

2008-01-01

An Analysis of Supply Chain Management and Competitive Solutions for the Island of Ireland

Edward Sweeney

Technological University Dublin, edward.sweeney@tudublin.ie

Claudia-Maria Wagner

Technological University Dublin, claudia.wagner@tudublin.ie

Follow this and additional works at: <https://arrow.tudublin.ie/nitlotr>



Part of the [Business Administration, Management, and Operations Commons](#)

Recommended Citation

Sweeney, E.:An Analysis of Supply Chain Management and Competitive Solutions for the Island of Ireland. Invited Lecture, Queens University Belfast, October 2008.

This Presentation is brought to you for free and open access by the National Institute for Transport and Logistics at ARROW@TU Dublin. It has been accepted for inclusion in Other Resources by an authorized administrator of ARROW@TU Dublin. For more information, please contact yvonne.desmond@tudublin.ie, arrow.admin@tudublin.ie, brian.widdis@tudublin.ie.



This work is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 3.0 License](#)

Edward Sweeney
Director of Learning

Claudia Wagner
Senior Researcher



An Analysis of Supply Chain Management and Competitive Solutions for the Island of Ireland

Agenda

- **NITL**
- **Introduction - What is SCM?**
- **SCM Excellence**
- **Diffusion of SCM in Ireland**
- **Re-engineering Supply Chains**
- **Some Concluding Comments**

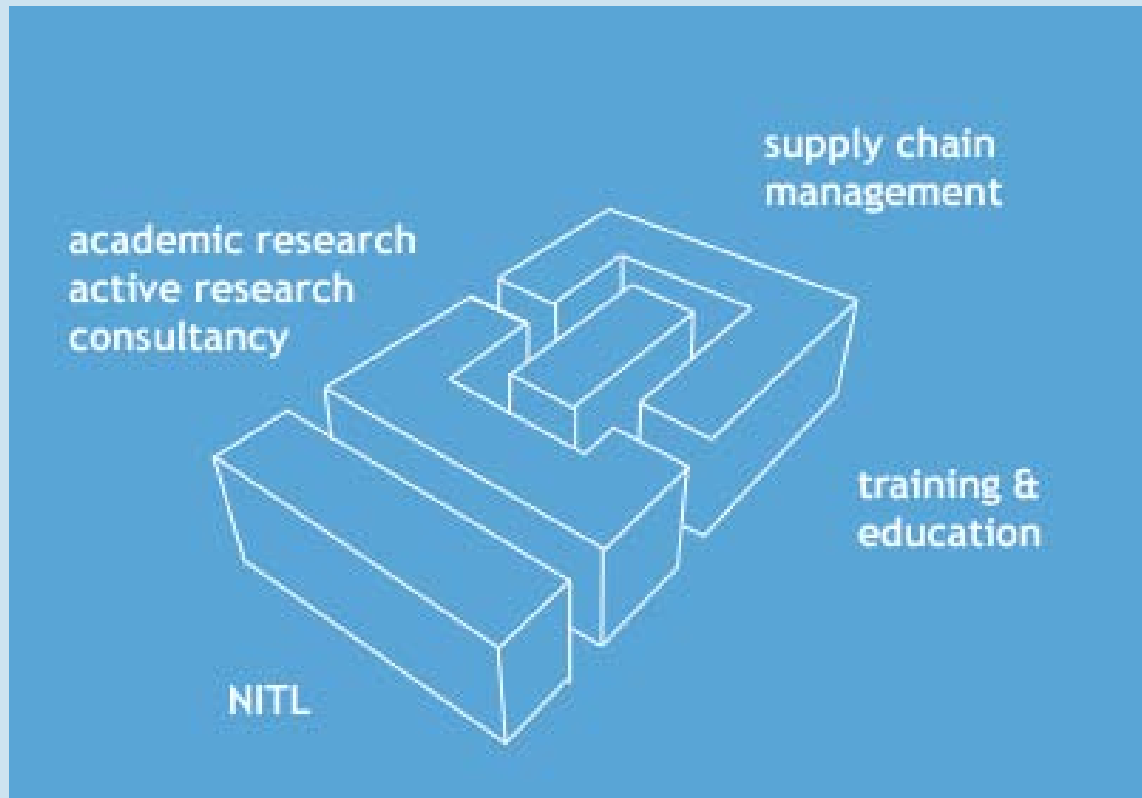
Agenda

- ***NITL***
- **Introduction - What is SCM?**
- **SCM Excellence**
- **Diffusion of SCM in Ireland**
- **Re-engineering Supply Chains**
- **Some Concluding Comments**

History of NITL

- Report “World Class to Serve the World”
- National Centre for Supply Chain Excellence
- Supported by the National Development Plan, managed by the Department of Enterprise, Trade and Employment, set up at the DIT
- April 1998

NITL Structure / Activities






Agenda

- **NITL**
- ***Introduction - What is SCM?***
- **SCM Excellence**
- **Diffusion of SCM in Ireland**
- **Re-engineering Supply Chains**
- **Some Concluding Comments**

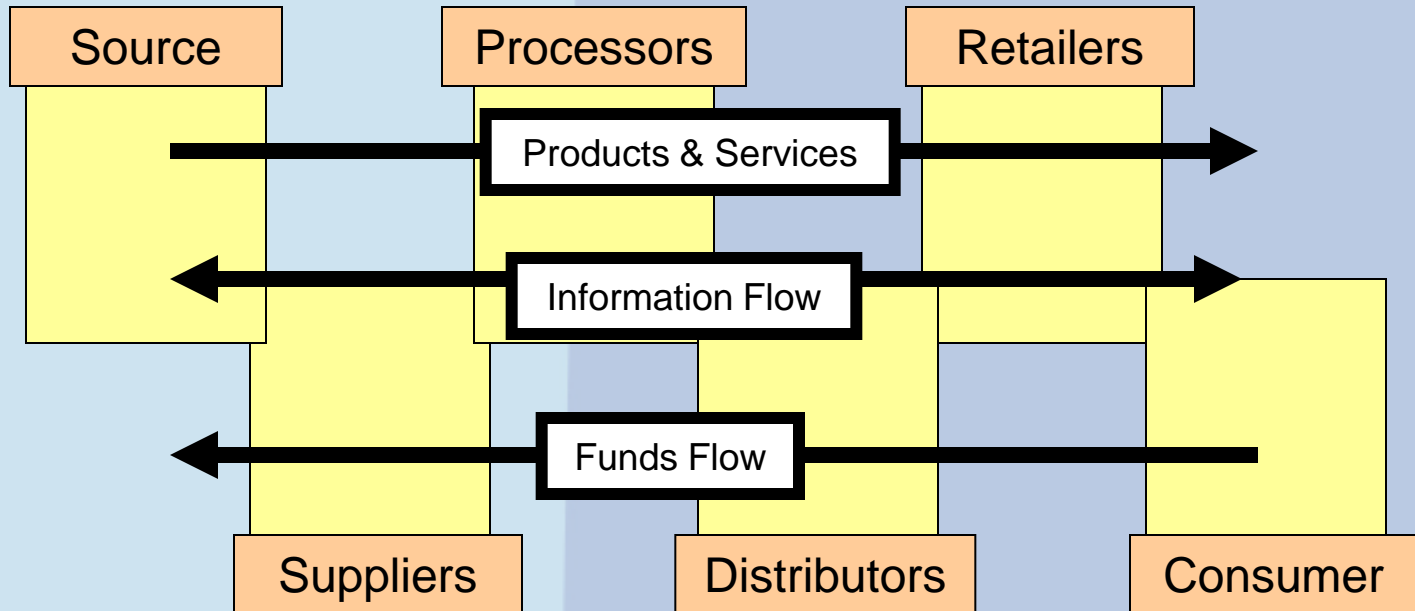
What is SCM?

- 👉 **SCM provides the end customer with the right product at the right time, priced at the right level, in the right quantity and quality**
- 👉 **SCM as a major source of competitive advantage**
- 👉 **NITL's *Four Fundamentals* of SCM**

Fundamental 1 - The Objectives of Supply Chain Management

-  **Supply Chain Management aims to achieve competitive advantage through:**
-  ***Enhanced Customer Service***
-  ***Optimised Costs and Investments***

Fundamental 2 - Supply Chain Philosophy



A product reaches the final consumer through a chain of companies which will typically include suppliers, processors, distributors and retailers.

The Weakest Link

- **Without the right companies across the supply chain to work with, a company will never achieve true competitive advantage. In other words**
- **The supply chain is only as strong as its weakest link.**

What is Supply Chain Management?

A white circle with a thin black border containing the word 'Buy' in blue text.

Buy

A white circle with a thin black border containing the word 'Make' in blue text.

Make

A white circle with a thin black border containing the word 'Store' in blue text.

Store

A white circle with a thin black border containing the word 'Move' in blue text.

Move

A white circle with a thin black border containing the word 'Sell' in blue text.

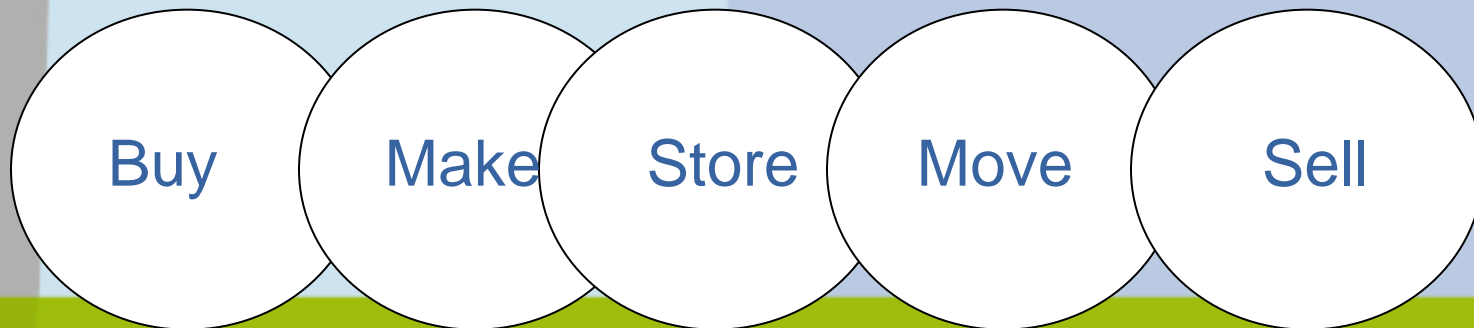
Sell

Traditionally these functions are managed in isolation and often operate at cross purposes.

What is Supply Chain Management?

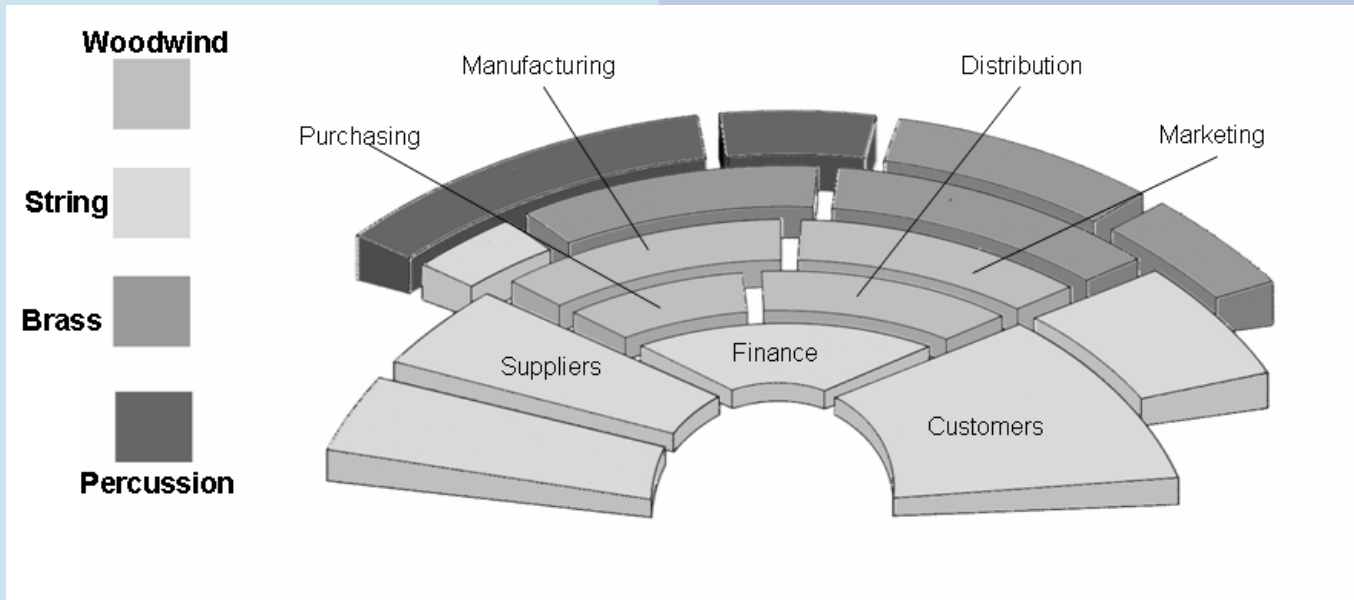
Supply chain management integrates these functions by holistically managing the information, material and financial flows.

Information and Money



Information and Materials

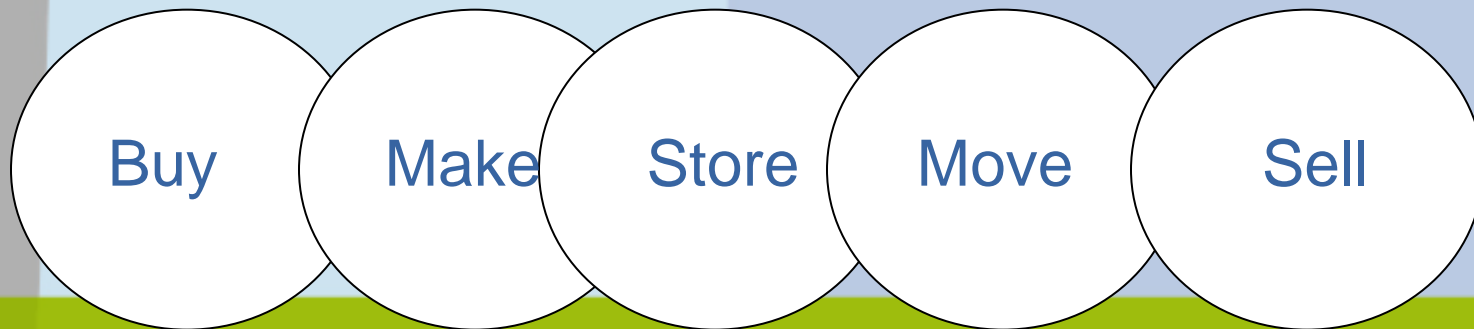
What is Supply Chain Management?



Fundamental 3 - Management of the Flows

Supply chain management integrates these functions by holistically managing the information, material and financial flows.

Information and Money



Information and Materials

Fundamental 4 - Management of the Flows

Re-assessment of internal and external
customer/supplier relationships.

SCM is not a “zero-sum game” based on
adversarial relationships

SCM is a “win-win” game based on partnership
relationships?

Why is SCM Important?

“Effective supply chain management can cut costs, improve service and enhance revenues and that’s just the beginning” Prof. P. Metz, MIT

MIT Survey: Implementation of ‘supply chain management’ in US resulted in:

50% reduction in inventory

40% improvement in on-time deliveries

27% reduction in order cycle time

Nine-fold reduction in out of stocks

Why is SCM Important?

“Supply chain management lies at the heart of the Dell Direct model and, therefore, at the heart of Dell’s business performance”

Michael Dell

Agenda

- **NITL**
- **Introduction - What is SCM?**
- ***SCM Excellence***
- **Diffusion of SCM in Ireland**
- **Re-engineering Supply Chains**
- **Some Concluding Comments**

Characteristics of SCM Excellence

Characteristics of SCM Excellence

- Identification and measurement of customer service

Characteristics of SCM Excellence

- Identification and measurement of customer service because *customer service 'sets the spec' for SC design*

Characteristics of SCM Excellence

- Identification and measurement of customer service because *customer service 'sets the spec' for SC design*
- Integration of supply chain activities and information

Characteristics of SCM Excellence

- Identification and measurement of customer service because *customer service 'sets the spec' for SC design*
- Integration of supply chain activities and information because *many supply chain NVAs are caused by fragmented supply chain configurations*

Characteristics of SCM Excellence

- Identification and measurement of customer service because *customer service 'sets the spec' for SC design*
- Integration of supply chain activities and information because *many supply chain NVAs are caused by fragmented supply chain configurations*
- SCM a senior management function

Characteristics of SCM Excellence

- Identification and measurement of customer service because *customer service 'sets the spec' for SC design*
- Integration of supply chain activities and information because *many supply chain NVAs are caused by fragmented supply chain configurations*
- SCM a senior management function because *SCM is a strategic activity*

Characteristics of SCM Excellence

- Identification and measurement of customer service because *customer service 'sets the spec' for SC design*
- Integration of supply chain activities and information because *many supply chain NVAs are caused by fragmented supply chain configurations*
- SCM a senior management function because *SCM is a strategic activity*
- Establishment and measurement of supply chain KPI's

Characteristics of SCM Excellence

- Identification and measurement of customer service because *customer service 'sets the spec' for SC design*
- Integration of supply chain activities and information because *many supply chain NVAs are caused by fragmented supply chain configurations*
- SCM a senior management function because *SCM is a strategic activity*
- Establishment and measurement of supply chain KPI's because *what gets measured gets done!*

Agenda

- **NITL**
- **Introduction - What is SCM?**
- **SCM Excellence**
- ***Diffusion of SCM in Ireland***
- **Re-engineering Supply Chains**
- **Some Concluding Comments**

The Evolving Strategic Context

- **Internationalisation (or globalisation) of supply chains**
- **Vertical disintegration**
- **Changing role of the SC in strategic differentiation**

Context: importance of SCM in Ireland

- Potential operational benefits (supply chain economics and customer service)
- Open economy (imports/exports proportion of GDP)
- Transport only one, and not most important cost, therefore location not a significant disadvantage
- Relatively small companies often part of a global supply chain
- Can manage 'virtual' supply chains from Ireland

SCM Barometer - Methodology

Survey instrument sent to sample frame of 1,655 companies across all sectors in Ireland; Response rate is 65% (1073 organisations).

Sample characteristics:

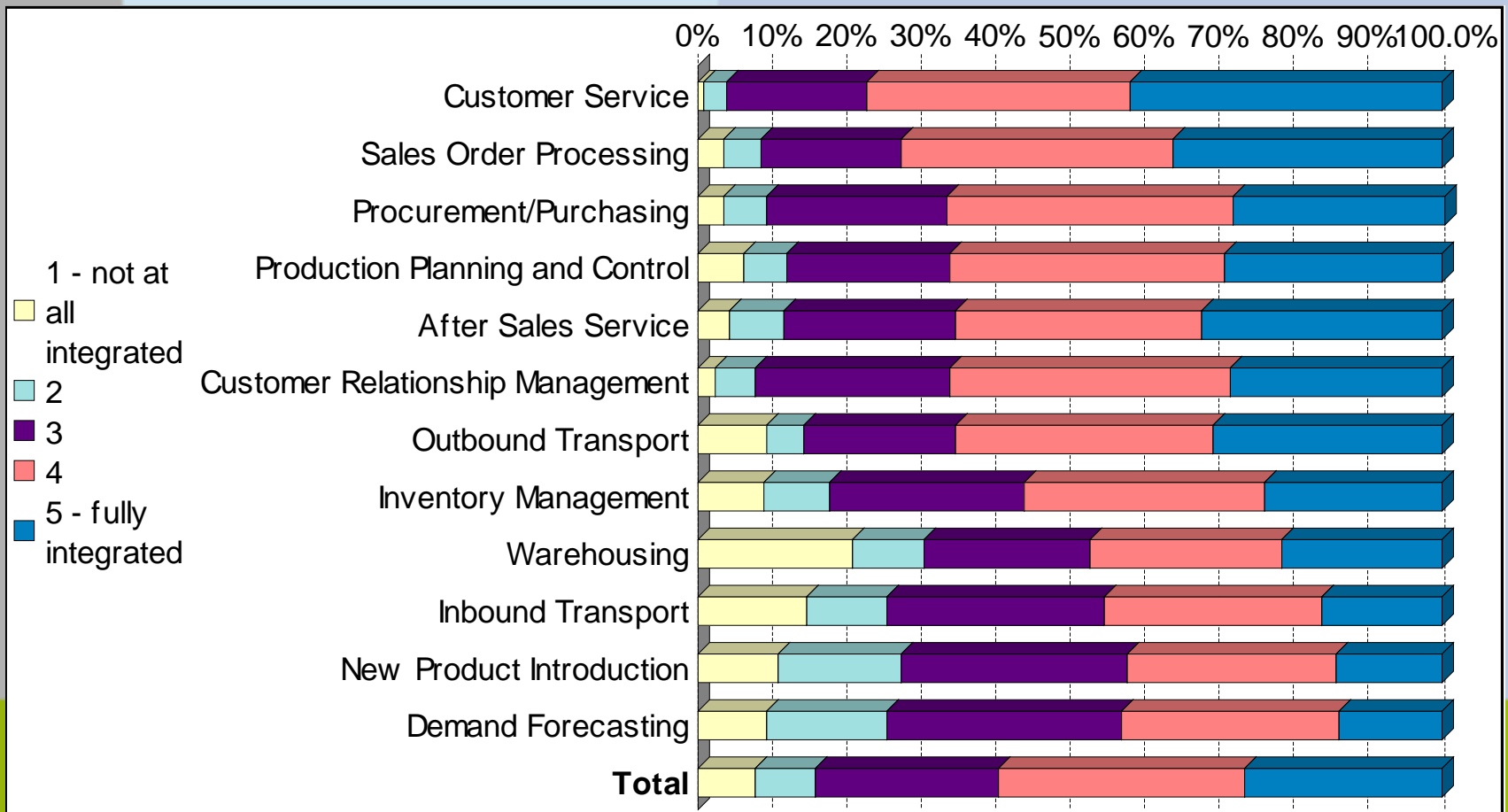
- ✓ 85% of the sample are small and medium size enterprises;
- ✓ 75% are indigenous firms;
- ✓ The food and consumer sector represents 25% of the total sample;
- ✓ Industrial products represent 47%;
- ✓ International services represent 25%.

| <u>Number of Employees by Firm</u> | <u>ROI Percent</u> | <u>NI Percent</u> | <u>Total Percent</u> |
|--|--------------------|-------------------|----------------------|
| Less than 10 | 13.6% | 29.3% | 18% |
| From 10 to 19 | 17.4% | 22.2% | 18.7% |
| From 20 to 49 | 24.9% | 17.5% | 22.8% |
| From 50 to 249 | 28.9% | 20.5% | 26.6% |
| 250 and more | 15.2% | 10.4% | 13.9% |
| <u>Company Ownership</u> | | | |
| Irish company | 69.6% | 87.5% | 74.6% |
| Subsidiary of company with HQ outside of Ireland | 27.3% | 12.1% | 23.1% |
| Semi-state/government/co-op | 2.7% | 0.3% | 2.1% |
| Other | 0.4% | 0% | 0.3% |
| <u>Business Sector</u> | | | |
| Food and Consumer | 25.5% | 24.9% | 25.3% |
| Industrial Products | 44.6% | 54.5% | 47.3% |
| (International) Services | 27.7% | 18.9% | 25.3% |
| Other | 2.2% | 1.7% | 2.1% |

Some Key Findings

- **Less than 57% measure customer service formally and those have very limited measurements**
- **Companies score low in relation to having the latest supply chain ICT and having them integrated across the supply chain**

Some Key Findings: integration of SCM activities



Some Key Findings

- **Less than 57% measure customer service formally and those have very limited measurements**
- **Companies score low in relation to having the latest supply chain ICT and having them integrated across the supply chain**
- **9% have a formal SCM position**
- **Few companies had clearly defined SCM KPI's (e.g. 59% of companies do not know their total supply chain costs)**

Some Key Findings

- Overall: SCM positively related to overall company performance
- Pockets of SCM excellence but much room for improvement
- Excellent or good SCM practice: <10%; Reasonable: ~30%; yet to establish SCM programme: ~60%
- Large MNC vs. Indigenous SME
- Future plans?

Some Barriers to SCM Excellence

- **Inefficiencies are often built into the supply chain**
- **Communication structures ineffective and exchange of information poor**
- **Culture inappropriate**
- **Excessive reliance on forecasting and stockholding**
- **Managing problems, rather than eliminating their causes**

Future Challenges

- Ireland moving into 2nd Generation SCM
- SCM moving “up the value hierarchy”
- Supply chain: becoming more virtual and international
- Need for robust supply chain design/re-engineering

Agenda

- ***NITL***
- **Introduction - What is SCM?**
- **SCM Excellence**
- **Diffusion of SCM in Ireland**
- ***Re-engineering Supply Chains***
- **Some Concluding Comments**

Re-engineering Supply Chains

- **Re-engineering = analysing + planning improvement + implementing improvement**
- **There is no “magic” solution**
- **Beware of copying inappropriate solutions**
- **BUT!**
- **There is a logical and systematic way of addressing the issue**

Understanding Customer Service

A diagram consisting of two white rectangular boxes with black outlines. The left box is shaped like an arrow pointing to the right. The right box is a simple rectangle. Both boxes contain blue text. The background is a light blue gradient with a green bar at the bottom.

**Market Driven
Customer
Service
Strategy**

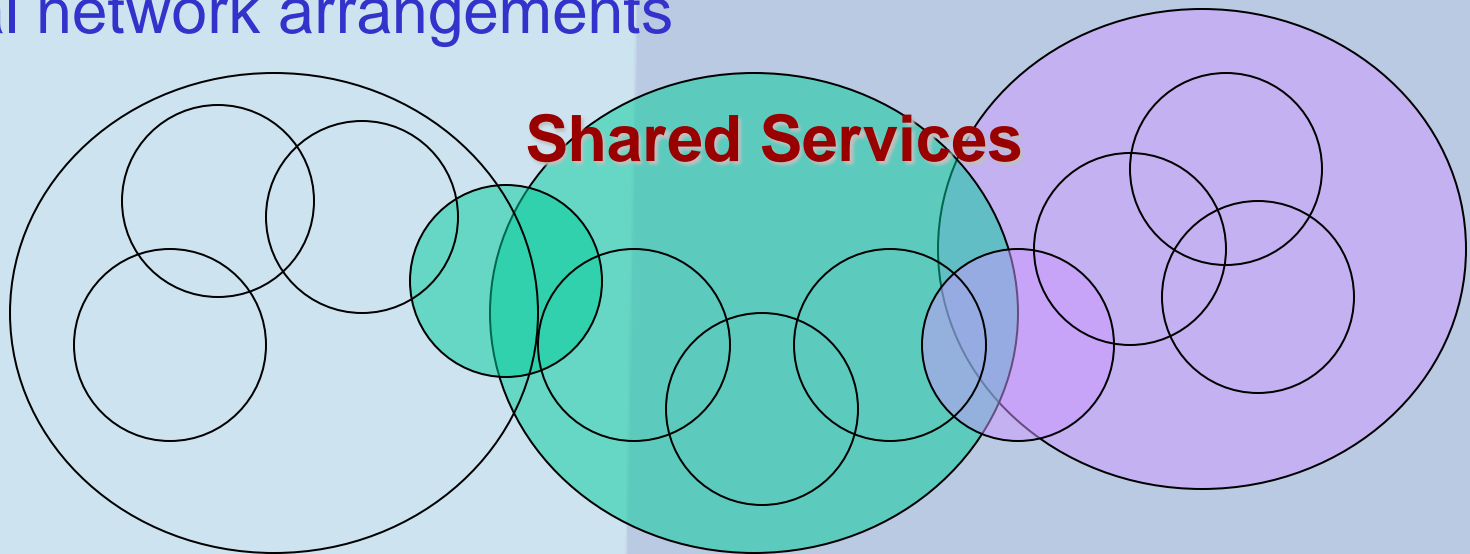
**Performance
Specification for
Integrated Supply
Chain Management**

The basis of effective re-engineering and change

Supply Chain Organisation

The organisational shape of the future?

Internal network arrangements



External network arrangements

Think process and effectiveness NOT function and efficiency

Technology: the great enabler?

- Key role as an integration enabler
- Piecemeal and tactical approach to integration and to IT/IS development
- Multiple standards, processes and platforms
 - Internally
 - Across the supply chain

Does IT Matter?

Information Enablers and Drivers

Most IT solutions are no longer likely to provide strategic advantage, but simply the business basics (*IT is imitable*)

The competitive advantage for companies will originate from developing creative information technology strategies and implementing them superbly

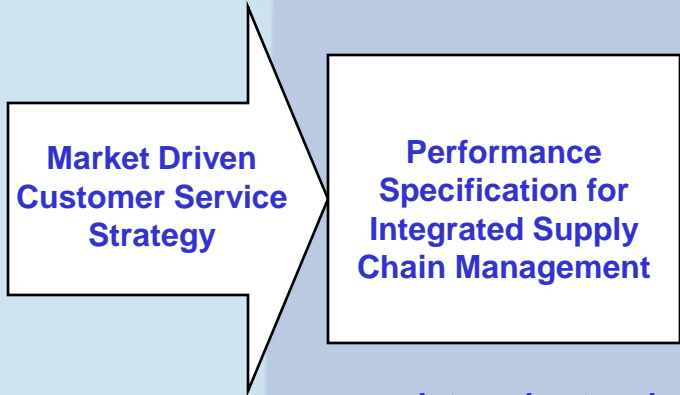
Focus on process and people NOT on systems and hardware

Supply Chain KPIs in World Class Companies

- relates to company strategy (and stakeholders)
- incorporates non-financial measures
- limit the number of measures
- measures change over time
- measures simple and easy to use
- fast feedback to staff
- “learning” experience

KPIs: the only rational basis for continuous improvement

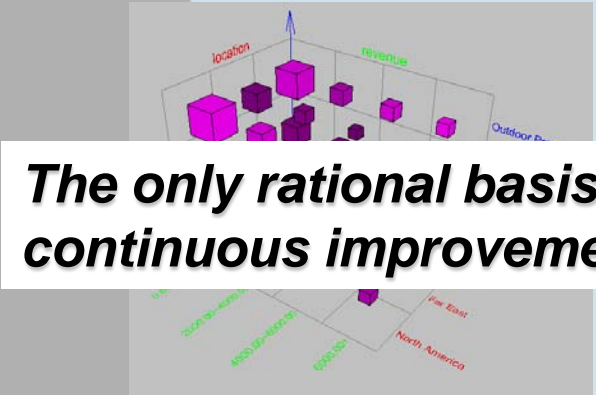
Towards A Supply Chain Re-engineering Roadmap



Internal network arrangements

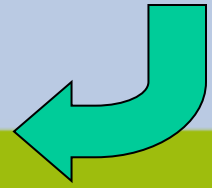
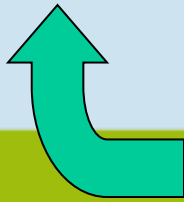


External network arrangements



The only rational basis for continuous improvement

Focus on process and people



Agenda

- **NITL**
- **Introduction - What is SCM?**
- **SCM Excellence**
- **Diffusion of SCM in Ireland**
- **Re-engineering Supply Chains**
- ***Some Concluding Comments***

Some Concluding Thoughts

- **Standing still = falling behind**
- **Innovation in all aspects is the key to survival**
- **Remember that most innovation is a series of small steps**
- **Re-engineering must focus on service delivery, integration, organisation and performance measurement**
- **People and learning are critical success factors**