Managing Chaos and Complexity in Projects 2 Days

Course Description:

Every project manager knows the feeling. The project has been initiated and planned using the best project management methods, and all the stakeholders have reached agreement and committed to the project. The controls are in place, the team is assembled and assignments have been made, and the project is ready to go. Everything that can be done to bring order to the project has been done. It's the calm before the storm and expectations of success are high.

Most project managers also know the feeling that comes soon after. Barely into project execution, what looked like a sure thing explodes. Rather than being the well-organized effort it was designed to be, the project looks more like a ride straight out of a professional bull-riding event. Instead of managing the project, the project manager finds himself hanging on for dear life with little ability to control outcomes. Instead of watching the project unfold as predicted, chaos ensues.

The truth is that our attempts to bring order to complex projects often come up short. No matter how much planning or organizing we do, we're no match for the turbulence that real-life projects can encounter. Complex IT projects are particularly subject to devastating disorder.

Complex projects look more like a ride on one of those mean-spirited, massive and agile bulls than the product of good planning, and though we might try to harness the forces that drive the project and tie ourselves on to the bull as tightly as we can, once that gate opens, all hell can, and usually does, break lose. Like that bull, the project seems to be intent on ruining the day of anyone close to it.

If we're going to be successful on complex projects we need to see them realistically for what they are and get away from our preoccupation with control. Fortunately, other disciplines have come to grips with the impact of complexity and chaos, and, if we listen carefully, can provide lessons for project managers.

That is the subject of this workshop—to identify what is known about turbulence, chaos and complexity and identify lessons and methods that can be applied by project managers to mitigate the damage they cause and harness the energy they release. These methods complement the methods and processes described by the *Project Management Body of Knowledge (the PMBOK® Guide, Fourth Edition)*, promulgated by PMI®. In particular, they provide supplemental techniques for communications and risk management, two of the knowledge areas defined by the *PMBOK® Guide, Fourth Edition.*

We will explore four project management strategies for the management of chaos and complexity. Those methods are drawn from current literature, including *The Project Management Journal*, also published by PMI. Footnotes throughout the materials allow participants to more fully explore the authors and materials cited.

Strategic Course Goals and Objectives:

- Identify the ways that complexity, chaos and turbulence affect IT projects and other types of projects
- Analyze the shortcomings of traditional project management methods for creating successful outcomes in complex projects
- Expose participants to concepts of chaos and complexity that can help them understand their project environments
- Provide participants with a new set of tools with which to augment traditional project management methods in complex projects
- Illustrate and practice the application of those methods in IT and other project environments

Tactical Skills:

- Examine complexity and chaos and what has been learned about it in recent research

- Examine the methods and processes embedded in the *PMBOK® Guide, Third Edition* that can help us manage chaotic processes

- Examine four specific tools that we can use to supplement our project communications management and risk management initiatives

- Engage in exercises to help us internalize the concepts we will present and apply them to your projects

- Point you toward other resources to help increase your understanding of chaos and complexity and their impact on your projects and your life, in part through the extensive footnotes to the cited materials

Course Audience:

- Though all project managers can benefit from this workshop, it is best suited for experienced project managers who are coping with complex projects involving technology, multiple stakeholders, and uncertain outcomes.

Prerequisites:

- To ensure your success, we recommend you have significant working knowledge or experience in working in a project environment.

Course Outline:

<u>Day 1:</u>
- Module 1: Introduction to the workshop

    o In this module, we will detail the course objectives and schedule and identify participant interests and concerns

- Module 2: Introduction to chaos and complexity

    o In this module, we'll examine the emerging literature on chaos and complexity and identify its main tenets. We'll take a look at how our world is increasingly impacted by the forces of chaos and how the science of chaos has been applied to make sense out of other disciplines.

- Module 3: Tools for the management of complexity and chaos in the *PMBOK® Guide, Fourth Edition*

    o In this module, we'll identify the ways that the project management methods we're most familiar with deal with chaos, complexity and change. We'll look at risk management processes, change management, and other concepts from the *PMBOK® Guide, Fourth Edition* that can help us deal with chaos and complexity in our projects

- Module 4: Social network management

    o In this module, we'll begin our examination of the four supplementary tools we'll use to manage complexity and chaos in our projects. Social network management, the first of those tools, allows us to map the connections between the various stakeholders for our projects and evaluate them on the criteria that define the most important network nodes. We'll build a network map for one of our projects.

<u>Day 2:</u>
- Module 5: Agent-based modeling

    o In this module, we'll summarize the principles of agent-based modeling and see how impacts can multiply across our projects and how simple decision rules by stakeholders can create success or failure. We'll apply agent-based modeling to a project.

- Module 6: Context and relational management, including scenario planning

    o In this module, we'll examine one of the most useful tools for managing chaos and complexity-the engagement of our stakeholders in a dialogue designed to co-create a project reality that can contribute to their satisfaction and our success. We'll examine and apply scenario planning, a tool proven to be useful by Shell and others,

to build visions of success and failure that can create a common understanding of our project and build excitement in it. We'll build scenarios for a project.

- Module 7: The identification and management of project bifurcation points

    o In this module, we'll examine those critical points in our projects at which subtle changes can create substantial swings in project performance. We determine what those points are and how we might influence them. We'll identify those bifurcation points for a project and identify strategies for dealing with them.

- Module 8: Conclusions and workshop wrap-up

    o In this final module, we'll draw conclusions from the course for our ability to manage our projects and conclusions about the necessary skills of project managers. We'll answer final questions, evaluate the course, and wrap it up.