



**Tivoli** software



Real Estate and Facilities



Plant and Production



Mobile Assets



Infrastructure



Information Technology

# Generating Real Economic Value in Transportation with IBM Asset Management

March, 2009

# Transportation Market Dynamics

## Transportation Imperatives

- On-time delivery
- Preserve capital
- Reduce operating expenses
- Reduce maintenance costs

**Unprecedented economic conditions, low confidence in major markets and the financial market crisis in recent months have created the most challenging business environment witnessed in decades**



# Transportation Trends

- Increased globalization of trade
- Fuel price volatility
- Increased security costs
- Increased competition
- Increased regulation
- Commoditization
- Focus on increased reliability and safety

**To remain competitive, asset-intensive companies must establish innovative strategies to extract maximum value from their assets, resulting in improved profitability and increased shareholder value**



# Transportation Challenges

- Managing with reduced budgets
- Improving operations
- Developing good asset information
- Warranty recovery
- Improving labor utilization
- Minimizing risk with new systems
- Extending life of assets
- Addressing poor inventory management
- Consolidating asset management applications

**With the industry continuously evolving and challenged by unique factors, Transportation companies must be prepared and equipped to cope with rapid change**

– IBM CEO Study 2008



# A More Dynamic Infrastructure is Required to Meet Transportation Challenges

**Mobility  
Infrastructure**



**Facilities  
Infrastructure**



**Production  
Infrastructure**



**IT  
Infrastructure**



**Communications  
Infrastructure**



Organizations in a Smarter Planet are powered by dynamic, flexible, and responsive physical and IT infrastructures that support *innovation*, *transformation*, and *differentiation*.

# What is the Role of Asset Management in a Dynamic Infrastructure?

- Manage business and IT assets together to ensure high availability and quality of existing services while meeting customer expectations for real-time, dynamic access to innovative **new** services.

- Not only managing assets according to the needs and priorities of the business to contain operational cost and complexity, but achieving **breakthrough** productivity gains.



- Addressing today's asset-related health, safety and business risks while preparing for the new risks posed by an even more **connected** and **collaborative** world.

**Enabling transformational change in a highly responsive way**

# Asset Management to Address Today's Challenges and Tomorrow's Opportunities

- **Total Cost of Ownership**
  - Asset costs throughout their lifecycle
  - Useful life of assets
- **Efficiency**
  - Operational & labor efficiency; production reliability
  - Service levels and customer satisfaction
- **Compliance**
  - License/regulatory/environmental & safety compliance risk
- **System Consolidation**
  - Multiple, siloed asset management systems
- **Asset Convergence**
  - Operational & IT assets

**Asset Management enables organizations to remain competitive in today's business climate and prepare for tomorrow's opportunities by extending the useful life of assets and reducing asset related expense**



# IBM Asset Management for Transportation

## Respond faster and make better decisions

- Enterprise-wide view of all asset types
- See asset details across your operation
- See your freight across the supply chain



## Increase governance and reduce operational risk

- Optimized asset management
  - Extend asset life
  - Reduce inventory costs
  - Control fuel spending
- Mitigate compliance and security risk

## Improve asset utilization with proactive asset management

- Consolidation of systems
- Enhanced operational capabilities
  - Automated workflow
  - Reporting
  - Improved inventory data reliability

**Only IBM offers a comprehensive asset management solution, comprised of software, services, and hardware offerings, for clients to manage end-to-end assets and address business imperatives**

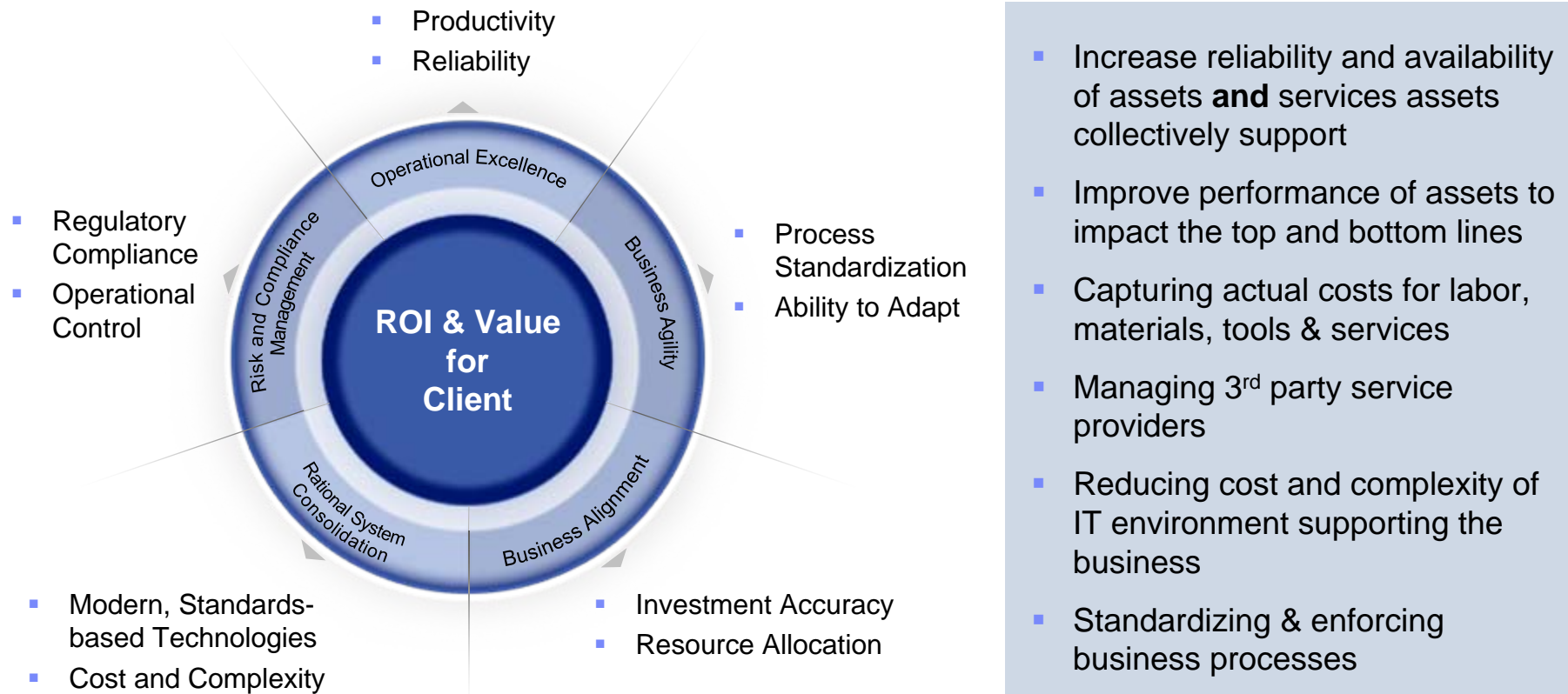


# IBM Asset Management Benefits for Transportation Companies

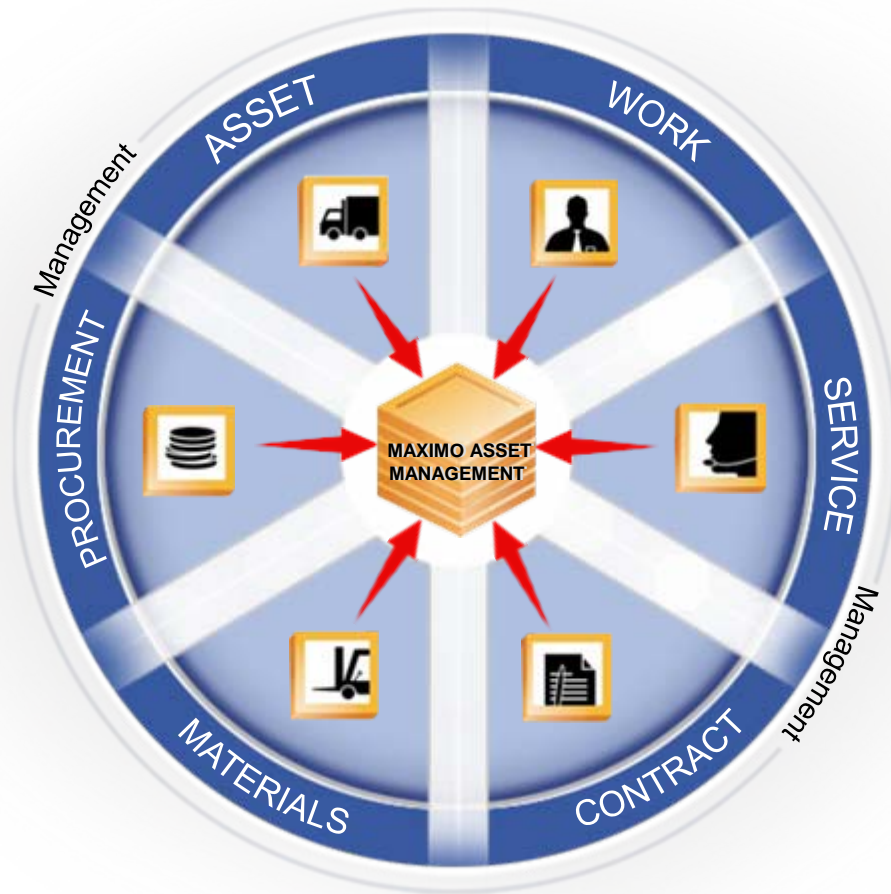
Business Scenarios	ROI Points	Customer Examples
Labor Utilization	<b>Up 10-20%</b>	<ul style="list-style-type: none"> <li>A major US railroad saved US \$5M by better tracking labor to specific work</li> </ul>
Asset Utilization	<b>Up 3-5%</b>	<ul style="list-style-type: none"> <li>A large OEM reduced overhaul process time from 56 days to 21 days</li> </ul>
Equipment Purchases	<b>Down 3-5%</b>	<ul style="list-style-type: none"> <li>A fleet management company saved US \$9.5M by meeting 100% availability with a smaller fleet</li> </ul>
Warranty Recoveries	<b>Up 10-50%</b>	<ul style="list-style-type: none"> <li>A consumer products company with a medium size fleet increased warranty recovery 50%</li> </ul>
Inventory Needs	<b>Down 20-30%</b>	<ul style="list-style-type: none"> <li>A large passenger railroad was able to identify US \$18M in excess or obsolete inventory</li> </ul>
Inventory Carrying Costs	<b>Down 5-20%</b>	<ul style="list-style-type: none"> <li>A railroad reduced saved US \$1.8M impacting financing, insurance, handling, overhead, etc.</li> </ul>
Material Costs	<b>Reduced 10-50%</b>	<ul style="list-style-type: none"> <li>A rail maintenance service company reduced costs 20% by optimizing material purchases</li> </ul>
Purchasing Labor	<b>Reduced 10-50%</b>	<ul style="list-style-type: none"> <li>A fleet management company reduced purchasing staff by 20%</li> </ul>



# IBM Asset Management...a Core Business Solution for Transportation



# IBM's Asset Management Solution: **Maximo**



- Addresses asset management challenges for line of business operations and IT
- Consolidates point solutions for Asset and Service Management into a Suite
- Includes enhanced Workflow
  - Event Driven
  - Context-based
  - Escalation Manager
- Provides Service Management capabilities for
  - Asset Owners
  - Asset Managers
  - Service Providers
- Next generation J2EE Technology Platform
- Service Oriented Architecture (SOA)

# Maximo Offerings for Transportation

IBM Maximo for Transportation	IBM Maximo Linear Asset Manager	IBM Maximo Service Provider	IBM Maximo Asset Configuration Manager
<ul style="list-style-type: none"> <li>▪ Support all types of moving assets               <ul style="list-style-type: none"> <li>– Cars, trucks, buses, trains, aircraft vessels</li> </ul> </li> <li>▪ Increase reliability, availability, labor optimization, warranty recovery, inventory reduction, aging workforce, safety, regulatory compliance, risk management</li> </ul>	<ul style="list-style-type: none"> <li>▪ Effective support of linear assets</li> <li>▪ Extends core applications to define, work on, and maintain history of linear assets</li> <li>▪ Provides a generic linear base that can be applied to, and extended by, multiple markets</li> <li>▪ Alternative to application clones via license and condition-based controls</li> </ul>	<ul style="list-style-type: none"> <li>▪ Capabilities for internal and external service providers</li> <li>▪ Multi-Customer enablement               <ul style="list-style-type: none"> <li>– Manage Assets for multiple customers in single instance deployment</li> </ul> </li> <li>▪ Enables Managing Service as a Business More Profitably               <ul style="list-style-type: none"> <li>– Manage Customer Agreements:                   <ul style="list-style-type: none"> <li>• Entitlement, Pricing, SLAs</li> </ul> </li> <li>– Provide for Efficient Service Delivery</li> <li>– Timely, Detailed and Accurate Billing</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Highly regulated and safety driven environments</li> <li>▪ Configuration management capabilities for Asset Operators and MRO organizations maintaining aircraft and rail assets</li> <li>▪ Manage design change effectively throughout asset life cycle</li> <li>▪ Manage life usage requirements within dynamic and volatile operating environments</li> <li>▪ Manage reference and operational data with the ability to validate one against the other</li> </ul>

# US Manufacturer Managing Distribution with IBM Maximo for Transportation



Business Challenges	IBM Solution	Business Benefits
<ul style="list-style-type: none"> <li>▪ Support over 1,500 transportation assets to support the delivery of product at 44 distribution branches across 16 states in the US</li> <li>▪ Increase vehicle reliability and service levels</li> <li>▪ Eliminate manual processes &amp; increase labor utilization</li> <li>▪ Implement a single, centralized system</li> </ul>	<ul style="list-style-type: none"> <li>▪ IBM Maximo for Transportation to support all fleet assets</li> <li>▪ Fuel interface to multiple systems</li> <li>▪ Integrating fleet optimization to automate preventive maintenance and regulatory reporting</li> </ul>	<ul style="list-style-type: none"> <li>▪ One central repository for data with access from all branches, providing central management with distributed cost control</li> <li>▪ Saved 15,000 labor hours through better scheduling</li> <li>▪ Automated the Warranty process, increasing recovery by 50%</li> <li>▪ Improved tracking of costs and asset depreciation</li> </ul>

# Managing Marine Assets with Maximo Asset Management



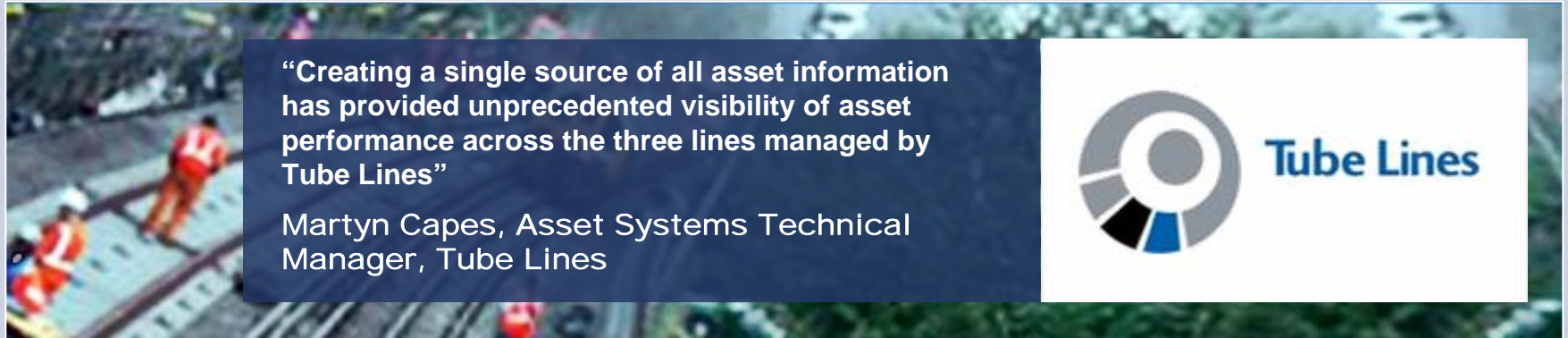
**“We set the requirements bar very high, and after a comprehensive search, we selected IBM Maximo”**

**Director of Information Technologies**

Business Challenges	IBM Solution	Business Benefits
<ul style="list-style-type: none"> <li>▪ Meet increasing safety regulations</li> <li>▪ Decrease the amount of time it takes to schedule and assign personnel to jobs</li> <li>▪ Significantly reduce administrative time associated with payroll</li> <li>▪ Centralize maintenance technology system into one location to save administrative time and costs</li> </ul>	<ul style="list-style-type: none"> <li>▪ IBM Maximo Asset Management for asset and work management</li> <li>▪ Integration to financial management system</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reduced labor-time involved in payroll process by 65% per week</li> <li>▪ Decreased scheduling time by a half-hour each day, resulting in a labor cost savings of 2,600 man-hours per year</li> <li>▪ Maximo makes data easily accessible to support adherence to Federal and State DOT regulations</li> </ul>

# Tube Lines

## Taking Stock of Assets with IBM Maximo Asset Management



“Creating a single source of all asset information has provided unprecedented visibility of asset performance across the three lines managed by Tube Lines”

Martyn Capes, Asset Systems Technical Manager, Tube Lines



Tube Lines

### Business Challenges

- An up-to-date solution to proactively maintain 200 miles of track, 255 trains, 100 stations, 2,395 bridges and structures, 71 lifts and 227 escalators
- Deploy a single asset management solution across the enterprise
- Provide engineers with mobile access to asset information
- Streamline processes and improve resource effectiveness

### IBM Solution

- IBM Maximo to manage rolling stock, linear assets and facilities
- Integration to corporate ERP and HR systems

### Business Benefits

- Maximo has enabled Tube Lines to provide a consistent approach to maintenance management across 15 asset classes
- Real time access to up to date asset information, enabling efficient job scheduling to minimize passenger impact
- Reduced duplication, improved information accuracy and with trend analysis for more proactive maintenance strategies

# IBM Maintenance, Repair and Overhaul Solutions

US regional carrier flying high with IBM



**Regional carrier focused on providing safe and reliable air transportation and great customer service.**

Business Challenges	IBM Service Management Solution	Business Benefits
<ul style="list-style-type: none"> <li>▪ Startup a regional carrier in a short period of time</li> <li>▪ Transition existing systems to smooth launch</li> <li>▪ Streamline maintenance processes &amp; reduce delays</li> <li>▪ Manage assets on a main concourse at major US metropolitan airport</li> </ul>	<ul style="list-style-type: none"> <li>▪ Asset Management, with configuration management, to support aircraft Maintenance, Repair and Overhaul (MRO) operations</li> <li>▪ Asset Management to support airport facilities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased asset efficiency and productivity</li> <li>▪ Provided an automated compliance regulation processes</li> <li>▪ Met short implementation deadline</li> <li>▪ Manage multiple assets with a common solution base</li> </ul>



# US International Airport

Managing all asset classes, improves productivity and increases revenue



**“By unifying the management of all our IT and operational assets using IBM solutions, we can maintain an industry leadership position and improve quality of service for travelers. IBM asset management software has also helped us realize a higher percentage of recoverable fees and directly improve revenue as a result.”**

Enterprise Resource Planning Systems Consultant

Business Challenges	IBM Solution	Business Benefits
<ul style="list-style-type: none"> <li>▪ <b>Must deliver a quality experience to a diverse customer base while facing tough maintenance and operational demands</b></li> <li>▪ <b>Embarked on major IT initiative to increase efficiency and service quality through system consolidation</b></li> <li>▪ <b>Managing asset information in silos across different divisions was increasing costs, hampering compliance reporting and complicating efforts to improve service</b></li> <li>▪ <b>Labor-intensive and largely manual processes</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Client uses IBM Asset Management software to unify management of all airport assets from facilities to IT</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Significantly improved technician productivity and accelerated resolution of repairs</b></li> <li>▪ <b>Helped reduce IT costs</b></li> <li>▪ <b>Increased revenue through accurate charge-back information.</b></li> <li>▪ <b>Helped enhance security efforts and streamline compliance reporting</b></li> </ul>

# IBM is the Asset Management Leader

- Enterprise Asset Management
- IT Asset Management
- Industry Specific Solutions
  - Nuclear Power, Utilities, Life Sciences, Oil & Gas, Government, Service Providers, Transportation
- Functional Extensions
  - Spatial Asset Management, Linear Asset Manager, Mobile Work Manager, Navigator, Calibration
- Service Request Management
- License Compliance Manager

## Segment Leadership

- 500+ Transportation Customers
- 1# in EAM Market Share – ARC
- 1# in EAM Market Share – IDC
- Gartner Magic Quadrant for Power Generation
- Gartner Magic Quadrant for Transmission and Distribution
- Gartner Magic Quadrant of Manufacturing
- IDC Short List for Power Generation
- IDC Short List Work and Asset Management for Energy Delivery

# Summary – Key Differentiators in IBM Maximo Asset Management

Core Business Imperatives	Unified Solution	Industry Expertise	Leadership
<p>Only vendor with proven ability to drive client value and ROI – reducing operational expense and extending useful asset life to preserve capital</p>	<p>Only vendor that can manage all asset types on a single, unified architecture, combined with service desk, change and configuration management</p>	<p>Deep industry knowledge across a broad spectrum of asset types – fleets, facilities, IT assets, linear assets, etc.</p>	<p>Long standing leadership in Transportation asset management; evidenced by market share, analyst reviews and the benefits our clients capture</p>
Leading, Standards-based Technology		Built Ground Up on The ITIL Framework	Breadth of Service Management Offering
<p>Web-architected platform built on J2EE with advanced business process management; based on SOA, web services and XML</p>		<p>Supports 7 ITIL processes out of the box: Incident, Problem, Change, Release, SLA, Configuration, Availability</p>	<p>IBM offers full breadth of end-to-end asset and service management solutions that operate on a common web services infrastructure</p>

**IBM**®