



Project & Contract Management

# **Engineering Excellence: Mastering Business Process Re-engineering for Operational Success**

## Course Introduction

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This training program is designed to equip managers in the engineering and operations sectors with the knowledge, skills, and tools necessary to lead successful BPR initiatives.

Throughout the program, participants will dive deep into Business Excellence Strategy, Data Analytics & Research, Business Process Management & Improvement, and Optimization & Continual Improvement. By integrating these concepts with practical tools, managers will be empowered to drive effective changes in their organizations.

With an emphasis on data-driven decision-making, continuous optimization, and fostering a culture of excellence, this course will help managers align processes with organizational goals and improve long-term operational performance.

## Target Audience

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1. Operations Managers
2. Engineering Managers
3. Process Improvement Managers
4. Project Managers
5. Production Managers
6. Quality Assurance Managers
7. Continuous Improvement Managers
8. Program Managers
9. Industrial Engineers
10. Business Process Managers

## Learning Objectives

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- Understand the core principles of Business Excellence (BE) and how to apply them to BPR efforts.
- Integrate business excellence frameworks into the strategic planning process.
- Align operational and engineering processes with overarching organizational goals.
- Foster a culture of continuous improvement and quality.
- Leverage data analytics to uncover process inefficiencies and improvement opportunities.
- Conduct effective research to evaluate and optimize engineering and operational processes.
- Understand key performance indicators (KPIs) and use them to measure and track progress.
- Map and model current business processes using BPM tools and techniques.
- Identify bottlenecks and inefficiencies in business processes and prioritize them for improvement.
- Apply BPM frameworks and methodologies (e.g., SIPOC, BPMN) to redesign and optimize processes.
- Implement optimization techniques to streamline operations and enhance process efficiency.
- Establish a continual improvement mindset using Lean, Six Sigma, and other optimization methods.
- Create systems to monitor performance and ensure sustainable process improvement over time.
- Manage and lead BPR projects from inception to completion.
- Engage stakeholders, communicate effectively, and manage change during BPR implementation.
- Develop an action plan to implement BPR within an engineering or operations context.

## Course Outline

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- Day 01

## Introduction to Business Process Re-engineering (BPR)

- Overview of Business Process Re-engineering
- The importance of BPR in the engineering and operations sector
- Key principles and components of BPR
- The role of managers in successful BPR implementation
- **Case study analysis:** Reviewing a successful BPR initiative in an engineering context

## Business Excellence Strategy

- Introduction to Business Excellence (BE) models (e.g., EFQM, Malcolm Baldrige)
- Integrating BE into the BPR framework
- Setting organizational goals and aligning them with operational processes
- Building a sustainable culture of business excellence
- **Workshop:** Aligning business process goals with BE principles

### • Day 02

## Introduction to Data Analytics & Research for Process Improvement

- Understanding data analytics in process management
- Identifying key performance indicators (KPIs) for process optimization
- Using data-driven decision-making to identify bottlenecks and inefficiencies
- Conducting research for continuous improvement
- **Group exercise:** Setting up KPIs for a business process improvement project

## Business Process Mapping and Management (BPM)

- Introduction to Business Process Management (BPM)
- Key BPM tools and techniques (e.g., SIPOC, BPMN, Flowcharts)
- Process mapping for understanding and analyzing workflows
- Identifying and prioritizing process improvements
- **Hands-on session:** Mapping an existing business process using BPM tools

## • Day 03

### Process Analysis and Improvement Methodologies

- Analyzing processes through the lens of Lean and Six Sigma
- Introduction to value stream mapping and waste identification
- DMAIC methodology for improving engineering processes
- Continuous Process Improvement (CPI) and Kaizen
- **Workshop:** Conducting a DMAIC analysis on a selected process

### Optimization Strategies and Tools

- Strategies for process optimization.
- Tools and techniques for optimizing workflows and reducing cycle times
- Best practices for optimizing engineering and operational processes
- The role of technology in process optimization
- **Hands-on exercise:** Optimizing a process through resource reallocation and automation

## • Day 04

### Implementing Continuous Improvement with Lean and Six Sigma

- Lean principles and Six Sigma methodologies for continual improvement
- How to sustain a continuous improvement culture in operations and engineering
- Utilizing Kaizen and PDCA (Plan-Do-Check-Act) for ongoing process monitoring and refinement
- Measuring and tracking progress using performance indicators

- **Workshop:** Using the PDCA cycle to address process challenges
- **Group activity:** Applying Lean principles to an ongoing improvement project

## **Change Management and Stakeholder Engagement**

- The role of change management in business process re-engineering
- Engaging stakeholders throughout the BPR process
- Overcoming resistance to change in engineering and operations teams
- Managing communication during process transformation
- **Role-playing exercise:** Communicating a BPR initiative to team members

### **• Day 05**

## **Monitoring, Controlling, and Sustaining Process Improvement**

- Establishing mechanisms for monitoring process performance post-BPR
- Using performance dashboards and real-time data to track improvements
- Correcting course when process performance deviates from expectations
- Ensuring long-term sustainability of process improvements
- **Workshop:** Creating a performance dashboard for ongoing process monitoring

## **Integrating BPR into Strategic Operations Management**

- Aligning BPR efforts with long-term organizational strategies
- Scaling BPR initiatives across multiple departments and teams
- Embedding BPR into the organization's operational framework
- Finalizing a strategic action plan for BPR implementation
- **Group exercise:** Developing an organization-wide BPR action plan

# Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
April 28, 2025	May 2, 2025	5 days	4250.00 \$	UAE - Dubai
June 15, 2025	June 19, 2025	5 days	2150.00 \$	Virtual - Online
Sept. 28, 2025	Oct. 2, 2025	5 days	4250.00 \$	KSA - Riyadh
Nov. 3, 2025	Nov. 7, 2025	5 days	5950.00 \$	switzerland - Geneva