Southern Company's GIS Asset Management Proof of Concept

Using GIS to Integrate Disparate Systems for Asset Management

July25, 2012

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Cohesive Information Solutions Inc.

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

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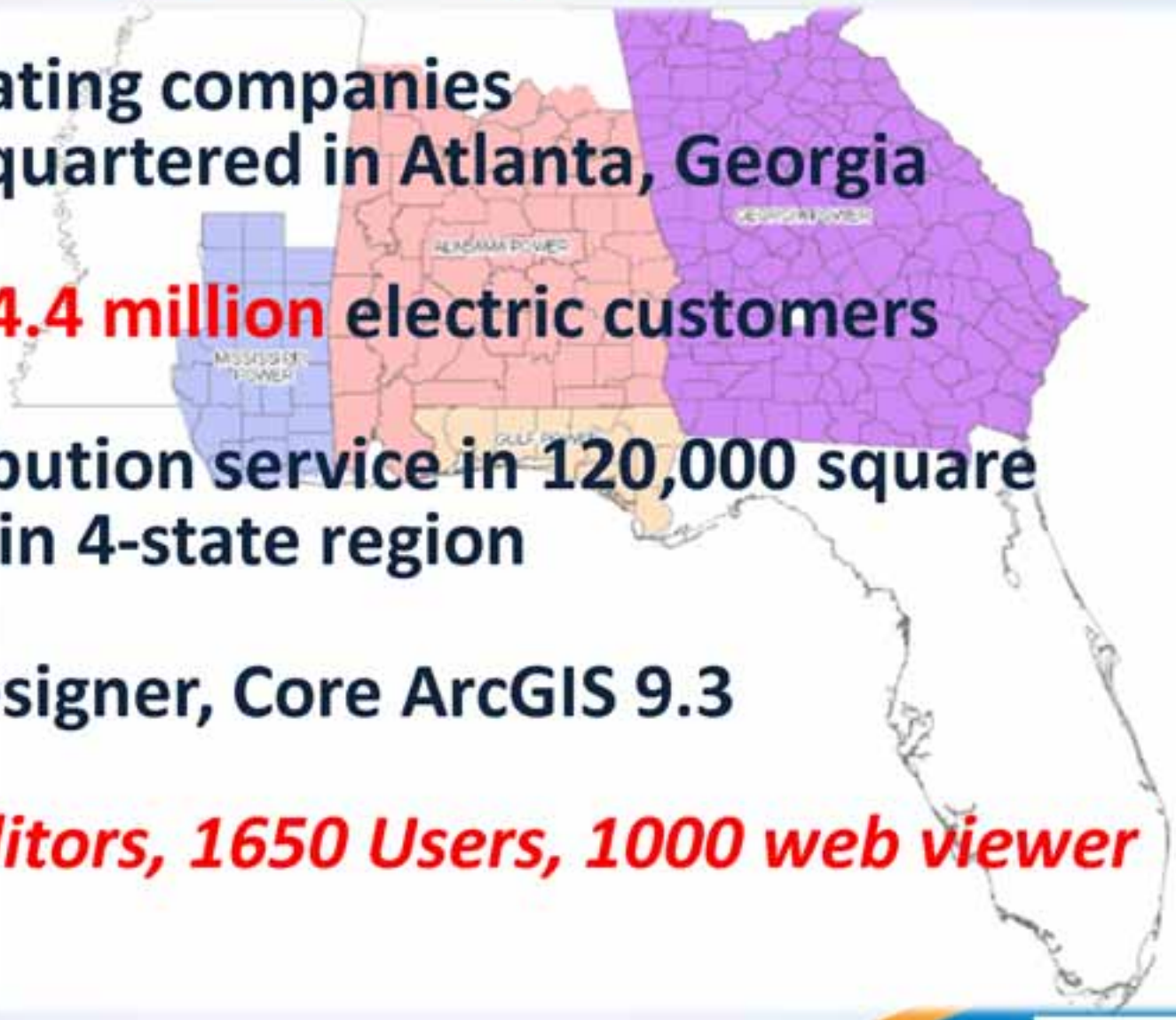
Southern Company

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

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Key Drivers

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.

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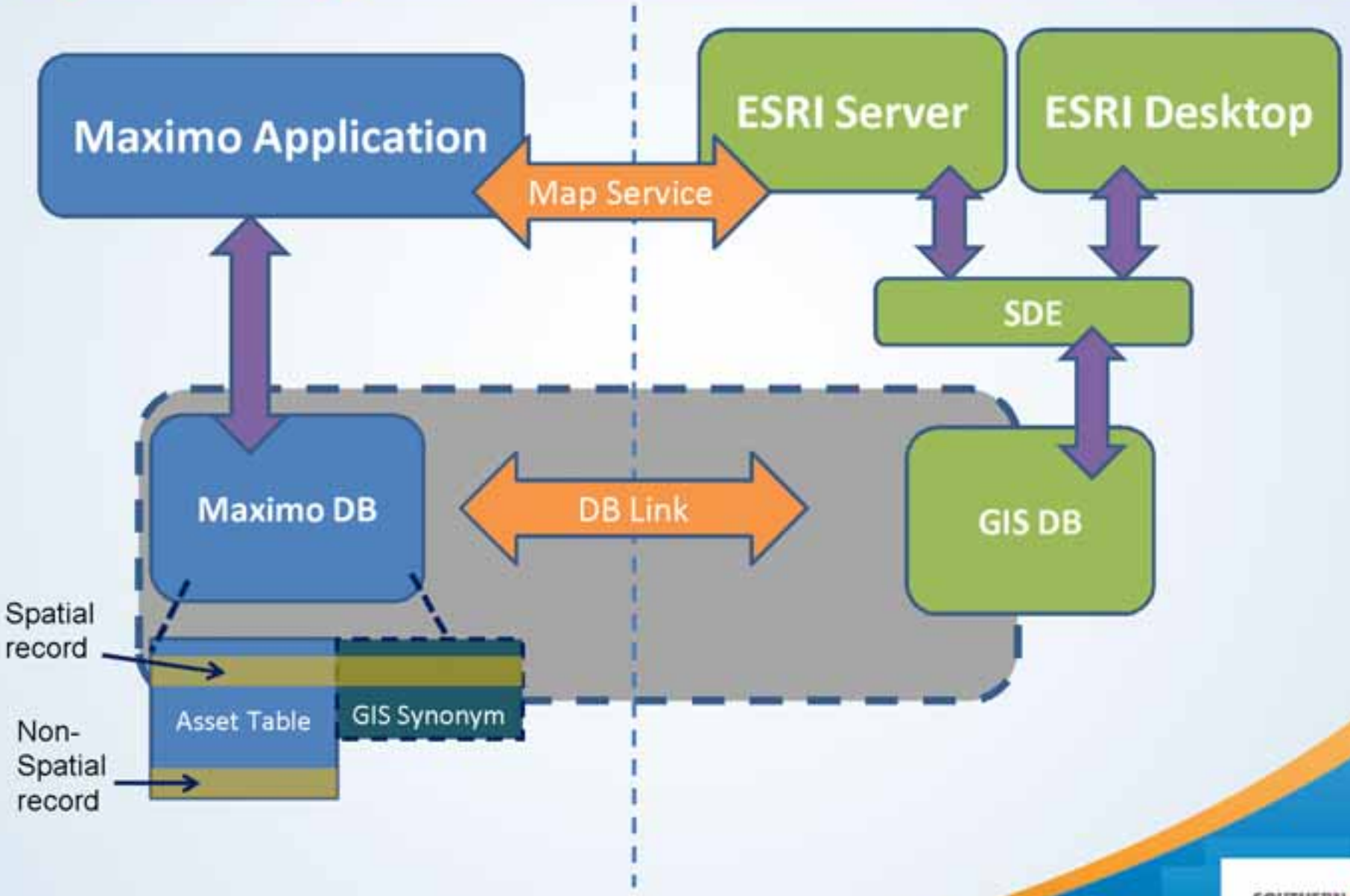
System Architecture

Spatial High Level Architecture



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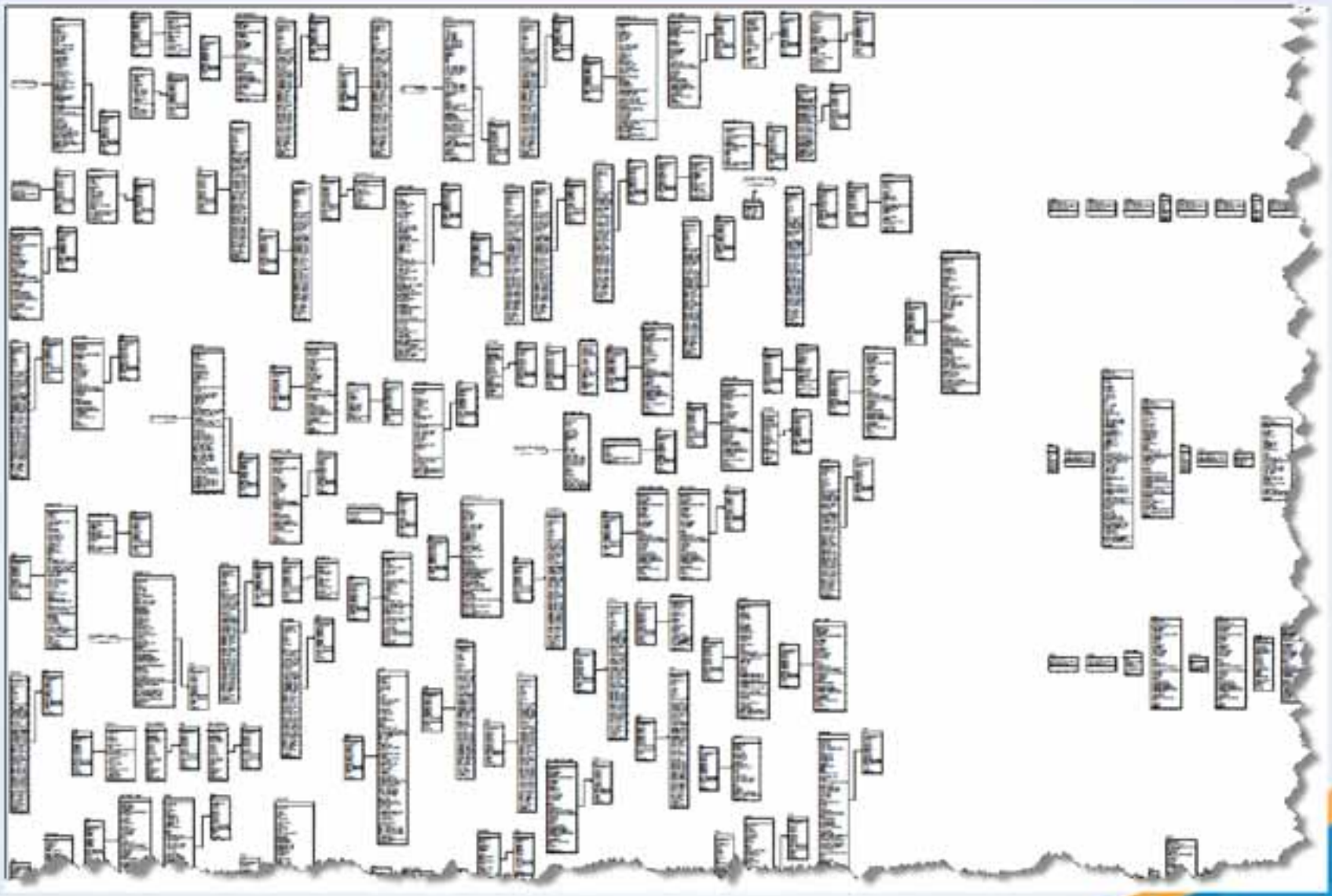
Southern GIS ERD



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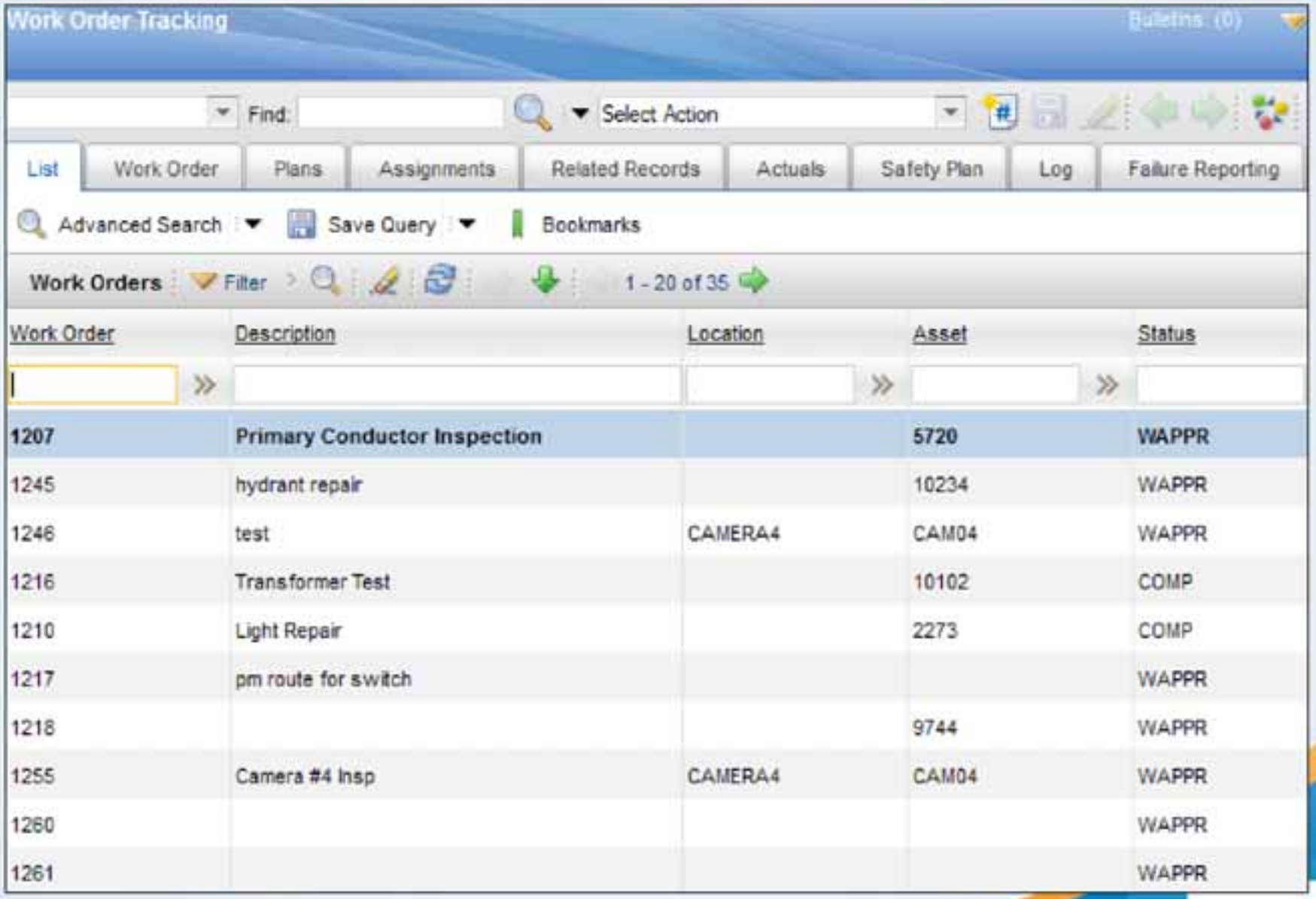
IBM Maximo EAM



Work Order	Description	Location	Asset	Status
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

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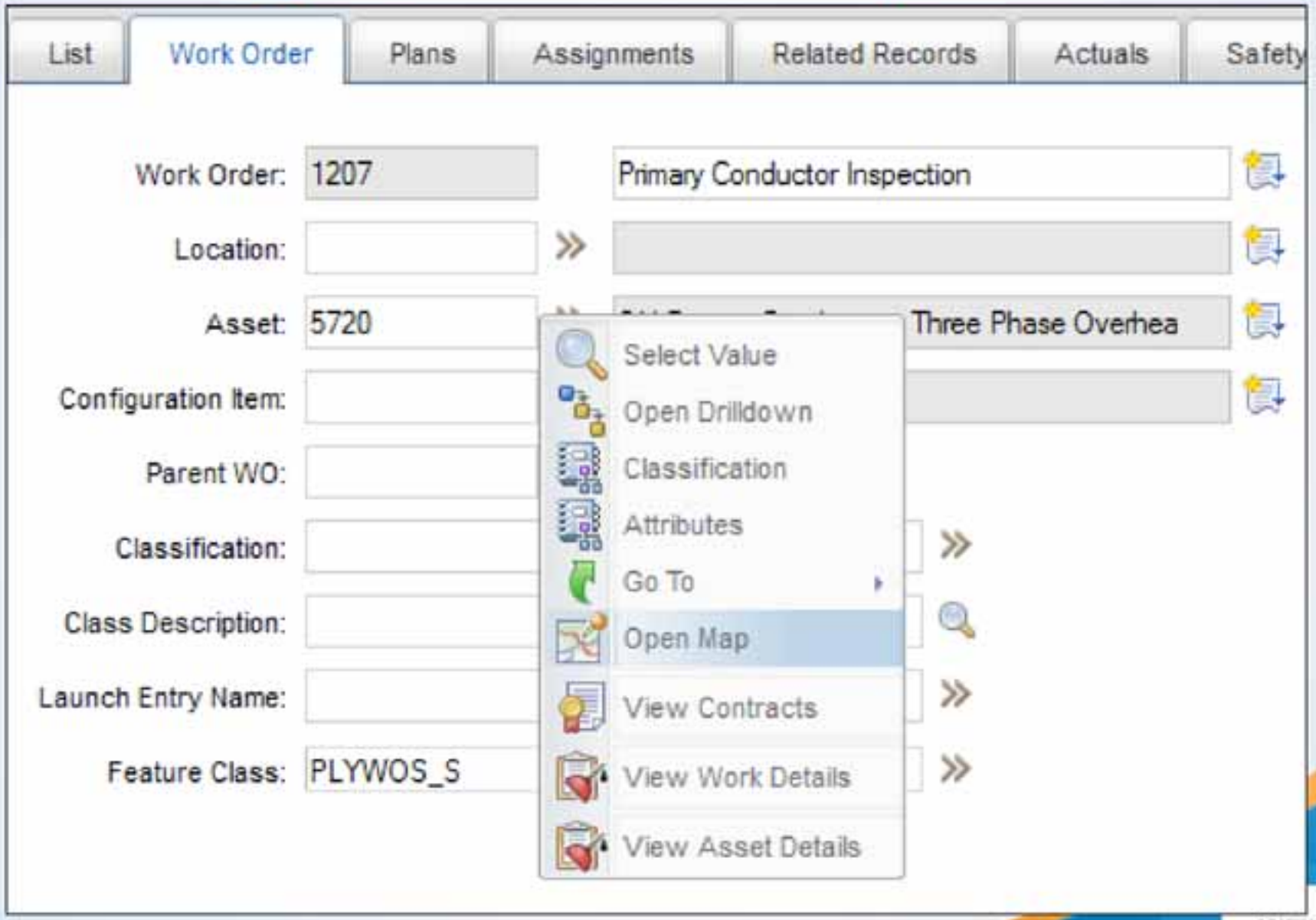
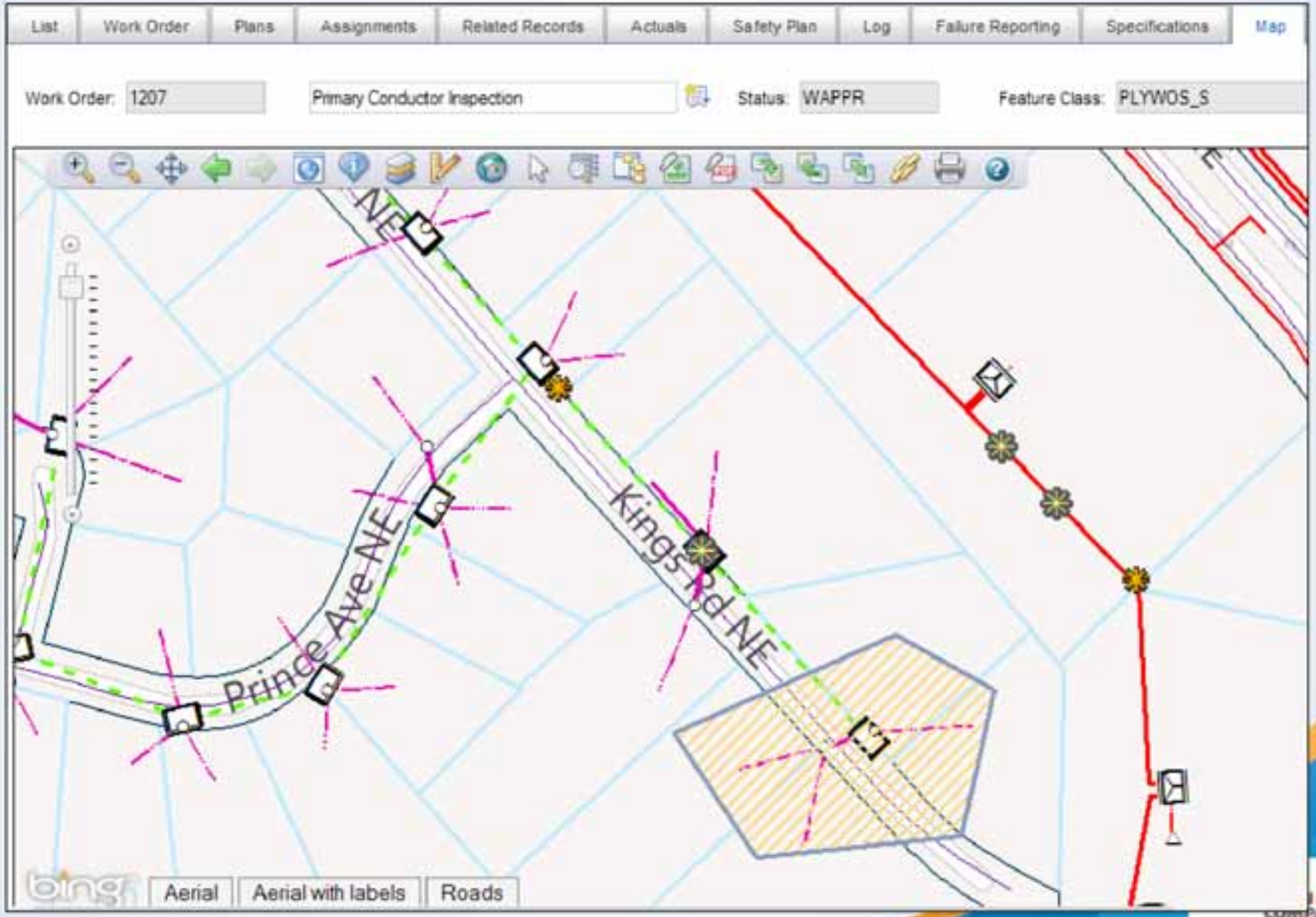
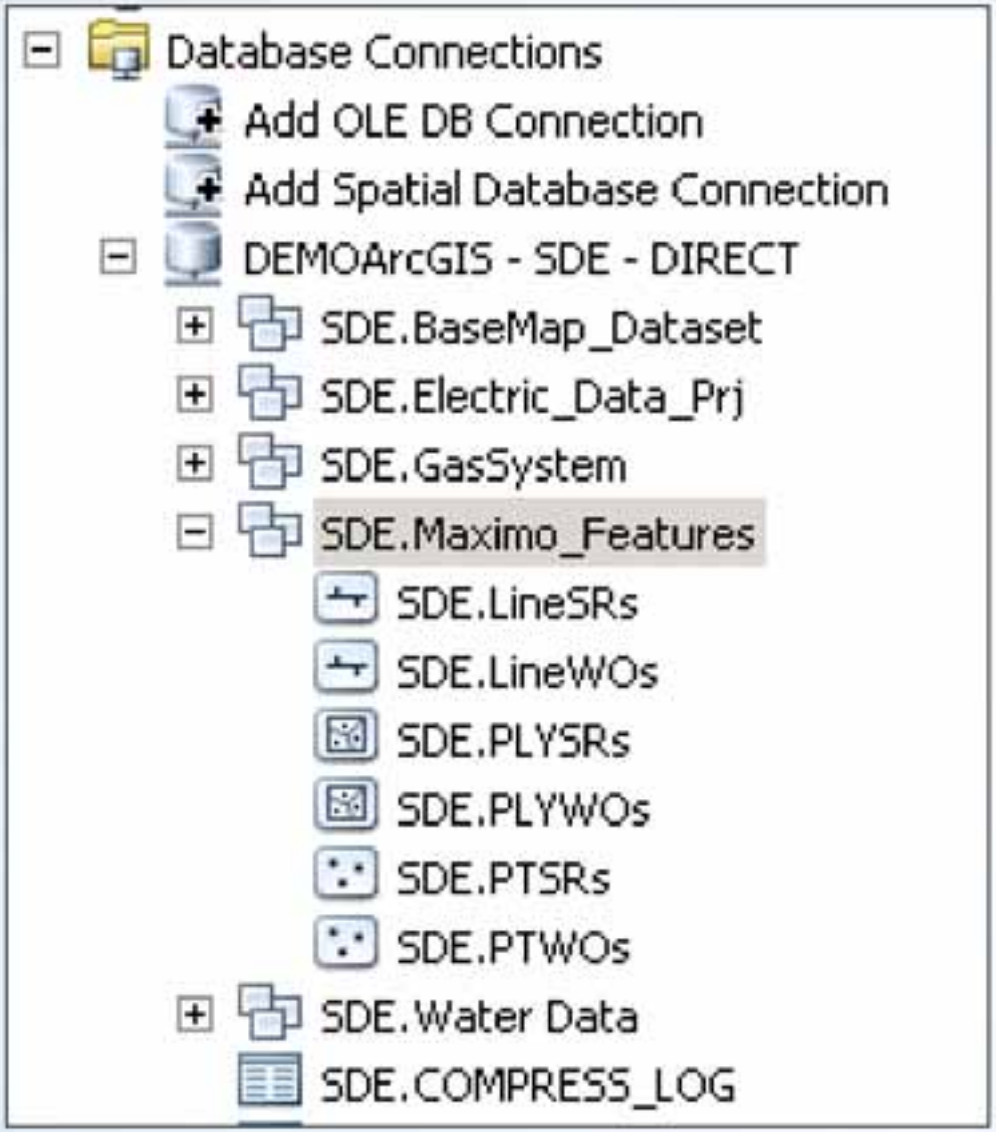
Selecting Values with Maps



Navigating and Visualizing EAM with Geography



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.

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Rethinking our Roles

- **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.

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Technical Next Steps

- 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.

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Integration Overview

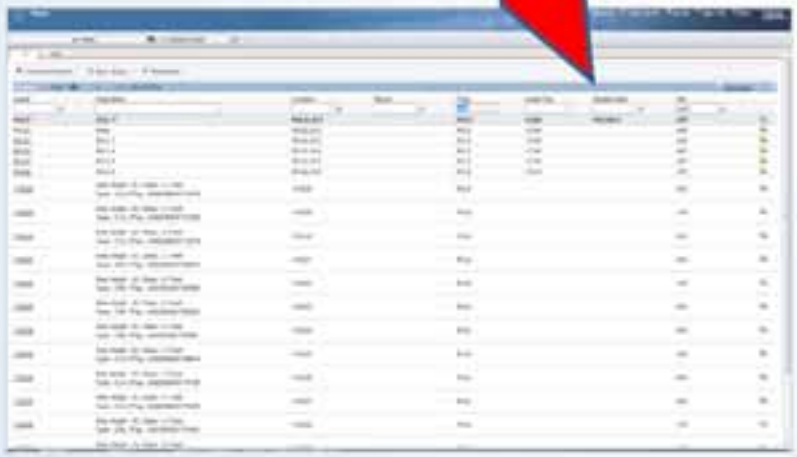
PM Examples - Poles

Time to perform

Identify the assets

Associate with PM

Execute PM



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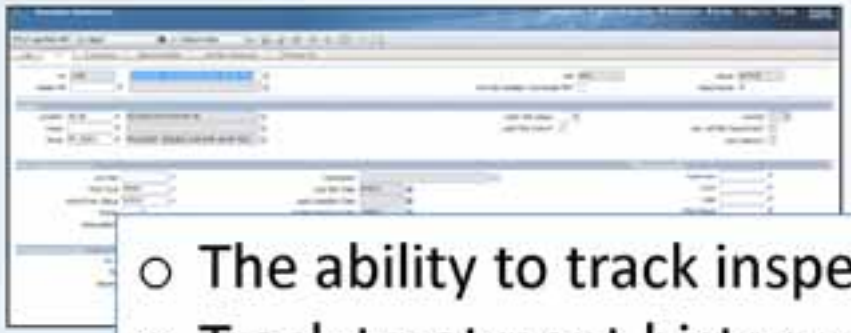
PM Examples - Poles



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

Associate with PM

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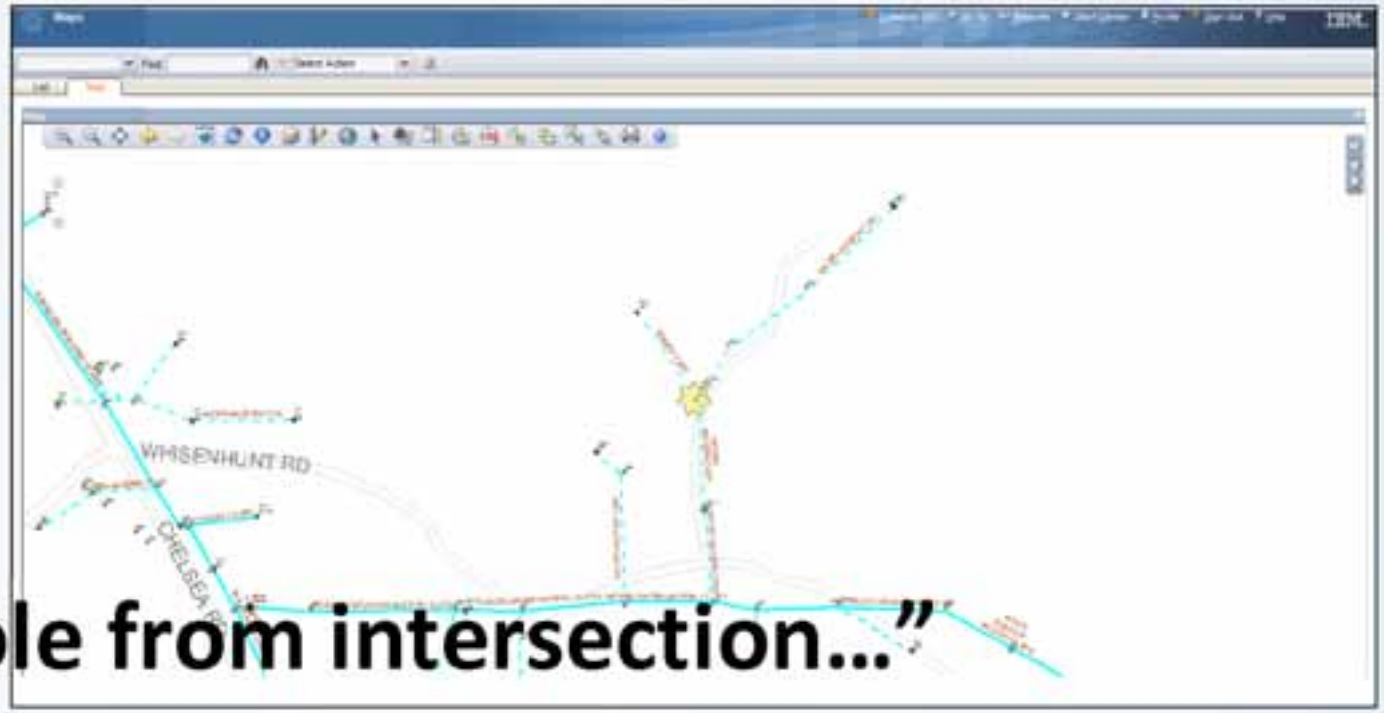
CM Examples



“Third pole from intersection…”

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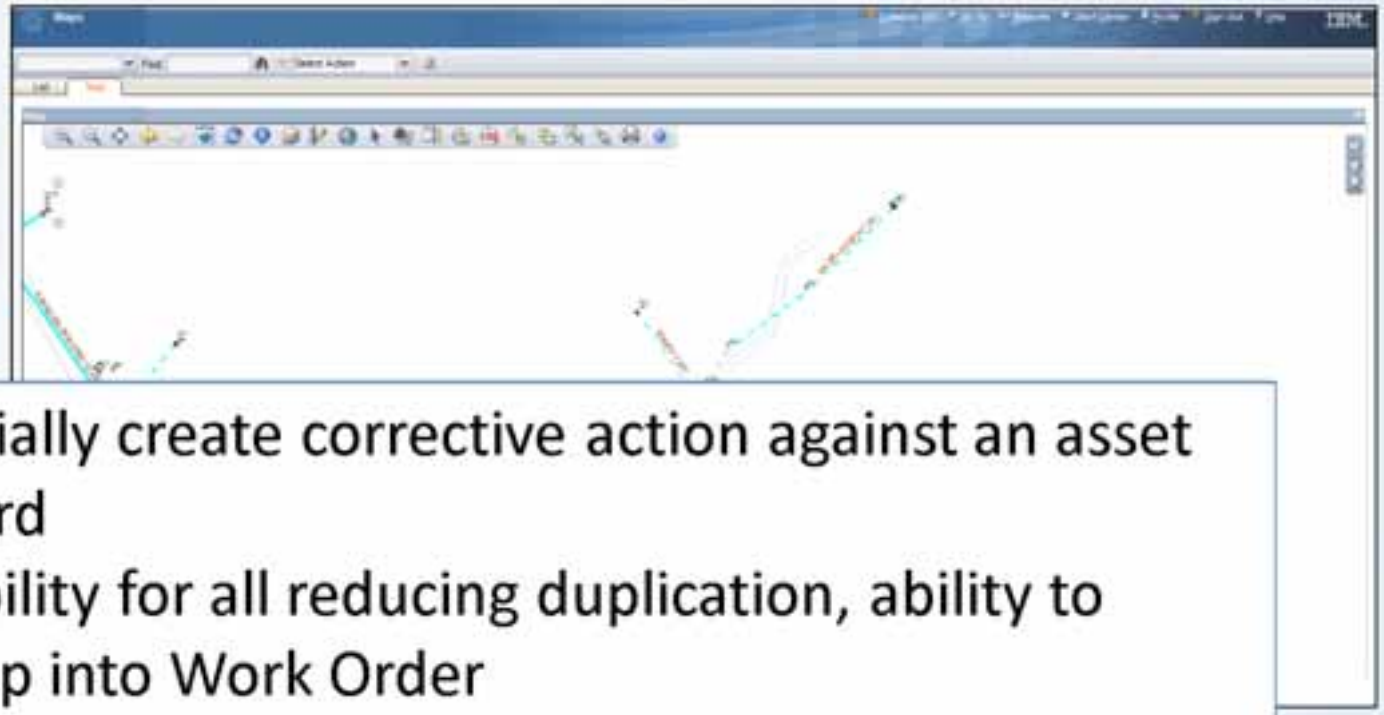
CM Examples



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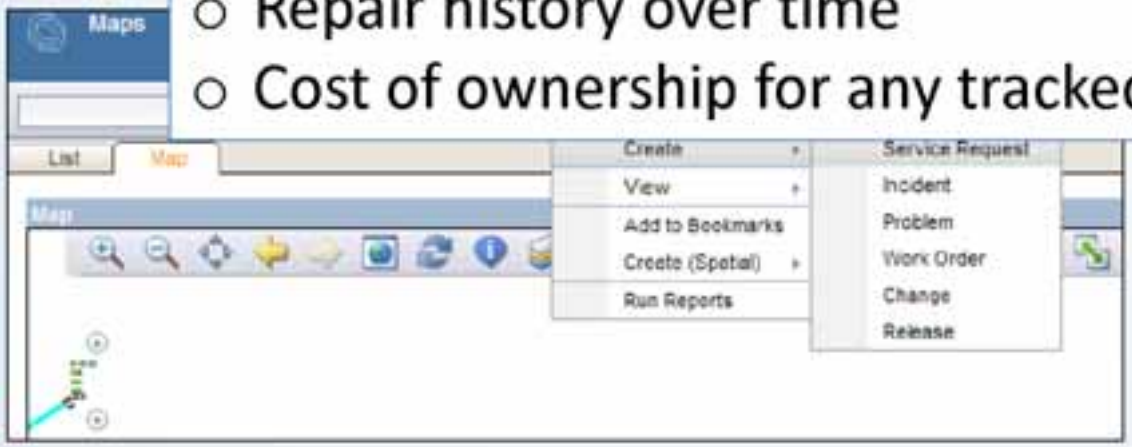
- Spatially create corrective action against an asset record
- Visibility for all reducing duplication, ability to group into Work Order
- Repair history over time
- Cost of ownership for any tracked asset



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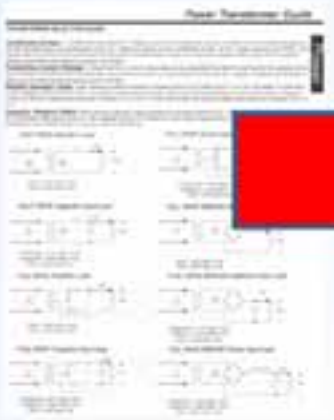
Asset Life Cycle

PM Template

Asset Purchase



Asset Record Creation

GIS

Asset Repair

Asset Record Retirement

Asset Record Archive

Asset Installation/Relocation

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Lessons Learned/Next Steps

Lessons Learned

- 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

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Questions

Answers

Discussion

Thank you for attending!

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