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Integration, Alignment and ICT in Supply Chains

Edward Sweeney

Technological University Dublin, edward.sweeney@dit.ie

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**University of Naples “Parthenope”
Launch of Masters in Integrated Transport and
Freight Logistics**



**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**

Agenda

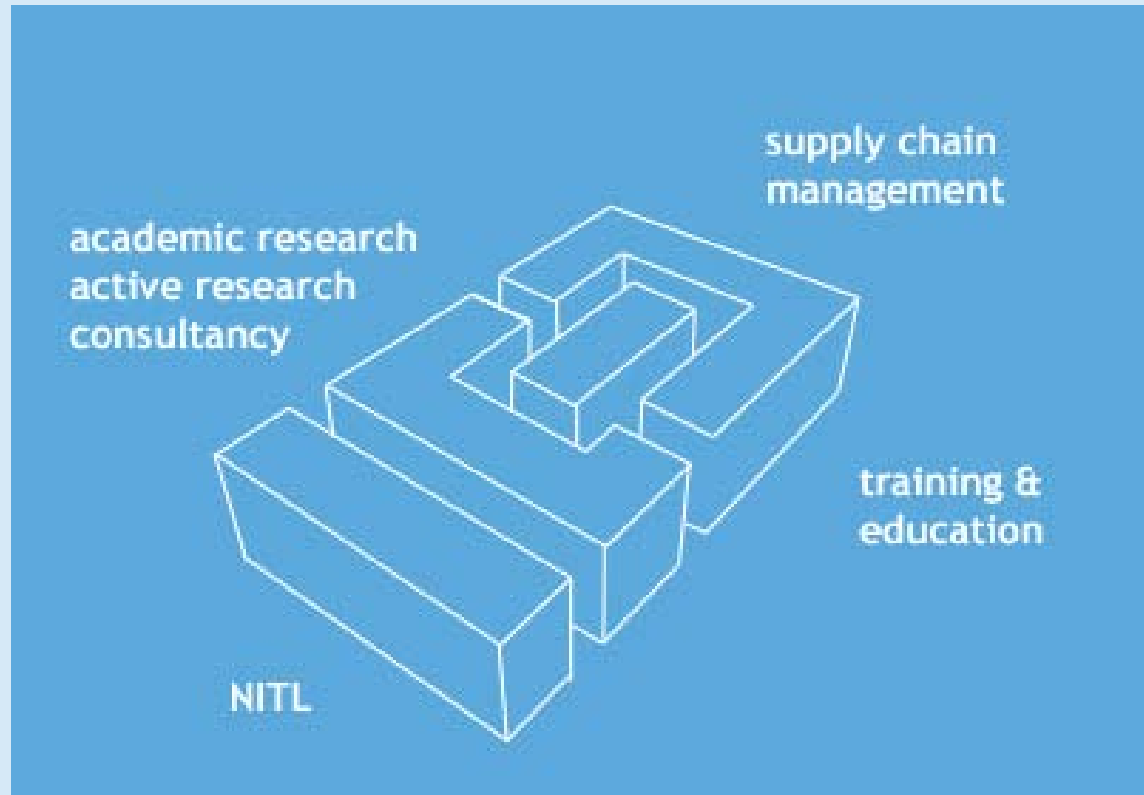
- 1. *NITL***
- 2. **SCM: Integration and Alignment****
- 3. **The Role of Technology****
- 4. **Some Concluding Remarks****

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



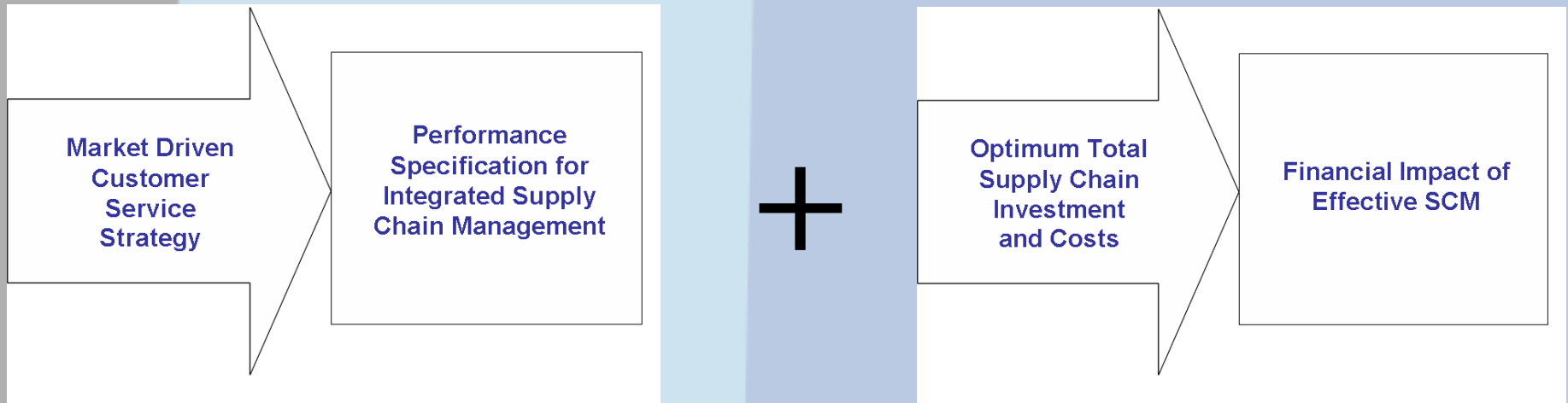
NITL Structure and Activities



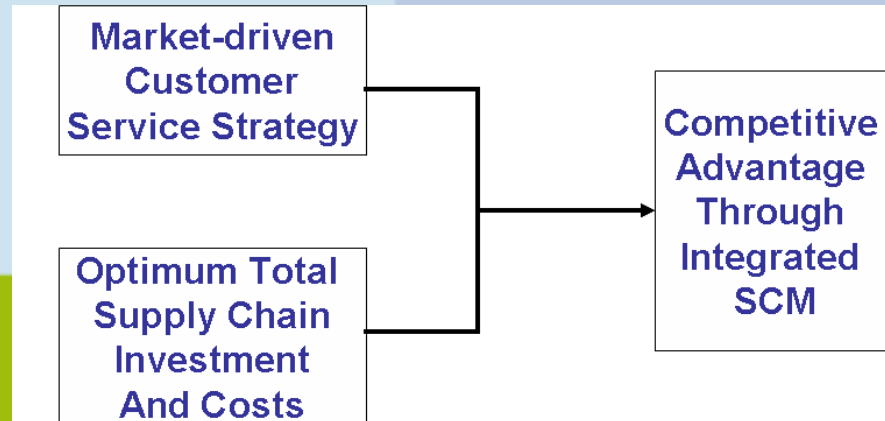
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World Class Organisations



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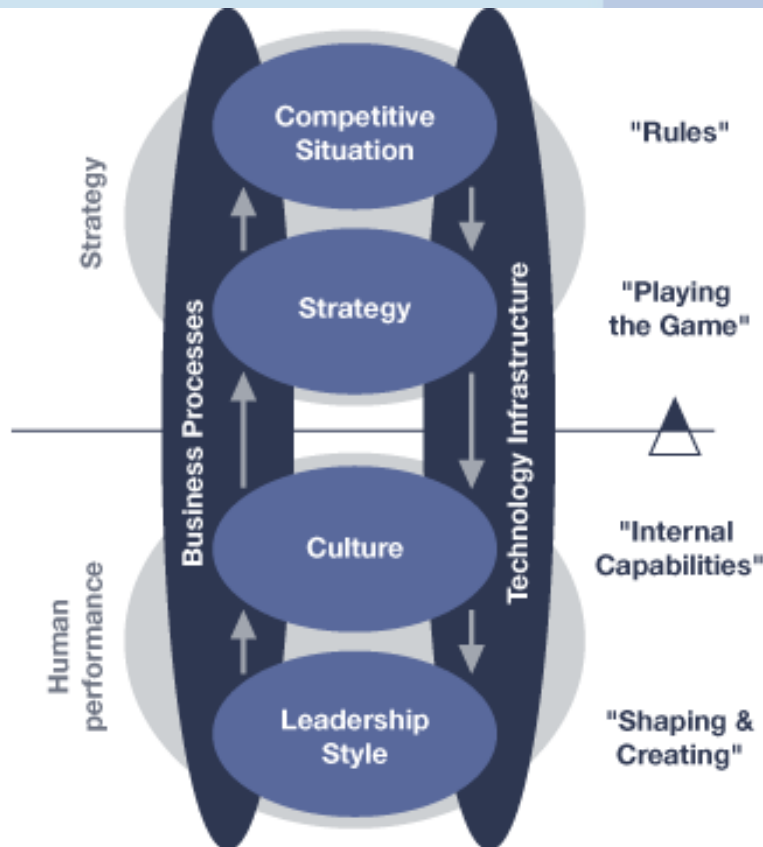
SCM: Integration and Alignment

- 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')

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

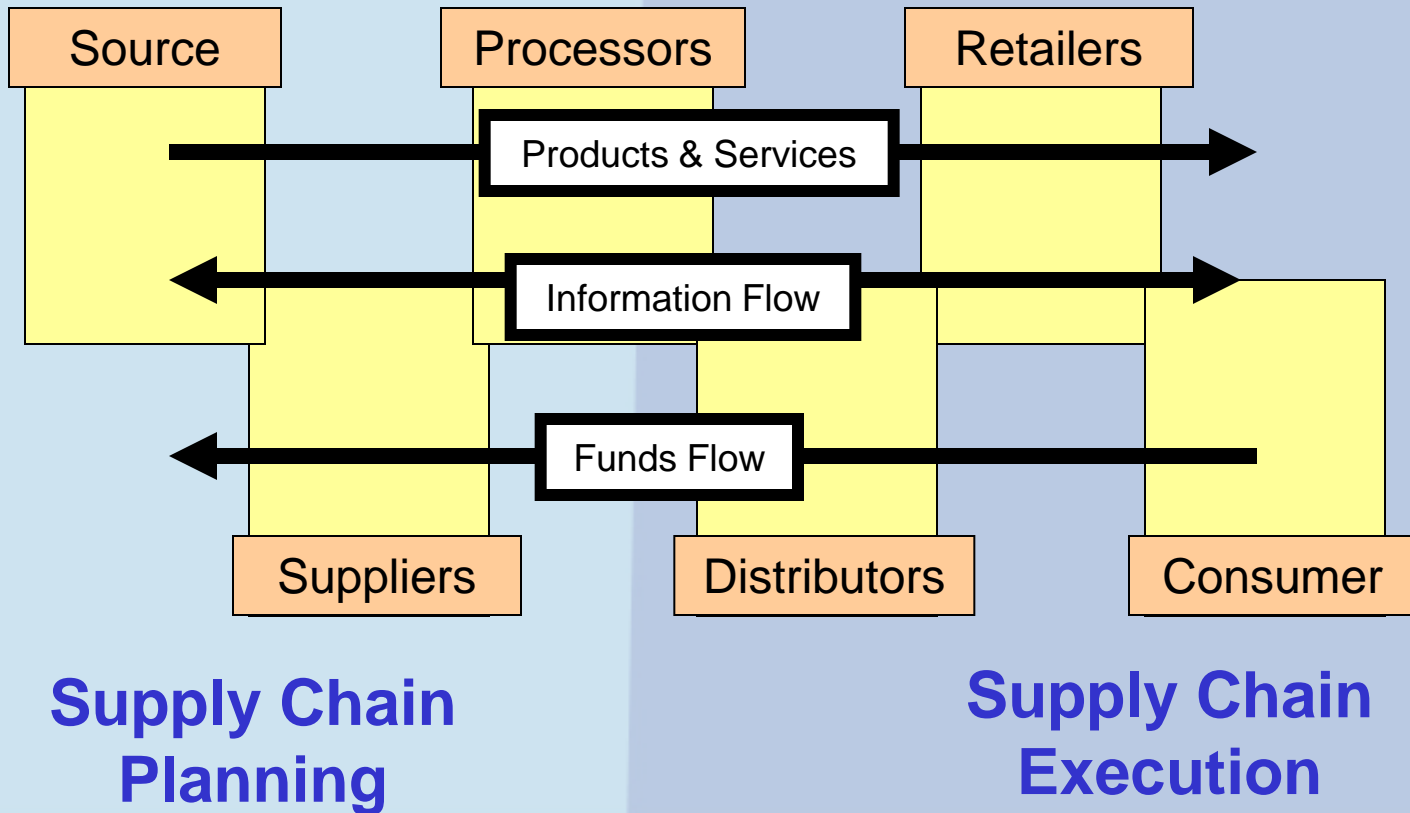
Prerequisite

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

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Information Management in the SC



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

Theory and Practice?

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)**

Theory and Practice?

Supply chain integration improves performance: the Emperor's new suit?

Supply chain
integration

835

Nathalie Fabbe-Costes

*Centre de REcherche sur le Transport et la LOGistique,
Université de la Méditerranée-Aix-Marseille II,
Aix-en-Provence Cedex, France, and*

Marianne Jahre

*Department of Strategy and Logistics,
Norwegian School of Management (BI), Oslo, Norway*

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



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