

# Introduction to Operations and Supply Chain Management

## Chapter 1

## 1 Chapter Objectives

### Be able to:

- Describe what the operations function is and why it is critical to an organization's survival.
- Describe what a supply chain is and how it relates to a particular organization's operations function.
- Discuss what is meant by operations management and supply chain management.
- Identify some of the major operations and supply chain activities, as well as career opportunities in these areas.
- Make a case for studying *both* operations management and supply chain management.

1 - 2

## 1 Why study Operations and Supply Chain Management?

- Every organization must make a product or a service that someone values.
- Most organizations function as part of larger supply chains.
- Organizations must carefully manage their operations and supply chains in order to prosper, and indeed, survive.

1 - 3

## 1 Operations Management

- **Operations Management – The planning, scheduling, and control of the activities that transform inputs into finished goods and services.** © 2010 APICS Dictionary

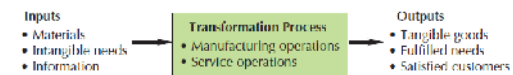


Figure 1.1

1 - 4

## 1 Manufacturing

- **Tangible product**
- **Key decisions driven by physical characteristics of the product:**
  - How is the product made?
  - How do we store it?
  - How do we move it?
  - Etc.

1-5

## 1 Services

- **Intangible Product or Service**
  - Location, Exchange, Storage, Physiological, Information
- **Key decisions:**
  - How much customer involvement?
  - How much customization?

1-6

## 1 Supply Chain Management

- **Supply Chain Management – The active management of supply chain activities and relationships in order to maximize customer value and achieve a sustainable competitive advantage.**

1-7

## 1 A Supply Chain Example

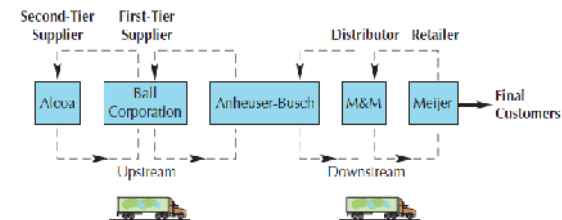


Figure 1.2

1-8

## 1 Supply Chain Terminology

- **Upstream** – Activities positioned earlier in the supply chain.
- **Downstream** – Activities positioned later in the supply chain.
- **First-tier supplier** – A supplier that provides products or services directly to a firm.
- **Second-tier supplier** – A supplier that provides products or services to a first-tier supplier.

1 - 9

## 1 Supply Chain Operations Reference (SCOR) Model

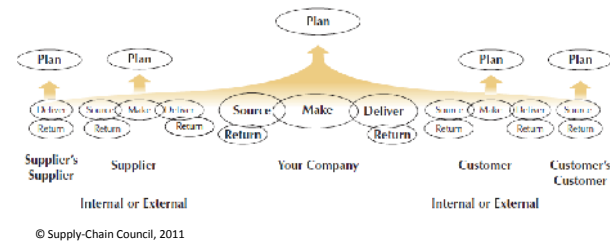


Figure 1.3

1 - 10

## 1 Supply Chain Operations Reference (SCOR) Model

Consists of:

- **Planning activities**
- **Sourcing activities**
- **“Make,” or production, activities**
- **Delivery activities**
- **Return activities**

© Supply-Chain Council, 2011

1 - 11

## 1 Important Trends

- **Electronic commerce**
  - Reduces the costs and time associated with supply chain relationships
- **Increasing competition and globalization**
  - Fewer industries protected by geography
- **Relationship management**
  - Competition between chains, not individual firms
  - Trust and coordination

1 - 12

## 1 Professional Organizations

- APICS – Association for Operations Management
- ISM – Institute for Supply Management
- CSCMP – The Council of Supply Chain Management Professionals
- ASQ – The American Society for Quality

1 - 13

## 1 Supply Chain Careers

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| ▪ Analyst                         | ▪ Sourcing Analyst               |
| ▪ Commodity Manager               | ▪ Logistics and Material Planner |
| ▪ Customer Service Manager        | ▪ Systems Support Manager (MIS)  |
| ▪ International Logistics Manager | ▪ Transportation Manager         |
| ▪ Logistics Services Salesperson  | ▪ Process Analyst                |
| ▪ Production Manager              | ▪ Scheduler                      |
|                                   | ▪ Purchasing Agent               |

1 - 14

## 1 Major Operations and Supply Chain Activities


- Process selection, design, and improvement
- Forecasting for decision making
- Capacity planning for capital investment and resource levels
- Inventory management for amount and location
- Planning and control for work scheduling and meeting demand
- Purchasing, managing supplier relationships
- Logistics or acquisition and distribution

1 - 15

## Introduction to Operations and Supply Chain Case Study

### *Supply Chain Challenges at LeapFrog*

1 - 16



**This work is protected by United States copyright laws and is provided solely for the use of instructors in teaching their courses and assessing student learning. Dissemination or sale of any part of this work (including on the World Wide Web) will destroy the integrity of the work and is not permitted. The work and materials from it should never be made available to students except by instructors using the accompanying text in their classes. All recipients of this work are expected to abide by these restrictions and to honor the intended pedagogical purposes and the needs of other instructors who rely on these materials.**

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.  
Printed in the United States of America.

1 - 17