Utilities are in our DNA

Regulated Utilities

Utility Operating Systems
• World-wide water scarcity is increasing
• Water resources are becoming increasingly more volatile
• Supply-side solutions take years to permit and develop
• Changing behavior is cheaper than building supply
• Utilities need DATA to change behavior

Rapidly Increasing Water Prices

Utility Revenue is Declining

Divergence of Assets

Physical Assets  Logical Assets

Revenue systems do not locate dollars in space-time
Non-Revenue Water

Apparent Losses = 2 x Real Losses

LEAKING DATA

Source: Mattar, R., “Kahramaa’s vision for non-revenue water reduction”, Water Utility 21, April 2013
Geo-located meters ensure all meters are billed all the time.

GIS-enabled audit technologies ensure all meters are in the billing platform.

Highly granular meter data can be used to ensure accuracy of meter readings.
Real-time pumped-vs-billed analysis ensures highly accurate understanding of non-metered use.

Combined with real-time hydraulic models unmetered use can be pinpointed.
Combining GIS + CIS + AMI data finds water theft by disconnected customers.
GIS-based Field and Paper Audits find data voids.

Validating infrastructure vs relying on old data eliminates errors.

GIS-enabled best practices and Data Validation tools built into systems maintain the integrity of the data.
Real-time demand data + hydraulic modeling + geospatial location finds real leakage.

This “first-principles” approach validates flows and does not rely on established baselines – can identify pre-existing leaks which can be hidden in baseline acoustic or analytics methods.
Layers

- Base Maps
- Taxation Data
- Utility Infrastructure Data
- Meter Location
- Customer Information System Data
- Remote Sensing/Aerial Data
Geospatial CIS
The Smart Grid for Water
Integrating data Systems
Validating Data
Finding Dollars in the Data

Source: Symmonds, G., "Get Smart!", UIM, Jan/Feb 2012
Finding Dollars in the Data

Pre- & Post-FATHOM Smart Grid Installation
Revenue by Category ($millions)
Mar - Sep 2010 vs Mar - Sep 2011

Source: Symmonds, G., "Get Smart!", UIM, Jan/Feb 2012
“A key to improving efficiency is understanding where, when, and why we use water.”

Source: Gleick, P., “Roadmap for sustainable water resources in southwestern North America,” PNAS, 14 Dec 2010
Questions?

- Increase Revenue
- Decrease Costs
- Delight Customers
- Preserve Our Most Vital Resource

FATHOM
www.gwfathom.com
www.TheSmartGridForWater.com