Strategic Design Thinking for Research and Development Training Course



23 - 27 Nov 2026

Geneva

5900 € (Per Person)

Ref: #RD9838_139439

Course Introduction / Overview:

This course provides a comprehensive framework for integrating design thinking principles directly into the research and development lifecycle. It moves beyond theoretical concepts to offer a practical, hands-on approach for R&D professionals seeking to foster a culture of innovation and create products that truly resonate with users. Drawing on the human-centered methodologies championed by pioneers like Tim Brown in his seminal work, "Change by Design," this program equips participants with the tools to systematically tackle complex challenges. Participants will learn to reframe problems, deeply understand user needs, and rapidly iterate on solutions through prototyping and testing. The curriculum is specifically tailored to the unique context of R&D, addressing how to balance creative exploration with technical feasibility and business viability. At BIG BEN Training Center, we have designed this experience to transform the traditional R&D process from a linear, technology-pushed model to a dynamic, user-pulled engine for growth and market leadership, ensuring that innovation is not left to chance but is a repeatable and manageable process. This course is the definitive guide for turning insights into impactful, market-ready innovations.

Target Audience / This training course is suitable for:

- Research and Development (R&D) Managers.
- Product Development Specialists.
- Engineers and Scientists.
- Innovation Leaders and Managers.
- Technology and R&D Strategists.
- Project Managers in technical fields.
- User Experience (UX) Researchers within R&D teams.
- New Product Introduction (NPI) Team Members.

Target Sectors and Industries:

- Technology and Software Development.
- Pharmaceuticals and Biotechnology.
- Manufacturing and Industrial Goods.
- Consumer Electronics and Packaged Goods.
- Automotive and Aerospace.
- Telecommunications.
- Energy and Utilities.
- Governmental agencies and public sector research institutions.

Target Organizations Departments:

- Research and Development (R&D).
- Product Management and Development.
- Engineering and Design.
- Innovation and Strategy Labs.
- New Product Introduction (NPI).
- Quality Assurance and Testing.
- Marketing and Market Research.
- Corporate Strategy and Business Development.

Course Offerings:

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

- Apply the five-stage design thinking model to R&D projects.
- Conduct effective user research and ethnographic studies to uncover latent needs.
- Create detailed empathy maps and user journey maps to guide development.
- Define clear, actionable problem statements based on user insights.
- Facilitate dynamic ideation sessions using a variety of brainstorming techniques.
- Develop and prioritize innovative concepts for new products and services.
- Build low-fidelity and high-fidelity prototypes to test assumptions quickly.
- Design and execute effective user testing plan to gather critical feedback.
- Analyze feedback and iterate on solutions in a structured manner.
- Integrate design thinking methodologies into existing agile and stage-gate R&D processes.
- Champion a human-centered design culture within their organization.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be immersive, interactive, and highly practical, ensuring that participants can immediately apply their learning. This course eschews traditional lecture-based formats in favor of a hands-on, workshop-style environment. Participants will engage in a simulated R&D project, working in small teams to tackle a real-world challenge from problem definition to final prototype. The learning journey is facilitated through a blend of expert instruction, interactive discussions, and collaborative exercises. A significant portion of the course is dedicated to practical activities such as conducting mock user interviews, building physical and digital prototypes, and running user testing sessions. We utilize a variety of case studies from leading innovative companies to illustrate key principles and demonstrate successful implementation. Continuous feedback is a core component, with structured peer reviews and expert coaching provided at every stage of the process. This experiential approach ensures a deep, practical understanding of design thinking and builds the confidence needed to implement these powerful techniques within any R&D context.

Course Agenda (Course Units):

Unit One: Foundations of Design Thinking in R&D

- Introduction to Design Thinking as a strategic tool.
- The history and evolution of human-centered design.
- Contrasting traditional R&D models with the design thinking approach.
- The five stages of the Design Thinking process overview.
- Cultivating an innovator's mindset: curiosity, empathy, and collaboration.
- Understanding the intersection of desirability, feasibility, and viability.
- Framing and reframing complex R&D challenges.

Unit Two: Empathize and Define The User-Centric Core

- The principles of deep empathy in a technical context.
- Techniques for primary user research: interviews, observation, and immersion.
- Secondary research methods for gathering user insights.
- Developing user personas to represent target segments.
- Constructing empathy maps to visualize user perspectives.
- Creating detailed customer journey maps to identify pain points and opportunities.
- Synthesizing research findings into a clear and actionable problem statement (Point of View).

Unit Three: Ideation and Concept Development

- Creating the right environment for creative thinking.
- Divergent vs. convergent thinking in the R&D process.
- Advanced brainstorming techniques (e.g., SCAMPER, Round Robin, Storyboarding).
- How to generate a high quantity and quality of ideas.
- Techniques for building upon the ideas of others.
- Methods for clustering, analyzing, and prioritizing innovative concepts.
- Developing initial solution hypotheses for testing.

Unit Four: Prototyping for Learning and Iteration

- The role of prototyping in reducing risk and uncertainty.
- Understanding different levels of prototype fidelity (low, medium, high).
- Techniques for rapid prototyping: paper prototypes, wireframes, and mockups.
- Creating experience prototypes and role-playing scenarios.
- Using storytelling as a prototyping tool for services and processes.
- Best practices for building prototypes with limited time and resources.
- Planning a prototyping strategy for a complex R&D project.

Unit Five: Testing, Implementation, and Scaling Innovation

- Designing effective user testing protocols and experiments.
- Methods for gathering and structuring user feedback.
- Differentiating between what users say and what they do.
- Using feedback to drive iterative development cycles.
- Developing a compelling business case for innovative concepts.
- Strategies for integrating design thinking into agile sprints and stage-gate reviews.
- Championing human-centered innovation and managing organizational change.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How might the principles of design thinking be adapted to address 'wicked problems' within highly regulated R&D environments, such as pharmaceuticals or aerospace, where failure is not a low-cost option?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by moving beyond a generic overview of design thinking and focusing intensely on its direct application within the rigorous and often complex world of research and development. Unlike many programs that remain at a high-level conceptual stage, our curriculum is built around the specific challenges and workflows of R&D professionals. We address the critical questions of how to integrate human-centered design with technical feasibility studies, regulatory constraints, and long-term technology roadmaps. The emphasis is not just on creative ideation but on a disciplined process for de-risking innovation and ensuring that user desirability is a core driver from the earliest stages of a project. Participants will work on case studies and simulations that mirror the realities of product development in technology-intensive industries. The course provides a practical bridge between the creative, exploratory nature of design thinking and the structured, analytical demands of the R&D function, equipping attendees with a robust framework for creating breakthrough products that are both innovative and commercially viable.