

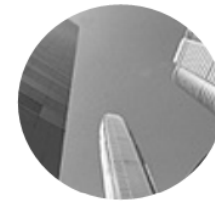
Nevada Test Site CMMS Status

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Work Control Manager
Presented to: EFCOG/IMWOG

March 3, 2009

At it's Core, Maximo is an Asset & Service Management System

- **Asset Management** is a business discipline related to managing an enterprise's assets over their lifecycle from design, build, procurement, operation, maintenance, modification and disposal. This not only includes the assets, but the inventory and human resources associated with maintaining them. Assets can be in classes such as Real Estate and Facilities, Plant and Production, Mobile Assets, Infrastructures and more recently IT equipment and networks.
- **Service Management** is a business discipline related to providing an optimal level of service to a customer at a justifiable cost.
 - **A service** consists of a number of components including management processes, assets, facilities, and people that provide a capability to satisfy a stated need or objective.



Real Estate and Facilities



Infrastructure



Mobile Assets



Plant and Production



Information Technology

Maximo Capability Overview



- ***Asset Management**
 - Facilities, Operations, IT, Fleet
 - Assets, Locations, Failure Reporting, Condition Monitoring, Meters
- ***Work Management**
 - Preventive, Corrective, Projects, Emergency, Safety Plans
 - Work Hierarchies, Planning, Status, Assignments, Actual Metrics
- **Procurement Management**
 - PR's, PO's, Receipts, Invoices
- ***Materials Management**
 - Items, Storerooms, Inventory, Reorder, Issues, Returns
- **Contract Management**
 - Master, Purchase, Warranty, Lease/Rental, Labor Rate
- ****Service Management**
 - Self Service Requests & Status
 - Platform for asset owners, asset managers and service providers

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Maximo Industry Solutions



Maximo for Service Provider



Maximo Life Sciences



Maximo Oil & Gas



Maximo for Nuclear



Maximo for Utilities



Maximo Transportation



Maximo for Government

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Representative Customers: Federal Agencies

50+ Fed Civ customers

- **Department of Homeland Security**
 - TSA, CBP, US Coast Guard
- **Department of Energy**
 - 15 sites
- **Department of the Interior**
 - NPS, BLM, FWS
 - BIA, USGS
- **GSA (Public Building Service)**
 - 8 of 11 Regions
- **Health & Human Services**
 - NIH, SAIC-Frederick
- **Department of Commerce**
 - NIST, NOAA/NESDIS
- **State Department**
 - Bureau of Admin; Facilities Mgmt Office
 - Bureau of Diplomatic Security
- **NASA**
 - 10 Space Centers/Labs
- **Veterans Affairs**
- **Department of the Treasury**
- **Department of Agriculture**



80+ DOD customers

- **US Air Force**
 - Air Force Depots
 - Range Support
 - Base Ops / Facility Support
 - Dover Port Mortuary
- **US Army**
 - Base Ops / Facility Support
 - Army Depots
 - Army Corps of Engineers
 - Army National Guard
 - Range Support
 - Madigan Army Hospital
- **US Marine Corps**
 - Base Ops / Facility Support
 - USMC Depots
- **US Navy**
 - NAVFAC
 - NAVSEA
 - NAVSUP – Fuel Depots
 - Navy Shipyards/NAVAIR Depots
- **The Pentagon**

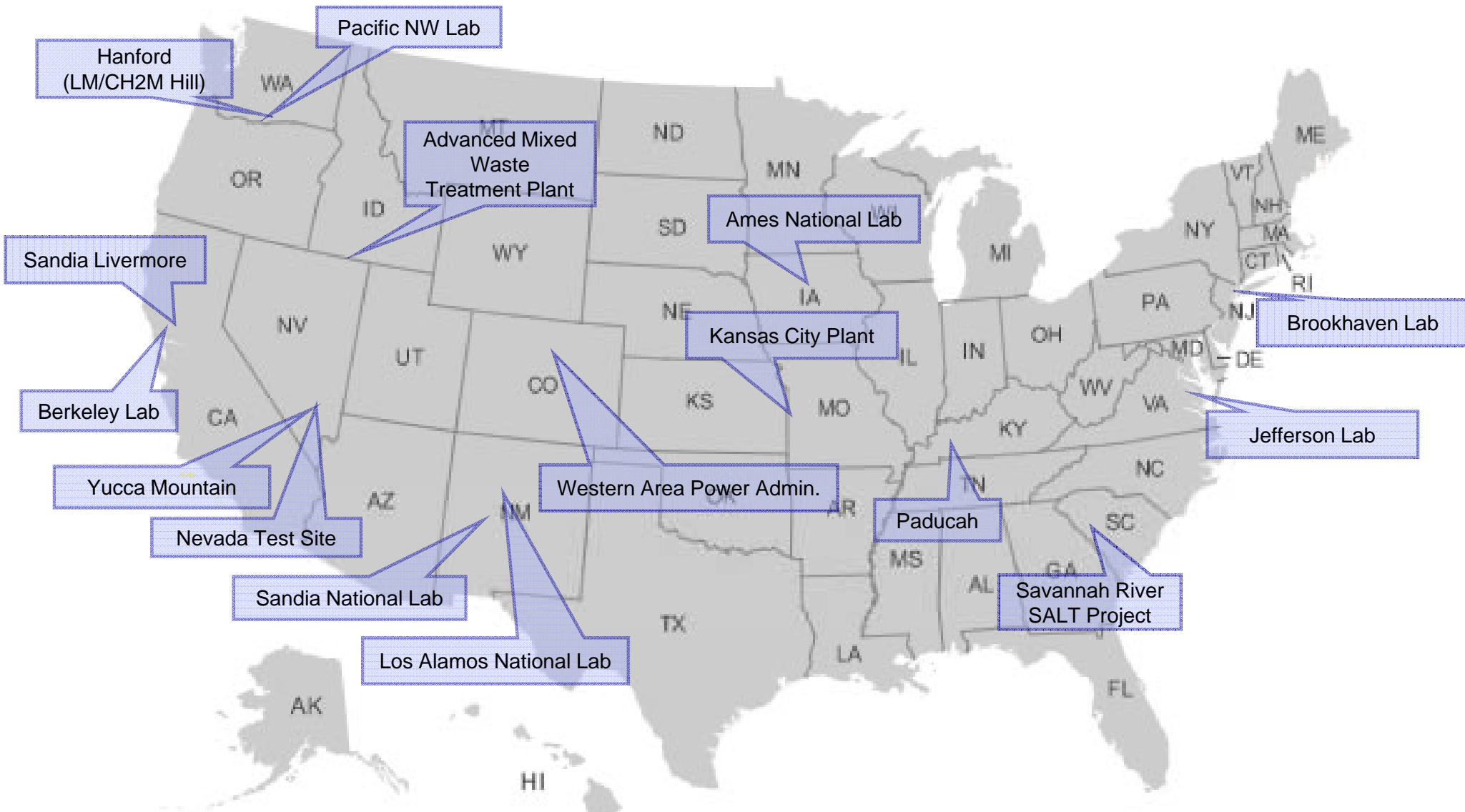


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Maximo in the Department of Energy

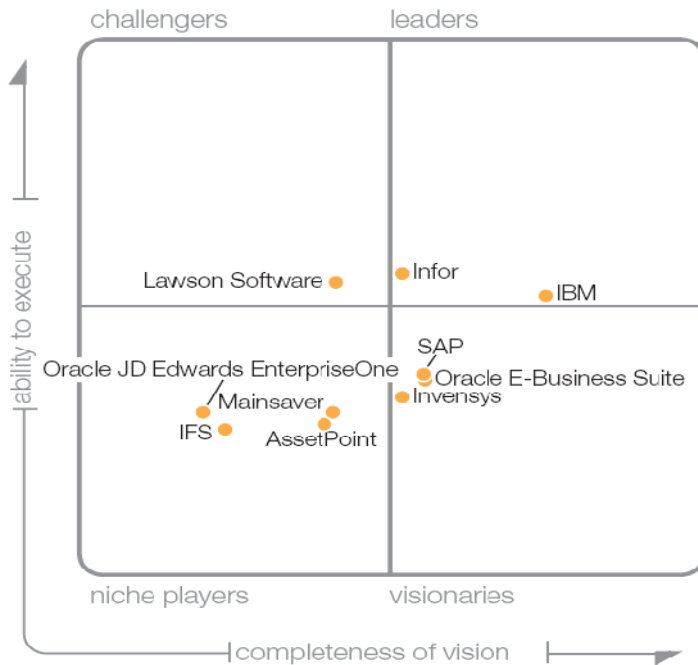


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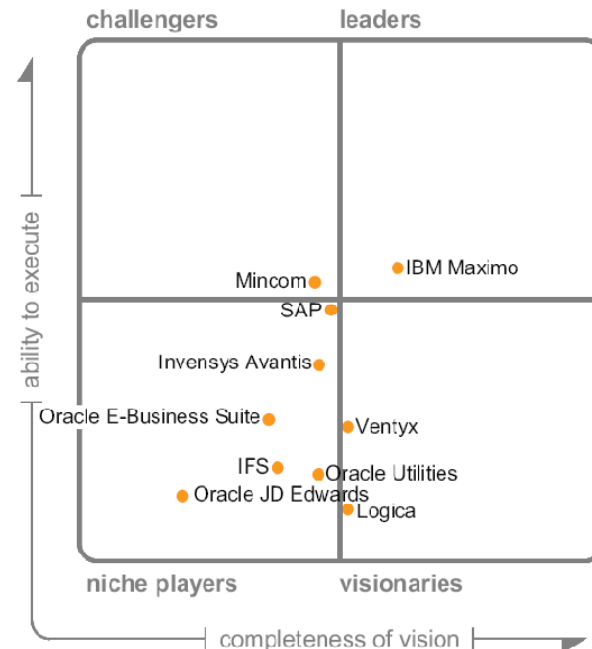
Asset Management Leadership: Analyst View

Recent Gartner Magic Quadrant's for Enterprise Asset Management; Manufacturing and Transmission & Distribution



Source: Gartner (September 2008)

As of 4 September 2008



Source: Gartner

As of 4 September 2008

5 September 2008
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 Kristian Steenstrup
 T&D
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“Under IBM ownership, MRO software has moved to extremely high viability. Global sales and implementation resources makes the solution widely available. Combined with Tivoli software, IBM Maximo Asset Management offers the opportunity of being able to manage IT-enabled assets with the same solution used to manage traditional EAM assets. High EAM investment and the leverage of IBM's research capabilities is bringing advanced maintenance functionality to market in the near future. It supports integration with a wide variety of ERP suites. It has native integration with ESRI's GIS. It has versatility across multiple platforms.”

Gartner, “Magic Quadrant for Enterprise Asset Management for Transmission & Distribution, 2007”

* Advantages and disadvantages

ADVANTAGES

- IBM software
 - Industry leader
- Data entry simple
 - Running 9 years w/out user classes
- Very customizable
- Industry solutions available
 - Using Transportation
- Stable platform (oracle)
- Web based
- Capable of integration with other systems (Oracle Financials, Peoplesoft)
- Still mostly seen as CMMS

DIS-ADVANTAGES

- IBM software
 - Big blue, competing interests
- System capability daunting
 - Once you start feeding the beast...
 - Once you start customizing...
- Can be seen as all things to all people
 - Solutions becoming more complex
 - Varied user base (nuclear, maintenance, construction, transportation)

* Decision for selection over other industry platforms

Legacy System

- System was installed in 2000 to replace an aging system called FAMIS
- Maintenance contractor was familiar with system
 - Las Vegas has several casinos using MAXIMO

Reasons for continued usage

- Investment in system (training, customization, reports, linkage to other systems)
- Meets current need
- No push to change from outside maintenance/construction community

* Challenges to implementation

- N/A

* Difficulty in use or ease of use

- Easy to use
 - Customized for real property use
- Scan and store completed work
 - Large capacity
- As database grows, as complexity grows system becomes more difficult to manage

* Amount of “tailoring” required to use at your site to coincide with your work processes

Two major things

- Development of the workflow
 - Must identify who gets the work package “next”
- Work order output
 - Have reproduced all our forms in order to print with the work order

New process requires additional data

- AHIC
- Planners checklist

* Cost of use (both purchase cost and annual maintenance cost)

• Purchased 9 years ago currently sunk cost	\$0
– Current cost would run (\$1900 per user license cost)	
• Annual maintenance cost	<u>\$85K</u>
Total	\$85K

Note: Costs for a new installation also would include difficulty of installation (time to install), type of systems on hand, data migration costs, interfaces, etc.

Note: The NTS employs 4 FTEs to do system administration, database “stuff”, reporting, and system updates (equipment loads/changes).

* Any known advances or updates including known industry changes

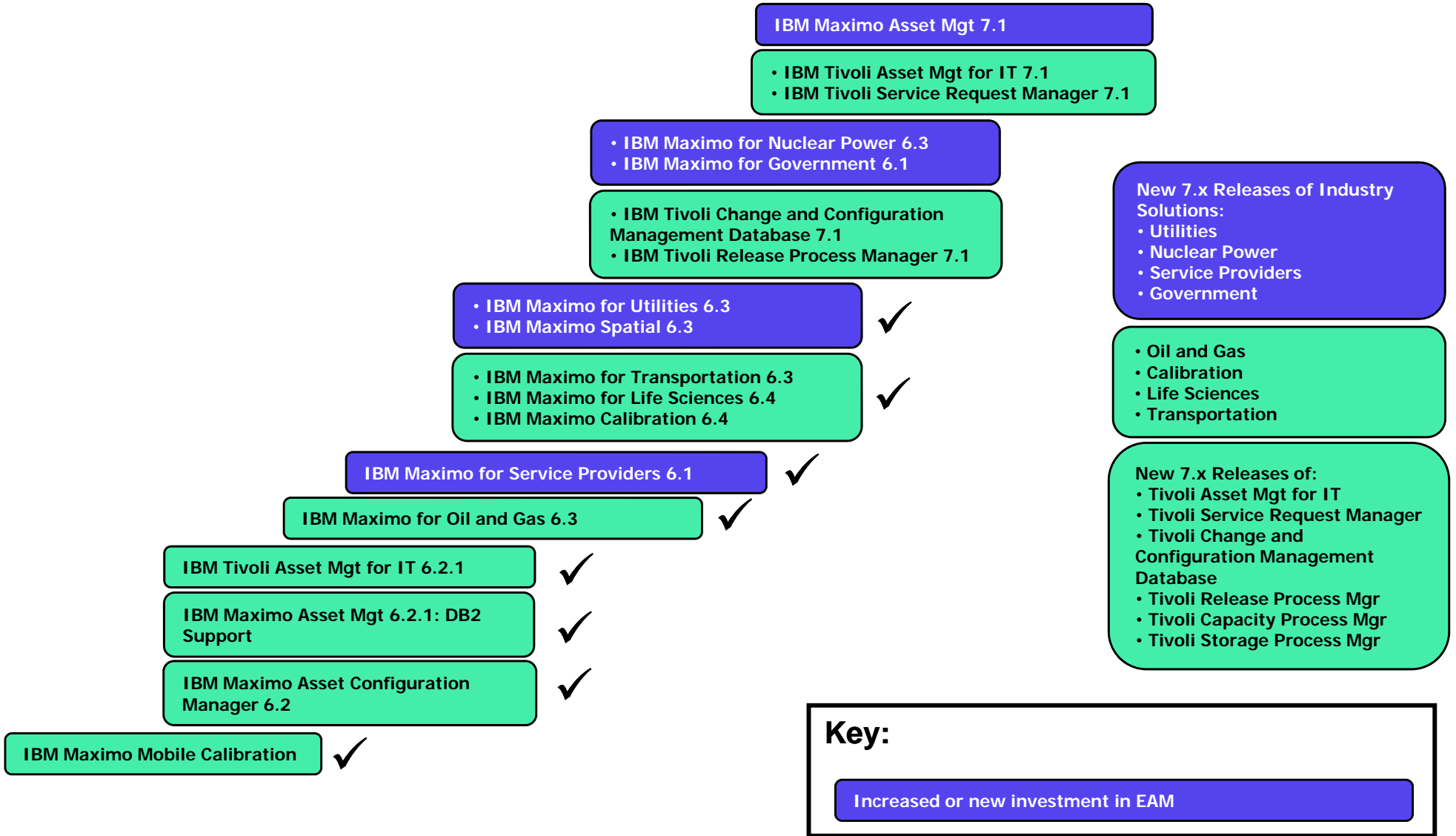
- System has migrated from PSDI to MRO to IBM over the past 9 years.
- System has grown from a desktop application to a web application, from a CMMS to an EAM
- Future changes on next slides provided by IBM

Maximo Roadmap

H2 2006

2007

2008-2009



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2009 Roadmap Highlights

- **Maximo Spatial (1H 2009)**

- Support for ESRI ArcGIS 9.3
- Auto-Create / Auto-Locate Work Orders and Service Requests
- Highlight linked Assets/Locations
- Expose Geo-Processing for Visual Reports
- Enhanced Usability and simpler administration

- **Maximo 8 (Falcon)**

- Key enhancements planned to Maximo Supply Chain Management
- **Inventory**
 - Costing / Consignment Inventory / Replenishment
- **Purchasing**
 - Distribution / Processing / Line Level Status / Work Planning
- **Receiving**
 - Receipt Document / Multi-Stage Processing with Holding Location(s) / Enhanced RMA / Receipt Quantity Tolerances

Linear Assets

Non linear Assets

Mobile (fleet, vehicles)

Fixed Physical Assets (facilities)

Component-based Assets (aircraft, ship)

Installed, maintained, replaced as a whole

A non Linear Asset occupies a defined space and can be tracked by its location or modeled as part of a parent child hierarchy

Linear Assets

Roads

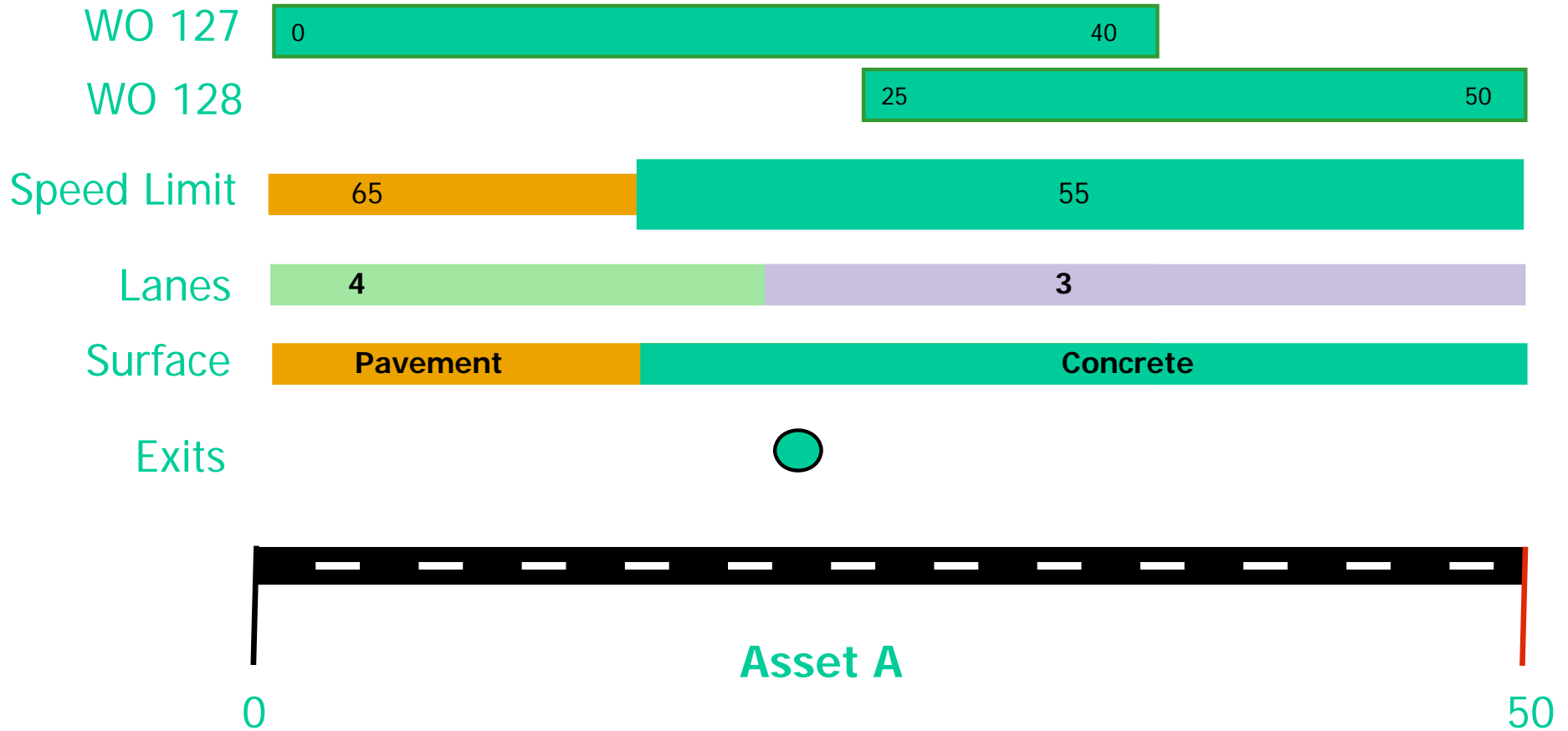
Pipelines (sewers, oil pipelines)

Railway tracks

Preserved and restored in place, and in segments

Linear Assets have linear properties and often connect with each other by their relationship with the linear infrastructure itself

Linear Assets



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