

Air  
Land  
Sea  
Space  
Cyberspace

Innovation. In all domains.

# **CMMI® and Business Improvement at Raytheon**

Dave Tyler  
Sr. Manager  
Enterprise Process Effectiveness  
Raytheon Intelligence and Information Systems

17 November, 2009

## Raytheon Today

A Global Leader in Defense,  
Homeland Security and other  
Government Markets



- \$23.2 billion in sales in 2008
- 73,000 employees worldwide
- More than 8,000 technology-driven programs
- Locations in 50 states, 80 countries, 7 continents
- Among the top 5 aerospace and defense companies in the nation



## Raytheon's Core Markets

Expanding opportunities to provide innovative solutions



Our Domain Knowledge and Technical Leadership Creates Expanding Opportunities in Four Core Defense Markets:

### **1. SENSING**

Technologies that acquire data and create the information needed for effective battlespace decisions

### **2. C3I**

(Command, Control, Communications and Intelligence Systems)  
Integrated real-time systems that optimize operational planning and execution

### **3. EFFECTS**

Technologies that achieve specific military actions or outcomes

### **4. MISSION SUPPORT**

Total life-cycle solutions that ensure NoDoubt™ performance

## Raytheon Businesses



# Raytheon Process Improvement

The way we develop products & provide services



A critical success measure

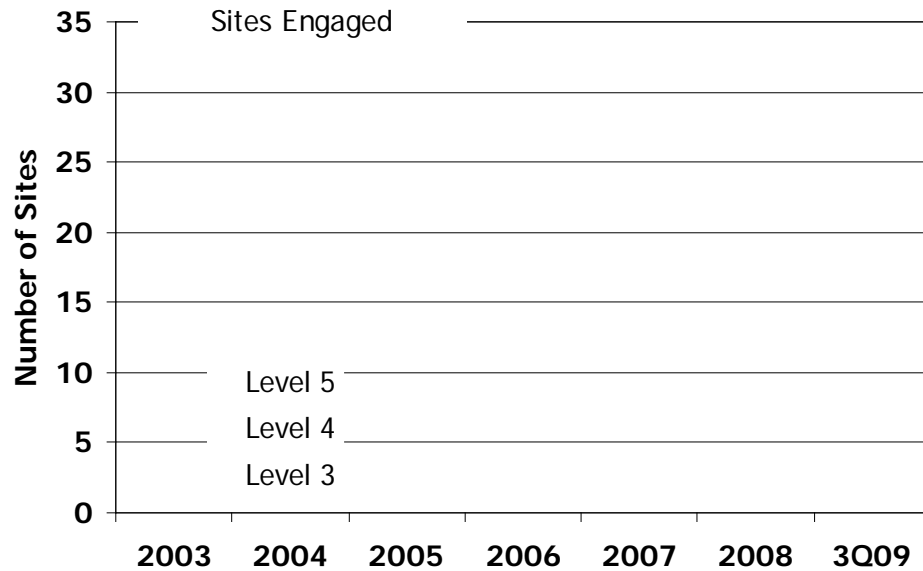
**Mission Assurance**

Our focus on No Doubt™ solutions for the warfighter



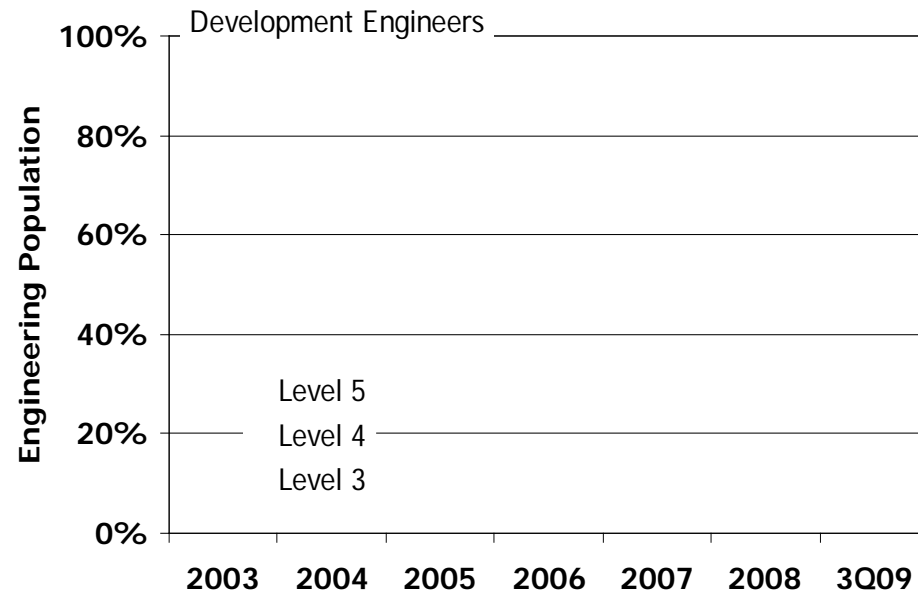
Our primary mechanism for continuous improvement

# CMMI® Adoption at Raytheon



**Virtually all of the engineering population engaged with CMMI®**

**Most divisions now operating at Maturity Level 5, including two v1.2 appraisals in last 12 months**



**Early Adoption and Commitment to High Maturity at Raytheon**

# Sample Benefits

## ■ Productivity

- Systems Engineering: 14.3% Improvement
- Software Engineering: 43 - 65% Improvement (depending on project)
- Hardware Engineering: 25 – 56% Improvement (depending on discipline)

## ■ Quality

- Systems Engineering: requirements volatility reduced by 56%
- Software Engineering: 12% improvement in defect containment
- Hardware Engineering: 65% improvement in drawing defect density

## ■ Cost/Schedule

- 4% decrease in CPI and significantly reduced variability
- 5% improvement to on-time deliveries

## ■ Process Management Cost

- \$15M savings over 5 years in process infrastructure cost
- 5:1 reduction in process guidance levied on business execution

**Maturity Levels Don't Tell the Whole Story**

# Non-Quantitative Benefits of CMMI®

- Establishes clear roles and responsibilities for business execution
- Documents a common language across broad spectrum of business functions
- Focuses process improvement on quality and performance objectives
- Provides for structured decision making instead of “seat of the pants”
- Helps answer the “are we there yet?” process institutionalization question
- Expands the reach of Raytheon Six Sigma
- Changes expectations (and behavior) of management

**Achieving the “I” in CMMI®**

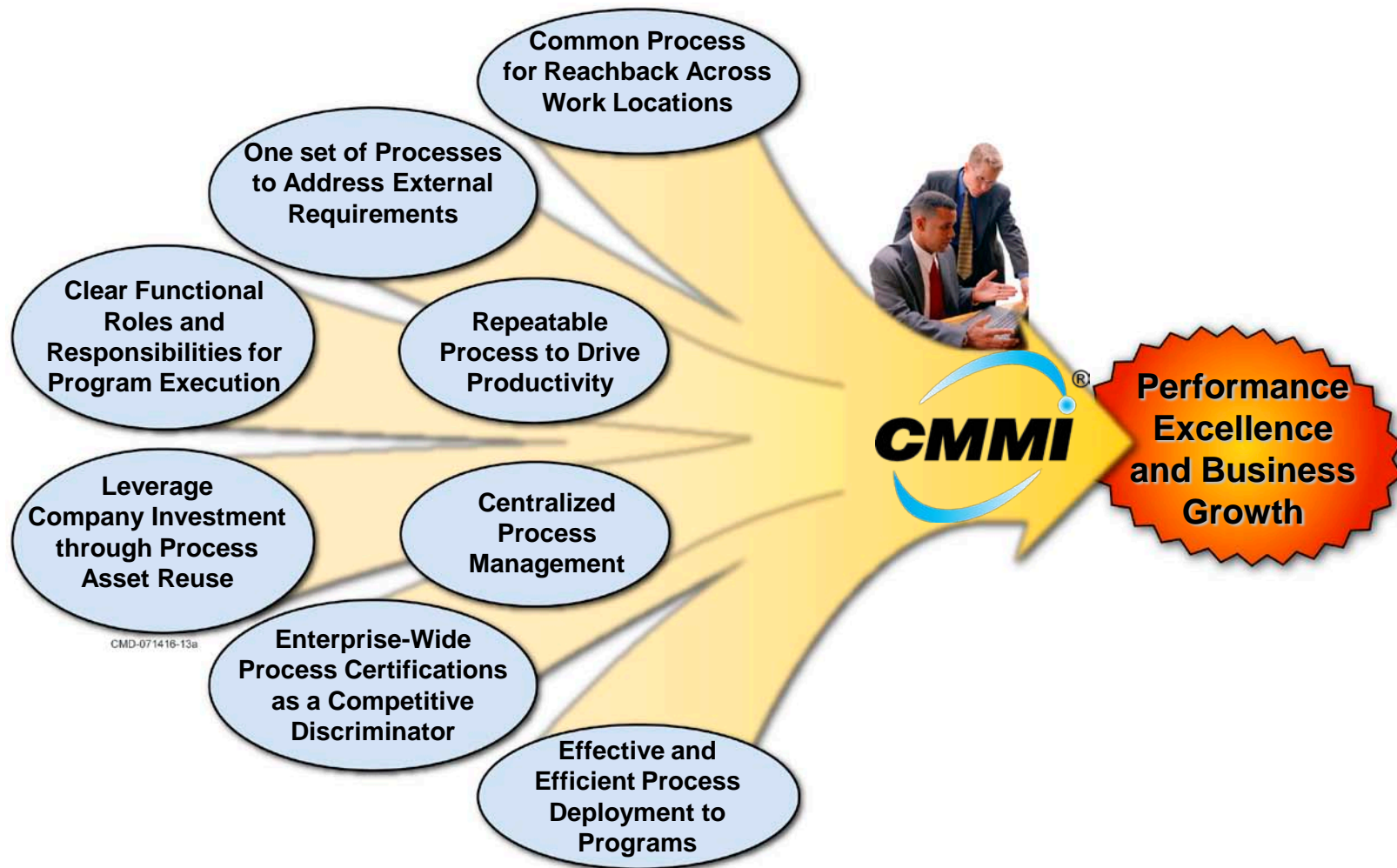


# Looking Ahead

- Continued focus on High Maturity
  - Leverage established best practices in the company to enable high maturity practices across the board
  - Invest in Capability Levels where Maturity Levels don't make sense
- Implementation of CMMI-SVC
  - A visibly better “fit” for the engineering services business
  - Provides a new benchmark in an increasingly competitive market
- Integration with other improvement paradigms
  - ISO9001 and AS9100 in development organizations
  - ITIL, ISO20000 and COBIT in services organizations
  - Lean models in production organizations

**Steady Momentum for CMMI® Implementation**

# The Bottom Line



**CMMI<sup>®</sup> Drives Business Value for Raytheon**