Maximo Spatial

Quick Question?

What percentage of enterprise systems use GIS at some point today?

95%

According to the data, a significant majority, 95% of enterprise systems, use GIS at some point today. This highlights the widespread adoption and integration of geographic information systems across various industries and organizations.

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What is GIS?

GIS (Geographic Information System) mapping is a powerful tool that helps organizations visualize and analyze spatial data. This guide provides an overview of GIS mapping and its applications in various industries.

GIS mapping involves the integration of geographic data, such as maps, satellite imagery, and location-based information, into a digital platform. This allows users to create detailed visualizations, perform spatial analysis, and make data-driven decisions.

All this in a simple way in the palm of our hands.

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GIS Vital Capabilities inside MAS

Maximo Spatial, as part of the Maximo Asset Management (MAS) suite, offers a range of powerful GIS capabilities that enhance asset management and decision-making processes. These capabilities leverage geospatial data and analytics to provide a comprehensive view of an organization's physical assets and infrastructure.

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How is GIS being used by companies?

Companies are leveraging GIS capabilities to enhance various operations and decision-making processes. GIS mapping and analytics are used for asset management, infrastructure planning, environmental monitoring, emergency response, and more. Organizations can improve operational efficiency, gain valuable insights, and make more informed, data-driven decisions by integrating geospatial data and visualizations.

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What are the benefits?

Improved Decision-Making

GIS provides a comprehensive view of an organization's assets and infrastructure, enabling more informed and data-driven decision-making. By integrating geospatial data and analytics, organizations can gain valuable insights to optimize operations, allocate resources effectively, and mitigate risks.

Enhanced Operational Efficiency

GIS mapping and visualization tools help organizations streamline their workflows, automate processes, and improve overall operational efficiency. By visualizing asset locations, maintenance schedules, and performance data, companies can identify bottlenecks, optimize routes, and reduce downtime.

Improved Asset Management

GIS provides a centralized platform for managing and monitoring an organization's physical assets, such as equipment, infrastructure, and facilities. By integrating asset data with geospatial information, companies can better track, maintain, and optimize the performance of their assets.

Increased Collaboration and Visibility

GIS enables cross-functional collaboration and enhances visibility across an organization. By providing a shared, interactive platform for visualizing and analyzing spatial data, GIS fosters better communication, coordination, and decision-making among teams and departments.

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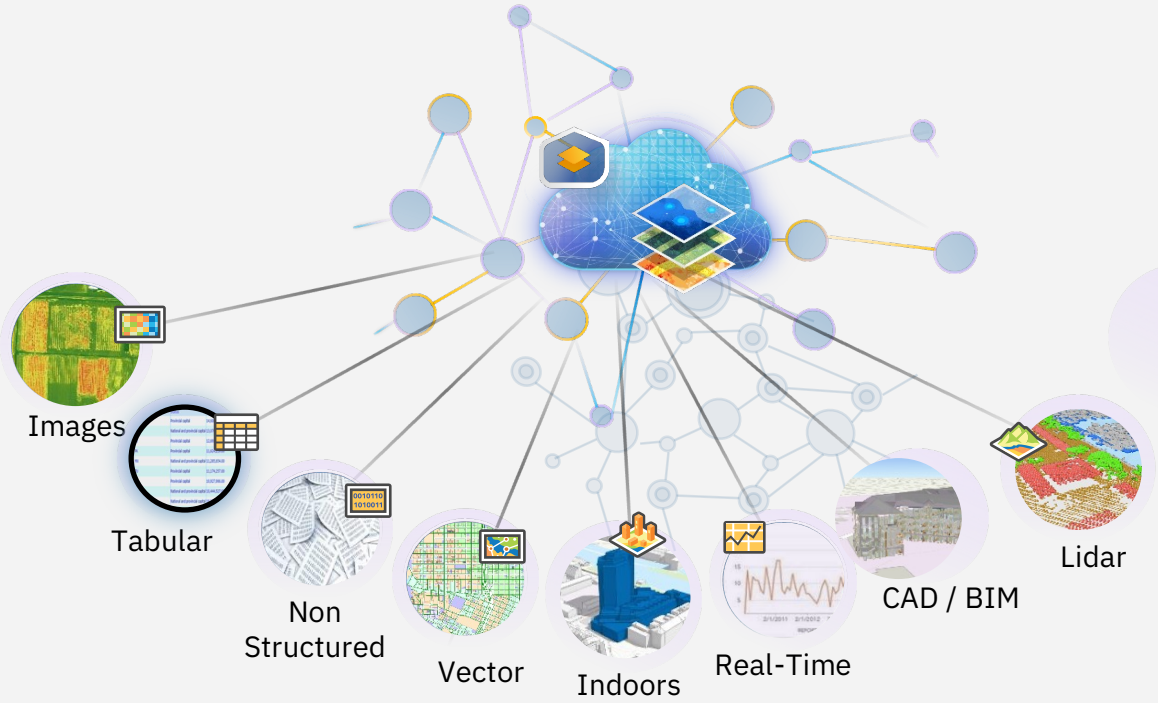
Spatial

Integrates many types of data



Creating a common language

GIS provides a common language and platform for integrating diverse data types, enabling organizations to understand their assets, operations, and environments comprehensively.

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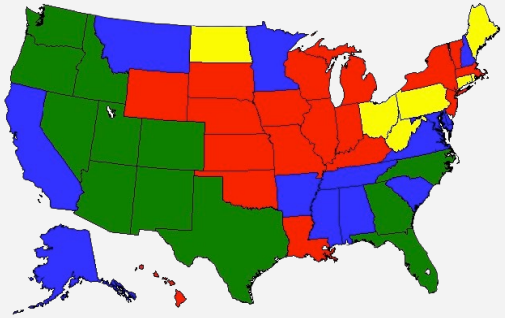
Quick Question

Which of the options below is easier to analyze?

Spreadsheet

vs.



Map

Maximo Spatial

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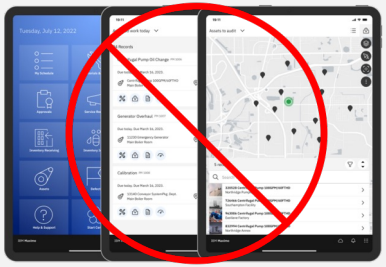
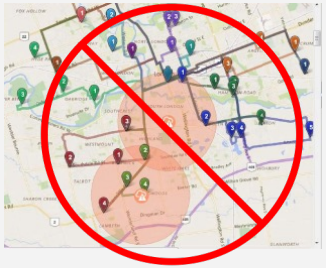
Customers Challenges Before Spatial :

- Perform spatial analysis
- Planning and scheduling work with the ability to view spatially
- Provide asset data combined with spatial data (mainly for a mobile technician)
- Optimize maintenance routes
- Link asset health to environmental factors





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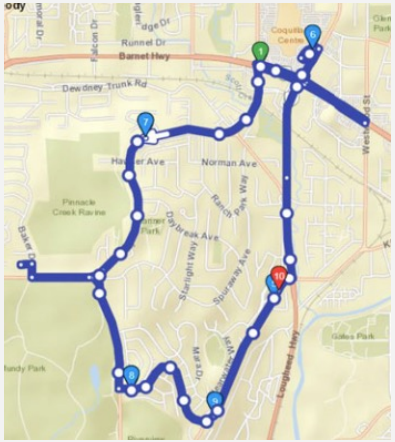
Maximo Spatial answers questions such as:

Where things are? – Sources – Customers – Sites – Staff - Problems
What's close by? – Sources – Repair crew
What impacts it? – Census – Drive times – Restrictions
How do I get there? – Routes - Redirecting – Scheduling



Desktop and Mobile versions

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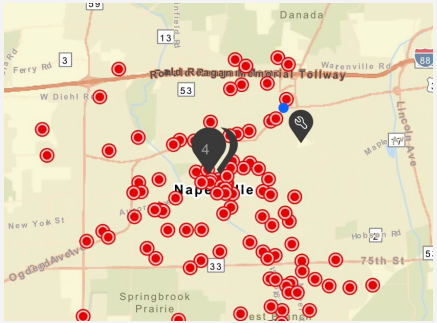
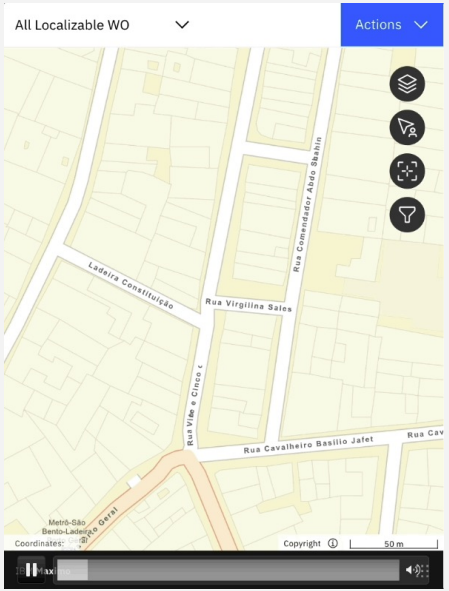
Configurable / Flexible

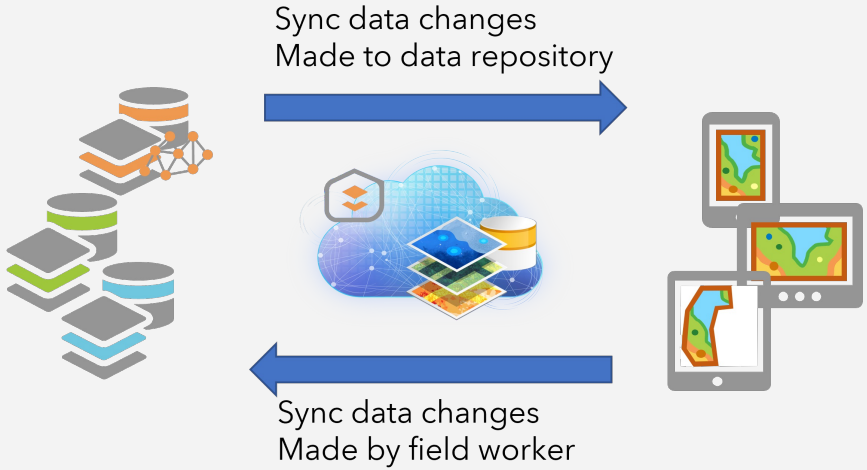
- Set the Map center
- Set initial scale
- Show scale line
- Show device position
- Clustering
- Map size (width, height)
- Show the coordinates of the mouse position
- Call function from Page Controller when the map is initialized
- Map Events

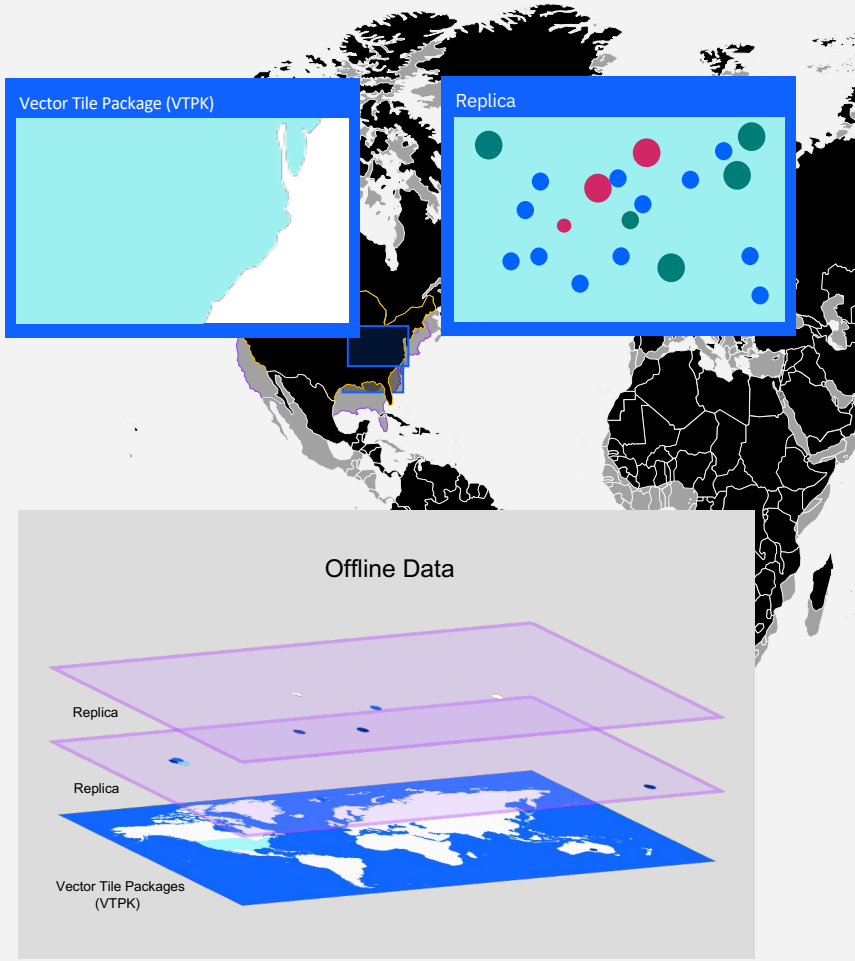




Offline Data

The replicas and Vector Tile Package (VTPK) offer offline data capabilities, enabling access to critical mapping information even in areas with limited connectivity. This empowers users to work seamlessly, regardless of network conditions.





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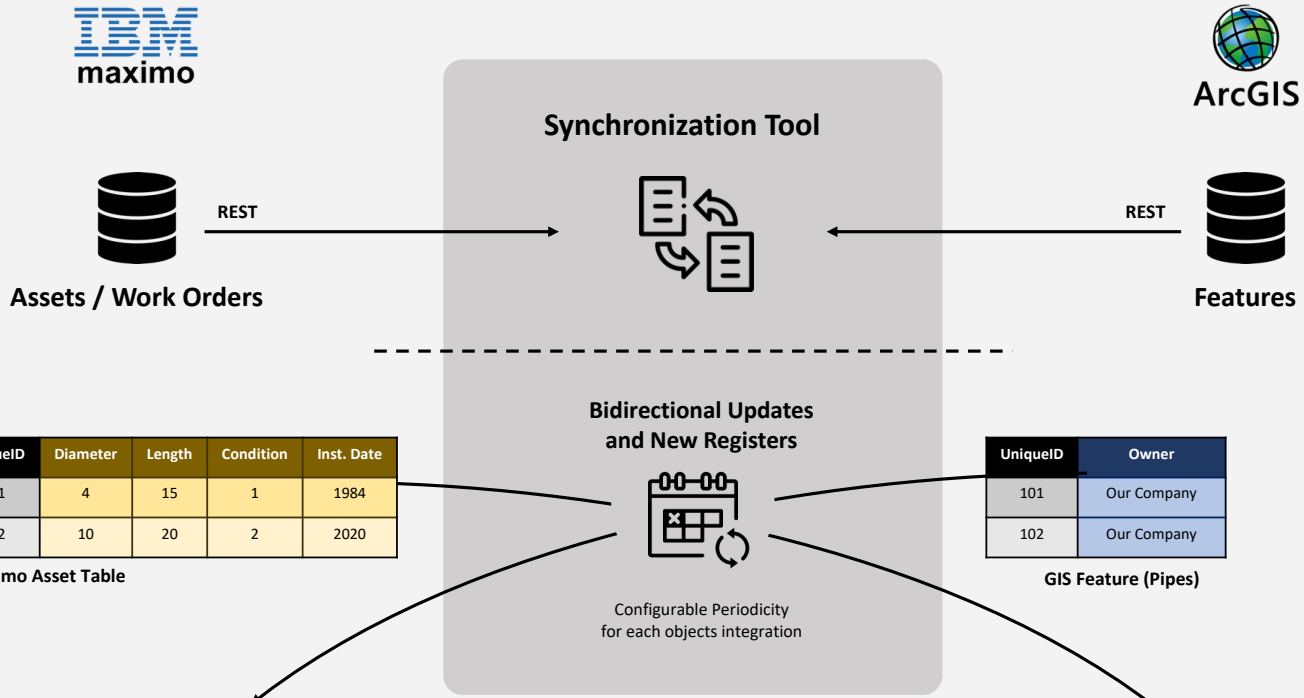
Synchronization



UniqueID	Diameter	Length	Condition	Inst. Date
101	4	15	1	1984
102	10	20	2	2020

Maximo Asset Table

UniqueID	Owner
101	Our Company
102	Our Company

GIS Feature (Pipes)

UniqueID	Diameter	Length	Condition	Inst. Date	Owner
101	4	15	1	1984	Our Company
102	10	20	2	2020	Our Company

Maximo Asset Table

UniqueID	Owner	Diameter	Length	Condition	Inst. Date
101	Our Company	4	15	1	1984
102	Our Company	10	20	2	2020

GIS Feature (Pipes)

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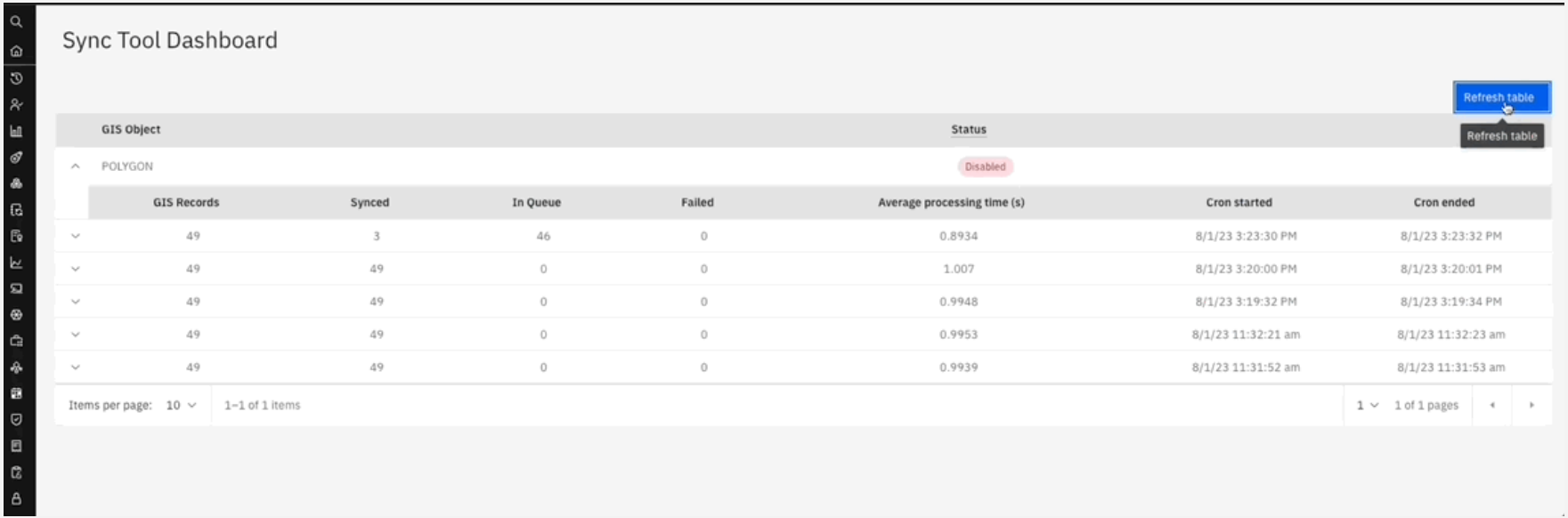
Synchronization - Operation Report



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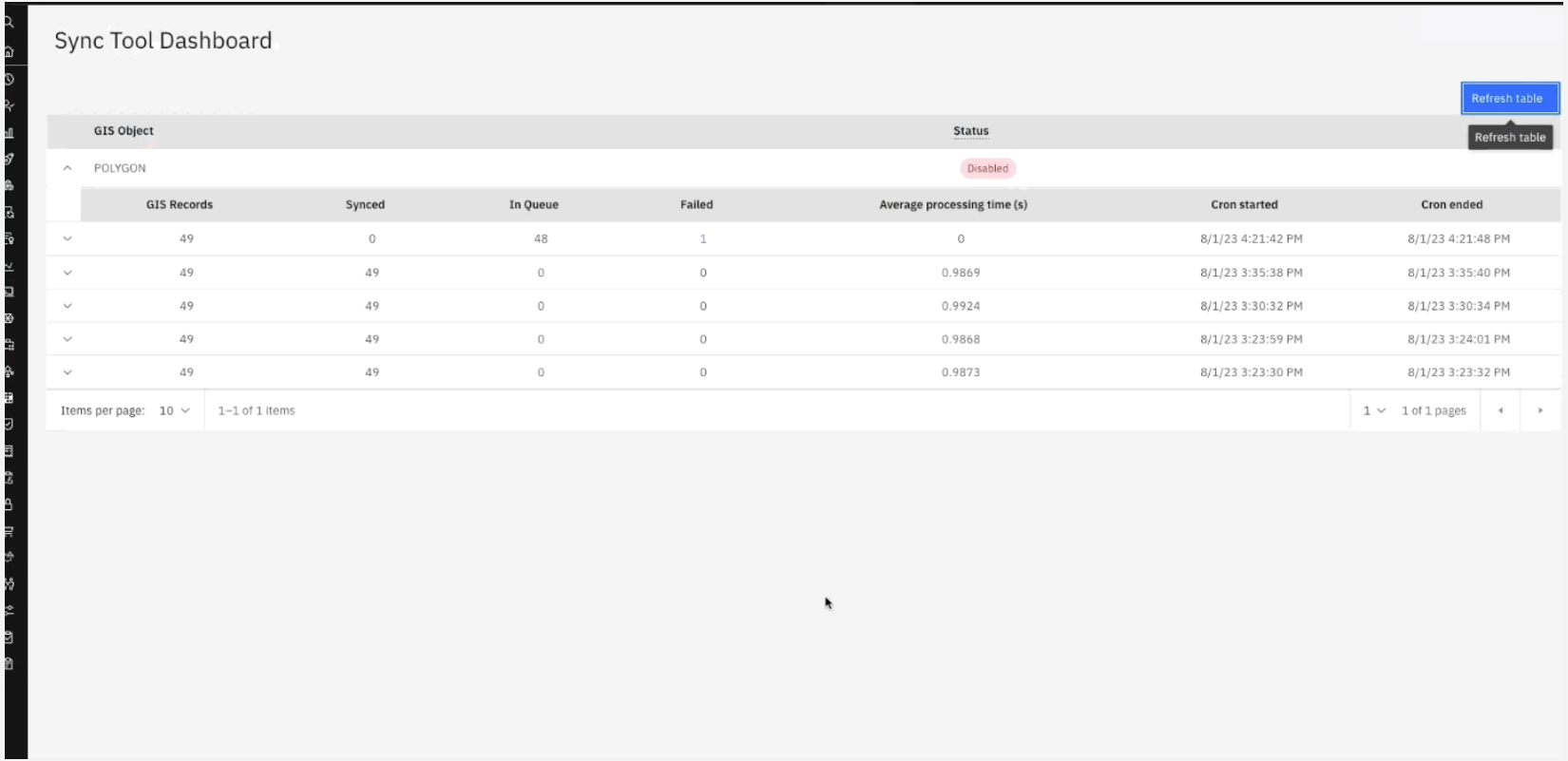
Synchronization - Operation Report



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Tools

Layers Tool

Select Visible Layers

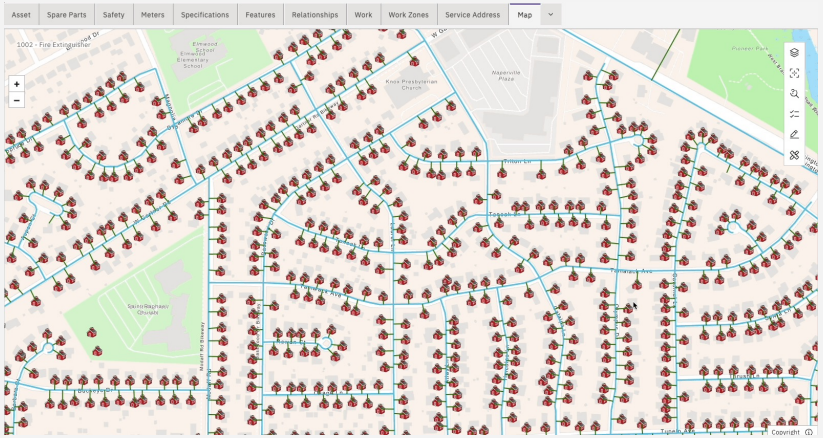
The Layers tool allows you to choose which map layers are displayed. Check the boxes next to the layers you want to see, and make sure any parent layers are also selected.

Inspect Layer Symbology

You can also view the symbology for each map layer, including the icons and labels used to represent different geographic features.

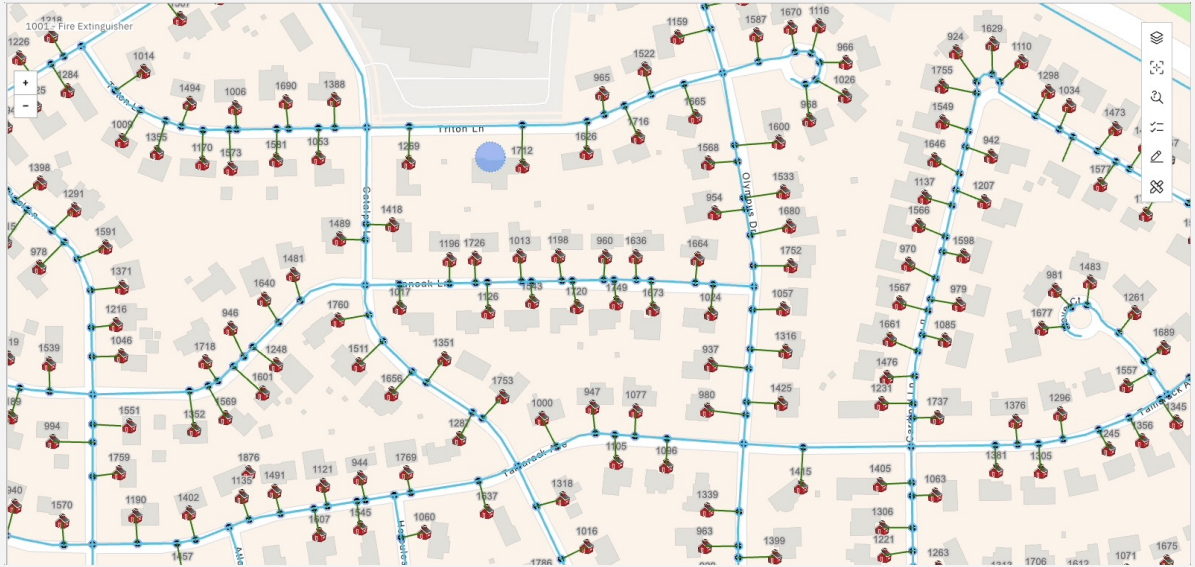
Toggle Layers On and Off

By selecting or deselecting the checkboxes, you can easily turn different map layers on and off to focus on the information most relevant to your current task.



Identify Tool

The Identify tool allows you to uncover the detailed attributes associated with any map feature. Simply hover and click your cursor over an object, and a popup window will display all the relevant data, including any linked application records.



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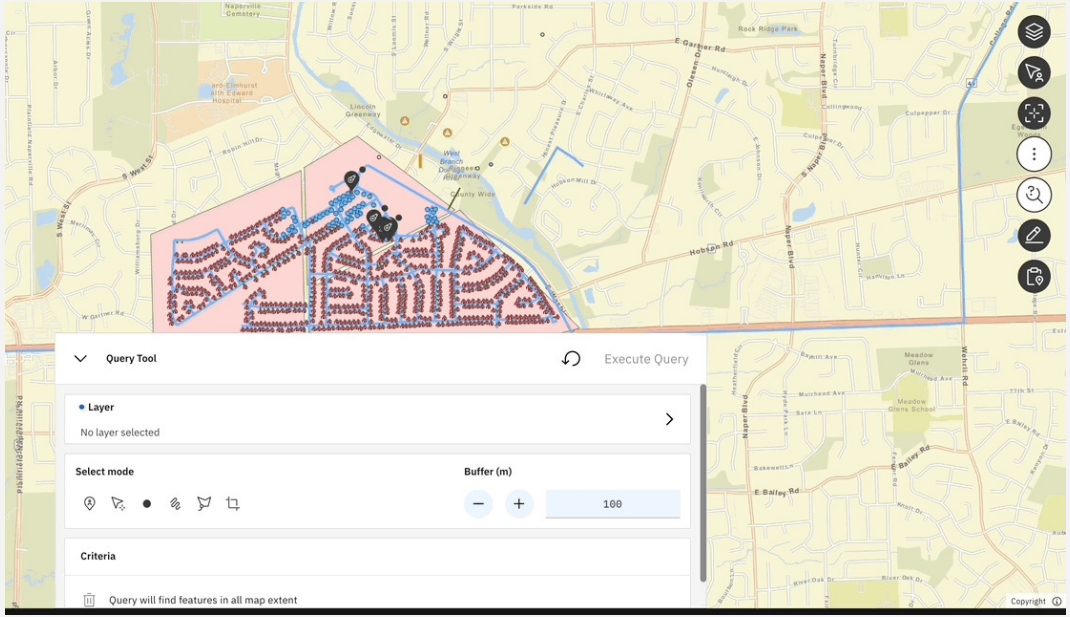
Query Tool

The Query tool in the Maximo Spatial allows you to perform feature queries on map components, both on desktop systems and mobile devices. It offers multiple feature selection modes, providing flexibility when identifying features for your queries.



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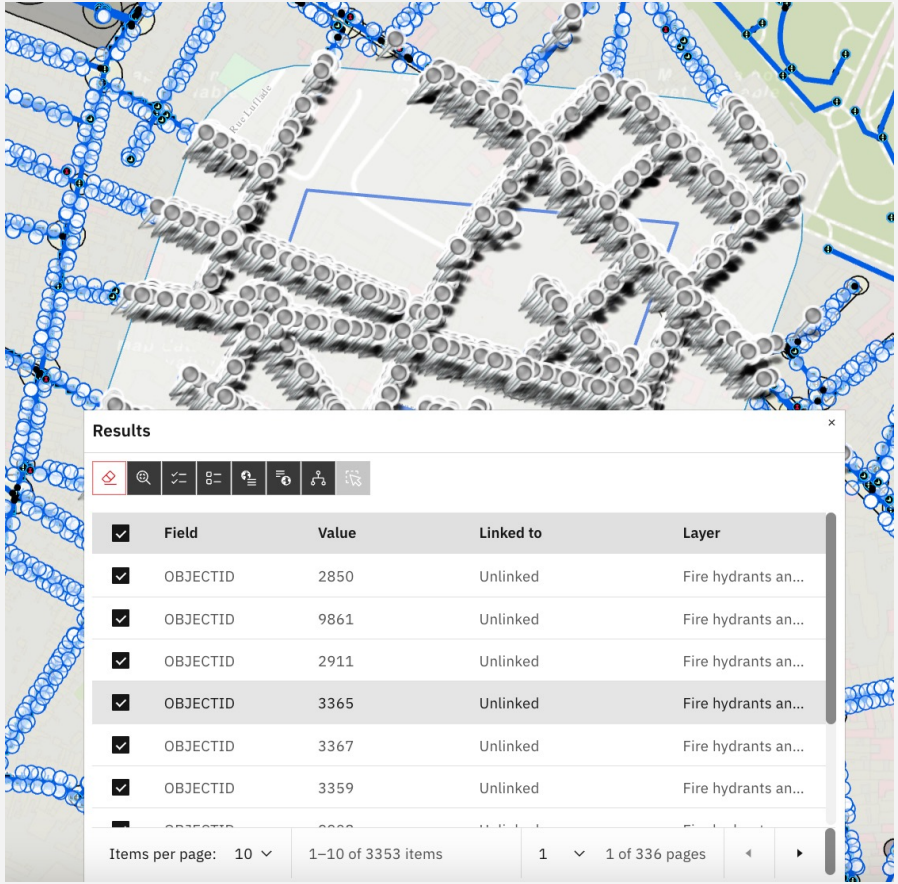
Results Tool

When you submit records from the Query tool, you can send the results to the Result tool.
You can query features on a map using the Query tool and then send the data to the Results tool from an application, such as Technician. The Query tool remains open and persists the query data. If no layers are selected in the Query tool, the **Send to Result tool** button is disabled. In the Results tool, you can select the columns of data you want to view for each record in the results set. In addition, you can select and batch-edit records.



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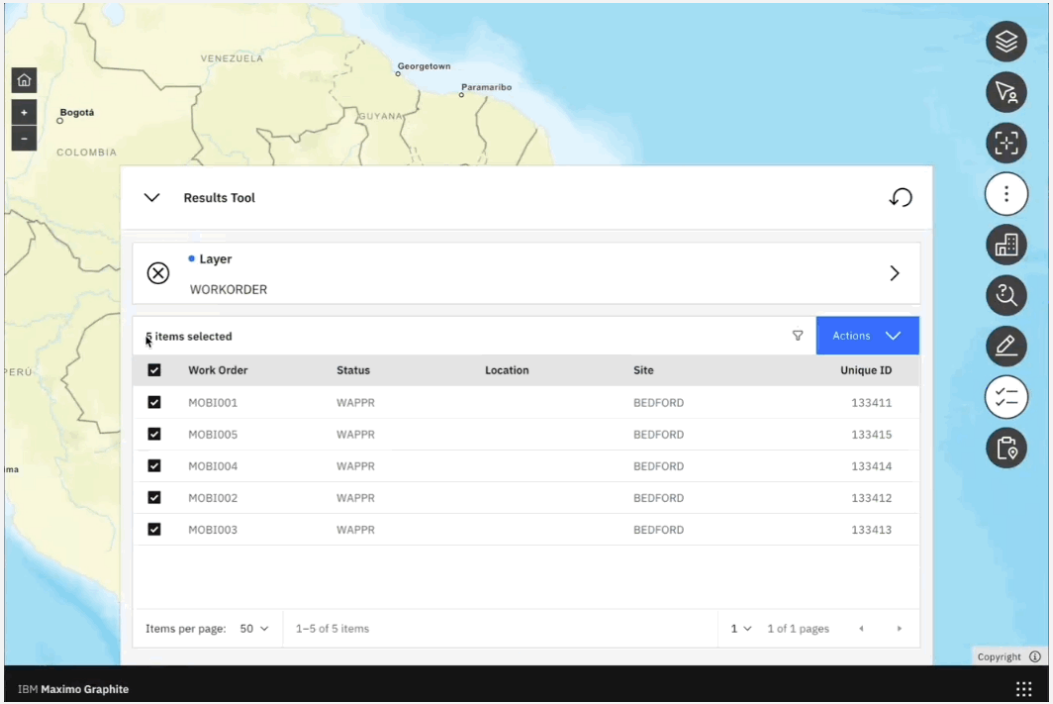
Batch Attribute Editor

The Batch Attribute Editor allows the users to select features and update common attributes at the same time. For example, an operations manager can use the Batch Attribute Editor to select WO that need to be inspected and update the status of these selected features to Approved.



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Edit Tool

Add Features

The Edit tool allows you to create new geographic features on the map, such as points, lines, and polygons. Use the toolbar and context menu options to place new elements and define their properties.

Adjust Existing Features

In addition to creating new features, the Edit tool enables you to modify the size, shape, and location of existing map elements. Leverage the Identify tool to select a feature, then use the editing controls to refine its geometry.

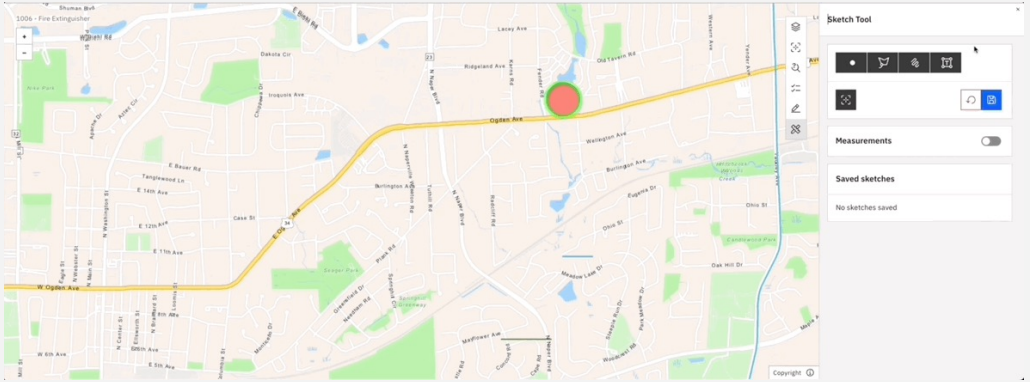
Comprehensive Editing Capabilities

The Edit tool provides a suite of advanced editing capabilities, including vertex editing, and attribute updates. This empowers you to precisely customize the map data to meet your specific needs.

Sketch Tool

The Sketch tool in the Maximo Application Framework allows you to add custom geometric elements such as shapes, lines, and points directly onto the map. This is particularly useful for defining specific areas or boundaries of interest, like drawing a polygon to highlight a region on the map.

The Sketch tool provides a comprehensive set of drawing capabilities, enabling you to precisely craft your annotations and visual overlays to complement the existing map data. This helps you communicate complex spatial information more effectively with colleagues and stakeholders.



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Show Related Tool

The Show Related tool allows you to visualize the assets and locations that are linked to multiple work orders simultaneously. This helps you quickly identify interdependencies and understand how different elements of your infrastructure are connected.

By highlighting the related assets and locations on the map, the Show Related tool provides valuable spatial context to support your decision-making and maintenance planning.

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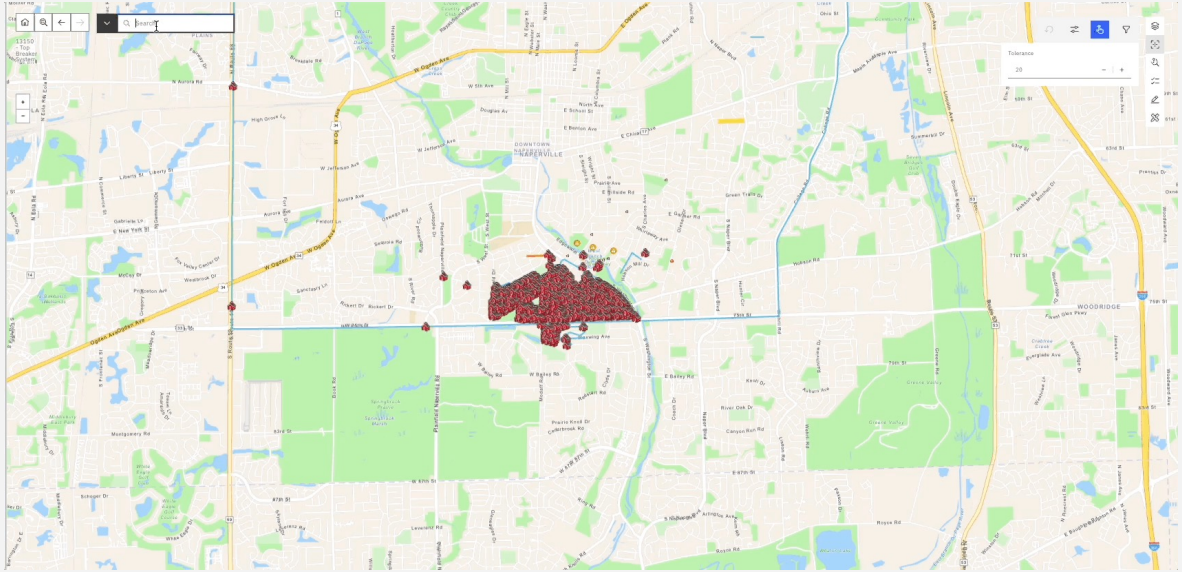
Geocoder Tool

The Geocoder tool allows end users to find locations or search features on the map. By default, the tool uses your geocoding service and displays searchable layers configured in the map, if available.

Further, the admins can add more geocoding services or configure specific layers within your map to be searchable using the tool configuration window.



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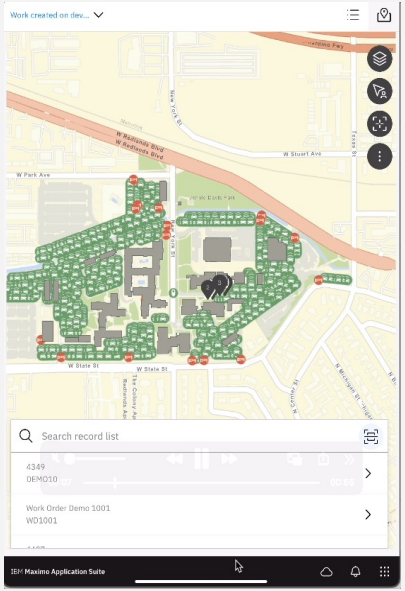
Indoors

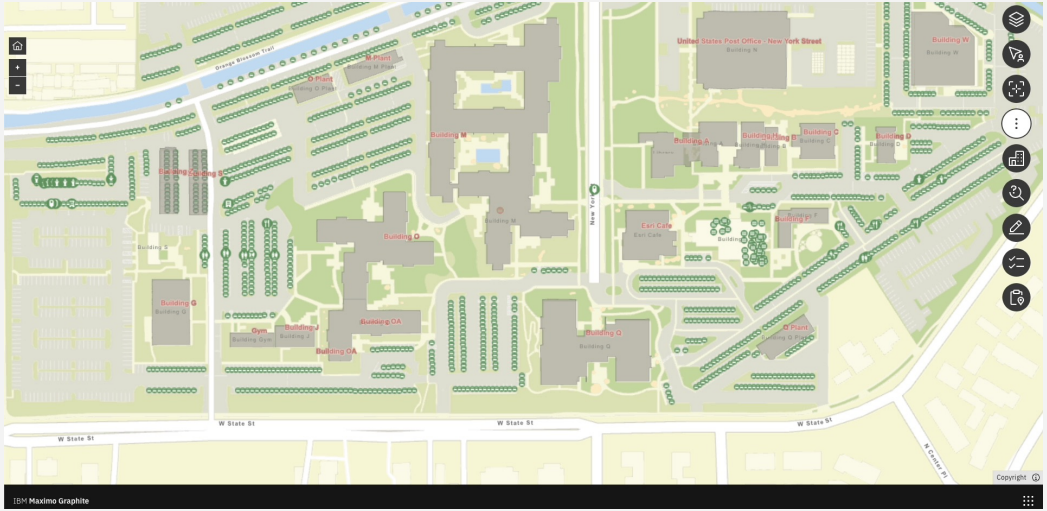
Comprehensive Indoor Mapping

Indoors enables organizations to create highly detailed digital twins of their indoor spaces, capturing the precise layout, furnishings, and relevant assets within buildings.



Visualization and Analysis

The platform provides robust data visualization capabilities, allowing users to analyze spatial relationships, occupancy patterns, and other valuable insights within the indoor environment.



Integrated with Maxmo Data

Indoors integrates seamlessly with the Maximo Application Framework, enabling users to leverage indoor spatial data to enhance asset management and maintenance planning within buildings.

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IBM Maximo Location Service for Esri

- Combines Maximo Application Suite with Esri ArcGIS geospatial capabilities
- Seamless deployment and integration of ArcGIS Enterprise on Kubernetes within the Maximo Application Suite
- Simplified procurement process for the bundle through IBM
- Unified support channel using IBM support
- Compatibility and Integration
- Fast deployment and upgrades
- Scalable

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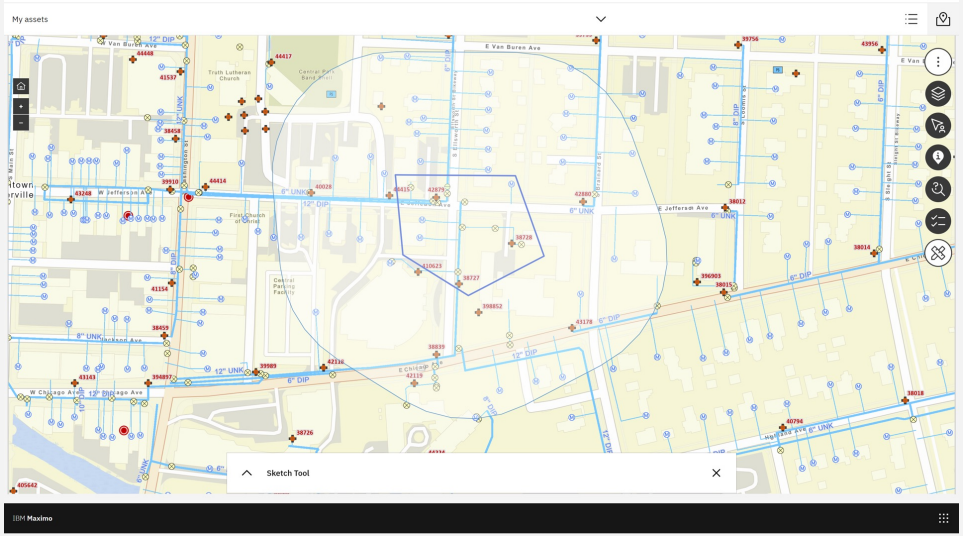
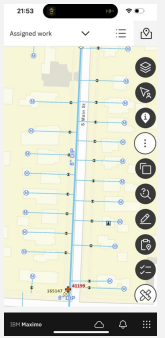
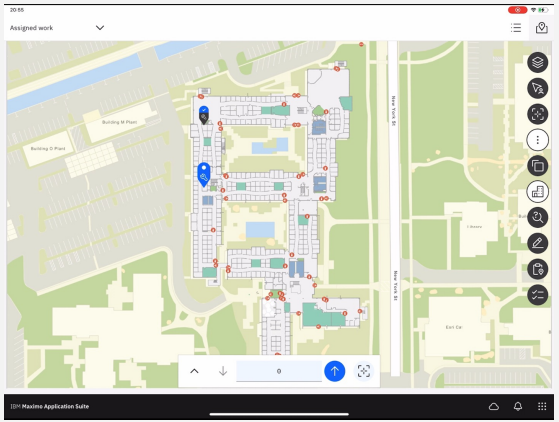
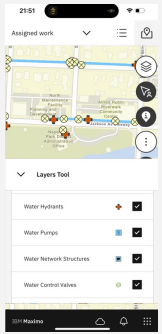
IBM Maximo Location Service for Esri

- ArcGIS Enterprise bundled in MAS
- Deployed on OpenShift using Kubernetes
- Automated ArcGIS deployment using MAS tools
- Integration with Manage and Maximo Mobile using Maximo Spatial
- Indoors and Outdoors maps
- Online and Offline maps









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Next steps

- Completely revamped graphical interface (Desktop version)
- Performance enhancement - at least 80% (Yes, you are reading that correctly. That's at least 80% performance improvement)

Refresh Tool

Wizard Sync Tool

Breadcrumb's Tool

Geofencing Tool

Dynamic Hierarchical Exploration Tool

MBO Symbology Editor

Performance Enhancements

UX/UI Enhancements

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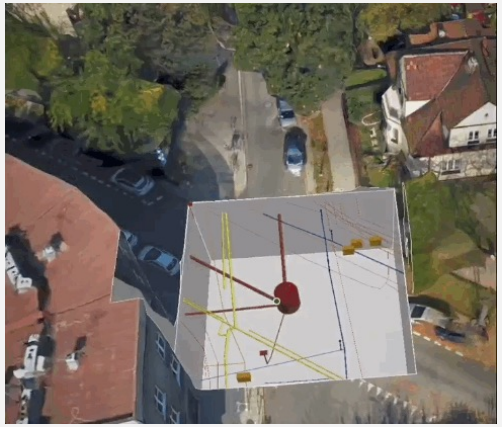
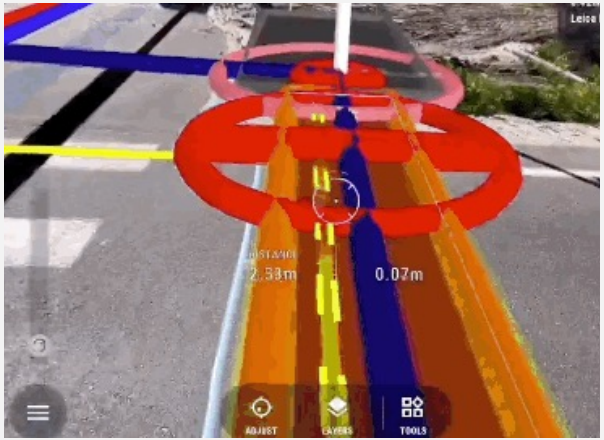
Next steps





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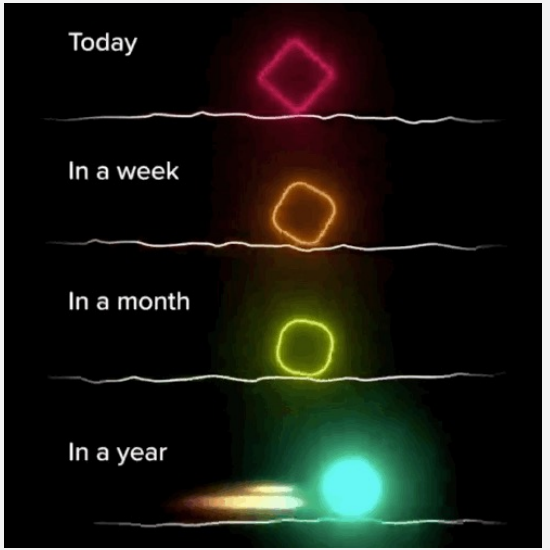
QUESTIONS ???



Thank You!

Thiago Geraldi
tgeraldi@ibm.com