

# The Case for Considering Acquisition Program Executability Prior to Materiel Development Decision (MDD)

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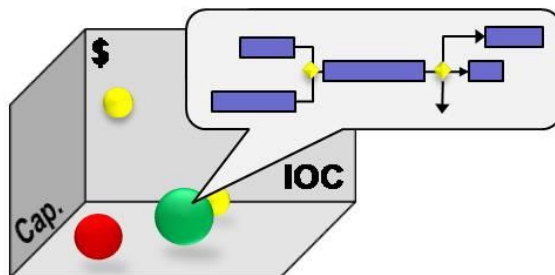
G. Laushine, H. Hayden

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# Assess Executability Before MDD?

“But I don’t have a program yet!”

- **GAO continually emphasizes having sufficient knowledge, early in decision process**
- **Need to consider trade space of programs, not just a concept**

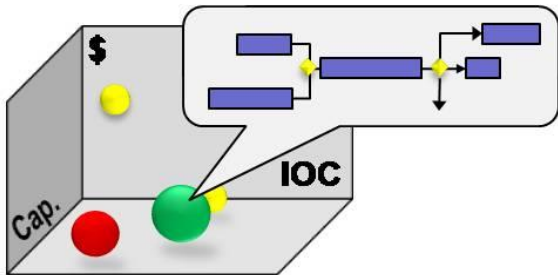
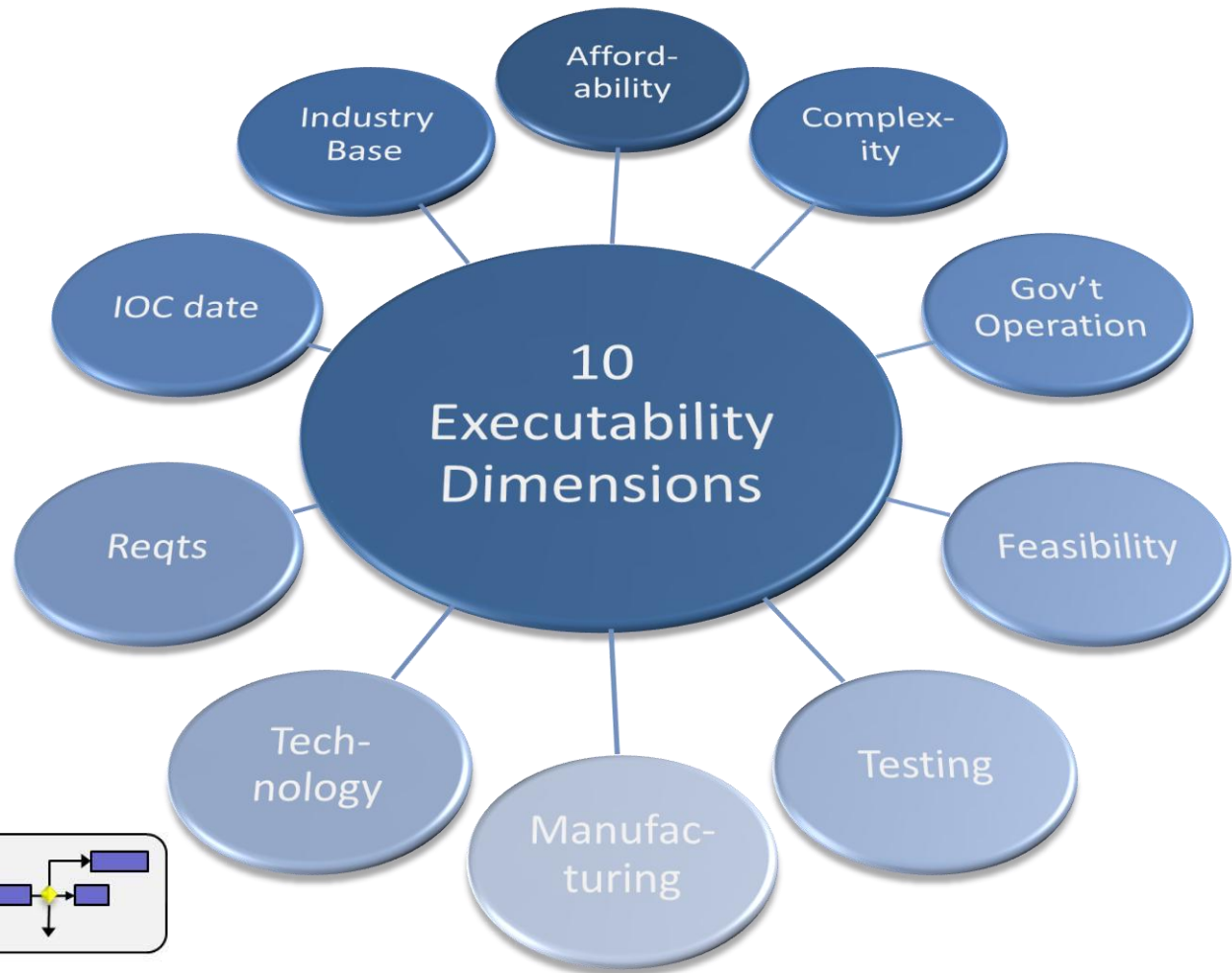


# What is MDD Looking at?

All I need is requirements and AoA guidance, right?

- What Artifacts Do They Get?
  - ICD, AoA guidance
- What Decisions are really being made?
  - Do I have confidence that MSA will develop good info for a successful MS A decision?
    - Will we get a good Analysis of Alternatives (AoA)?
    - Will we get good Technology Development Strategies (TDSs)?
    - Is the MSA phase executable?
  - Do we need more info before we can review?
  - Should this effort be stopped?

# Execution Considerations

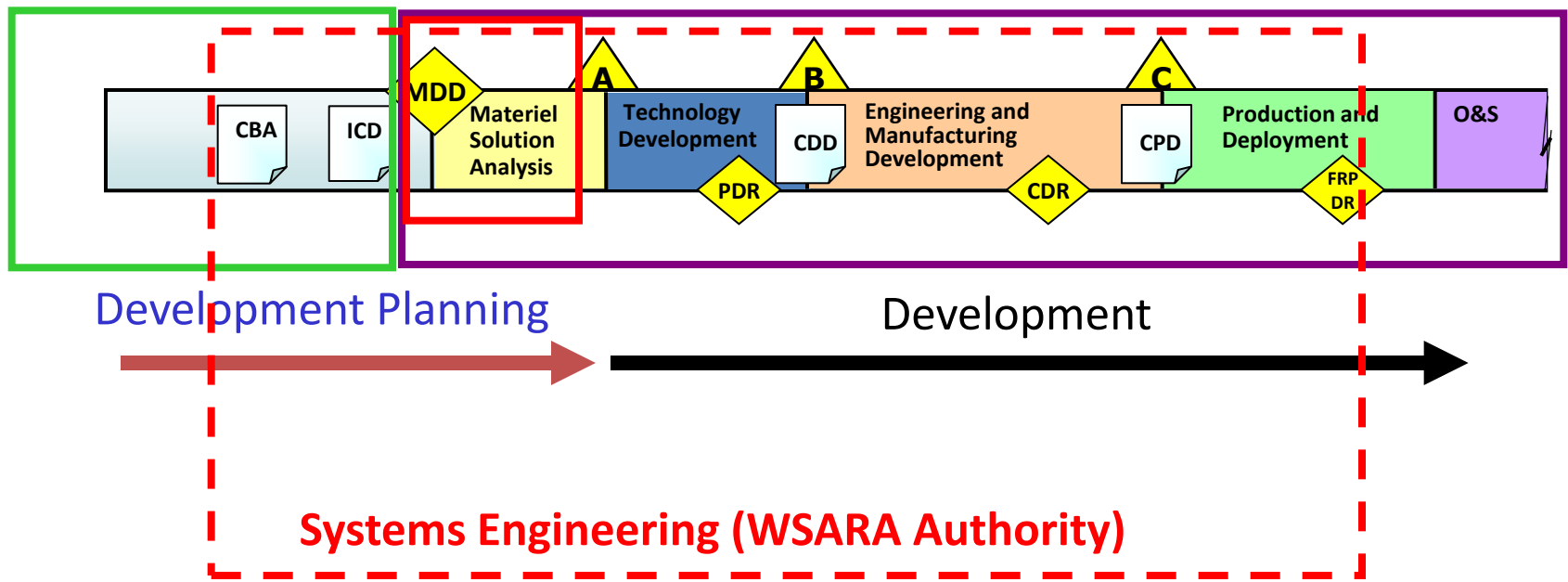


# Current Approach is Required But Not Sufficient to Avoid Breaches

JROC  
Authority  
(CJCSI 3170,  
Goldwater-Nichols)

CAPE  
Authority  
(DoDI 5000.02, WSARA)

MDA  
Authority  
(DoDI 5000.02,  
Title 10)

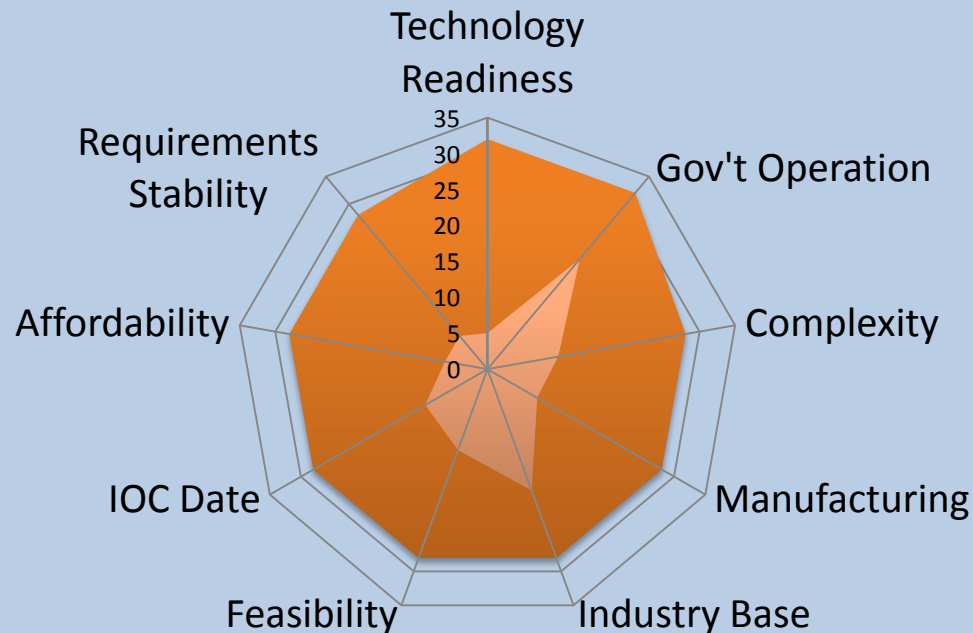


# Hypothesis

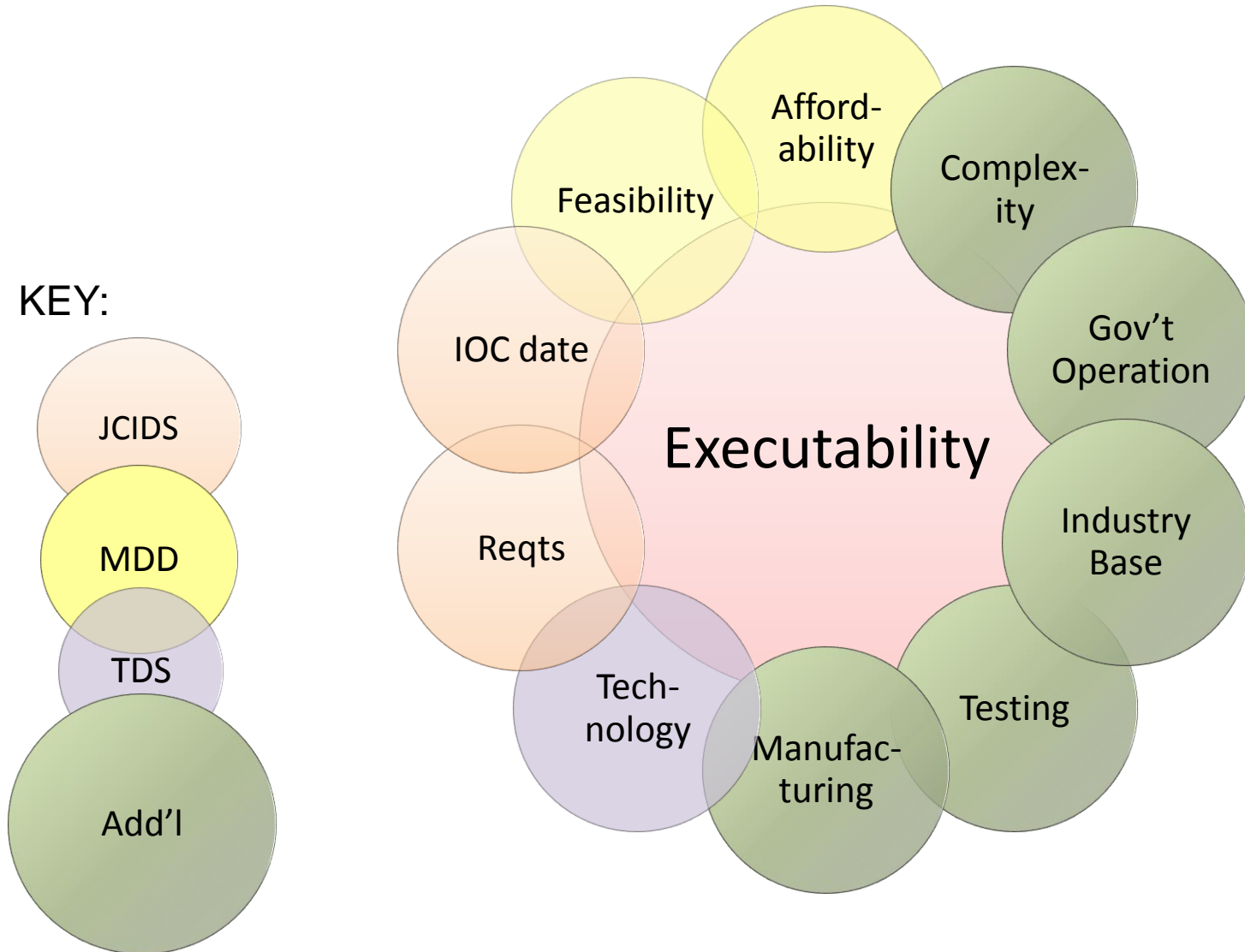
A balanced look at execution considerations early on could help reduce number and magnitude of breaches

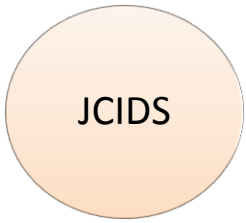
## Execution Readiness

■ At MDD   ■ At Joint Concept2



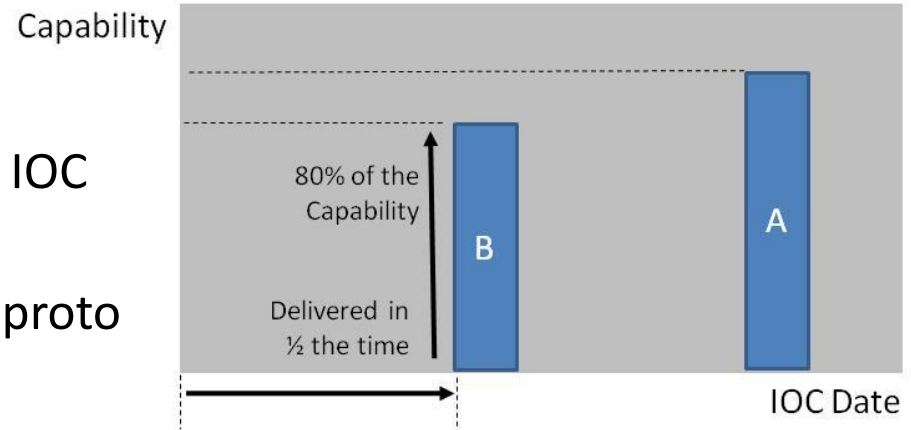
# Executability Explored



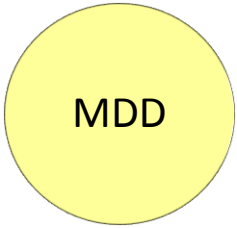


# JCIDS Focus

- Requirements
  - Clarity, stability, completeness
  - GAO Cited as a major reason for cost growth
- IOC Date
  - Need date vs. other achievable IOC dates for alternatives
  - Development path sequences (proto IMS)
  - True IOC Date achievable may not look as attractive as getting 80% of the capability in ½ the time

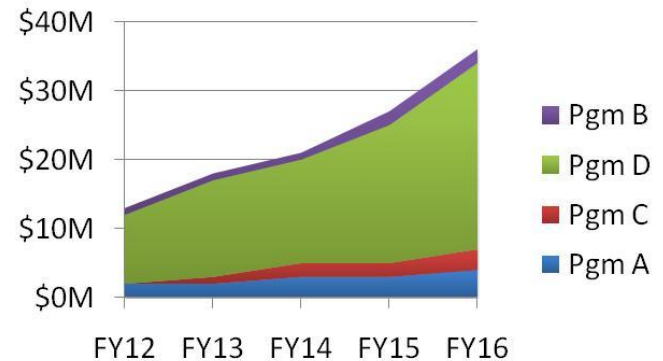




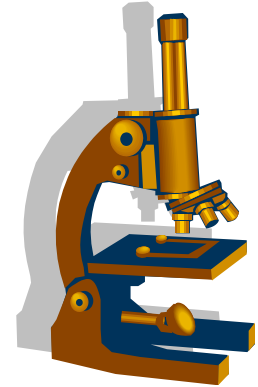


# MDD Focus

- **Affordability**
  - Total costs affecting ability to keep stable funding
  - Large budget over time is more vulnerable than small budget needed over short time frame
  - WSARA (Terminating MDAPs)
- **Feasibility**
  - Practical ability to do
  - Wasted time and effort
  - Lost opportunity cost



# TDS Focus

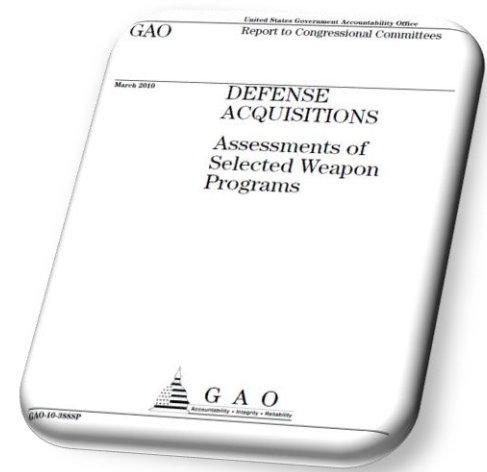


- Technology
  - The Known one
    - Identification of critical technologies in the alternative concept
    - Technology Readiness Levels (TRLs)
  - Why it matters
    - Major WSARA, DoD 5000 emphasis
    - Cited by GAO as major reason for cost growth

Add'l

# Additional Considerations

- **Complexity**
  - Numbers of functions, modes, interfaces (especially how it integrates with the operational environment, infrastructure)
- **Government Operation**
  - Sufficient manning of program office work force
  - Geographically separated units, communication
- **Industry Base**
  - Expertise, capacity, availability to study, produce, supply, sources and backup sources
- **Testing**
  - What needs to be tested, and are there adequate test facilities?
- **Manufacturing**
  - Maturity of processes to efficiently produce sufficient units to standards, without defects



# DoD Development Reality:

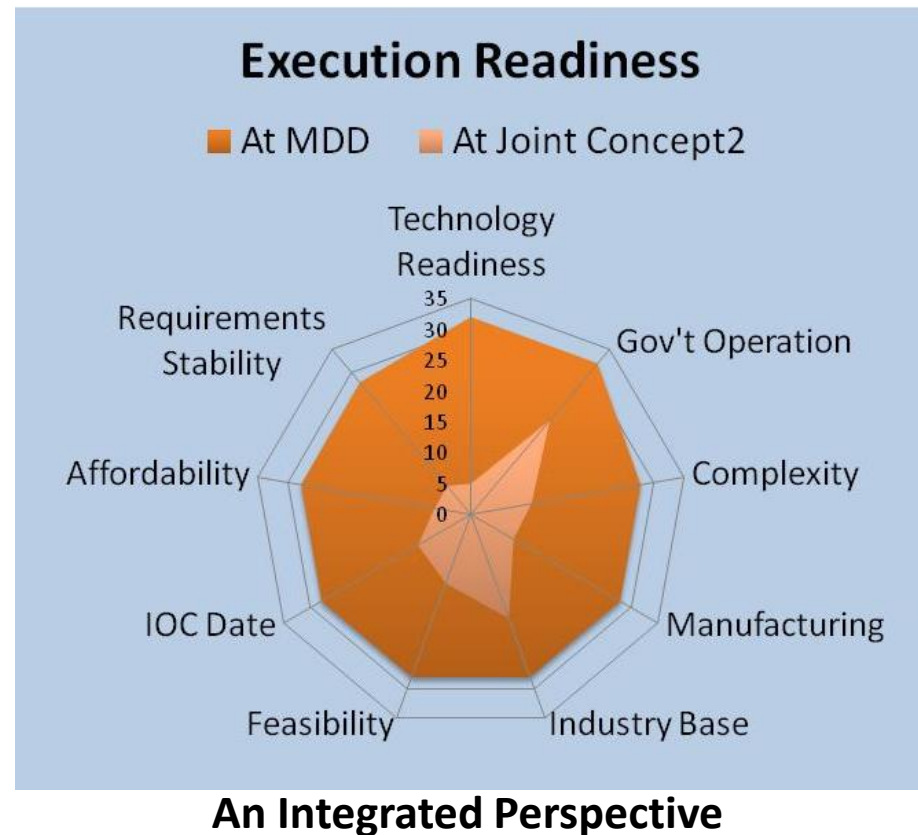
## Challenges to Considering Executability Before MDD

- Organizational
  - Developers, Users, and funding sponsors usually separated
  - Fear of Technology Push
  - Linear Paradigm of JCIDS to DoD 5000.02
- Complexity (too much to deal with)
- Schedule Distractions
  - Budget cycle drives early decisions
  - Shift to rapid acquisition (no time)
- Requirements keep changing
  - Users want more
  - Threat picture keeps changing
- Resource Limitations



# Summary

- **GAO continually emphasizes having sufficient knowledge early in the decision process**
- **Need to address all considerations at MDD in a balanced integrated perspective**
  - **Then focus on next action (TDS)**
- **Not all elements will present the same risk of breach, but all elements have potential risk**
  - **Bring developers in early to minimize total risk**
- **Acquisition strategy should be thought of as executability implementation**



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# **BACKUPS**

# Contact Info



**Gregory Laushine**

Science Applications International Corp. (SAIC)

(310) 936-4258

[laushineg@saic.com](mailto:laushineg@saic.com)

# Accepted SE Practice: Requirements and Developers work Together

