

## Customer Value and Waste

### Customer Value

In Lean philosophy, "customer value" refers to actions or processes that a customer is willing to pay for because they meet their needs or desires effectively.

#### Key Aspects of Customer Value in Lean

- **Value as Defined by the Customer:** The definition of value comes strictly from the customer's perspective, focusing on features, functions, performance, or experience that the customer perceives as valuable.
- **Willingness to Pay:** The customer must be willing to pay for the feature or service for it to be considered value-adding.
- **Satisfies Needs and Expectations:** Activities that directly meet or exceed customer expectations, enhancing satisfaction and loyalty.
- **Direct Contribution to End Product:** Activities that directly contribute to the completion of a product or service that the customer requires.

#### Importance of Understanding Customer Value

- **Eliminate Waste:** Focuses on activities that add real value from the customer's perspective, eliminating non-value-adding processes.
- **Product Development:** Prioritizes features that customers care about, enhancing product appeal and market success.
- **Resource Allocation:** Allocates resources to areas that enhance customer satisfaction and retention.
- **Continuous Improvement:** Guides continuous improvement efforts to always align with enhancing customer satisfaction.

#### Application in Lean Strategy

Lean organisations use customer feedback loops, market research, and direct interactions to refine their understanding of customer value. They adapt their operations and offerings to meet these needs, using tools like value stream mapping to identify and eliminate non-value-adding activities.

### Muda

Muda is a Lean term for any activity that consumes resources but creates no value for the customer. It is crucial to eliminate or reduce muda to improve efficiency, reduce costs, and increase productivity.

#### Required Muda

Required muda includes non-value-added activities necessary due to technical or regulatory requirements. The goal is to minimise required muda while exploring long-term solutions to eliminate it.

#### Types of Muda

- **Overproduction:** Producing more than necessary, leading to excess inventory and storage costs.
- **Waiting:** Delays between production stages.
- **Transport:** Unnecessary movement of products, increasing contamination risk.

- Over-processing: Excessive processes beyond specifications.
- Inventory: Excess raw materials or finished goods leading to spoilage.
- Motion: Unnecessary worker movements.
- Defects: Production errors requiring rework or disposal.

#### **Strategies for Minimising Muda**

- Process Optimization: Streamline operations to reduce unnecessary movements and enhance workflow.
- Standardisation of Work: Implement standardised procedures to reduce variability and defects.
- Just-In-Time (JIT) Production: Produce only what is needed to reduce overproduction and inventory.
- Automated Systems: Use automation to minimise errors and maintain aseptic conditions.
- Employee Training: Train employees on Lean practices to identify and reduce inefficiencies.
- Quality Management Systems: Monitor and control quality to reduce defects.
- Maintenance Programs: Regular maintenance to minimise downtime.

#### **Conclusion**

Managing muda is essential. Lean methodologies and continuous improvement enhance efficiency, reduce costs, and increase competitiveness. Customer Pull and Customer Flow

In Lean manufacturing, "customer pull" and "customer flow" describe production driven by actual customer demand rather than push-based systems.

#### **Value Stream**

In Lean philosophy, a "value stream" includes all actions (value-added and non-value-added) required to bring a product or service from its initial stage to the customer. This concept covers the entire lifecycle of a product, including design, production, delivery, use, and disposal or recycling.

#### **Key Components of a Value Stream**

- Raw Materials to Customer: The value stream starts with raw materials and ends with the finished product delivered to the customer. It includes all processes, activities, events, and transactions needed to transform raw materials into the final product.
- Information Flow: Involves all information needed to manage the product's journey, including order information, schedules, and production control mechanisms.
- Material Flow: The physical flow of materials through the manufacturing process, from raw materials to work-in-progress to finished goods.

#### **Purpose of Mapping the Value Stream**

- Identify Waste: Helps categorise each step as value-adding or non-value-adding to eliminate waste and improve efficiency.
- Process Improvement: Provides a big-picture view to better coordinate and integrate activities, leading to targeted and effective improvements.
- Enhance Flow: Aims to create a smooth, uninterrupted flow of products and services, reducing delays, bottlenecks, and excess inventory.
- Customer Focus: Aligns processes with customer needs by focusing on what adds value from the customer's perspective.

## Practical Application

Value stream mapping is a common Lean management tool that visually maps the flow of materials and information. It includes data on time and resources required at each step, helping pinpoint issues and guide continuous improvement.

## Impact of Business Strategies on the Value Stream

Business strategies significantly influence the configuration of a value stream, optimising the flow of work, information, and materials to produce a product or service.

### 1. Cost Leadership Strategy

- Objective: Minimise costs to offer the lowest price.
- Impact:
  - Streamlined Operations: Eliminate waste to reduce costs.
  - Standardisation: Achieve economies of scale through standardised processes.
  - Automation: Increase automation to reduce labour costs.
  - Supplier Integration: Tight integration with low-cost suppliers.

### 2. Differentiation Strategy

- Objective: Offer unique products or services.
- Impact:
  - Flexibility: Allow customization and rapid product design changes.
  - Quality Focus: Implement rigorous quality control measures.
  - Innovation Emphasis: Foster innovation through R&D and continuous improvement.
  - Customer Feedback: Rapidly integrate customer feedback into development.

### 3. Focus Strategy

- Objective: Concentrate on a narrow market segment.
- Impact:
  - Customised Processes: Tailor operations to target segment needs.
  - Specialised Capabilities: Develop unique capabilities for the niche market.
  - Close Customer Collaboration: Engage deeply with customers to refine products.

### 4. Rapid Growth Strategy

- Objective: Expand market share quickly.
- Impact:
  - Scalable Processes: Design scalable processes.
  - Capacity Management: Focus on flexible capacity management.
  - Cross-Functional Teams: Speed up problem-solving and reduce time-to-market.

### 5. Sustainability Strategy

- Objective: Reduce environmental impact and promote social responsibility.

- Impact:
  - Eco-efficient Processes: Minimise waste and energy consumption.
  - Sustainable Sourcing: Prioritise sustainable practices and materials.
  - Product Lifecycle Management: Consider the entire lifecycle for recyclability and reduced impact.

**The chosen business strategy dictates the value stream configuration, aligning operational capabilities with strategic goals to deliver maximum value to customers.**

## **Customer Pull and Customer Flow**

### **Customer Pull**

- Definition: Products are manufactured only when there is customer demand.
- Key Features:
  - Just-In-Time Production: Producing goods just in time to be shipped out and sold, minimising inventory.
  - Kanban Systems: Visual signals to manage production and supply.
  - Reduction of Overproduction: Prevents overproduction by aligning production with actual consumption.

### **Customer Flow**

- Definition: Streamlined and uninterrupted flow of products from production to the customer.
- Key Features:
  - Smooth Production Cycles: Ensures balanced and synchronised production steps.
  - Elimination of Bottlenecks: Identifies and addresses delays and inventory build-up.
  - Continuous Improvement: Refines processes to maintain efficient and responsive production flow.

### **Importance of Pull and Flow in Lean**

- Reduced Inventory Costs: Minimises costs associated with holding and managing excess inventory.
- Increased Flexibility and Responsiveness: More responsive to changes in customer demand and market conditions.
- Enhanced Quality Control: Smaller batches and continuous flow help identify and correct quality issues quickly.
- Waste Reduction: Minimises unnecessary production, waiting times, and inventory.

### **Practical Implementation**

Implementing customer pull and flow often requires significant cultural and process changes, including employee training, restructuring layouts, and implementing feedback mechanisms to quickly adapt to demand changes.

### **Internal and External Customers**

In Lean thinking, customers include both external buyers and internal entities within the organisation.

### Internal Customers

- Definition: Individuals or departments within the organisation relying on others to fulfil their roles.
- Key Needs:
  - Timeliness: Timely delivery of inputs to keep processes efficient.
  - Quality: High-quality inputs to ensure subsequent process steps are performed correctly.
  - Communication: Effective channels to clarify requirements and provide feedback.
  - Support: Adequate information, tools, or resources to perform duties.

### External Customers

- Definition: End users or buyers of the organisation's products or services.
- Key Needs:
  - Value for Money: Products or services that meet needs at a reasonable price.
  - Product Quality and Reliability: High standards with reliable performance.
  - Customer Service: Excellent pre-sale and post-sale support.
  - Timely Delivery: Products or services delivered within promised time frames.

### Comparison and Contrast

- Similarities:
  - Quality Expectations: Both expect outputs that meet quality standards.
  - Dependency: Both depend on the provider for essential tasks or products.
  - Feedback and Improvement: Feedback is vital for continuous improvement.
- Differences:
  - Nature of Requirements: Internal customers focus on process-oriented needs, while external customers focus on product/service-oriented needs.
  - Relationship Dynamics: Internal relationships are collaborative and ongoing; external relationships are more transactional and influenced by competition.
  - Impact of Satisfaction: Internal satisfaction affects operational efficiency; external satisfaction impacts market reputation and sales.

Understanding and managing the needs of both internal and external customers are critical in Lean methodology to ensure seamless value flow and continuous improvement.

## Methods for Identifying Customer Needs and Benefits

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- Surveys and Questionnaires: Gather structured feedback on preferences, pain points, and experiences.
- Customer Interviews: Conduct one-on-one interviews for in-depth insights into customer experiences and satisfaction.
- Focus Groups: Group discussions to uncover needs and benefits not expressed individually.
- Observation and Ethnographic Studies: Observe real-world product or service usage to highlight unarticulated needs.

- Customer Journey Mapping: Map the customer journey from awareness to post-purchase to identify key touchpoints.
- Market Trend Analysis: Analyse market trends and consumer behaviour reports for broader insights.

#### **Methods to Identify Customer Benefit/Cost Ratio**

- Economic Value Estimation (EVE): Estimate the economic value compared to alternatives, assessing additional earnings or cost savings.
- Total Cost of Ownership (TCO): Calculate the total lifecycle cost, including purchase, maintenance, operation, and disposal, compared to benefits.
- Conjoint Analysis: Evaluate trade-offs customers make, determining how they value different product attributes.
- Customer Satisfaction and Retention Rates: Monitor satisfaction and retention as indicators of perceived value relative to cost.
- Net Promoter Score (NPS): Measure likelihood of customers recommending a product, reflecting their value perception.
- Break-even Analysis: Determine the time it takes for benefits to surpass costs, assessing product attractiveness.

These methods provide insights into customer needs and benefits, helping organisations understand the value delivered relative to costs for strategic decision-making.