



## **Chapter X**

# **The Application of Soft Systems Methodology to Supply Chain Management**

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## **Abstract**

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*This chapter reflects upon techniques that might facilitate improved strategic decision making in a supply chain management (SCM) environment. In particular, it presents the integration of a selection of techniques adapted from an approach to systems-based problem solving that has emerged primarily in the UK over the last 20-30 years—the soft systems methodology (SSM). The results reported indicate that SSM techniques can complement existing SCM decision-making tools. In particular, this chapter outlines a framework for integrating some SSM techniques with approaches based upon the supply-chain operations reference-model (SCOR)*

## Introduction

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Supply chain management (SCM) is a collaborative effort that combines many parties or processes in both the optimisation of the delivery of goods and services and optimisation of information flows. To the customer, optimisation means that the supplier knows what the customer needs and understands the timing of the delivery of goods and/or services. To the supplier, optimisation means that the right goods and/or services are available in the right quantities at the right time, when the customer needs them, without requiring the supplier to carry excess inventory or maintain excessive production capacity. Such collaborative efforts are necessarily founded upon negotiated, “whole-of-chain” strategies, often decided in an environment that brings together stakeholders across an entire product cycle.

In this chapter, we reflect upon techniques that might facilitate improved strategic decision making in an SCM workshop environment, in particular, integrating a selection of techniques adapted from an approach to systems-based problem solving that follows, in part, a socio-technical approach that has emerged primarily in the United Kingdom over the last 20 to 30 years—the soft systems methodology (SSM). A short timeframe action research approach, introducing a selection of SSM techniques in a workshop environment, has been applied. The results confirm and extend studies indicating that SSM techniques can complement existing SCM workshop approaches. In particular, this chapter outlines a framework for integrating some SSM techniques with approaches based upon the supply-chain operations reference (SCOR) model.

## Background

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*Supply chain management is a collaboration based strategy to link cross-enterprise business operations to achieve a shared vision of market opportunity. It is a comprehensive arrangement that can span from raw material sourcing to end-consumer purchase”* (John McConnell, as reported by Ferguson, 2000, p. 64)

As Ferguson (2000) notes, this definition introduces two important ideas. First, supply chain management (SCM) is collaborative, combining many parties and processes in a product cycle. Second, it suggests that SCM potentially covers an entire product cycle, from raw materials to the product sales point. Such collaborative efforts are necessarily founded upon negotiated, whole-supply-

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