema**
 - **Extensible**
 - **Configure core & extend as necessary**
 - **Avoid customization of core**

Maps

The Maps Build on the Geodatabase Schema

- **Map Documents**
 - Built for Local Government Information Model GDB schema
 - Designed for a service or an application
 - Services Maps
 - Operational Maps
 - Base Maps
 - Support many apps & mashups
- **Best Practices**
 - Expressing water utility data on a map
 - Multi-scale cartography & labels for utility networks
 - Maps for specific user roles and clients

Client Configuration

Turns Maps into Applications

- **Clients are desktop, mobile or web applications**
- **Built around maps or a collection of map services**
- **Include generic/common functionality and workflows**
- **Best Practices**
 - **Reuse minimum number of services for applications**
 - **Consume multiple services in an application**
 - **Use the appropriate client for the app**
 - **Determined by role and technology**

Scenario - No Existing GIS

“I don’t have ArcGIS for Water Utilities, but we need it, where do I start?”

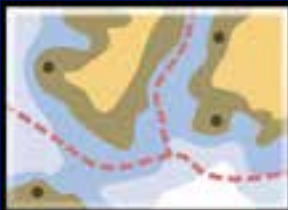
Geodatabase Schema



Configure Schema

- Determine any data model gaps
- Extend if necessary
- Set spatial domain
- Set attribute domains

Maps



Minimal Changes

Client Configuration



Minimal Changes

Scenario – Mature Existing GIS

“I have a robust data schema I cannot change, but want to use the maps & clients”

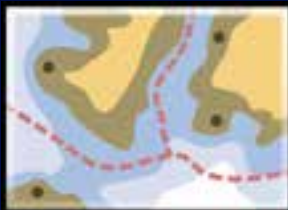
Geodatabase Schema



No or Minimal Schema Changes to Enterprise GDB

- Evaluate gaps in schema
- Extend schema if missing data

Maps



Heavy Changes

- Modify every map document layer
- Modify all labels
- May sacrifice cartography

Client Configuration



Heavy Changes

- May need to modify all config files
- May sacrifice functionality
- Requires in depth testing

Scenario – Mature Existing GIS

“I have a robust data schema I cannot change, but have an agile deployment & can use a publication gdb”

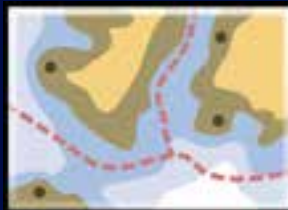
Geodatabase Schema



No or Minimal Schema Changes to Enterprise GDB

- Evaluate gaps in schema
- Transform prod GDB to publication GDB
- Determine pub GDB update frequency

Maps



Moderate Changes

- May need to modify all map documents
- May sacrifice cartography

Client Configuration



Moderate Changes

- May need to modify all config files
- May sacrifice functionality
- Requires in depth testing

Scenario – Existing Non-Esri Enterprise GIS

“I don’t use ArcGIS as my GIS platform, but I want to use some of your maps & apps”

Geodatabase Schema



No or Minimal Schema Changes to Enterprise repository

- Evaluate gaps in schema
- Transform prod GIS repository to publication GDB
- Determine pub GDB update frequency

Maps



Moderate Changes

- May need to modify all map documents
- May sacrifice cartography

Client Configuration



Moderate Changes

- May need to modify all config files
- May sacrifice functionality
- Requires in depth testing

Scenario – Existing GIS Adding New Functionality

“I have an adequate asset repository in GIS, we need to roll out applications that use my data”

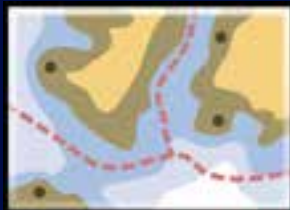
Geodatabase Schema



Extend Schema

- Evaluate gaps in schema
- Add feature datasets & classes from LGIM
- Suggest adopting entire LGIM schema

Maps



Minimal Changes

- May sacrifice cartography

Client Configuration



Minimal Changes

- May sacrifice functionality

Scenario – Existing GIS Adding New Functionality

“We use a different ArcGIS client than your app is built for”

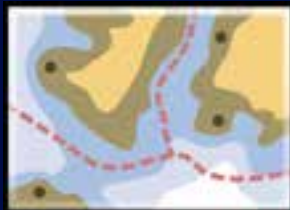
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Maps



Minimal Changes

- May sacrifice cartography

Client Configuration

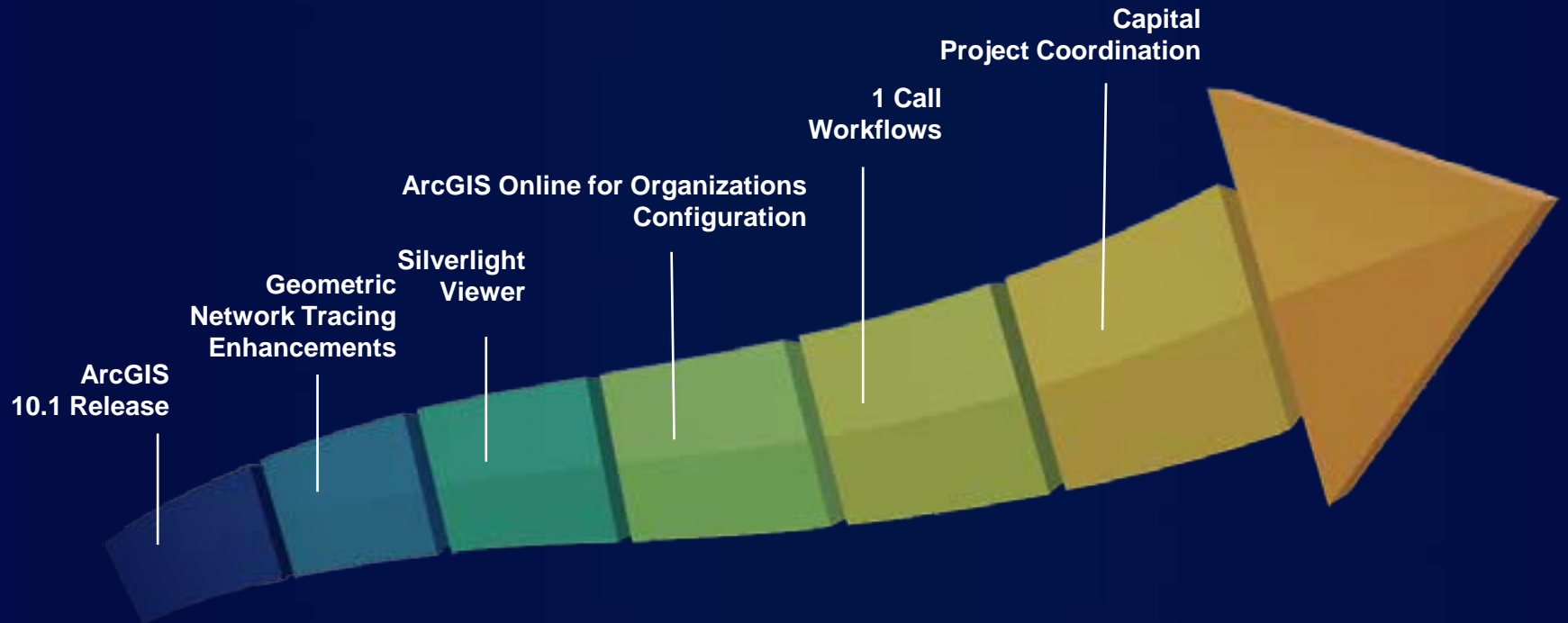


Heavy Changes

- Rebuild app in your client
- Reuse business logic from app
- Consume map services

ArcGIS for Water Utilities

The Road Ahead



Participating in the ArcGIS for Water Utilities Community

- **User Opportunities**
- **Developer Opportunities**
- **Partner Opportunities**

User Opportunities

- **Visit the ArcGIS for Water Utilities Resource Center**
 - Download the maps & apps
- **Share knowledge with the community**
 - Discussion forums
- **Give us feedback**
 - Ideas.arcgis.com
 - ArcGISsteamwater@esri.com
- **Follow us on Twitter**
 - @esriteamwater

Developer Opportunities

- **Visit the ArcGIS for Water Utilities Resource Center**
 - **Download the maps & apps**
- **Add new functionality to existing apps**
- **Build new apps on the Local Government Information Model**
- **Share your work**
 - **On ArcGIS.com**

Partner Opportunities

- **Visit the ArcGIS for Water Utilities Resource Center**
 - Download the maps & apps
 - Build your expertise in the maps, apps & information model
- **Configure & deploy the maps and apps**
 - Schema migration
 - Populate geodatabase
 - Set up maps and apps
- **Extend the maps and apps**
 - Add new functionality
- **Create new maps and apps**
 - Add them to the ArcGIS for Water Utilities ecosystem

Partner Specialty

A formal way to collaborate with Partners who are helping implement ArcGIS for Local Government

- **Acknowledges Esri Partners that provide....**
 - **Complementary applications that leverage the ArcGIS for Local Government Information Model**
 - **Implementation services that help users install, configure and extend ArcGIS for Local Government**
- **In return, Esri will...**
 - **Promote and market through a variety of media**
 - **Align partners with Esri local government sales teams**
 - **Enable ongoing technical engagement**

Thank You

- Questions and Answers



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