



Project Systems Thinking and Complexity Risk Training Course

5 – 9 September 2027
Johannesburg

Project Systems Thinking and Complexity Risk Training Course

Ref: 1261_193194 **Date:** 5 – 9 September 2027 **Location:** Johannesburg **Fees:** 4500 Euro

Overview

Project Systems Thinking and Complexity Risk Training Course is a one-week advanced course for project managers, systems thinkers, PMO professionals, risk managers, transformation leaders, sponsors, and workstream owners who need a Project Complexity and System Risk Map. The course connects project systems thinking, system boundaries, stakeholder viewpoints, interdependency mapping, causal-loop analysis, emergent risk, intervention design, and adaptive monitoring. Participants apply the methods to infrastructure and digital-service scenarios. Agile Leaders Training Center presents systems thinking as a disciplined basis for complexity-aware decisions.

Who Should Attend

- Teams responsible for coordinating complex projects and interconnected workstreams
- Functions responsible for project governance, risk oversight, and assurance
- Teams responsible for transformation architecture and system-wide change
- Sponsors responsible for choices with cross-project consequences
- PMO functions responsible for dependency visibility and escalation
- Analysts responsible for modeling feedback, uncertainty, and emerging patterns

The course assumes participants already manage project decisions, dependencies, risks, or governance at work and leaves out introductory project management and software-specific modeling administration.

Departments and Industries

The course supports departments and industries where interdependencies and changing conditions shape project outcomes.

- Project management, PMO, transformation, and strategy functions
- Risk, governance, internal assurance, and enterprise architecture teams
- Engineering, construction, transport, and utilities organizations
- Technology, telecommunications, and digital-service organizations
- Healthcare, financial-services, and professional-services organizations

Learning Objectives

By the end of this course, participants will be able to:



- Build a defensible project system boundary and stakeholder viewpoint map
- Analyze interdependencies, assumptions, delays, and feedback loops
- Diagnose complexity sources and emergent risk signals
- Evaluate systemic risk propagation through scenarios
- Prioritize leverage points and adaptive interventions
- Build a Project Complexity and System Risk Map

Course Agenda

Day 1: System Context and Complexity

- ISO/IEC/IEEE 15288 System-of-Interest and Life-Cycle Context Map
- Project System Boundary and Environment Canvas
- Stakeholder Viewpoint and Concern Matrix
- Project Complexity Source and Characteristic Diagnostic
- System Purpose, Value, and Decision-Criteria Model

Day 2: Interdependencies and Feedback

- Component and Interdependency Network Map
- Causal-Loop Diagram Construction Method
- Reinforcing and Balancing Feedback Analysis
- Delay, Accumulation, and Nonlinearity Pattern Map
- Assumption and Dependency Risk Register

Day 3: Emergence and Systemic Risk

- ISO 31000 Risk Principles and System Context Frame
- Emergent Risk Signal Catalogue
- Systemic Risk Propagation and Concentration Map
- Scenario and Unintended-Consequence Analysis
- Complexity-Aware Risk Prioritization Matrix

Day 4: Intervention and Adaptive Control

- Leverage-Point and Intervention Option Matrix
- Boundary and Stakeholder Impact Review
- Leading-Indicator and Pattern-Monitoring Dashboard
- Experiment, Feedback, and Adaptation Cycle
- Decision Assurance and Escalation Log



Day 5: Complexity Risk Practice

- Exercise: System Boundary and Viewpoint Design
- Exercise: Interdependency and Causal-Loop Analysis
- Exercise: Emergent Risk and Scenario Evaluation
- Exercise: Leverage-Point Intervention Decision
- Capstone Exercise: Project Complexity and System Risk Map

Practical Exercises

The course uses suggested activities that connect systems evidence to project risk and intervention decisions.

- Suggested activity: define boundaries and competing stakeholder viewpoints for an infrastructure expansion.
- Suggested activity: map dependencies, delays, and feedback loops in a digital-service transformation.
- Suggested activity: test emerging risks and unintended consequences across alternative scenarios.
- Suggested activity: select an intervention and prepare monitoring and escalation evidence.

FAQs

Who should attend the Project Systems Thinking and Complexity Risk Training Course?

The course suits professionals responsible for complex projects, PMO coordination, risk, transformation, sponsorship, assurance, or system analysis. It assumes practical experience with project decisions, dependencies, governance, or risk.

How does project systems thinking differ from conventional project risk management?

Project systems thinking examines relationships, feedback, boundaries, delays, and emergence across the project system, while conventional project risk management may focus more directly on identifiable events, causes, impacts, responses, and owners.

What is a causal-loop diagram used for in complex projects?

A causal-loop diagram shows how variables influence one another, where feedback reinforces or balances change, and where delays or unintended consequences may affect a project decision.

How can teams identify emergent risk in project systems?

Teams identify emergent risk by monitoring interaction patterns, weak signals, dependency changes, feedback behavior, assumption failures, and scenario outcomes rather than relying only on isolated risk statements.



What belongs in a Project Complexity and System Risk Map?

The map combines boundaries, stakeholder viewpoints, components, dependencies, causal loops, complexity characteristics, emerging signals, propagation paths, scenarios, leverage points, interventions, indicators, and decision records.

Conclusion

The course integrates project systems thinking, causal mapping, complexity diagnosis, systemic risk analysis, intervention design, monitoring, and assurance. Participants take back a Project Complexity and System Risk Map containing the evidence behind key project choices. The map helps teams see connected effects, challenge assumptions, and adapt interventions as conditions change.