# Balancing Traditional Systems Engineering with some Focused Agile Development

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**Overview:**

The purpose of this masterclass is to:

- Examine the complexities and challenges involved in projects and programs implementing the more "Agile" approaches being called for, particularly for systems and software-intensive development projects.
- Learn how to apply a new approach, Systems Engineering Focused Agile Development (SEFAD), that practically offers the benefits of enabling more Agile approaches to be implemented while maintaining the systems engineering best practices essential for achieving successful delivery outcomes.

The approach presented has been extensively trialed in several US Defense programs with commonsense practical feedback incorporated throughout to refine guidance documents and project review artefacts.

The challenges of adopting more Agile approaches include:

- Projects which lack the benefits of established systems engineering methodologies and good engineering rigor often fail to meet customer needs and expectations.
- Systems engineering methods are usually not flexible enough to take advantage of the capability changes required, particularly for software projects, which need flexibility in schedule and requirements definition to achieve successful outcomes.
- Engineers trained in the use of the various Agile frameworks frequently strongly oppose any development methodology viewed as infringing on the Agile Manifesto.
- While Agile projects, by their nature, embrace the concept of change, uncontrolled change often leads to project failure, particularly for major acquisition projects

The new SEFAD approach has been developed that takes a common-sense *rigor-flexibility-rigor* approach to development, making use of the strengths of the Agile Scrum framework and the best practices of systems engineering methodologies. SEFAD results are a common language that better allows cross-functional teams to communicate project needs while also allowing software developers to maintain flexibility in the execution of software projects.

Research has determined that the blending of Agile methods and contemporary systems engineering methods using SEFAD offers the potential benefits of achieving improved cost, schedule, and technical performance outcomes.

**Masterclass Objectives:**

The masterclass objectives include:

1. Examine the nature and complexities surrounding defense industrial and manufacturing development in implementing a more "Agile" approach.
2. Learn about the SEFAD process and the benefits of using it.
3. Explore how the SEFAD process can be utilized by projects and programs that are not system and software intensive.
4. Brainstorming session to discuss SEFAD in specific implementations, such as participant projects or programs.

As a result of the workshop, participants will be better prepared and equipped to implement the SEFAD process in their project and programs.

This will enable projects and better programs to successfully implement the more Agile approaches being called for in project and program delivery while retaining the essential engineering and technical rigor needed to achieve successful delivery outcomes.

**Target Audience:**

The workshop is primarily intended for people with responsibilities for the design, oversight, execution, or evaluation of projects or programs in an engineering or project or program management capacity.

This includes Project Directors, Program Directors and Managers, PMO and Contract Managers and Analysts, Senior Project Managers and project managers managing large complex projects, and Chief Engineers.

Others who would benefit from attending this workshop include project stakeholders with oversight roles including members of Project Steering Committees or Governance Boards.