Asset Management for Support Fleets
Agenda

- Introductions and Objectives
  - Vision
    - Transportation Landscape
    - Industry Trends
    - Asset Management and A Smarter Planet
  - Value
    - Solution Map
    - Experience
    - Case Studies
    - Value Proposition
- Summary
Introductions and Objectives

- IBM

- Objectives

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The Transportation Asset Landscape

An asset management portfolio to meet the needs of Transportation clients

Industry

<table>
<thead>
<tr>
<th>Less Complex Needs</th>
<th>More Complex Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All non-T&amp;T</strong></td>
<td><strong>Travel &amp; Transportation</strong></td>
</tr>
<tr>
<td>Fleet</td>
<td>Airports</td>
</tr>
<tr>
<td>Distribution</td>
<td>Shipping</td>
</tr>
<tr>
<td>Rail</td>
<td>Aviation</td>
</tr>
</tbody>
</table>

Solutions

Maximo for Transportation

Maximo Asset Configuration Manager

Linear Asset Manager

Service Provider

Maximo Asset Management and Tivoli Asset Management for IT
Industry Challenges for Fleet Asset Management

- Managing with reduced budgets and increased competition
- Increasing asset reliability and availability
- Improving asset performance to reduce the impact of rising fuel costs
- Recovering warranties
- Capturing actual asset costs for labor, materials, tools & services
- Reducing inventory costs
- Capturing accurate data to drive condition-based PM programs
- Consolidating asset management solutions
- Minimizing risk with new systems
New Innovations are Transforming Entire Industries

**INTERCONNECTED**
*People, systems and objects can interact with each other in entirely new ways.*

**INSTRUMENTED**
*New abilities to measure, sense and see the exact condition of everything.*

**INTELLIGENT**
*Processes & things can respond to changes quickly and accurately optimizing for future events.*
The convergence of physical assets and IT applications requires a new approach for managing infrastructure and services.
Drivers of Asset Management for A Smarter Planet:
- The emergence of pervasive devices, embedded chips, RFID, sensors, detectors and IP addresses attached to enterprise assets
- Need to measure and manage the availability and use of all strategic assets
- Cost inefficiencies and complexity associated with redundant asset management infrastructure
- Improved risk management across the enterprise
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IBM Maximo solutions for Fleet

Maximo for Transportation for managing all fleet assets, including cars, trucks and emergency vehicles

Maximo Asset Management for managing facilities and real estate, including HVAC, lighting and security assets

Tivoli Asset Management for IT for managing technology assets including networks & telephony

Maintenance Managers can see the backlog of preventive & unscheduled work to manage resources and increase asset reliability

Inventory Managers can see demand for replacement items and better manage spare parts inventory

IT Managers can see how to streamline technology assets and resources across the organization
Maximo for Transportation

- Provides a complete feature set for managing all types of transportation assets
- Consolidates point solutions for Asset and Service Management into a single platform
- Includes enhanced Workflow
  - Event Driven
  - Context-based
  - Escalation Manager
- Provides configurable Start Center with user defined Key Performance Indicators (KPI)
- Next generation J2EE Technology Platform
- Service Oriented Architecture (SOA) enabled integration
Maximo for Transportation

Asset Management Modules
- Condition Monitoring
- Failure Codes
- Locations
- Meters and Meter Groups
- Asset Alias
- Equipment Groups
- Equipment Status
- Fuel Record
- Fuel, Meter & Vendor Import
- Licensing & Insurance
- Life Cycle Costing
- Meter Change Out
- Meter History
- Position Codes
- Primary Meter
- Quick Asset History
- Serial # Changes
- Telematics Interface
- Warranty Tracking & Recovery

Maximo for Transportation modules in Blue
Maximo for Transportation

**Work Management Modules**
- Assignment Manager
- Job Plans
- Lock-Out/Tag-Out
- Labor Tracking
- Preventive Maintenance & Master PM
- Qualifications
- Safety
- Service Items and Requests
- Tools/Crafts
- Campaigns
- Drivers Log
- Industry Codes and Line Codes
- Labor Certification
- Maintenance Alerts
- Mechanic Clip Board
- Motor Pool
- Recent/Repeat Repairs
- Repair Orders

Maximo for Transportation modules in Blue
Maximo for Transportation

Inventory Management Modules
- Item Master
- Storerooms
- Lot Management
- Kitting
- Issues & Transfers
- Condition Codes
- Stocked Tools
- Service Items
- Enhanced Cycle Counting
- Fuel Tank Monitoring

Procurement Management Modules
- Desktop Requisitions
- Purchase Orders
- Purchase Requisitions
- Receiving & Receiving Inspections
- Request for Quotation
Maximo Service Provider

**Contract Management Modules**
- Labor Rate Contracts
- Lease/Rental Contracts
- Master Contracts
- Payment Schedules
- Purchase Contracts
- Warranty Contracts
- Billing

**Service Management Modules**
- Service Catalogs
- Service Level Agreement (SLA) Management
- ITIL Processes

Maximo Service Provider modules in Blue

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Systems Integration

Maximo Transportation

Enterprise Management
- Customer Relationship Management
- Business Intelligence & KPIs
- Regulatory Reporting
- Financial Management
- Human Capital Management

Operations Systems
- Dispatching & Scheduling
- Fuel/Fluids Management
- Performance Monitoring
- Graphical Information Systems
- Diagnostic Integration

Work Management

Asset Management

Inventory Management

Service Management

Contract Management

Procurement Management
Fuel Management Systems Import

- Track fuel and fluid usage
- Automate data entry into Asset Management Solution
  - Fuel dispensed
  - Mileage
  - Operator
  - Date & Time Stamp
- Fuel module provides standard integration to automated fuel & fluid systems and fuel card solutions
- Drive Preventive Maintenance (PM) programs
- Initiate early inspections when fuel economy declines
Telematics and Diagnostic Data Import

- Multiple AVL/Telematics Data Servers

- AVL/Telematics Data Server

- XML

- Maximo Transportation

- Drive Preventive Maintenance (PM) programs
- Initiate early inspections, work orders and alerts using diagnostic codes or meters
Transportation Experience: over 750 Customers

- Leader in Enterprise Asset Management
  - Ranked by Gartner as the leader in the EAM Magic Quadrants for over 14 years
  - Market share leader in Transportation Logistics based on ARC Advisory Group data from 2011 EAM and Field Service Management Solutions Worldwide Outlook report

- 200 Customers managing Fleet and Logistics assets
  - Albertsons/Supervalu
  - Coca-Cola Enterprises
  - Grupo Bimbo
  - Old Dominion Freight Lines
  - US Navy Facilities Command
  - Blue Bell Creameries
  - Fulton Hogan Ltd.
  - Maryland DOT
  - State of Georgia
  - Weyerhaeuser
Blue Bell Creameries  
Managing the Distribution of Premier Ice Cream with IBM Maximo

Manufacturer of premium ice cream managing over 1,670 transportation assets and supporting 44 distribution branches across 16 U.S. states

<table>
<thead>
<tr>
<th>Business Challenges</th>
<th>IBM Solution</th>
<th>Business Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Increase vehicle reliability and service levels</td>
<td>▪ IBM Maximo for Transportation</td>
<td>▪ Single central data repository</td>
</tr>
<tr>
<td>▪ Eliminate manual processes</td>
<td>▪ – Support all fleet assets</td>
<td>▪ Centralized management</td>
</tr>
<tr>
<td>▪ Increase labor utilization</td>
<td>▪ – Solution focus</td>
<td>▪ – Distributed cost control</td>
</tr>
<tr>
<td>▪ Implement single, centralized system</td>
<td>▪ – Work Management</td>
<td>▪ 15,000 labor hours saved</td>
</tr>
<tr>
<td></td>
<td>▪ – Asset Management</td>
<td>▪ Increased Warranty recovery by 50%</td>
</tr>
<tr>
<td></td>
<td>▪ – Warranty Management</td>
<td>▪ Improved tracking of costs and asset depreciation</td>
</tr>
<tr>
<td></td>
<td>▪ – Inventory Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Fuel interface to multiple systems</td>
<td></td>
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<tr>
<td></td>
<td>▪ Integrated fleet optimization</td>
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</tbody>
</table>
Grupo Bimbo has the most extensive distribution network in Mexico, and one of the largest in the American Continent. It exceeds 39,000 routes and guarantees that bakery products are delivered uninterruptedly and fresh to more than 1,800,000 points of sale located in 17 countries.

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| ▪ Managing a large volume of transactions in different systems for fleet asset management for over 44,000 vehicles                                                                                                      | ▪ Maximo for Transportation to support all aspects of fleet equipment management  
  – Preventive Maintenance  
  – Unscheduled Corrective Maintenance  
  – Spare Parts Inventory and Procurement  
  – Tire Management  
  – Fuel Tracking                                                                                                                                     | ▪ Centralized all asset management systems for fleet onto a single platform  
 ▪ Able to unify all equipment information in a centralized solution  
 ▪ Can track all cost for fuel, tires, lubrication, maintenance and materials for the company’s 44,000 vehicle fleet                                                                                       |
Fulton Hogan Ltd.
Effectively managing a fleet of more than 4,500 assets

Fulton Hogan is a major trans-Tasman civil contracting company, with interests in a broad range of products and services in the roading, quarrying, civil construction, infrastructure maintenance and land development sectors.

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<td>Maintain a large number of different assets, including road, facility, production and fleet</td>
<td>Maximo for Transportation for fleet assets</td>
<td>Improved safety compliance</td>
</tr>
<tr>
<td>Asset management system to manage multiple assets in multiple locations</td>
<td>Maximo Asset Management for plant &amp; facility assets</td>
<td>Reduced downtime</td>
</tr>
<tr>
<td>Ability to electronically import a large number of meter readings</td>
<td>Integration to procurement, financial and billing systems</td>
<td>More accurate and consistent meter readings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Better warranty recovery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Optimized maintenance scheduling</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enhanced data-analysis capabilities</td>
</tr>
</tbody>
</table>
## Business Challenges

- A complex operating environment with 1,141 rail cars, 1,500 active buses, 1,686 service vehicles and other equipment
- Deploy a single asset management solution across the enterprise to manage all assets
- Replace antiquated financial, HR, maintenance, inventory control and purchasing systems

## IBM Solution

- IBM Maximo for Transportation to manage rolling stock and support fleet
- IBM Maximo Asset Management to manage linear assets and facilities
- Integration to corporate financial, HR & dispatching systems

## Business Benefits

- Increased labor utilization and asset reliability
- Inventory fully visible to Maintenance Staff
- Real time access to up to date asset information, enabling efficient job scheduling to minimize passenger impact
- Able to accurately capture assets maintenance costs
- Standardized business process across the enterprise
IBM Maximo solutions for Fleet & Freight Logistics

**Maximo for Transportation**
for managing all fleet assets, including tractors, trailers, cars, trucks and forklifts

**Maximo Asset Management**
for managing facilities and distribution centers, including conveyors, refrigeration units, lighting and security assets

**Tivoli Asset Management for IT**
for managing technology assets including networks & telephony

**Maintenance Managers** can see the backlog of preventive & unscheduled work to manage resources and increase asset reliability

**Inventory Managers** can see demand for replacement items and better manage spare parts inventory

**IT Managers** can see how to streamline technology assets and resources across the organization
## Gwinnett County Public Schools
Maximo helps Georgia’s largest school district support rapid growth

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### “Maximo makes it easy to keep track of existing equipment and add new equipment to the system so that we can effectively manage growth.”

Gwinnett County Public Schools Maintenance Engineering Supervisor

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<td>Improve maintenance efficiency district-wide while adding 6,000 students each year</td>
<td>Selected IBM Maximo Asset Management to manage facilities in 2003 because it would easily scale with the district’s growth and improve overall maintenance efficiency</td>
<td>Replaced inflexible asset management system with IBM Maximo to gain better, real-time view of all assets and scheduled maintenance</td>
</tr>
<tr>
<td>Support 24,000 pieces of equipment, including 1,508 school buses and more than 400 delivery and service vehicles</td>
<td>Added IBM Maximo for Transportation to manage school buses and support fleet</td>
<td>Replaced handwritten courier mail service for delivering service request online, cutting nearly a week from problem notification</td>
</tr>
<tr>
<td>Reduce maintenance time to repair</td>
<td>Integration to corporate financial, HR &amp; billing systems</td>
<td>Doubled square footage and increased number of schools from 76 to 106 while keeping the same number of maintenance staff</td>
</tr>
<tr>
<td>Streamline costs as district grows</td>
<td></td>
<td></td>
</tr>
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</table>

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Leading analyst firm Gartner Research identifies eight items where companies can achieve return on investment (ROI) *

- Labor utilization, 10 to 20% increase
- Asset availability, increase 3 to 10%
- Decrease in new equipment purchases, 3 to 5%
- Warranty recovery, up 10 to 50%
- Inventory reductions, 20 to 30%
- Reduced inventory carrying costs, up to 20%
- Material cost reductions, 5 to 10%
- Purchasing cost reductions, 10 to 50%

* – Gartner Group report G00122453, *The EAM Market Shows Growth and Consolidation*
## Typical Benefits from implementing Maximo

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<tr>
<th>Business Scenarios</th>
<th>Key ROI Data Points</th>
<th>Customer Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Utilization</td>
<td>Up 10-20%</td>
<td>• A major US railroad saved US $5M by better tracking labor to specific work</td>
</tr>
<tr>
<td>Asset Availability</td>
<td>Up 3-5%</td>
<td>• A large OEM reduced overhaul process time from 56 days to 21 days</td>
</tr>
<tr>
<td>Equipment purchases</td>
<td>Down 3-5%</td>
<td>• A transit &amp; rail company saved US $9.5M by meeting 100% availability with less</td>
</tr>
<tr>
<td>Warranty recoveries</td>
<td>Up 10-50%</td>
<td>• A consumer products company with a medium size fleet increased warranty recovery 50%</td>
</tr>
<tr>
<td>Inventory needs</td>
<td>Down 20-30%</td>
<td>• A large passenger railroad was able to identify US $18M in excess or obsolete inventory</td>
</tr>
<tr>
<td>Inventory carrying costs</td>
<td>Down 5-20%</td>
<td>• A railroad reduced saved US $1.8M impacting financing, insurance, handling, overhead, etc.</td>
</tr>
<tr>
<td>Material Costs</td>
<td>Reduced 10-50%</td>
<td>• A rail maintenance service company reduced costs 20% by optimizing material purchases</td>
</tr>
<tr>
<td>Purchasing Costs</td>
<td>Reduced 10-50%</td>
<td>• A transit &amp; rail company reduced purchasing staff by 20%</td>
</tr>
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## Why IBM?

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<thead>
<tr>
<th>ORGANIZATIONS ARE FOCUSED ON...</th>
<th>IBM IS DELIVERING...</th>
</tr>
</thead>
</table>
| Asset Lifecycle Management       | • End-to-end asset lifecycle management that maximizes the lifetime value of critical assets to the enterprise  
                                 | • Improved reliability and availability to optimize service while reducing operational cost and ensuring safe & reliable operations |
| Managing all asset classes in a single system | • A single platform that can manage all asset classes with service request, incident, problem, change, release, configuration and provisioning management.  
                                              | • Web-architected platform built on J2EE with advanced business process management; based on SOA, web services and XML |
| Supporting “smarter” assets      | • Support for both operational & IT assets, as well as IT-enabled operational assets on a single system  
                                 | • Using Interconnected, Instrumented and Intelligent systems to automate and optimize business processes while crossing EAM and ITAM organizational boundaries |
| Delivering Industry Specific Solutions | • Unique industry functionality that provides out-of-the-box industry specific business processes  
                                           | • Complete solutions delivering specific industry and regulatory compliance, while lowering implementation costs and delivering a faster return on investment (ROI) |
Questions?
Thank You!