

Design Thinking + Systems Thinking for Digital Innovation

Course Description

Modern digital challenges—whether in government platforms, enterprise systems, or startup ecosystems—are rarely simple technical problems. They involve people, policies, processes, and technology interacting as complex systems.

This training integrates **Design Thinking (human-centered innovation)** with **Systems Thinking (holistic problem understanding)** to help professionals approach complex challenges creatively and strategically.

Participants will learn how to **understand users deeply, analyze systems, generate innovative ideas, prototype solutions, and evaluate long-term impact**. The course is designed for technology professionals, developers, and digital innovators working in environments such as **Thimphu TechPark**, where innovation and problem-solving are key to national digital development.

Course Objectives

By the end of the training, participants will be able to:

- Apply **Design Thinking principles** to solve real-world problems
 - Use **Systems Thinking tools** to analyze complex challenges
 - Conduct user research and identify hidden needs
 - Generate creative ideas for digital innovation
 - Prototype and test solutions quickly
 - Identify systemic impacts of technology solutions
 - Collaborate effectively within multidisciplinary teams
 - Design sustainable and human-centered digital solutions
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Course Duration

7 Days

Each day includes:

- Concept learning
- Case studies

- Interactive activities
 - Practical workshops
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Day-wise Table of Contents

Day 1 – Foundations of Innovation Thinking

Theme: Understanding Modern Problem-Solving Approaches

Module 1: Introduction to Design Thinking

- Evolution of innovation approaches in technology
- The five stages of Design Thinking
- Why human-centered design matters in digital solutions

Module 2: Introduction to Systems Thinking

- Understanding complex problems
- Linear vs systemic thinking
- Interconnected systems in technology environments

Module 3: Innovation Mindsets

- Curiosity and experimentation
- Collaborative problem solving
- Learning from failure

Case Study

- Innovation culture in successful technology companies

Activity

- Identifying everyday system problems in technology workplaces
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Day 2 – Understanding Users and Stakeholders

Theme: Designing Solutions for Real Needs

Module 1: Empathy in Problem Solving

- Understanding user perspectives
- Identifying user pain points

- Building empathy maps

Module 2: User Research Methods

- Interviews and observation
- Gathering insights from stakeholders
- Identifying unmet needs

Module 3: Defining the Problem Clearly

- Writing effective problem statements
- Avoiding solution bias
- Framing innovation challenges

Case Study

- Designing user-friendly digital government services

Activity

- Conducting mock user interviews
-

Day 3 – Systems Thinking for Complex Problems

Theme: Seeing the Bigger Picture

Module 1: Mapping Systems

- Identifying system components
- Understanding relationships and dependencies
- Visualizing complex systems

Module 2: Stakeholders and Ecosystems

- Mapping stakeholder influence
- Understanding system dynamics
- Collaboration across departments

Module 3: Root Cause Analysis

- Identifying underlying problems
- Feedback loops in systems
- Avoiding superficial solutions

Case Study

- Analyzing why large technology projects fail

Activity

- Mapping the ecosystem of a digital service platform
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Day 4 – Creative Ideation and Innovation

Theme: Generating Powerful Ideas

Module 1: Divergent Thinking

- Techniques for creative thinking
- Brainstorming methods
- Breaking conventional thinking patterns

Module 2: Collaborative Innovation

- Building ideas in teams
- Encouraging diverse perspectives
- Turning ideas into opportunities

Module 3: Evaluating Ideas

- Impact vs feasibility analysis
- Prioritizing innovation ideas
- Selecting the best concepts

Case Study

- Innovative digital solutions transforming industries

Activity

- Generating solutions for improving digital public services
-

Day 5 – Prototyping and Experimentation

Theme: Turning Ideas into Tangible Concepts

Module 1: Rapid Prototyping

- Purpose of prototypes
- Low-fidelity vs high-fidelity prototypes
- Learning through experimentation

Module 2: Iterative Development

- Testing early ideas
- Learning from feedback
- Improving solutions through iteration

Module 3: Communicating Ideas Through Prototypes

- Using sketches and storyboards
- Presenting ideas visually
- Explaining solutions clearly to stakeholders

Case Study

- How prototypes shaped successful digital products

Activity

- Creating a simple prototype for a digital solution
-

Day 6 – Testing and Refining Solutions

Theme: Learning from Feedback

Module 1: User Testing Methods

- Observing user behavior
- Collecting meaningful feedback
- Testing assumptions

Module 2: Iteration and Improvement

- Refining solutions
- Managing stakeholder input
- Continuous improvement mindset

Module 3: Measuring Success

- Evaluating solution effectiveness
- Metrics for innovation
- Aligning outcomes with organizational goals

Case Study

- Iteration cycles in successful product development

Activity

- Testing prototypes with peer feedback
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Day 7 – Integrating Design Thinking and Systems Thinking

Theme: Creating Sustainable Solutions

Module 1: Combining Design Thinking with Systems Thinking

- Human-centered innovation within complex systems
- Identifying long-term impacts
- Avoiding unintended consequences

Module 2: Leading Innovation in Organizations

- Building an innovation culture
- Communicating ideas to decision-makers
- Collaborating across teams

Module 3: Future-Ready Problem Solving

- Sustainable digital transformation
- Ethical and responsible innovation
- Continuous learning for innovators

Case Study

- Digital transformation initiatives in emerging economies

Activity

- Final innovation challenge: designing a solution to a real-world problem