



MAPDRIVER Market Analysis of ICT in Transport & Logistics

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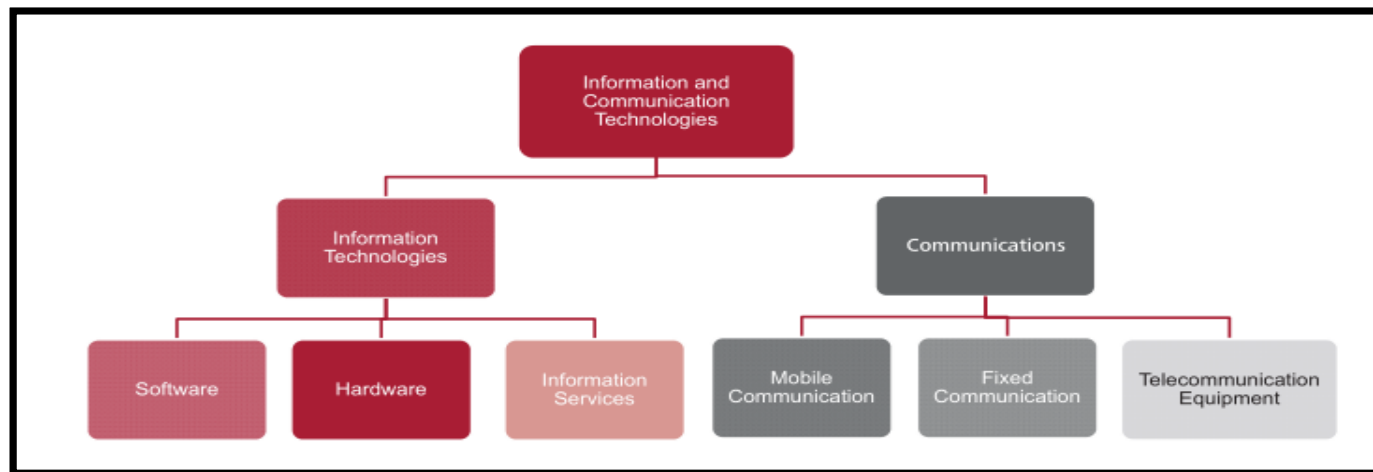
Content

- ▶ General Information for ICT
- ▶ What are the main Drivers and Impacts of ICT?
- ▶ Contributions of the ICT sector to the Economy and the Competitiveness in Logistics Sector
- ▶ Demand-side Innovation Policies for the Development of ICT Sector in Transportation
 - ▶ Examples of Some Demand-Side Policy Instruments for Innovation in Companies
- ▶ SWOT Analysis of each partner countries



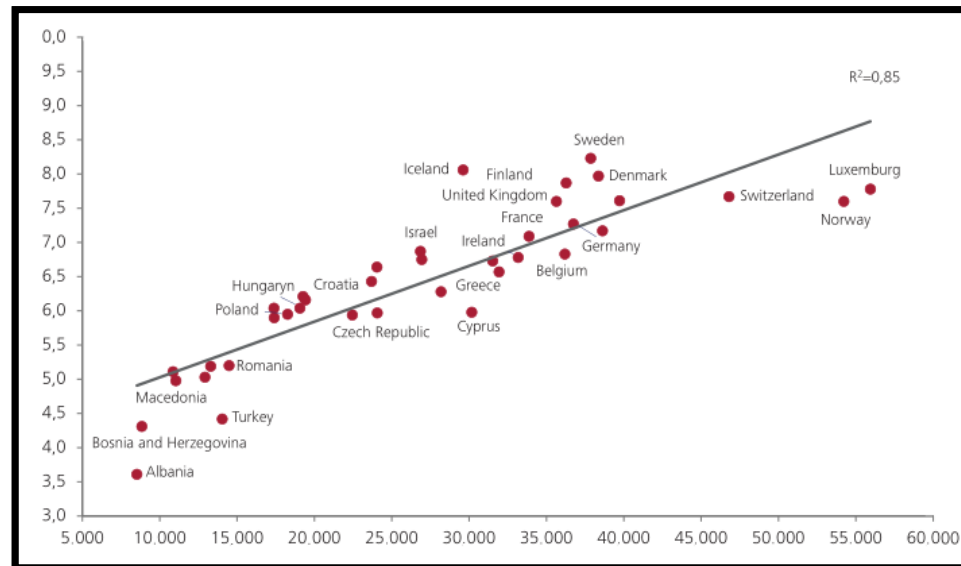
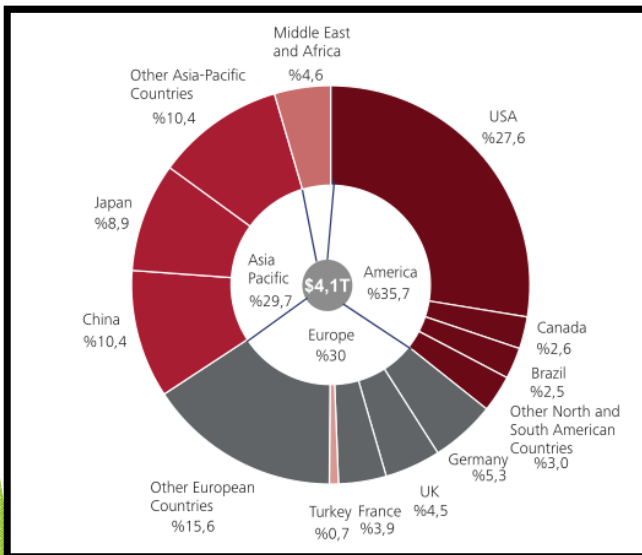
What is ICT?

- ▶ No precise and clear definition
- ▶ *"a set of the service and manufacturing sectors that display, transmit and store information and data electronically" by OECD*



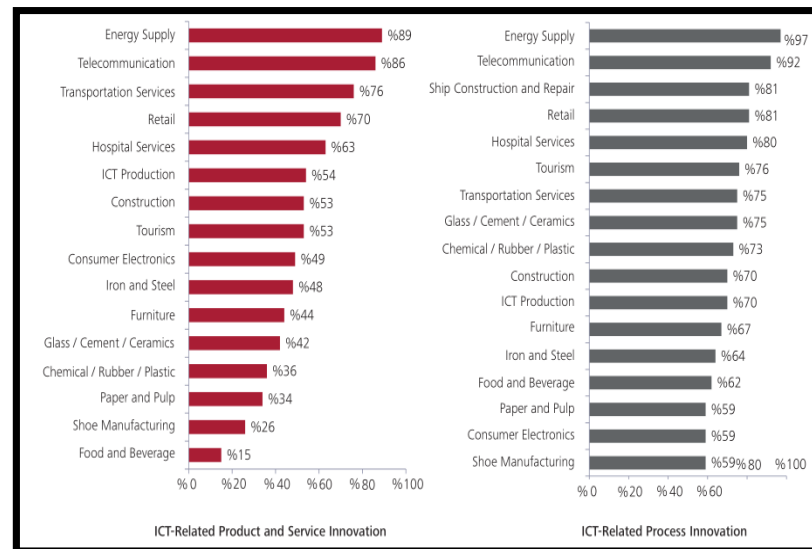
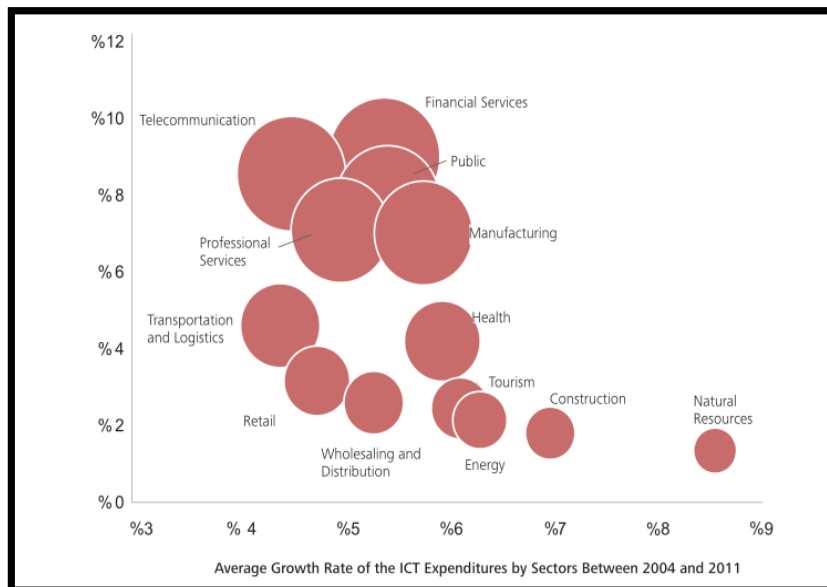
What is ICT?

- ▶ allocation of this 4.1 trillion dollar
- ▶ Geographical distribution of the global ICT sector
- ▶ ICT Development Index (IDI) scores and GDP of countries are almost correlated



What is ICT?

- ▶ Effect of ICT in products and services and innovation processes



Driving Forces/ Impacts over Sector

Drivers:

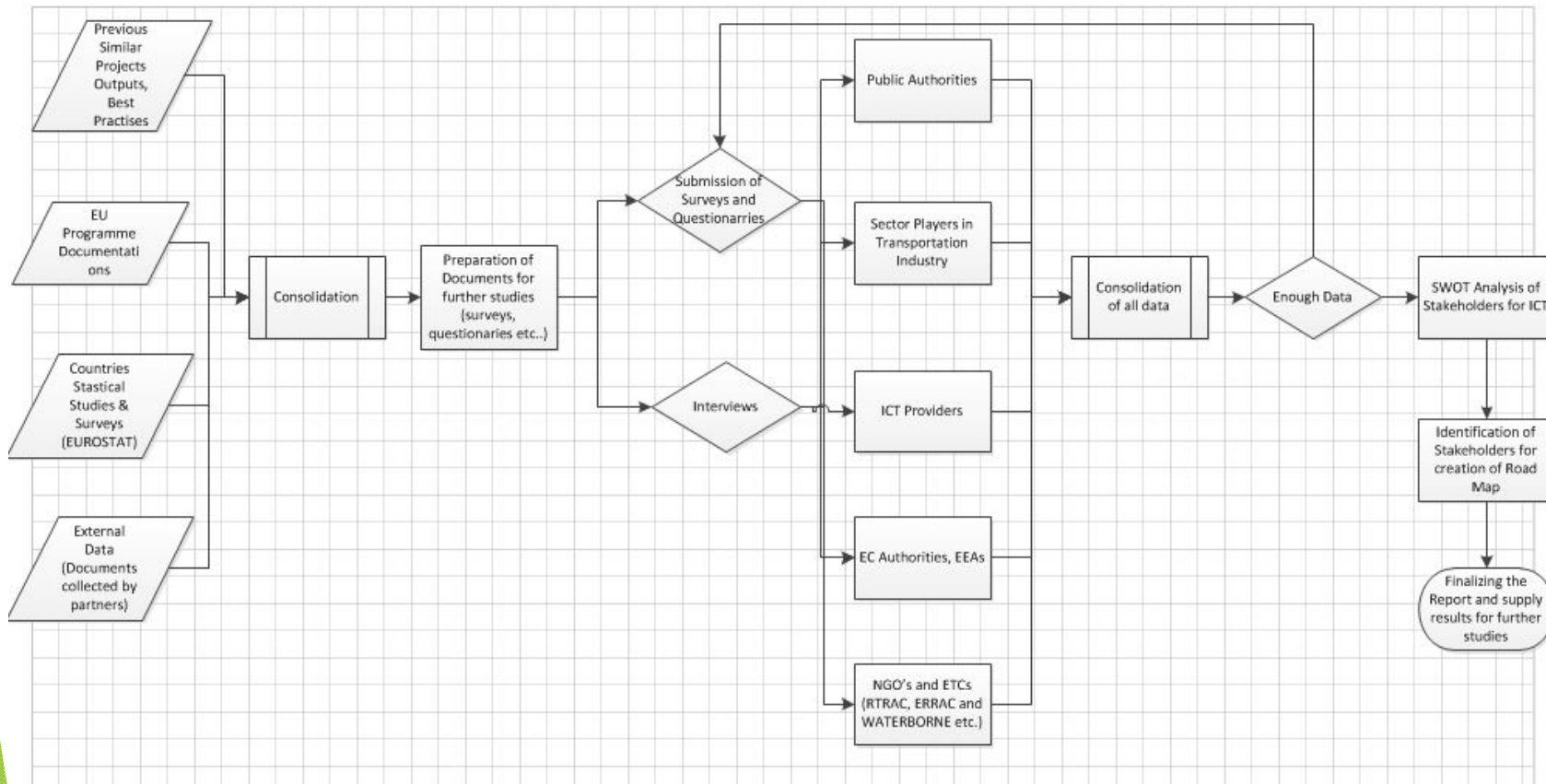
- ▶ the increase in the market competition
- ▶ collaborations between companies
- ▶ the success of the ICT driven innovative process

Impacts:

- ▶ more likely to have outsourced their business activities
- ▶ impact on company performance, such that firms can increase market shares and sales by introducing ICT enabled innovations



Methodology



Main Barriers

- ▶ High investment and implementation costs
- ▶ High running costs
- ▶ Lack of personnel skills
- ▶ Unclear return on investment
- ▶ Lack of technological standards
- ▶ Difficulties in integration into the company's current systems
- ▶ Data security
- ▶ Organizational barriers
- ▶ Integration with legacy systems
- ▶ Long implementation times
- ▶ Lack of consumer demand, which stems from the low level of awareness of the benefits and opportunities offered by ICT



Main Barriers

Level of Policy Intervention, Technical Areas	Potential ICT Contribution
Macro Level	
Macroeconomic Stability	Liberalization and effective regulation of telecommunications and related markets
Budget and Financial Stability	ICT Skills Development
Guiding Productive Structural Change	Competition policies to ensure that ICT services are affordable
Investing in Human Resource Development	
Infrastructure and Utilities Development and Management	
Open and Competitive Markets	
Restructuring of state Enterprises	
Meso Level	
Policy, Legal and Regulatory Framework	Using ICT's to improve the interactions between government and private sector
Administration	Using ICT's to promote transparent, rule-based business regulations
Business Representation and Dialogue	Using ICT's to facilitate business registration, tax administration and trade
Access to Finance	Improve legal and regulatory frameworks to facilitate e-commerce and related applications
Public- Private Dialogue	
Facilitating Innovation and Knowledge Systems	
Micro Level	
Micro-enterprise Development	Creating incentives for private enterprises to invest in ICT's to improve their competitiveness
SME Development	such as Reducing business / Transaction costs, Accessing information, Reducing risks etc.
Women's Entrepreneurship	Using ICT's to make business development and extension services more effective
Formalization of Informal Enterprises	Using ICT's to improve the access of enterprises to micro-finance and other financial services
Attract Foreign Investment	
Entrepreneurship Promotion	
Value Chains and Clustering	



Demand-Side Policies

- ▶ a main goal to increase the **demand for innovations**, to increase the conditions for **absorption of innovation**
- ▶ Demand-side policy instruments in four categories:
 - ▶ Public Procurement,
 - ▶ Regulation,
 - ▶ Policies Supporting Private Demand
 - ▶ Systemic Policies.



Demand-Side Policies

- ▶ **Public Procurement of Innovation** is when innovation is taken as the main criterion in general procurement or if the tenderer specifically demands an already existing innovation.
- ▶ **Regulations** is when new rules are introduced with reference to how certain products perform and how they are manufactured, or how innovations can and must be used.
- ▶ **Standardization** is when technical standards are introduced to maximize compatibility, interoperability, safety, repeatability, or quality.
- ▶ **Tax incentives** is when the purchase or use of a technology is amortized with incentives on taxes such as tax credit, rebate
- ▶ **Support to market demand** is when the purchase of innovative technologies by consumers or industrial users is directly subsidized, lowering the entry cost of an innovation.
- ▶ **Awareness raising campaign** is when the state starts information campaigns, advertises new solutions, conducts demonstration projects to create confidence in certain innovations.



Demand-Side Policies / Examples

Country	Practise Name	Programme Features	Details
Australia	Green Car Innovation Fund	Support for R&D and commercialisation for green passenger motor vehicles.	To foster innovation broadly It is technology-neutral Having a joint vision and support technology development in an industry tackling global challenges
Australia	Victoria State Government Smart SMEs Market Validation	Pre-commercial procurement of R&D (SBIR-type programme) to drive technology development and commercialisation in SMEs.	Main components of the US SBIR programme Differing in providing incentives for public-sector participation through funding A pilot programme
Australia	Creative Commons	Support for open and free access to public sector information.	Better access to public sector information is expected to contribute to innovation and creativity.
Belgium	Flanders Action Plan on Public Procurement of Innovation	Pre-commercial procurement of R&D. Government buys innovation from companies and knowledge institutes in various areas.	IT can help government to identify public demand and define purchasing needs, thereby enhancing the public commitment to procure innovative solutions from the private sector. Innovation platforms can contribute to the involvement of stakeholders and exchange of information between the demand and supply side through the process of decision making, market consultation and technical dialogue
Denmark	Danish Programme for User-Driven Innovation	Grant funding to help companies become more user-driven and develop user-driven innovations	To uncover user needs takes time and is not automatically followed by innovation Involvement of top management and co-operation across different sectors and business areas are the main challenges
Finland	Funding for procurement of innovation in the public sector	Central or local government can apply for funding for the procurement of innovative products or services	An effective tool to find new innovative solutions by providing incentives The promotion of innovation through public procurement raises challenges which cannot be tackled solely by funding instruments raising interest in the funding instrument at local level, owing to the difficulty to meet funding criteria; developing efficient market dialogue with the private sector

SWOT Analysis - Germany

<u>STRENGTH</u>	<u>WEAKNESS</u>
<ul style="list-style-type: none"> • ICT market size (third largest one) • Highly innovative product portfolio • Developed clusters on ICT • High level R & D activities and collaboration with industry • Highly developed infrastructure for ICT 	<ul style="list-style-type: none"> • Number of German global players • Lack of venture capital • Lack of regulations • Slow technology diffusion • International standardization process
<u>OPPORTUNITY</u>	<u>THREAT</u>
<ul style="list-style-type: none"> • Growth market position • Geographical Location (close to the developing markets) • Pure Research Activities on ICT • Number of innovative products • Secure applications and trustworthy business processes • High support from the governmental side 	<ul style="list-style-type: none"> • Less profit margins due to high competition • Globalization • Vulnerability of information technologies • Quick adjustment of business models

SWOT Analysis - Spain

<u>STRENGTH</u>	<u>WEAKNESS</u>
<ul style="list-style-type: none"> • Innovative product portfolio • Developed clusters on ICT • High level international R & D activities and collaboration • Highly knowledge transfer for ICT 	<ul style="list-style-type: none"> • Number of Spanish players • Lack of venture capital • Lack of regulations • Slow technology diffusion • Low Research Activities
<u>OPPORTUNITY</u>	<u>THREAT</u>
<ul style="list-style-type: none"> • Growth market position • Geographical Location (close to the developing markets) • Research Funds on ICT • Number of innovative products • High support from the governmental side 	<ul style="list-style-type: none"> • Less profit margins due to high competition • Globalization • Vulnerability of information technologies • Quick adjustment of business models • Postponement of Investments • Bureaucracy

SWOT Analysis - Turkey

<u>STRENGTH</u>	<u>WEAKNESS</u>
<ul style="list-style-type: none">• Easy Absorption of new technologies by a young population• Young and open minded labor force• Strong economic indicators and growth trends	<ul style="list-style-type: none">• Inconsistent political conditions• Violation of Intellectual property rights• Lack of venture capital• Lack of regulations• High tax rates
<u>OPPORTUNITY</u>	<u>THREAT</u>
<ul style="list-style-type: none">• Market Position• Geographical Location (close to the developing markets)• Quick adaptation of consumers to the innovations• Number of innovative products• Interest of international investors in the sector• Support from the governmental side	<ul style="list-style-type: none">• Less profit margins due to high competition• Lack of R&D and Industry collaboration• Macroeconomic uncertainties• Lack of policies and strategic plans•

Thank you for the attention!

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