



IBM Global Services

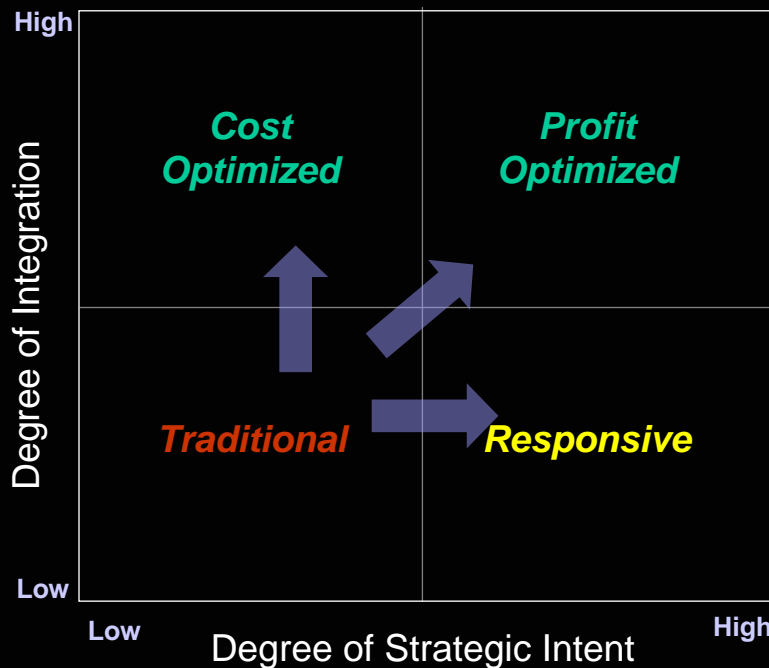
# IBM Service Parts Management

**Dr. Grace Lin,**      **Global Sense and Respond Leader**  
**IBM Business Consulting Services**  
**Member, IBM Academy of Technology**  
**VP Practice, Informs**  
**Email: [gracelin@us.ibm.com](mailto:gracelin@us.ibm.com)**

**2005 Department of Defense Maintenance Symposium & Exhibition**  
**Birmingham, Alabama, USA**  
**October 24-27**

# Several forces are challenging the sustainability of the traditional model of service management

## Forces of Change

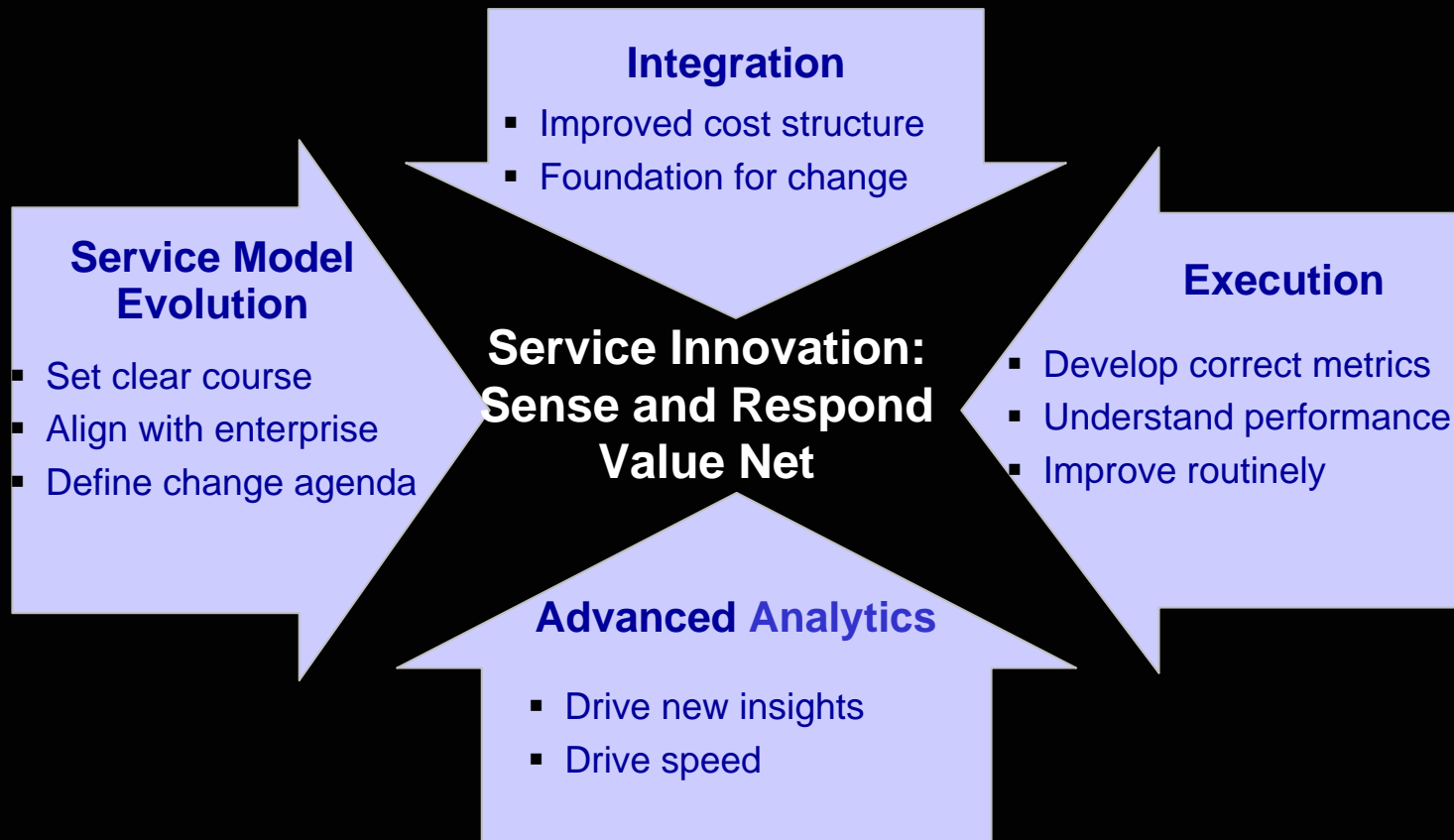


- Warranty impact
- True expense to revenue
- Missed profit potential
- “Service” and the Competitive Equation
- Customer satisfaction
- Rich target for optimization

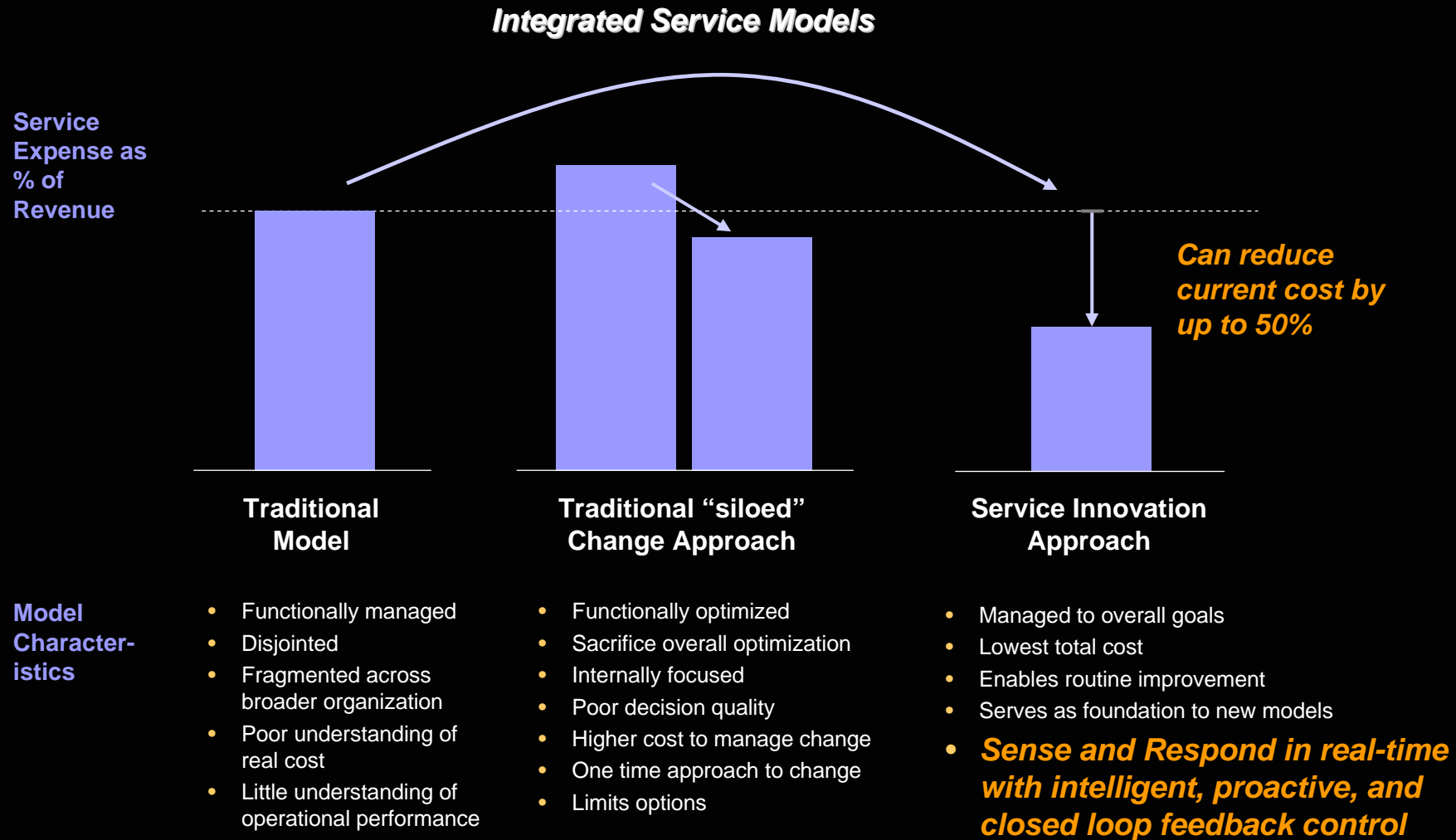


In many cases the traditional service model is impeding the CEO agenda

# Service Innovation: The Path to Change



# We have learned that applying innovation to the service function drives transformational change



IBM service business model is based on the tight integration of the core processes across the value chain including Spare parts management and customer supply chain, and closed-loop feedback mechanisms

## Global characteristics

5 worldwide Control Towers and physical hubs  
 300 main stock locations WW (170 IBM countries)  
 Over 250.000 Service Part numbers for IBM and OEM  
 Service ranging from: On site - 2/4hrs - Next Day  
 Network availability 7x24x365  
 Over 1400 WW parts suppliers  
 One WW IT system and 2 GEO legacy IT systems  
 Back-up for international discontinuity issues  
 30 million movements a year both Forward and Reverse  
 Network > 90% executed by Logistic Service Providers

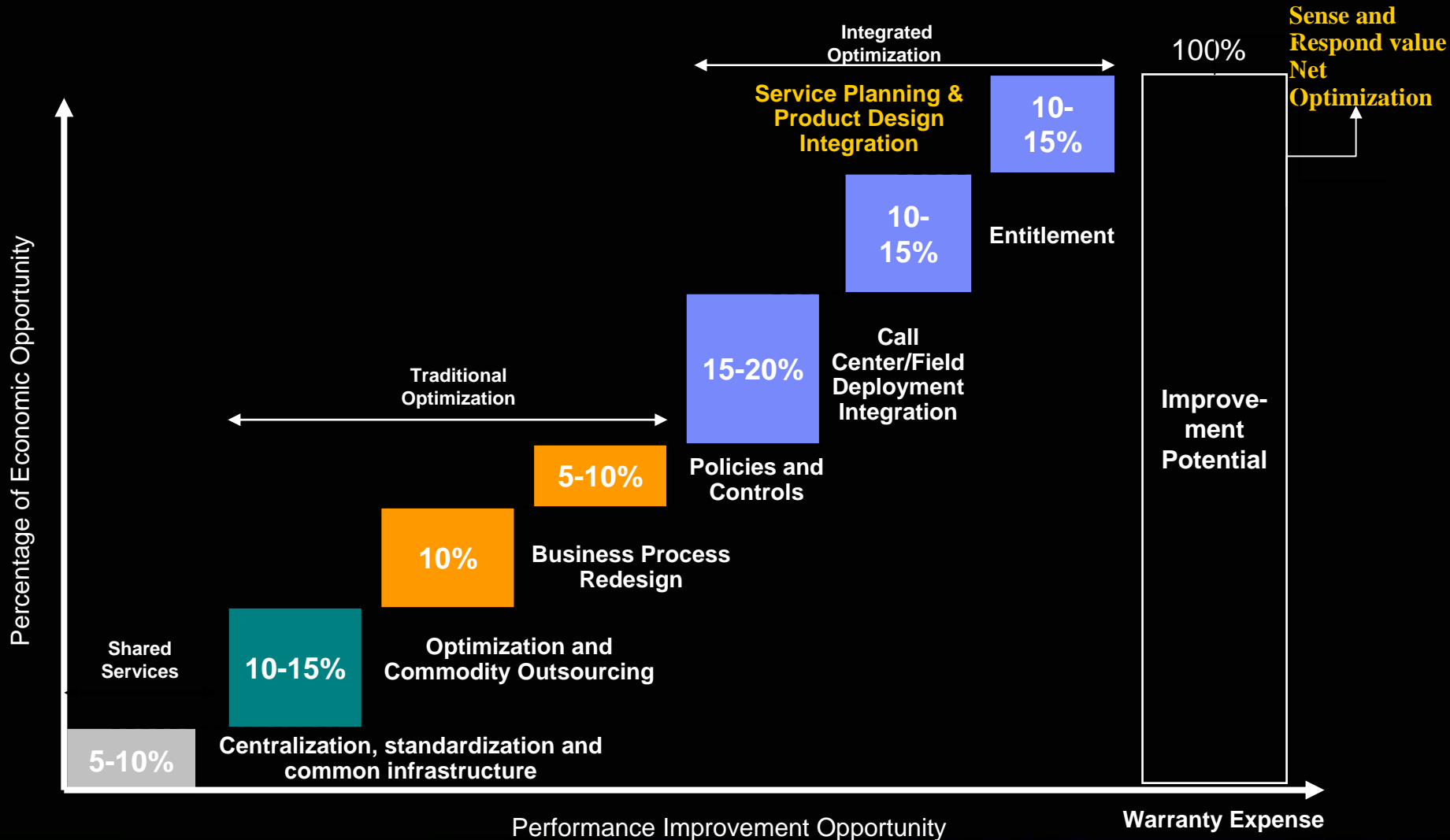


- Warehousing
- Import / export
- In- outbound transportation
- Customer delivery
- Customer returns

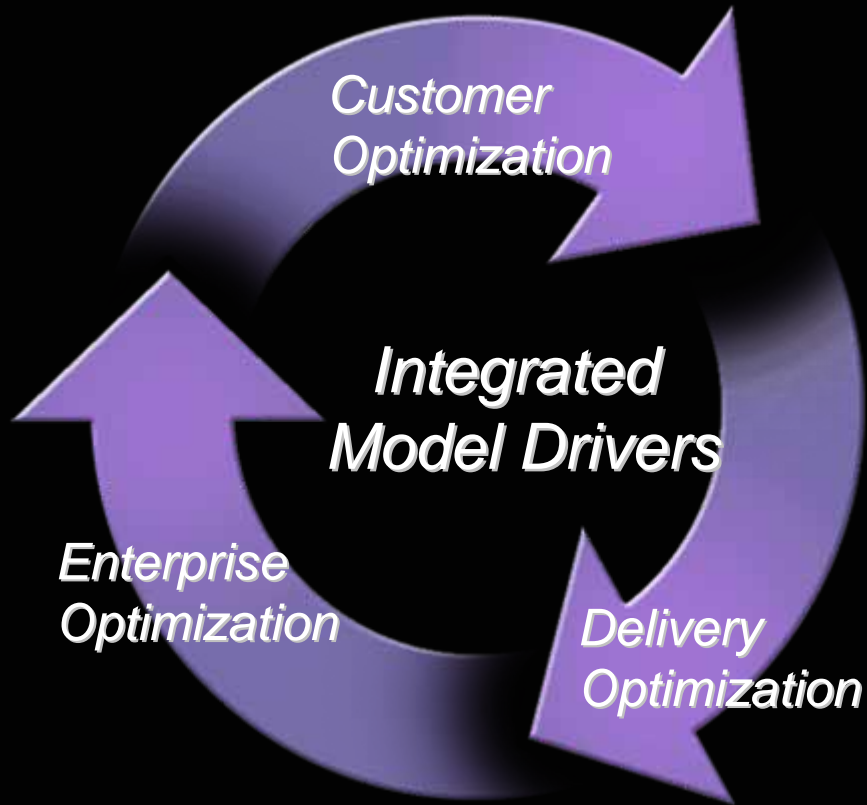
## Current US Environment

More than 5000 IBM Field Maintenance Service Personnel  
 Respond to >3.4M Customer Service Requests Per Year  
 Receive 1.4M Calls Electronically Per Year  
 IBM & Selected OEM Hardware Products  
 Service 24x7, 365 Days Per Year  
 350k Parts Stocking Units – 4.2M Parts Movements Per Year  
 About 1500 Remote Support & Service Planning Personnel  
 About 2M Calls Remotely Assisted Customer PD  
 50% of the Problems Cleared Remotely

# Over 50% of the opportunity will remain unaddressed if one simply automates the traditional model



# Integrated Service Model Value Drivers



- **IBM Service Parts Solutions:** Seamless e2e process leveraging IBM systems & process blueprint, Execution outsourced to multiple service partners
  - **Inventory Initiatives**
  - **Integrated Product Development process**
    - maximizing parts and inventory management by building a common supply, warranty and reutilization plan at the earliest possible stage of product development
  - **Reverse Logistics**
  - **Single Global Parts System**
    - Data Management,
    - Time Based Field Planning. Field Forecast
    - Central Planning: Forecast
    - Order Management / Procurement

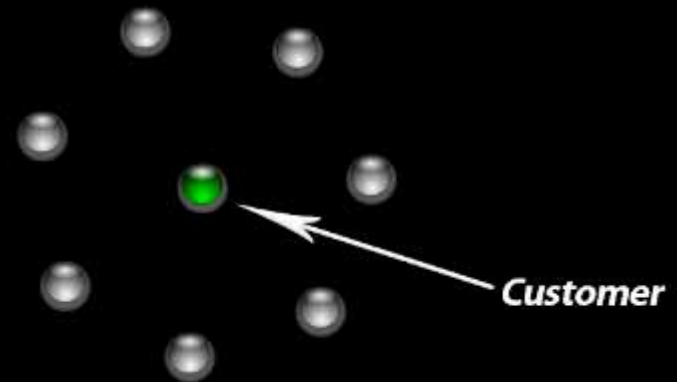
## Inventory Initiatives

- Air Support Program
  - high dollar low usage parts
  - build 2 – 4 hour network
- Inventory Deployment Strategy
  - Network Neighborhood: Time based Inventory Optimization Proprietary Software
- OEM Direct Ships
- Commodity Logistics Center
  - IBM retains only same day inventory for high volume commodities
- Inventory and policy Reduction Program
  - Policy Reduction
  - Order Line Management
  - Excess Disposition
- Global Parts System

## IBM Neighborhood Process

Service Regions are created around the Customer

Pass-up demand is converted to Pass-Along demand



Service Delivery criteria is Time-Based

Inv. Transport & Handling Costs Influence Stock Decision

Regional Containment is Improved



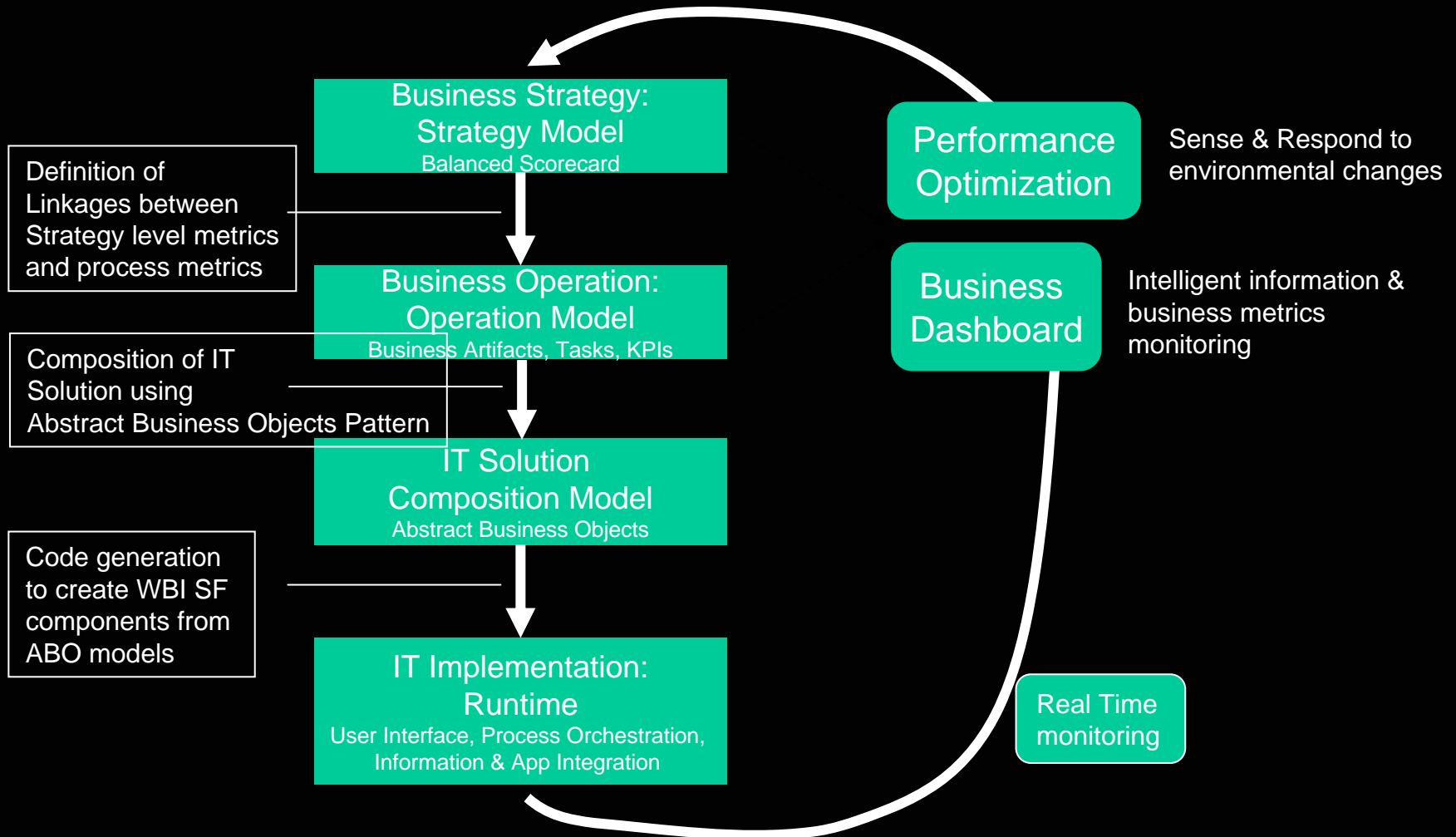
## Business Critical Objectives

| Engineering<br>Vitality | Parts Delivery Time (PDT) |           |             |             |            |
|-------------------------|---------------------------|-----------|-------------|-------------|------------|
|                         | 2<br>Hour                 | 4<br>Hour | Same<br>Day | Next<br>Day | 2nd<br>Day |
| V1: Hard Down           | 85%                       | 90%       | 95%         | 97%         |            |
| V2: Degraded            |                           | 80%       | 90%         | 97%         |            |
| V3: Safety Impact       |                           |           |             | 90%         | 97%        |
| V4: Preventative Mnt.   |                           |           |             | 70%         | 90%        |
| V5: Non-Vital           |                           |           |             | 50%         | 80%        |

Engineering classifications used to determine part failure  
impact on machine performance

**Service Group**

# Sense and Respond Model Driven Business Transformation



# Service Parts Management



➔ **Sense and Respond Value Net  
Service Parts Management**