Integration, Alignment and ICT in Supply Chains

Edward Sweeney

Technological University Dublin, edward.sweeney@tudublin.ie

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University of Naples “Parthenope”
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Integration, Alignment and ICT in Supply Chains
Edward Sweeney, November 2010
Agenda

1. NITL
2. SCM: Integration and Alignment
3. The Role of Technology
4. Some Concluding Remarks
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National Institute for Transport and Logistics

- Report “World Class to Serve the World”
- April 1998
- National Centre for Supply Chain Excellence
- Based in the College of Engineering and Built Environment at the DIT
NITL Structure and Activities

- Academic research
- Active research consultancy
- Supply chain management
- Training & education

NITL
Agenda

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2. SCM: *Integration and Alignment*
3. The Role of Technology
4. Some Concluding Remarks
World Class Organisations


Optimum Total Supply Chain Investment and Costs + Financial Impact of Effective SCM =

Market-driven Customer Service Strategy -> Competitive Advantage Through Integrated SCM

Optimum Total Supply Chain Investment And Costs
SCM: Integration and Alignment

- SCM concept originally introduced by management consultants in the early 1980s (Oliver and Webber, 1982)
- Significant and growing interest in business, academia and professional bodies
- Strong emphasis on the concept of inter-firm and intra-firm integration of supply chain activities in SCM academic literature
- Integration of supply chain activities and information because many supply chain NVAs are caused by fragmented supply chain configurations
Integration: SCM’s ‘Big Idea’

- Storey et al. (2006) in their discussion of the interlocking ideas and propositions of SCM declare that, "the central underpinning ideas relate to alignment and integration"
- Pagell (2004) declares that “in its essence the entire concept of SCM is really predicated on integration”
- Internal (‘buy-make-move-store-sell’)
- External (‘intra-firm’)

"the central underpinning ideas relate to alignment and integration"
SCM: Integration and Alignment

Underlying logic
- An organisation must be aligned with its operating environment

Usefulness
- Shows the interaction between customers' needs, the formulation of appropriate strategic responses, and the successful execution of these strategies by shaping the necessary internal capabilities and corresponding leadership styles

Prerequisite
- Understanding of the customers' fundamental needs and buying behaviours that ultimately drive sales, revenues, and profit

Source: www.johngattorna.com
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Information Management in the SC

Supply Chain Planning

Source

Processes

Suppliers

Information Flow

Funds Flow

Products & Services

Distributors

Retailers

Consumer

Supply Chain Execution
Technology: the key enabler

- Point solutions
- Best of breed solutions
- Enterprise solutions (ERP)
- Extended Enterprise Solutions (XES)

Facilitating integration of supply chain processes
Managing Information Flows

**EFFECTIVE ICT IS A KEY SUCCESS FACTOR**

- Information as the basis of supply chain control
- The role of ICT in supply chain integration
- Inventory visibility
- Track and trace
- eBusiness
Forrester in the *Harvard Business Review* in 1958 stated that:

“Management is on the **verge of a major breakthrough** in understanding how industrial company success depends on the interactions between the flows of information, materials, money, manpower, and capital equipment.”
Theory and Practice?

- SCM is a sound concept but turning the idea into practice is not easy and that it has so far received more lip service than accomplishment, except in a few leading edge companies (Leenders et al., 2002).
- Practitioners are far from mastering SCM (Chen and Paulraj, 2004).
- Anecdotally, the SCM literature appears to be concentrated in a handful of industry sectors - examples to illustrate SCM concepts are mostly chosen from industries such as consumer goods retailing, computer assembling and automobile manufacturing (Burgess et al., 2006).
- Our research found very few examples of ‘end to end’ SCM (Storey et al., 2006).
We can confirm that integration is more rhetoric than reality, that it might be more difficult in practice than in theory (Fabbe-Costes and Jahre, 2007)
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Concluding Remarks

- Rapid developments in technology are now occurring.
- The correct implementation of this technology has the potential to enhance competitiveness.
- To realise the maximum benefits from technology it should not be implemented in isolation, but rather as part of integrated approach to total supply chain design and management.
- People and training are essential to success.
- Innovative approaches to ICT deployment in transport and logistics companies.
- Competitive advantage will originate from developing creative information technology strategies and implementing them superbly.