Designing Your Business and Products for Machine to Machine (M2M) Communication

Webcast April 30, 2008
Webcast Logistics

- Audio lines are muted until Q&A session

- Submit your questions via the Live Meeting Chat window at any time

- Slides available within 24 hours for Manufacturing Insights clients and attendees

- All other requests:
  - Email info@manufacturing-insights.com

- Problems?
  - Email dstark@idc.com
Manufacturing Insights, an IDC company

- Provides industry business leaders with informed opinions on the technologies required to create a competitive advantage
- Presents strategic and insightful market positions, trends, and cross-industry segmentation data
  - Aging / Emerging Workforce
  - IT for Green
  - RFID and Sensor Networks
  - Remote Services Technology
  - Sustainability
  - Warranty and Quality Management
- Encourages an open dialogue with our expert analysts to support key investment decisions
  - Asia/Pacific, Europe, North America
- Leverages IDC’s worldwide network of resources and data
Introducing our Speakers

- Joe Barkai, Practice Director, Product Lifecycle Strategies
  - Responsible for research and analysis on the types of investments that introduce operational efficiencies to the domain while improving the responsiveness to customer requirements

- Extensive experience as both a practitioner and market researcher
  - Over 20 years industry experience in product management, marketing, and business development
  - Founder and principal at Diagnostic Strategies
  - Founder of the Transportation Industry Knowledge Management Consortium that has become the Service Technology Program Office of SAE International

- Sought after thought leader for industry events with strong focus on the business value of technology in manufacturing and customer service
Introducing our Speakers

- Benjamin Friedman, Research Manager, Product Lifecycle Strategies
  - Examines key challenges facing manufacturing companies, such as innovation, time to market, operational efficiency, and product quality
  - Experience in sensor networks, automatic identification technologies (Universal Identification and RFID), Internet data center engineering and operational best practices.
  - Studied at the AT&T Learning Center, Hebrew University of Jerusalem and the London Business School.
Machine to Machine (M2M) Defined

Any technology to enable wired or wireless communication between machines, and connect remote machines to the enterprise.

Diagram:
- **Intelligent Device**
- **Network**
- **Enterprise**
- **User/Operator**

- **Data Acquisition/Device Control**
- **Data Transmission**
- **Data Analysis & Assessment**
- **Response**

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M2M is Hot

Stage of M2M implementation

- Do not expect to add M2M within the year: 11%
- Adding M2M within the year: 8%
- Using M2M in one area: 32%
- Using M2M in multiple areas: 49%

Source: Manufacturing Insights, 2008
M2M is Top of Mind for Service Organizations

Top priorities for IT Investments in service organization

Source: Manufacturing Insights, 2008
Why Hot?

- **Business pressures**
  - Need to do more with less
  - Increased cost pressures on the service organization
  - Need to extend life and utilization of existing assets
  - Regulatory compliance and sustainability awareness

- **Products as service platforms**

- **Dropping technology barriers**
  - Pervasive, cost-effective connectivity
  - Data security
  - Cost/performance of data acquisition, processing and communication semiconductors
Benefits from M2M implementation

Regulatory compliance
New source of revenue
Improved customer service
Improved asset monitoring
Lower operation costs

Source: Manufacturing Insights, 2008
Extreme Verticalization

- Islands of individually successful implementations
- Narrow domain and business focus
- Why?
  - Inadequate and immature business models
  - Preference for smaller, manageable scale and shorter time to value
  - Many vendors have narrow domain focus
  - Not quite understood by IT
  - Lack of open M2M standards
  - Questionable ROI
Current State

- Bottom up, technology-centric approach
- One project at a time
- Machine-to-back office more than machine-to-machine
- Questionable scalability
- Suboptimal enterprise-level process integration
- Extreme verticalization
Adoption Accelerators

- **Business**
  - Need to extend life of assets, improve uptime and total cost of ownership
  - Ability to provide higher service levels and reduce costs
  - Remote connectivity as a platform for new revenue models
  - Remote service allows high level of workforce and resource optimization
  - Aging workforce

- **Technology**
  - Development of communication and open M2M standards
  - Adoption of enterprise service oriented architecture (SOA)
  - Continued expansion of global wireless coverage
  - Lower cost of wireless communication
  - Increased density and cost/performance of M2M components
Design Your Business for M2M

- Design your M2M strategy
  - What is the strategic business value?
  - What is the M2M service model?
M2M: Faster, Better Decisions

Resiliency in Decision Making

- Decision Context
- Calibrate Processes
- Speed in Detection & Response

Information

- Business Rules & Analytics
- Consistency in Execution

Governance

- Optimize Cost & Service Levels
- Calibrate Processes
- Control Activity

Maximize Value of Assets & Human Resources

- Assets
- Infrastructure
- Human Resources
Business Value First, Technology Second

- M2M across the service organization
  - How will M2M Improve decision making capacity?
  - What is the business impact?
  - What are the (non-technical) potential barriers?

- Don’t get sidetracked by the technology

- If offered to your customers, what is the value to be realized by your customer? What are the barriers?
Business Value First, Technology Second

- Don’t just automate existing processes

![Pie chart showing percentages of new processes, enhanced existing processes, and automated manual processes.](image)

Source: Manufacturing Insights, 2008
What About the ROI?

- M2M: ROI or a strategic enabler?
- The real options model
  - M2M as a platform to propel business opportunities
  - Technology proficiency, business process maturity, IT partnership
Data, Data Everywhere

- More data than you know what to do with (but possibly more than you really need)

- Role of data
  - Visibility and early warning
  - Context for decision making
  - Continuous improvement

- Equipment Maintenance
  - Early Warning
  - Remote diagnostics
  - Prognostics
Plan Ahead

- Design your future product for M2M
- M2M needs to be designed-in, not an afterthought
  - Early involvement
  - Standards-based design
  - Service product design as an integral part of product design
- Educate product managers, engineering and IT
Partner for Success

- Technology and process challenges abound
  - Wireless technology
  - Integration and certification
  - Data security
  - Network scalability and resilience
  - Business process reengineering

- Consider
  - M2M as a Service (M2M on demand)
  - Business process outsourcing
A Call for Action

From extreme verticalization to a uniform platform
A Call for Action

- Standards and business models
  - Development of communication and M2M standards
  - SOA application of M2M Services
  - Developing M2M as a Service

- Industry Groups
  - Promote best practices
  - Establish standards
  - “Open source” community
    - M2M services
Related Reports and Your Questions

- The Aging Workforce — Impact and Opportunity
- Redefining Design for X
- Engineering Change Management — How Manufacturers Manage Product Design Changes
- Machine-to-Machine Communication: Technology Overview and Market
- Smart Services Come of Age?
- Dassault Systèmes: PLM 2.0 Is Here

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As a Reminder…Green IT Webcast

- IT for Green: Impacting the Triple Bottom Line - People, Planet, and Profits
  - May 21, 2008 - 2:00 pm - 3:00 pm
  - Join **Kimberly Knickle**, practice director, Manufacturing Insights as she presents the latest findings and overviews how manufacturers' IT and business organizations, including supply chain, engineering, operations, and more, are developing what-if scenarios to guide their sustainability efforts today and as they mature over time.
Upcoming Events

- 5th Annual Remote Device Monitoring & Management Summit
  - June 22-26, 2008 - Nashville, TN
    - Benjamin Friedman, research manager, Product Lifecycle Strategies, will be at this 5th annual Remote Device Monitoring & Management Summit.

- 4th European PLM Summit 2008
  - June 23-25, 2008 - Toulouse, France
    - Join Pierfrancesco Manenti, EMEA Research Director at this local event.

- M2M United
  - June 23-26, 2008 - Westin Chicago North Shore, Wheeling, IL
    - Join Joe Barkai, practice director, Product Lifecycle Strategies as he presents at this annual conference which promotes the development, awareness, and business value of machine-to-machine technology and the industries that surround it.