

Systems Thinking for Complex Sustainability Challenges Training Course

8 – 12 February 2027
Singapore

AGILE LEADERS
Training Center

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Overview

Systems Thinking for Complex Sustainability Challenges Training Course is a one-week advanced course for sustainability leaders, policy professionals, program managers, and cross-sector decision-makers, who leave with a Sustainability Systems Intervention Portfolio. The course connects systems mapping, causal-loop analysis, feedback dynamics, stakeholder mapping, leverage-point analysis, scenario exploration, portfolio interventions, adaptive learning, and governance. It turns fragmented responses into coordinated experiments for environmental, social, and economic outcomes. Agile Leaders Training Center develops applied systems thinking for sustainability practice.

Who Should Attend

- Teams responsible for sustainability strategy and transformation portfolios
- Functions responsible for public policy, cross-sector coordination, and institutional change
- People responsible for program design, innovation, and adaptive delivery
- Teams responsible for climate, resource, social-impact, and resilience decisions
- Functions responsible for stakeholder engagement and collaborative governance

The course assumes participants can interpret sustainability evidence and influence multi-stakeholder decisions; it leaves out introductory sustainability awareness, policy drafting, statistical monitoring administration, and technical engineering design.

Departments and Industries

The course supports interconnected decisions across government, energy, infrastructure, finance, food systems, manufacturing, cities, and social development.

- Sustainability and environmental transformation functions
- Policy, planning, and cross-government coordination teams
- Strategy, innovation, and program-management offices
- Energy, water, food, transport, and infrastructure organizations
- Finance, investment, manufacturing, and supply-chain functions
- Community development and civil-society organizations

Learning Objectives

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

- Apply systems thinking to define complex sustainability challenges.
- Build causal-loop, stakeholder, and system-boundary maps.
- Analyze feedback dynamics, delays, and unintended consequences.
- Compare leverage points through scenario exploration.
- Prioritize coordinated portfolio interventions and experiments.
- Evaluate adaptive learning and governance arrangements.

Course Agenda

Day 1: Frame the Sustainability System

- Complex Sustainability Challenge Framing Canvas
- System Boundary and Purpose Map
- Behavior-over-Time Graph Method
- Economic, Social, and Environmental Interaction Matrix
- Assumption and Mental Model Register

Day 2: Map Actors and Feedback

- Causal-Loop Diagramming Method
- Reinforcing and Balancing Feedback Analysis
- Delay, Accumulation, and Threshold Map
- Stakeholder Power and Relationship Network
- Resource, Information, and Value Flow Map

Day 3: Find Leverage and Explore Futures

- System Archetype Diagnostic Cards
- Leverage-Point Screening Matrix
- Unintended Consequence Pathway Analysis
- Cross-Sector Trade-Off and Synergy Matrix
- Scenario Exploration and Wind-Tunneling Method

Day 4: Design an Adaptive Intervention Portfolio

- Portfolio Intervention Logic Map
- Intervention Coherence and Dependency Matrix
- Safe-to-Learn Experiment Design Canvas
- Adaptive Learning Question and Signal Set
- Collaborative Governance and Decision-Rights Model

Day 5: Practice Systemic Sustainability Action

- Exercise: Frame a Water-Energy-Food Challenge
- Exercise: Build a Circular-Economy Causal Loop
- Exercise: Test Climate-Resilience Leverage Points
- Exercise: Sequence a Cross-Sector Experiment Portfolio
- Capstone Exercise: Complete the Sustainability Systems Intervention Portfolio

Practical Exercises

The course uses suggested activities based on urban resilience, industrial resource use, food systems, and infrastructure-transition decisions.

- Suggested activity: map system boundaries, behavior patterns, assumptions, actors, and flows for an interconnected challenge.
- Suggested activity: build causal loops and diagnose reinforcing, balancing, delayed, and unintended effects.
- Suggested activity: compare leverage points under alternative scenarios and document trade-offs and synergies.
- Suggested activity: assemble linked interventions, experiments, learning signals, decision rights, and adaptation triggers.

FAQs

Who suits systems thinking for sustainability training and what does it assume?

Systems thinking for sustainability training suits leaders, policy professionals, program managers, and cross-sector decision-makers who can interpret sustainability evidence and contribute to decisions involving several organizations or sectors.

How does systems thinking for sustainability differ from sustainability strategy training?

Systems thinking for sustainability diagnoses interactions, feedback, delays, power, and leverage before selecting coordinated interventions; sustainability strategy training usually focuses on priorities, goals, initiatives, and execution within a defined organizational scope.

What is a causal-loop analysis for complex sustainability challenges?

Causal-loop analysis represents variables and directional relationships to expose reinforcing and balancing feedback, delayed effects, and pathways through which an intervention may amplify, stabilize, or displace a sustainability problem.

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How are leverage points selected in sustainability systems?

Leverage points are selected by comparing influence on system behavior, feasibility, distributional effects, dependencies, reversibility, time horizons, and possible unintended consequences across alternative scenarios.

Why use portfolio interventions for complex sustainability challenges?

Portfolio interventions combine complementary actions and experiments because complex challenges rarely respond to one project; the portfolio connects structural, behavioral, institutional, financial, and learning actions while retaining options as evidence changes.

Conclusion

Participants take back a Sustainability Systems Intervention Portfolio linking system maps, feedback diagnosis, leverage points, scenarios, experiments, learning signals, and governance. It changes separate sustainability initiatives into a coordinated set of testable interventions. The portfolio supports adaptive decisions across environmental, social, and economic boundaries while making assumptions, dependencies, and trade-offs visible.