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Supply Chain Management on the Island of Ireland: the role of the National Institute of Transport and Logistics

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Supply Chain Management on the Island of Ireland: the role of NITL

Presentation to Scottish Enterprise
February 2nd 2005

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Agenda

- NITL Origins and Background
- SCM Role in Ireland
- NITL Status in Ireland: The SCM Barometer
- NITL's Future Plans
- Discussion

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Agenda

- *NITL Origins and Background*
- **SCM Role in Ireland**
- **NITL Status in Ireland: The SCM Barometer**
- **NITL's Future Plans**
- **Discussion**

Origins of NITL

- Report “World Class to Serve the World”
- National Centre for Supply Chain Excellence
- Supported by the National Development Plan, managed through Enterprise Ireland, set up at the DIT
- Mission, Activities and Structure

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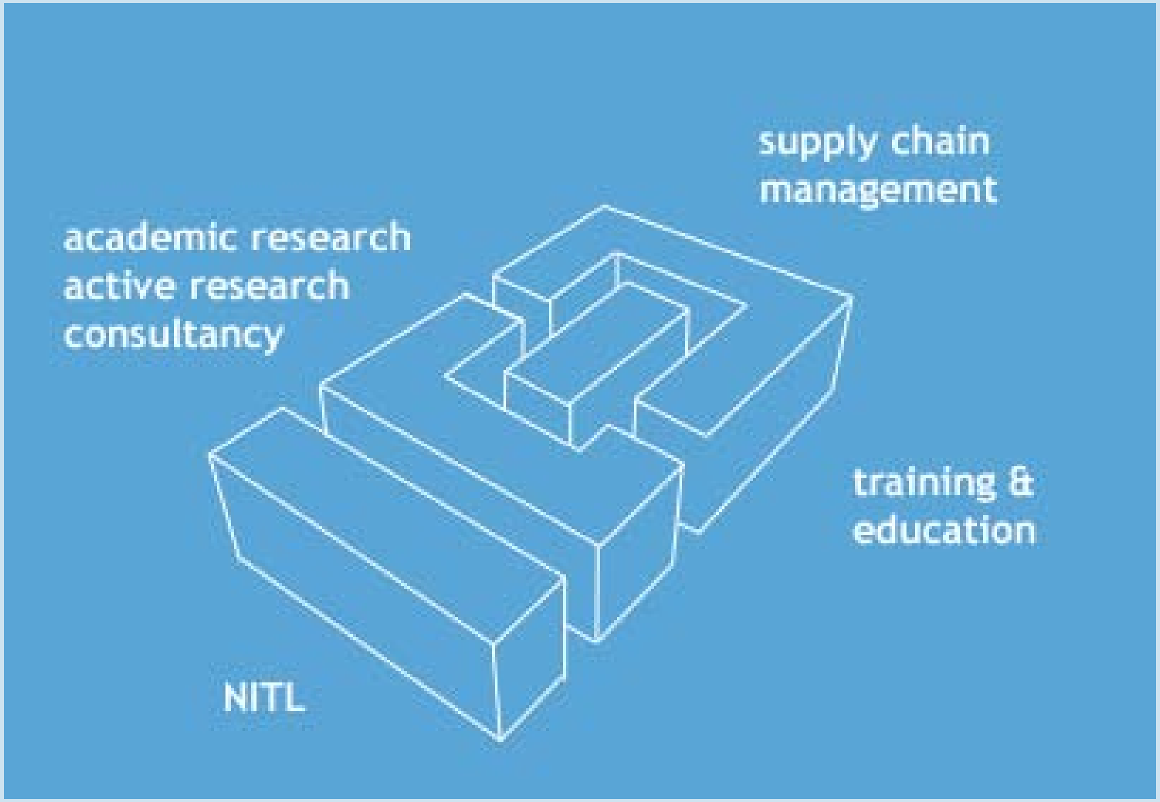
Mission Statement

NITL will support the achievement of competitive advantage in Irish organisations by creating a fundamental new resource for logistics and supply chain effectiveness.

NITL Structure / Activities



Industrial Interface

- All activites run in partnership with industry (*excellence with relevance*)
- Sectors represented include:

Electronics *Food and Drink*

Pharmaceutical and Medical Devices

Logistics Service Providers

Public Sector

- MNEs and Indigenous Firms

Agenda

- **NITL Origins and Background**
- ***SCM Role in Ireland***
- **NITL Status in Ireland: The SCM Barometer**
- **NITL's Future Plans**
- **Discussion**

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The Importance of SCM to Ireland's Future Economic Development

- 3 Key Value Adding Functions in Modern Business
  - New Product Introduction (including R&D)
  - Marketing (including brand management)
  - SCM
- Like NPI and Marketing, SCM is part of the knowledge based economy

Buy	Make	Store	Move	Sell
Global Sourcing	Access to Low Cost Manufacturing Worldwide	Need for Distribution Strategies to Exploit Global Market		Global Markets

Result: shift from national/regional to global configurations

The Importance of SCM to Ireland's Future Economic Development

- Open economy
- Geographic peripherality
- Additionally small companies can be a part of global supply chains
- Need for SCM awareness, capability and support is central
- Implicit in Enterprise Strategy Group "*Ahead of the Curve*" Report

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!***

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SCM Barometer: Background Information to Survey

A wide spread of companies participated in the survey.

297 responses from companies based in Northern Ireland (NI).

776 responses from companies based in the Republic of Ireland (ROI).

Approx. 38% of companies from the greater Dublin area.

Survey of 1073 Firms

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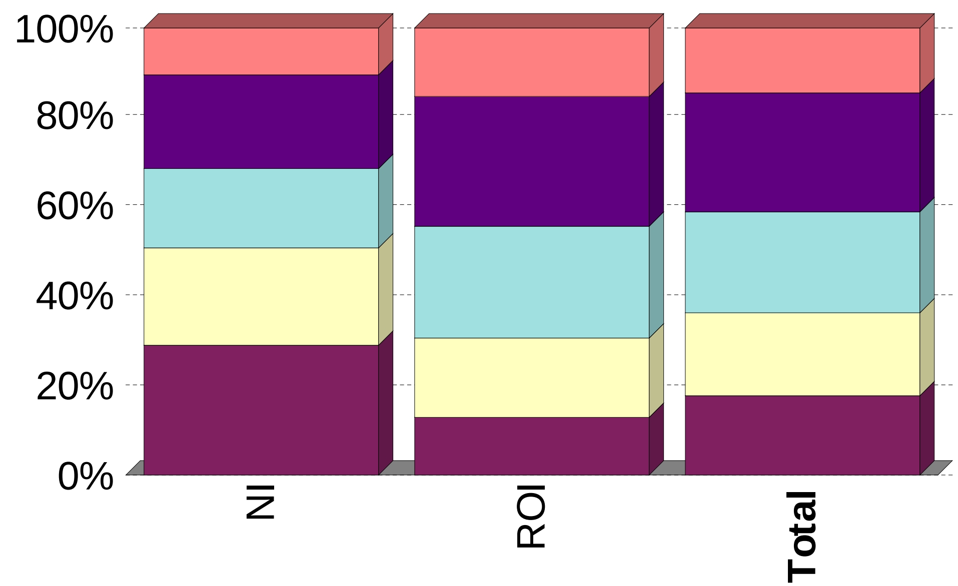
Profile of Respondents

	NI		ROI		**Total**	
	N	%	N	%	N	%
less than 10	**87**	**29.3%**	**105**	**13.6%**	**192**	**18.0%**
from 10 to 19	**66**	**22.2%**	**134**	**17.4%**	**200**	**18.7%**
from 20 to 49	**52**	**17.5%**	**192**	**24.9%**	**244**	**22.8%**
from 50 to 249	**61**	**20.5%**	**223**	**28.9%**	**284**	**26.6%**
250 and more	**31**	**10.4%**	**117**	**15.2%**	**148**	**13.9%**
Total	**297**	**100.0%**	**771**	**100.0%**	**1068**	**100.0%**



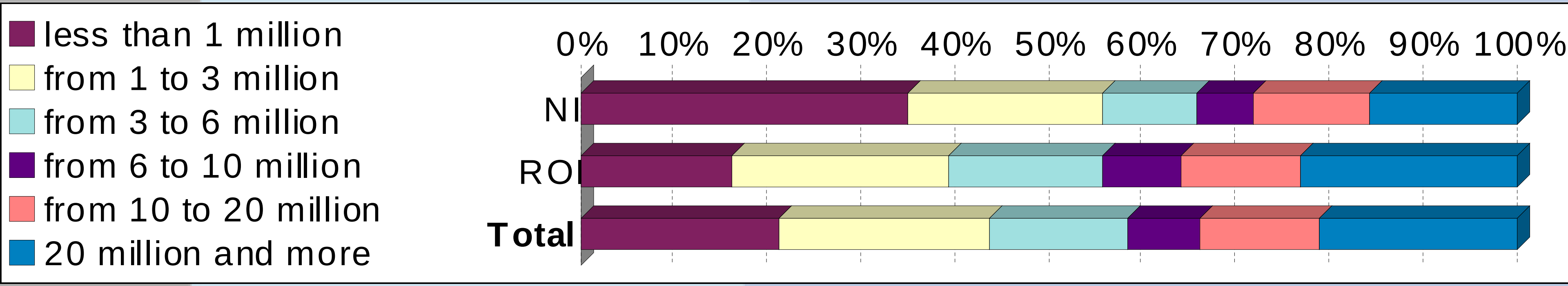
Average number of employees

NI respondents: 153

ROI respondents: 306

Profile of Respondents

Turnover of Respondents (in Euros)



Average turnover per company:

NI: 16,935,600 euros **ROI: 37,158,120 euros**

Average turnover per employee:

NI: 110,690 euros **ROI: 121,432 euros**

⇒ **SME's dominate**
⇒ **NI companies smaller**
⇒ **T/O per employee consistent**

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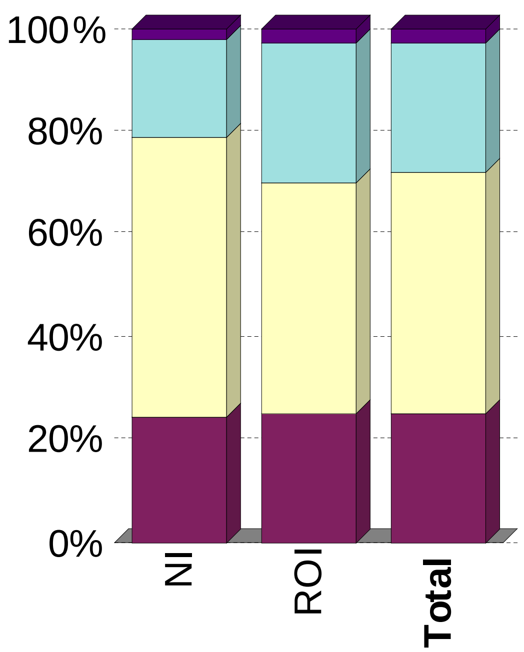
Profile of Respondents

Three Broad Sectors

NI vulnerable to moves to low cost manufacturing/ROI cushioned with services

	NI		ROI		**Total**	
	N	%	N	%	N	%
Food & Consumer	**74**	**24.9%**	**198**	**25.5%**	**272**	**25.3%**
Industrial Products	**162**	**54.5%**	**346**	**44.6%**	**508**	**47.3%**
International Services	**56**	**18.9%**	**215**	**27.7%**	**271**	**25.3%**
Other	**5**	**1.7%**	**17**	**2.2%**	**22**	**2.1%**
Total	**297**	**100.0%**	**776**	**100.0%**	**1073**	**100.0%**



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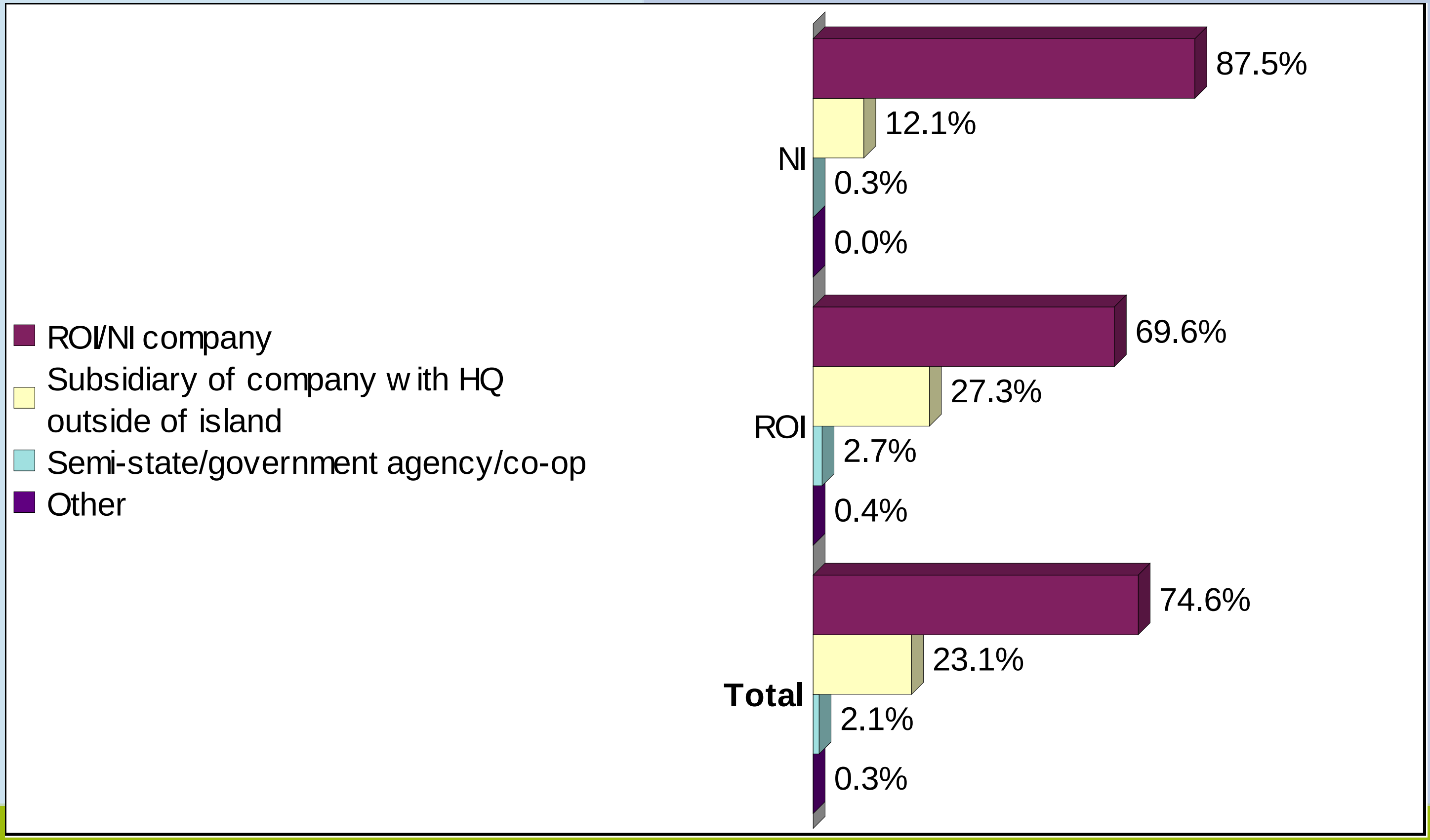
SCM Barometer

Factors impacting SCM

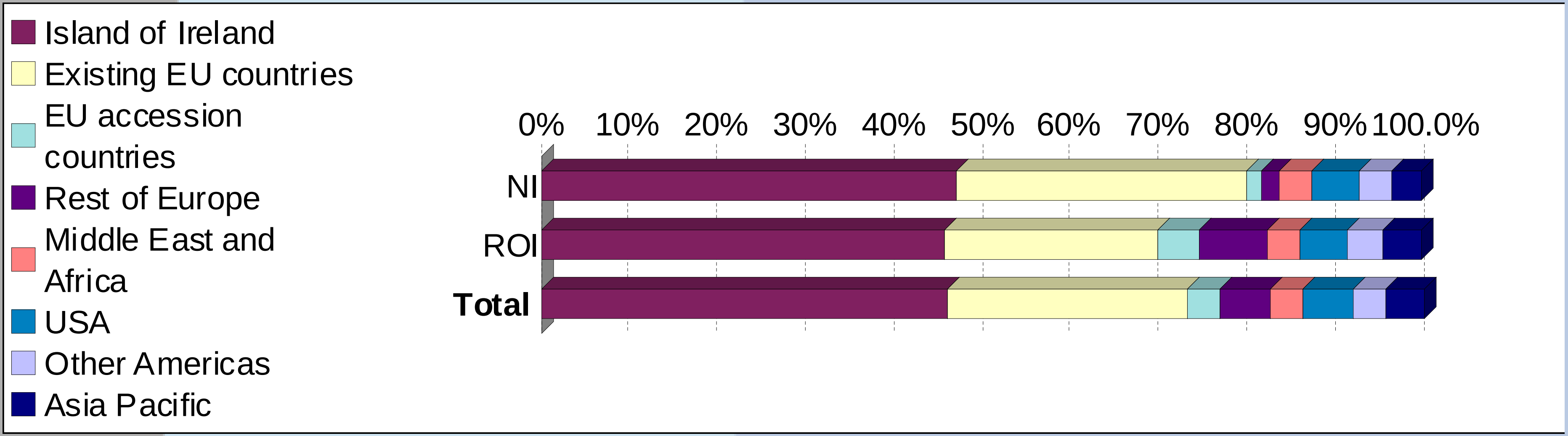
- Ownership
- Location of SC Partners
- Level of Exports
- Channels of Distribution
- Manufacturing Strategy
- Business Strategy
- Business and SCM Competitiveness Challenges

Company Ownership of Respondents



NI have fewer 'foreign' companies

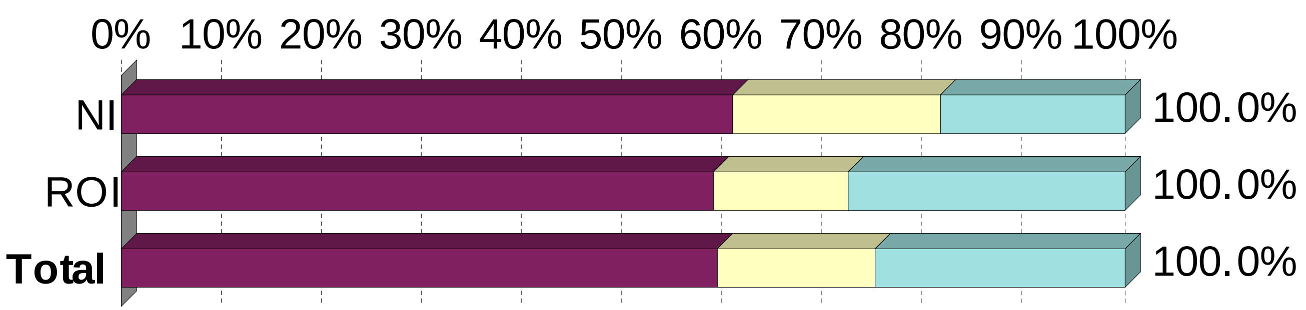
Location of SC Partners



ROI firms have wider spread of SC partners e.g. Non EU Europe and US – particularly true of indigenous companies

Exports

	less than 30% from export		30-69% from export		70% and more from export		Total	
	N	%	N	%	N	%	N	%
NI	**174**	**61.1%**	**59**	**20.7%**	**52**	**18.2%**	**285**	**100.0%**
ROI	**438**	**59.2%**	**99**	**13.4%**	**203**	**27.4%**	**740**	**100.0%**
Total	**612**	**59.7%**	**158**	**15.4%**	**255**	**24.9%**	**1025**	**100.0%**



⇒ **Exports are important to all companies, more so in ROI than NI**

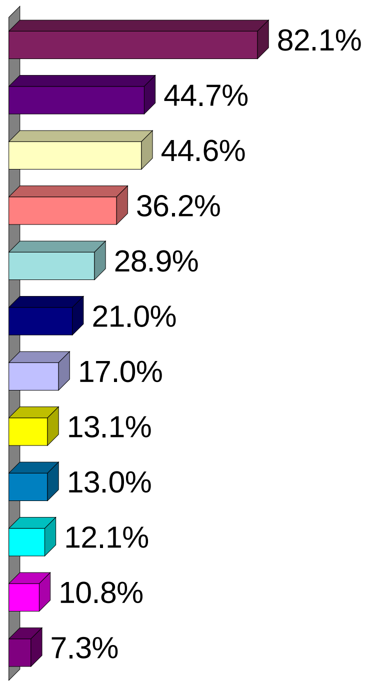
⇒ **Larger companies have larger level of exports**

⇒ **All sectors have similar export profile** nitl Supply Chain Management Centre of Excellence

Market Location

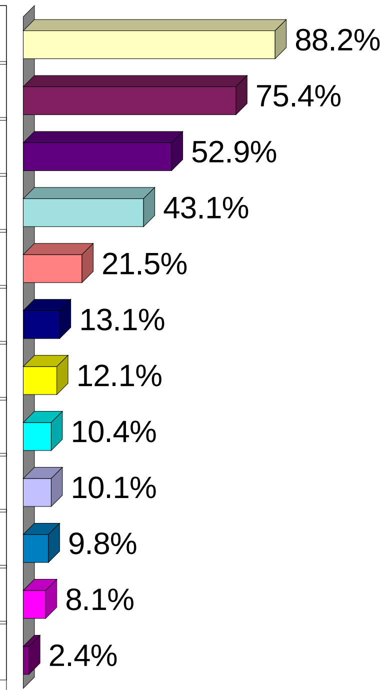
ROI respondents:

Republic of Ireland	637	82.1%
England and Wales	347	44.7%
Northern Ireland	346	44.6%
Other EU countries	281	36.2%
Scotland	224	28.9%
USA	163	21.0%
Rest of Europe	132	17.0%
Middle East and Africa	102	13.1%
EU accession countries	101	13.0%
Asia Pacific	94	12.1%
Other Americas	84	10.8%
Don't know	57	7.3%
Total	776	



NI respondents:

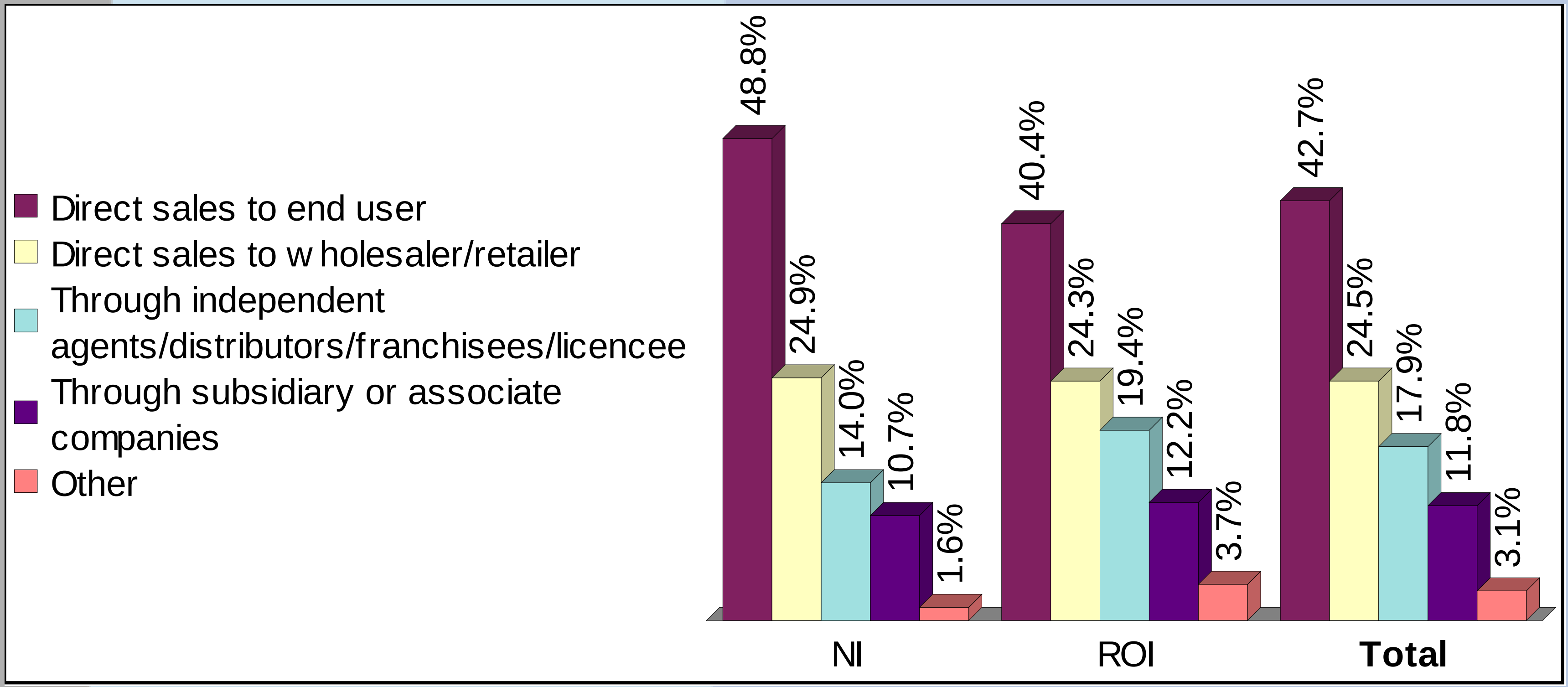
Northern Ireland	262	88.2%
Republic of Ireland	224	75.4%
England and Wales	157	52.9%
Scotland	128	43.1%
Other EU countries	64	21.5%
USA	39	13.1%
Middle East and Africa	36	12.1%
Asia Pacific	31	10.4%
Rest of Europe	30	10.1%
EU accession countries	29	9.8%
Other Americas	24	8.1%
Don't know	7	2.4%
Total	297	



⇒ **Importance of ROI and UK markets for NI**

⇒ **ROI companies in more global markets**

Channels of Distribution



⇒ **Direct to end user is demanding channel mainly for Industrial and Services**

⇒ **Wholesaler/retailer still dominant channel for Food and Consumer**

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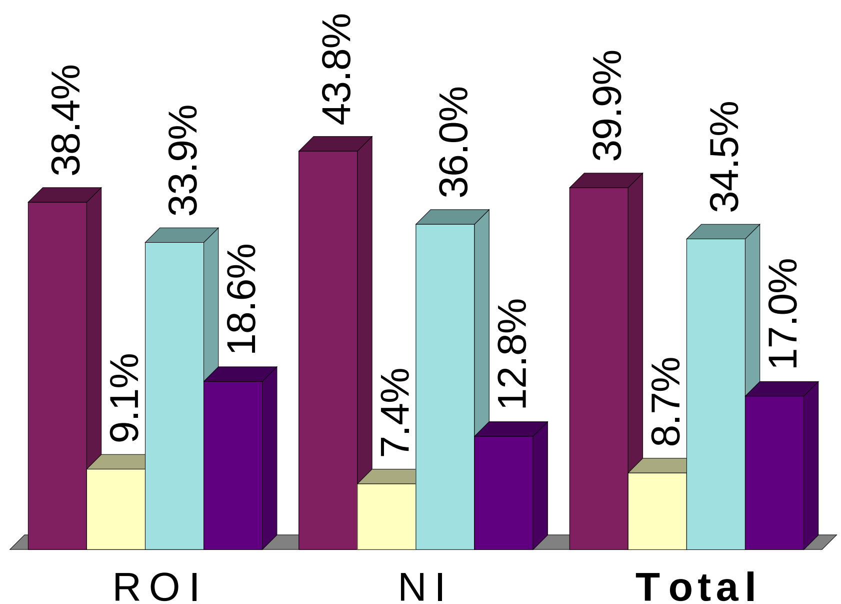
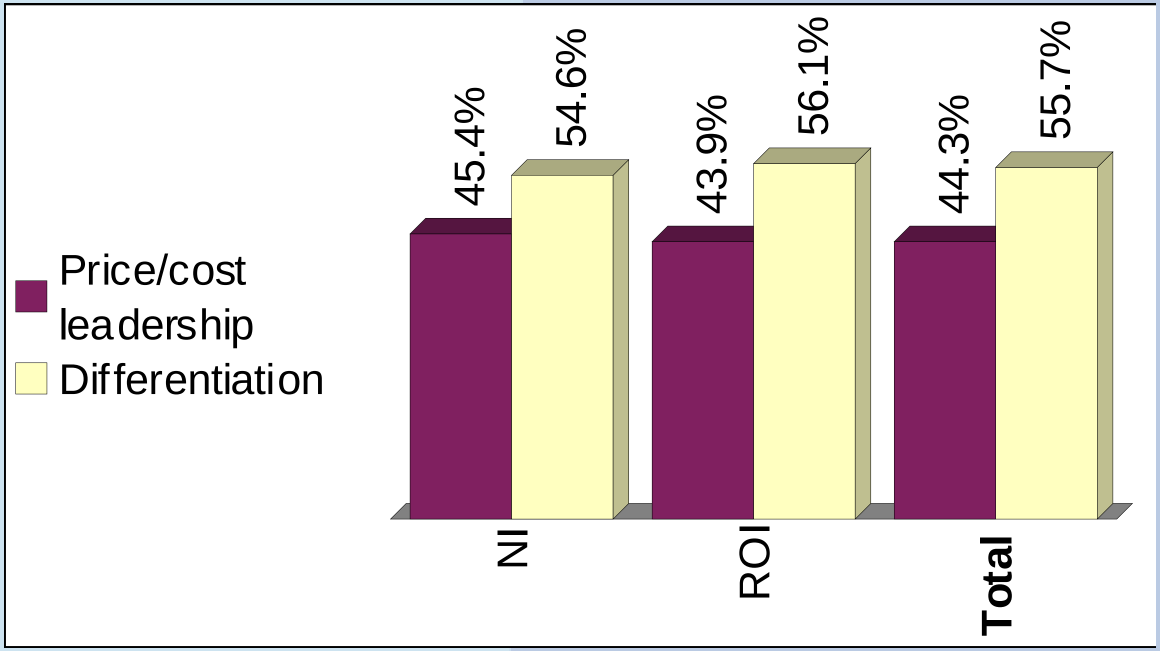
Manufacturing Strategy

‘Make to Order’ requires SC flexibility

	ROI		NI		Total	
	N	%	N	%	N	%
Made to order	298	38.4%	130	43.8%	428	39.9%
Made to stock	71	9.1%	22	7.4%	93	8.7%
Both	263	33.9%	107	36.0%	370	34.5%
Don't know	144	18.6%	38	12.8%	182	17.0%
Total	776	100.0%	297	100.0%	1073	100.0%



Corporate Strategy



⇒ **Balancing Price/Cost leadership with differentiation is one of the SC Challenges and it is no different between NI and ROI**

⇒ **However, larger NI firms are more concerned with differentiation and the industrial sector more concerned with cost issues**

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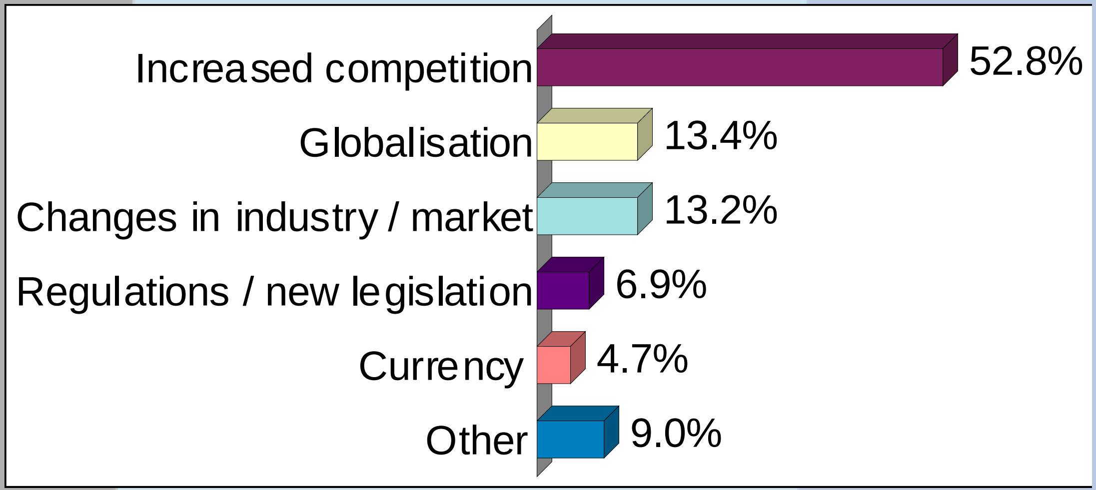
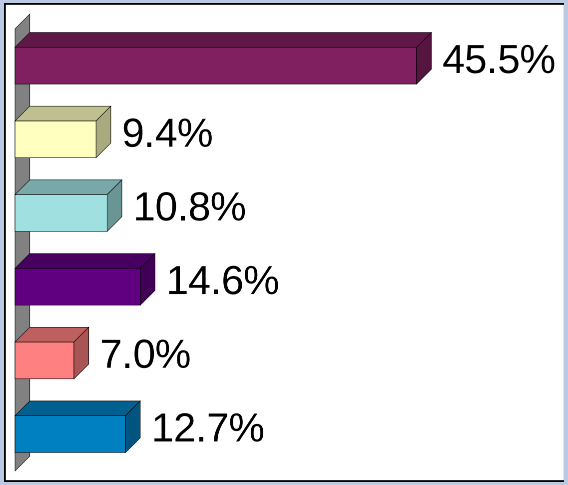
Business Challenges

ROI

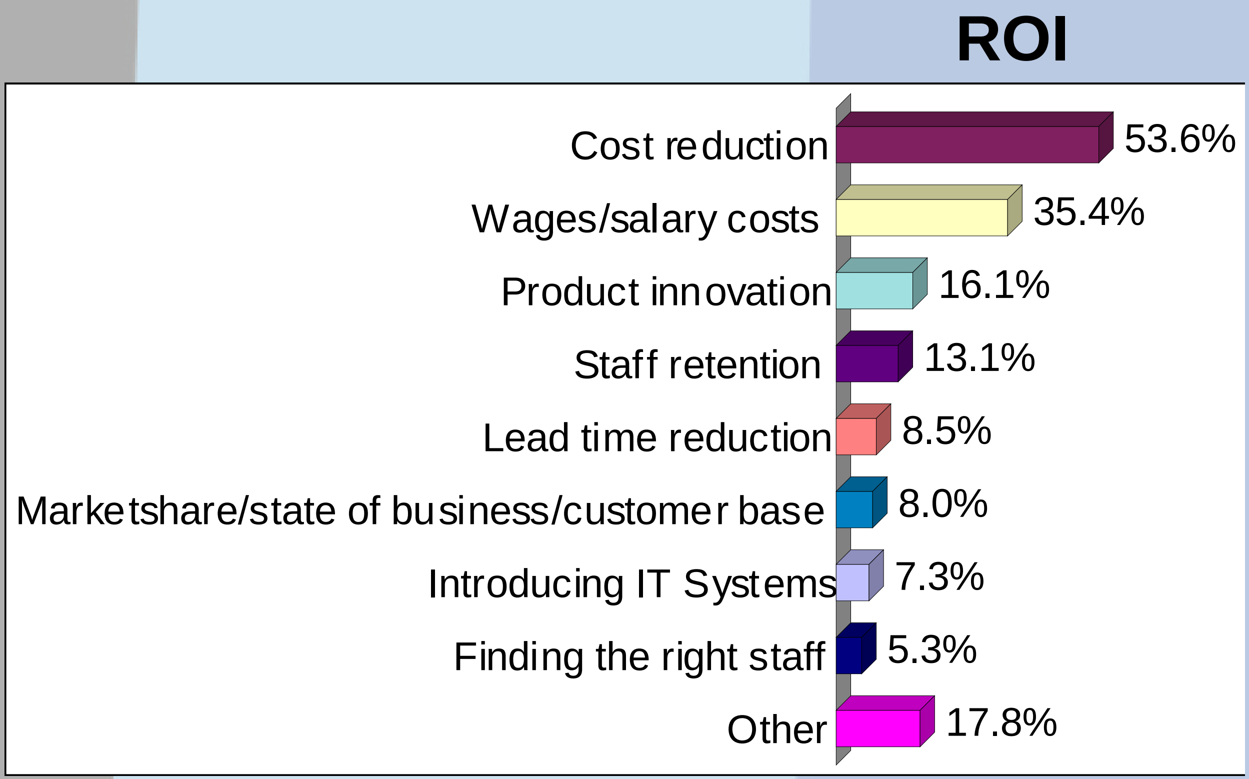


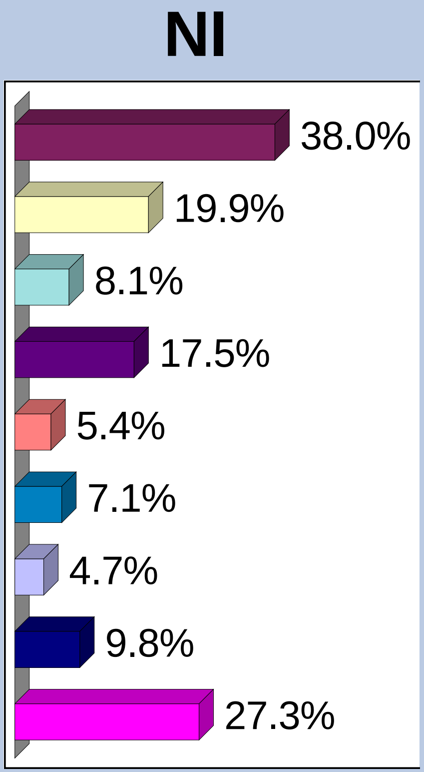
NI



Its about competitiveness with ROI finding it tougher

Supply Chain Challenges

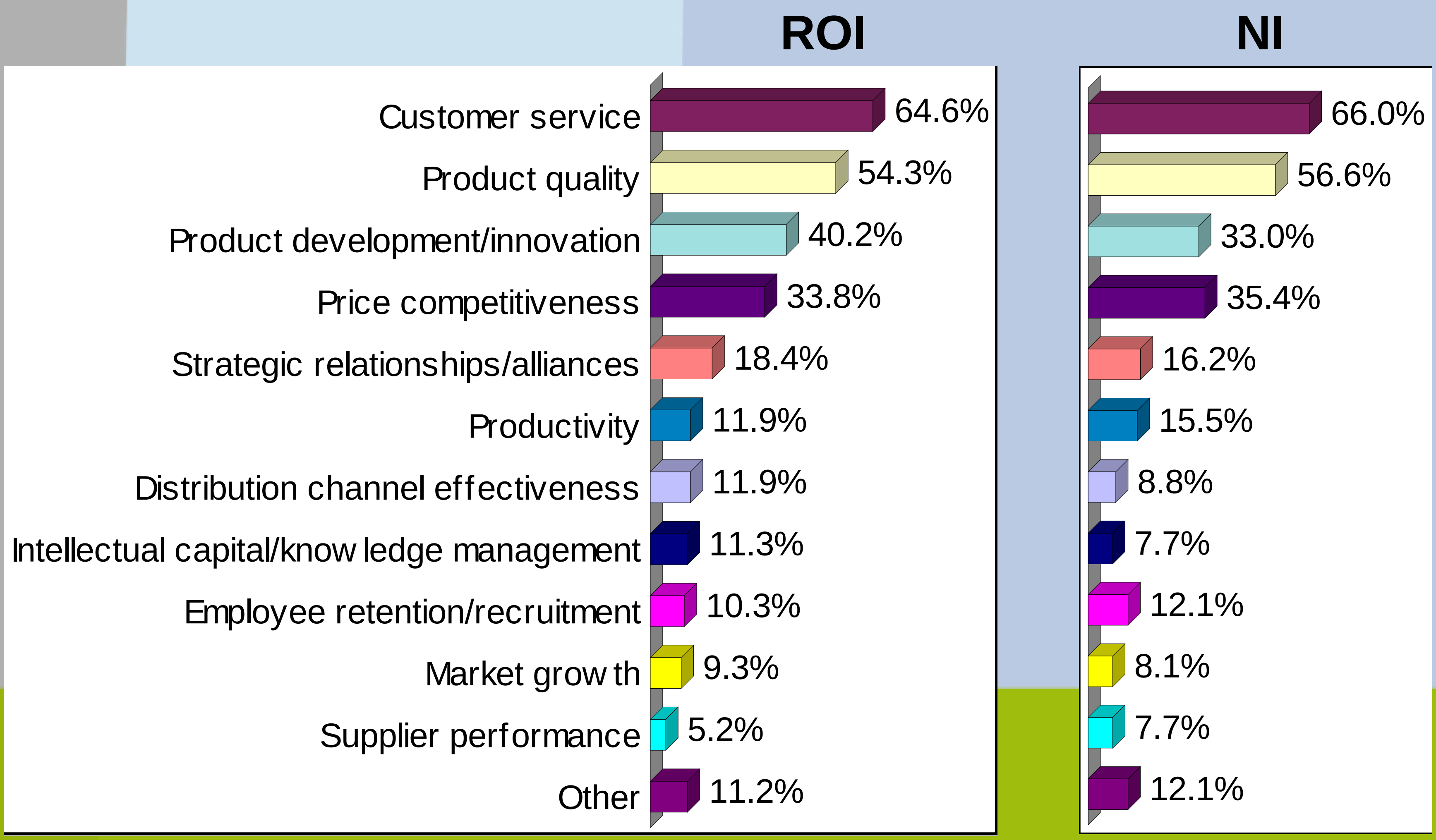




⇒ **Different challenges in ROI where costs are an issue**

⇒ **Same challenges across sectors**

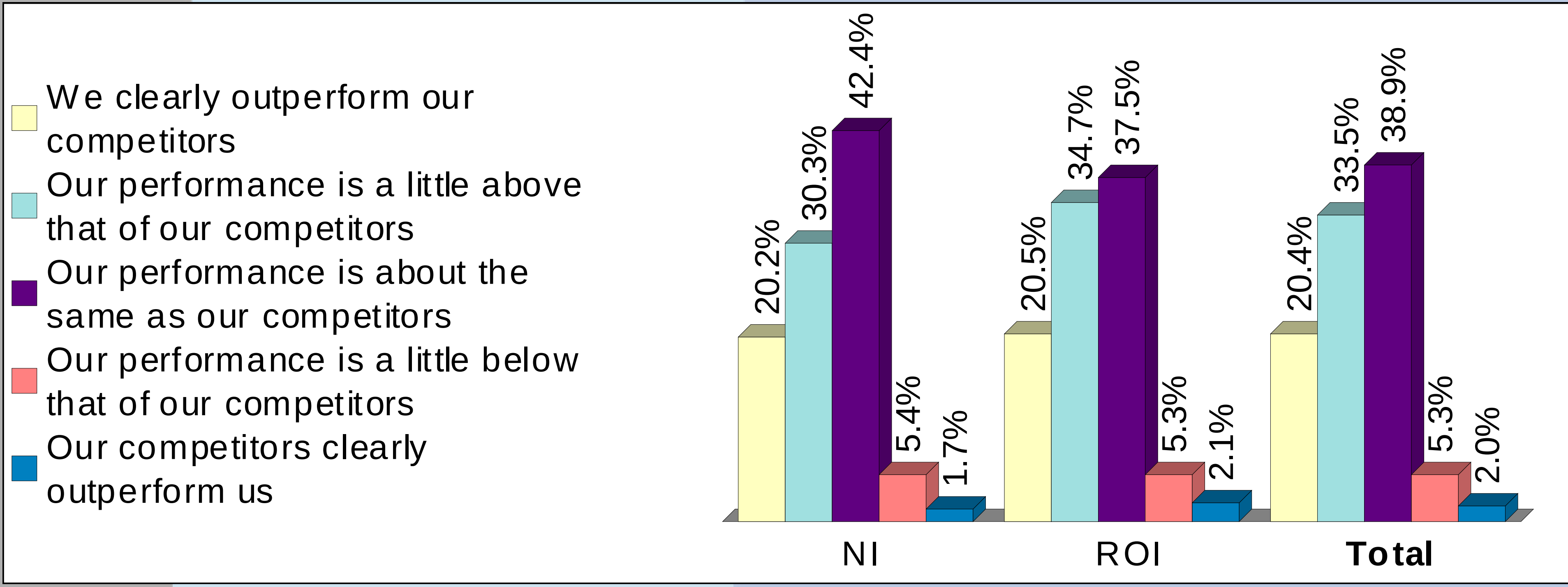
Competitiveness Issues



Competitiveness Issues

- ⇒ Consistent with global experience, Customer Service is more important than price and Customer Service is the output of the SCM process
- ⇒ Quality is now a given and therefore no longer the number 1 differentiator
- ⇒ Customer service even more important in Services sector

Competitiveness Issues



All companies admit there is room for improvement in competitiveness with smaller indigenous firms scoring lower than foreign owned.

SC Capability & Performance: Integration of SCM

Means on a scale from

1 = not at all integrated

to

5 = fully integrated

	ROI	NI	**Total**
Customer Relationship Management	**3.83**	**3.87**	**3.84**
Demand Forecasting	**3.26**	**3.14**	**3.23**
Sales Order Processing	**3.98**	**3.92**	**3.96**
Procurement/Purchasing	**3.79**	**3.90**	**3.82**
Inbound Transport	**3.26**	**3.10**	**3.21**
Warehousing	**3.23**	**3.05**	**3.18**
Production Planning and Control	**3.79**	**3.71**	**3.77**
Outbound Transport	**3.79**	**3.57**	**3.73**
After Sales Service	**3.80**	**3.87**	**3.82**
New Product Introduction	**3.18**	**3.20**	**3.18**
Customer Service	**4.13**	**4.16**	**4.14**

⇒ Average level of integration in most functions, with Forecasting, Warehousing, Inbound Transport less integrated.

⇒ No perceived differences between NI and ROI in relation to integration

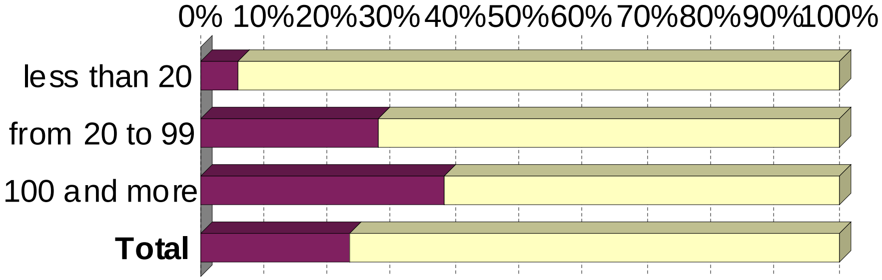
⇒ Larger and Foreign owned and Industrial sector slightly more integrated

SC Capability and Performance Integration of SCM

SCM Programmes

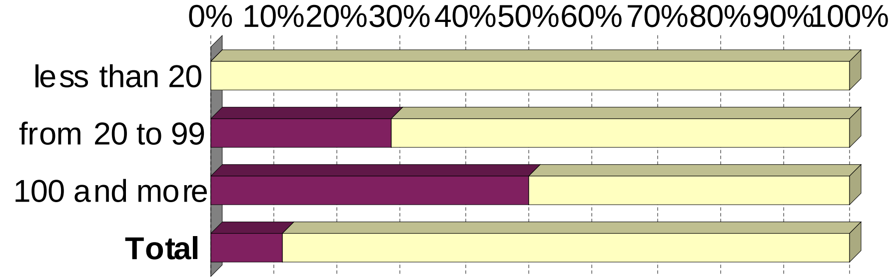
ROI

	Yes	No	Total
less than 20	**5.9%**	**94.1%**	**100.0%**
from 20 to 99	**28.0%**	**72.0%**	**100.0%**
100 and more	**38.5%**	**61.5%**	**100.0%**
Total	**23.6%**	**76.4%**	**100.0%**



NI

	Yes	No	Total
less than 20	**0.0%**	**100.0%**	**100.0%**
from 20 to 99	**28.6%**	**71.4%**	**100.0%**
100 and more	**50.0%**	**50.0%**	**100.0%**
Total	**11.4%**	**88.6%**	**100.0%**



19% companies have total SCM programmes (NI 11%, ROI 23%) with larger companies more active

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SC Capability and Performance: SCM Costs

Supply chain costs as a % of turnover	Percent NI	Percent ROI	Percent Total
0-9	20.0%	39.1%	31.6%
10-19	13.3%	13.0%	13.2%
20-29	6.7%	4.3%	5.3%
30-39	20.0%	0.0%	7.9%
40-49	6.7%	4.3%	5.3%
50-59	20.0%	13.0%	15.8%
60-69	6.7%	0.0%	2.6%
70-79	0.0%	4.3%	2.6%
80-89	0.0%	13.0%	7.9%
90-100	6.7%	8.7%	7.9%
TOTAL CIT.	100%	100%	100%

58% (NI 57% ROI 59%) did not analyse Total SC Costs

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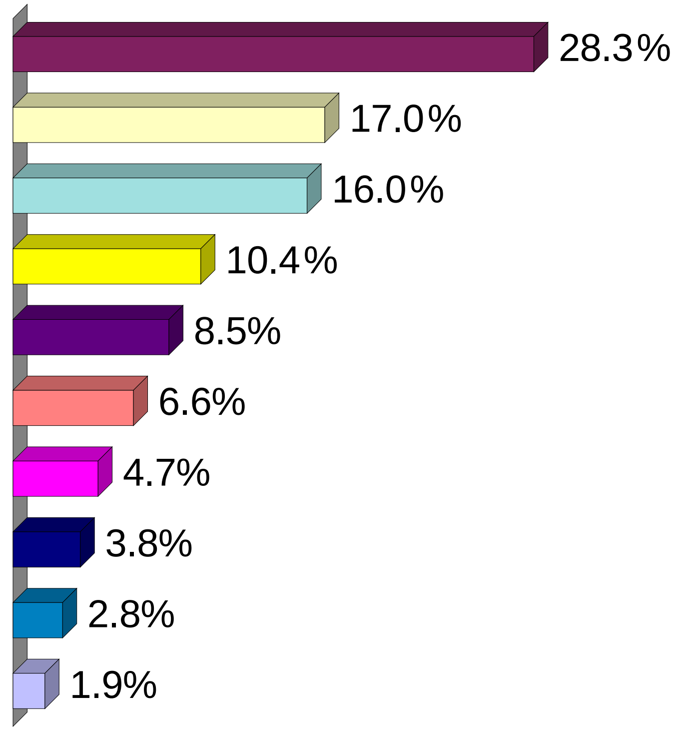
SC Capability and Performance: SCM Costs

Transport/freight/deliveries	**28.3%**
Labour/salaries/wages	**17.0%**
Materials	**16.0%**
Other	**10.4%**
Storage	**8.5%**
Inventory / stock	**6.6%**
Purchasing	**4.7%**
Production	**3.8%**
Admin	**2.8%**
Carriage in/out	**1.9%**
Total	**100.0%**



Transport is still seen as the major SC cost, but ‘its all over the place’ as % of T/O, reflecting lack of understanding of what SCM costs are.

SC Capability and Performance: Perceived Effectiveness of SCM

Means on a scale from

1 = not at all effective

to

5 = very effective

	ROI	NI	Total
Customer Relationship Management	4.07	4.13	4.09
Demand Forecasting	3.45	3.41	3.44
Sales Order Processing	4.10	4.04	4.08
Procurement/Purchasing	3.89	3.90	3.89
Production Planning and Control	3.90	3.83	3.88
Inventory Management	3.61	3.58	3.60
Warehousing Management	3.42	3.33	3.39
Transport Management	3.77	3.62	3.73
Quality	4.41	4.43	4.42
Product Development	3.65	3.52	3.61
After Sales Service	4.07	4.17	4.10
Customer Service	4.35	4.38	4.36

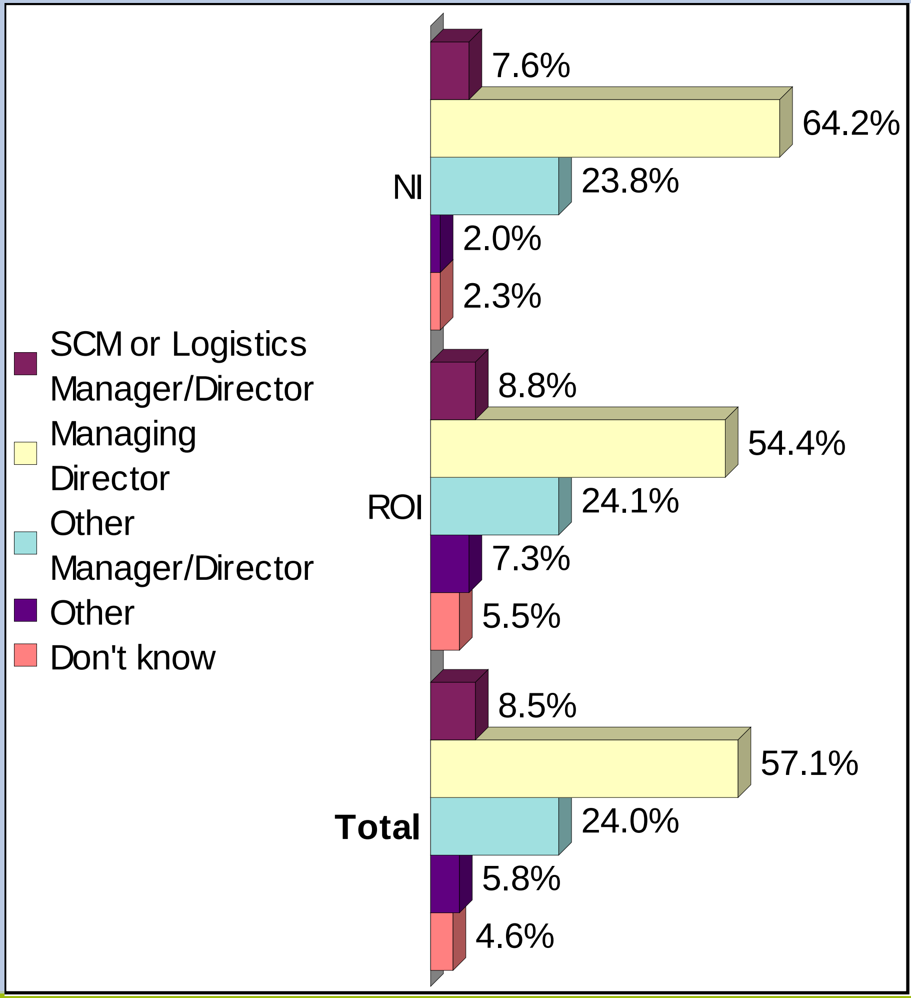
SCM activities are seen as important in both NI and ROI, even in small firms and all sectors

SC Capability and Performance:Responsibility for SCM

⇒ Only 8.5% of companies have specialist SCM function (NI 7.6%, ROI 8.8%). This is higher in foreign owned companies.

⇒ In most cases it is the MD who has responsibility for most SCM activities due to number of SME’s. This is significantly more pronounced in NI.

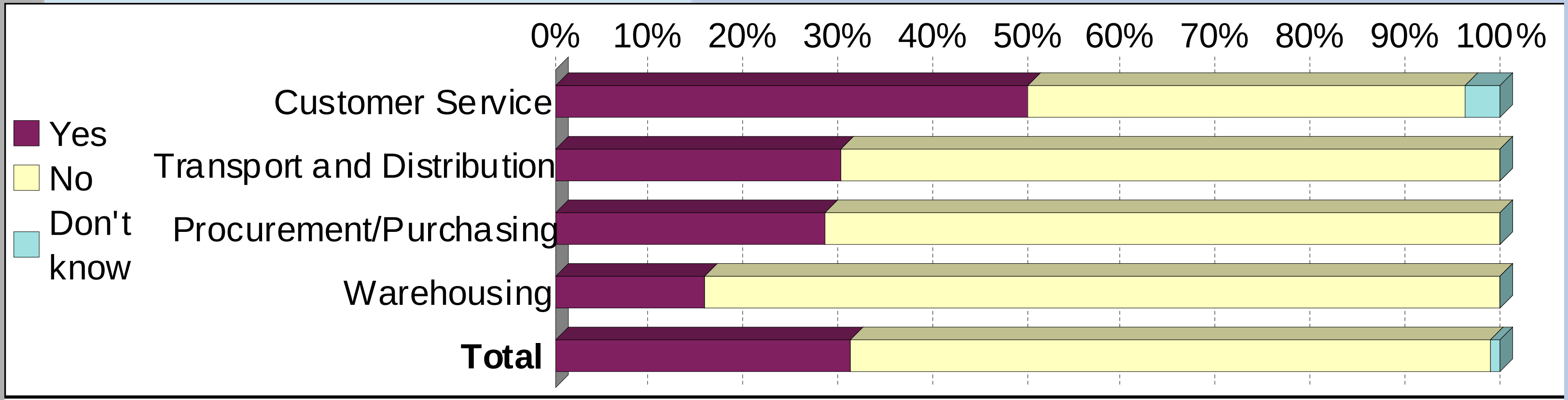
⇒ The traditional SCM activities e.g. procurement, transport and production planning have clearly defined reporting lines.



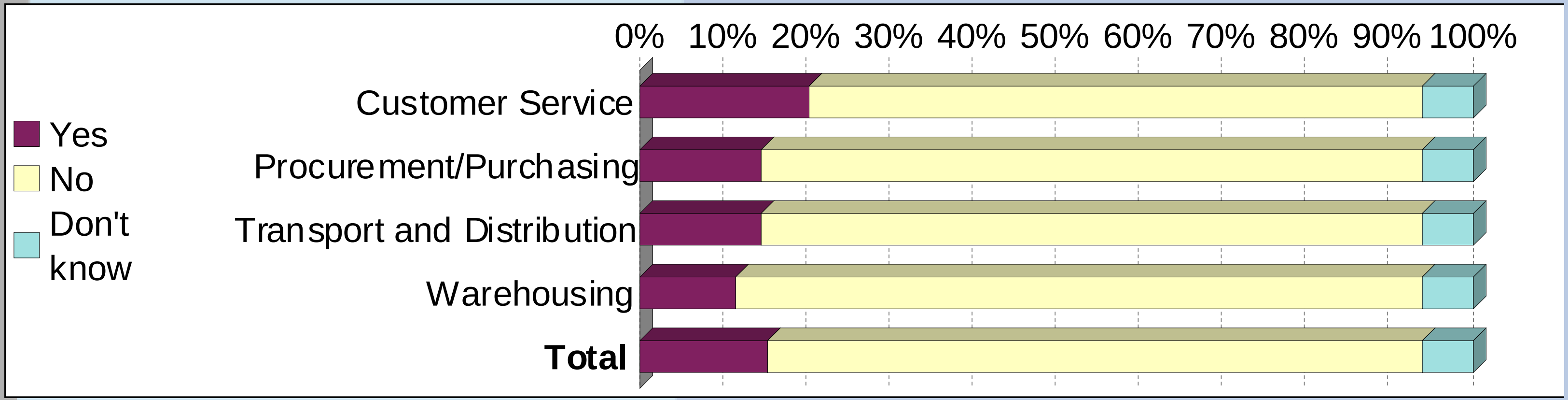
⇒ SCM activities such as inventory, forecasting, warehousing, responsibility is less clear.

SC Capability and Performance: SCM KPIs

ROI



NI



Level of establishment of SCM KPI's is low overall, and lower in NI than ROI

SC Capability and Performance: SCM IT Systems

Employment of Latest System Technology

Means on a scale from

1 = strongly disagree

to

5 = strongly agree

	ROI	NI	**Total**
Inventory Management	**3.36**	**2.64**	**3.08**
Production Planning	**3.09**	**2.42**	**2.83**
Procurement	**3.09**	**2.53**	**2.87**
Transportation	**3.04**	**2.19**	**2.71**
Warehousing	**2.77**	**2.31**	**2.59**
Forecasting	**3.14**	**2.36**	**2.84**
Sales Order processing/fulfilment	**3.57**	**3.08**	**3.38**

Less than 40% of companies agree they are using the latest IT technology for SCM with NI companies scoring lower than ROI.

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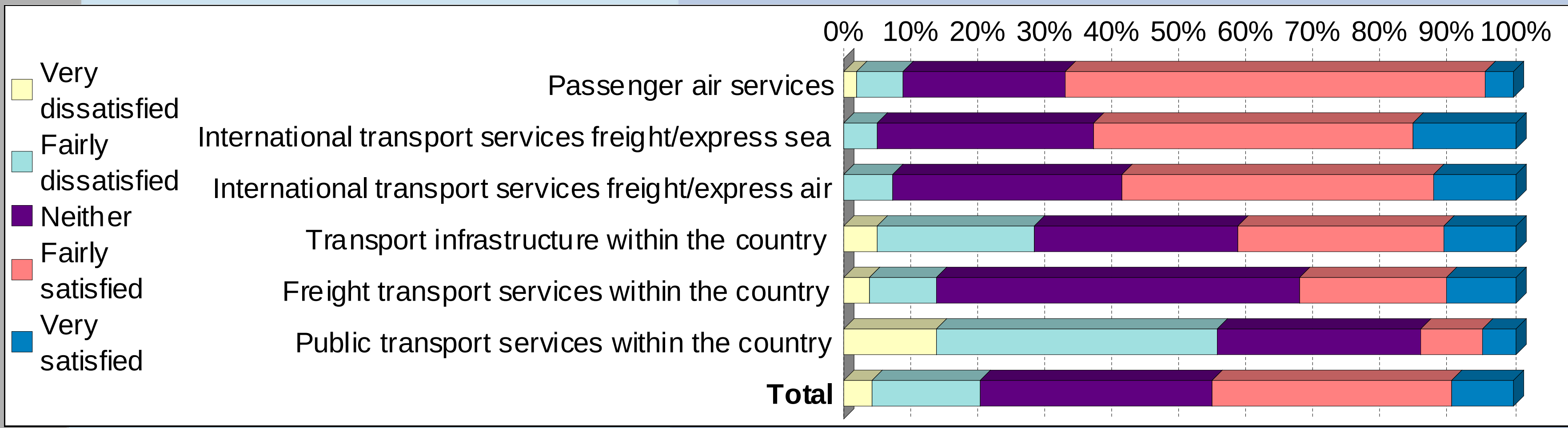
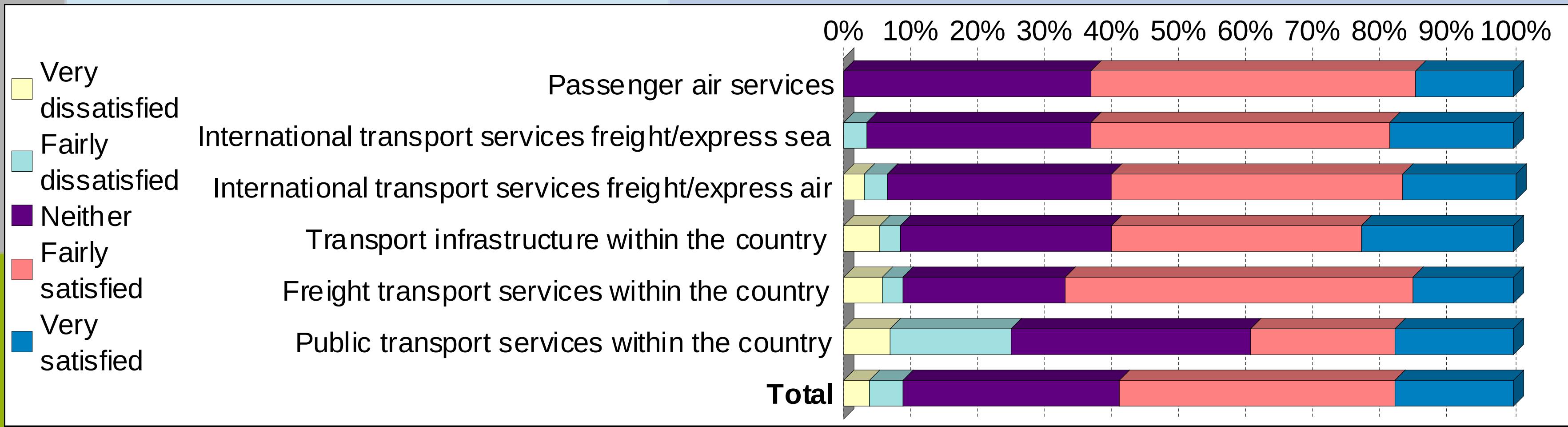
SCM Activities: Satisfaction with Transport Services

ROI



NI



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SCM Activities: Satisfaction with Transport Services

⇒ On average neither satisfied nor dissatisfied. ROI less satisfied with Public Transport and Freight Services than NI.

⇒ In relation to air carriers, NI companies less happy with availability, fares and punctuality than ROI.

SCM Activities: Satisfaction with Transport Services

⇒ **35% of companies (ROI 45%; NI 10%) specified that transport infrastructure was constraining their business**

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Yes
No

Food & Consumer

Industrial Products

International Services

Total

⇒ **More of a problem for Food Sector**

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SCM Activities: Transport Costs, Modes & Performance

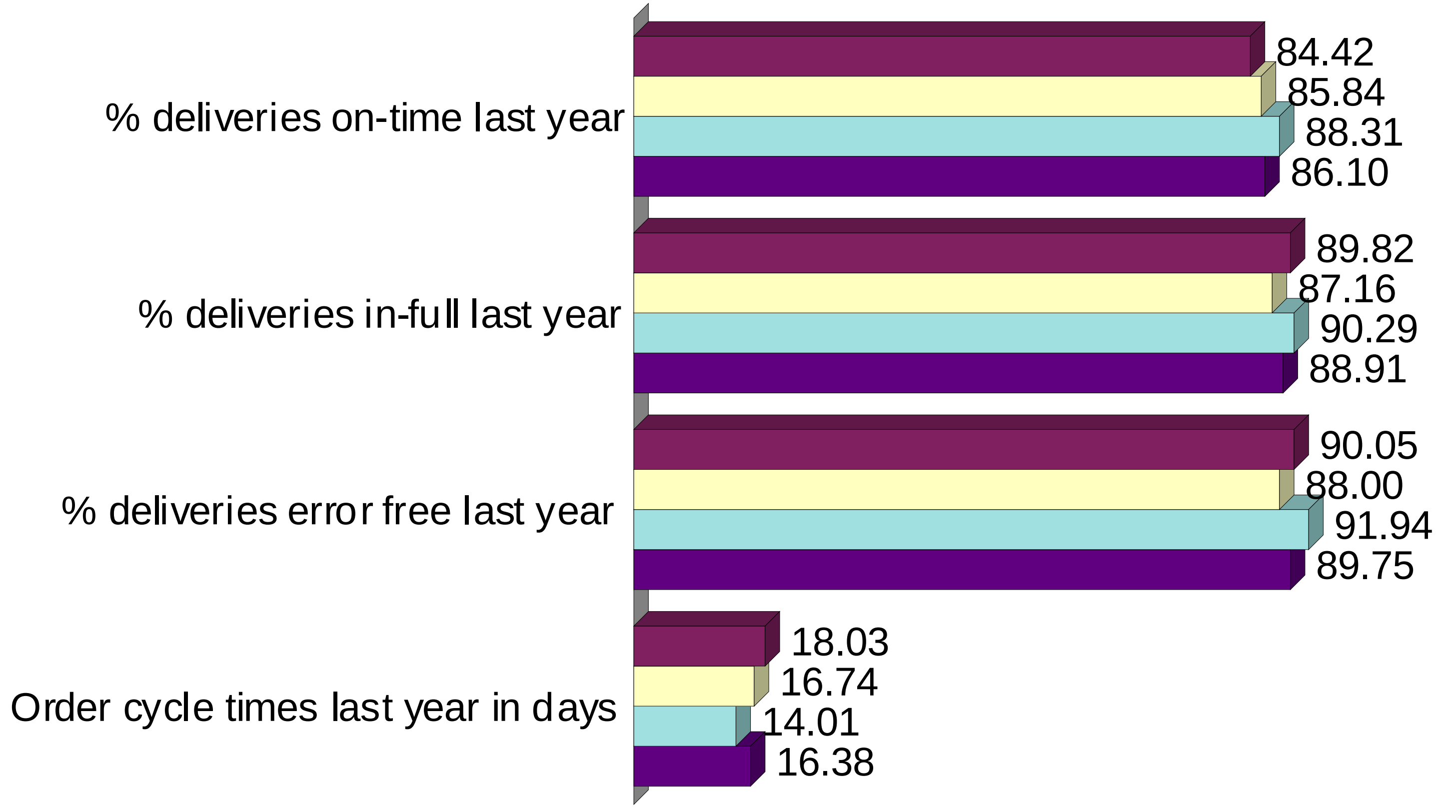
Mode	Percentage (by volume) of goods transported by NI companies	Percentage (by volume) of goods transported by ROI companies	Total percentage (by volume) of goods transported
Rail	0.03%	0.7%	0.4%
Road	83.4%	75.2%	78.3%
Air	6.5%	3.1%	4.4%
Sea	10.2%	16.8%	14.3%

- 52% of companies did not know their transport costs (NI 69%; ROI 41%)

- Transport costs on average 7% of turnover (NI 7%; ROI 7%) but sector dependent

SCM Activities: Transport Costs, Modes & Performance

	less than 20	from 20 to 99	100 and more	**Total**
% deliveries on-time last year	**84.42**	**85.84**	**88.31**	**86.10**
% deliveries in-full last year	**89.82**	**87.16**	**90.29**	**88.91**
% deliveries error free last year	**90.05**	**88.00**	**91.94**	**89.75**
Order cycle times last year in days	**18.03**	**16.74**	**14.01**	**16.38**



Other SCM Activities

Survey contains information on:

- Warehousing
- Inventory
  - Obsolete
  - Out of stocks
  - Turns
- Supplier relations and evaluation
- Customer service
- Forecasting
- KPI’s for each activity

How Do Irish Companies Measure Up?

- Approximately 50% measure customer service formally and those have very limited measurements
- Companies score low in relation to having the latest supply chain IT and having them integrated across the supply chain
- Less than 10% have a formal SCM position
- Few companies had clearly defined SCM KPI’s

(Source: NITL Supply Chain Barometer, 2004)

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NITL’s Programme to Date

NITL has:

- Increased awareness of SCM (e.g. Conference, Roadshows, Logistics Solutions, Presentations at major academic and industry events, Media)
  - SCM is a used (and abused) term
- Assisted companies implement SCM
  - NITL has practical experience of implementing SCM
  - Undertaken over 80 SCM consulting projects for over 50 companies
  - Support tools (e.g. fact sheets, self-audit packs, directories)
  - Benchmarking Clubs
- Carried out research on a variety of transport, logistics and SCM issues

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NITL's Programme to Date (cont.)

NITL has:

- **Increased understanding of SCM through Learning programmes**

Programme	Leading to
Foundation Certificate Programme	Post-Experience Certificate
SCM Development Programme	Post-Experience Cert/Diploma
Graduate Development Programme	M.Sc.
Fellowship Programme	M.Phil.
Research Studies	M.Phil./Ph.D.
In-house Learning	Certified Continuing Professional Development
Senior Executive Programme	
Short Courses	

PLUS

FAS Supply Chain Logistics National Traineeship

DIT B.Sc. In Transport and Logistics

NITL Market Share
(Based on Data from ROI Firms)

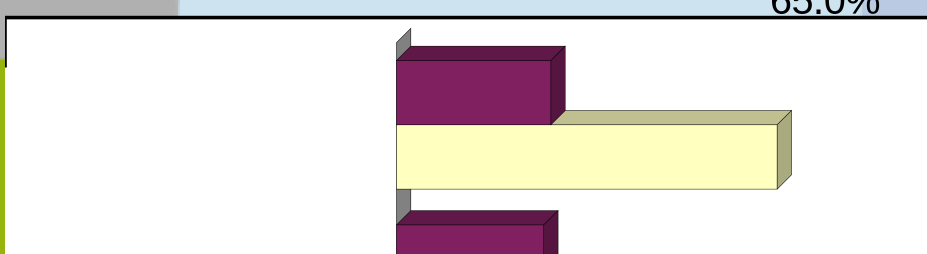
- 51% of ROI companies have heard about NITL.

- 8.5% have attended the conference ‘Logistics Ireland’ so far (5.4% of Irish companies and 15.9% of multinational firms).

NITL Contribution to SCM Development

Awareness of NITL Learning Programmes

By Number of Employees



By Company Ownership

	Irish Company	Subsidiary of Company with HQ outside of Ireland
Yes	**27.5%**	**45.5%**
No	**72.5%**	**54.5%**

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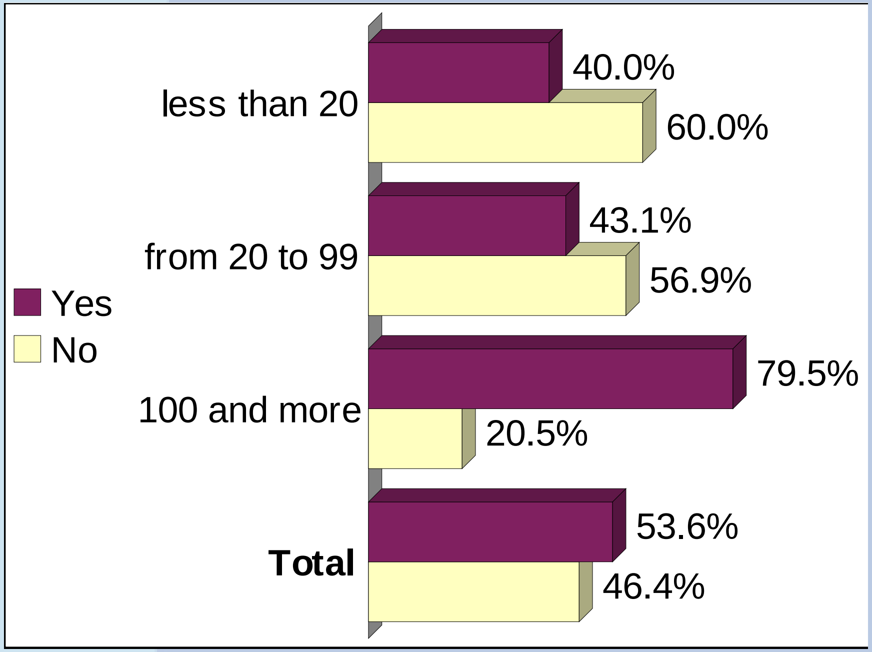
NITL Contribution to SCM Development

Awareness of Logistics Solutions

61% of ROI companies have received the publication 'Logistics Solutions'. 54% stated that this publication is **relevant** to their companies.

Relevance by firm size (number of employees)



85% of those companies that have received 'Logistics Solutions' specified an **increase of awareness in supply chain management**.

NITL's Future Plans

Addressing the Challenge to Broaden Impact

- Undertake SCM Sector Studies to identify policy/intervention opportunities
  - Map and benchmark the sector supply chain and identify SCM improvement opportunities
  - For example: Horticulture-developing a central distribution operation; Fish farming- developing central sales, marketing and distribution operation; Saw Milling-reviewing capacity issues, single supplier, product rationalisation; Specialist Food-developing affordable route to market through consolidation; Clothing Sector-outsourcing and related management and IT skills.
- Create Knowledge Resource
  - Case study material
  - SCM software reviews
  - Services Directory
  - Literature

Agenda

- **NITL Origins and Background**
- **SCM Role in Ireland**
- **NITL Status in Ireland: The SCM Barometer**
- **NITL's Future Plans**
- ***Discussion***

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