What Progress Have We Made So Far With Evolutionary Development?

Fact Based

Multiple theses:
- Ferdowisi (2003)
- Derleth (2003)
- Spaulding (2003)
- Roberts (2003)
- Tondrealt (2003)
- Additional relevant and related theses from past LAI research

Tool/process development
- MATECON with multiple spirals and options

Key Finding:
- Programs leading in implementation of evolutionary acquisition are largely using variants of well-known program strategies (e.g., block upgrades, P3i)

What does it do?
- Assess current state of evolutionary development
- Identify issues for research and practice
- Develop methods and tools to help improve evolutionary development performance

Who should use it?
- Program managers/planners
- SPOs
- Acquisition policy makers
- Researchers

What are the benefits?
- Insight to avoid potential system problems
- Tools for better strategic decision-making
- Identify areas for investment, action, education, and training

Action Oriented

- Early engagement with SAF/ACE on evolutionary acquisition pathfinders
- Building on successful research to develop innovative new ways to model system evolution
- Applying knowledge from research base to inform action on Lean Now!

Decision Guidance for Program Strategy

Affordability-focused Model

- Cost drivers typically established through the SAR/ACE
- More than a single cost driver
- Overall cost drivers generally available to assess
- Affordability-focused model several issues to be considered

Performance-focused Model

- Key Finding:
  - Modularity and open architectures are helpful, but real limitations emerge in interdependencies in systems of systems

PD and enabling infrastructures are recurring components of evolutionary programs
- Iteration and concurrency can require stakeholders to work harder and faster
- Need enterprise lean to eliminate waste
- Need advanced decision-making tools to work smarter
- Product design and architecture issues are more important
  - COTS no simple solution
  - Modular system architecture helps, but interfaces in systems of systems can still dominate