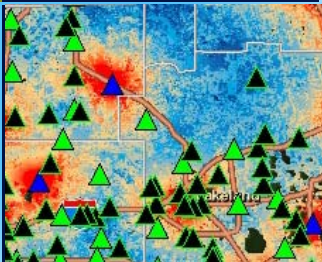
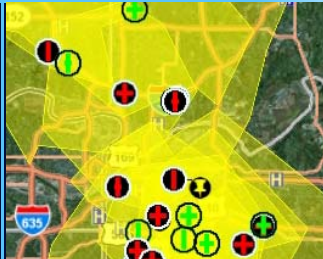
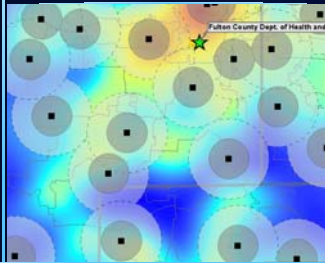


# Know your place...

*Francisco Urbina*

IBM Alliance Manager, Esri Australia



## Know your place...

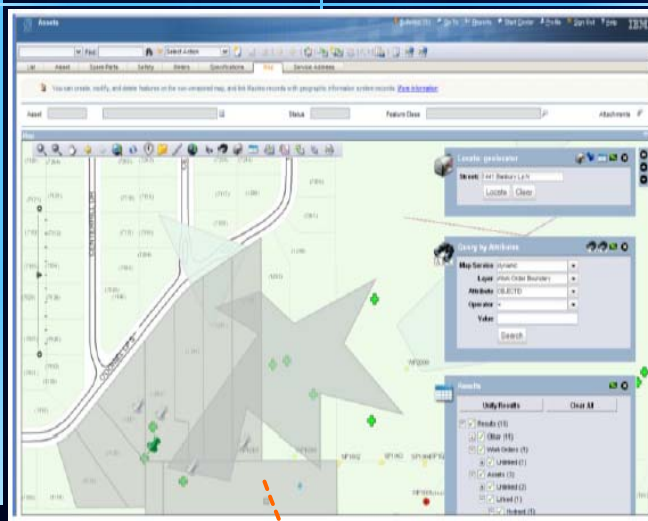






Know your place...

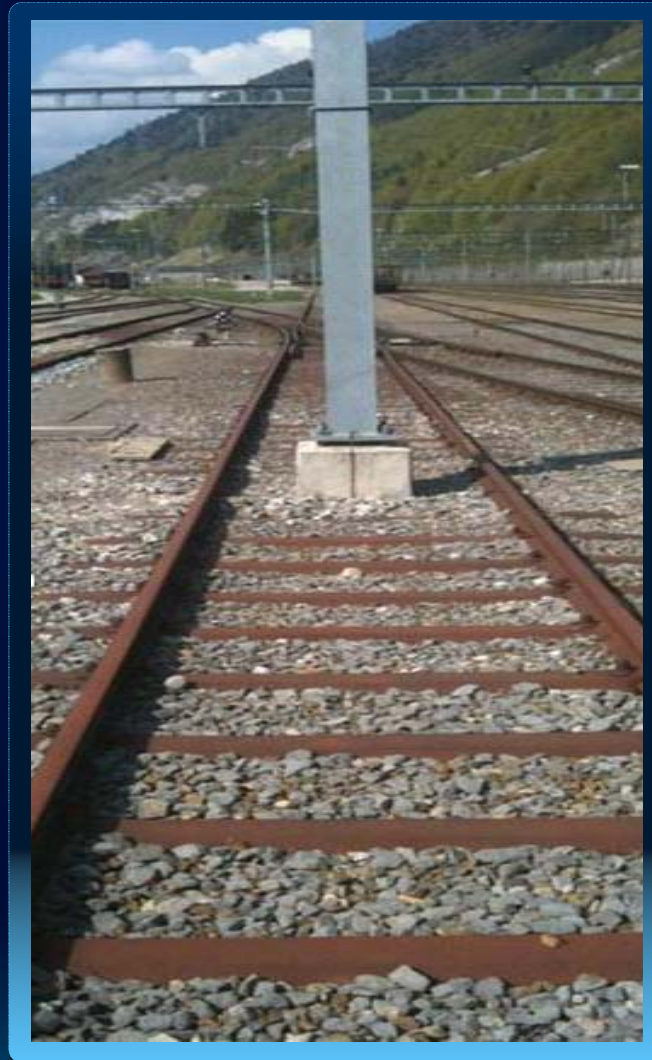
The Location of  
anything **is** becoming  
Everything...



PRECISION DR



Know your place...







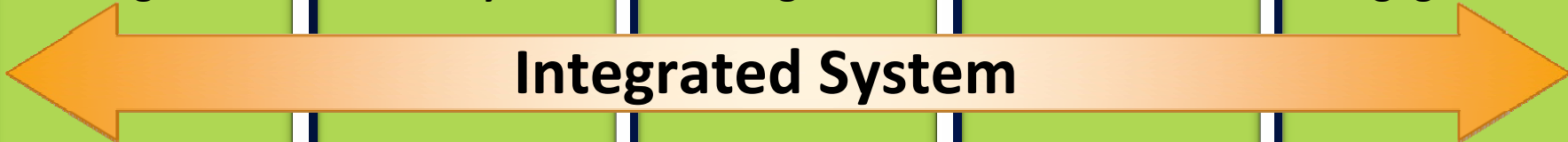
## Data & Asset Management

## Planning & Analysis

## Workforce Management

## Operational Awareness

## Community Engagement



Store, manage, & maintain accurate asset records



Transform data into actionable intelligence



Get information into and out of the field



Disseminate knowledge where & when it's needed



Community portals, Crowd sourcing and

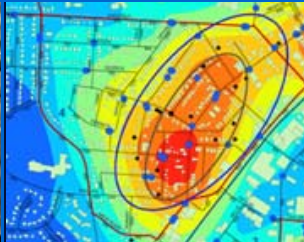


# Know your place...

More accurately  
define work  
locations



Plan and  
schedule work  
by area



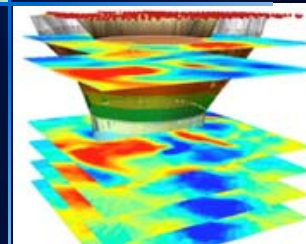
Query a map  
by address,  
siteid, or asset  
id



Optimise  
technicians'  
travel time

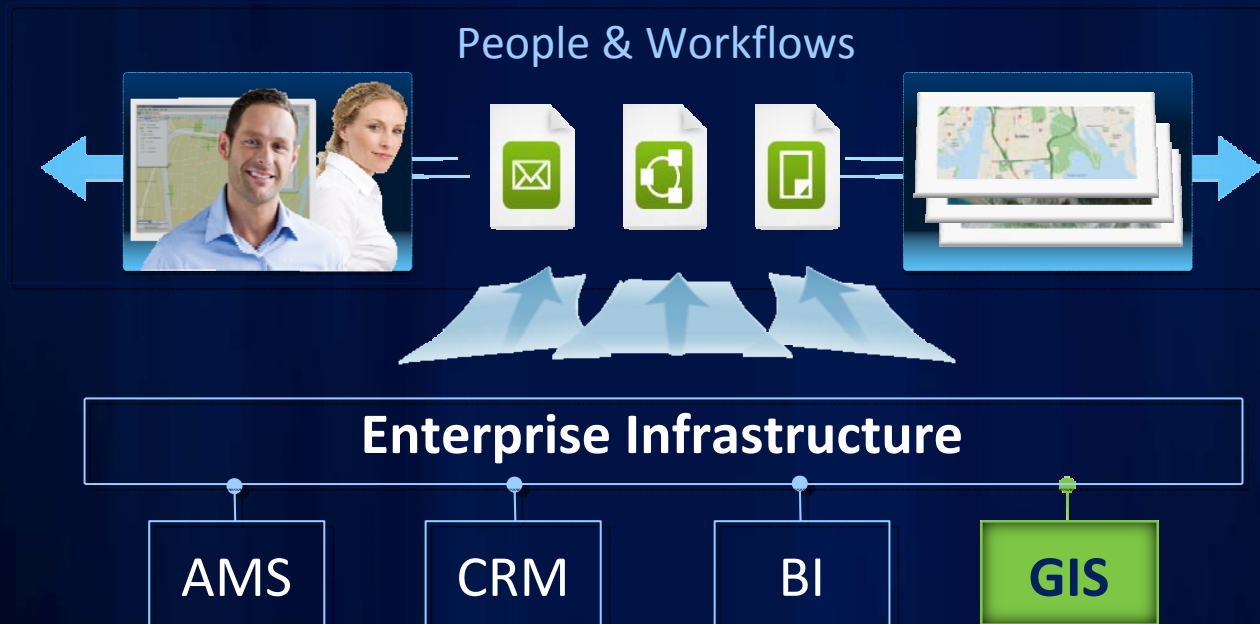


Advanced  
analytics



## Integrated with other enterprise systems

- Enrich and improve workflows to increase organisational efficiency
- More than dots on a Map

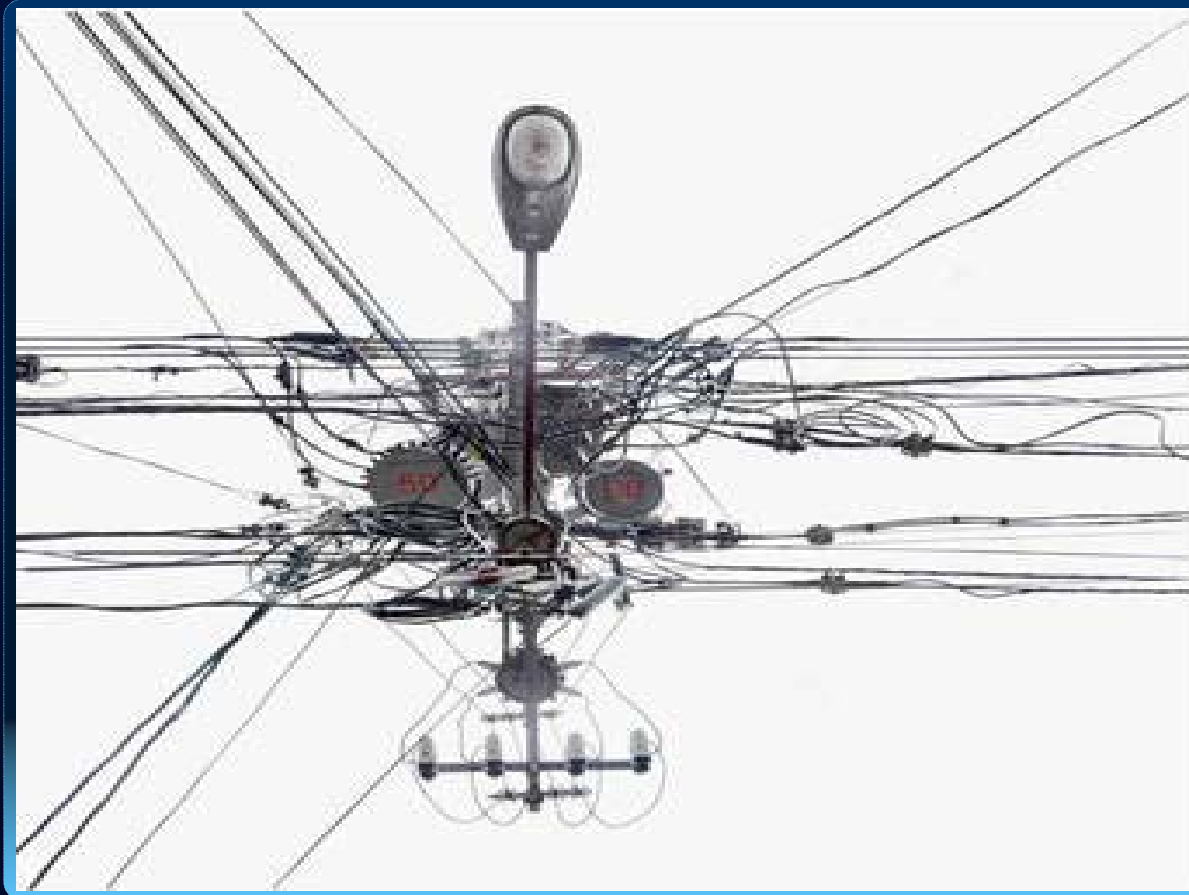


Embedding geographic thinking into many aspects of an organisation.

## Sinking Feeling



# Complexity



# Duplication



# Over Engineered



# Usability





## Over Promised



# System Fragility



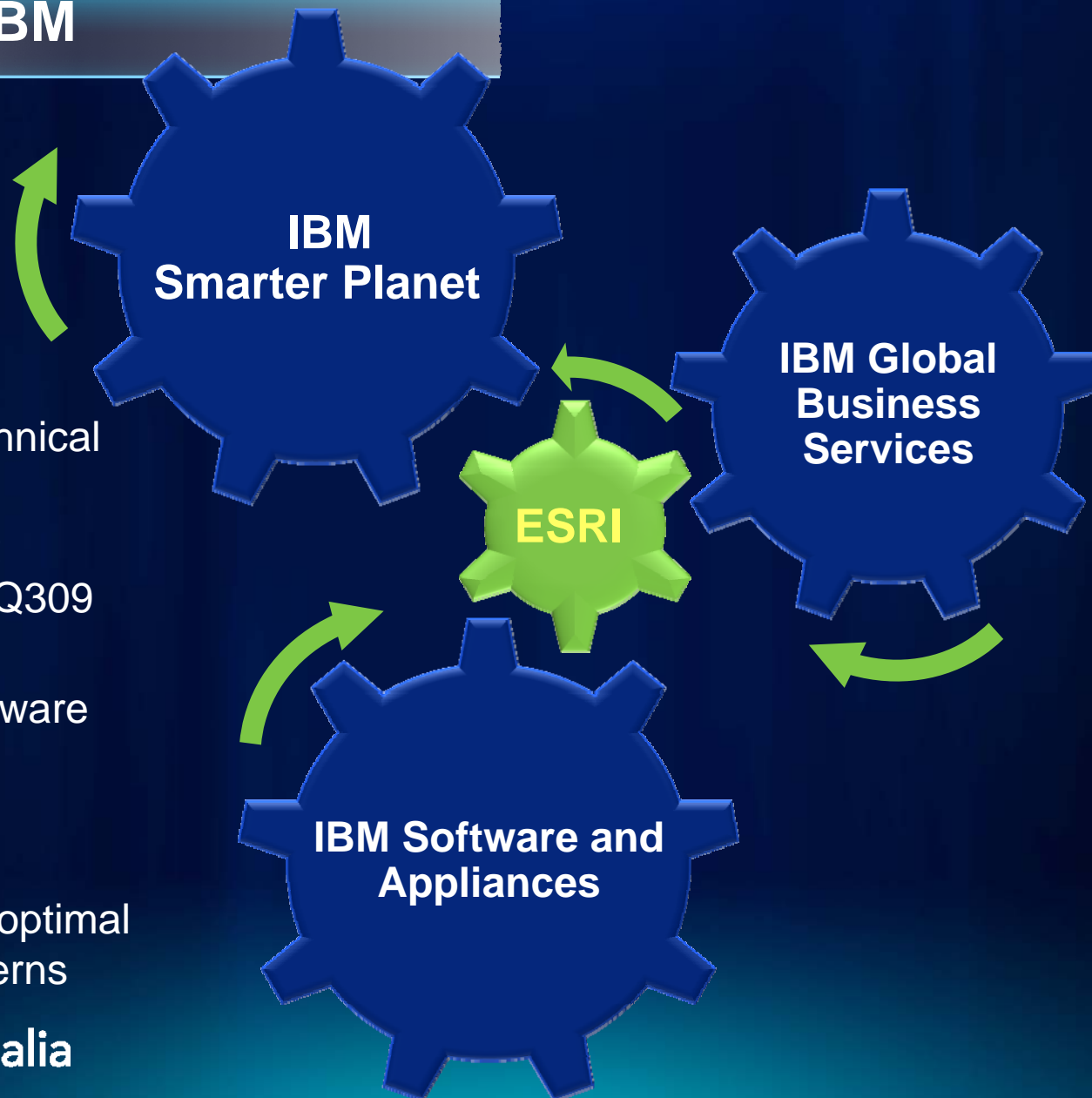
## Lack of Agility



# Frustration



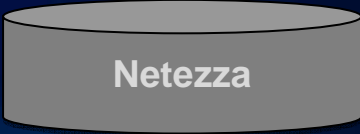
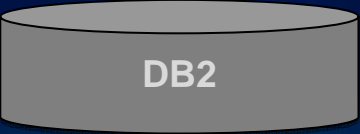
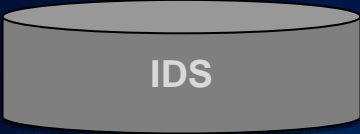
## Esri & IBM



- Decade long technical relationship
- Geo-enablement  
Process started Q309
- Led by IBM Software Group
- GBS and Esri collaborating on optimal deployment patterns

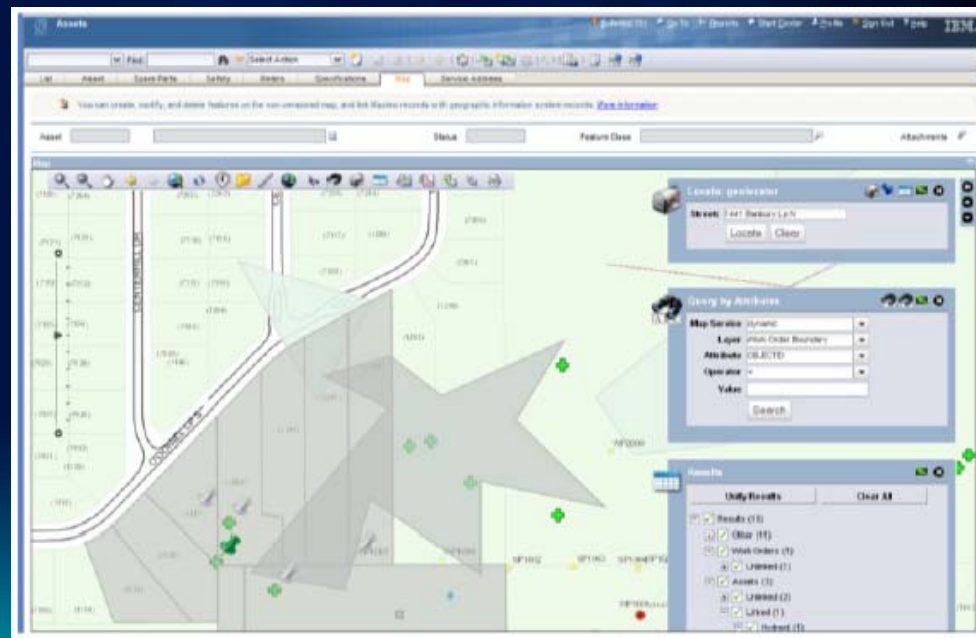


iWidgets



# Maximo Spatial

- Components have been built by both IBM and Esri in partnership
- Allows geo-enabled processes to run within Maximo
- Seamless view of spatial data using a new Geo tab within Maximo GUI .
- Provision for two-way integration with external Professional Esri GIS



# Geospatially Enable Asset Management

## Benefits...

- ⇒ *Cost savings through greater efficiency. Streamlining work and scheduling activities;*
- ⇒ *Better informed decision making. Knowing more about where assets are located spatially;*
- ⇒ *Enhanced communication and collaboration. Maps and visualisations created using GIS;*
- ⇒ *Creation of new business value. Through its support for new forms of data analysis*



## Single solution

### Benefits...

- ⇒ Geospatial data allows Service Management users to, easily and dynamically visualise spatial relationships between managed assets and roads, buildings, pipelines etc..

*empowering levels of awareness and insight that tabular systems with dry numbers alone cannot provide*

- ⇒ Less Truck Rolls – Increased Productivity & Work Accomplishment

## Single solution

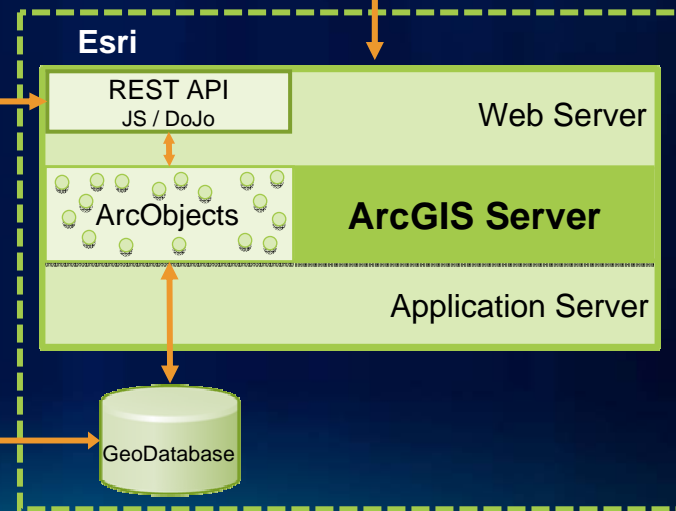
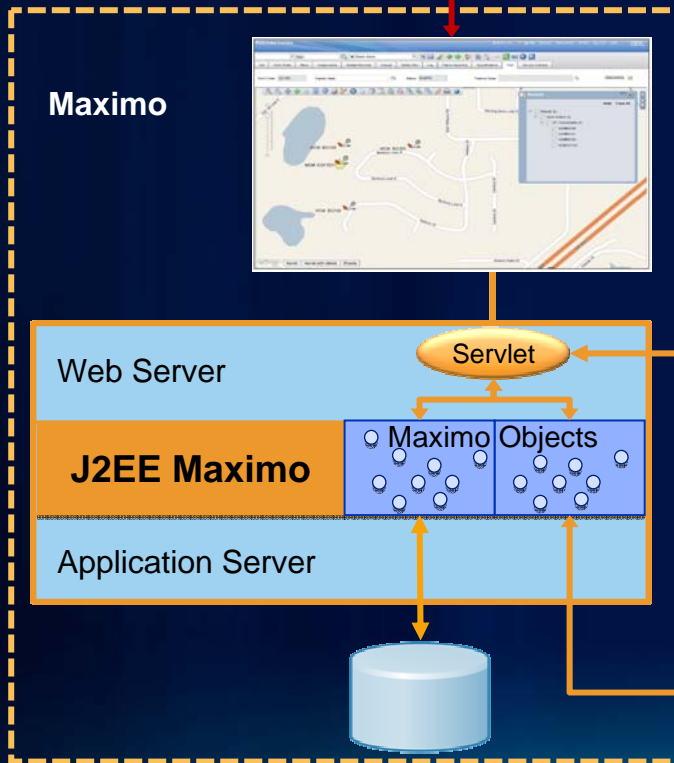
### Benefits...

- ➔ Real-time integration of IBM Maximo & Esri ArcGIS
- ➔ IBM has a long-term relationship with Esri
- ➔ Aligned technical vision
- ➔ Sales and implementation support

# How Does It Work? Standard Architecture



External  
Commercial  
Base Maps

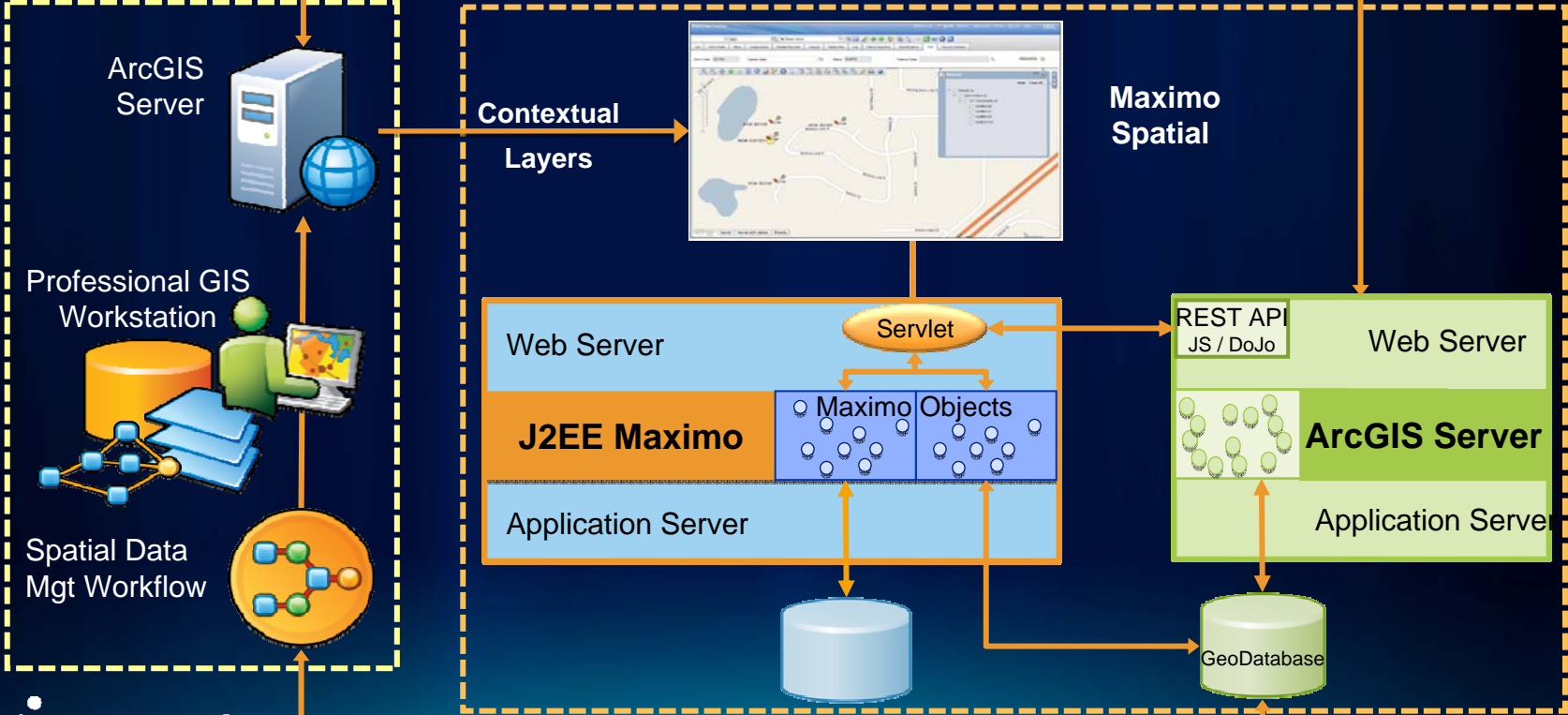


# How Does It Work?

## High Availability Architecture



**Corporate GIS**





# Goulburn Murray Water

Case Study

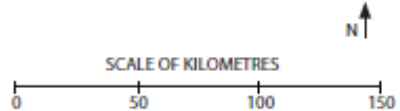
# Goulburn-Murray Rural Water Corporation



- Manages water storage, delivery and drainage systems involving 70% of Victoria's stored water
- 50% of Victoria's underground water supplies
- Australia's largest irrigation delivery network
- G-MW's service region covers more than 68,000 square kms - that's about the same size as Tasmania.



# Goulburn-Murray Water Region



DISTRICT SERVICES	
<b>IRRIGATION AREAS</b>	<b>WATER DISTRICTS</b>
Shepparton	Tungamah
Central Goulburn	East Loddon
Rochester-Campaspe	West Loddon
Pyramid-Boort	Normanville
Murray Valley	<b>FLOOD PROTECTION DISTRICT</b>
Torrumbarry	Loch Garry

MAJOR STORAGES	
Lake Nillahcootie	Dartmouth Dam*
Lake Eildon	Hume Dam*‡
Goulburn Weir	Yarrawonga Weir*
Waranga Basin	Torrumbarry Weir*
Lake Eppalock	Mildura Weir*
Calm Curran Reservoir	Lake Buffalo
Newlyn Reservoir	Lake William Hovell
Hepburns Lagoon	
Tullaroop Reservoir	
Laanecoort Reservoir	

KEY
Channel/Canal
River
Operations Centres
Dams Operation Centres
Pipelines (Not managed by G-MW)

\* Murray-Darling Basin Authority assets  
 ‡ Managed by NSW Constructing Authority



## Benefits of Project

- Common Maintenance Management and Asset Management Systems
- Integration with the GIS
- The ability to use the AMIS in the field
- Web based delivery model with full Active Directory integration.
- Cost saving related to migrating from Oracle to MS SQL Svr

## Key Metrics



- Project was completed to schedule and within budget
- Functional Specification Achieved
  - Achieved 1334 of 1402 Requirements – 95.15%

# Variations



- Variation #1 –resignation of Assets team member who had been identified to assist in required additional external resources to assist in data conversion.
- Variation #2 –transfer of Eildon Houseboat Register from a spreadsheet to an application within the asset register.

## Business Case



- Replace Assetlife with a like-for-like product
- Should have also aimed to expand asset management capability
  - modernisation of irrigation system and the fact that it is a critical business system

## Areas of Complexity



- Number of Integration points
- Volumes of Information
- Changes to organisation and presentation of asset data

# System Design



- Define business processes
- Security Groups
  - Be hard just because they want to have access to information and maps doesn't mean they should
  - Use Business case to structure decisions
- Reduce hierarchy for performance
  - Text Hierarchy vs Map visualisation

## Key Lessons Learnt



- **Information Rich vs Knowledge Poor**
  - Get the owners of information involved to avoid redundant, irrelevant data in new system
  - Cleanse before project

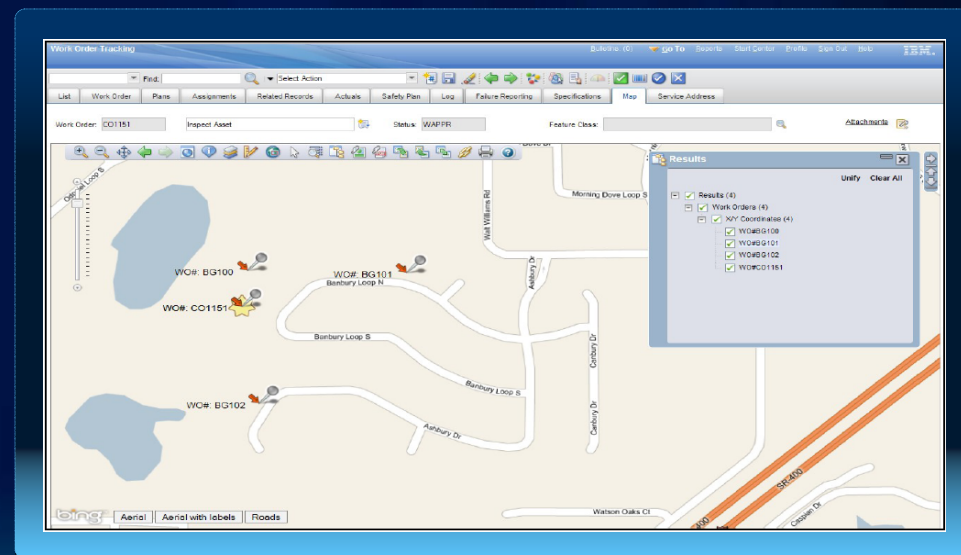


# Lessons Learnt

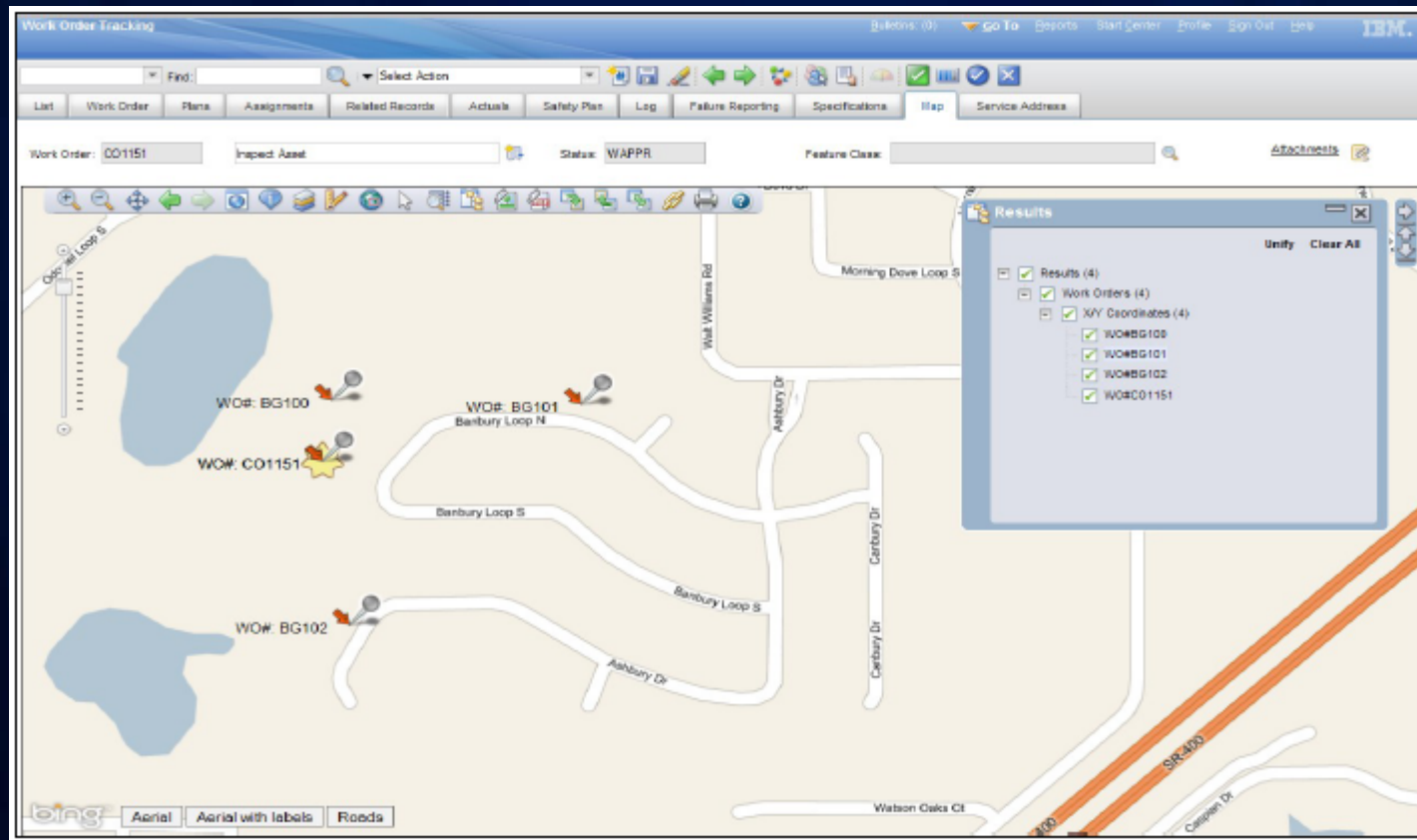


# No Excuses – Place is in the DNA of Maximo

## Top 5 Maximo Spatial 7.5 release



# Support for External Map Services



## Map Tips Configured with more links

- Provides maximum access to Maximo data from the map
- Simple to configure and re-use Maximo objects
- Create more business value while using the map
- Challenges Hierarchy Data access

The image shows two screenshots. The left screenshot is an ArcGIS 'Identify' window for a feature named 'Hydrant 10'. It lists attributes such as OBJECTID (10), MIXCREATIONSTATE (Null), DESCRIPTION (Null), HYDRANTGUID (Null), MAXASSETNUM (Null), MXSITEID (Null), and Shape (Point). A red circle highlights a link labeled 'Learn more about this feature...'. A blue arrow points from this link to the right screenshot.

The right screenshot is a Maximo 'Specifications' window for an asset named 'Standard Desktop Computer'. It shows a table of specifications with columns for Attribute, Description, Data Type, and Unit of Measure. The 'DISKSIZE' attribute is highlighted, and its details are shown in a 'Details' section below.

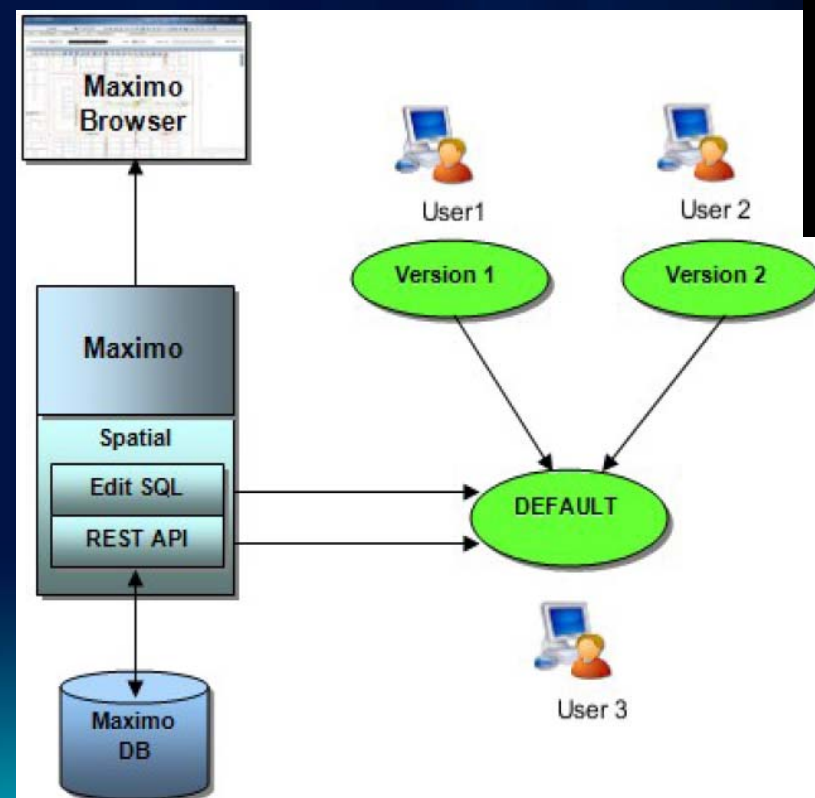
Attribute	Description	Data Type	Unit of Measure	Table Value
PROSPEED	PROCESSOR SPEED	NUMERIC	GHZ	
RAMSIZE	MEMORY SIZE	NUMERIC	MBYTE	
DISKSIZE	DISK SIZE	NUMERIC	GBYTE	

Details for DISKSIZE:

Attribute	DISKSIZE	DISK SIZE	Alphanumeric Value	
Data Type	NUMERIC		Numeric Value	500
Unit of Measure	GBYTE		Table Value	
Section			Inherited from	
			Apply Down Hierarchy?	<input type="checkbox"/>

## Version Editing

- New DEFAULT Multi-Version View from ESRI for IBM/Maximo
- Merges short and long transaction edits to DEFAULT version in geodatabase (current version performed edits to Base Tables)
- Maximo user gets a consistent view of most current GIS and Maximo edits



## New Key Columns Used for Linking

- Key columns now conform to Maximo's Standard of Site + ID eg...SiteID (BEDFORD) + AssetNUM (HYD1253)
- Enhances Maximo's control over GIS tables when registered

Hydrant Feature Class (Geodatabase)

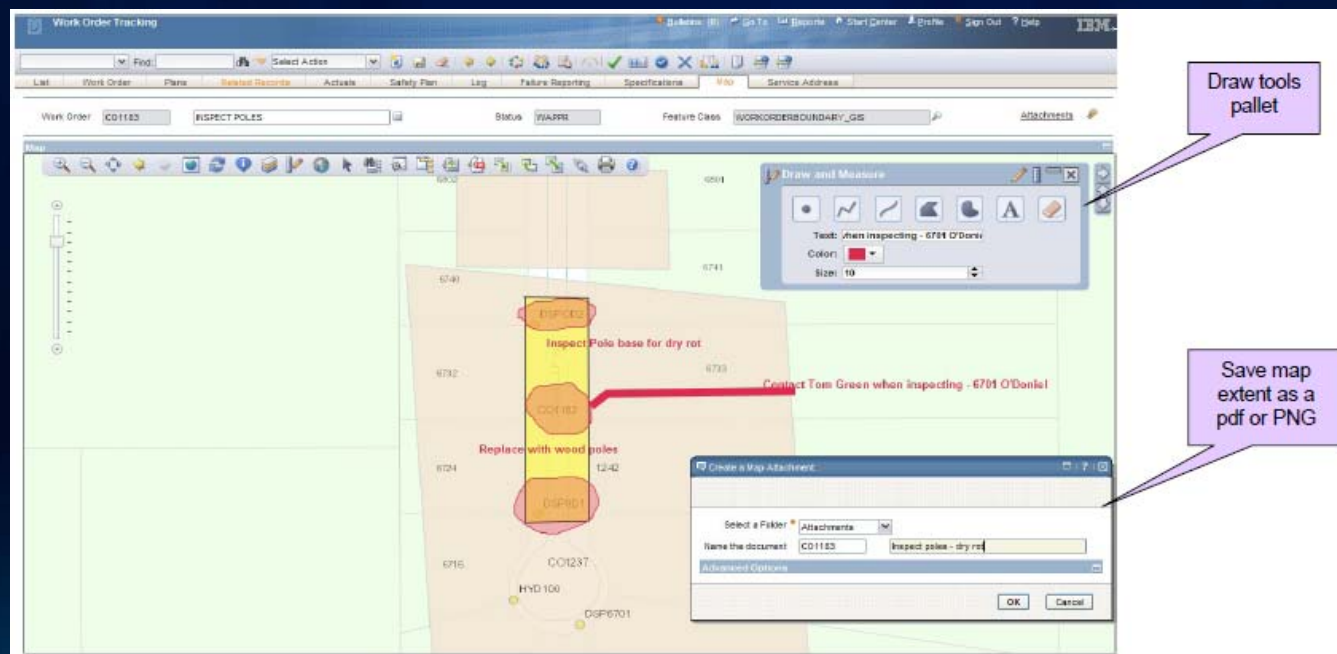
ObjectID	MXAsset Num	MXSiteID	MXAssetUID
100	HYD1253	BEDFORD	Existing field – keep if Joins required 15500

Maximo Asset Table – Hydrant Asset

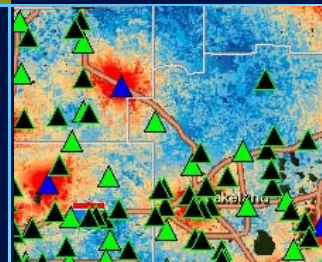
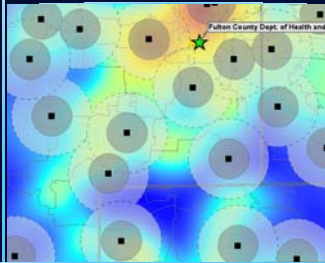
AssetUID	PlusFeature Class	AssetNum	SiteID
15500	HYDRANT	HYD1253	BEDFORD

# Draw Tools

- Redline tools – ability to capture notations directly on map view
- End users can capture changes and save as a PDF which can be attached to the WO for future reference.

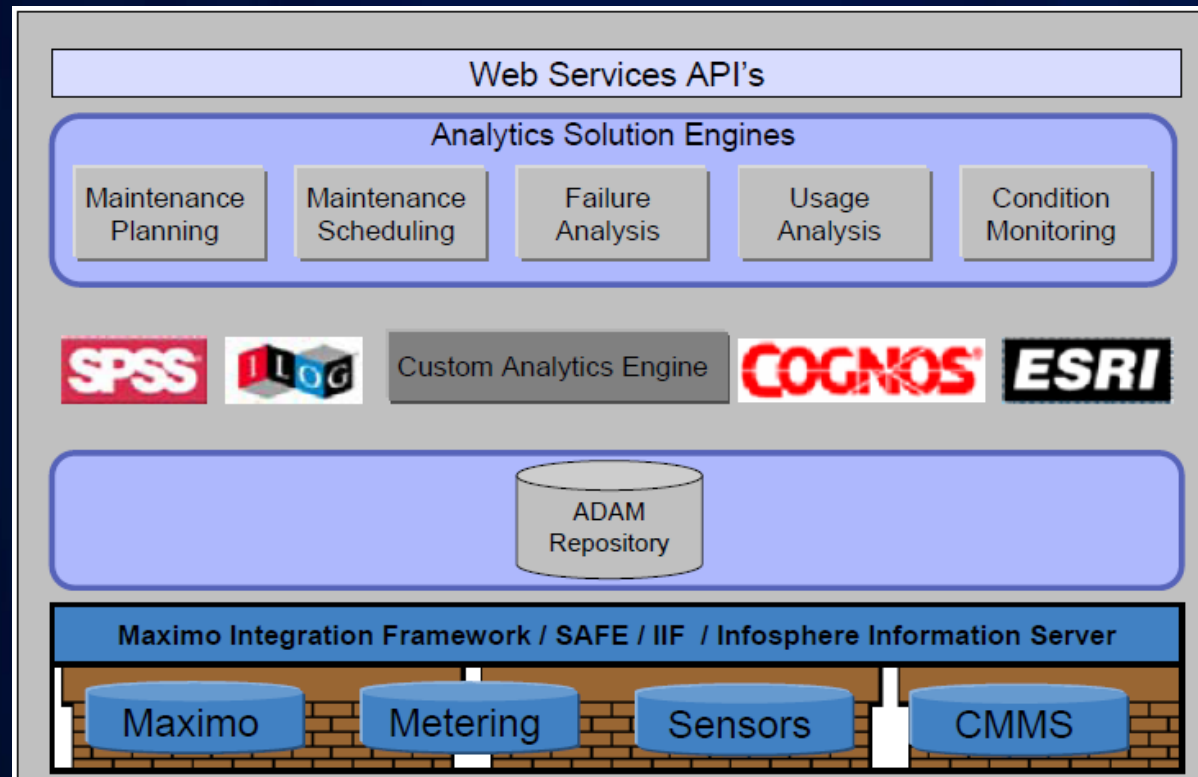


# Business Benefit of Geo Enabled Business Process



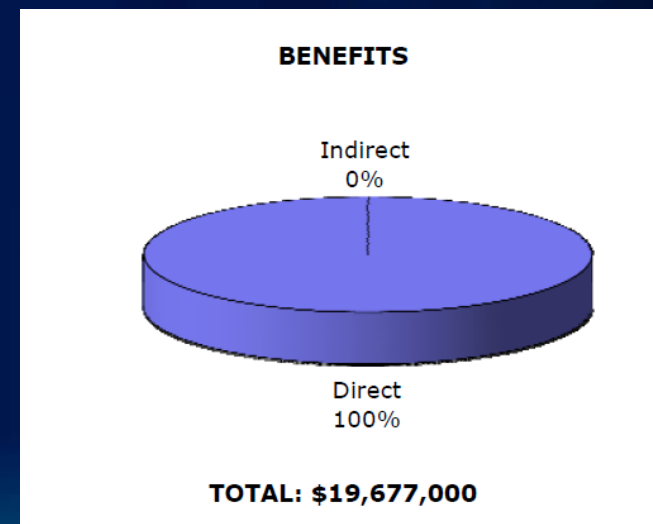
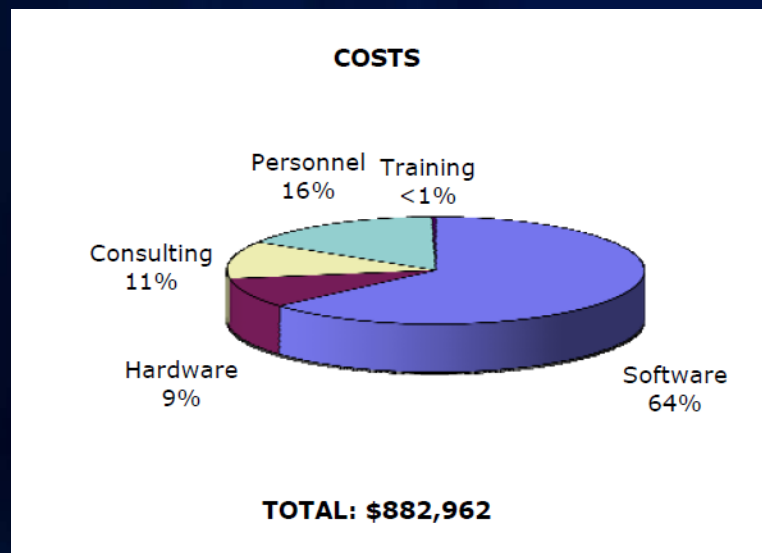


# DC Water Components



## DC Water

- ROI: 629%
- Payback: 2 months
- Average annual benefit: \$6,559,000



## DC Water

- **Reduced labour costs**
  - work assignments and truck rolls.
  - less reliant on contract workers and reduced the annual cost of these workers by \$1.8 million.
- **Avoided call centre costs.**
  - Despite growth in the levels of commercial and residential activity
  - Preventative maintenance and better incident management have reduced call volumes
  - Avoid adding five customer service representatives.



## DC Water

- **Reduced fuel costs.**
  - By reducing the annual number of truck rolls completed,
  - reduced by 20 percent.
- **Recaptured revenues by \$3.8 million in revenues.**
  - Revenue loss from defective meters reduced
  - Billing of locations where there is unmetered water usage.

# Summary

## Top Seven...

1. **GIS is now in the DNA of Maximo and asset management business process**
2. **Designed for non GIS users**
3. **Provides a Integration gateway to Maximo for Professional GIS**
4. **Increase Speed of Deployment**
5. **Greater Agility to meet changing business needs**
6. **Better Business Decisions**
7. **Reduced Costs and Higher Value**

# Questions...

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