Agenda

- Ken Donnelly, Strategy & Market Management
  - Product Background
  - Industry Challenges
  - Maximo Solutions

- Ed Jones, Product Designer and Architect
  - Product Features
  - Future Direction

- Questions
Product Background – Industry Drivers

- **Roads**
  - GASB 34 requirements in US
  - $92B / year to maintain US state highways

- **Rail Infrastructure**
  - Railway maintenance is 20-30% of operating costs of a railroad
  - 5-15% annual revenue lost due to track occupancy for maintenance

- **Pipeline & Wire**
  - Address Service interruptions immediately

Management of Linear Assets is critical
Industry Challenges – Linear Organizations

- All need to manage as a continuous asset with dynamic segmentation

- Many ways to identify location information
  - Roads - Mile or km markers, lane, direction, offset, bridges, tunnels, signs…
  - Rail – Mile or chain markers, track #, offset, switch, frog/crossing, signals…
  - Pipeline & Wire – GIS Locations for access or towers

- Capturing problems or conditions are different
  - Inspections, assessments, service calls…
Asset Challenges

- The world of assets can be divided into two broad classifications…

<table>
<thead>
<tr>
<th>Non linear Assets</th>
<th>Linear Assets</th>
</tr>
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<tbody>
<tr>
<td>Mobile (fleet, vehicles)</td>
<td>Roads</td>
</tr>
<tr>
<td>Fixed Physical Assets (facilities)</td>
<td>Pipelines</td>
</tr>
<tr>
<td>Component-based Assets (aircraft, ship)</td>
<td>Railway tracks</td>
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<tr>
<td><em>Installed, maintained, replaced as a whole</em></td>
<td><em>Preserved and restored in place, and in segments</em></td>
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Product Challenges

...in the past, Maximo users had to treat them the same

- Roads
- Fixed Physical Assets (facilities)
- Railway tracks
- Installed, maintained, replaced as a whole
### Solution

- Allow users to identify assets as “linear”
- Allow them to virtually segment linear assets without impacting the underlying geometry

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<thead>
<tr>
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<th>WO 127</th>
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<tbody>
<tr>
<td>Surface</td>
<td>Pavement</td>
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<td>Markers</td>
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<td>Speed Limit</td>
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<tr>
<td>Lanes</td>
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<td>3</td>
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<tr>
<td>Intersections</td>
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IBM Maximo Asset Management

Maximo Asset Management

Industry Solutions
- Utilities
- Life Sciences
- Nuclear Power
- Oil & Gas
- Transportation
- Government

Add-On Solutions
- Linear Assets
- Change & Corrective Action Mgr
- Spatial
- Service Provider
- Asset Configuration Manager
- SLA Manager

Options
- Mobile Work Manager
- SAP ERP Adapter
- Adapter for MS Project
- Asset Navigator
- Mobile Inventory Manager
- Oracle ERP Adapter
- Adapter for Primavera
- Compliance Assistance Documentation

* Included with MAM 7.1

* Enterprise Adapter
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Maximo 7.1 Linear Asset Manager Features

- Linear Assets
- Linear Attributes
- Linear Features
- User-defined Relationships
- Asset/Feature/Relationship History
- Dynamic Gauge and Characteristic Meters
- Relationship-based Routes
- Linear Work
- Linear Work Progress
- Linear Work Search
- Linear Self-Service Service Requests
Linear Assets

Challenge: Defining linear assets in Maximo

Solution: Extend the definition of an asset

![Asset Details](image)
Linear Attributes

Challenge: Linear asset attributes apply to an entire linear asset – forcing creation of numerous assets

Solution: Extend the definition of an asset specification
Linear Features

**Challenge**: While some clients use absolute measures to locate work, most use features, such as mile posts.

**Solution**: Create a new object called features.
User-defined Relationships

Challenge: Linear assets are not related hierarchically, and the relationships vary by industry and client

Solution: Allow users to create their own relationships
Asset/Feature/Relationship History

**Challenge:** Customers want to see a snapshot of a linear asset at any point in its history

**Solution:** Add spec, feature, and relationship history
Dynamic Gauge and Characteristic Meters

Challenge: Linear assets have an infinite number of ‘points’
Solution: Extend Condition Monitoring
Relationship-based Routes

**Challenge**: Rail customers inspect like assets (signals, cat poles), in groups based on relationship

**Solution**: Allow routes to be created using relationships
Linear Work

**Challenge:** Customers want to work on a segment of a linear asset

**Solution:** Add linear details to work order tracking
Linear Work (Part 2)

Challenge: Work on segments of multiple linear assets

Solution: Add linear details to the multiple assets table
Linear Work Progress

**Challenge**: Customers want to record progress against work orders

**Solution**: Add linear progress table to the multiple assets table
Linear Work Search

Challenge: Users need a way to locate/group linear work orders
Solution: Create a linear filter
Linear Self-Service Service Requests

**Challenge:** Every driver with a cell phone becomes a road inspector

**Solution:** Add linear details to the Create Service Request App
Future Direction – Product Roadmap

- Capabilities to add to Maximo Linear Asset Manager
  - Interaction with Maximo Spatial
  - Costing to Multiple Accounts
Questions & Contact Information

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Questions
Thank You!