Complex Project Management

Considering the Limits of Conventional Project Management

- Stretching the limits of conventional project management
- Rethinking the future of project management

Defining Complexity Science, Chaos Theory and Project Complexity Factors

Introducing complexity science and chaos theory

- Comparing and contrasting simple and complex systems
- Applying various complexity modeling techniques

Adopting the four-dimensional project complexity diagnostic tool

- Analyzing project boundary conditions to understand the complexity of your project
- Determining the edge of chaos
- Assessing the significance of complex project risks
- Communicating project complexity factors to others

Employing an Adaptive Project Management Process

Beginning with adaptive principles

- Building with Agile software development
- Borrowing from the combat operations loop and the scientific method

The four-step adaptive project management process

- Implementing rolling wave planning and progressive elaboration
- Managing adaptive requirements, change and quality
- Scheduling, budgeting and metrics on complex projects

Minimizing Scale on Strategic Projects

Aligning with corporate strategy and value engineering

- Executing portfolio management strategies
- Making the business case and delivering value
- Utilizing business capability and purpose alignment models

Developing small, strategic batches of work

- Applying Van Creveld's Iron Rule and Occam's Razor
- Delivering minimal marketable features

Managing Pace on Complex Projects

Maintaining control through speed and agility

- Dealing with daily disruptions
- Employing fast-tracking and crashing
- Compressing the critical path

Incorporating Critical Chain and Lean techniques

- Evaluating Critical Chain project management
- Employing the theory of constraints and five focusing steps to eliminate waste and optimize flow

Exercising Strong Leadership

Leading adaptive teams

- Developing your core competencies
- Growing your sphere of influence and managing politics

Building CRACK teams

- Facilitating emergent organization and self-management
- Agreeing on vision, goals, objectives and values
- Empowering and motivating the team
- Implementing effective feedback loops

Recognizing and Managing Risks

Identifying and managing risks with scenario modeling

- Quantifying and mitigating risk threats
- Exploiting risk opportunities for disruptive innovation

Implementing probabilistic estimating tools and techniques

- Managing precision and accuracy
- Correcting estimating bias and reducing variability
- Revisiting the cone of uncertainty and order of magnitude estimating
- Leveraging PERT, Monte Carlo and Agile techniques

Building Your Personal Action Plan

- Putting it all together
- Analyzing a real-world case study
- Assessing your own real-world projects
- Identifying specific actions you will take
- Gaining support and managing risks