NDIA Systems Engineering Conference









Acquisition Transformation and Accelerating Change



October 24, 2006

presented by

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DUSD, Acquisition & Technology

9th Annual NDIA Conference Topics

- Improving acquisition and program performance √
- Data/information interoperability -
- System-of-Systems -
- System sustainment -
- Major transformation √
- New and legacy systems -
- Systems engineering √

A&T Vision

LEADERSHIP

for an

INTEGRATED, RESPONSIVE

ACQUISITION SYSTEM

providing

WARFIGHTER NEEDS

with

PREDICTABLE PERFORMANCE

"THE WILL TO CHANGE …"

A&T Strategy

RESHAPE THE ENTERPRISE

Utilizing Short and Long Term

INITIATIVES

that

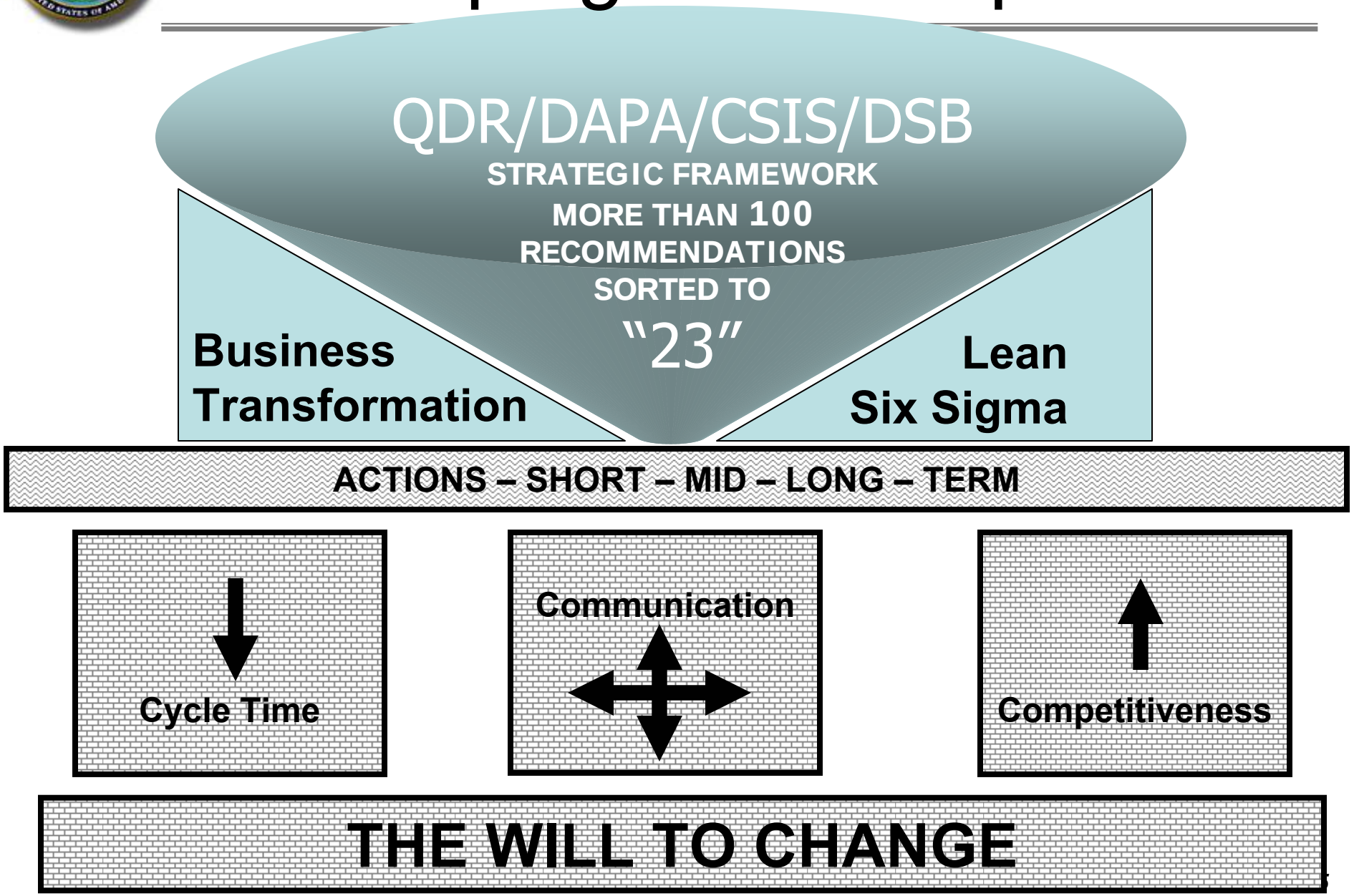
ACCELERATE LASTING CHANGE

for All Elements of the

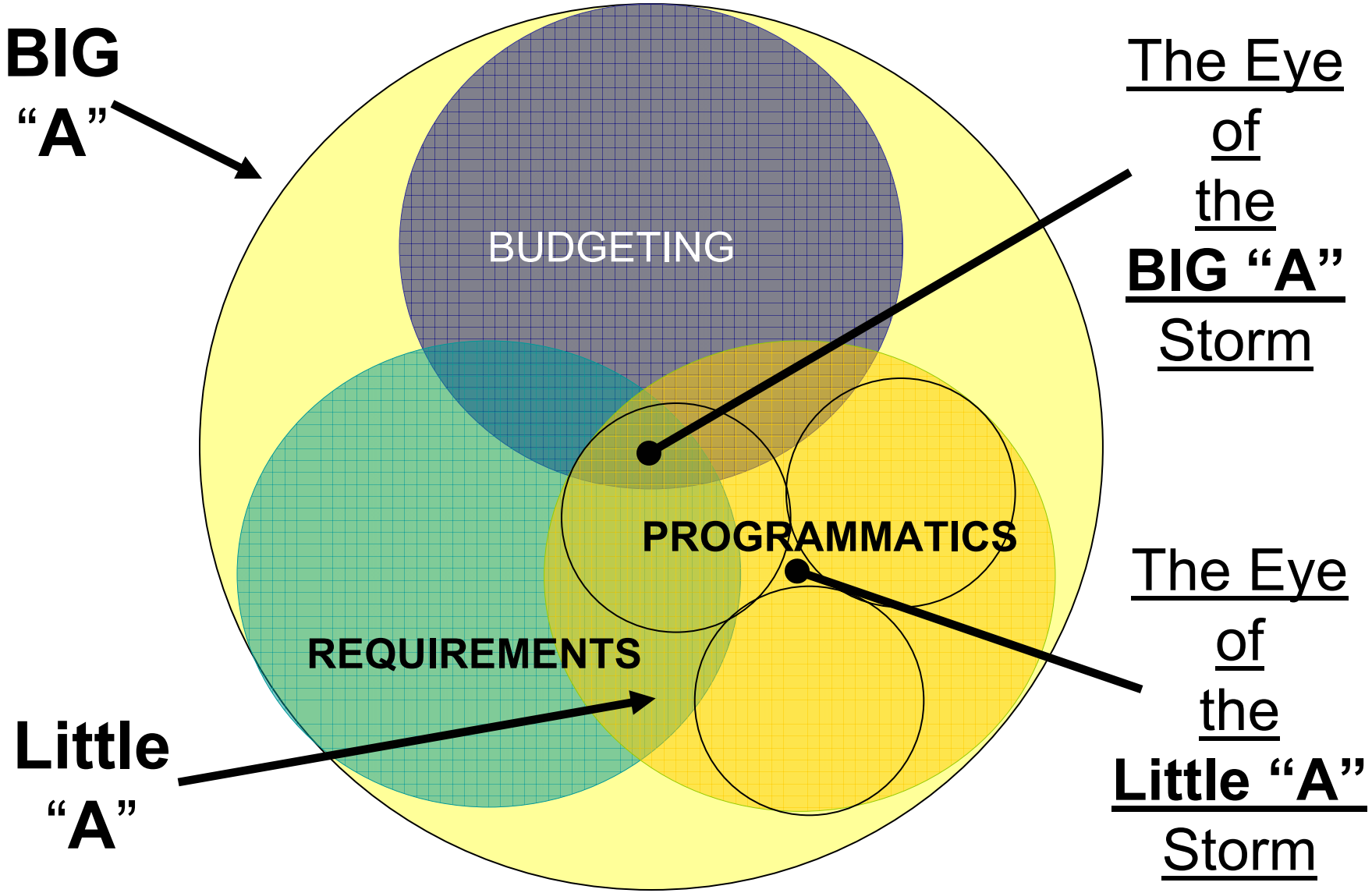
ACQUISITION SYSTEM

"THE WILL TO CHANGE …"

Reshaping the Enterprise

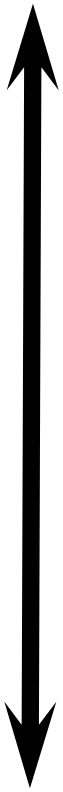


The Acquisition System



Initiatives For Acquisition Excellence

STRATEGIC
"Big A"



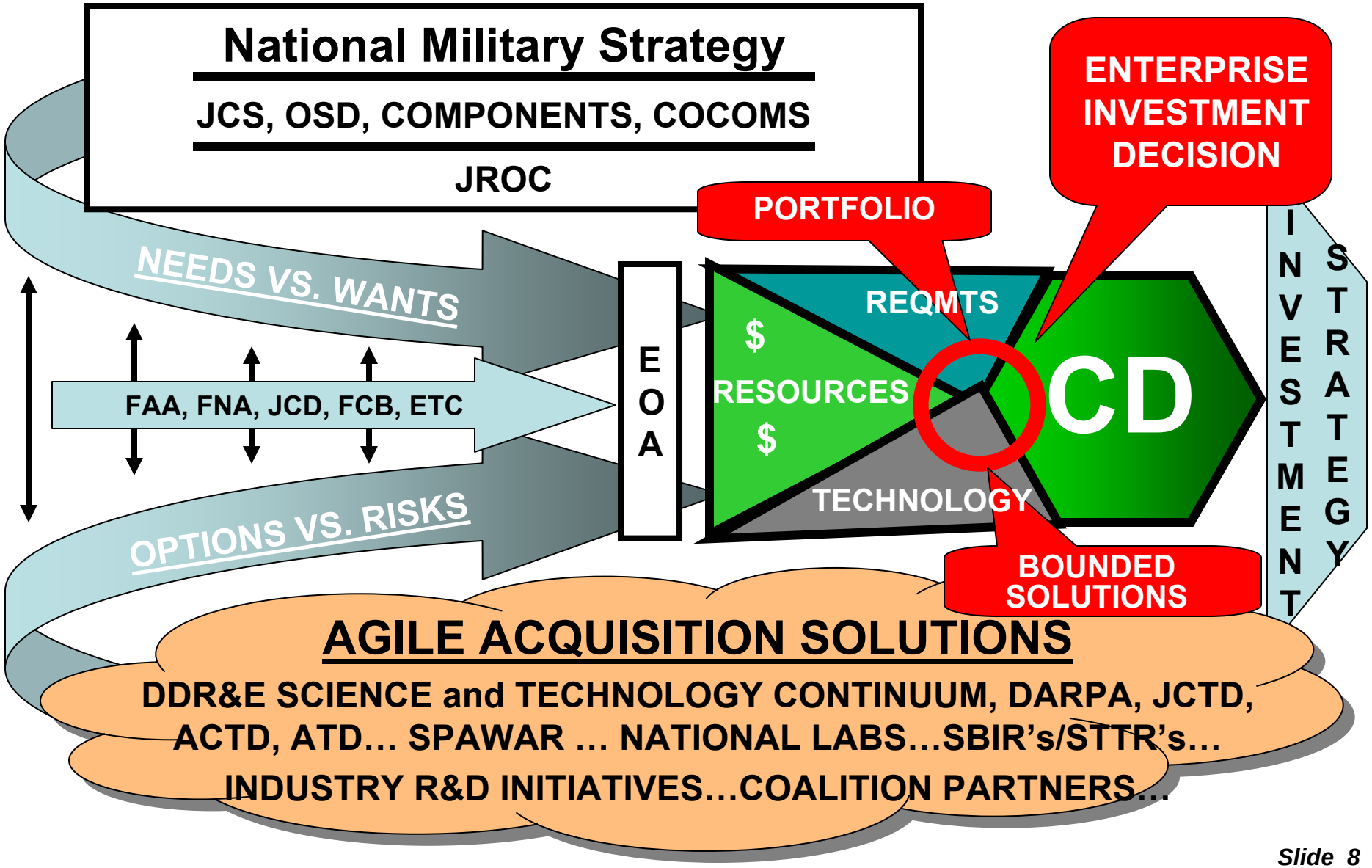
TACTICAL
"Little A"

OBJECTIVES	INITIATIVES
Strategic Decisions that Balance the Trade-Space – Affordable, Feasible Investments	• Portfolio Management • Tri-Chair Concept Decision / Time-Defined Acquisition • Evaluation of Alternatives (EOA) • Synchronize Existing Processes • Tri-Chair Investment Balance Reviews
Start Programs Right – Improved, Up-Front Planning – Awareness of Risk / Improved Source Selection – More Responsive Acquisition Solutions	• Risk-Based Source Selection • Small Business Innovative Research • Acquisition of Services Policy • Systems Engineering Excellence • Award Fee and Incentives
Improve Process efficiency – Tailored, agile, transparent	• DAB / OIPT Process Optimization • Common Data / DAMIR • Restructured DAES
Improve Program Stability – No Downstream Surprises – Issue Awareness	• Program Baseline Assurance • Capital Accounts

Improving the Full Range of Acquisition Execution

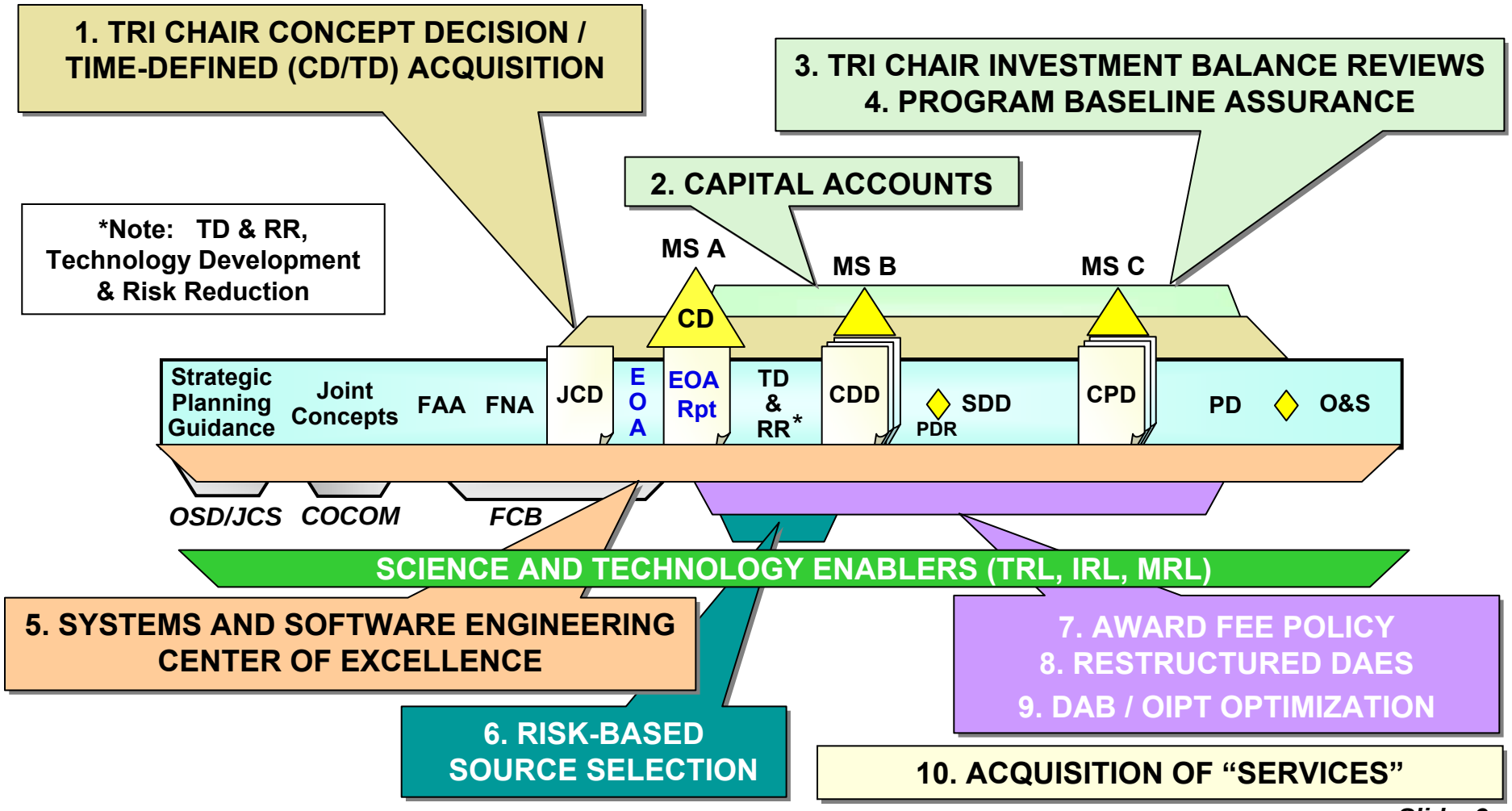
Concept Decision (CD)

A Catalyst For Change

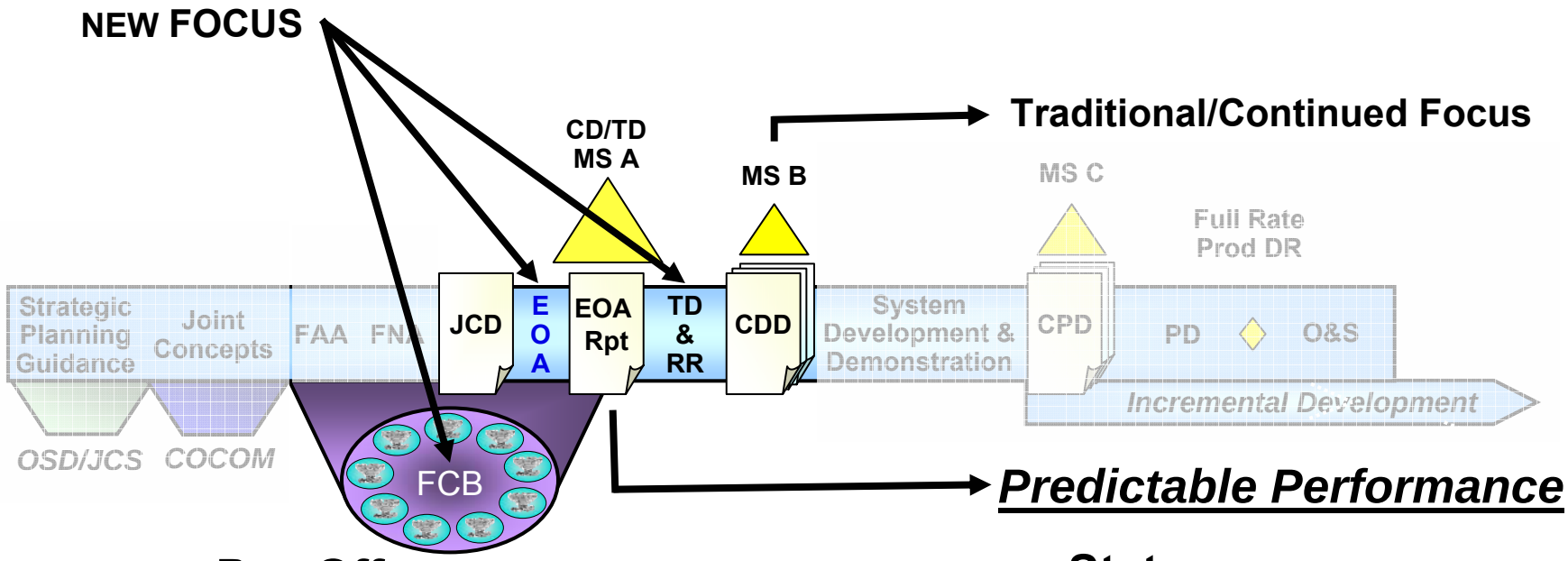


Acquisition Excellence

An Evolving Toolkit Reducing Cycle Time 50%



Systems Engineering - Key Roles



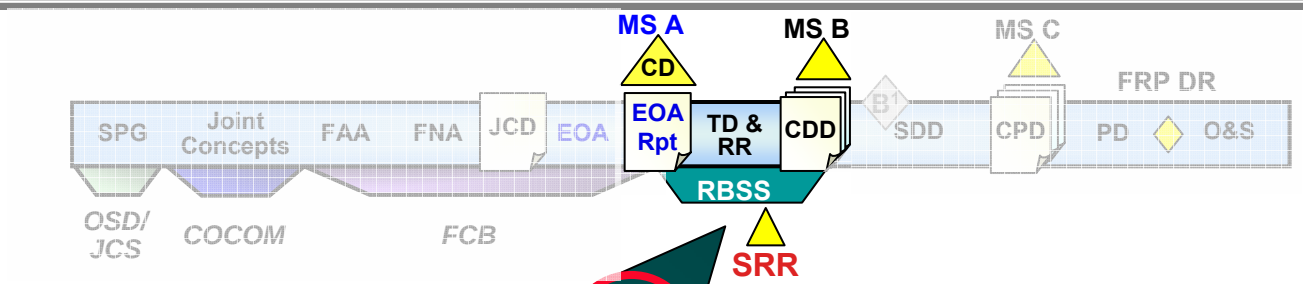
Pay Off

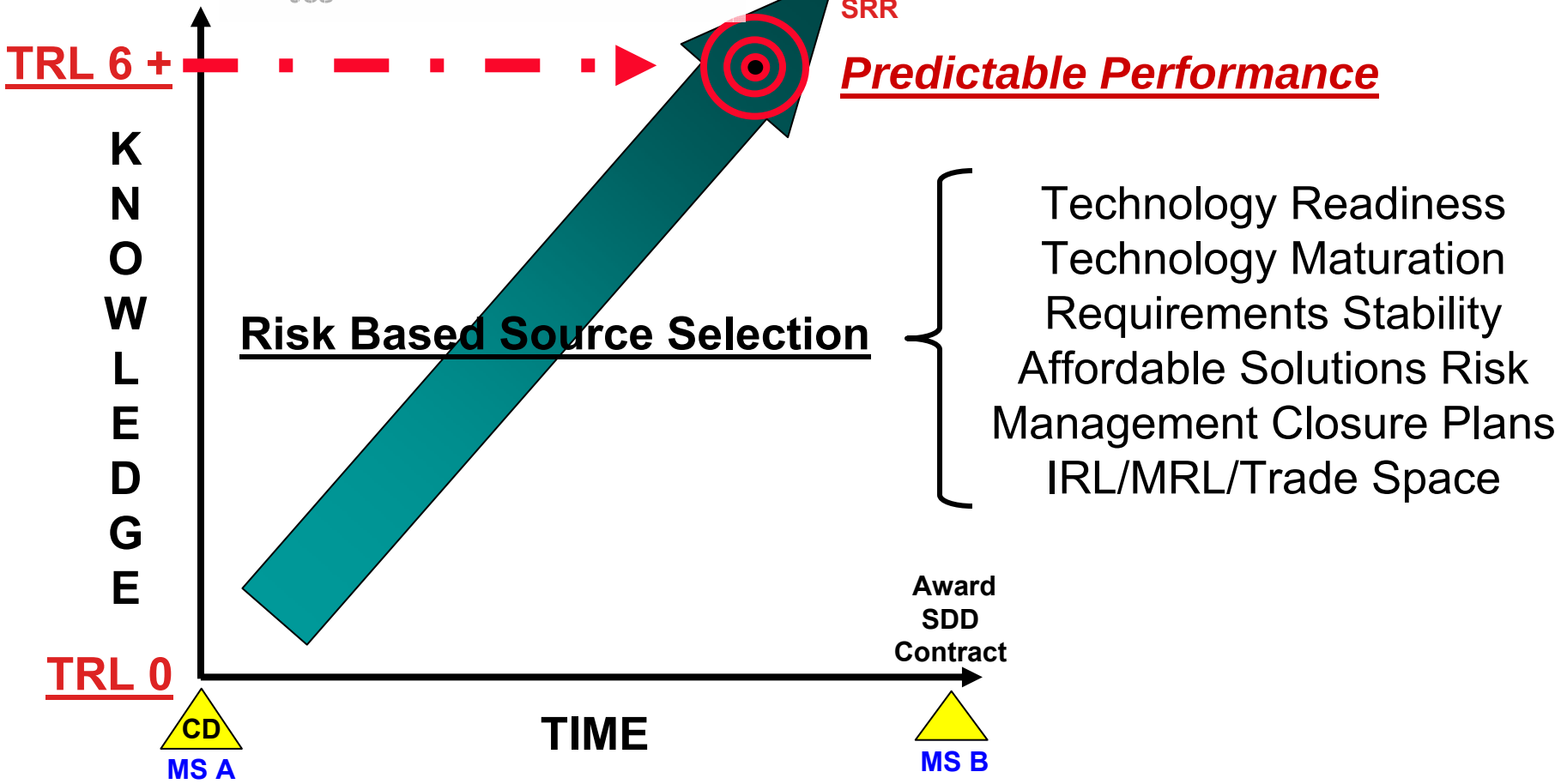
From	To	Metric
30 - 36 mo	≤ 9 mo	Shorter
· · MS · ·	// MS //	Earlier
Single Comp	JS/OSD/Comp	Choices
Uncertain	Defined	Increment
Performance	Trade Off	Constraints

Status

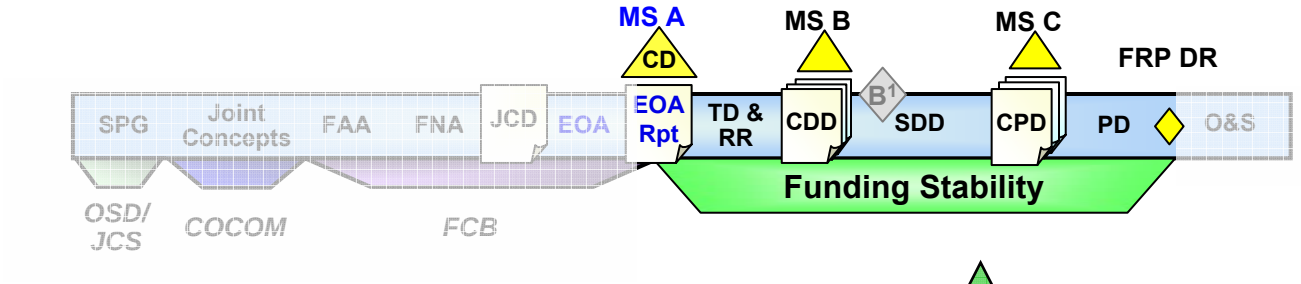
- **Tri-Chair approved "four pilots" 24 July**
  - **Joint Light Weight Vehicle**
  - **Global Strike Raid**
  - **Integrated Air Missile Defense**
  - **Joint Rapid Scenario Generation**
- **War Game conducted 7- 8 September**

Systems Engineering - Key Roles





Systems Engineering - Key Roles



- **Financial initiative - JS/OSD/Service**
- **Funding protection and stability**
- **Risk-informed investment strategy**
  - **Technology ready**
  - **Affordability bounded**
  - **Requirements hardened**
  - **Incremental acquisition approach**
- **Consistent with the QDR and FY 06 Authorization Act**
- **Pilot ACAT 1 Programs (MS A through MS C)**
  - **Selection criteria and metrics established**

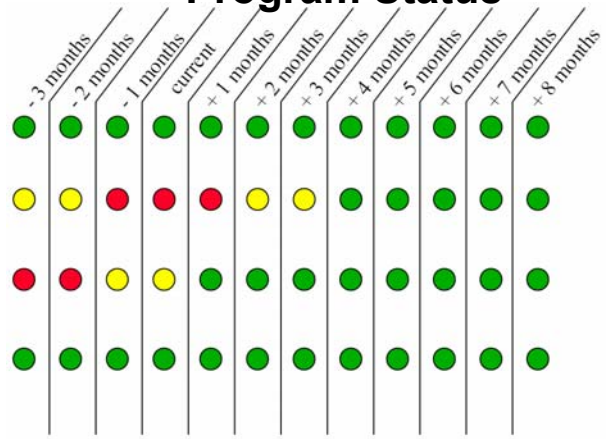
FUNDING STABILITY

Predictable Performance

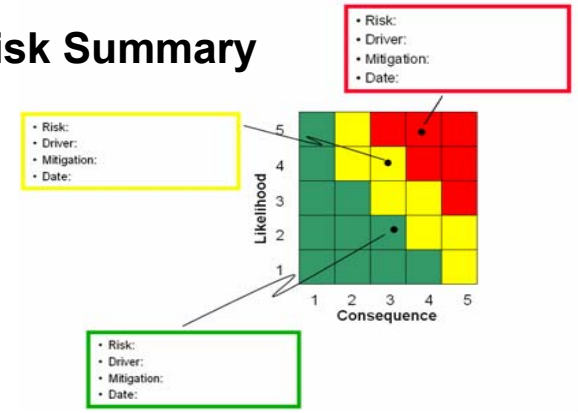
Systems Engineering - Key Roles

- 85 MDAP, ACAT 1 Programs
- 3 Star Level Review, Government Only
- Simplified from 30+ to 3 pages
- Utilize standard formats, streamlined
- Open and transparency of data with shared information, leading metrics
- Contract and Acquisition Baselines
- Trade-off considerations
  - Start with technical performance
  - Schedule consideration, second
  - Trade-off cost as a last resort
- Known problems - closure 30/60/90 days
- Potential problems - risk mitigation plans

Program Status



Risk Summary

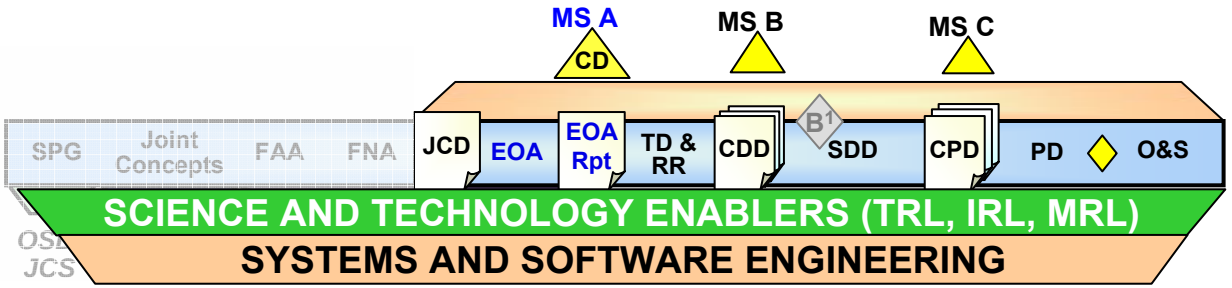


Issue Summary

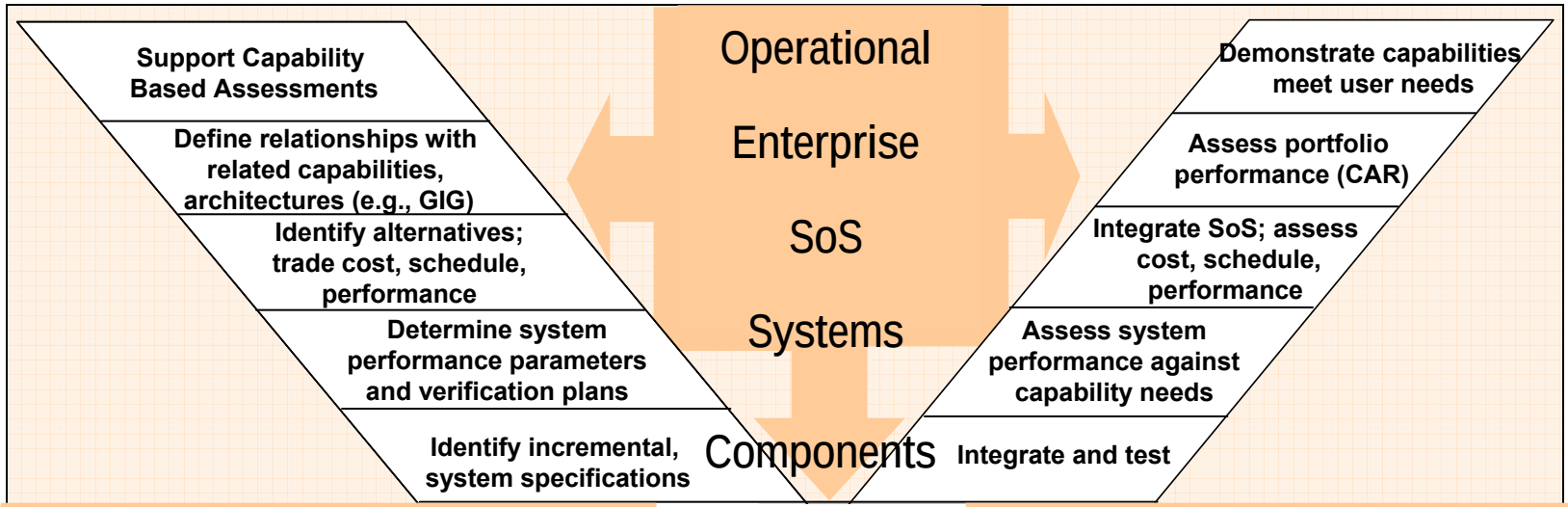
No.	Issue / Problem Description	Action Plan	Closure Date
1			
…			
n			

Objective: Predictable Performance

Systems Engineering - Key Roles



Objective - Early Technical Planning Shaping Acquisition Excellence



The technical foundation for building acquisition knowledge for the life cycle

Develop, test, and assess increments of capability

Fully integrated approach for technical maturity, cost realism, risk mitigation

Predictable Performance

Systems Engineering Key Assessments & Findings (1)

- Requirements not well defined, traceable, testable
- Immature architectures, COTS integration, interoperability, obsolescence (electronics/hardware refresh)
- Development processes not institutionalized, planning documents missing or incomplete, reuse strategies inconsistent
- Software test/evaluation lacking rigor and breadth
- Schedule (un) realism - compressed, overlapping…
- Lessons learned not incorporated into successive builds
- Risks/metrics not well defined, managed

Systemic Issues are Driving Focused Initiatives

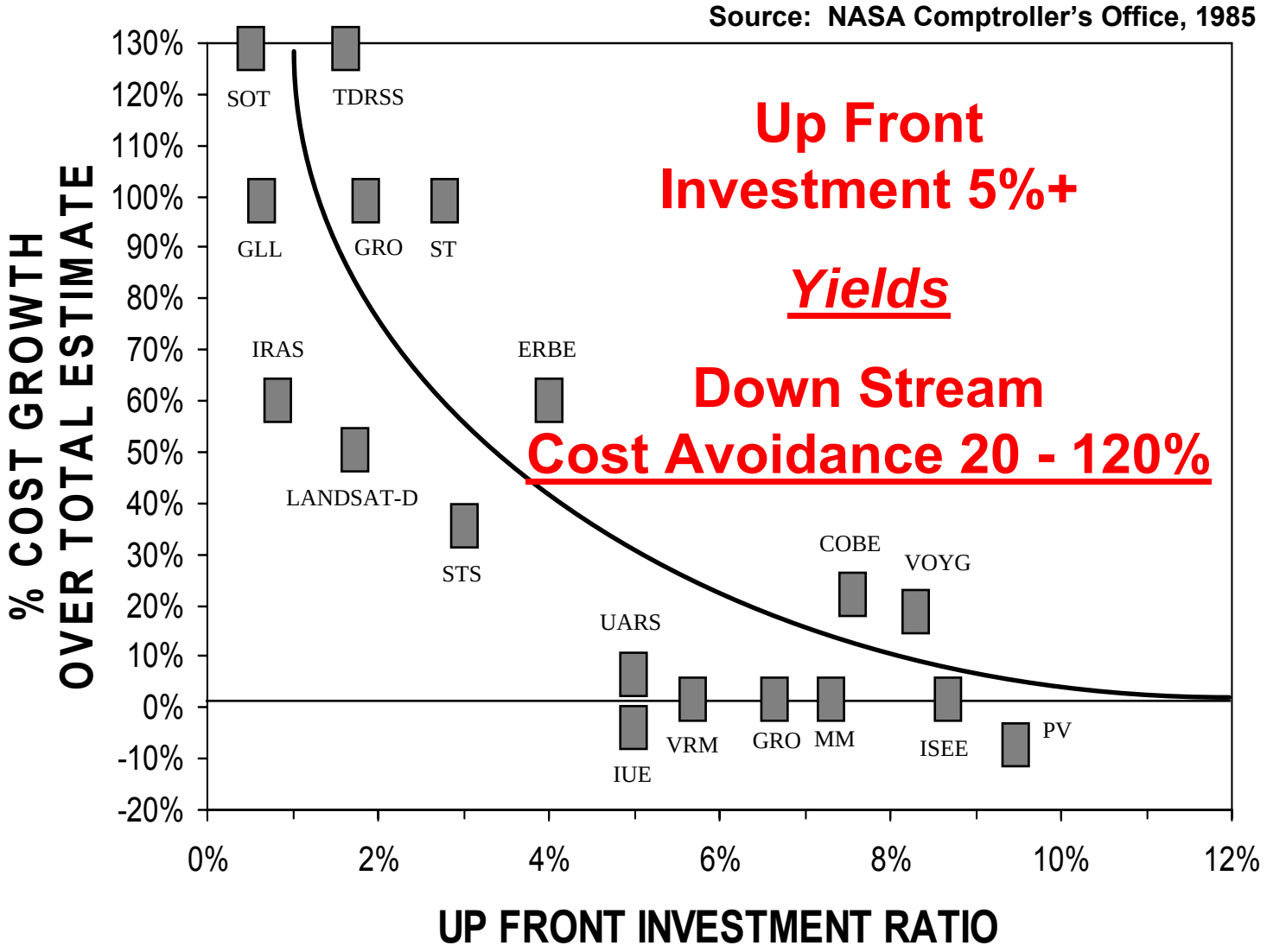
(based on sampling of 40 programs - past two years)

Systems Engineering Key Assessments & Findings (2)

- Research investment has been static or declining
  - DARPA computer science R&D funding 50% ↓ (’01 - ’04, universities)
- SW reqmts growth 10X (% functionality) ’60s -’00s
- Need vs. skilled/clearable workforce - gaps increasing
- President’s Information Technology Advisory Committee Report, February 2005
  - Identifies SW as “major vulnerability”
  - Recommends priority attention: “Secure Software Engineering and Software Assurance” and “Metrics, Benchmarks, and Best Practices”
- Cost, schedule and performance issues

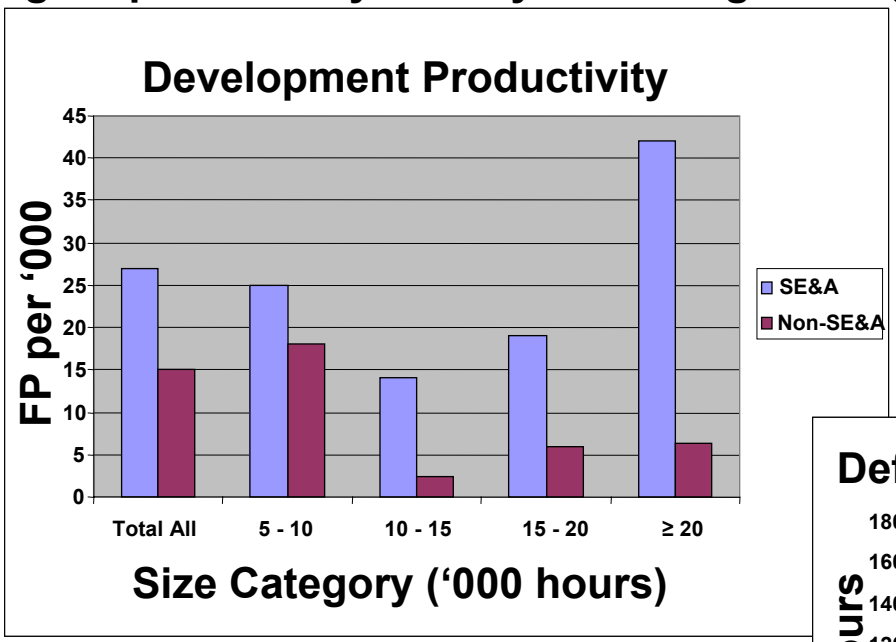
Software is an increasingly, important factor

Systems Engineering - Key Results



Systems Engineering - Key Results

Higher productivity with Systems Engineering



IBM

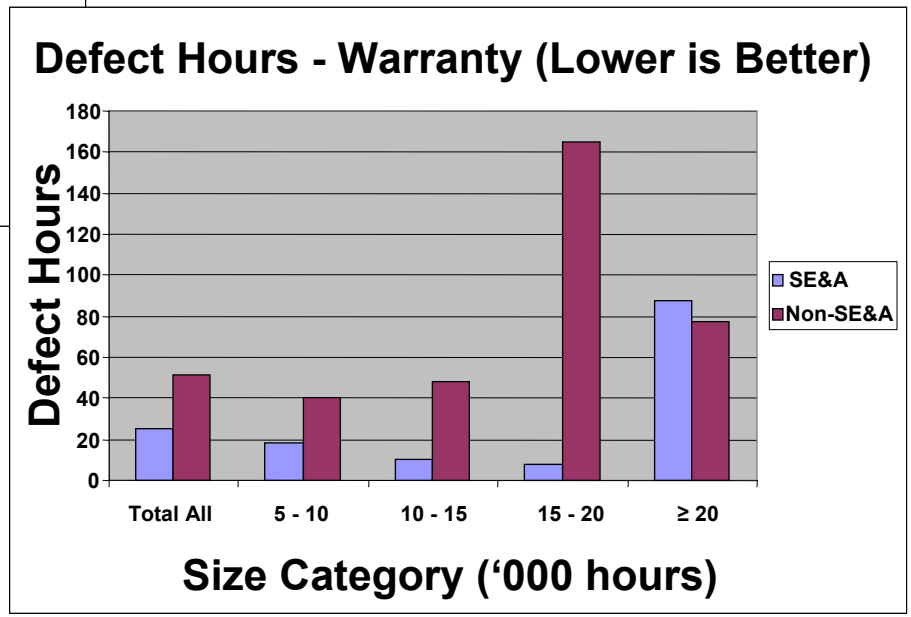
35% cost saving - two years

productivity improvements

large-scale integration projects using

Systems Engineering processes

Less maintenance work with Systems Engineering



Systems Engineering - Next Level

- Strategic Direction - Center of Excellence
  - Higher and broader visibility, value added insight
- Key challenge areas – examples…
  - Affordability - design to cost
  - Software engineering - information assurance
  - Energy alternatives - national security
  - System sustainment - RAM factors
  - Systems of Systems engineering - policy/guidance

. . . the Technical Foundation that Enables Acquisition Excellence

Vision of Success in 24 Months

Streamlined and Simplified Acquisition

- Reduced Decision Making Cycle Time
- Earlier Initial Operational Capability

Affordable and Predictable Outcomes

- Bounded Choices – Trade Space Driven
- Open and Transparent Data and Information Management

Improved Centers of Excellence

- Systems and Software Engineering
- Program Management / Contract / Pricing / Cost Expertise

Responsibility and Accountability Alignment

- Trust, Integrity, and Ethics as the Cornerstones

Broadened Globalization, Innovation and Competition

- Characterized Industrial Base Aligned to Skills and Strategy

"THE WILL TO CHANGE …"

We Need You - Make A Difference!

… Be a LEADER !!!

… Be an ENABLER !!!

… Be a CHAMPION !!!

… Be a CHANGE AGENT !!!

Join Us To Help Revitalize Systems Engineering !!!

"THE WILL TO CHANGE …"

Thank you !

Special thanks to the NDIA, Industry, DoD and Agency Engineering Staffs.

Time for Q & A….