

# Southern Company's GIS Asset Management Proof of Concept

*Using GIS to Integrate Disparate Systems for Asset  
Management*

*July 25, 2012*

# Asset Management – Proof of Concept

## Today's Topics:

- Southern Company overview
- The Proof of Concept
  - Project Scope & Objectives
- System Architecture
- Integration overview
- Lessons Learned
- Next Steps



# Southern Company

Four operating companies  
Headquartered in Atlanta, Georgia

**4.4 million** electric customers

Distribution service in 120,000 square miles in 4-state region

ArcFM, Designer, Core ArcGIS 9.3

***500 GIS Editors, 1650 Users, 1000 web viewer users***



# Key Drivers

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*Southern Company has more than 50 disparate applications to manage the millions of distribution assets.*

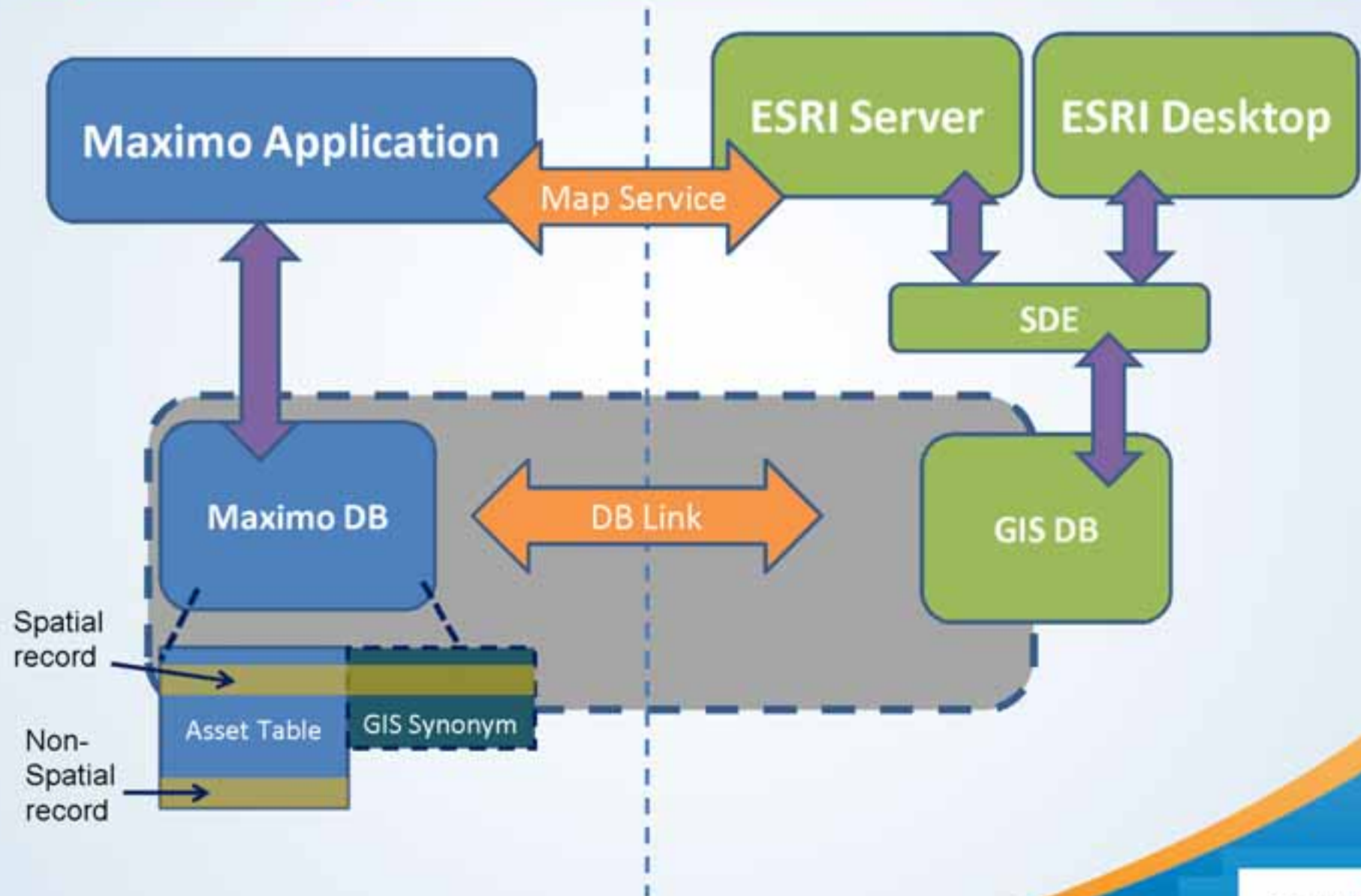


Conduct a Proof of Concept (POC) to gain an understanding of how **ESRI ArcGIS** integrated with **IBM Maximo** can centralize the full lifecycle of Asset Management functions and meet the requirements of Southern Company Distribution.

# System Architecture

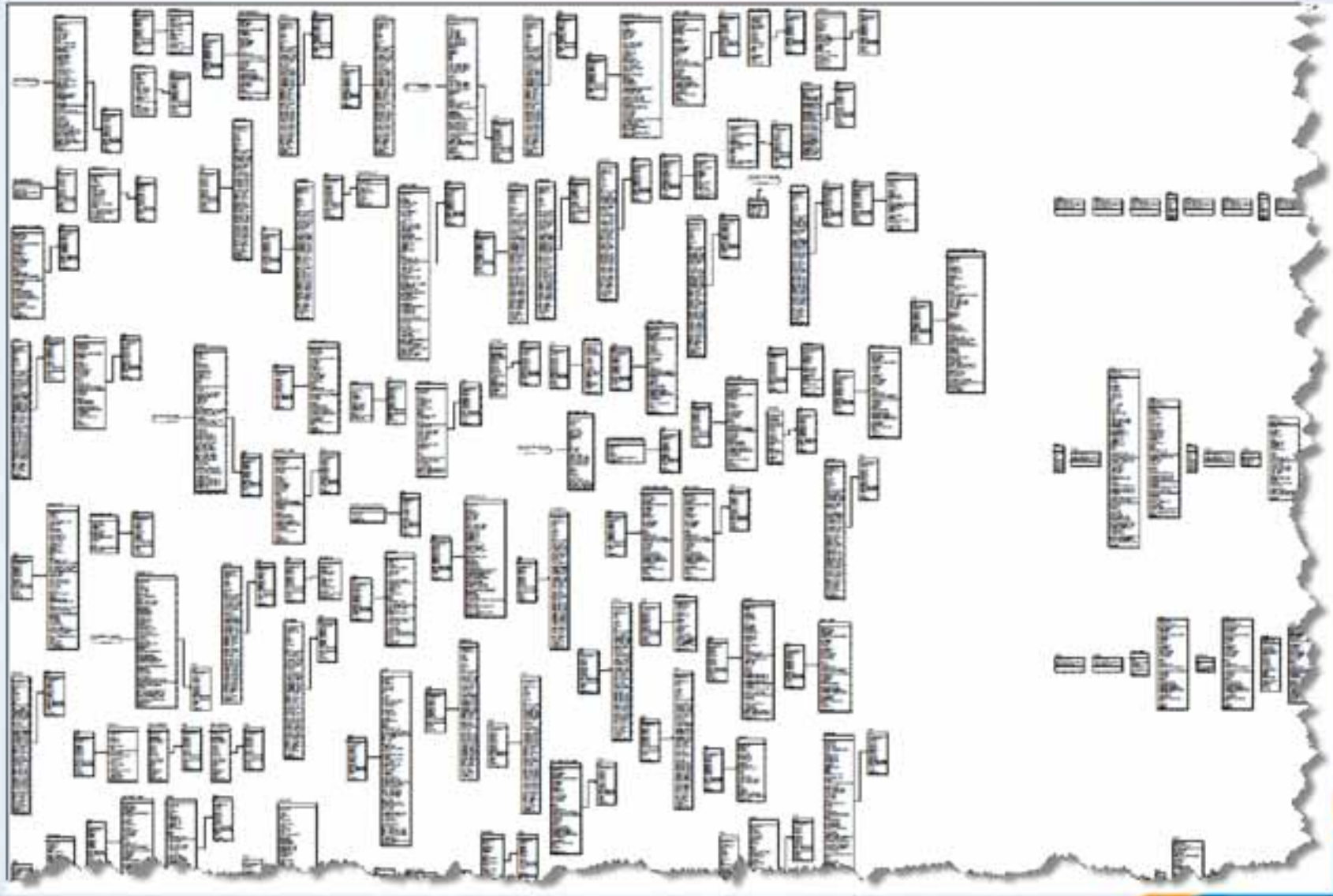
The background is a solid blue color with a faint, repeating pattern of light blue hexagons. In the bottom right corner, there is a decorative orange curved line that sweeps upwards and to the left.

# Spatial High Level Architecture





# Southern GIS ERD



# IBM Maximo EAM

Work Order Tracking Bulletins (0)

Find:  Select Action # Save Filter Refresh

List Work Order Plans Assignments Related Records Actuals Safety Plan Log Failure Reporting

Advanced Search Save Query Bookmarks

Work Orders Filter 1 - 20 of 35

Work Order	Description	Location	Asset	Status
<input type="text"/>	>>	<input type="text"/>	>>	<input type="text"/>
1207	Primary Conductor Inspection		5720	WAPPR
1245	hydrant repair		10234	WAPPR
1246	test	CAMERA4	CAM04	WAPPR
1216	Transformer Test		10102	COMP
1210	Light Repair		2273	COMP
1217	pm route for switch			WAPPR
1218			9744	WAPPR
1255	Camera #4 Insp	CAMERA4	CAM04	WAPPR
1260				WAPPR
1261				WAPPR



# Selecting Values with Maps

List	Work Order	Plans	Assignments	Related Records	Actuals	Safety
Work Order:	1207			Primary Conductor Inspection		
Location:		>>				
Asset:	5720	>>		Three Phase Overhea		
Configuration Item:						
Parent WO:						
Classification:					>>	
Class Description:						
Launch Entry Name:						
Feature Class:	PLYWOS_S					

- Select Value
- Open Drilldown
- Classification
- Attributes
- Go To
- Open Map
- View Contracts
- View Work Details
- View Asset Details

# Navigating and Visualizing EAM with Geography

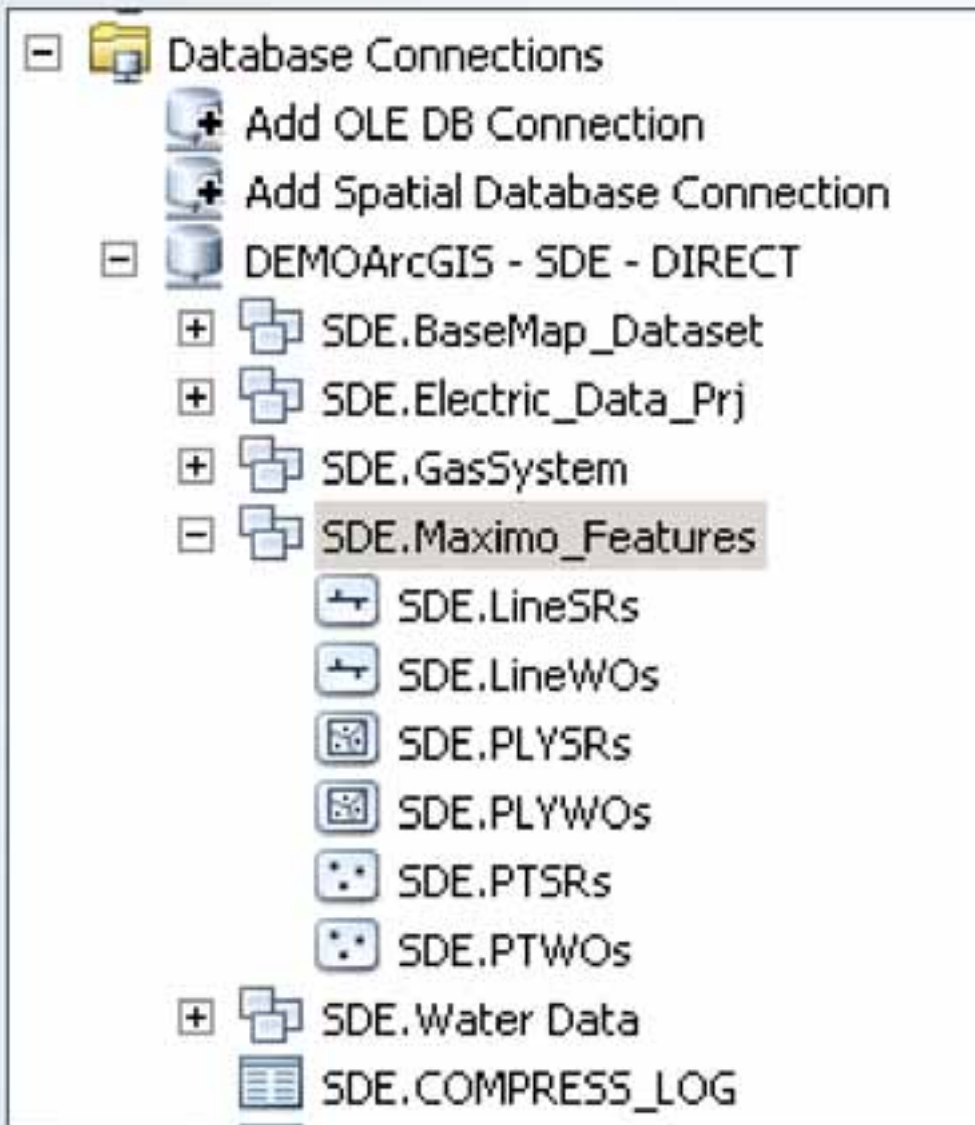
List Work Order Plans Assignments Related Records Actuals Safety Plan Log Failure Reporting Specifications Map

Work Order: 1207 Primary Conductor Inspection Status: WAPPR Feature Class: PLYWOS\_S

bing Aerial Aerial with labels Roads

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# EAM Layers



- Use Line Work Orders to calculate length of linear assets replaced. Material costs.
- Polygon work shows regions affected. Ex. Vegetation management and growth analysis.
- Point work can be aggregated for cluster analysis.



# Rethinking our Roles

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- Rethinking **Asset Management** as *Spatial Asset Management*
  - The Map becomes the central access point over the List Tab
  - Geography becomes a new dimension to analyze and feedback into maintenance decisions.
- Rethinking **GIS** as an **Enterprise Service**
  - Provide GIS capabilities that help other IT systems solve their problems.
  - Extend Geographic thinking to other enterprise departments.

# Technical Next Steps

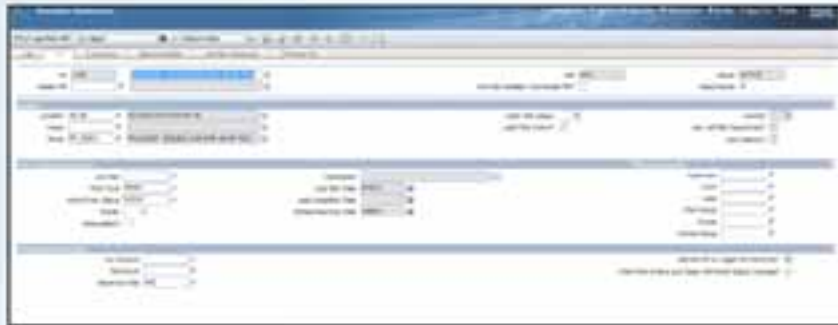
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- ArcGIS 10.1 / Maximo 7.5
- Build **GeoProcess Services** in to Maximo Map Tab.  
***Network Trace.***
- Usability tweaks – ex. Zoom to Feeder.
  
- Exploit **Telvent** capabilities.
  - As Built Design integration.
  
- Integrate system with **Spatial BI solutions**, such as the **ESRI Maps for IBM Cognos** adaptor.

# Integration Overview



# PM Examples - Poles

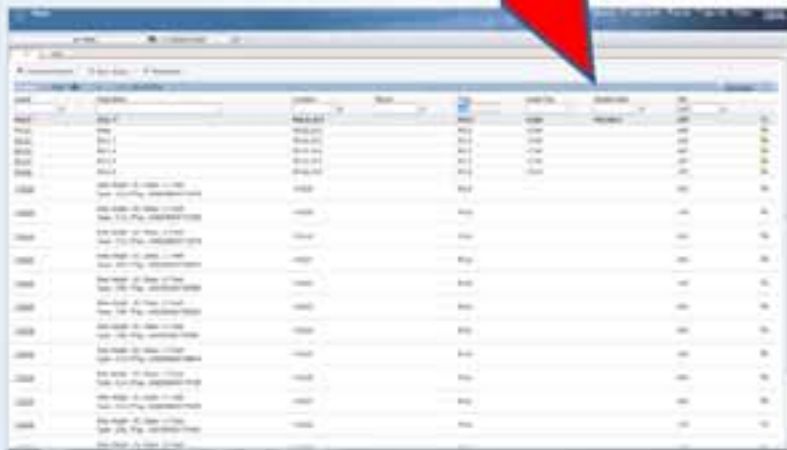


Time to perform



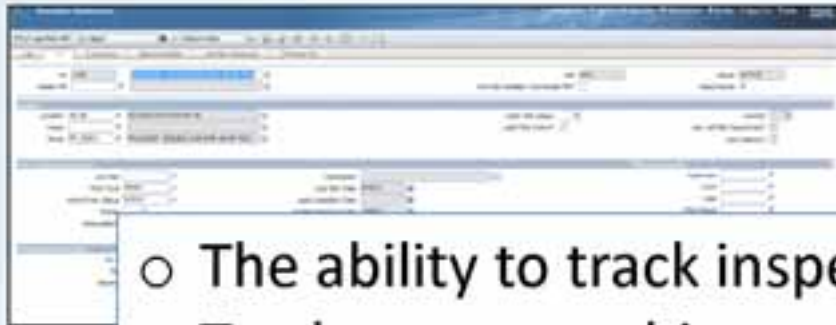
Identify the assets

Execute PM

A screenshot of a software interface showing a detailed list of assets. The interface has a header with various filters and a main table with multiple columns containing data.

Associate with PM

# PM Examples - Poles



Time to perform



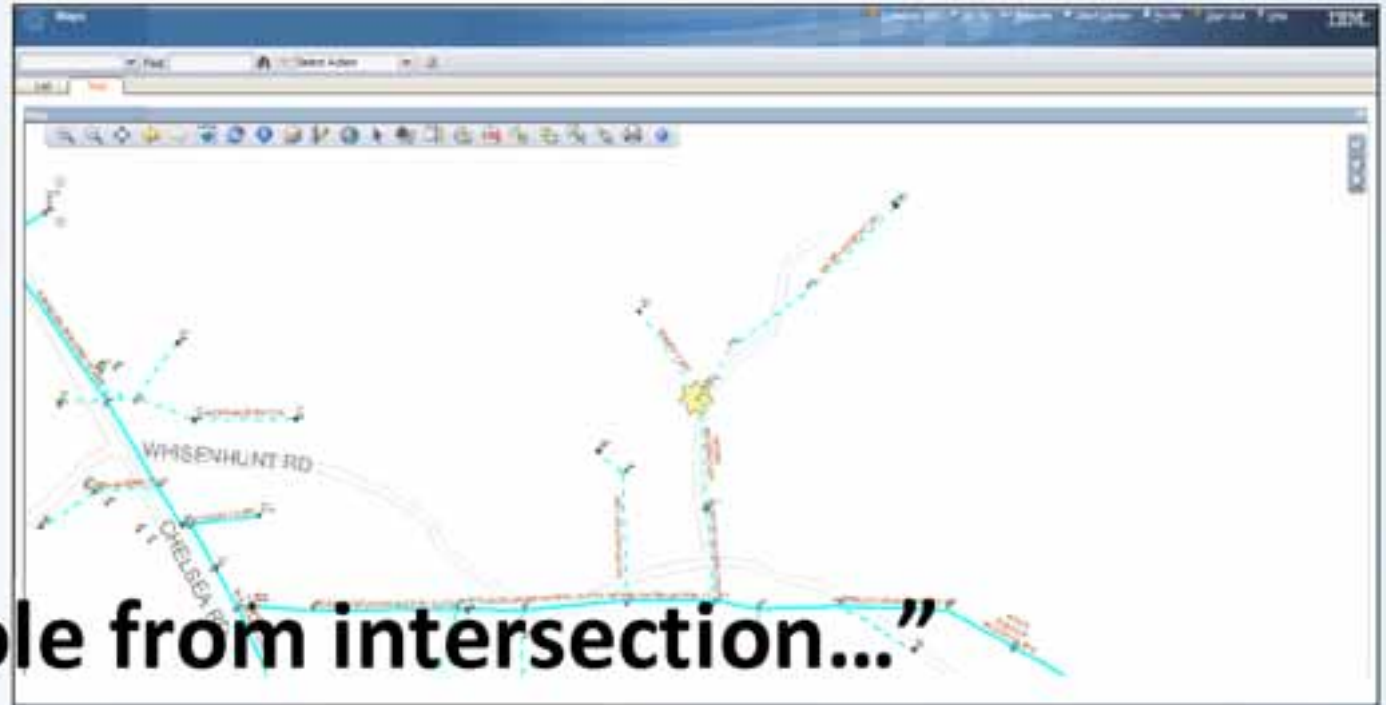
Identify the assets

- The ability to track inspection and remediation in Maximo
- Track treatment history over time
- Capture the cost of Contractor for each pole
- Cost of contractor units over time
- Estimated versus actual cost tracking
- Referential treatment location for analysis
- Warranty tracking

A screenshot of a software interface showing a detailed view of an asset or pole. The interface includes a table with columns for various attributes and a list of data rows.

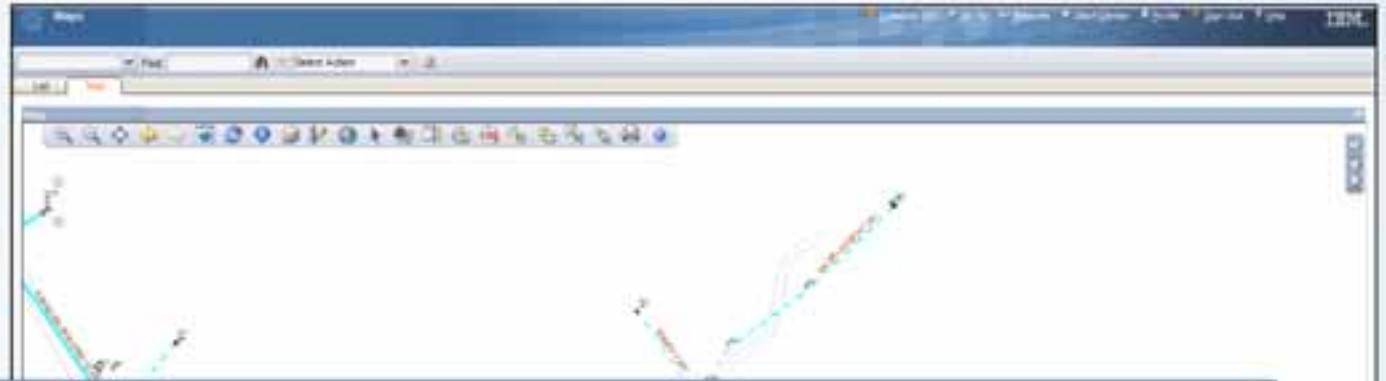
Associate with PM

# CM Examples



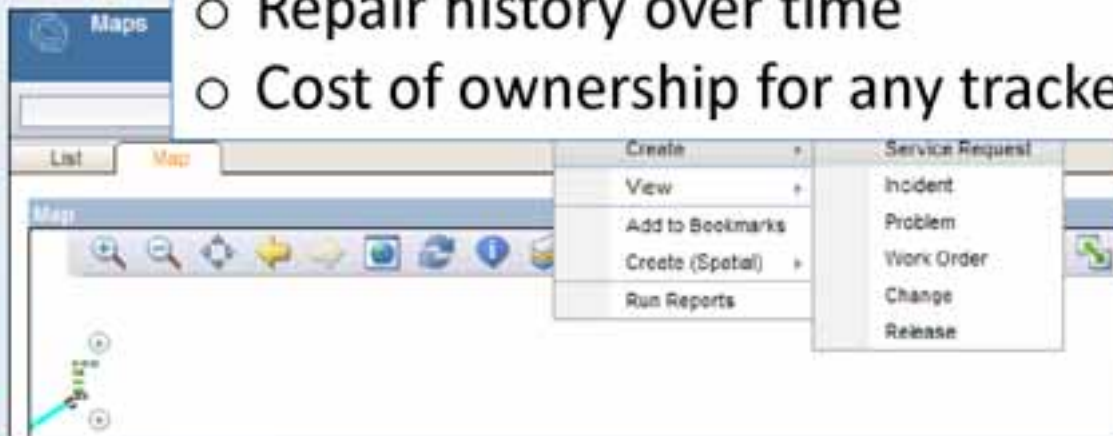


# CM Examples



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- Spatially create corrective action against an asset record
- Visibility for all reducing duplication, ability to group into Work Order
- Repair history over time
- Cost of ownership for any tracked asset

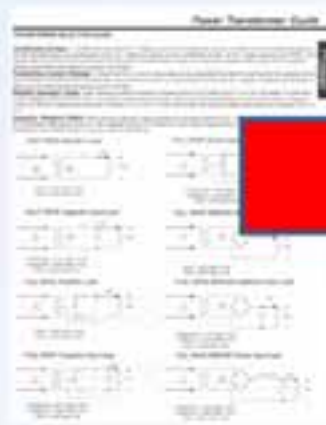


# Asset Life Cycle

PM Template



Asset Purchase

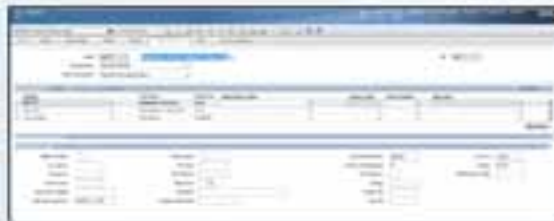


Asset Record Creation

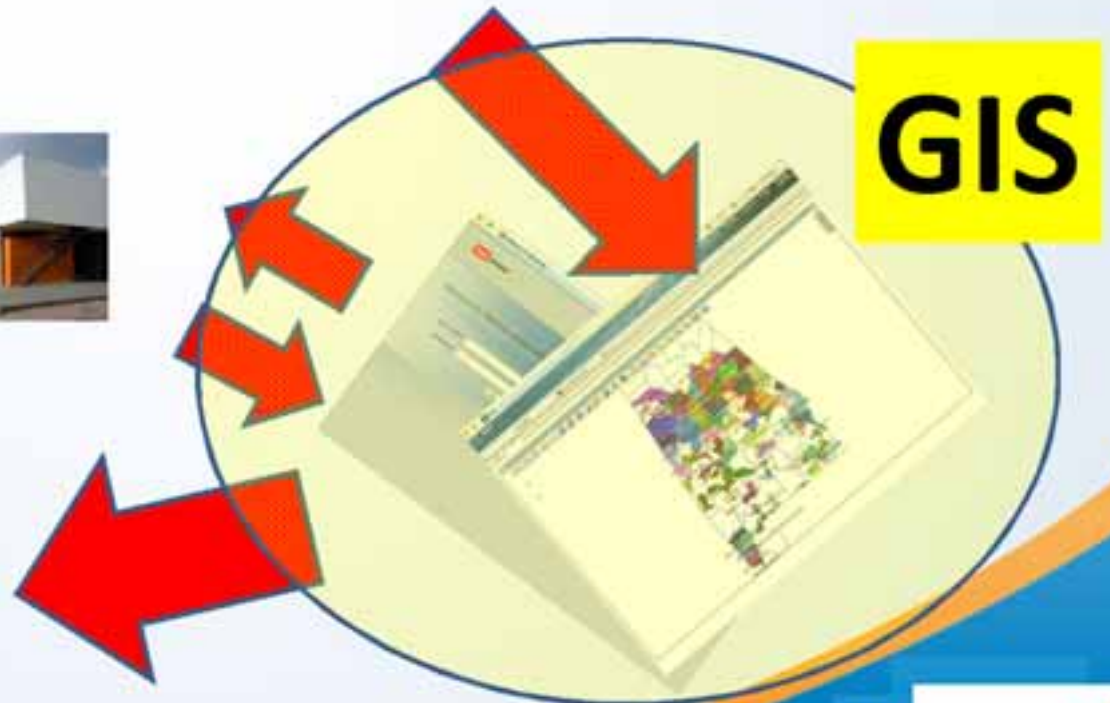
Asset Repair



Asset Record Retirement



Asset Record Archive



Asset Installation/Relocation



# Lessons Learned/Next Steps



# Lessons Learned

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- Integration of Asset Management and GIS is in the early stages of development
- Direct editing of default must be understood
  - Network features
  - GIS Business rules
- Asset information can live in GIS, Asset management or both however you can only have one owner
- Understand your asset management objectives
- Flexibility is a two edged sword
- POC is good idea that will results in savings in the long run

Questions

Answers

Discussion

Thank you for attending!

## Contact Information

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