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Intermodality

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Summary

- State of art on Intermodality in the Atlantic AREA
- Impact of Smart Technologies on intermodality
- Impact of rising fuel on intermodality
- General Conclusion
- Recommendations

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State of art on Intermodality in the Atlantic AREA

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Definition of Intermodality

- In the literature, the term “intermodal” transport is applied for passengers who use successively a several transport modes for an interconnected trip from the first kilometer to the last kilometer.

- The trip can include the use of urban, suburban, national and international connections.

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Intermodality in the Atlantic AREA (AA)

- All AA countries have an urban mobility plan.
- Several actions are made to develop intermodality.
- Most of the trips are done between home and work.
- Most of the trips are done by private cars
- In each region, users can use a local planner.
- Some countries have a global journey planner (national and international planner) with or without the first and the last kilometers
- Some Countries promote Electromobility, introduce and develop new mobility services.

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Recommendations

- An **effective coordination is required** between the different territories.
- The **Governments and the stakeholders** have to be involved in this **coordination**.
- **Standardization and interoperability** between the different systems of intelligent transport are detected as a key element.
- **Regulatory actions** have been made at **European level** and in Member States, **they aren't efficient**
- **Development of Smart technologies** to improve intermodality

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Potential impact of smart technologies

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Impact of Smart Technologies on Intermodality : Our Approach

- Study and presentation of Smart Technologies used in The Atlantic AREA.
- Presentation of the benefit of Smart Technologies on transport sector and on intermodality.
- Presentation of the limits of Smart Technologies.
- General conclusion in the Atlantic AREA
- Presentation of some recommendations

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Smart Technologies in the Atlantic AREA

- The analysis of intermodality in The Atlantic Area shows that:
  - All transportation modes and networks are interconnected
  - All regions have a local experience to improve intermodality (journey planer, single ticketing, etc.)
- The analysis of the existing Smart Technologies shows that we can classify them on three classes:
  - Smart Technologies and Data
  - Smart Technologies and IT
  - Intermodality and Interconnectivity

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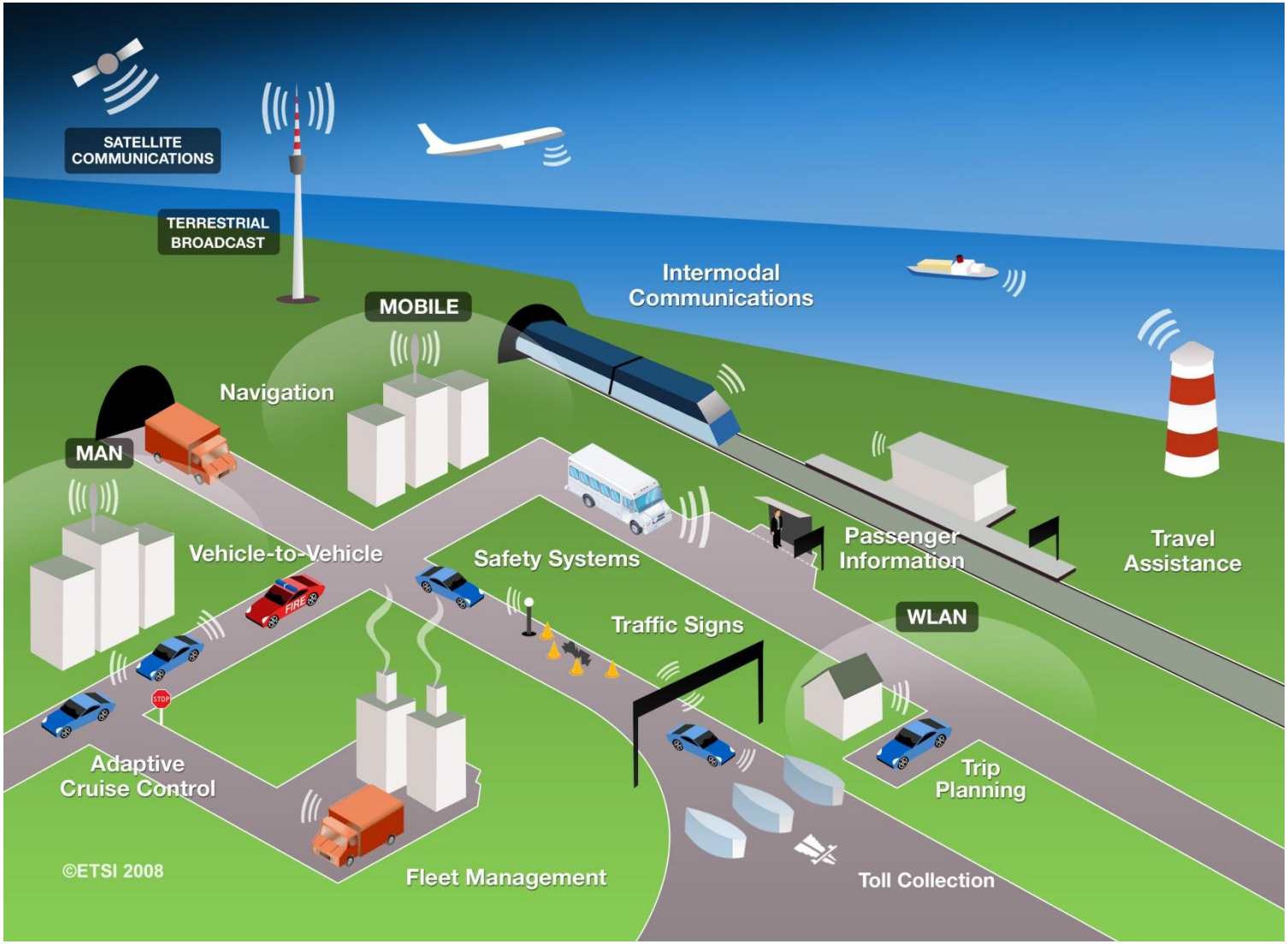
Intelligent Transportation Systems



Source : www.liu.se

Smart Technologies impact on Intermodality Key points

- The physical networks and the interconnection hubs (Management TS, Car sharing, etc.)
- New transportation modes (E-car, Bicycle, etc.)
- Synchronisation of the networks (Urban Mobility Plan for passengers)
- Planning services (Journey planner)
- Payment tools (single ticketing)
- Real time information

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Conclusion

- Intermodality is one of the ways to optimize the costs of the transportation
- The AA countries are making efforts to propose a wide range of transport modes while insuring an efficient interconnectivity
- Smart technologies have a direct impact on all the key point of intermodality
- Intermodality improvement needs smart technologies but not only
- Intermodality without smart technologies is not efficient

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Potential impact of rising fuel costs on intermodality

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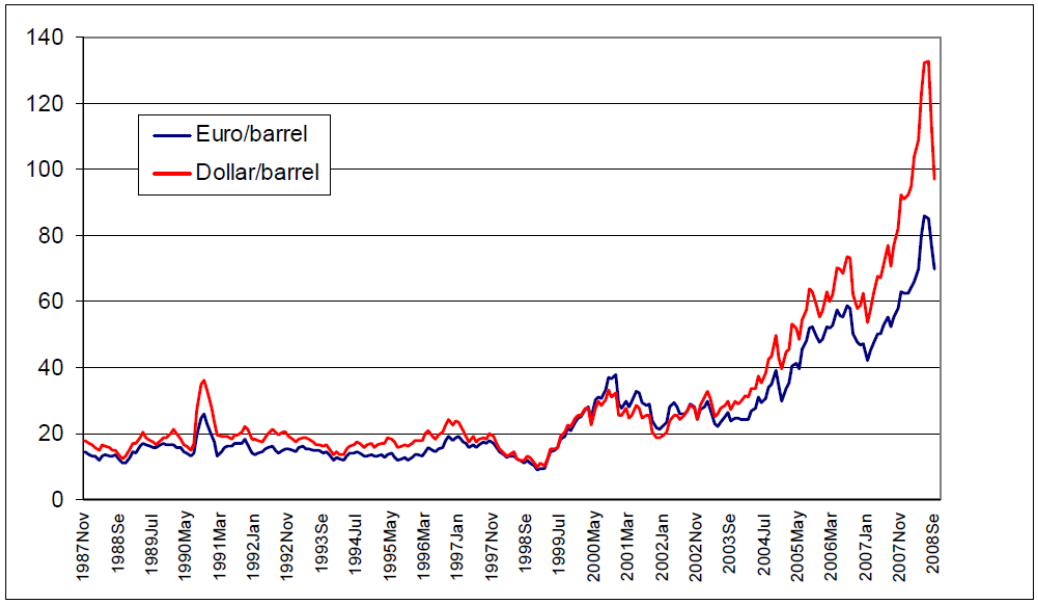
Fuel price evolution analysis in correlation with crude oil price

- Fuel price is influenced by the price of crude oil



Price evolution of crude oil 1987-2008

- The rising price of barrel is due to the explosion of the demand coming from fast-growing economies (China, India, etc.)

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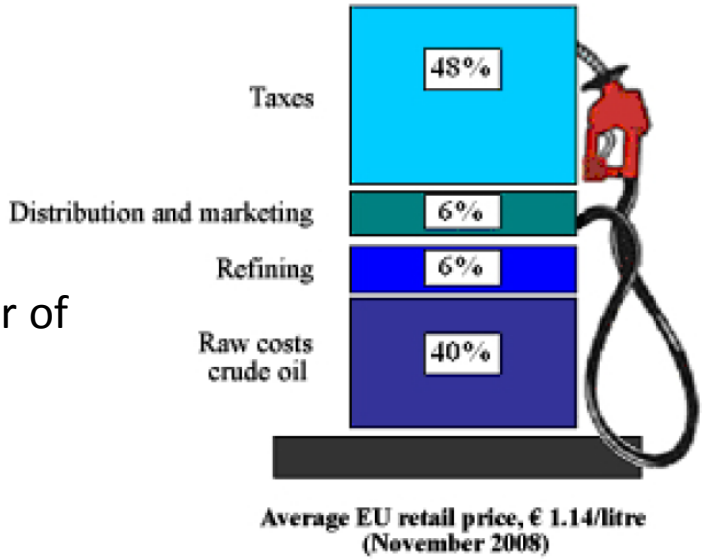
Fuel price evolution analysis in correlation with crude oil price

- Relationship between the crude oil price and the fuel price in the road transport

Cost decomposition of one liter of diesel in EU, November 2008



- In the road sector, the oil price reflects only one part of the total fuel price

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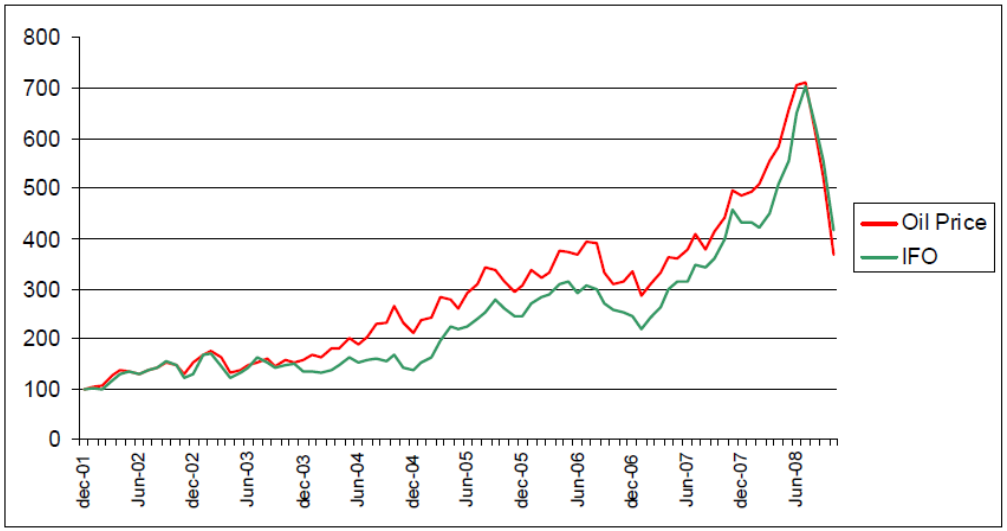
Fuel price evolution analysis in correlation with crude oil price

- Relationship between the crude oil price and the marine fuel price



Marine fuel (IFO) and crude oil evolution (2001-2008), index100=2001

- There is a direct impact on the costs of marine bunkers, because marine fuels are exempted from governmental taxes

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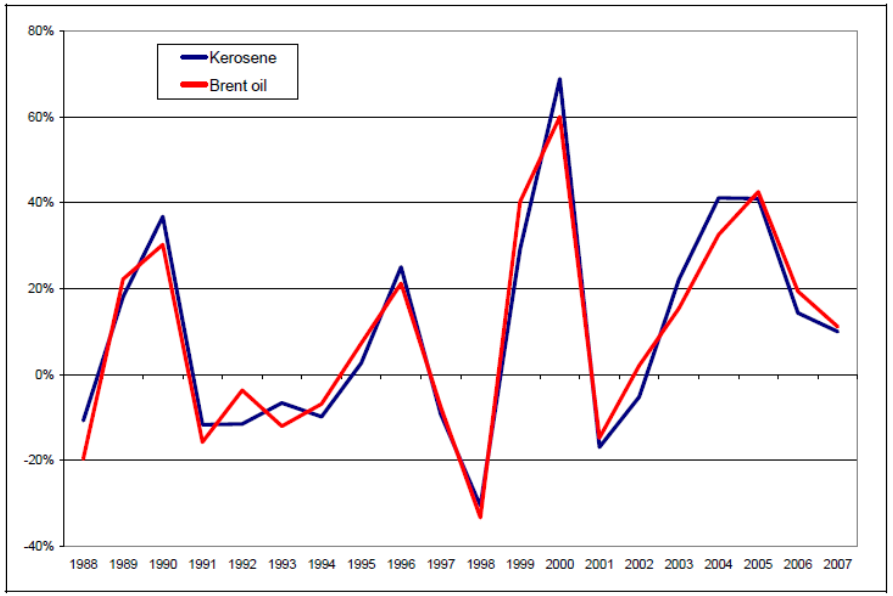
Fuel price evolution analysis in correlation with crude oil price

- Relationship between the crude oil price and the jet fuel price

Annual movement of oil and kerosene price (1998-2007)



- Similarly to marine fuels, jet fuels are also exempted from taxes which means that their prices are influenced by the crude oil price

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Impact of oil price rising on transport sector and intermodality

- Globally an expensive barrel of oil has an economic impact on the transport sector more probably in the short term than in medium to long term. This is due to multiple reasons
  - Dependency on oil was reduced by half in the last thirty years in developed countries such as AA countries
  - The possibilities of introducing viable solutions that allow substituting oil and improving energy efficiency are much more important than in the past

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Impact of oil price rising on transport sector and intermodality

- In this context, the transport modes such as rail transports, maritime transports and waterway transports are re-launched and are developed more and more.
  - They are less energy consumer than road transports
  - They have less impact on the environment
- In Atlantic area public transport modes and intermodality are developed more and more

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Conclusion

- Oil prices are very high, and have a straightforward impact on the transportation and intermodality
- Intermodality is one of the ways to optimize the costs of the transportation
- The AA countries are making efforts to propose a wide range of transport modes while insuring an efficient interconnectivity
- This investment has multiple advantages particularly the decrease of energy consumption and greenhouse gases

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Synthesis in the Atlantic Area

- Intermodality needs two points: the infrastructures and the services.
- New transportation modes are in progress: electric cars, car sharing, bicycle rental, buses on demand etc.
- Intermodality services are in progress.
- The level of intermodality is not the same in the Atlantic area.
- All regions developed actions to improve intermodality

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