

# A position paper on ICT and Innovation

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# Agenda

- ❑ **The European Context**
- ❑ **The VII Work Programme**
- ❑ **Interoperability and Accessibility**
- ❑ **Next steps in PORTNET: the 2007 Conference in Bologna**



# The European Context

## The Context (1/2)

- ❑ The transport sector has witnessed the recent development of ICT solutions in the field of transport.
  
- ❑ The available ICT systems and services attempting to support planning, operational and controlling activities within the context of intermodal transport chains seems not able to support the demanding requirements of transnational intermodal transport chains, nor are they – restricted in scope and reach as they are - providing attractive business propositions for the ICT services suppliers and (potential) users.
  - ✓ Although built using the state-of-the-art technology,

## The Context (2/2)

- ❑ There have been completed many projects to enhance existing ICT-solutions **with capabilities to cooperatively support transport chains.**
  - ✓ Specifically, efforts have been made to build solutions upon the recommendations of international standardization bodies (UN/CEFACT, OASIS and ebXML);
  - ✓ **Many pilot systems** interconnecting ICT-solutions among themselves and with legacy applications of other public/private actors to support specific transport chains, such as perishable goods, automotive and reversed logistics of container;
- ❑ There is the need to define new appropriate **business models**;
- ❑ There is the need to establish a common ICT level playing field for SME's and global players;

# Thinking in the European Context

- ❑ **The Sevilla submit in June 2002 endorsed two important political initiatives:**
  - ✓ **“e-Europe 2005”** aims at providing a favourable environment to boost productivity, modernise public services, create jobs, in order to make Europe the most competitive and dynamic knowledge based economy. Some of the key targets of this initiative are:
    - interactive public services (**e-government**),
    - accessible for all, and
    - offered on multiple platforms.
  
  - ✓ **“Better regulation”**: a review of legislation affecting e-business both at European level, as well as at international level. Efforts are being made and initiatives taken to facilitate legitimate trade by using IT and by improving and simplifying European legislation in order to reduce the cost of doing business and increase legal certainty for citizens and companies.

# The new communication

**Bruxelles, 1.6.2005**

COM(2005) 229 final

**COMMUNICATION FROM THE COMMISSION TO THE  
COUNCIL, THE EUROPEAN PARLIAMENT, THE  
EUROPEAN ECONOMIC AND SOCIAL COMMITTEE  
AND THE COMMITTEE OF THE REGIONS**

**“i2010 – A European Information Society for  
growth and employment”**

- ❑ **The Commission proposes three priorities for Europe's information society and media policies:**
  - ✓ i) **the completion of a Single European Information Space which promotes an open and competitive internal market for information society and media;**
  - ✓ ii) **strengthening Innovation and Investment in ICT research to promote growth and more and better jobs;**
  - ✓ iii) **achieving an Inclusive European Information Society that promotes growth and jobs in a manner that is consistent with sustainable development and that prioritises better public services and quality of life.**



## *i2010*

- ❑ **The creation of a Single European Information Space needs to address at the outset four main challenges posed by digital convergence:**
  - ✓ **speed:** faster broadband in Europe services to deliver rich content such as high definition video;
  - ✓ **rich content:** increased legal and economic certainty to encourage new services and on-line content;
  - ✓ **interoperability:** enhancing devices and platforms that “talk to one another” and services that are portable from platform to platform;
  - ✓ **security:** making internet safer from fraudsters, harmful content and technology failures to increase trust amongst investors and consumers.

# IST Work Programme 2007-2008

- ❑ **26 Sept. 2006: the presentation of the results of a consultation process to identify research needs and prioritisation (ICT for safer mobility)**
- ❑ **The challenge:**
  - ✓ Concrete goals and ambitious/strategic proposing on ICT
  - ✓ Achievements to reach
    - not in terms of means to realise achievements
- ❑ **Three abjectives:**
  - ✓ ICT for intelligent car and mobility services
    - (Intelligent vehicle systems, **Mobility for goods** and people)
  - ✓ ICT for cooperative systems
  - ✓ ICT for better environmental management and energy efficiency
- ❑ **SME participation as motor for innovation**

[www.eSafetySupport.org](http://www.eSafetySupport.org)

## Main topics addressed in contributions

- Cooperative systems**
- Components**
- eSafety**
- Traffic Management**
- Good transport**
- Evaluation and testing methods**

# Main topics addressed in contributions

## ❑ **Cooperative systems**

- ✓ Links between driver<> vehicle <> infrastructure
- ✓ On board information systems

## ❑ **Components**

- ✓ Reliability and costs of sensors (upgradeable sensors)
- ✓ Power train control with sensors

## ❑ **eSafety**

- ✓ Human machine interface
- ✓ European accident statistics database
- ✓ Driving speed management
- ✓ 2 wheel driver assistance

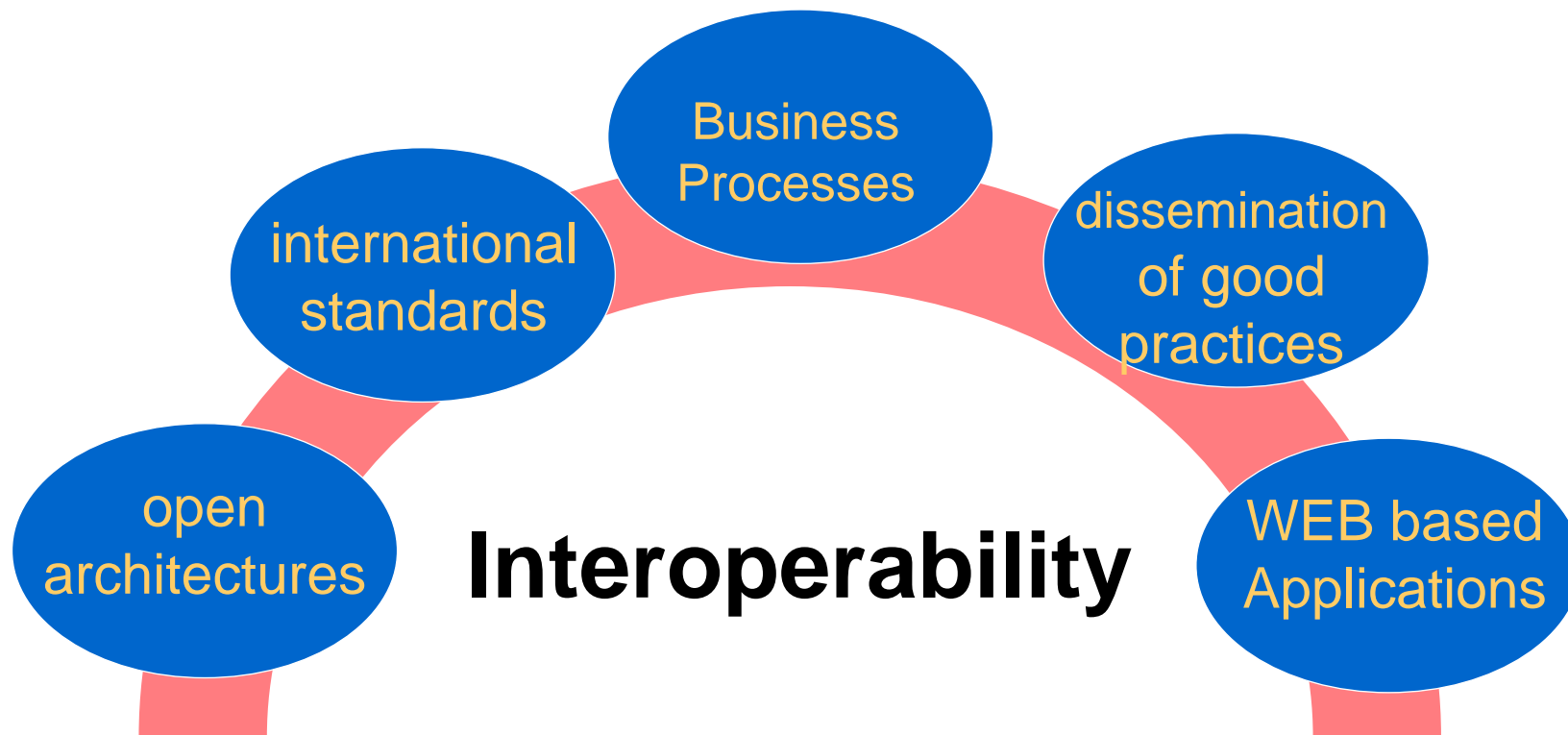
# Main topics addressed in contributions

- ❑ **Traffic Management**
    - ✓ Dynamic road pricing
    - ✓ Full multimodal journey support
    - ✓ Infrastructure monitoring / maintenance
    - ✓ Traffic data collection technologies
    - ✓ Optimising road space usage
  - ❑ **Logistics & Good transport**
    - ✓ Full multimodal freight support (transparency)
    - ✓ eSecurity in cross border good flows
    - ✓ Cross linked development in logistics and traffic concepts
  - ❑ **Evaluation and testing methods**
    - ✓ Comparesafety measures
    - ✓ Models for impact assessment
    - ✓ Field test for retrieving real driver behaviour
- 

## Other topics

- ❑ **Intelligent infrastructures**
- ❑ **Urban logistics and city services**
- ❑ **Demand responsive transport**
- ❑ **Automated transport**
- ❑ **Safety in tunnels**

# Effective e-logistics and e-government require interoperability



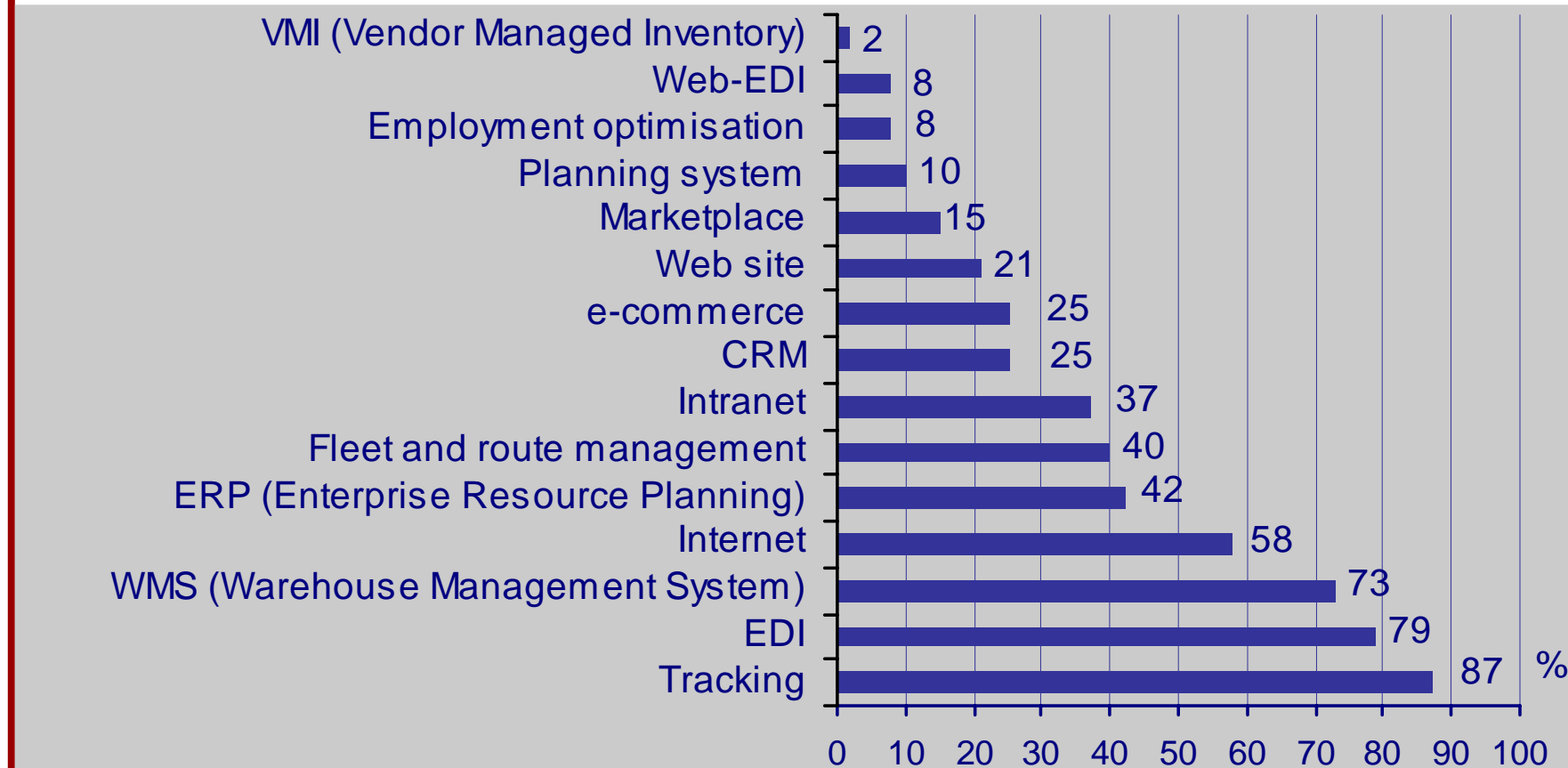
Effective e-logistics and e-government

# Development of ICT

- ❑ **Researches of the European Commission estimated the rate of implementation of ICT in the European logistics operators' firms:**
  - ✓ the three technologies which have the higher rate of implementation are tracking (87%), EDI (79%) and WHS (Warehouse Management System, 73%).
- ❑ **Furthermore, the European Commission highlights that the implementation of ICT in Europe has not been developed such as in USA.**
  - ✓ It has estimated that the delay of the European logistics companies is of 2 or 3 years.
- ❑ **The e-business is causing several impacts both on the demand side and the supply side. In particular, although the traditional activities constitute a dominant part of the relation of outsourcing and partnership, the demand of information-based and value-added activities is increasing very fast.**



## Operators involved in logistics chains need electronic infrastructures to share information to enable effective and efficient e-business processes



Source: "DG Tren-Eurostat: transport in figures", Europe, 2002

(To be updated during the study)

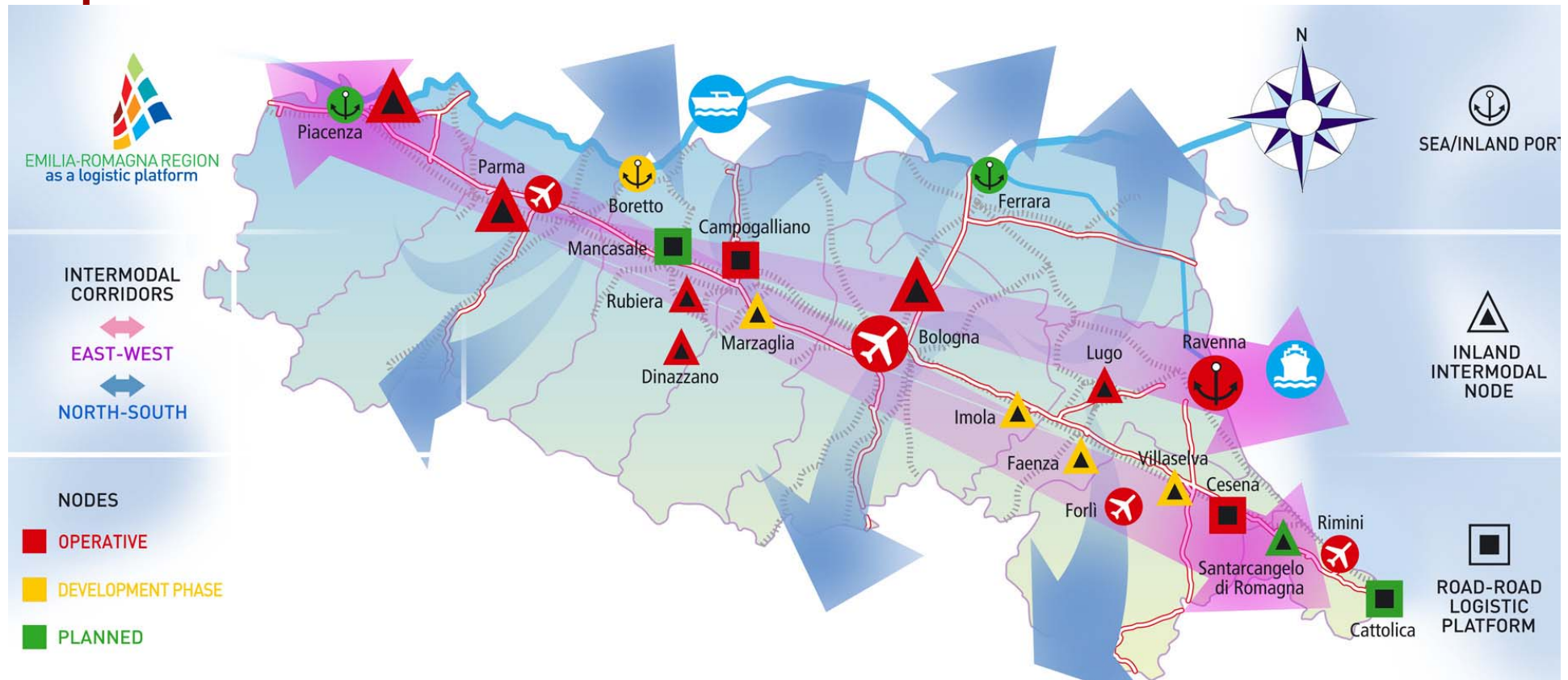


# Accessibility

Physical and Virtual Accessibility

# Regione Emilia Romagna

## □ A natural Logistic Platform



## A complex area of research

### □ Long story about **ACCESSIBILITY**

- ✓ Difficult to be defined
- ✓ Different requirements according to local needs and local constraints
- ✓ Local accessibility vs global accessibility
- ✓ The European corridors



# Accessibility Measurement

- ❑ **Measuring accessibility has received substantial attention since the groundbreaking work of W. G. Hansen in 1959 (“How accessibility shapes land use,” *Journal of the American Institute of Planners*, 25, 73-76) however, most existing accessibility measures suffer from a lack of rigor.**
  - ✓ **It is often unclear exactly what is being assessed by accessibility measures**
  - ✓ **Many accessibility measures also make unrealistic assumptions about individuals’ abilities to participate in activities distributed in space and time.**
  - ✓ **Finally, despite recent efforts to link these measures with GIS, treatment of geographic space is often unrealistic and inconsistent.**
  
- ❑ **Although **accessibility** is a powerful concept for measuring transportation system performance and guiding transportation and land-use planning, it can be difficult to manage and apply these measures for regional-urban-scale transportation analysis.**

# Accessibility in transport and logistics

## Different views

- ❑ **Accessibility for people**
- ❑ **Accessibility for goods**
- ❑ **Accessibility for vehicles**
  - ✓ (vessels, lorries, trains, planes ..... space\_shuttles)
- ❑ **Multimodality and Intermodality**
  - ✓ Global accessibility
- ❑ **Infrastructures:**
  - ✓ Roads, Railways,
  - ✓ MoS - Motorway of the Sea & SSS – Short Sea Shipping
- ❑ .....

# ACCESSIBILITY: a methodology

- ❑ **A methodology is essential for a common approach:**
  - ✓ To identify and evaluate **Barriers**
    - Physical barriers and other information (i.e.: land surface) are important to get a better view of territorial accessibility
  - ✓ How to obtain useful **Traffic data**
    - Instead of building a simple cost surface based on a fixed travel time cost, it is possible to integrate traffic data in order to get a more accurate travel time.
  - ✓ Monitoring of **Vehicle data**
    - Complex accessibility models can take under consideration vehicle data as one factor shaping the cost surface.
  - ✓ Urban – Port – Freight Villages **connections**
    - It is possible to cross area network data, such as population (people or companies), services or equipment, to express accessibility of population to goods and basic services.



## Next Steps in PortNet



# Port Net

## *Announcement of*

### **PORTNET conference on EDI and CARGO FLOWS**

**9-11 May, 2007  
in Bologna (Italy)**

*thinking moves things*

## ***You are invited***

to join the PORTNET Conference on EDI and Cargo Flows where experts from Europe will report about innovation and impact of ICT in ports, dry ports, multimodal transport and e\_business initiatives in freight transport and logistics.

- A call for papers will be published by Nov 30, 2006
- Papers expected by end of February 2007
- A book will be published by RER under the Portnet activities

# Invited projects for presentations

## ❑ FREIGHTWISE

- ✓ Management Framework for Intelligent Intermodal Transport



## ❑ MOSES

- ✓ Motorways of the Sea in the European Style

## ❑ MATAARI

- ✓ Accessibility to European Corridors



## ❑ MADAMA

- ✓ MediterrAnean DAngerous goods MAnagement

## ❑ CORELOG

- ✓ Network of Regional Competence Centers in Logistics