Advanced R&D Portfolio Management and Optimization Training Course



26 - 30 Oct 2026

California

7900 € (Per Person)

Ref: #RD5400_139039

Course Introduction / Overview:

This intensive training course provides a comprehensive framework for mastering the complexities of Research and Development (R&D) portfolio management. In today's hyper-competitive landscape, strategically managing the innovation pipeline is not just an advantage; it is a necessity for survival and growth. This program moves beyond basic project selection to instill a holistic, strategic approach to optimizing your entire R&D portfolio for maximum value and alignment with corporate objectives. Drawing upon foundational concepts from leading thinkers like Robert G. Cooper, whose work in "Winning at New Products" revolutionized the field, participants will learn to build and manage a balanced portfolio that mitigates risk while fostering breakthrough innovation. At BIG BEN Training Center, we have designed this course to equip leaders with the analytical tools and strategic foresight needed to make high-stakes investment decisions with confidence. Participants will explore advanced optimization models, resource allocation strategies, and dynamic governance structures, ensuring their organization's R&D efforts translate directly into sustainable competitive advantage and long-term profitability. This is a definitive guide to transforming your R&D function from a cost center into a powerful engine of value creation.

Target Audience / This training course is suitable for:

- R&D Directors and Managers.
- Portfolio Managers and Analysts.
- Product Development and Innovation Managers.
- Heads of Strategy and Corporate Planning.
- Project Management Office (PMO) Leaders and Members.
- Chief Technology Officers (CTOs) and Chief Innovation Officers (CIOs).
- Finance Managers involved in R&D budgeting.
- Senior Scientists and Lead Engineers transitioning into management roles.

Target Sectors and Industries:

- Pharmaceuticals and Biotechnology.
- Manufacturing and Engineering.
- Information Technology and Software Development.
- Aerospace and Defense.
- Automotive and Transportation.
- Consumer Packaged Goods (CPG) and Electronics.
- Telecommunications.
- Energy and Utilities.
- Governmental agencies and public research institutions.

Target Organizations Departments:

- Research and Development (R&D).
- Product Management and Development.
- Strategic Planning.
- Project Management Office (PMO).
- Finance and Controlling.
- Corporate Strategy.
- Innovation Management.
- Engineering.

Course Offerings:

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

- Develop a robust governance framework for R&D portfolio management.
- Apply sophisticated financial and strategic models for project valuation and selection.
- Master techniques for balancing the portfolio across risk, reward, and strategic horizons.
- Implement effective resource allocation and capacity planning strategies.
- Integrate technology road mapping with portfolio planning for long-term alignment.
- Design and utilize key performance indicators (KPIs) to monitor portfolio health.
- Conduct dynamic portfolio reviews to adapt to changing market conditions.
- Mitigate portfolio risks through advanced scenario planning and analysis.
- Champion a culture of strategic innovation and value-driven R&D investment.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, experiential, and directly applicable to the participant's professional challenges. We believe that adult learning is most effective when it combines theoretical knowledge with practical application. Therefore, this course heavily emphasizes a hands-on approach, moving beyond traditional lectures to foster deep, practical understanding. Participants will engage in a series of realistic case studies drawn from various industries, allowing them to analyze complex portfolio dilemmas and formulate strategic solutions. Interactive group workshops and simulation exercises will challenge teams to make critical portfolio decisions, balance competing priorities, and allocate resources under realistic constraints. These activities are designed to facilitate peer-to-peer learning and the exchange of diverse perspectives. Expert-led discussions will provide a platform for exploring nuanced topics and receiving personalized feedback. Our approach ensures that participants not only learn the "what" and "why" of advanced R&D portfolio management but also master the "how," leaving them confident and prepared to implement these powerful techniques within their own organizations.

Course Agenda (Course Units):

Unit One: Strategic Foundations of R&D Portfolio Management

- The strategic role of R&D in corporate growth.
- Defining portfolio management versus project management.
- Establishing a robust portfolio governance structure and processes.
- Aligning the R&D portfolio with overall business strategy and objectives.
- The portfolio management lifecycle from ideation to commercialization.
- Identifying key stakeholders and establishing clear roles and responsibilities.
- Developing a strategic charter for the R&D portfolio.

Unit Two: Project Valuation and Prioritization Techniques

- Fundamentals of creating a project pipeline and idea funnel.
- Qualitative and scoring models for early-stage project assessment.
- Advanced financial valuation methods (NPV, IRR, Payback Period).
- Introduction to Real Options Analysis for high-uncertainty projects.
- Utilizing the Risk-Reward Bubble Diagram for portfolio visualization.
- Developing and applying a multi-criteria decision analysis (MCDA) framework.
- Techniques for effective project prioritization and ranking.

Unit Three: Portfolio Balancing and Resource Allocation

- The concept of a balanced portfolio (e.g., incremental vs. breakthrough innovation).
- Balancing short-term needs with long-term strategic goals.
- Strategies for managing portfolio risk and technology uncertainty.
- Resource capacity planning and demand management.
- Techniques for allocating financial and human resources across the portfolio.
- Addressing resource constraints and resolving allocation conflicts.
- The role of portfolio management in optimizing resource utilization.

Unit Four: Advanced Portfolio Optimization and Analysis

- Introduction to mathematical portfolio optimization models.
- Using scenario planning and sensitivity analysis to test portfolio resilience.
- Integrating technology road mapping into the portfolio management process.
- Conducting portfolio health checks and diagnostics.
- Identifying and managing interdependencies between projects.
- Techniques for killing or shelving underperforming projects gracefully.
- Leveraging data analytics and visualization for portfolio insights.

Unit Five: Portfolio Execution, Monitoring, and Agile Adaptation

- Establishing key performance indicators (KPIs) for the R&D portfolio.
- Designing and conducting effective portfolio review meetings.
- Tracking portfolio performance against strategic and financial targets.
- Communicating portfolio status and decisions to executive leadership.
- Adapting the portfolio to market shifts and competitive threats.
- Integrating Agile principles for dynamic and flexible portfolio management.
- Building a culture of continuous improvement in portfolio processes.

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 can an organization effectively balance the quantifiable metrics of portfolio optimization with the unquantifiable, yet critical, element of fostering radical, game-changing innovation?

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

This training course distinguishes itself by focusing on the strategic integration of R&D portfolio management within the broader context of corporate strategy, rather than treating it as a siloed financial or operational exercise. While many programs concentrate heavily on the tools and quantitative models for project selection, our curriculum places equal emphasis on the qualitative aspects of governance, strategic alignment, and fostering an innovative culture. We delve into the complex realities of balancing a portfolio not just for financial return, but for strategic impact, risk diversification, and long-term technological advantage. The course uniquely bridges the gap between theory and practice by using dynamic case studies and simulations that force participants to grapple with the real-world trade-offs and ambiguities inherent in R&D investment decisions. Furthermore, we incorporate forward-looking topics such as Agile portfolio management, preparing leaders to manage innovation in an environment of increasing volatility and uncertainty. The focus is on developing strategic thinking and decision-making capabilities, empowering participants to build and lead a resilient, value-driven R&D engine, not just manage a list of projects.