



# Supply chain challenges for transport



**Working Party on Transport  
Trends and Economics,  
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# Trends affecting transport

- Globalization and Global Supply Chain Management
- Trade liberalization – Facilitation – Security
- Technical and technological changes
- Changing role and scope of the public sector
- Environmental awareness - growing responsibility for sustainable development

# Supply chains - Transport - Competitiveness

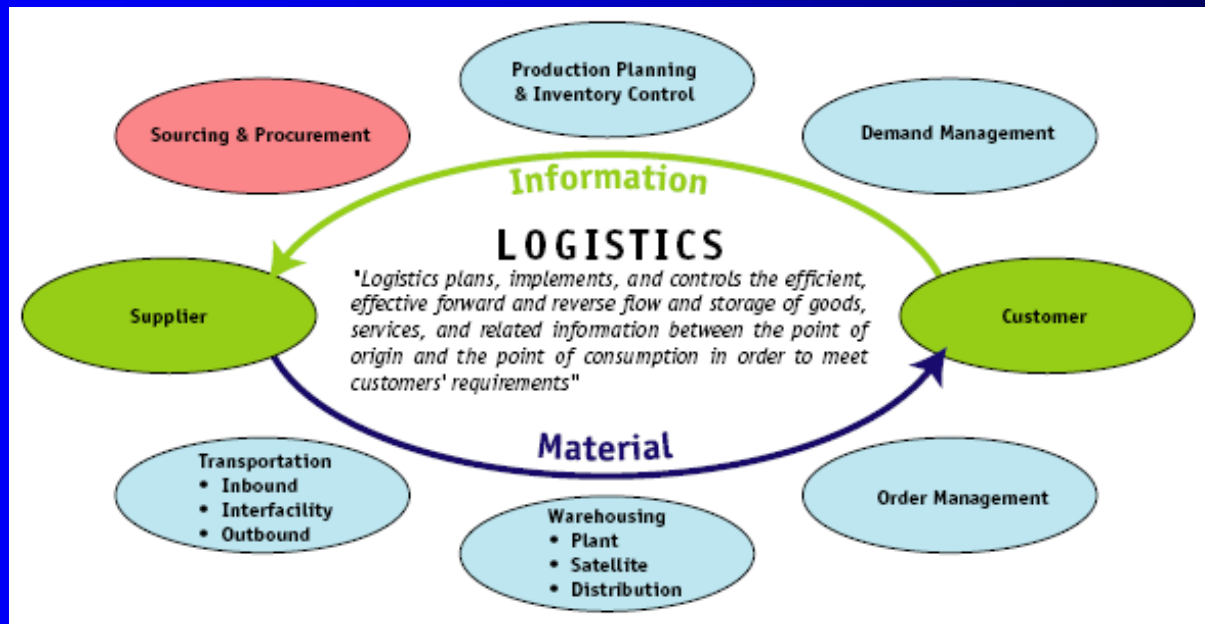
- Globalization is putting increased pressure in the organization of supply chain
- Specialization, utilization of superior resources, and economies of scale in production and distribution are important
- All depend on **efficient freight movement** to be successful
- Freight movement is fundamental to the functioning and **competitiveness** of a modern economy

# What is logistics?

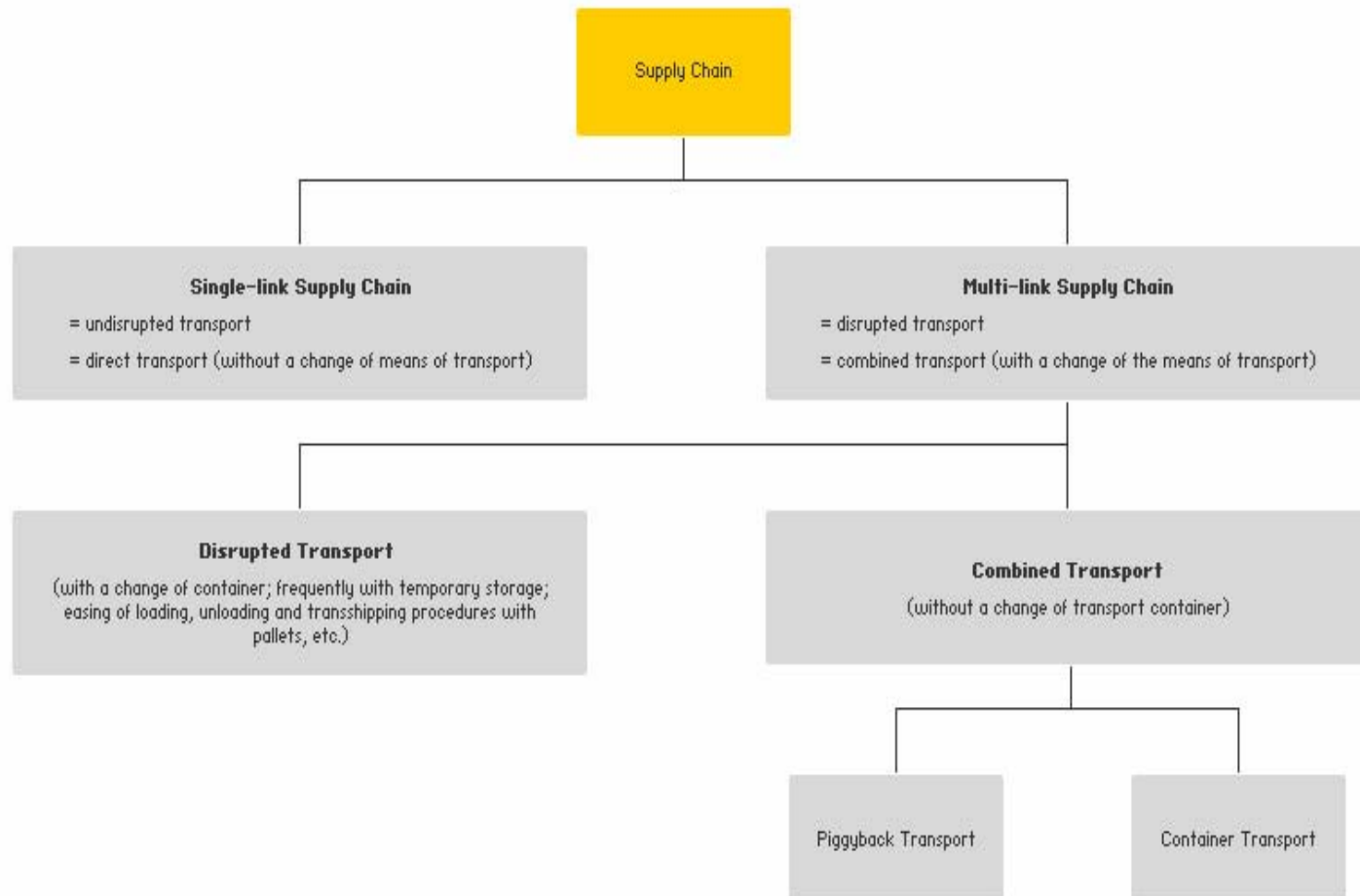
There are several ways to view logistics: input/output view, supply chain view, geographic view, regional economy view

To some logistics is limited to **transport management** to others it might be as broad as **supply chain management**

The Council of Supply Chain Management Professionals (CSCMP) definition:



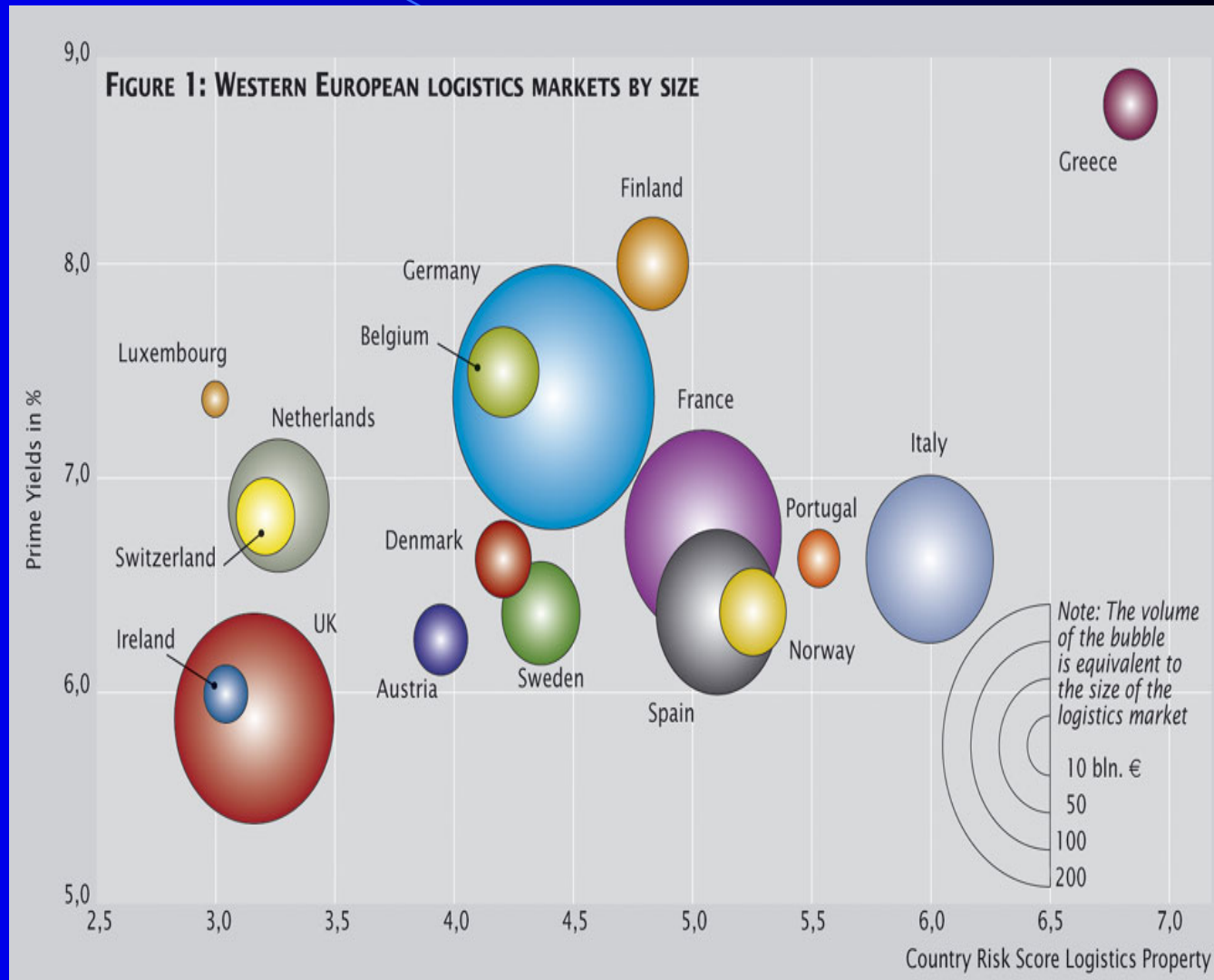
# Supply chain



# Volume of logistics sector

- Logistics market has grown steadily in the last 10 years
- Driving factors of logistics development:
  - trade liberalization
  - technological changes
  - increased possibilities for communication and IT solutions
  - increased efficiency of transport operations
  - increased standardization of processes

⇒ integration of supply chains on the world scale





# Economic significance of logistics

- Logistics sector is estimated at 14% of the global GDP;
- European logistics expenditures are estimated at about 1000 billion € per year;
- Logistics costs are typically 10-15% of final product costs;
- Direct transport costs are around 25% of all logistics costs;

Country	GDP in US\$m	Logistics in US\$m	% of GDP
Mexico	334,726	49,753	14.9
Ireland	67,392	9,611	14.2
Singapore	94,063	13,074	13.9
Hong Kong	153,068	20,992	13.7
Germany	2,352,472	306,264	13.0
Taiwan	273,440	35,686	13.0
Denmark	174,237	22,440	12.8
Portugal	101,182	12,871	12.7
Canada	585,105	70,191	12.0
Japan	4,599,706	522,982	11.3
Netherlands	392,550	44,495	11.3
Italy	1,214,272	137,027	11.2
UK	1,151,348	122,344	10.6
US	7,576,100	795,265	10.5

# Traditional methodologies and tools

- Transport statistics and a variety of indicators:
  - modal indicators (length of roads, railways, etc.)
  - capacity indicators (number and carrying capacity of vehicles, trucks, trains, etc.)
  - performance indicators (pkm and tkm, train km., etc.)
  - environmental indicators (emission, noise, energy consumption, etc.)
- They have certain strengths but also weaknesses:
  - statistical analysis and reliability, historical data, harmonized among countries, based on objective information,
  - lack of quality of service measures, not demand driven, partially capture the role of transport in supply chains, static as they do not capture developments and dynamic changes in markets

**Can they still be useful for assessment of transport sector's role in supply chains and contribution to national competitiveness?**



# International and national initiatives

- To capture the new role of transport in supply chains,
- Awareness of transport sector importance for overall national competitiveness

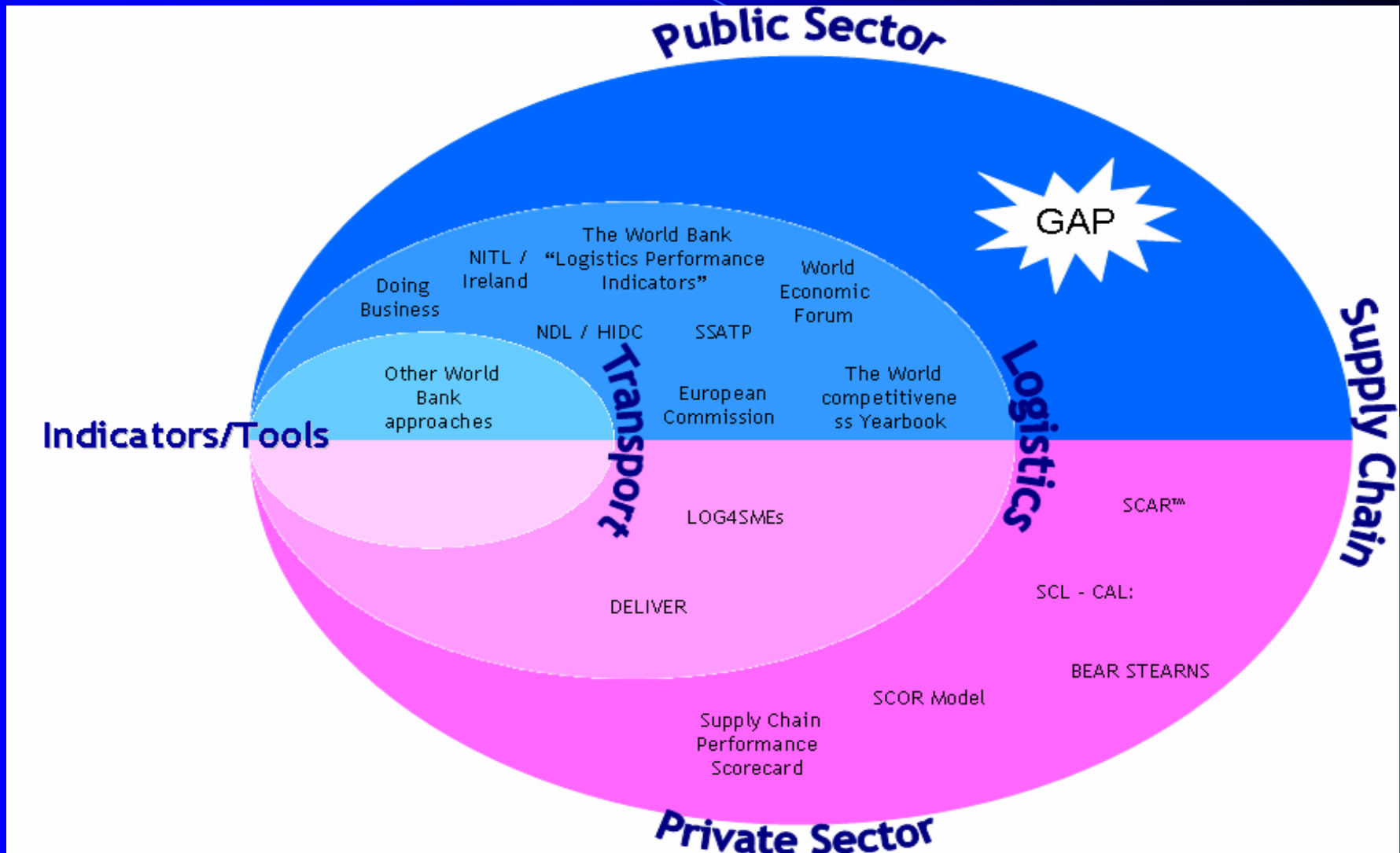
## International initiatives

- The World Bank - Logistics Performance Index
- The World Bank – Doing business
- The World Economic Forum – Global Competitiveness Index
- European Commission – a core set of generic indicators to measure and record performance in freight logistics
- IMD Lausanne – the World Competitiveness Yearbook

## National

Canada, Finland, Germany, Ireland, United States

# Gap analysis



# Goal

- The Sofia Ministerial ITF meeting in 2007:
  - “Better indicators definition, data collection and monitoring is indispensable for tracking progress towards improving the reliability of transport system performance” ....., and... “Like the Global Competitiveness index published by the World Economic Forum, Transport Ministers could launch the Global Logistics indicators as a benchmark for transport competitiveness”
- Re-positioning of the image of transport
  - as part of the global trade
  - important indicator for the level of development and competitiveness
- Reflect the technological, commercial and regulatory changes governing transport
- Develop methodology

# S.W.O.T analysis of different initiatives

## Strengths

- Preliminary database of definitions and data
- Dispersion of indicators and focus
- Numerous indicators developed
- Transport considered as integral part of logistics services

## Weaknesses

- Lack of harmonized definitions, terminology, and methodologies
- Special needs of land locked countries not taken into account
- No results based on use of different modes of transport
- Transport is evaluated either as an isolated sector of the economy or lumped with logistics services
- No evaluation of transport's role as part of the global supply chain, or of transport's contribution to national competitiveness
- Particular regional characteristics , the socio-economic factors of each country, etc. not taken into account and do not provide reliable basis for analysis and benchmarking,

# S.W.O.T analysis of different initiatives

## Opportunities

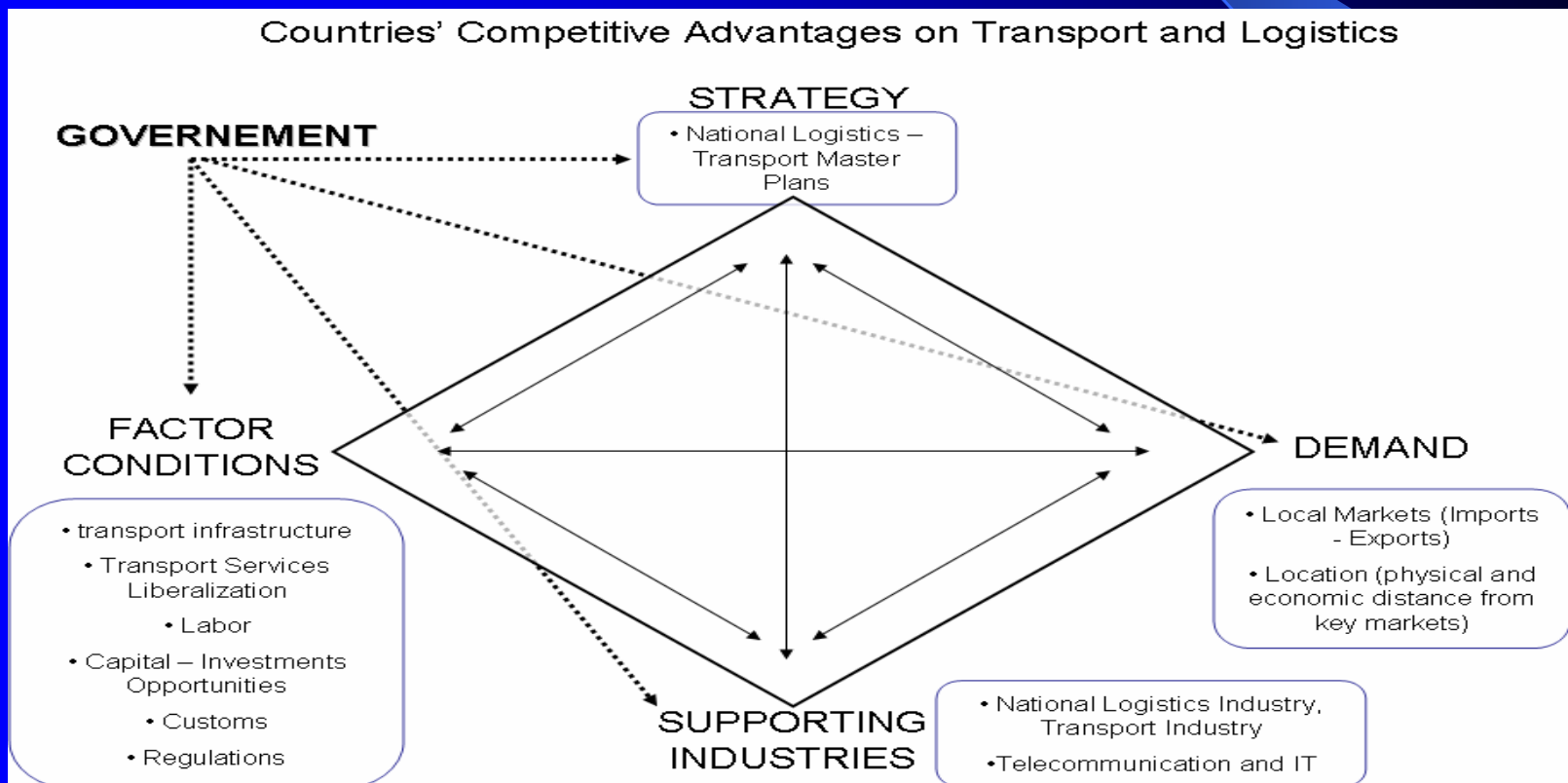
- Development of new, flexible, dynamic and efficient evaluation tool
- Raise awareness of Governments of the new role of transport networks as important part of global supply chains and not as the predecessor of logistics services providers (3PLs/4PLs),

## Threats

- Role of transport in the global economy and supply chain to be underestimated as it cannot be correctly assessed,
- Contribution of transport to competitiveness might not to be reliably measured, or could be underestimated as a result of unreliable evaluation tools,
- In future national investment plans, transport sector might not be considered as an important development factor as a result of inappropriate and inadequate assessment methodology and/or tool.

# Way forward

- Considering various initiatives and different methodologies used, it is clear that there is a need for a **common methodology** to adequately assess competitive advantage of a country from a transport and logistics points of view.
- This would require to think beyond the cost elements.





# Evaluation methodology of supply chain challenges for transport

## ● Objective

- Development of a multi criteria assessment methodology which will help countries assess transport's contribution to their competitiveness through its role in global supply chains.

## ● General Assumptions

- Logistics/supply chains are emerging/fast growing markets
- There is a need to develop methodology which could assess transport's contribution to national competitiveness
- Some countries have started to establish long-term master plans and to formulate strategic action plans for the development of their national logistics markets.
- Some countries are becoming aware of the importance of logistics and supply chain markets for their national competitiveness and their contribution to economic development.

# Evaluation methodology of supply chain challenges for transport

## ● What are the benefits for Governments?

Governments need to have an effective and consistent methodology for an adequate assessment of the transport market. The advantages are:

- Harmonized information, description, and consensus,
- Scientifically based methodology which will assess supply chain challenges for transport with the possibility to:
  - Assess transport's contribution to national competitiveness,
  - Understand its role in global supply chains,
  - Develop an integrated strategy for national supply chain market,
  - Assess and provide results integrating different transport modes,
  - Provide analytical tools to be used for further analysis (ex: assess country's capacity as logistics or transit hub; benchmark country with other countries using same and objective parameters)
  - Assess the degree of technology penetration in transportation networks and supply chain markets,
  - Assess capacity of different supply chain sub-markets (knowledge of cargoes transit limits),



**Thank you for your attention**  
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