
# Critical Role of Software Engineering in Development Planning and Sustainment

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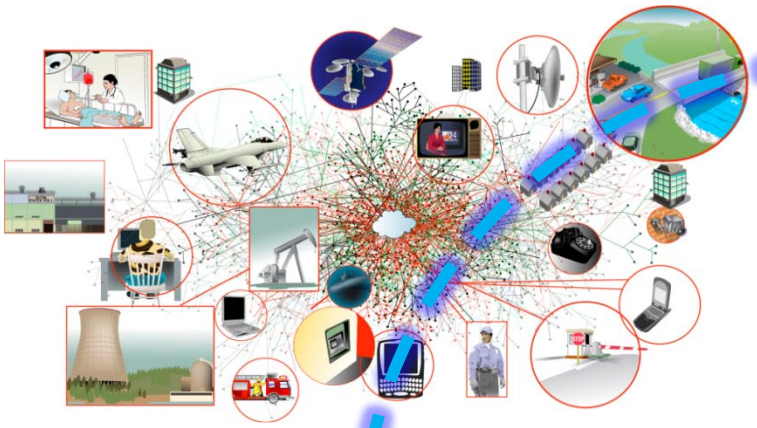
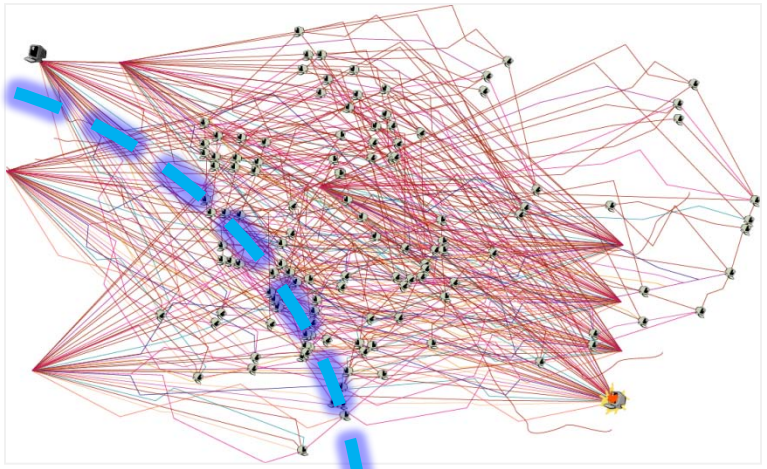
**ODDR&E/Systems Engineering**

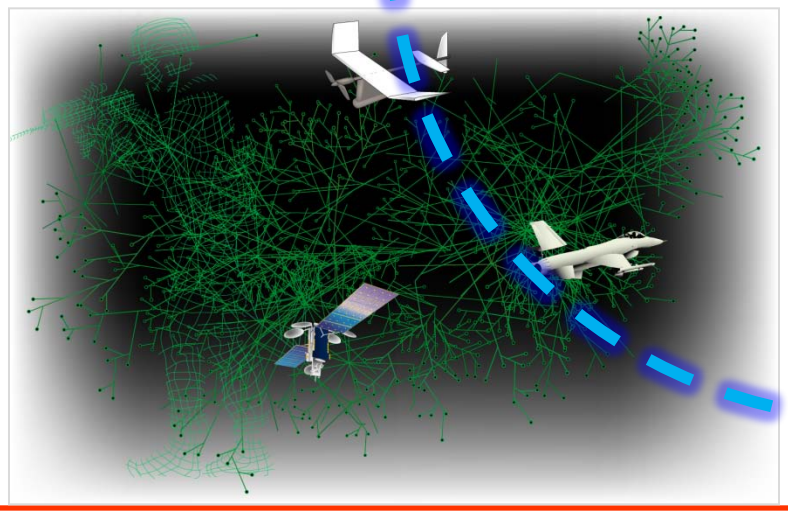
**13th Annual NDIA Systems Engineering Conference**
**San Diego, CA | October 28, 2010**

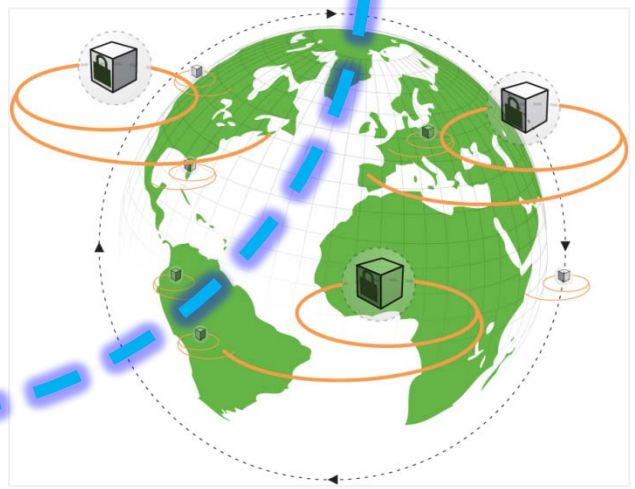
# Software – 21st Century Glue





SW

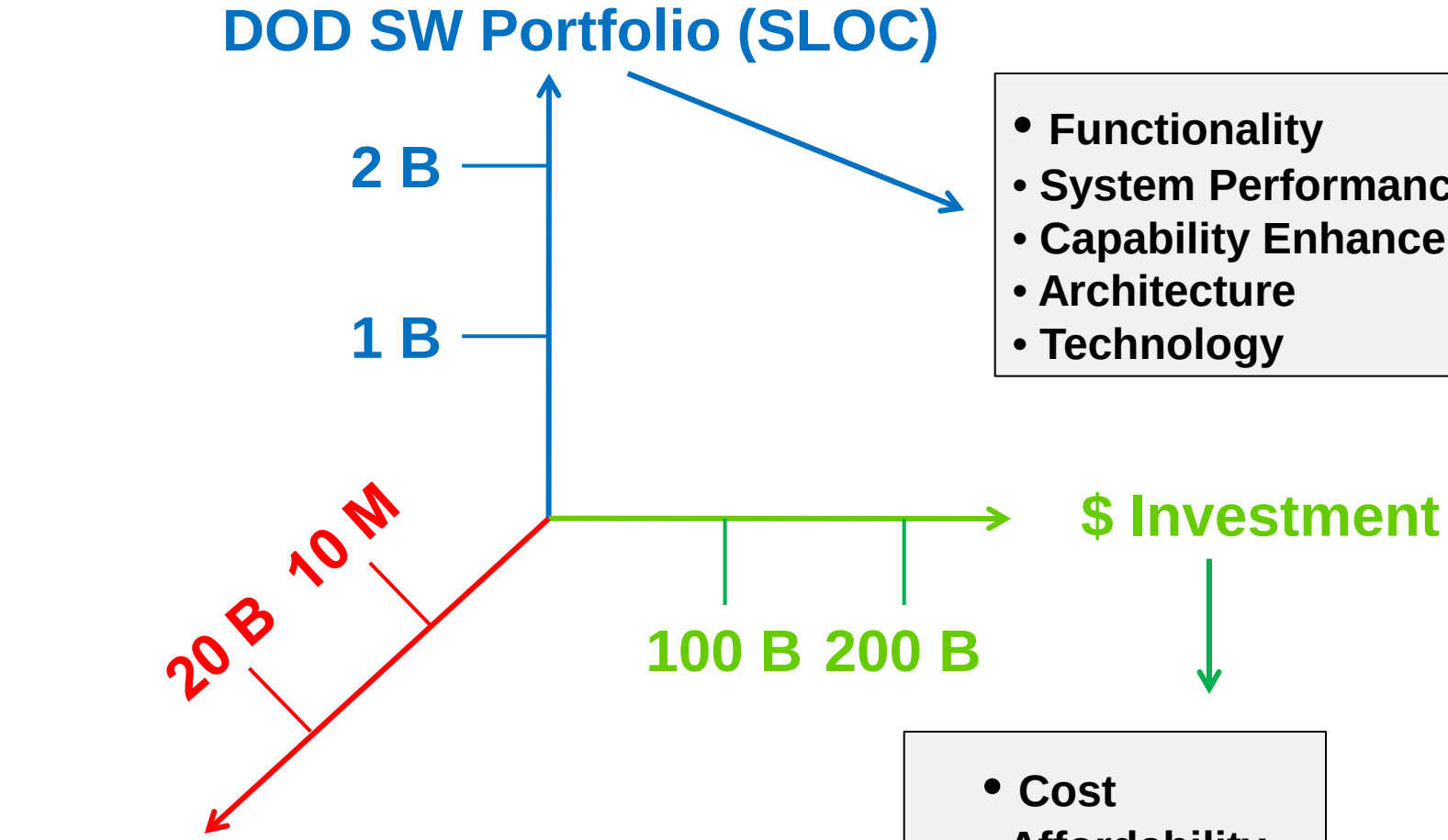




# Key Points

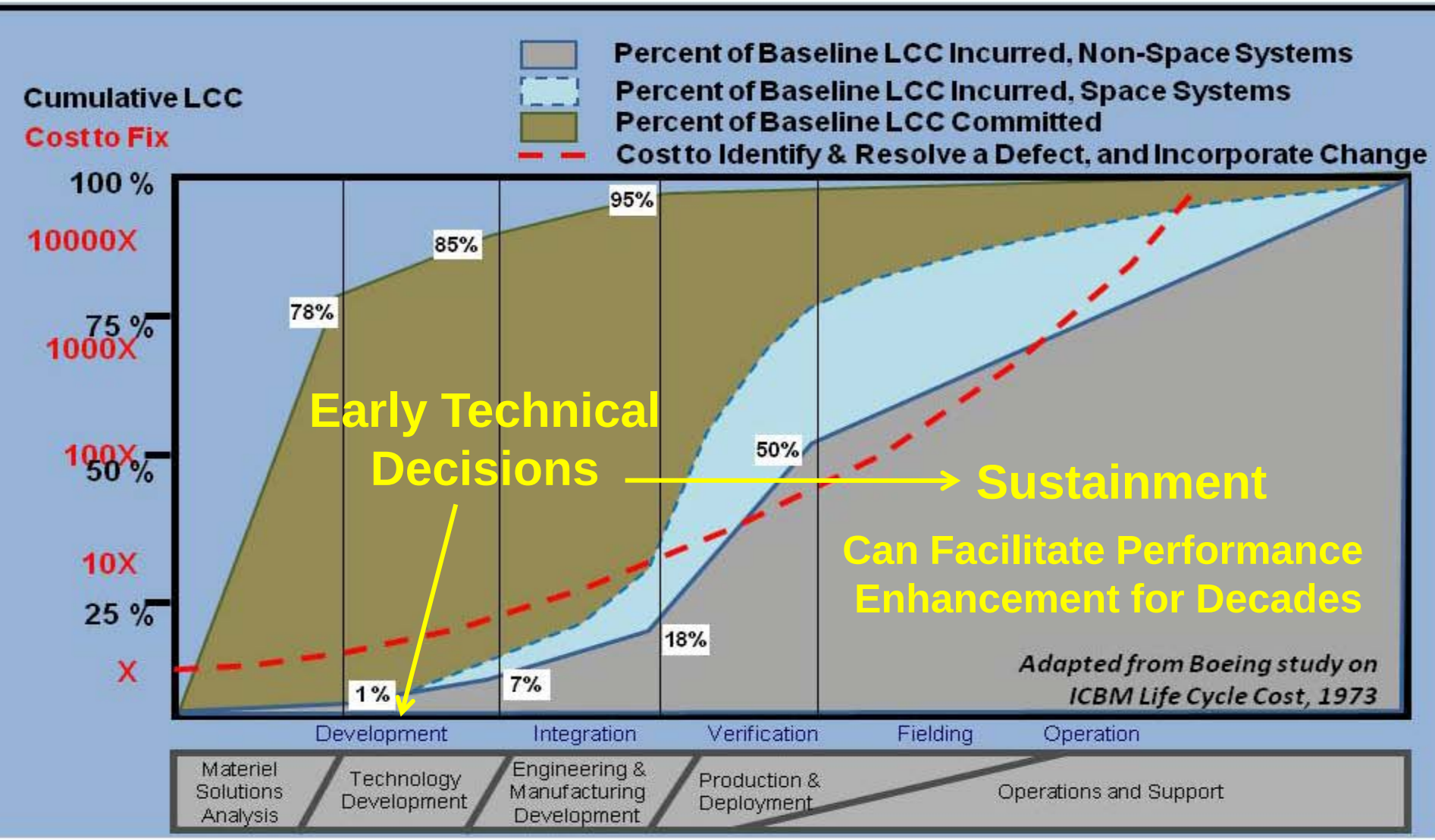
- Ever increasing SW  performance and capital asset portfolio
- SW - 21st Century modernization pathway to delivering rapid, affordable performance to the war fighter for the life cycle
- Early SW choices have major, decades long technical and program consequences
- Renewed emphasis on Development Planning demands engagement , active role of SW community to design approaches enabling life long system performance enhancements
- Consistent, continual application of SW engineering for life cycle critical for war fighter success

# Software: Performance & Capital Asset Portfolio

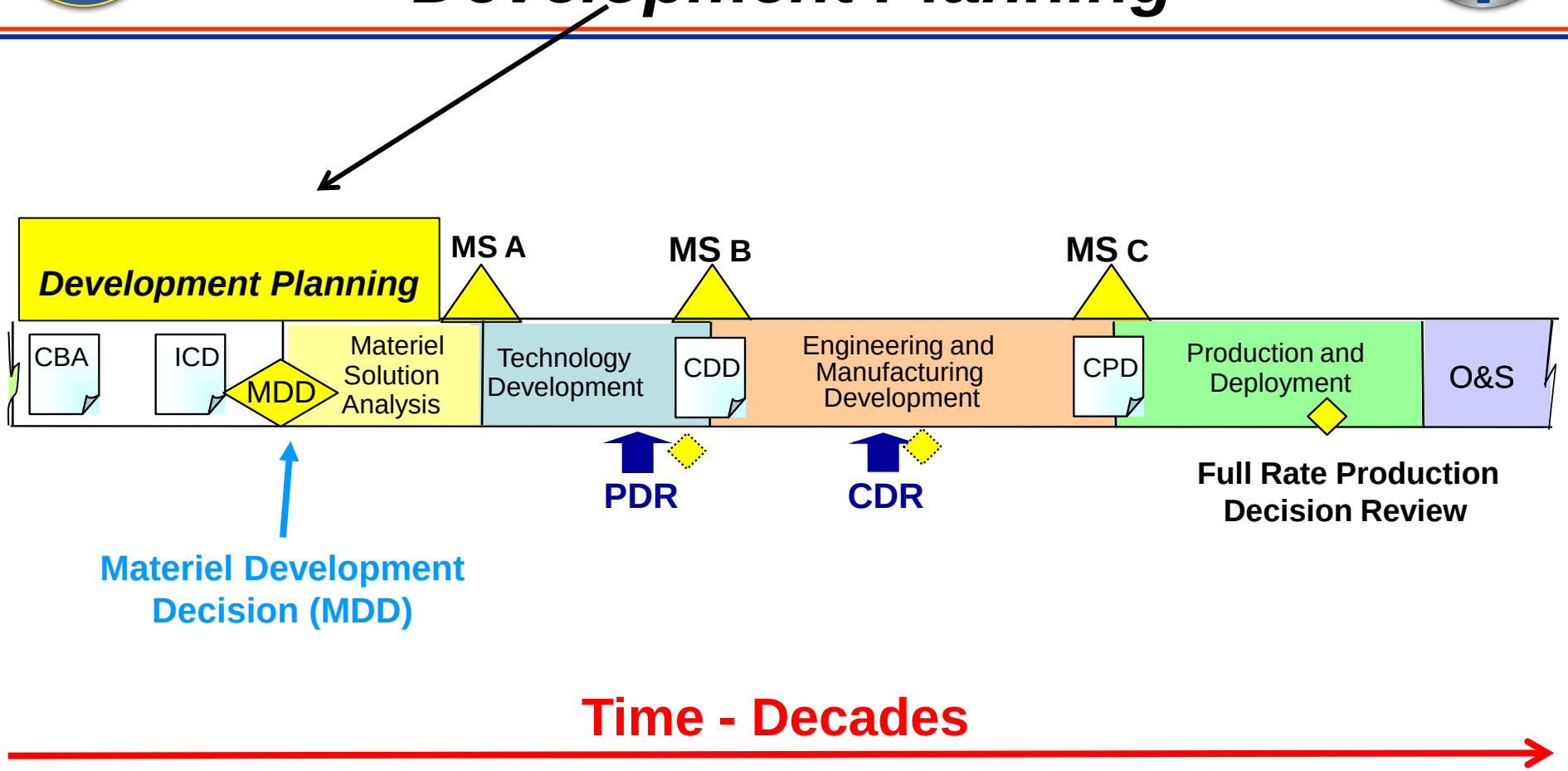


# Increasing Reliance on SW as Key Modernization Strategy Pathway

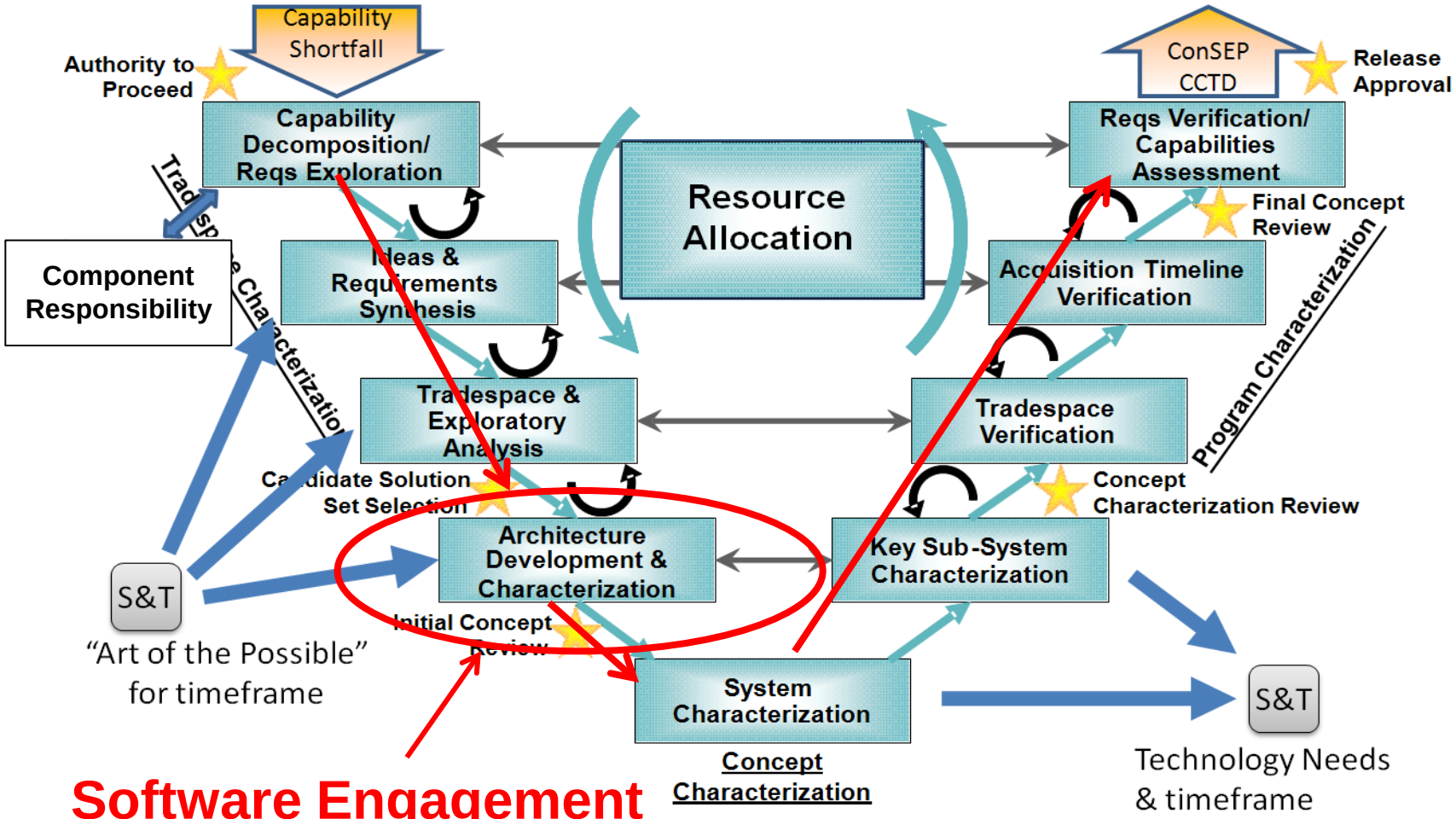
# Future Consequences of Early SW Decisions



# Renewed Emphasis on Role of *Development Planning*



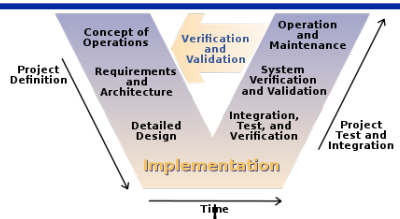
# Early Engineering Engagement Critical to Development Planning Success…



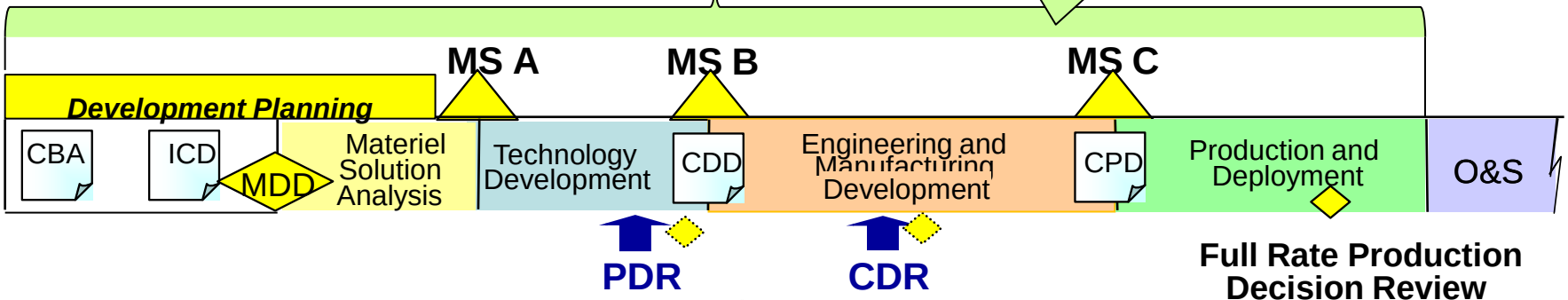

**Software Engagement**

***Knowledge, Tools, Practice***

# …Continuity of SW Engineering Critical to Program Life Cycle Success

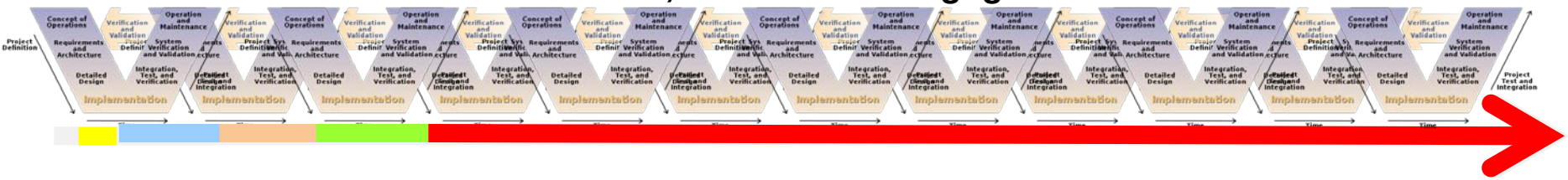



This is how we often think about SW Engineering…




## How We Should Plan and Resource

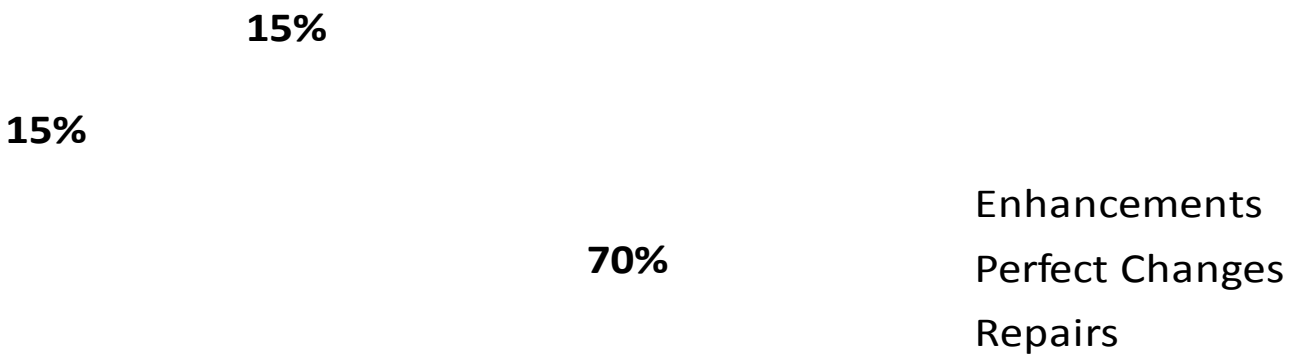
**Consistent, Continuous Engagement**



# Time in Decades

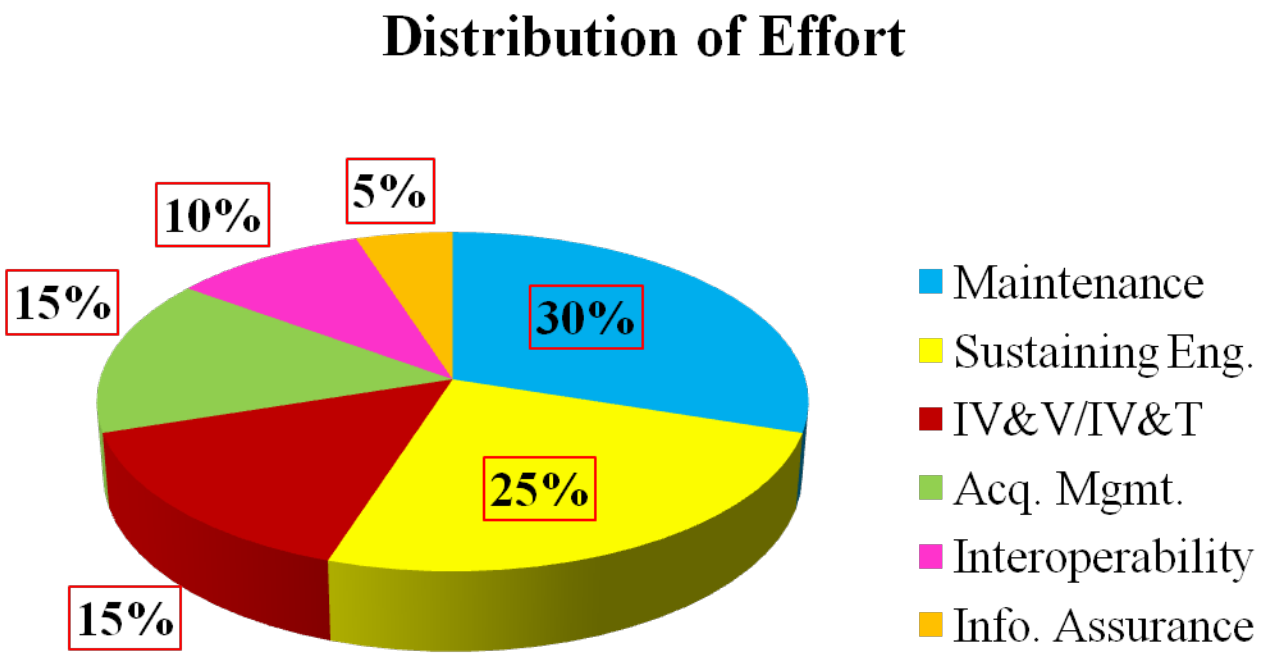
# Software Engineering in Sustainment

## Contents of Typical SW Release in Sustainment




**Measures for Maintenance Study, July 2010, USA/USAF**

# Future SW Sustainment Demands




- More SW intensive systems
- Increasing demand for enhancements
- Net-Centric Warfare impacts
- New Security/Info Assurance requirements
- Distribution of effort to changes
- Increasing demand for SW engineering workforce capability

**Measures for Maintenance Study, July 2010, USA/USAF**

# Continuous Systems Engineering: Critical to Life Cycle Program Success

- **Sustainment – the 21st Century route to performance enhancements for war fighter**
- **Must make right SW choices early in design enabling rapid, affordable enhancements in sustainment**
- **Imperative SW community proactively engage in Development Planning to influence best choices**
- **Develop knowledge, practices, and tools to make value contribution**
- **Consistent, continuous SW engineering engagement for multi-decade success**

*Innovation, Speed, and Agility*

***http://www.acq.osd.mil/se***

# Questions

# For Additional Information

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