

Module 01

Introduction to Supply Chain Management

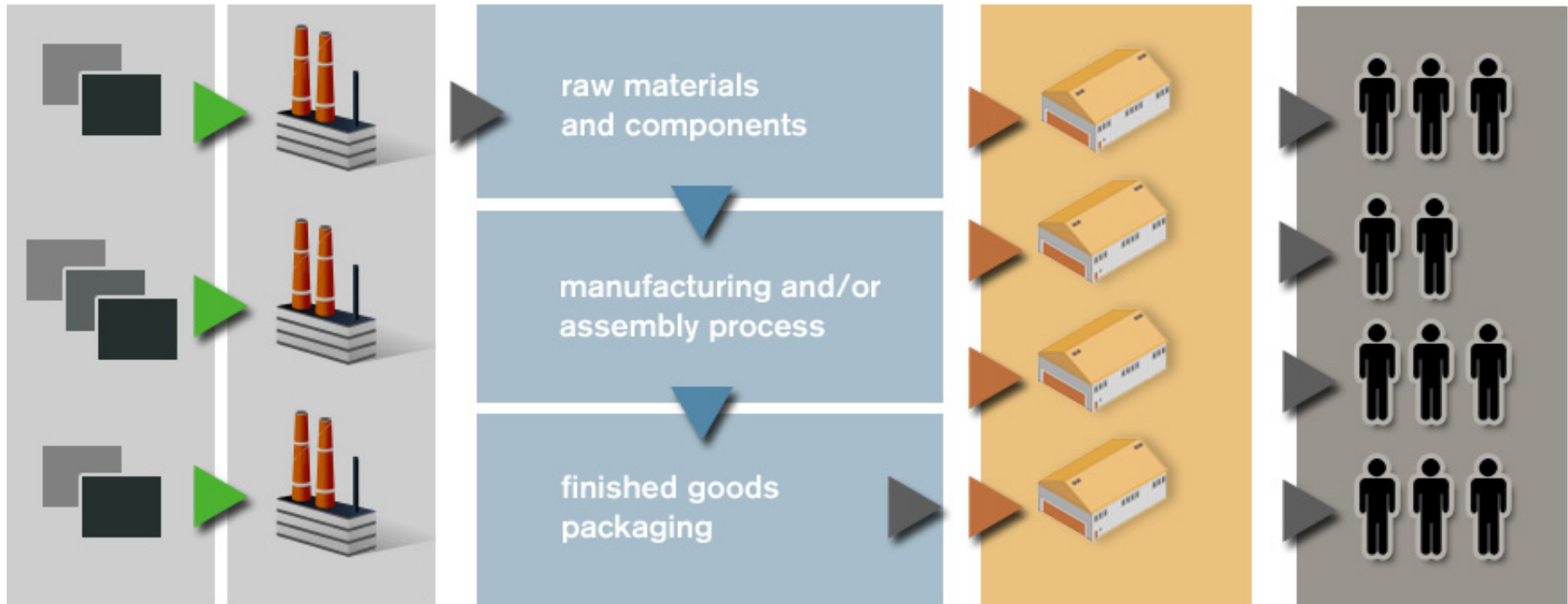
Simple Supply Chain Illustration

PURCHASING
supplier network

PRODUCTION
assembly/manufacturing

DISTRIBUTION
warehousing/distributing

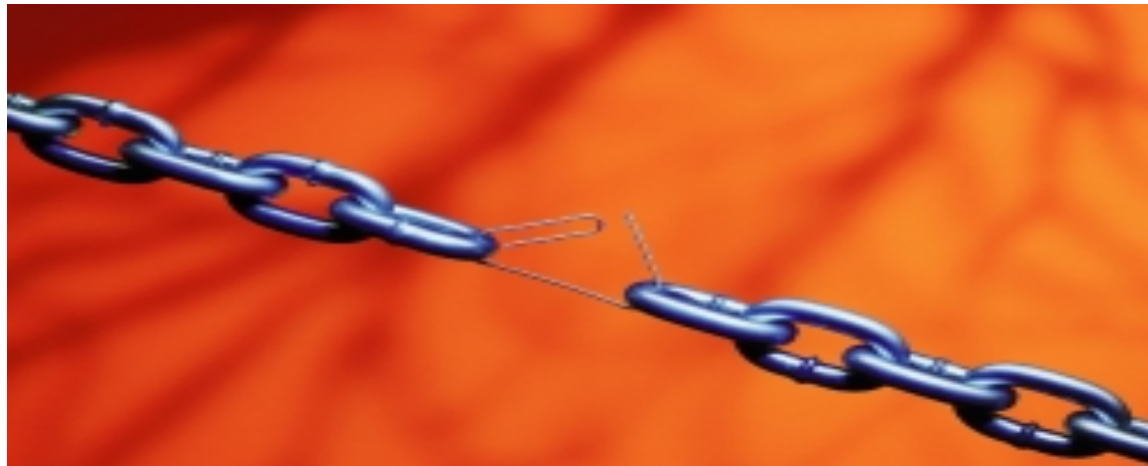
RETAIL SALES
retailers



SCM Definitions

Supply Chain Management is the Efficient Integration of suppliers, transporters, manufacturers, warehouses, retailers and all other parties associated with the delivery of the final product.

- Achieve Goals – Cost, Speed, Quality..
- Efficient Execution – Get things done right, but with minimal effort and resources
- Manage Resources – People, Materials, Machines..



Supply Chain: Key Components

- _____ The process of obtaining services, supplies, and equipment in conformance with corporate regulations.

Examples of duties:

- Supplier selection
- Purchasing negotiations
- Managing supplier relationships – Motivation, Development
- Materials/Inventory management

Supply Chain: Key Components

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Design, operation, and improvement of the production systems that *efficiently* transform INPUTS into Finished Goods & Services, maximizing productivity.

Examples of duties:

- Process management, Plant management
- Capacity planning – resources, speed (How much, how fast?)
- Scheduling jobs/people
- Waiting line management
- Process improvement projects

SCM Definitions

• _____
is the **COORDINATED Planning and Execution** of the following:

- Preparation of Packaged Product
- Movement Itinerary (Transport)
- Storage Itinerary (Warehousing)
- Product Distribution throughout the Supply Chain –
Who gets what? When? How?

Examples of duties:

- Distribution/Warehousing, Infrastructure Mgmt.
- Packaging, containerization, transportation, documentation
- Third party management and communication

MARKETING / DESIGN / STRATEGY

BUY IT: purchasing

MAKE IT: operations

MOVE IT: logistics

SELL IT: Sales, Retail Operations, Support

SERVICE IT: Support, Returns,
Maintenance / Repairs

IT

MARKETING

FINANCE

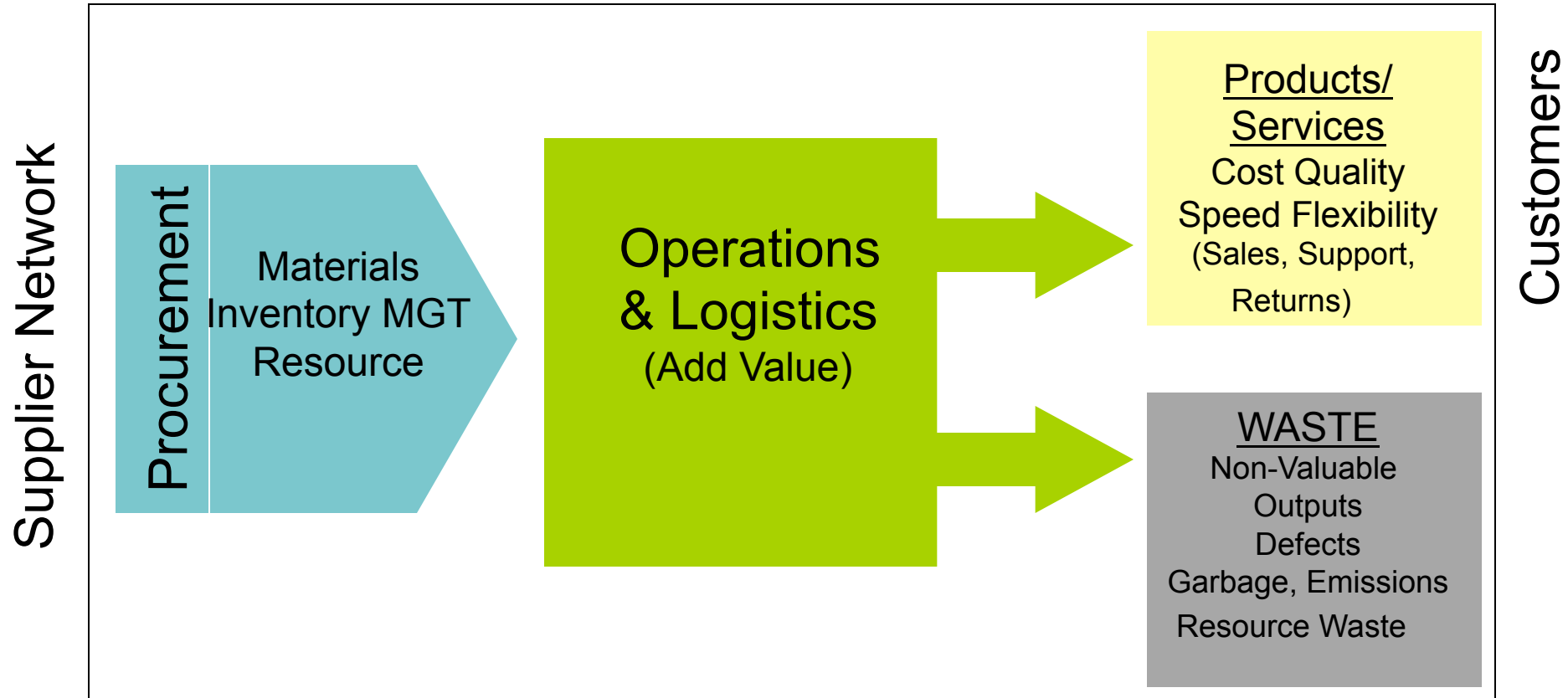
ACCOUNTING



GOALS

**Profits → Increase revenue, Low Cost
Maximize Value
Increase Productivity
Quality, Speed, Flexibility
Eliminate waste, Minimize inventory...**

Key Supply Chain Concepts



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The Corporation – Goals and Stakeholders

Stakeholders

- Owners, Investors, Stockholders
 - Managers, Employees AND Business Partners
 - CUSTOMERS!!!
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Primary Goals - Sustainable Long-term Profits AND Maximize Return on Investment (ROI)

How can this be achieved?

- ROI Formula – Profit/Investment
- PROFIT FORMULA – Profit = Revenue – Cost
 - Increase Revenue – Provide customer VALUE
 - Control Costs – Increase PRODUCTIVITY, Eliminate Waste
- Develop Core Competencies - Primary Skill or Knowledge
Difficult to learn, copy, acquire. (Intangible!)

Shigeo Shingo's – 7 Types of Waste

1. Defects – Obvious, but could cause additional waste
2. Overproduction – Production used to mask shortcomings
3. Transportation – No value added, Possible loss
4. Motion – Employee and Machines
5. Waiting – Wasted resources during wait
6. Inventory – Not providing a return
7. Over-Processing – More work than required done in creating end item/service. Best workers doing most basic tasks.

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Buzz Words – Corporate Goals

- **Value** – Customer Perspective

What do I get? (Quantity, quality, size..)

What is the price? (Money, waiting time, warranty...)

- **Productivity** – Organizational Perspective

What did I make? (Outputs)

What was the cost? (Inputs)

Buzz Words - Competitive Priorities

1. Cost
 2. Quality
 3. Speed/Time
 4. Flexibility
- Look at a company or a process you are familiar with and consider the competitive priorities utilizing the slides that follow. Starbucks, Nordstrom, BMW, McDonald's ... What specifically do these companies promise in terms of the 4 competitive priorities?
 - Now that you are beginning to understand what supply chains are and what they are attempting to accomplish, these *competitive priorities* should have greater depth and meaning.

Competitive Priorities - COST

When you buy a bottle of water don't just consider the water!

- Material Costs**
- Production Costs - Machine and Labor**
- Packaging, Transportation, Storage Costs**
- Quality Costs - Returns, Warranties, Repairs, Rework, Errors, Time**
- Customer Service Costs**
- Other Organizational Costs – Marketing, Finance, Technology, Waste Disposal, Rent, Insurance, Legal, Human Resources...**

Control Across the Entire Supply Chain!!!

Competitive Priorities -QUALITY

DESIGN QUALITY - Product or Service. Good workers and materials can't make-up for bad design

MATERIAL & PRODUCTION QUALITY – This requires well designed Production System, good materials, labor, high performance, aesthetics, durability

QUALITY LEVEL DELIVERED – How does it look when the end-user finally gets it? What it looks like off the assembly line isn't the only thing that's important.

CONSISTENT QUALITY – Same every time? Perfect every time? Having the ability to be consistent is challenge for any company that wants a massive customer base.

SERVICE QUALITY - Sales, Support, Repairs, Maintenance, Assembly, Delivery

Competitive Priorities - TIME

DELIVERY TIME – Lead Time (Pizza Delivery)

- From Order Placement to Order Fulfillment
- Includes supplier delivery times, manufacturing time, transport times across supply chain, waiting time...
- Consider importance of good inventory management, forecasting

ON-TIME DELIVERY (Airline Industry)

- Percentage of time delivered when promised
- Developing Schedules, Staying on Schedule
- Who dictates promised date/time?

Fast, Accurate or Both?

Which is important in your industry?

Control Across the Entire Supply Chain!!!

Competitive Priorities - FLEXIBILITY

Companies typically offer you large quantities OR a large range of customizable features. Both are considered a form of flexibility. Consider the planning required to offer customer each (or both).

1. Product or Customization Flexibility

- Options Offered
- Built to your Specifications

2. Volume Flexibility

- Coping with Demand Changes
- Large and/or Small Orders (Timely)

Some companies, through the use of good planning, good design, and technology, can actually provide both.

3. Mass Customization

- Both Customization and Volume Flexibility

Competitive Priorities - FLEXIBILITY

Other types of flexibility modern organizations require.

DESIGN FLEXIBILITY – Consider the future of the product or service.
Modifications? Changes in market demand? Easy to change color, size, features

MATERIALS / PARTS FLEXIBILITY - Can the material or component be used for a number of different end items and in a number of different ways?

FACILITY FLEXIBILITY - Producing Multiple Items in a Single Plant

TOOLS / MACHINERY FLEXIBILITY - Can tools be used to make a number of different end items or only one end item?

EMPLOYEE FLEXIBILITY - Agile Employees – Good at everything? Specialists?
Competent / Intelligent employees

SERVICE FLEXIBILITY - Repairs, Returns, Assembly, Recycle; Suggestions, Help Desk; Locally, Worldwide; On Site, In-Person

Corporate Strategy & Management

- **Research and Planning** – Who? What? How? How Much...

- Marketing – Identify Market(s), Understands needs/desires

- **Design** – Develop Product/Service to fill need(s)

- **Develop the Appropriate Business Model**

- **SCM – Getting Product (or service) to Customer**

- Plan, build and organize the required supply chain
- Schedule, Measure, Improve, and Adapt in pursuit of perfection. Assess impact of supply chain failures and defects
- Buy, Make, and Move materials toward customer
- Assist in selling the product
- Service, support, repairs, maintenance, and returns -
Maximizing value beyond date of sale

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Business Models

- **The mechanism by which a business intends to generate revenue and profits. It is a summary of how a company plans to serve its customers at the strategic level.**
 - **How does the company plan to serve its customers in the most effective and profitable manner?**
 - Movie Rentals - NetFlix vs. Blockbuster
 - Retail Book Sales - Amazon.com vs Barnes & Noble
 - Computer Sales - Dell vs. Sony
 - Hamburgers – McDonald's vs Red Robin
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- **Copying or Adapting Business Models – Razors and Blades**
 - **Impact on Supply Chain Design**

SCM and Basic Business Models

Think about how a company's business model defines its supply chain

- **Business to Consumer Company – B2C**
 - Amazon, Best Buy, Burger King, Dillards
 - **Business to Business Company – B2B**
 - DHL Cargo, Boeing, Consulting/Marketing Agencies
 - **Both B2B and B2C - IBM, Ford Motors, Dell, Sprint PCS**
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- **Brick & Mortar - Land-Based Commerce Only**
 - Burger King, Circle K
 - **Internet Only Retailer - Net Commerce Only**
 - Amazon.com, Overstock.com
 - **Click & Mortar – Land-Based and Internet Commerce**
 - Barnes and Noble, Best Buy

Supply Chain Strategy & Management

Goals

Strategy

Management Needs

Satisfy Customer

Create value by creating
desired competitive priority
mix

Satisfy Company

Maximize productivity
Eliminate waste
Contribute to profits

Consider the Future

Be responsive to change

Plan for the Customer

Business Model

Buy

Make

Move

Sell

Service

Adapt and Improve

Performance Metrics

Supply Chain Visibility

Relationship Management

Support/Cooperation

Marketing

Accounting

HR

Info Mgt/IT

Finance