

# MANAGING COMPLEX TECHNICAL PROJECTS



## WHEN

Nov 13 – 15, 2023  
Dec 4 – 6, 2024

## PRICE

\$4,500

## WHERE

Live Online

## EXECUTIVE CERTIFICATE TRACK

Technology, Operations, and  
Value Chain Management

Managing a complex technical project is a massive effort well beyond the scope of a simple project plan. Complex systems are comprised of hundreds or thousands of interconnected components, each potentially developed by a different group of people distributed over multiple organizations. Cost and schedule overruns are common. How can technical program leaders better manage such a complex process. This 3-day online program offers two specific sets of techniques which technical managers can use to better handle the complexity of large product and service development efforts. Two days of the course focus on the design structure matrix (DSM) method, while the third day teaches modern agile development methods. DSM techniques have been used by MIT researchers to study complex system development and to help technical managers improve project performance. After field-testing DSM in dozens of organizations and industries around the world, the method is now being applied in a wide range of technical industries – automotive, software, aerospace, telecommunications, medical devices, energy systems, electronics, capital equipment, large-scale construction, and more. Agile development techniques have been evolving in the software industry for many years. Today we are finding ways to apply agile methods in many other types of technical projects. However, some of the techniques that work for software projects are difficult to apply in other realms. The key to application of agile methods is to understand which of the many tools to use in any particular project.

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**MIT**  
**MANAGEMENT**  
EXECUTIVE EDUCATION

## FACULTY\*



Steven Eppinger

*\*Please note, faculty may be subject to change.*

## TAKEAWAYS

Through lectures, exercises, interactive discussions, and teamwork, participants in the program Managing Complex Technical Projects learn how to:

- Map existing product development processes using DSM
- Identify ways to facilitate planned iterations and reduce unplanned iterations
- Manage technical complexity
- Model system decomposition and architecture using DSM
- Find patterns of modularity and integration in systems
- Restructure development organizations based on system architecture
- Understand team-based agile development and scrum methods
- Select the most appropriate agile tools for specific projects
- Scale planning and coordination in larger agile applications

## WHO SHOULD ATTEND

- Senior managers involved in complex product development, highly interdependent system and service development and delivery, and project management
- Those responsible for speeding up the process of improving design procedures and designing and developing better products and services
- Vice presidents of engineering, manufacturing, and technology



*Steve is an engaging lecturer with a wealth of knowledge. He gives a number of excellent examples and presents the material in a way that can be easily digested and applied to your own company. Two days is a good introduction to the material and definitely piques your interest to learn more.*

**OVERALL RATING** | ★ ★ ★ ★

– Nicholas W

## CONTACT INFORMATION

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