

# **A Proven Technology's Time Has Come...Again!**

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AMR Research, Inc.**

# AMR Research: Who We Are

- Industry and Market Analysis Firm
- Advise business and technical executives on using technology and applications to implement business strategies
- Boston, MA – San Francisco, CA - London, UK
- Incorporated - 1986  
Privately Held
- 200 Employees
- Users, Vendors,  
Financial Community



# The Big Issues Manufacturers Face Today

- **Global markets**

- *World-wide competition*
- *World-wide product visibility*
- *Standardized quality*

- **Technology**

- *Increasing demand for innovation & shorter product lifecycles*
- *Time-to-market & Time-to-volume*
- *Technology convergence - RFID*

- **Cost reduction**

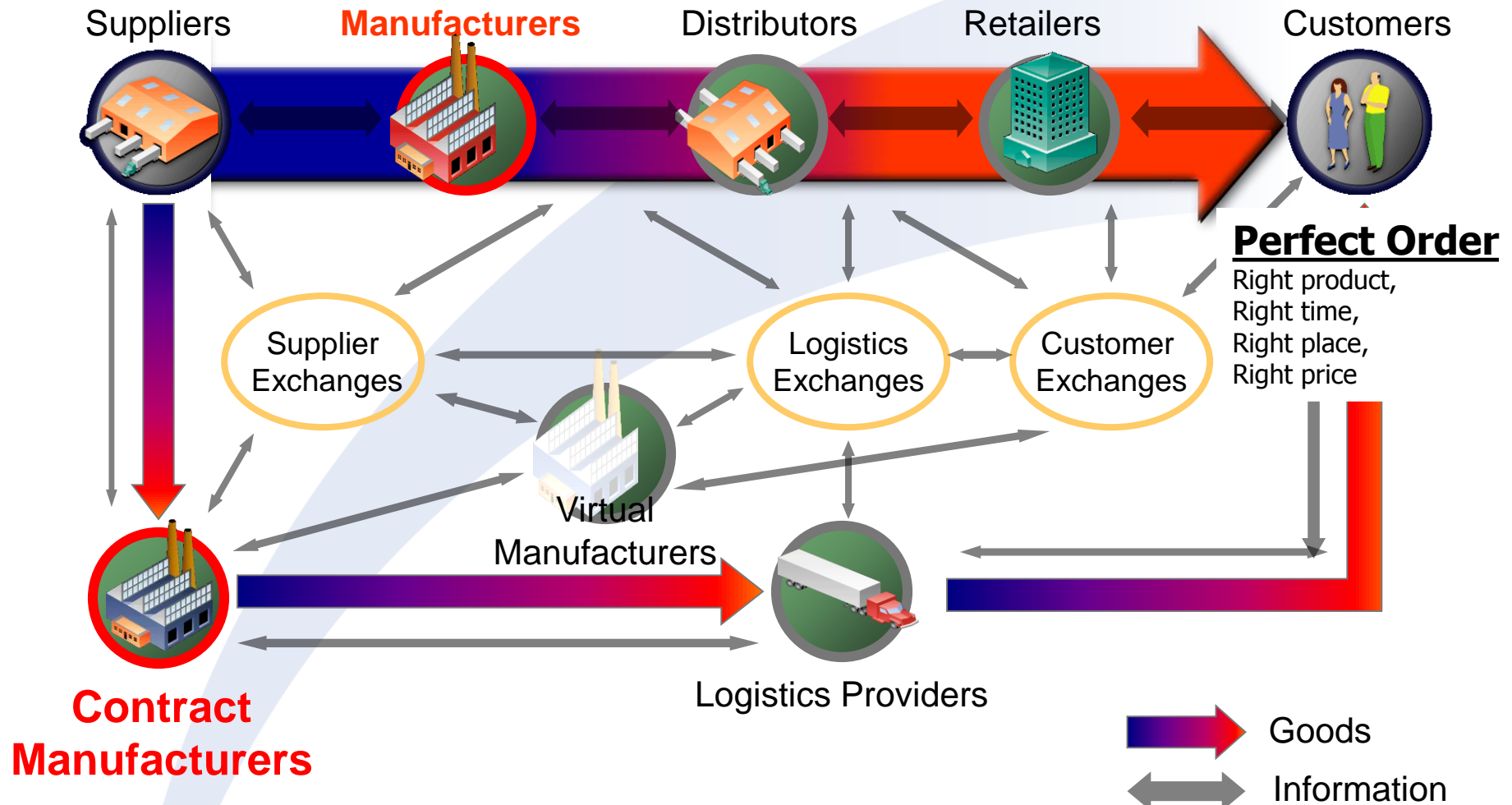
- *The “China Price”*
- *Six sigma, lean mfg*
- *Outsourcing*

**Much Bigger Than  
Anyone Thinks!**

- **Regulatory compliance**

- *Sarbanes-Oxley, 21 CFR part 11, TREAD, WEEE, RoHS, etc...*

# The Demand Driven Supply Network...



## ...Requires Manufacturing Excellence

# Supply Network Operations

The synchronized execution of compliant manufacturing and logistics processes across a dynamically reconfigurable supply network, to profitably meet demand.

# The Reward For Manufacturing Excellence

- **Importance of Perfect Order Performance**

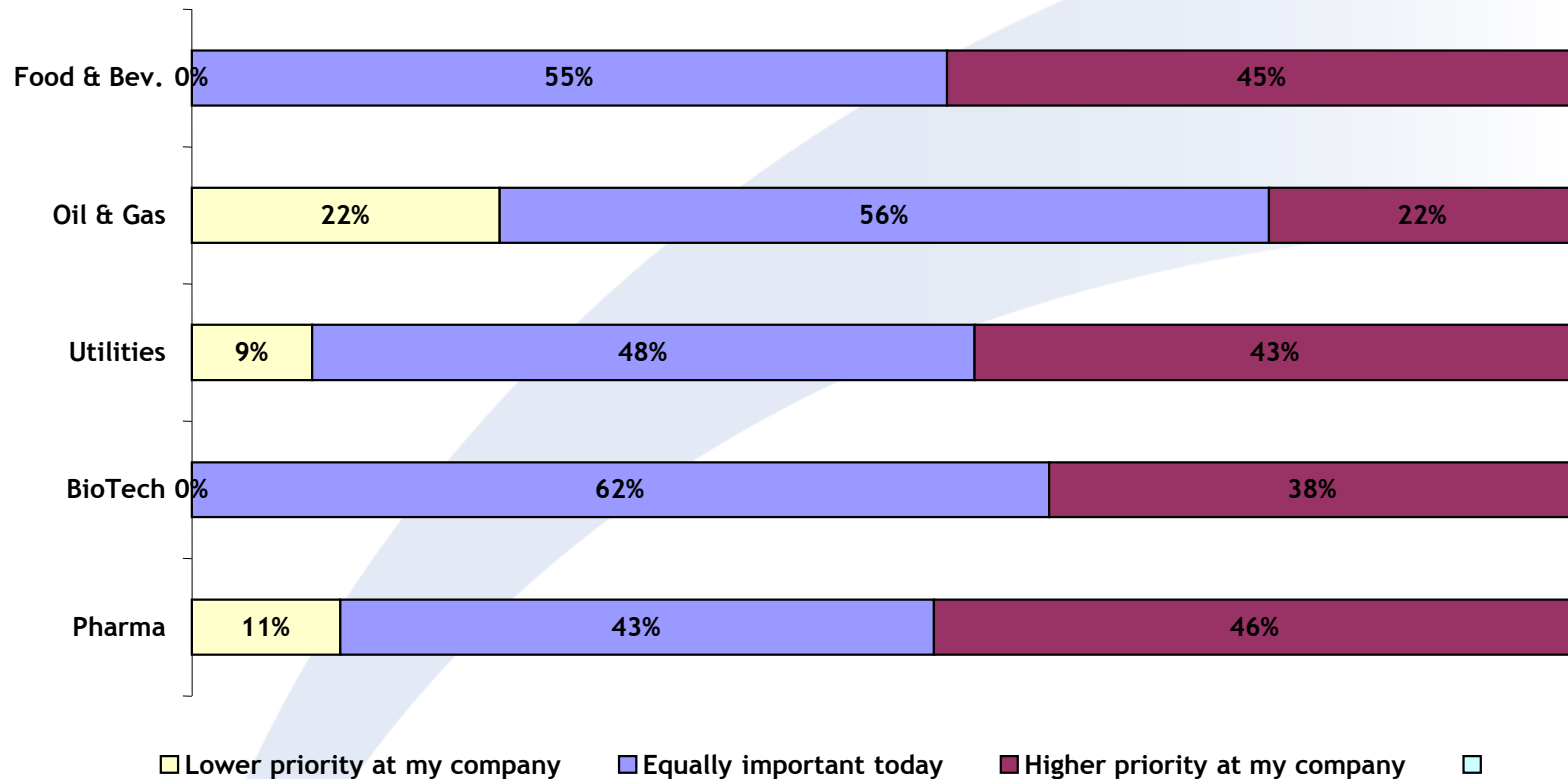
- 15% less inventory
- 17% stronger perfect order fulfillment
- 35% shorter cash-to-cash cycle times
- 1/10 of the stock outs of their peers

- **What It Means**

- 10% Improvement = 50 Cents Better EPS
- 5% Improvement = 2.5% Better ROA
- 3% Improvement = 1% Improved Profit

• ***Right Process***  
• ***Right Technology***  
• ***Right Metrics***

# Visibility into Real Time Performance, by Industry

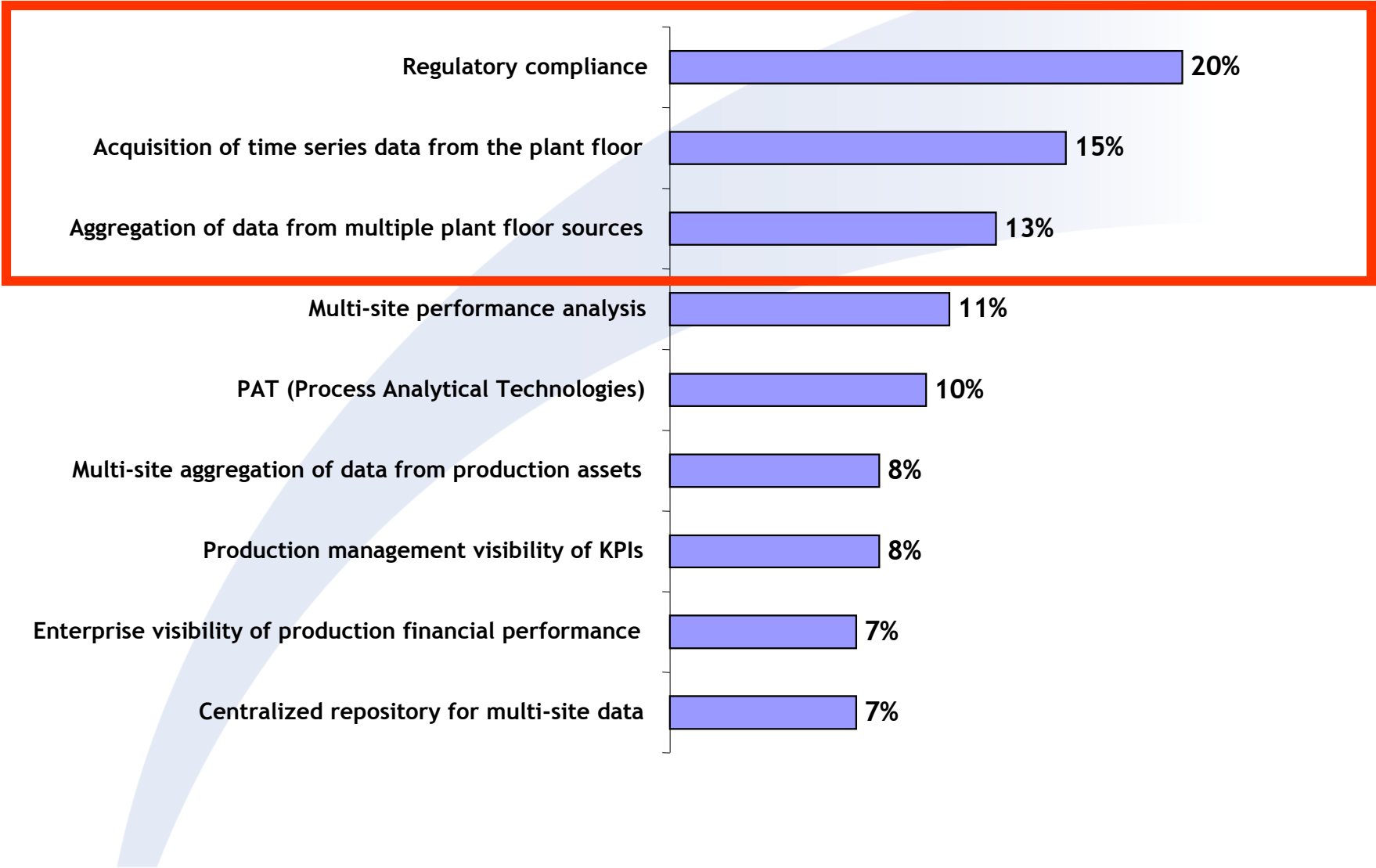


# Compliance Tops the Manufacturing Agenda



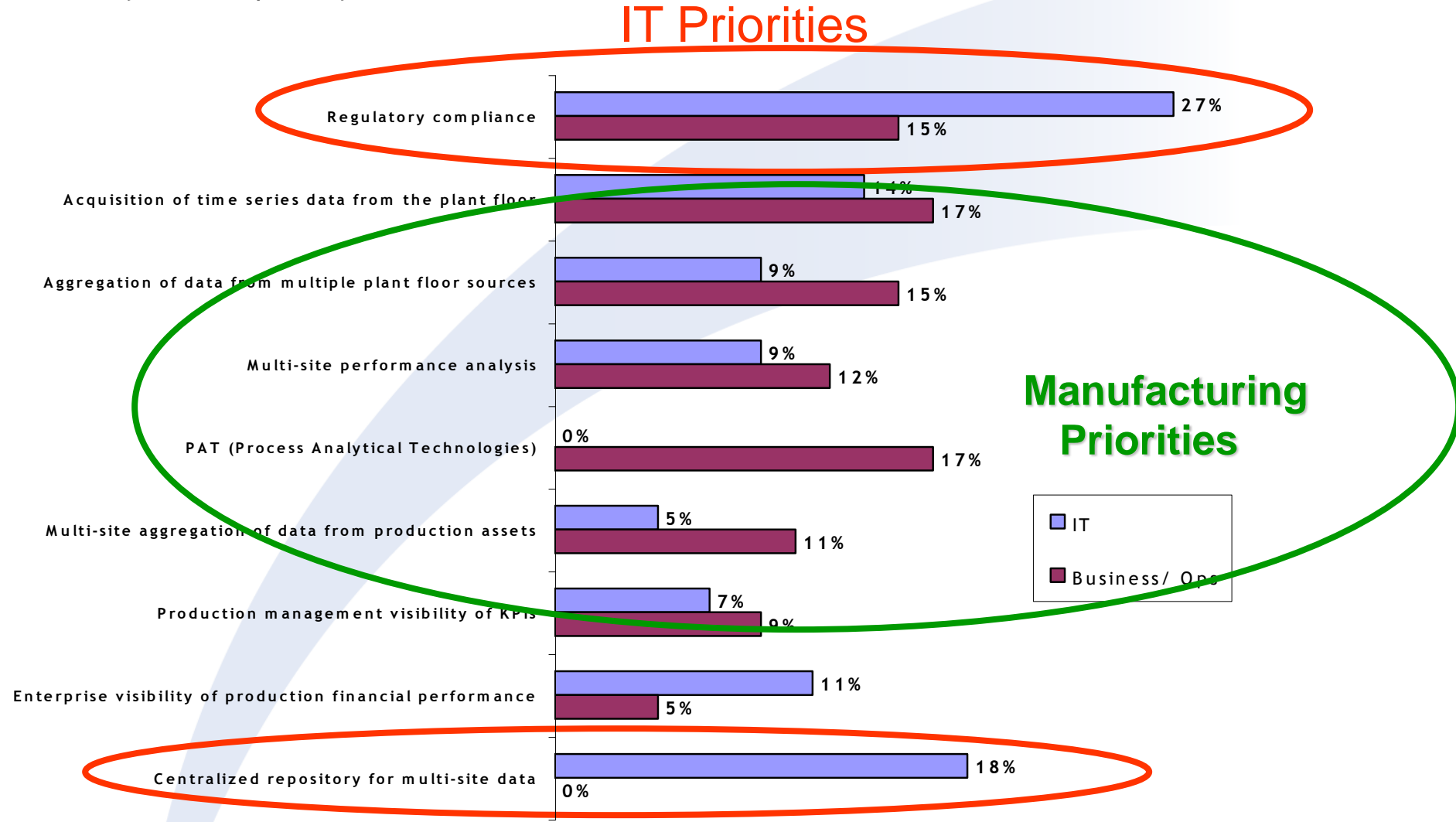


# Process Improvement Priorities



# Different Views Converge on the Shop Floor

If you had the budget to improve one of the processes we've discussed, which would be your TOP priority?



# Global Coordination, Local Execution

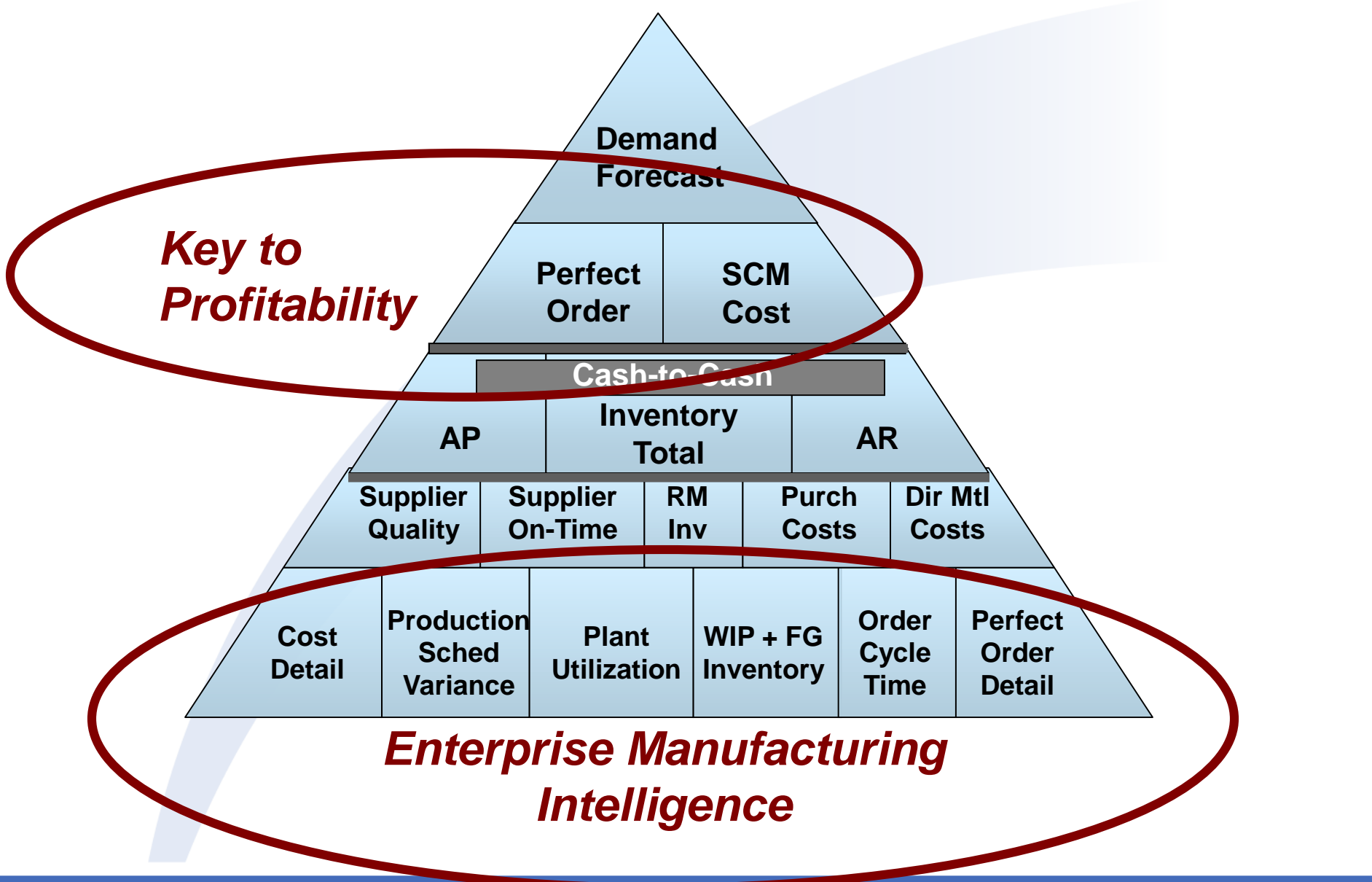
- **Supply Network Operations**

- **Global Visibility of manufacturing performance** and Traceability, genealogy, and quality management across extended supply network for warranty, safety, & compliance **(EMI)**
- **Products and Specifications** managed centrally and electronically communicated across fleet of assets (plants)
- **Event driven Sales & Operations Planning (S&OP)**, same day scheduling across fleet of assets (plants), requiring deeper insight of equipment and process capability

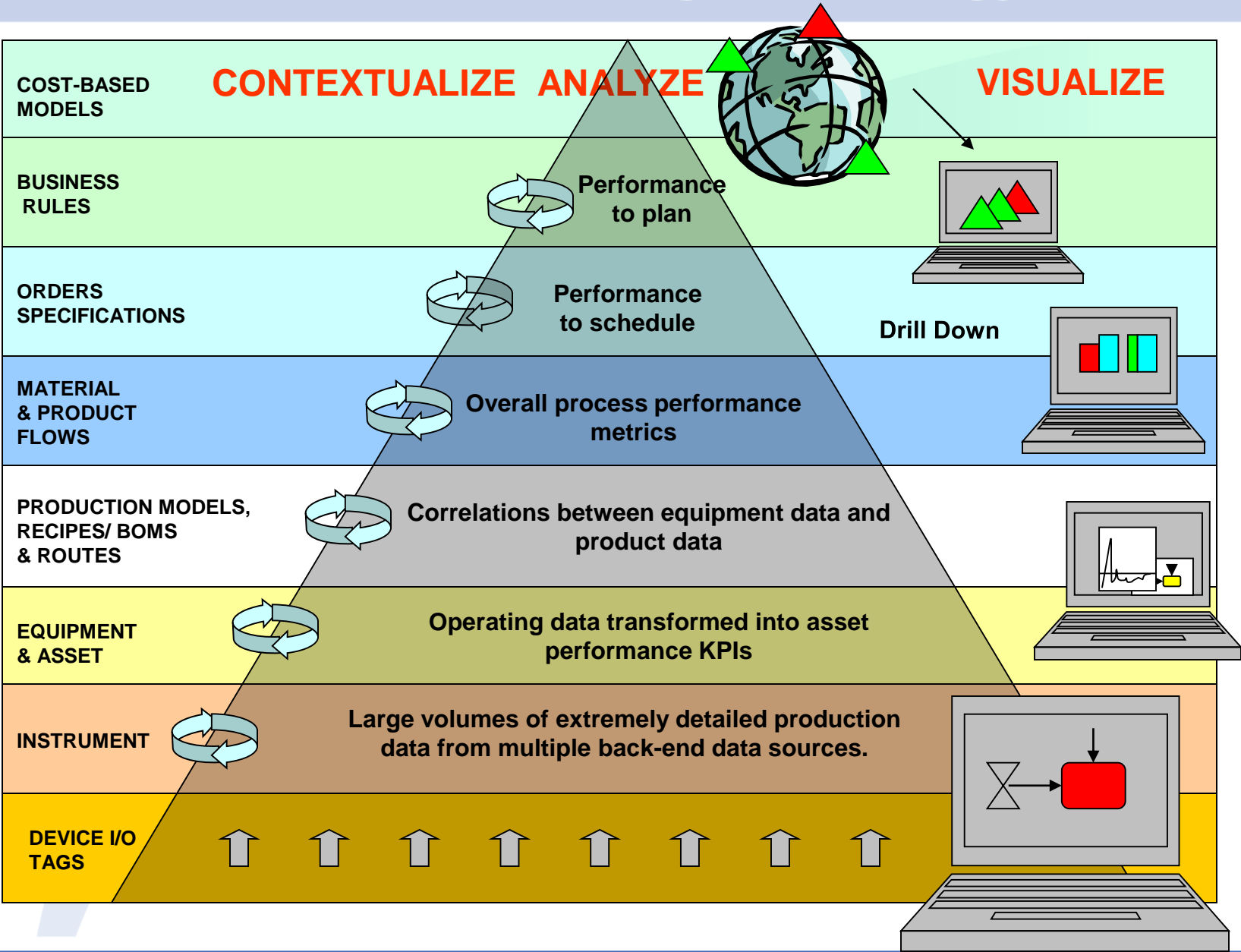
- **Production Operations**

- Product or Specification Management
- Production Order & Recipe Execution
- Flexible plant automation for rapid changeovers
- Track & Trace, Genealogy, Quality
- Equipment & Process Capability, Plant Production Scheduling

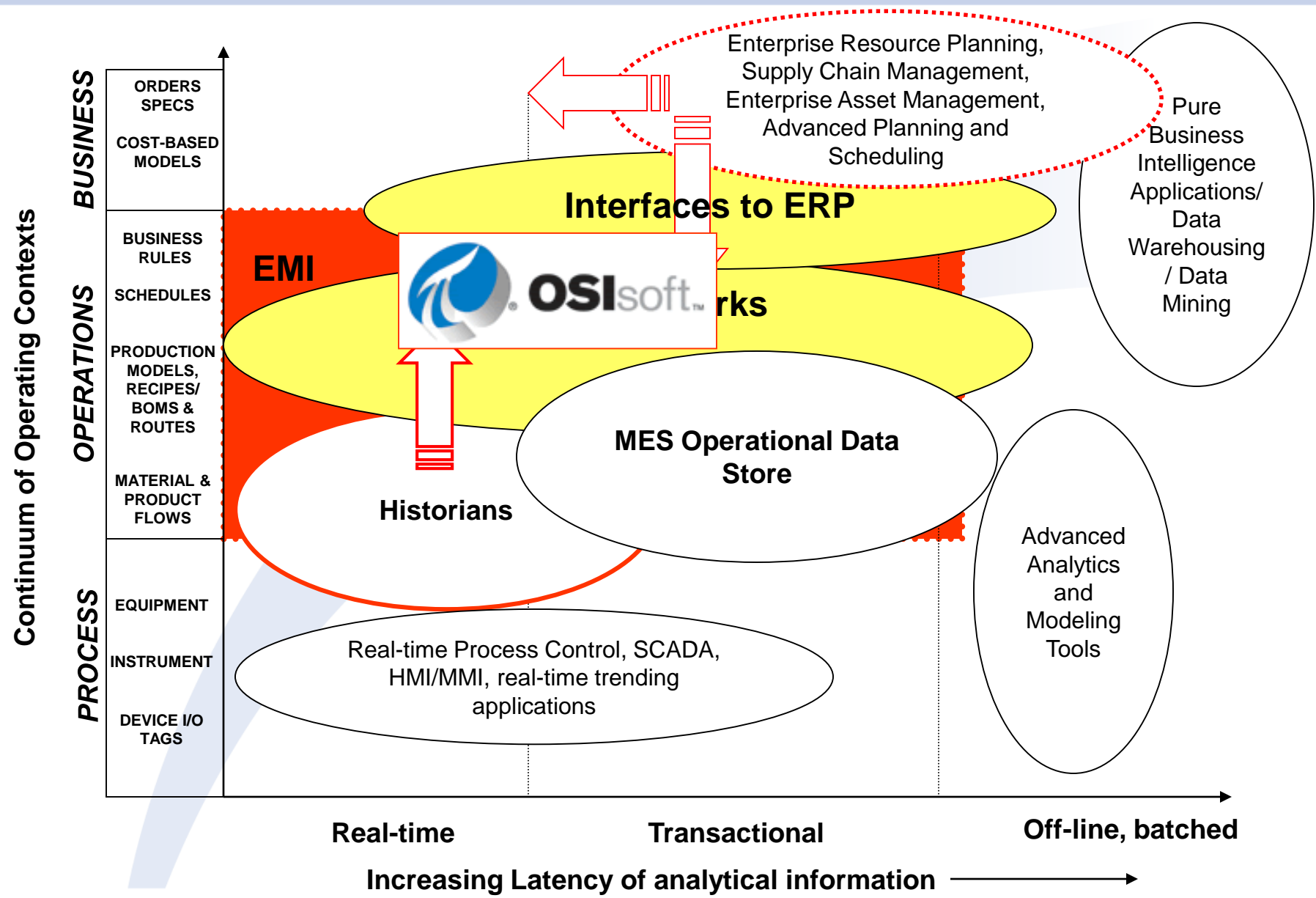
# Manufacturing Impact on Business Performance



# Business Meets Manufacturing Technology



# Evolving EMI Landscape



# The New Strategic Role of Data Historians

- **The Foundation for Global Coordination and Local Execution:**
  - Regulatory Compliance Engine
  - Process Analytic Technology
  - Asset Performance Management
  - Item Level RFID tracking
  - Enterprise Manufacturing Intelligence
- **Data Warehouses Can't Provide real-time Performance Management**

# Conclusions

- **Agile, Predictable Product Supply is the foundation of Profitability**
- **Predictable Product Supply requires:**
  - Visibility across departments and business units inside and beyond your four walls to include customers, contract manufacturers, component suppliers and logistics providers
  - Constant measurement against goals / Service Level Agreements
  - Constant tuning to adjust for variability in supply & demand
- **EMI should be an integral part of your company's Supply Network Operations strategy**
- **EMI is the key provider of information derived from real time data**
- **Expand EMI to Performance Management by linking goals and incentives to the KPIs**



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