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## PROGRAM OF SUPPLY CHAIN IMPROVEMENT (SCI)



Motivation. Any focal company is embedded in a supply chain so that its products are the result of a joint effort i.e. the effort of the supply chain partners. However, each partner firm has its own organization and working procedures so that the delivery delay, cost, quality and variety of the supply chain products differ from the ones desired by the customers of the focal firm.

Goals. The program of supply chain improvement (SCI) integrates the organization and working procedures of the focal firm with the ones of its partners. Hence, the products have the efficiency desired by the focal firm customers and this one gets more customers. This program is for firms that assemble products and its suppliers of components.

**Program overview.** The SCI includes the activities in the shown flowchart. The employees of the focal firm and the ones of the partner firms participate.

Weaknesses of current approaches. They suggest hardware solutions to improve parts of the supply chain without evaluating their joint effect and link with the strategic plan. Hence, there is no guarantee that these improvements allow making products with the focal firm customers' desired efficiency.

Advantages of our improvement program. Our approach conceives improvements covering fully the product lifecycle: Product development and mass production (materials supply, mass production, sales

and distribution). In addition, we use systemic models that support the integration of the improvements suggested for the supply chain partners. These tools evaluate also their joint effect.

#### **DEFINE:**



- -Identify the products functions and efficiencies required by the customers of the focal firm
- -Make a supply chain organizational change plan
- -Define an intervention project
- -Form a supply chain improvement team

### **MEASURE:**

- -Model the lifecycle of the focal firm products through the supply chain
- -Evaluate the efficiency at different parts of the supply chain

# **ANALYZE:**

-Examine the supply chain to identify the causes of the poor efficiency

### IMPROVE:

- -Conceive the potential improvements for the focal firm and its partners
- -Evaluate the improvements effects using systemic simulation models
- -Choose the improvements to implement
- -Implement the improvements

### CONTROL:

-Measure the post-improvement efficiency and compare it to the one required by the focal firm customers