



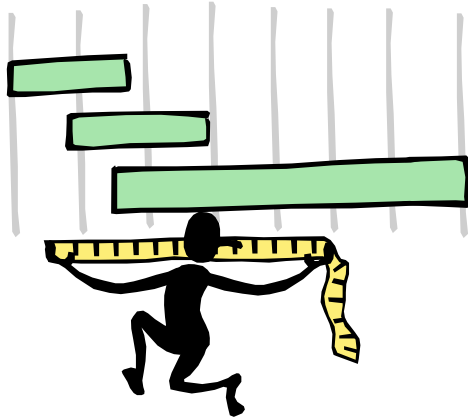
Acquisition Strategies to Deal with Uncertainty

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Two Types of Problems

Tame Problems



- Well-bounded problems
- You know when you've solved one
- Lend themselves to linear, structured approach

Wicked Problems



- Messy problems: complexity, uncertainty, interdependence, diverse interests...
- Problems keep coming back
- Iterative, collaborative approach

Rittel, Horst, and Melvin Webber; 1973. "Dilemmas in a General Theory of Planning," *Policy Sciences*, Vol. 4: 155-169

Federal Acquisition Challenge

- It takes too long, costs too much... to sometimes buy the wrong thing
 - Lengthy history of reform
 - Values: requirements stability, compliance, control and oversight
 - > *Discipline*
- IT acquisitions pose additional challenges
 - Uncertainty in requirements, technology pace of change
 - Values: rapid response to changing user needs/external events
 - > *Agility*

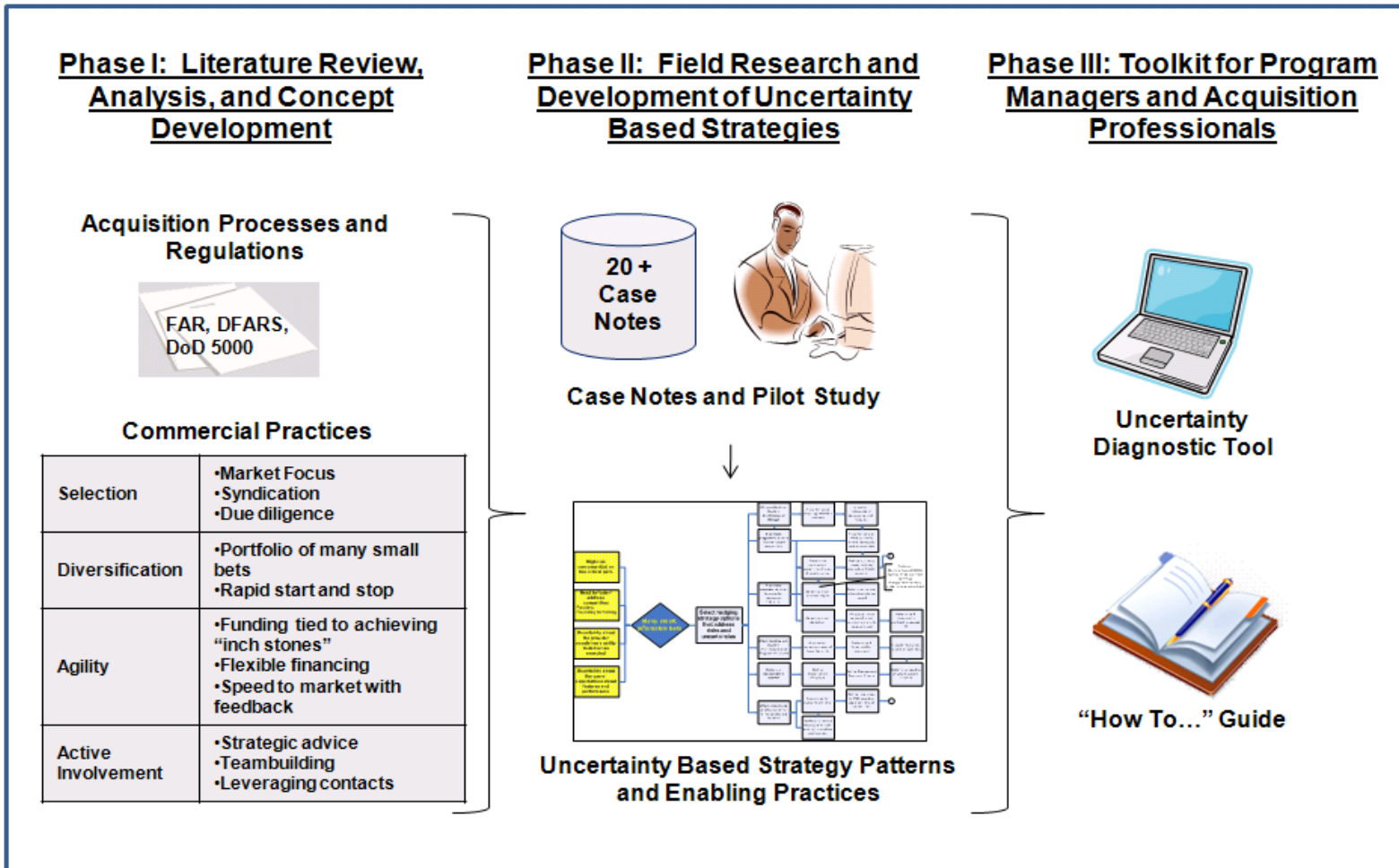




Research Objective

- **Explore the hypothesis that commercial practices that work in managing uncertainty offer opportunities to address federal IT acquisition challenges**
- **Research Questions:**
 - How can commercial practices be adapted to federal IT acquisition?
 - Under what circumstances might they work and make a difference?
 - What needs to change to make it happen?

Research Approach



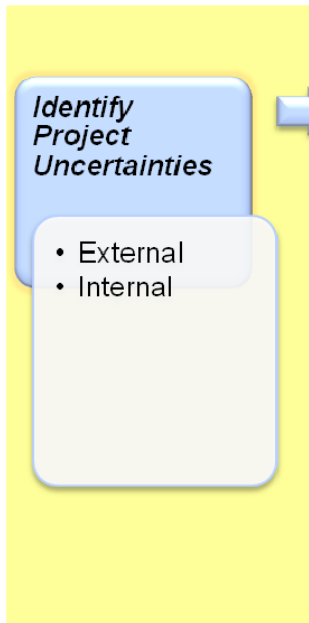


Acquisition Strategies Mapped to Acquisition Uncertainty Framework

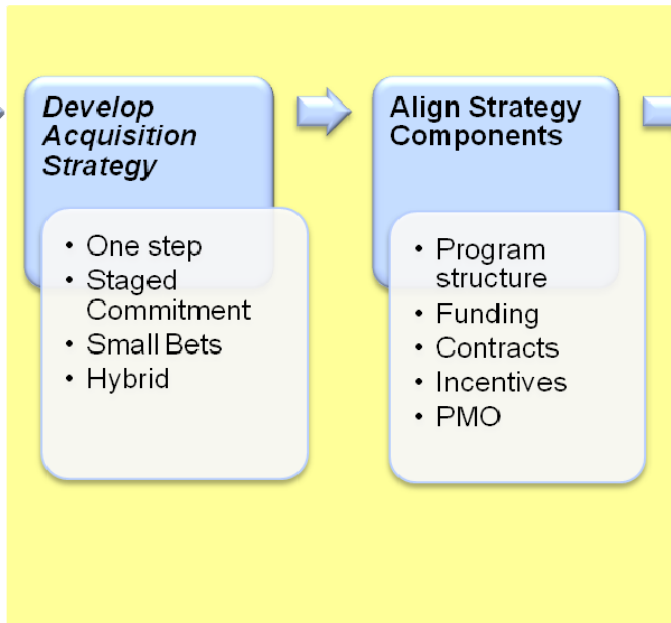


How To Implement

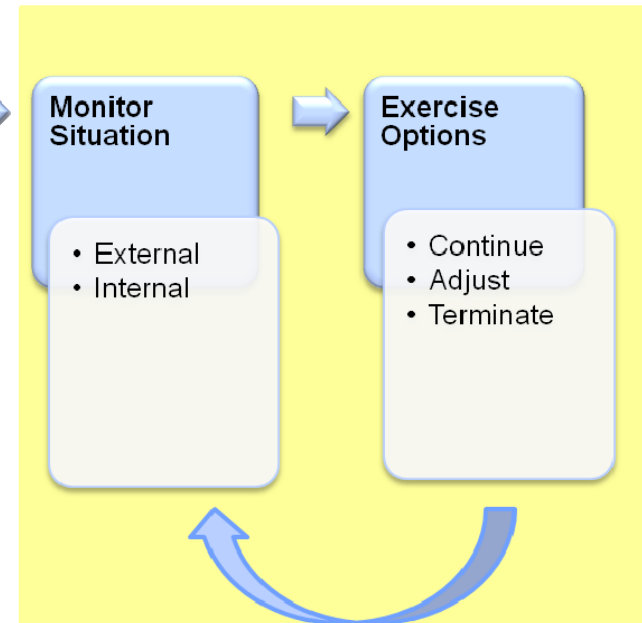
Diagnosis



Acquisition Strategy



Adaptive Execution



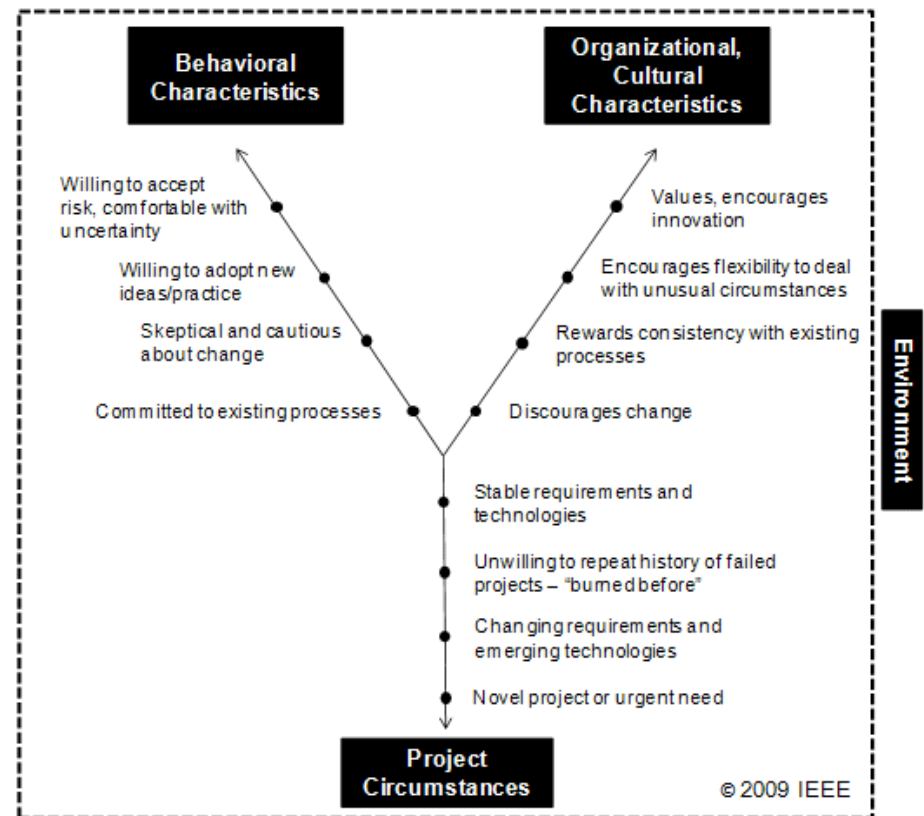
Should you consider alternative acquisition strategies? If so, for what part(s) of the program?

What should you do to build in the necessary acquisition flexibility?

What factors should you consider in deciding whether and when to exercise flexibility options?

“Y” Model: Factors Impacting Likelihood of Implementing Alternative Practices

- Drivers and motivators
 - Project characteristics (inc. degree of novelty, experience with failed projects)
- Enablers and barriers
 - Behavioral characteristics (tolerance for uncertainty/ambiguity...)
 - Organizational/cultural characteristics (inc. top cover)
- Environment
 - Formal policy, statutes
 - Technology pace of change...





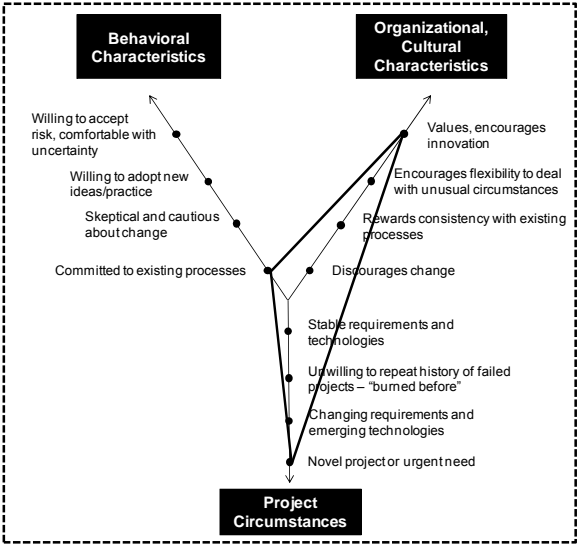
Three Examples from our Case Notes

Aligned



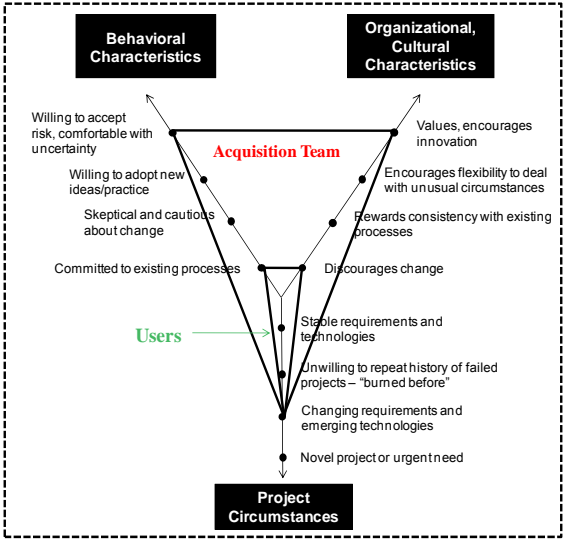
- Novel project that some believed couldn't be done
- "Intrapreneur" that was willing to challenge establishment and showed that he could deliver
- Top cover from senior leadership

Misaligned



- Novel project that some believed demanded different process
- Senior leadership encouraged innovation and prepared to provide top cover
- Project management committed to existing processes; not prepared to take advantage of offered top cover

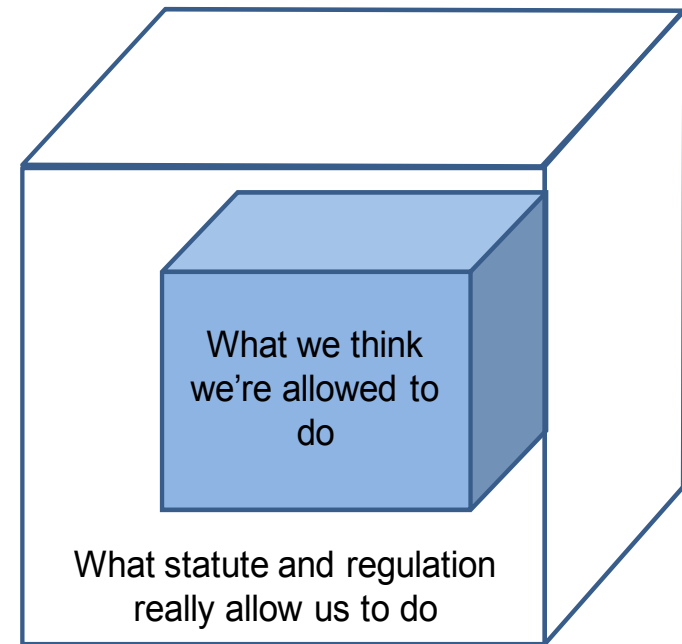
Conflicting



- Project entailed shift to cross-agency information sharing model
- Development team implemented innovative approach; strongly supported by senior management
- Users comfortable with existing processes and tools; resistant to change

Implications for Acquisition

- **Innovative practices are strongly supported by statute and regulations...**
 - **But challenged by long-standing practices and culture (we've always done it that way)**
- **Innovative practices are needed to meet legitimately changing user needs and provide responsive support**





Summary: A Change in Culture and Perspective

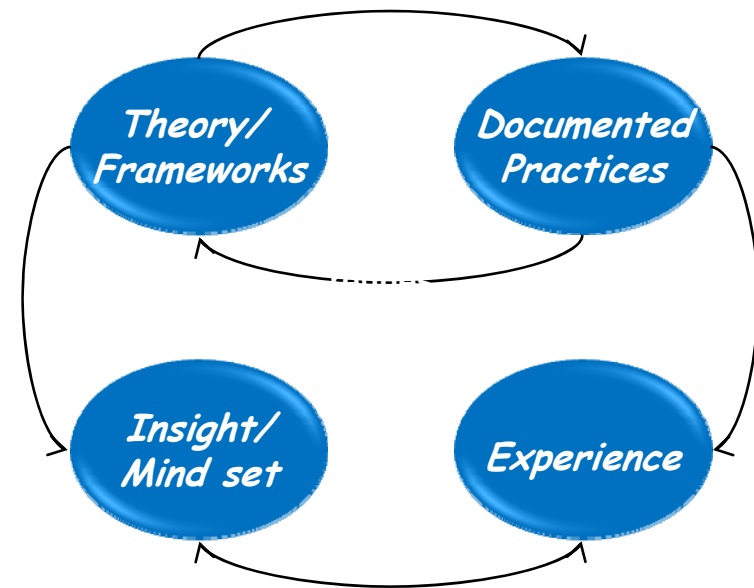
- **Understand that different parts of the program face different types and degrees of uncertainty and urgency; be prepared to tailor acquisition strategies accordingly.**
- **Balance the need for discipline and agility – discipline in executing the current increment and agility in adjusting subsequent increments to changing needs, priorities and evolving technologies**
- **Recognize that law and regulation provide great flexibility but implementing “non-traditional” practices are often challenged by long standing practice and culture**
- **Seek out active partnership with the end user and “top cover” within the organization**
- **Strive to implement a culture that emphasizes outcomes, “time to value” and responsiveness**



Backup Slides

Thoughts on Implementing

- Recognize that any change will advance through stages
- Develop the vision (SECDEF Gates, DSB, others)
- Empower others to act on that vision
- Focus on shaping the mind set as well as defining and documenting practices
- Provide training to key players (PMs, CEs, COs, others)
- Build out tools to help them work through the decision logic



"One size does not fit all"



Background: How Venture Capital Manages Uncertainty

Venture Capital Practices

*External
Uncertainties (in
the Market)*

+

*Internal
Uncertainties (in
the Portfolio Firm)*

Selection

- **Market focus**
- **Syndication**
- **Due diligence**

Diversification

- **Portfolio of “many small bets vs. few large ones”**
- **Rapid start and stop**

Agility

- **Funding tied to achieving “inchstones”**
- **Flexible, opportunistic financing**
- **Speed to market with feedback**

Active

involvement

- **Strategic advice**
- **Teambuilding/recruiting**
- **Leveraging contacts...**



Regulations Support Tailoring Practices

FAR Part 1.102: Statement of Guiding Principles for the Federal Acquisition System

- (d) The role of each member of the Acquisition Team is to exercise personal initiative and sound business judgment in providing the best value product or service to meet the customer's needs. In exercising initiative, Government members of the Acquisition Team may assume *if a specific strategy, practice, policy or procedure is in the best interests of the Government and is not addressed in the FAR, nor prohibited by law (statute or case law), Executive order or other regulation, that the strategy, practice, policy or procedure is a permissible exercise of authority.*

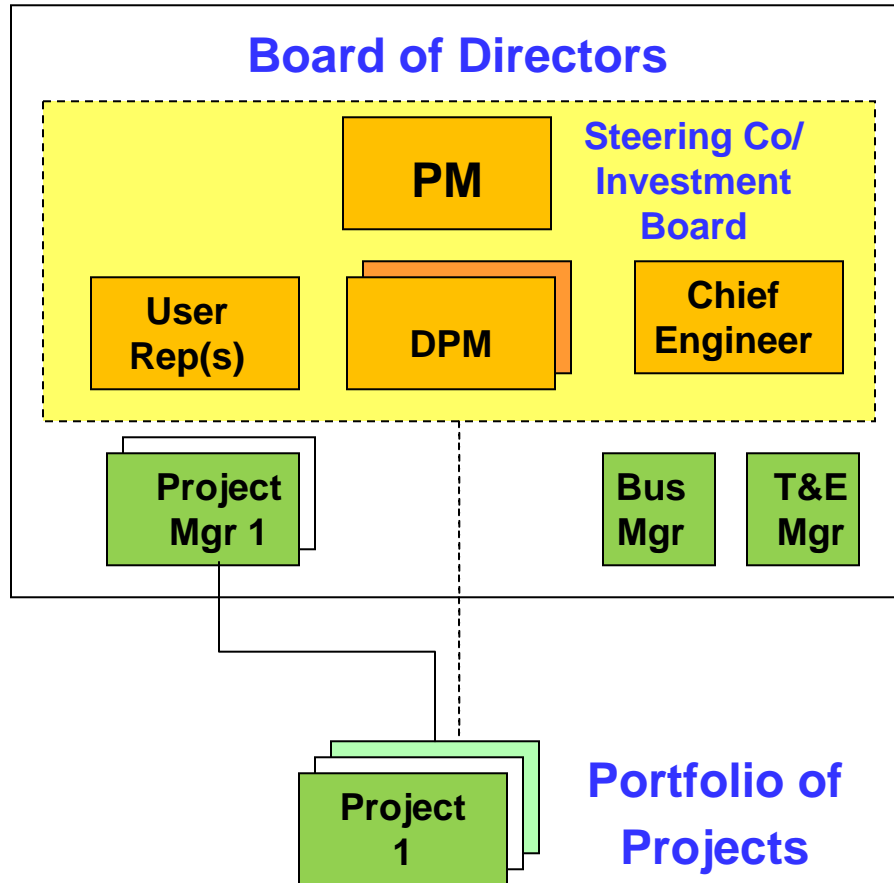
DoD 5000.2 Section 1. Defense Acquisition Management System

- b. Consistent with this Instruction and Reference (b), *the Program Manager (PM) and the MDA shall exercise discretion and prudent business judgment to structure a tailored, responsive, and innovative program.*





Governance: Managing a Program as a Portfolio of Investments



- Treat individual projects as investments
- Manage investments as a portfolio
 - Allocate resources to individual projects
 - Continuously monitor
 - Market conditions (demand, competitors...)
 - Product delivery
 - Fit with user expectations
 - Rebalance portfolio as warranted
 - Turn projects on/off; accelerate/slow down
 - As necessary, fund risk hedging initiatives (parallel paths)