



भारतीय प्रबन्धन संस्थान तिरुचिरापल्ली  
Indian Institute of Management Tiruchirappalli

Post Graduate Certificate Programme in

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**OPERATIONS EXCELLENCE**

**&**

**LEAGILE MANAGEMENT**

Earn IIM Certification ■ IIM Campus Immersion ■ Executive Alumni Status





# About IIM Tiruchirappalli

Indian Institute of Management Tiruchirappalli (IIM Trichy) is the eleventh IIM and was instituted on 4th January 2011. Tiruchirappalli is a city known for its prominence in education, spirituality, art and culture and IIM Trichy tends to benefit from this. IIM Trichy is functioning from its sprawling state-of-the-art campus spread over 175 acres of land on Trichy-Pudukottai highway, about 11 km from Tiruchirappalli International Airport.

## MOULDING EXCELLENCE – HEART OF OUR BEING

IIM as a name has steadily become synonymous with excellence in management education and has established a benchmark for unwavering quality in India. IIM Trichy aims to find its own footing in developing competent professionals for the industry and doing quality research in India.

Hard work, Perseverance, Passion and Integrity are some of the virtues necessary to attain success. IIM Trichy boasts about a collection of eminent faculty and motivated students which form its backbone. Students are selected after a thorough screening process and IIM Trichy takes excellent care in ensuring an optimal student-teacher ratio to encourage better learning and to impart appropriate guidance.

## GUIDING STAR

"Knowledge is endless" is a motto that has strongly governed IIM Tiruchirappalli.

IIM Trichy holds strong values which it imparts to its students, primary amongst which is an unceasing desire to learn. It also firmly believes that the foundation of value creation lies in the path of continuous learning.

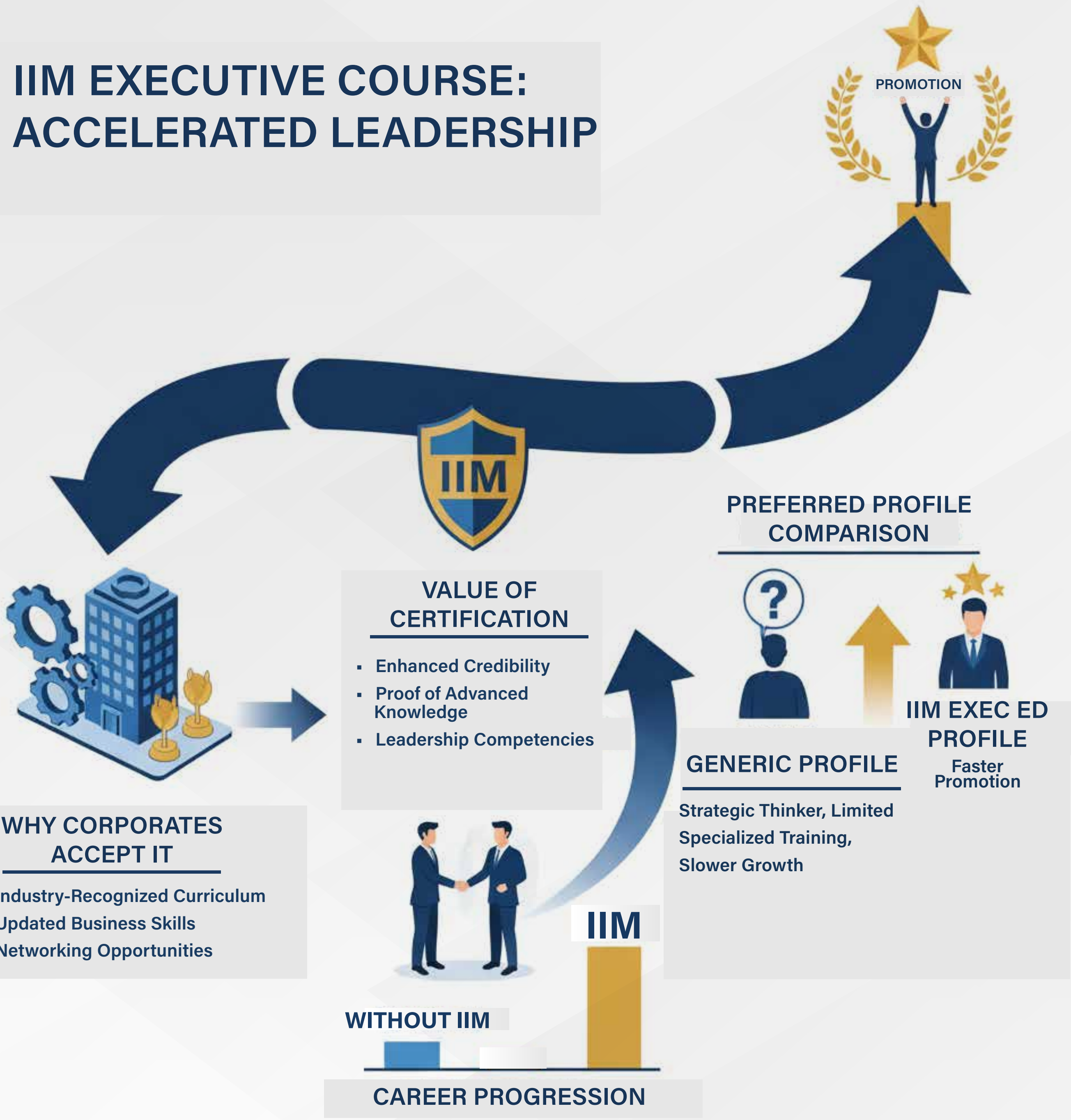
The institute recognizes the fact that its students would be the catalyst of change for the betterment of the future and hence, takes great responsibility in shaping them into leaders of tomorrow. IIM Trichy understands and gives students complete freedom to decide upon their academic gradient based on their work experience and academic background as well as their appetite for challenges, providing them with an environment conducive in enhancing their learning experience.





# Career-Boosting Roadmap

## IIM EXECUTIVE COURSE: ACCELERATED LEADERSHIP



*The charts, graphs, and visuals in this brochure are for illustrative purposes only*

# Course Objectives

This programme is designed for early to mid-professionals looking to take their career to the next level with a solid grasp of operations management concepts and analytical frameworks to build and scale process efficiencies.



## TAKE YOUR CAREER TO THE NEXT LEVEL

Advance leadership  
potential



## SOLID GRASP OF OPERATIONS MANAGEMENT

Master core  
concepts & principles



## ANALYTICAL FRAMEWORKS

Data-driven  
decision-making



## BUILD & SCALE PROCESS EFFICIENCIES

Optimize workflows  
& productivity

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# Why would an organization give promotions?



## Improved Operational Efficiency

Employees trained in Lean and Six Sigma identify waste, streamline processes, and improve efficiency.

**Example:** A project manager applies Lean tools to reduce machine downtime by 25%, saving the company ₹50 lakhs annually proving capability to manage larger teams and budgets, leading to promotion as Operations Head.



## Data-Driven Decision Making

Six Sigma professionals rely on data analysis and performance metrics rather than assumptions.

**Example:** A quality engineer uses DMAIC (Define–Measure–Analyze–Improve–Control) to cut defect rates from 5% to 1%. The measurable improvement builds management confidence, earning a promotion to Process Excellence Manager.



## Strategic Thinking & Leadership Skills

The programme trains professionals to align operational excellence with business strategy, a key expectation from senior leaders.

**Example:** An operations executive integrates Lean practices into the company's strategic roadmap, enhancing delivery performance leading to a promotion into a strategic operations role.





## Cross-Functional Impact

Lean and Six Sigma principles apply across departments production, logistics, procurement and customer service.

**Example:** A supply chain analyst implements value stream mapping across functions, cutting delivery time by 30%. This cross-functional impact makes them ideal for a leadership promotion.



## Capability to Lead Transformation Projects

Organizations promote those who can drive large-scale transformation initiatives with measurable ROI.

**Example:** A Six Sigma-certified professional leads a cost reduction project saving ₹1.2 crore annually, demonstrating business impact and getting promoted to Operations Excellence Lead.



## Improved Stakeholder & Team Management

Logic: Six Sigma certification ensures alignment with international process quality benchmarks (ISO, TQM, etc.).

**Example:** The certified professional helps the company qualify for ISO 9001 certification, strengthening its market reputation rewarded with a promotion to Quality Head.

# Why organizations trust this certification?



## Recognized Academic Credibility

This certification comes from IIM Tiruchirappalli, one of India's top management institutes known for academic rigor and industry relevance.

**Example:** A company hiring an Operations Manager with an IIM certification knows the candidate has been trained in globally accepted management frameworks.



## Proven Frameworks for Measurable Results

The programme integrates Lean and Six Sigma methodologies that are proven to reduce process waste, defects, and inefficiencies.

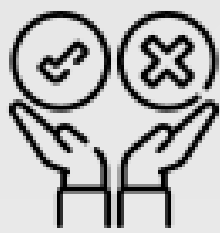
**Example:** A certified professional can help a manufacturing firm reduce production errors by implementing DMAIC (Define–Measure–Analyze– Improve –Control) principles.



## Industry–Oriented Curriculum

Each module is designed around real-world case studies and business challenges, ensuring practical application.

**Example:** Participants learn to streamline a supply chain process using data-driven simulations similar to what FMCG or automotive firms use.



## Focus on Strategic Decision-Making

Learners are trained to link operational excellence with business strategy, a critical capability for leadership roles.

**Example:** A process improvement initiative that saves 10% cost in operations can be aligned with a company's larger profitability goals.



## Certified Expertise in Continuous Improvement Tools

Exposure to tools like MINITAB, Value Stream Mapping, and Root Cause Analysis prepares professionals to handle complex operational data.

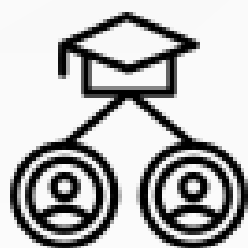
**Example:** A Six Sigma-certified manager can analyze customer defect data and identify root causes to improve service quality in a telecom company.



## Real-World Impact Through Capstone Projects

Participants work on real-time organizational projects, demonstrating immediate business impact.

**Example:** A participant's capstone project on optimizing warehouse operations resulted in 15% faster delivery times for their company.



## Organizational Trust in IIM Alumni Network

Organizations recognize that IIM alumni bring leadership, analytical thinking, and execution excellence.

**Example:** Many companies prefer IIM-trained professionals for operational leadership roles because of their exposure to global best practices.



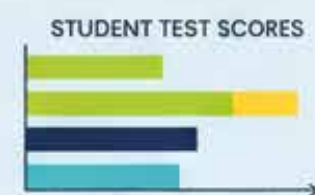
# Programme Topics in Detail

## Module 1: Fundamentals of Analytics

- Descriptive Statistics
- Data Visualization
- Sampling Distributions
- Hypothesis Testing
- Regression



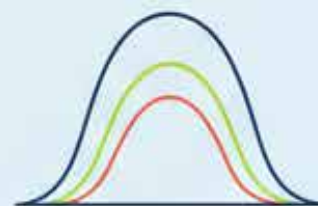
### Descriptive Statistics



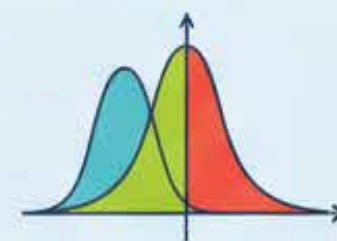
### Data Visualization



### Sampling Distributions



### Hypothesis Testing



### Regression



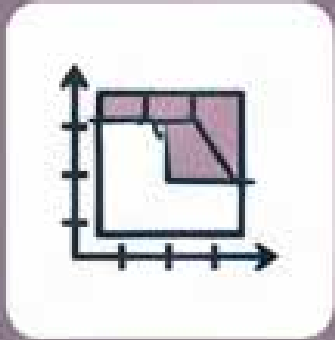
$$\text{Exam Score} = b_0 + 1(\text{Study Hours})$$

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This module covers core analytical tools starting with Descriptive Statistics to summarize data for clear insights, and Data Visualization to present findings effectively. Sampling Distributions help in making predictions from limited data, while Hypothesis Testing enables evidence-based decisions in real business scenarios. Regression Analysis builds the ability to identify trends and forecast outcomes, preparing participants for data-driven roles in business, strategy, and operations.

# Module 2A: Decision Modelling and Optimization

- ▶ **Linear programming models**
- ▶ **What-if analysis**
- ▶ **Resource optimization**



## LINEAR PROGRAMMING MODELS

- Optimize Objectives
- Constraints & Variables



## WHAT-IF ANALYSIS

- Scenario Planning
- Impact Assessment



## RESOURCE OPTIMIZATION

- Allocate Efficiently
- Maximize Utilization

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This module introduces Linear Programming Models to help participants formulate and solve real-world business problems involving constraints and trade-offs. Using What-If Analysis, learners can evaluate the impact of different decisions and scenarios before implementation, reducing risk. The focus on Resource Optimization enables professionals to allocate time, budget, workforce, and materials more efficiently key for driving cost savings and operational excellence in competitive business environments.

# Module 2B: Production & Operations Management

- **Process Flow Analysis**
- **Capacity and Resource planning**
- **Process / Facility Layout Design**
- **Forecasting**
- **Inventory Planning & Management**



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This module focuses on improving operational efficiency starting with Process Flow Analysis to identify bottlenecks and streamline activities. Participants learn Capacity and Resource Planning to ensure manpower, equipment, and budgets are optimally aligned with demand. Through Process / Facility Layout Design, they understand how workspace arrangement impacts productivity and movement. Forecasting techniques help anticipate future demand trends, while Inventory Planning & Management equips them to maintain the right stock levels, reduce costs, and improve service performance essential for effective operations leadership.



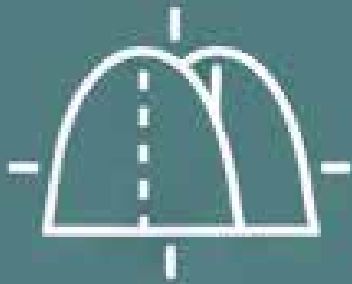
# Module 3A: Production & Operations Management

- ▶ Applying SPC
- ▶ Process capability analysis
- ▶ Data-driven quality improvement for operational excellence



## APPLYING SPC

- Monitor & Control Processes
- Identify Special Cause Variation



## PROCESS CAPABILITY ANALYSIS

- Assess Process Performance
- Cp & Cpk Indices



## DATA-DRIVEN QUALITY IMPROVEMENT

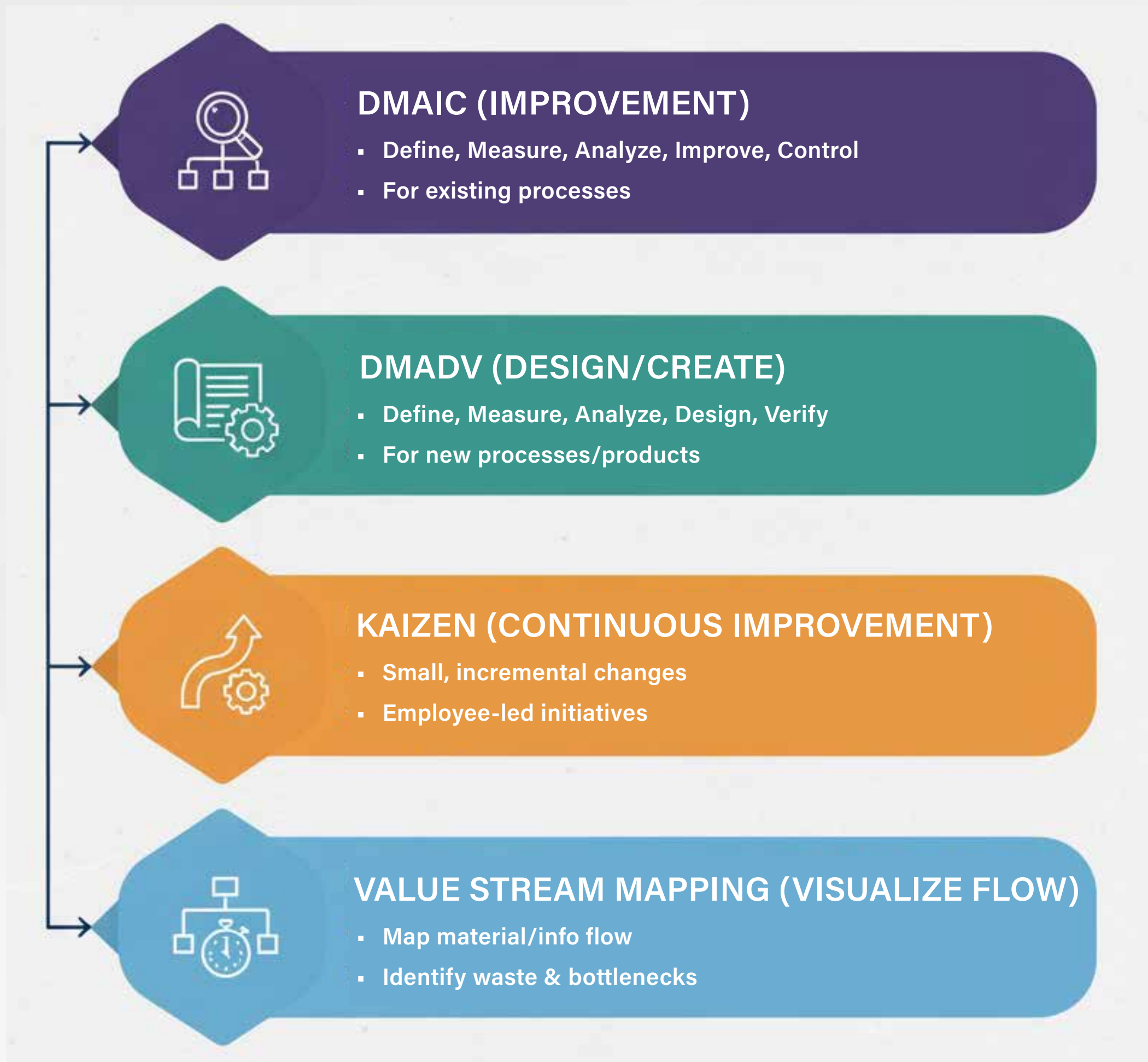
- Use Data for Decisions
- Continuously Enhance Processes

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This module focuses on Applying Statistical Process Control (SPC) to monitor processes and detect variations before they lead to defects. Participants learn Process Capability Analysis to measure how well a process meets customer requirements and performance standards. By leveraging Data-Driven Quality Improvement, they gain the ability to identify root causes, reduce errors, and drive sustainable operational excellence, making them valuable leaders in quality and performance improvement initiatives.

# Module 3B: Lean and Six Sigma Methodologies and Applications

- Lean and Six Sigma frameworks (DMAIC, DMADV, Kaizen, value stream mapping).



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This module equips participants with Lean and Six Sigma frameworks to systematically reduce waste and improve process quality. Through approaches like DMAIC and DMADV, learners gain structured problem-solving skills to analyze operations and design efficient workflows. Techniques such as Kaizen foster a culture of continuous improvement, while Value Stream Mapping helps visualize and eliminate non-value-adding steps. Together, these tools enhance productivity, quality, and operational excellence across any business function.

# Module 4A: New Product Development and Design

- ▶ **NPD Approaches**
- ▶ **Design Thinking**
- ▶ **Lean Approaches to Design**
- ▶ **Design for Manufacturing**
- ▶ **Emerging Trends on Concurrent Engineering**



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This module introduces modern New Product Development (NPD) Approaches, helping participants create solutions that are efficient, market-ready, and user-focused. Through Design Thinking, they learn to identify customer needs and develop innovative concepts. Lean Approaches to Design emphasize eliminating waste early in the development cycle, while Design for Manufacturing ensures products are easy, cost-effective, and reliable to produce. The module also covers emerging trends in Concurrent Engineering, enabling cross-functional teams to work collaboratively and reduce development time for faster go-to-market results.



# Module 4B: Service Process & Operations Management

- ▶ **Service System Design**
- ▶ **Service Quality Management**
- ▶ **Service Failures & Recovery**
- ▶ **Lean & Six Sigma in Services**

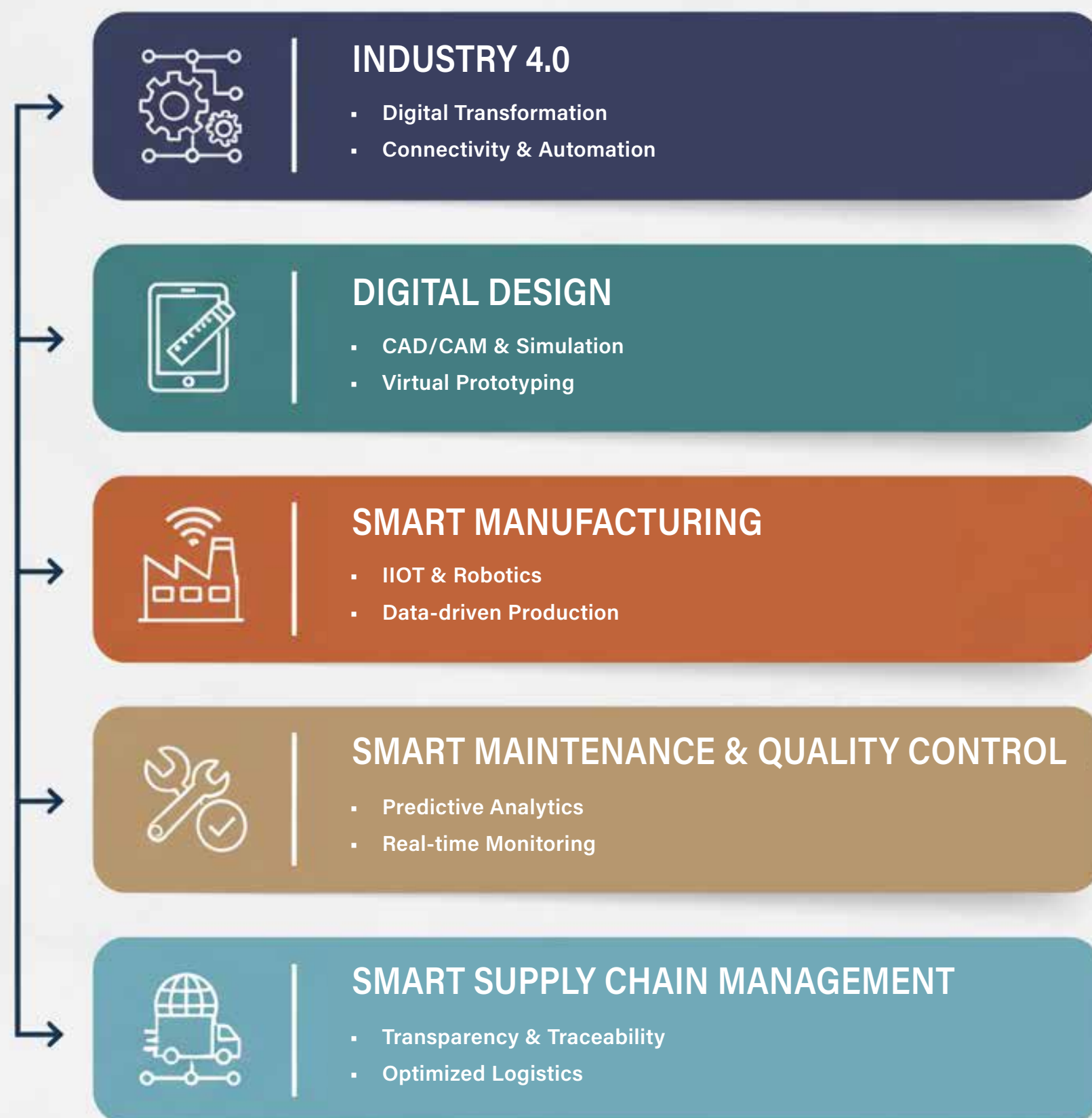


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This module focuses on effective Service System Design, ensuring services are structured to deliver seamless customer experiences. Participants learn Service Quality Management models to measure and enhance service performance, while understanding Service Failures & Recovery strategies to handle breakdowns and restore customer trust. By applying Lean & Six Sigma in Services, they gain tools to eliminate delays, reduce errors, and improve service efficiency essential for roles in operations, customer experience, and service excellence leadership.

# Module 5A: Industry 4.0 for Enterprise Transformation

- ▶ **Industry 4.0**
- ▶ **Digital Design**
- ▶ **Smart Manufacturing**
- ▶ **Smart Maintenance and Quality Control**
- ▶ **Smart Supply Chain management**



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This module explores Industry 4.0 and the integration of digital technologies to transform operations. Participants learn Digital Design methods that leverage data and simulation for improved product and process development. Smart Manufacturing and Smart Maintenance approaches use automation, sensors, and real-time analytics to enhance productivity and reduce downtime. Finally, Smart Supply Chain Management demonstrates how connected systems enable faster decision-making, transparency, and resilience key capabilities for modern operational and strategic leadership.

# Module 5B: Supply Chain Management & Strategic Sourcing

- ▶ Supply Chain Management
- ▶ Supply Chain Strategy
- ▶ Sourcing & Supplier Selection
- ▶ Supplier Management & Development



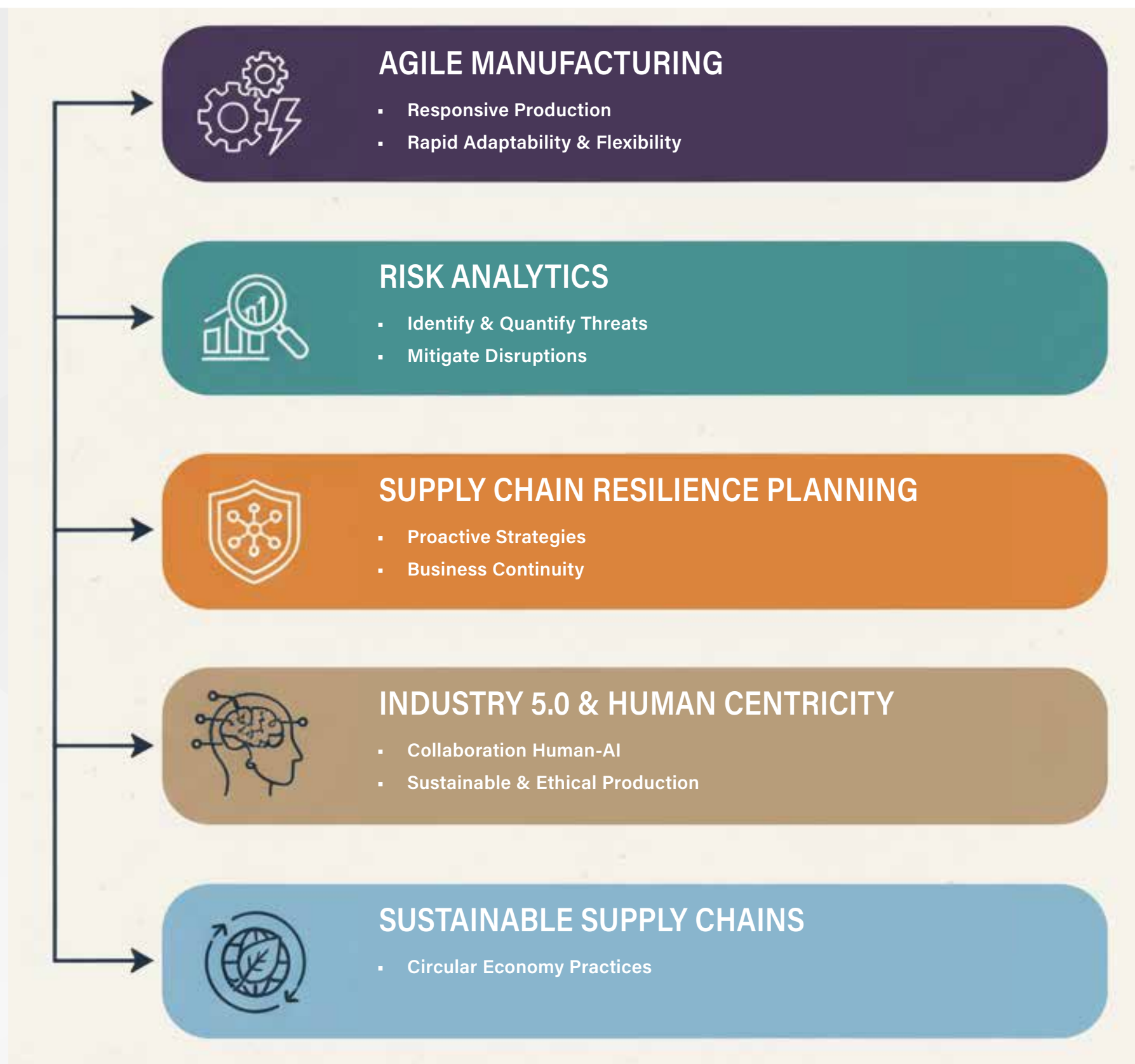
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This module provides a practical understanding of Supply Chain Management, focusing on how materials, information, and resources flow across the value network. Participants learn to craft Supply Chain Strategy aligned with business goals to enhance efficiency and competitiveness. The module also covers Sourcing & Supplier Selection, enabling professionals to evaluate vendors based on cost, capability, and reliability. Additionally, Supplier Management & Development techniques help build long-term, performance-driven supplier relationships that improve quality, reduce risks, and strengthen operational resilience.



# Module 6A: Agile Manufacturing & Industry 5.0 Readiness

- ▶ **Agile Manufacturing**
- ▶ **Risk Analytics**
- ▶ **Supply Chain Resilience Planning**
- ▶ **Industry 5.0 and Human Centricity**
- ▶ **Sustainable Supply Chains**

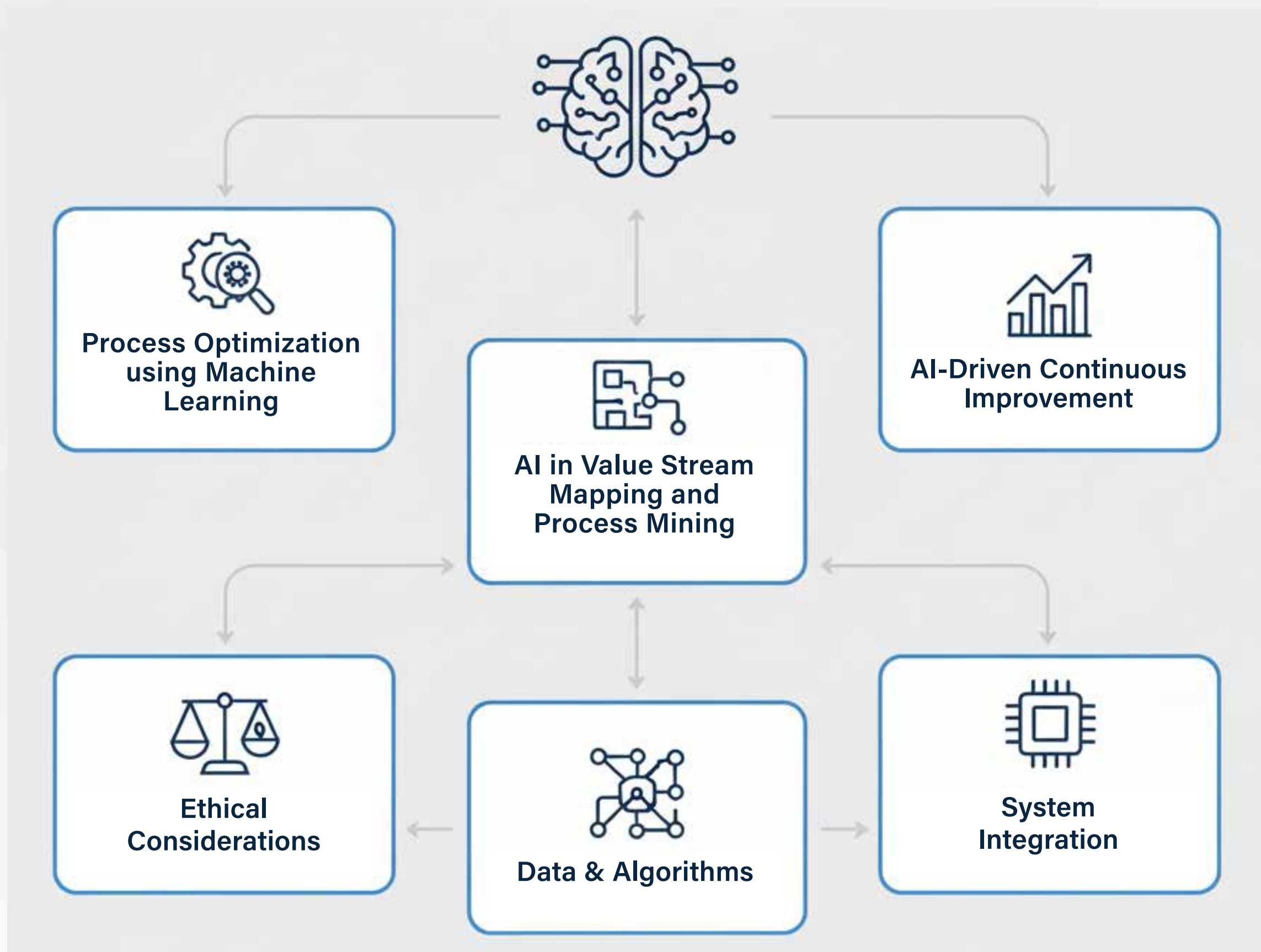


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This module introduces Agile Manufacturing, enabling organizations to respond quickly to changing customer demands through flexible processes and rapid adjustments. Participants learn Risk Analytics to identify and mitigate vulnerabilities across operations and the supply chain. Supply Chain Resilience Planning prepares firms to withstand disruptions and maintain continuity. The module also explores Industry 5.0, emphasizing human–technology collaboration for smarter decision-making, along with Sustainable Supply Chains, focusing on eco-friendly practices and long-term value creation in global operations.

# Module 6B: AI Driven Operations Excellence

- ▶ **AI Foundations**
- ▶ **Process Optimization using Machine Learning**
- ▶ **AI in Value Stream Mapping and Process Mining**
- ▶ **AI-Driven Continuous Improvement**
- ▶ **Ethical Considerations**



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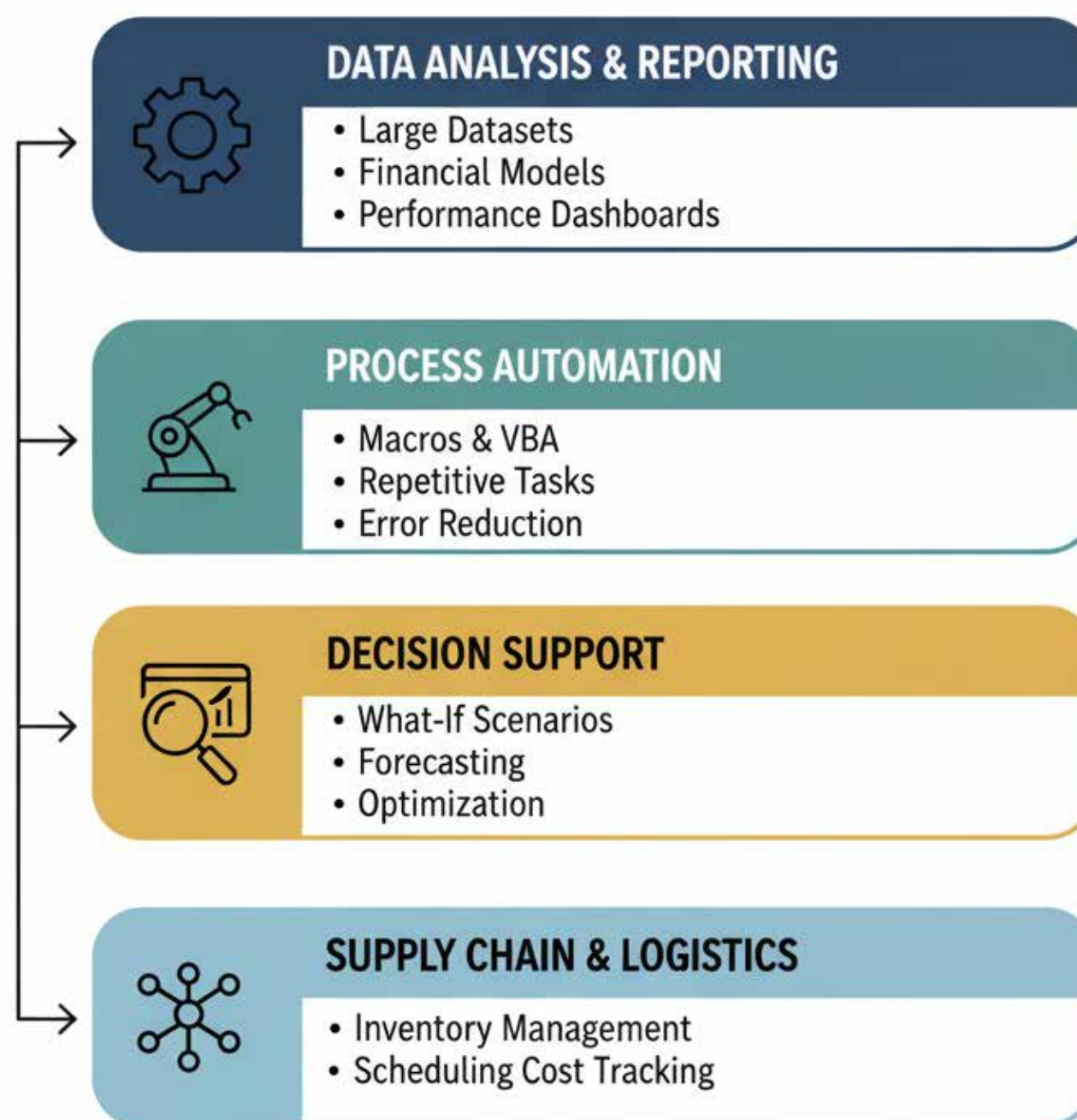
This module begins with AI Foundations, giving participants a clear understanding of how artificial intelligence supports data-driven operations. They then explore Process Optimization using Machine Learning, learning to identify patterns and improve efficiency. The module covers AI in Value Stream Mapping and Process Mining, where digital tools automatically detect bottlenecks and improvement opportunities. Through AI-Driven Continuous Improvement, participants learn to sustain gains and enhance decision-making in real time. Finally, Ethical Considerations ensure responsible and transparent AI adoption within organizational processes.

# Module 7: Project Presentation

## Tools to be Covered



Advanced Excel equips professionals with strong data analysis, reporting, and visualization capabilities that are essential for decision-making in infrastructure projects. It helps in managing large datasets, performing cost and financial analysis, automating repetitive tasks, and creating clear dashboards that simplify complex information for stakeholders.



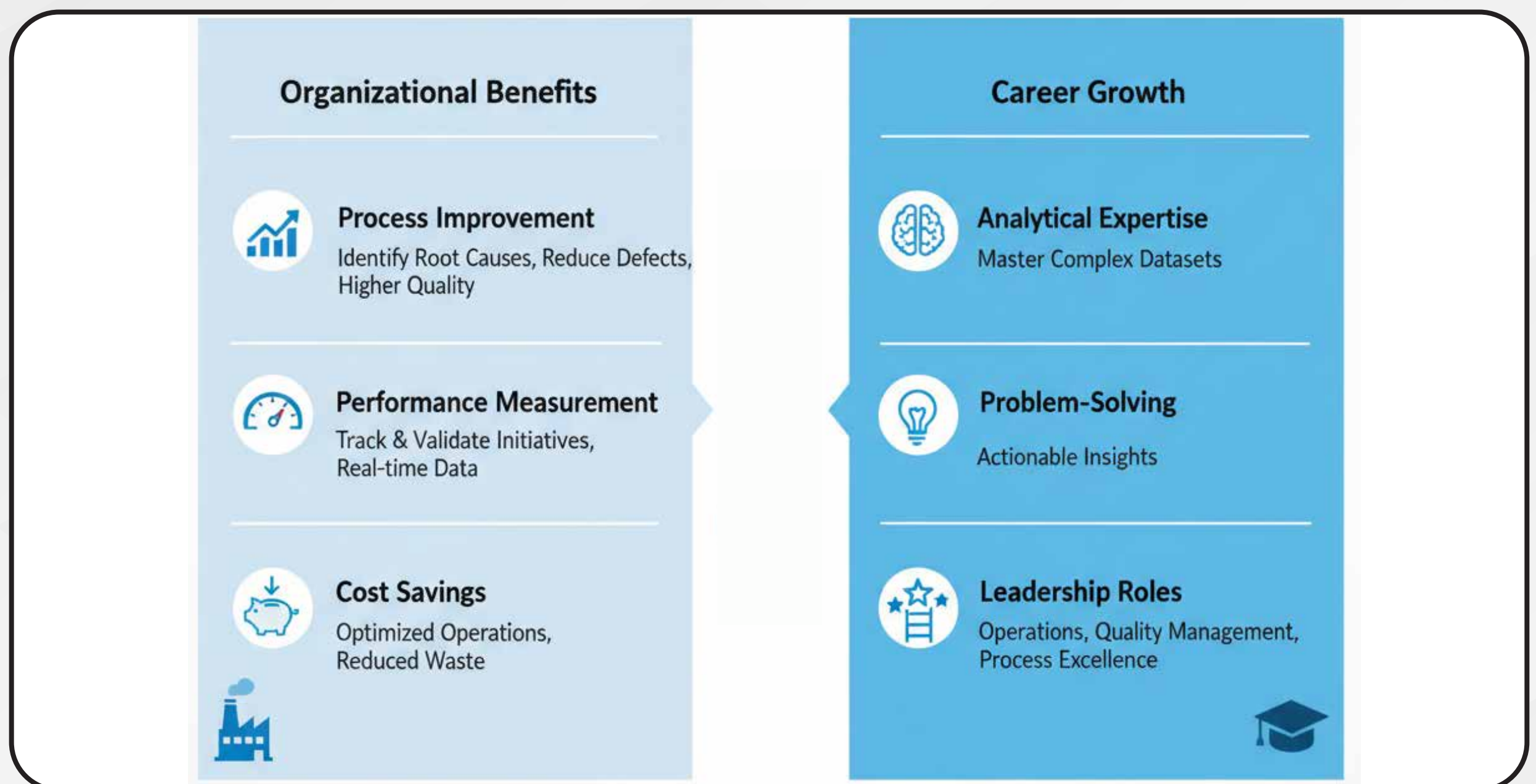
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Mastering these skills improves efficiency, accuracy, and analytical insight, leading to better project planning and performance tracking. It also enhances professional credibility and opens opportunities in roles such as Project Planner, Cost Estimator, Data Analyst, and Project Coordinator making Advanced Excel a valuable asset for long-term career growth.

*\*Only fundamentals will be taught\**



MINITAB is a powerful statistical analysis tool that enables professionals to make data-driven decisions with precision and confidence. It helps identify root causes of process variations, measure performance, and validate improvement initiatives using real-time data. In an organization, professionals skilled in MINITAB can translate complex datasets into actionable insights leading to higher quality, reduced defects, and cost savings.



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Mastering MINITAB demonstrates strong analytical expertise and problem-solving capability, both of which are essential for leadership roles in operations, quality management, and process excellence.

**Example:** A Six Sigma Green Belt professional used MINITAB to analyze defect patterns in a production line, reducing rework costs by 18% and earning recognition for operational excellence.

*\*Only fundamentals will be taught\**

# Programme Directors



## **Arulanantha Prabu P M**

Programme Director

Ph.D. (IIM Ahmedabad)

Arulanantha Prabu P M is a faculty in operations management and decision sciences area at Indian Institute of Management Trichy, India. He received his Ph.D. from Indian Institute of Management Ahmedabad in Production and Quantitative Methods area. Before joining IIM Trichy, he taught at Indian Institute of Management Ranchi for two years. His research papers are published in leading journals like European Journal of Operational Research, International Journal of Production Economics and International Journal of Production Research. He teaches operations management, operations research and business statistics.

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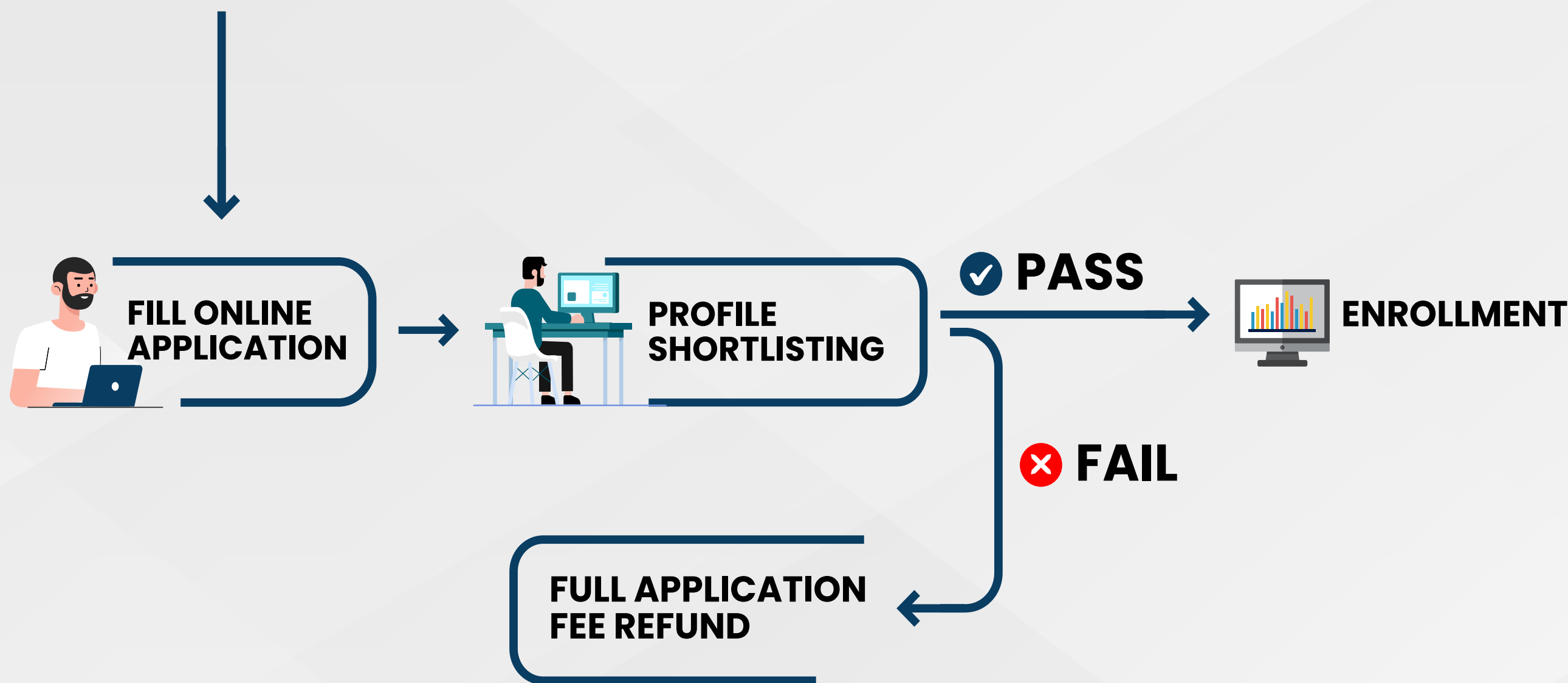
## **Rajesh R**

Programme Co-Director

Ph.D IIST (ISRO), PDF IIT Madras

Rajesh is an Assistant Professor in the area of Operations Management & Decision Sciences at IIM Tiruchirappalli. He previously worked as an Assistant Professor at ABV-IIITM Gwalior. He has completed a Post-Doctoral Fellowship (PDF) from the Indian Institute of Technology Madras (IIT-M) and a Ph.D. from the Indian Institute of Space Science and Technology (IIST (ISRO)), Trivandrum. He works in supply chain risk management, resilience, sustainability, decision-making, and grey theory. Currently, he has an h-index of 31 (Google Scholar) and over 4600+ citations (Google Scholar).

# Admission Process



## Duration

12 Months (Total 171 Hours)

## Course Start Date

22<sup>nd</sup> February, 2026

## Session Timings

06:00PM – 09:15PM

**Programme Fee – INR 2,46,000 + 18% GST**

**Application Fee – INR 2,000 + 18% GST**

EMI Options Available

*Application Fee for the Programme is non-refundable.*



# Who Should Attend

Operations Manager, Plant Manager, Manufacturing Director, Business Owner, Production Manager/Head, Supply Chain Manager, Process Improvement Manager, Lean Manufacturing Consultant, Project Manager - Operations or Transformation, Quality Manager/Head, Process Engineer, Continuous Improvement Specialist, Director of Operations, Chief Operations Officer (COO), Logistics Manager/Head.



## Eligibility



Participant must be a graduate in any discipline with a minimum of one year of work experience.

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## Attendance



Minimum 70% attendance is mandatory for successful completion of the programme.

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## Evaluation



Performance of participants will be monitored through continuous evaluation on assessments, quizzes & project works.

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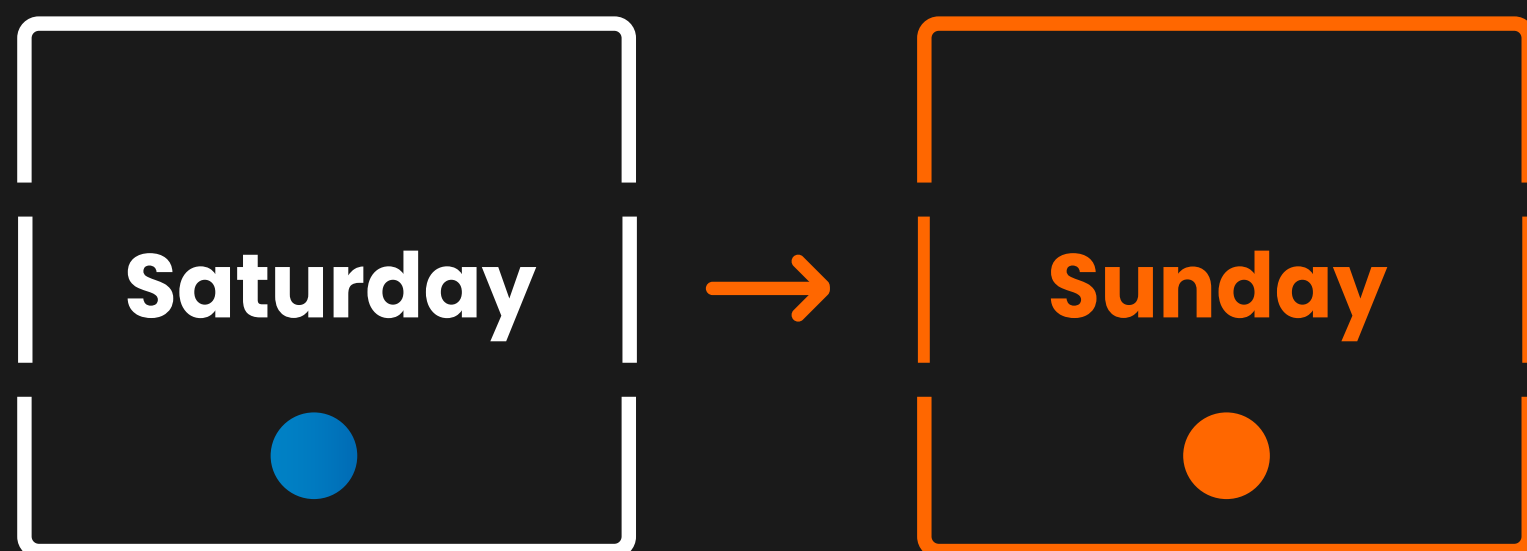
## Recorded Sessions Guidelines



Recorded sessions will be available on the Uptop portal for a period of two months from the course completion date, including the valedictory session of the programme.

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## Course Roadmap

The online sessions will be held every Sunday. However, participants may have live sessions on some Saturdays if the course roadmap requires it. The course roadmap will be prepared and shared by the Programme Professor.



-  = Regular Online Session
  -  = Occasional Live Session (as per roadmap)
-

# Campus Immersion

3-days mandatory campus immersion (No Extra Charges for the Campus Immersion & Alumni Membership)

## Welcome Kit during Mandatory Campus Immersion

*\*Note: Family/Friends or any other member who is not a registered participant in the course, will not be allowed to visit the campus at the time of campus immersion.\**





# Programme Certificate

Upon completion of the “**Post Graduate Certificate Programme in Operations Excellence & Leagile Management**” from IIM Tiruchirappalli, the successful candidates will be awarded the Post Graduate Certificate from the institute. To qualify for the certificate, participants need to meet the minimum attendance requirements and have to submit their final project reports.



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Indian Institute of Management Tiruchirappalli

## Certificate of Completion

This is to certify that

**XXXXXXXX**

(Roll No. YYYYYYY)

has successfully completed the

**Post Graduate Certificate Programme in Operations Excellence & Leagile Management**

through blended learning mode

Given on the -----

Programme Director

Programme Director

Dean (Corporate Relations & Faculty  
Affairs)

Director

S. No. e-learning/SDT01/32/01/90/2025

*\*Certificate images are for illustrative purposes only and may be subject to change at the discretion of IIM Tiruchirappalli without notice.*

# About **Up Top Careers**

The speedy pace of the universal revolution compels working professionals not only to gain mastery of current trends, digital transformations, and platforms but also to be able to connect that knowledge to their daily job. The ability to adapt and learn evolving trends can often unlock the next step in career advancement.

Up Top Careers is a dedicated platform for working professionals to help them to adapt, overcome, improvise and stay UP on the TOP in the career climbing race.

We believe that continuous learning is the key to maintaining a competitive edge and achieving rapid career growth. The concept is just not to offer rapid executive development programmes but to make professionals self-aware of different career stages and the need for continued development, also helping working professionals to self-realize the essential of filling the gaps to have swift career growth.

The principle of executive education is not to follow traditional learnings but to welcome the right set of combinations in the development programmes well aligned with the industry needs. We do believe that the executive programmes cannot be uniform or traditional but have to be aligned with emerging industry inclinations as executives require highly actionable insights, frameworks, and strategies to apply in their own roles and processes which will empower them to meaningfully contribute to the success of their organizations and to their career growth.

Up Top Careers is the authorized admission partner for this programme of IIM Tiruchirappalli.

## **Always UP on the TOP**

ISO 29990:2010 certified company



## INDIAN INSTITUTE OF MANAGEMENT TIRUCHIRAPPALLI

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## IN COLLABORATION WITH



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All the sessions will be delivered in English only