

Module I: Introduction to Global Operations Management

1. Global Operations Management: Overview and Evolution

Global Operations Management

Global Operations Management refers to the planning, organizing, directing, and controlling of production and service activities across different countries. It focuses on managing resources, processes, technology, supply chains, and people to produce goods and services efficiently on a global scale.

As businesses expand internationally, operations management becomes more complex due to differences in culture, laws, currencies, customer preferences, and logistics.

Objectives of Global Operations Management

- Produce goods and services efficiently
- Meet customer requirements worldwide
- Reduce operational costs
- Improve quality and productivity
- Achieve global competitiveness
- Ensure smooth international supply chain operations

Example: A smartphone company may design products in one country, manufacture components in several countries, and assemble them in another country before selling globally.

Evolution of Operations Management

Operations management has evolved significantly over time.

Automation Era

Machines and technology began replacing manual work.

Example: Computer-controlled manufacturing systems.

Global Operations Era

Organizations now manage production and supply chains across multiple countries.

Example: Multinational companies sourcing raw materials and components globally.

Craft Production Era

Products were made individually by skilled craftsmen.

Example: Handmade furniture produced by local carpenter.

Digital Operations Era

Modern operations use artificial intelligence, automation, robotics, cloud computing, and data analytics.

*Example:
Amazon using AI and robotics in warehouses.*

2. Competitive Priorities and Operations Strategy

Competitive Priorities

Competitive priorities are the operational goals that help an organization compete successfully in the market.

They determine how operations contribute to achieving business objectives.

Delivery

Providing products to customers quickly and reliably.

Example: Same-day delivery services offered by e-commerce companies.

Flexibility

Ability to respond quickly to changes in customer needs and market conditions.

Example: Customized furniture manufacturers offering multiple design options.

Cost

Producing goods or services at the lowest possible cost.

Example: Budget airlines offering low ticket prices.

Quality

Providing products and services that meet or exceed customer expectations.

Example: Luxury automobile manufacturers emphasizing superior quality.

Innovation

Developing new products, services, or processes.

Example: Technology companies regularly launching upgraded products.

Operations Strategy

Operations strategy is a long-term plan that determines how operations resources and capabilities will support business goals.

It aligns production and service activities with the organization's overall strategy.

Components of Operations Strategy

- Capacity planning

- Process design
- Technology selection
- Supply chain management
- Quality management
- Workforce planning

Importance of Operations Strategy

- Improves efficiency
- Supports competitive advantage
- Enhances customer satisfaction
- Aligns operations with business objectives

Example: A company focusing on low-cost leadership designs its operations to minimize production expenses.

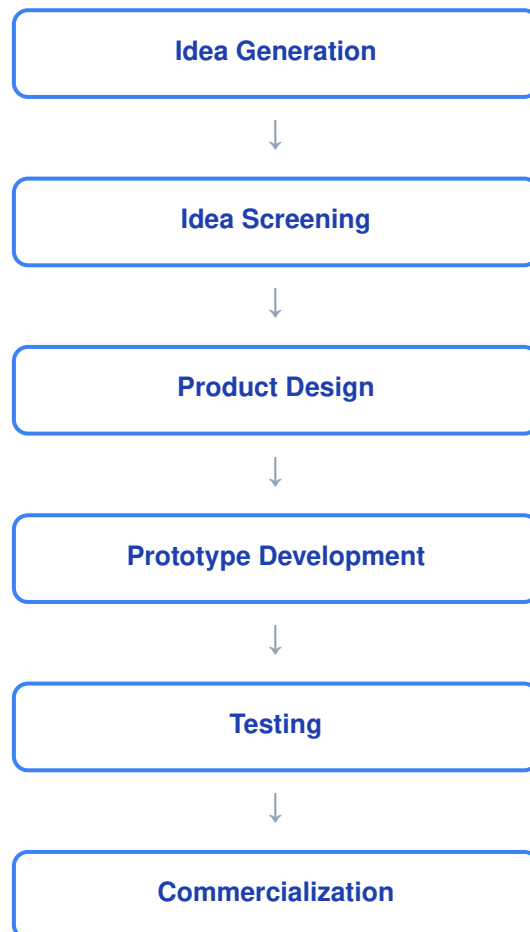
3. New Product Development in a Global Context: Manufacturability and Reliability

New Product Development in a Global Context

New Product Development (NPD) is the process of creating and introducing new products into the market.

In a global context, companies must consider different customer preferences, regulations, cultural factors, and market conditions across countries.

Stages of New Product Development



Challenges in Global Product Development

- Cultural differences
- Diverse customer preferences
- Regulatory requirements
- International competition
- Logistics and supply chain issues

Example: A food company may modify product ingredients to suit the tastes of different countries.

Manufacturability

Manufacturability refers to the ease and efficiency with which a product can be manufactured.

Products should be designed in a way that reduces production costs and simplifies manufacturing processes.

Importance of Manufacturability

- Reduces production costs
- Improves productivity
- Minimizes manufacturing errors

- Speeds up production

Example: Designing a product with fewer components makes assembly easier and cheaper.

Reliability

Reliability refers to the ability of a product to perform its intended function consistently over a specified period without failure.

Customers prefer reliable products because they provide consistent performance.

Importance of Reliability

- Increases customer satisfaction
- Reduces maintenance costs
- Improves brand reputation
- Enhances product value

Example: A refrigerator functioning effectively for many years without major repairs demonstrates high reliability.

4. Quality Management for Global Operations: Quality Cost and TQM

Quality Management for Global Operations

Quality management involves planning, controlling, and improving processes to ensure products and services meet customer expectations.

In global operations, maintaining consistent quality across different countries is essential.

Objectives of Quality Management

- Meet customer expectations
- Reduce defects
- Improve efficiency
- Enhance competitiveness
- Build customer loyalty

Example: A global fast-food chain maintaining the same quality standards across all countries.

Quality Cost

Quality cost refers to the costs associated with achieving, maintaining, and improving product quality. These costs are often categorized into four groups.

Prevention Costs

Costs incurred to prevent defects before they occur.

Example: Employee training and quality planning.

Appraisal Costs

Costs associated with inspecting and testing products.

Example: Product quality inspections.

Internal Failure Costs

Costs resulting from defects detected before delivery to customers.

Example: Rework and scrap materials.

External Failure Costs

Costs arising after defective products reach customers.

Example: Warranty claims and product recalls.

Quality Cost Categories

Category	Purpose
Prevention Cost	Prevent defects
Appraisal Cost	Detect defects
Internal Failure Cost	Correct defects before delivery
External Failure Cost	Correct defects after delivery

Total Quality Management (TQM)

Total Quality Management (TQM) is a management philosophy focused on continuous improvement of products, services, and processes involving all employees.

TQM aims to achieve long-term customer satisfaction.

Principles of TQM

- **Customer Focus:** Customer satisfaction is the primary objective.
- **Continuous Improvement:** Organizations constantly seek ways to improve.
- **Employee Involvement:** All employees participate in quality improvement.
- **Process Approach:** Focus is placed on improving processes rather than simply correcting defects.
- **Fact-Based Decision Making:** Decisions are based on data and analysis.

Benefits of TQM

- Better quality
- Lower costs
- Increased productivity
- Higher customer satisfaction
- Improved employee morale

Example: Toyota's continuous improvement philosophy (Kaizen) reflects TQM principles.

5. Global Operations Performance Metrics: KPIs

Global Operations Performance Metrics

Performance metrics are measurements used to evaluate the effectiveness and efficiency of operations.

In global operations, managers use performance metrics to monitor activities across different countries and locations. Performance measurement helps organizations identify strengths, weaknesses, and opportunities for improvement.

Importance of Performance Metrics

- Measure operational efficiency
- Improve decision-making
- Track progress toward goals
- Identify performance gaps
- Support continuous improvement

Key Performance Indicators (KPIs)

Key Performance Indicators (KPIs) are specific measurable indicators used to assess performance against objectives.

KPIs help managers determine whether operations are achieving desired results.

Common Global Operations KPIs

Productivity

Measures output produced relative to input used.

Example: Units produced per employee.

Quality Rate

Measures the percentage of products meeting quality standards.

Example: Percentage of defect-free products.

On-Time Delivery Rate

Measures the percentage of orders delivered on schedule.

Example: 95% of customer orders delivered on time.

Inventory Turnover

Measures how efficiently inventory is used and replenished.

Example: A company selling and replacing inventory several times a year.

Capacity Utilization

Measures how effectively available production capacity is used.

Example: A factory operating at 85% of its maximum capacity.

Customer Satisfaction

Measures customer perception and satisfaction levels.

Example: Customer feedback survey scores.

Cost Efficiency

Measures the ability to control operational expenses.

Example: Production cost per unit.

Common KPIs in Global Operations

KPI	Measures
Productivity	Efficiency of resource utilization
Quality Rate	Product quality performance
On-Time Delivery	Delivery reliability
Inventory Turnover	Inventory management efficiency
Capacity Utilization	Usage of production capacity
Customer Satisfaction	Customer experience
Cost Efficiency	Cost control effectiveness

Example: A multinational manufacturing company may track on-time delivery, defect rates, and production costs across all its global factories to ensure consistent performance and competitiveness.

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