Future Role for IT in Organizational and In-Vehicle Transformation

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Agenda

• Industry in Transformation
• Operational Disconnect
• Foundation for Profitability
Solving Big Industry Problems, Involve End-to-End Processes: …that will define competitive advantage
What We Hear from Our Customers

Making strategic use of IT investments (new and old) to achieve business goals:

**Customer Centricity**
- Unify 360° customer view for analytics-driven service and selling
- Integrate real-time transactions across Branch, ATM, Call Center, Internet, Mobile

**Operational Efficiency**
- Faster, cheaper, better: flat IT budgets, more requests
- Increase productivity and reduce backlog
- Streamline manual processes to reduce cost, risk
- Scale transactions and improve responsiveness without costly infrastructure upgrades

**Business Agility**
- Deliver new products and services more rapidly
- Expose legacy Systems of Record as virtual services
- Leverage value of business logic in legacy applications
- Raise integration logic above code to reduce costs
“80 percent of new vehicle design innovation will be IT driven.”

- Karl Probst, CIO BMW
Radical Automotive Industry Business Model Changes are Looming

Opportunities to drive significant cost out of current business model

- **Production** – total control, extreme traceability and transparency (from birth to end of lifecycle), documentation of the entire production process
- **Quality/Environment** – Field analysis and issue identification, vehicle lifecycle performance, end of life compliance, emissions/fuel economy tracking, failure mode analysis
- **Warranty/Liability/Safety** – Early warning detection, direct, vehicle specific non-public recall notifications, brand image remains positive, safety enhancements via V-to-V and B-to-V communications, safety system diagnostics and performance analysis
- **Logistics** – real-time traceability of shipments and distribution, vehicle reworks, customs clearance
- **Spare Parts** – Perfect demand signals, better control, less inventory and transportation cost
Radical Automotive Industry Business Model Changes are Looming (cont.)

Opportunities to drive significant increased revenue by redefining customer interaction

- **Sales** (Wholesale, Retail) – Direct customer relationships, customer loyalty, proactive customer contact, proactive identification of customer requirements, improved customer communication and notifications, aftermarket accessories, fleet management

- **AfterSales/Service** – New cost structures in service model, in field diagnostics, customer- and vehicle specific maintenance (premium service program), extended warranty sales, call center direct connect

- **Marketing** – Demographic of one, targeted campaigns and customer specific offerings, incremental services, infotainment

- **Captive Finance** – Incremental sales, pay on use model, lease management, insure as you go, remarketing, repossession, vehicle as a subscription
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Automotive IT: Legacy Realities and Consequences

Intense Pressure to Minimize IT Costs and Increase Agility
- Maintenance for 1000 MIPS legacy environment runs $3M-$5M/yr
- Lock-in and high cost limits funds for new initiatives
- High integration cost and time-to-market delays impact front-end agility

60-80% of IT Budget Consumed by Maintenance Cost (Apps and Systems)

2/3rd of Business-Critical Applications are on Legacy Platforms

Legacy Skills are Diminishing
- Loss of business process knowledge as people retire
- Increased risk to supporting, enhancing core applications
- IT cannot react quickly to emerging business requirements

“Gartner predicts\(^1\), by 2008, organizations that have not developed a legacy modernization strategy risk losing the opportunity to leverage this portfolio due to a decline in skills and knowledge of these systems (0.7 probability).”

35M LOC Maintained in Legacy Apps at an Average Fortune 100 Company

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Urgent Need for Modernization and, …Multiple Approaches

- **Re-Architect**: By uncovering business rules, mining models and forward-engineering to re-useable services, BPM flows, and Business Rules.
- **SOA Integration**: Leave applications on MF, extend in place via adapters, WS, etc.
- **Re-Host**: Migrate to compatible stack on open systems with automated process, preserving code and data, SOA enable and integrate.
- **Replace**: custom apps with COTS: Oracle Apps for HRMS, CRM, Financials, Procurement.
- **Automatic Migration**: Convert 4GLs to COBOL or Java, PL/I to C/C++, etc.

*Mix multiple approaches based on the modernization goals*
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…that will define competitive advantage

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Example – Concept to Launch
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Automotive Industry Future of IT:
Enables End-to-End Processes with Standards Based Technologies

AIA Enterprise Business Objects & Services

Access
- Composite UI
- Mobile Access
- Analytics & Dashboards
- Workflow & Alerts
- Secure Dealer Access
- Secure Field Access

CUSTOMER
PRODUCT
CONFIGURATION
DEALER

Enterprise Service Bus
BPEL Process Manager
Data Integrator

Marketing
Sales & Order Management
Distribution & Logistics
Customer Service & Parts
Captive Finance

- Promotions Planning
- Incentives Program Management
- Incentive Claims Payment
- Effectiveness Analytics
- Campaign Management
- Customer Segmentation
- Email and Web Marketing
- Event Management
- Leads Management
- Catalog Management
- Loyalty Management
- Internet Configuration

- Dealer Order Workbench
- Vehicle Configuration
- Sales Order Management
- Collaborative Volume Forecasting
- Dealer Vehicle Allocation Management
- Vehicle Locator
- Collaborative Lead Management
- Order Tracking
- Dealer Portal
- Order Upload to Production Order Management
- Fleet Sales Management

- Transportation Sourcing
- Outbound Logistics
- Freight Payments & Audit
- Forwarding & Brokerage Operations
- Shipment Planning & Optimization
- Intranet/Intra-Enterprise
- Stock Pooling
- CKD and SKD Logistics
- Regional Distribution Center Operations

- Customer Service Operations
- Call Center
- Warranty Registration
- Warranty Claims Submission
- Warranty Eligibility Determination
- Warranty Claims Payment
- Warranty History
- Warranty Analytics
- Service Advisory and Recalls
- Vehicle Registration
- Service Parts Planning and Forecasting

- Credit Origination
- Credit Application
- Loan Contract Handling
- Document Processing
- Application Lead Generation
- Floor Plan Management
- 3rd Party Financing Interface
- Lease End
- Remanufacturing
- Collections
- Dealer Contract Management
- Dealer Self Service Captive Finance Portal
Example - Oracle Connected Vehicle Foundation
Vehicle based IT- SOA Architecture

Warranty / Services / Intelligence / Infotainment

- Vehicle Info Hub
- Event Processing

Vehicles
- Automobiles
- Trucks
- Heavy Equipment
- etc..

open embedded platform

Database Synch
Apps Provisioning
Device Management

Oracle
“Oracle’s Application Integration Architecture will help us solve our problems of integrating our front and back office systems. By leveraging an open, standards-based architecture, we will have the flexibility to make discrete changes without disrupting the entire business process.”
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