

PROGRAM BENEFITS

**CPIA**  
**CERTIFIED PRODUCTION AND**  
**INVENTORY ANALYST**

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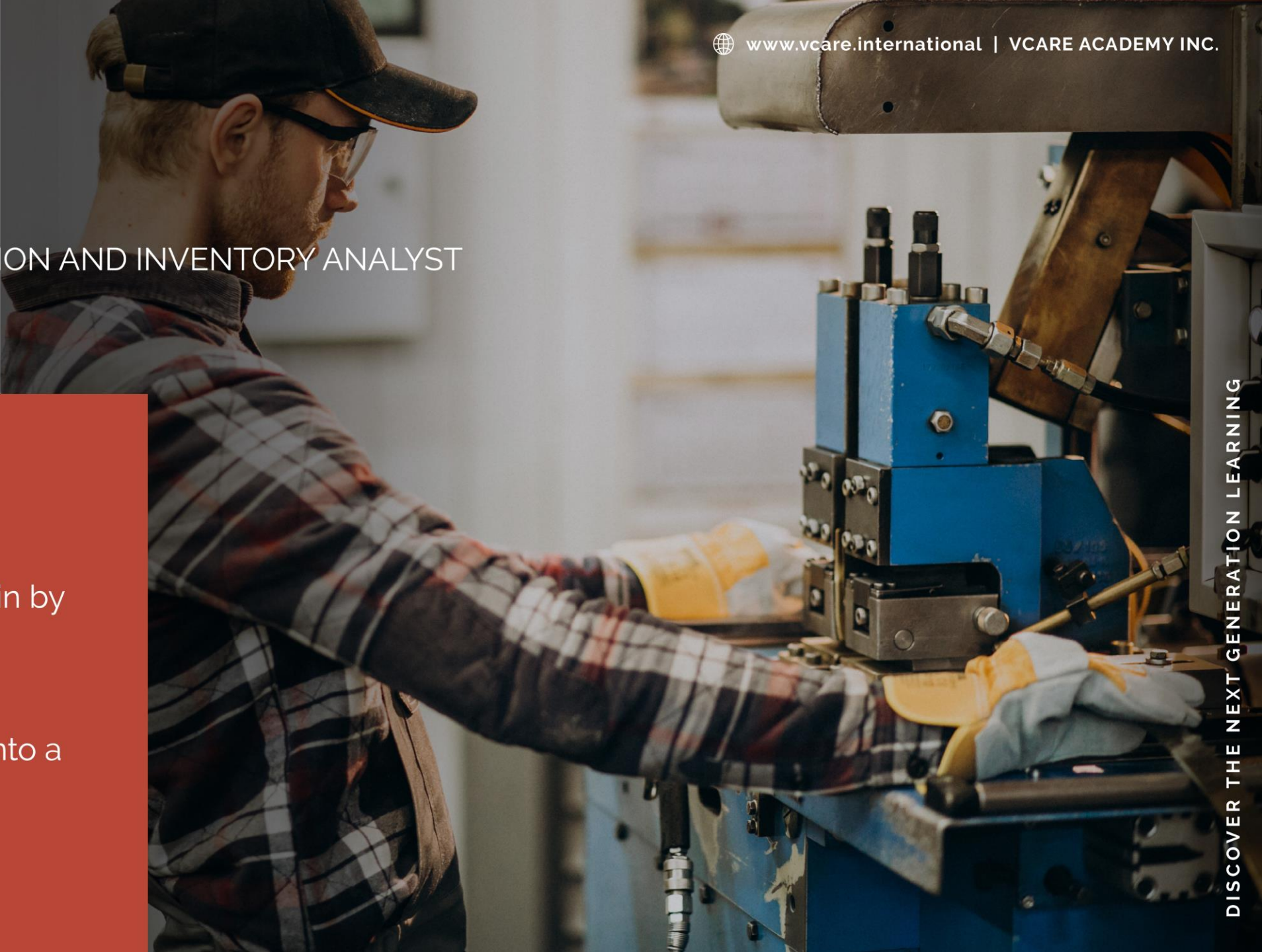
World First Authentic Practical Oriented  
Approach Certification Program

# CPIA

## CERTIFIED PRODUCTION AND INVENTORY ANALYST

Empowering the manufacturing value chain by assisting companies in achieving flexibility and transforming their manufacturing facilities into a value chain

DISCOVER THE NEXT GENERATION LEARNING



## TRANSFORMING THE CAREERS OF SUPPLY CHAIN PROFESSIONALS

The Certified Production and Inventory Analyst (CPIA) program is one of the best certification programs in the field of supply chain management. This program helps employers to provide an exceptional kick-start to transform both new and current employees to a work-to-do professional status to reach a high level of productivity in a very short time.



## ASSISTING ORGANIZATIONS TRANSFORM THEIR SUPPLY CHAIN INTO VALUE CHAIN

The CPIA Program provides the learners with a practical hands-on platform on which to develop their skills, both in the classroom and in the workplace. We left the theory at the door!

CPIA program enable employers to identify where the knowledge and training gaps are within their organization. Having a well-qualified and certified staff is a great competitive advantage and branding tool for a world-class business.



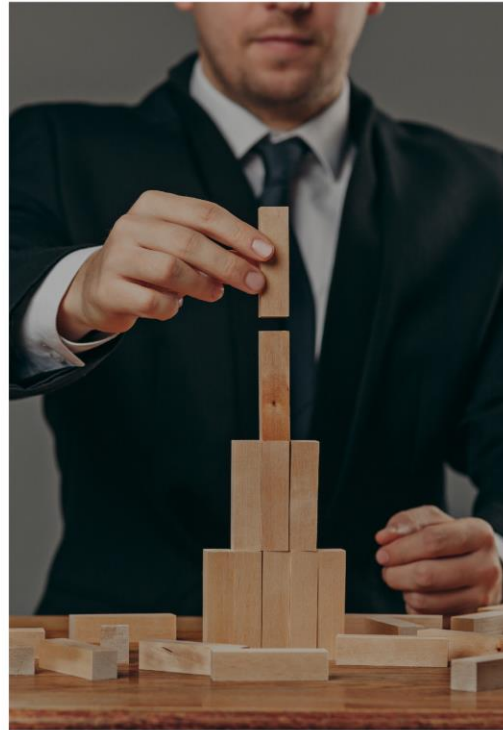
# 5 MAJOR PROBLEMS

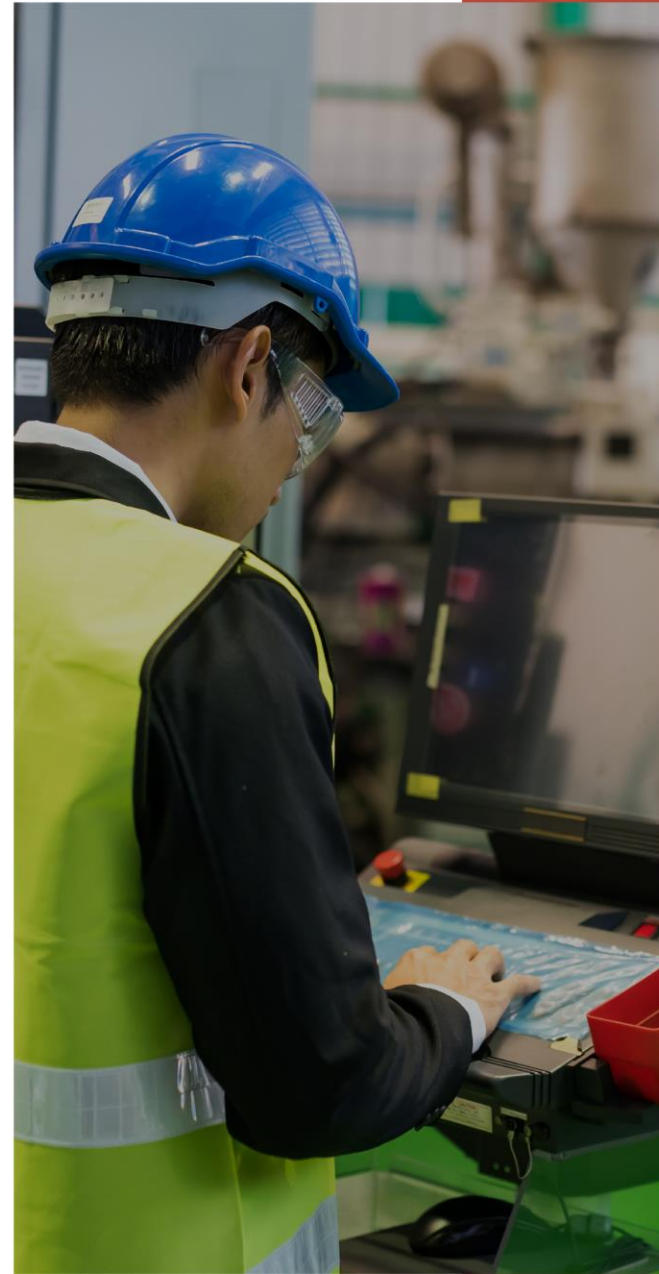
WHICH ORGANIZATIONS ARE FACING

Achieving a high level of productivity in operations and ensuring schedule adherence is paramount to obtaining manufacturing excellence. Unexpected random fluctuations in labour, material and equipment confront operations personnel daily. Challenging though this may be, competently trained and motivated employees can significantly mitigate the effects of these interruptions.

## Five of the major problems which organizations are facing include:

1. Poor utilisation of resources
2. A skills gap
3. Poor demand forecasting and production scheduling
4. Substandard quality products and services
5. Failed customer delivery promises





# IMPACT OF NOT SOLVING

## THESE FIVE MAJOR PROBLEMS

When a manufacturing company fails to recognise and initiate the appropriate corrective action to manage, and eventually eliminate, these obstacles, several adverse conditions will present themselves:

1. High levels of absenteeism and labour turnover
2. Need for frequent replanning and rescheduling operations
3. High levels of work-in-process inventories
4. Ineffective utilisation of plant and equipment
5. Loss of capacity as a result of rework and repairs
6. Increased costs of operations
7. Absence of a coordinated, continuous improvement initiative
8. Inability to meet customer due dates

## WHAT VALUE WILL A COMPANY GET IF THEY SOLVE THESE FIVE MAJOR PROBLEMS?

### COMPANIES THAT RECOGNISE THAT EACH

potential or present inefficiency in their organisation is affecting their productivity, customer service levels and profitability can reap significant rewards:

1. A motivated and self-directed workforce
2. A substantial reduction in the level of work-in-process and an increase in floor space utilisation
3. World-class products that meet or exceed all customer quality expectations
4. One or more competitive advantages over competitors leading to increased sales
5. A stable "doable" sales and operations plan and master production schedule
6. A reduction in costs through more productive use of manufacturing resources
7. A genuinely innovative continuous improvement initiative, eliminating all waste in the manufacturing supply chain
8. Ability to become more flexible in meeting changing customer demand patterns
9. Increased funding for investment in new technology

DISCOVER THE NEXT GENERATION LEARNING



# LEARNING AREAS

## IN CPIA PROGRAM

This program enhances the employees' understanding of production and inventory operations by becoming competent in the following outcomes:

- Name the objectives a business would **establish for its operations**;
- Distinguish between unincorporated businesses and incorporated businesses; **give examples of each**;
- Define supply chain and supply chain management; **with the aid of a diagram, show how demand, supply and information flows through the supply chain**;
- Define customer service; **explain the importance of customers to a business**;
- Distinguish between qualitative **forecasting techniques and quantitative forecasting techniques**;
- Explain the importance of tracking forecast error and making adjustments to a forecast when **demand exceeds forecast by a significant degree**;
- Explain how to utilise capacity planning to balance load with **capacity at one or more work centres**.
- Define materials planning; **give the role of materials planning in the supply chain**;
- Describe the purchasing cycle; **outline the requirements when selecting suitable suppliers**;
- Explain the process of physical distribution; **distinguish between carriers and the modes of transportation**;
- Name and give a brief explanation of each of the components of a representative **technological transformation system**;
- With the aid of a diagram, **explain the volume-variety matrix**;
- Name the different types of production systems; **provide examples of the products produced by each**;
- Name the manufacturing processing families; **indicate the significant differences between them**;
- Explain the role of industrial engineering in a **manufacturing environment**;
- Define productivity; name the resources, and discuss how **productivity influences the wealth of a nation**;
- Identify the types of waste; give examples of each **waste from the workplace**;
- With the aid of sketches, explain the seven essential quality tools; **give one example of the application of each**.



**WE LEFT THE THEORY AT THE DOOR!**

# HOW LEARNING AREAS WILL IMPACT ON EMPLOYEES PERFORMANCE

Once your employees realise that company management is beginning to take an interest in them, this will encourage them to **perform more effectively, resulting in:**

- Appreciating the importance of working as a **cohesive team**
- Understanding the sequence of a **manufacturing process**
- Realising the importance of making products right the **first time – and every time after that**
- Acknowledging the importance of maintaining a **high level of productivity throughout the workday**
- Recognising the role support functions provide to **production and inventory operations**
- Understanding how to plan production and schedules to meet specific delivery **dates while balancing load with available capacity**
- Appreciating the importance of both the supplier and the **customer in the manufacturing supply chain**
- Recognising and contributing to the way costs can be contained and **improvements made in the field of production and inventory**
- Identifying and eliminating waste at each stage of production and inventory along the **manufacturing supply chain**



**EMPOWERING VALUE CHAIN**



# HOW IT WILL BE

## CONTRIBUTING IN REDUCING COST AND INCREASING PROFITABILITY

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By investing in company personnel, which after all are a company's most valuable (but often forgotten) asset, a participating company will reap the following benefits:

- A reduction in labour tardiness, **absenteeism and labour turnover**
- A team of production personnel always dedicated to **producing quality products**
- A decrease in production downtime, with a **corresponding increase in plant capacity**
- Consistent achievement in meeting **customer delivery dates**
- Fewer production schedule changes and **less progress chasing**
- A planned maintenance program with a corresponding reduction in **machine and plant breakdowns**
- Elimination of waste in all production processes through an **aggressive continuous improvement program**
- Better utilisation of factory space with less space for **work-in-process inventories**
- A reduction in throughput time and an **increased output**
- Multi-skilled and **multi-tasked workforce**



**World First Authentic Practical  
Oriented Approach Certification Program  
in Production and Inventory Management**



## ABOUT PROGRAM

This program is designed to increase your knowledge of a business environment, and in particular the role manufacturing plays in business. The program will provide insights into the many opportunities that exist within manufacturing for well-qualified personnel.

Operating within a manufacturing and operations environment and having control over the wide range of manufacturing activities that take place within a typical manufacturing or process industry is a competitive advantage in today's dynamic economy. Gaining this competitive advantage requires being able to identify the various operations within manufacturing and operations, and in turn recognizing the need to initiate and implement a number of continuous improvement initiatives to reduce operating costs and increase throughput.

The program covers the role of manufacturing and operations in the 21st century, how manufacturing forms the "engine" of the supply chain, the role of planning and scheduling in manufacturing, the various manufacturing strategies and engineering materials, and the materials management and industrial engineering support functions. Each presents a challenge to those who are engaged in the field of manufacturing and operations.

## MODULE 01

### INTRODUCTION TO MANUFACTURING AND OPERATIONS MANAGEMENT

- 1.1 Business Formation and Business Strategy
- 1.2 Business Functions and Activities
- 1.3 Management
- 1.4 Supply Chains and Customer Service

# PROGRAM OUTLINE

DISCOVER THE NEXT GENERATION LEARNING

## MODULE 02

### OPERATIONS PLANNING AND SCHEDULING

- 2.1 Forecasting and Demand Management
- 2.2 Planning and Scheduling
- 2.3 Materials Planning
- 2.4 Capacity Planning

## MODULE 03

### MATERIALS MANAGEMENT

- 3.1 Purchasing and Warehousing
- 3.2 Inventory Management and Materials Handling
- 3.3 Transportation and Distribution

## MODULE 04

### MANUFACTURING AND MANUFACTURING PROCESSES

- 4.1 Manufacturing and Technology
- 4.2 Manufacturing Strategies
- 4.3 Types of Production
- 4.4 Manufacturing Processing, and Manufacturing Materials

## MODULE 05

### MANUFACTURING AND OPERATIONS SUPPORT FUNCTIONS

- 5.1 Industrial Engineering and Productivity Improvement
- 5.2 Quality, Inspection, Metrology, and Maintenance
- 5.3 Lean and Waste Management
- 5.4 Continuous Improvement

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