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SOBRE LA TRAVESÍA  
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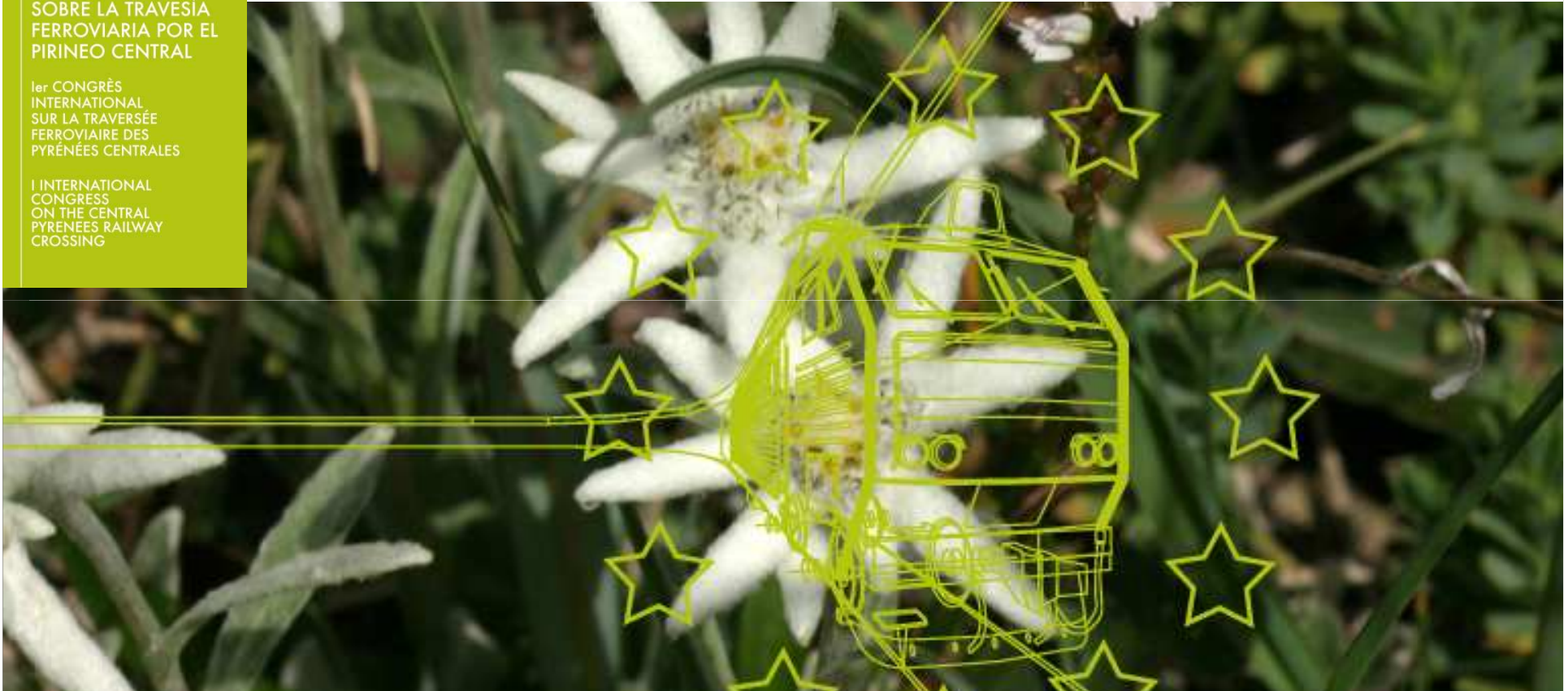
Ier CONGRÈS  
INTERNATIONAL  
SUR LA TRAVERSÉE  
FERROVIAIRE DES  
PYRÉNÉES CENTRALES

I INTERNATIONAL  
CONGRESS  
ON THE CENTRAL  
PYRENEES RAILWAY  
CROSSING

# FastPath: THE TRANSPORT/LOGISTICS ANALYTICAL TOOL FOR THE CENTRAL PYRENEES HIGH CAPACITY RAILWAY CORRIDOR

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**Grandes Infraestructuras Europeas - Grandes Infrastructures Européennes - Large European Infrastructures**

ZARAGOZA (España), 29/31 Octubre 2008 - SARAGOSE (Espagne), 29/31 Octobre 2008 - ZARAGOZA (Spain), 29/31 October 2008



# Agenda

1. **The Impact of Logistics Inefficiencies**
2. **Spain and France in the Global Context–WB Doing Business Analysis**
3. **What is the *FastPath* Approach?**
4. **How does *FastPath* Software Work?**
5. ***FastPath* in Other Regions**
6. **Working with Stakeholder Group and Contractor**
7. **Future of *FastPath*\*\***
8. **Conclusions**



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# **The Impact of Logistics Inefficiency**

























# 1. The impact of Logistics Inefficiencies

- **Impact of shipping/transport costs on trade and GDP**
  - A 10 % increase in transport costs reduces trade volume by 20 % - (Limao and Venables 2000)
  - Doubling shipping costs slows GDP growth by 0.5 % - (Radelet and Sachs 1998)
- **Impact of improving port-logistics efficiency**
  - A substantial increase in trade can come from increasing logistics efficiency in three areas: port operations, customs and regulations/e-business – (Wilson, Mann, and Otsuki 2003)
  - Port inefficiency, when mitigated, induces GDP growth by 0.47 percent – (Kent and Fox 2004)



# **Spain in the Global Context – Doing Business Report WB**

## 2. Top 25 of the ease of doing business 2009

	1. Singapore		16. Saudi Arabia
	2. New Zealand		17. Sweden
	3. United States		18. Bahrain
	4. Hong Kong, China		19. Belgium
	5. Denmark		20. Malaysia
	6. United Kingdom		21. Switzerland
	7. Ireland		22. Estonia
	8. Canada		23. Korea
	9. Australia		24. Mauritius
	10. Norway		25. Germany
	11. Iceland		
	12. Japan		31. France
	13. Thailand		48. Portugal (-)
	14. Finland		49. Spain (-)
	15. Georgia		

## 2. WB-Doing Business Report (DBR)

- Snapshot on the ease of doing business in 181 countries (annual evaluation based on country surveys)
- Evaluation in trade measures as well as others
- Overall Spain ranking in 2009: 49
- Trading across border ranking: 52
- Overall France Ranking 2009: 31
- Trading across border ranking: 22

## Diapositiva 7

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**P4**

Julian, it would be helpful if you could explain the low ranking. You should look at the details in the ranking -- like time for export, no. of documents, etc. Also, you didn't mention it before, but if you mention the time for export, then this can be related to Simeon Djankov's research indicating that each day of delay is the equivalent of adding 70 KM to the distance to the market. If Spain currently requires 30 days for exports, and the OECD standard is 10, then meeting the OECD standard means that Spain would move 1400 KM closer to its markets! Of course, you should cite this research in your earlier slide.

PAUK; 23/10/2008



## 2. Trading Across Borders (2009)

- Costs and procedures involved in importing and exporting a standardized shipment of goods

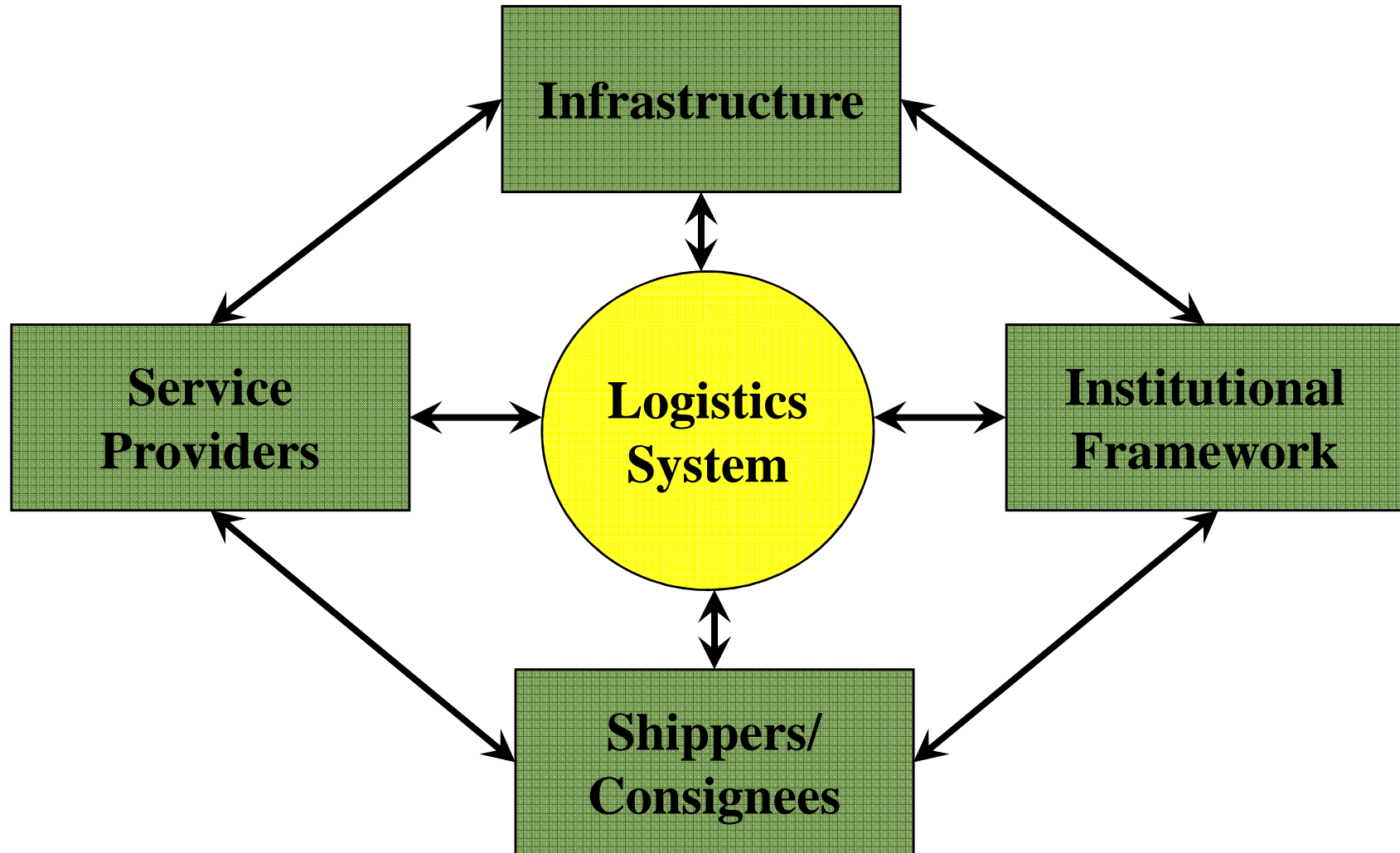
Indicator	Spain	Portugal	France	Gap - Spain	OECD	Gap - Spain
Documents for export (number)	6	6	2	- 200%	4.5	- 33%
Time for export (days)	9	16	9	+ 77%	10.7	- 16%
Cost to export (US\$ per container)	1,121	685	1,078	- 4% - - 64%	1,069	- 5%
Documents for import (number)	8	7	2	- 14% - - 300%	5.1	- 57%
Time for import (days)	10	16	11	+ 38% - +9%	11.4	+12%
Cost to import (US\$ per container)	1,121	999	1,248	- 12% - + 10%	1,133	+1%

Source: Julian Barona

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What is the *FastPath* Approach?

### 3. Components of the Logistics System



### 3. The *FastPath* Approach

#### It is a Decision-Support System

- It is both a process and a toolbox:
  - The process includes:
    - A transport/logistics audit methodology
    - Corridor and commodity specific analyses
    - Stakeholder interactions
  - The software application gives users:
    - A means of entering detailed corridor data,
    - A means of summarizing and analyzing transport/logistics chain data
    - A support tool for deciding priorities
- It will not make decisions for the user

### 3. The Audit Methodology (Checklists and Questionnaires)

- Focuses on two levels:
  - National or regional level
  - The shipper association and freight-forwarder level
- Is based on:
  - A set of checklist questionnaires for sector managers and policy-makers for:
    - **Customs**
    - **Ports**
    - **Railways**
    - **Roads**
    - **Logistics Services Industry**
  - A set of detailed survey questionnaires for shippers and freight forwarders

### 3. The Audit Methodology (Detailed Computerized Audit)

#### The *FastPath* Software

- Allows fast user inputs at different levels of knowledge
  - General subjective knowledge (overall performance) – good, fair, poor, very poor
  - More detailed knowledge (specific costs and times)
  - Expert knowledge (with some simple models)
- Provides automatic comparison with international norms
- Creates summary of logistic chain performance (cost/price, time and reliability) with total logistics score
- Allows comparisons of existing and improved cases (with graphics)



# How Does *FastPath* Software Work?

## 4. Computerized tool –Initial Screen

 **USAID** | *FastPath*  
FROM THE AMERICAN PEOPLE

Welcome About this Tool Help

**Welcome to *FastPath* :**  
**A Computerized Transport Logistics**  
**Diagnostic Tool**

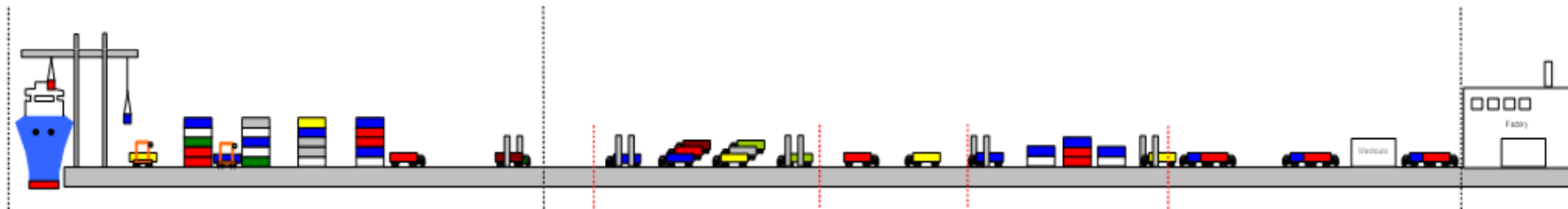
Created for USAID  
by  
Nathan Associates Inc.

Example Logistics Chain Define Scenario Use Existing Scenario Exit



## 4. Transport/Logistics System

*FastPath* analyzes links and nodes in the system

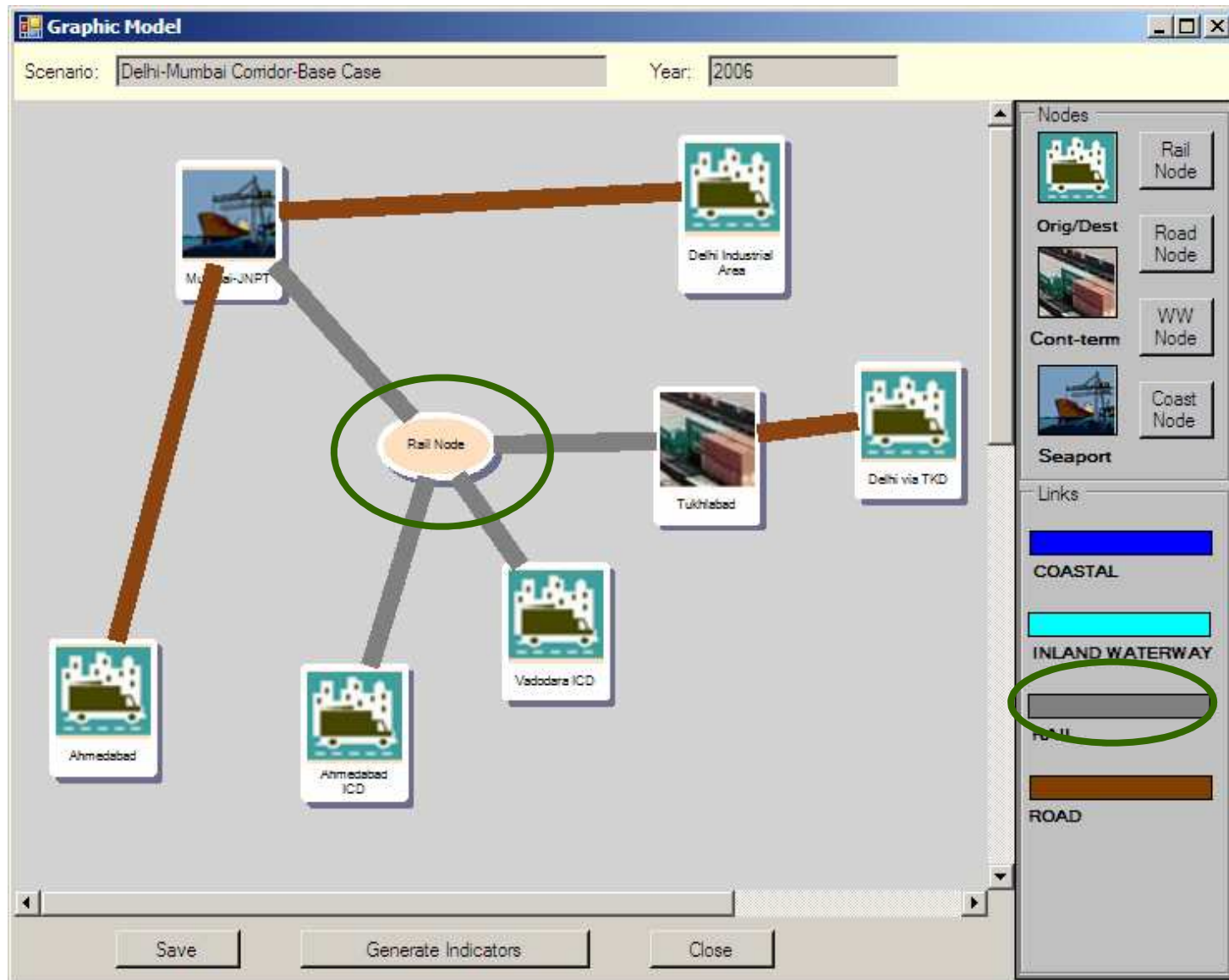


Port/Terminal/Customs

Hinterland Transport/Transfer

Delivery  
or Shipment

## 4. Logistics Chain – Schematic Diagram Input Screen



## 4. Transport/Logistics System Performance

Performance for each link and node is measured in *FastPath* by:



# 4. *FastPath*: Data Input Screens (detailed user)

**SEAPORT**

**General Characteristics**

Name:

Terminal:

Number of Berths:

Ratio TEU/Cont:

**Vessel Size**

	%
< 1,000 TEU	<input type="text" value="30"/>
1,000-2,500 TEU	<input type="text" value="50"/>
2,500-4,000 TEU	<input type="text" value="20"/>
> 4,000 TEU	<input type="text" value="0"/>
<b>Total</b>	<b><input type="text" value="100"/></b>

**Components**

Exists	Select	Exists	Select
<input checked="" type="checkbox"/> Channel	<input type="radio"/>	<input type="checkbox"/> Consolidation	<input type="radio"/>
<input checked="" type="checkbox"/> Berth	<input checked="" type="radio"/>	<input checked="" type="checkbox"/> Intermodal Transfer	<input type="radio"/>
<input checked="" type="checkbox"/> Yard	<input type="radio"/>	<input checked="" type="checkbox"/> Gate	<input type="radio"/>
<input checked="" type="checkbox"/> Customs	<input type="radio"/>	<b>Port Price Model</b>	<input type="radio"/>

**Data Input Methods**

Enter Subjective Ratings | Enter Data Directly

**Berth Transfer and Handling**

Noms  Benchmarks

	Good	Fair	Poor	VeryPoor
Price / Container	10-50	50-80	80-150	150-400
Average Time Ship - Yard	4-8	8-16	16-24	24-60
Reliability % Average Time	5-40	40-80	90-150	160-400

Price / Container:  US\$/cont

Average Time Ship - Yard:  hours

Reliability % Average Time:  %

OK Cancel

# 4. *FastPath*: Data Input Screens (general user)

**ROAD**

**General Characteristics**

Name:

Start Point:

End Point:

Length - km:

Ratio TEU/Cont:

**Terrain**

Flat

Flat-Hilly

Hilly

Hilly-Mountainous

Mountainous

**Surface Conditions**

Good

Fair

Poor

Very Poor

**Congestion**

Light

Heavy

Factor:

**Data Input Methods**

Enter Subjective Ratings | Enter Data Directly | Enter Unit Values | Enter General Function

**Price Data** | **Transit Time Data**

Select one or two adjacent ratings

Good  Fair  Poor  Very Poor

Noms  Benchmarks

Average Trip Time	<input type="text" value="35"/>	hours	Good	Fair	Poor	VeryPoor
Average Speed	<input type="text" value="42"/>	km/hr	40-60	30-40	20-30	5-20
Average Waiting Time	<input type="text" value="2.4"/>	hours	0-3	3-8	8-12	12-24

**Comments**

OK Cancel

# 4. FastPath's Results Summary

**Summary Results by Logistics SubChain**

Scenario:

	Cont/Year	Avg Price	Avg Time	Avg Reliability	Logistics Score
<b>Total Logistic Chain</b>	<b>277000</b>	<b>557.1</b>	<b>225</b>	<b>15</b>	<b>60</b>

Logistics SubChains

Choose	Name	Cont/Year	Price	Time	Reliability	Logistics Score
<input type="checkbox"/>	Mumbai-JNPT-Delhi Industria...	73000	556	227	12	59
<input checked="" type="checkbox"/>	Mumbai-JNPT-Rail Node-Tuk...	148000	635.91	244	20	57
<input type="checkbox"/>	Mumbai-JNPT-Rail Node-Ah...	26000	359.53	169	19	63
<input type="checkbox"/>	Mumbai-JNPT-Ahmedabad / ...	20000	336.75	182	14	62
<input type="checkbox"/>	Mumbai-JNPT-Rail Node-Va...	10000	353.02	167	17	63

Nodes

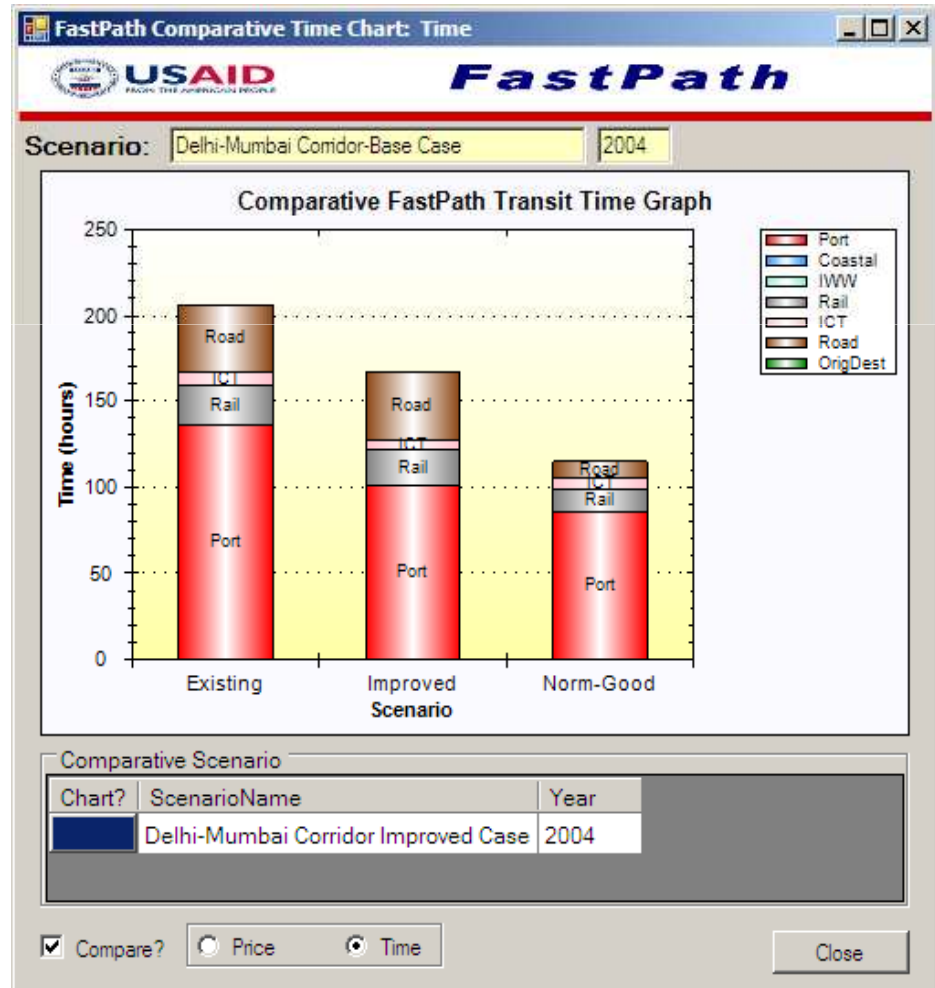
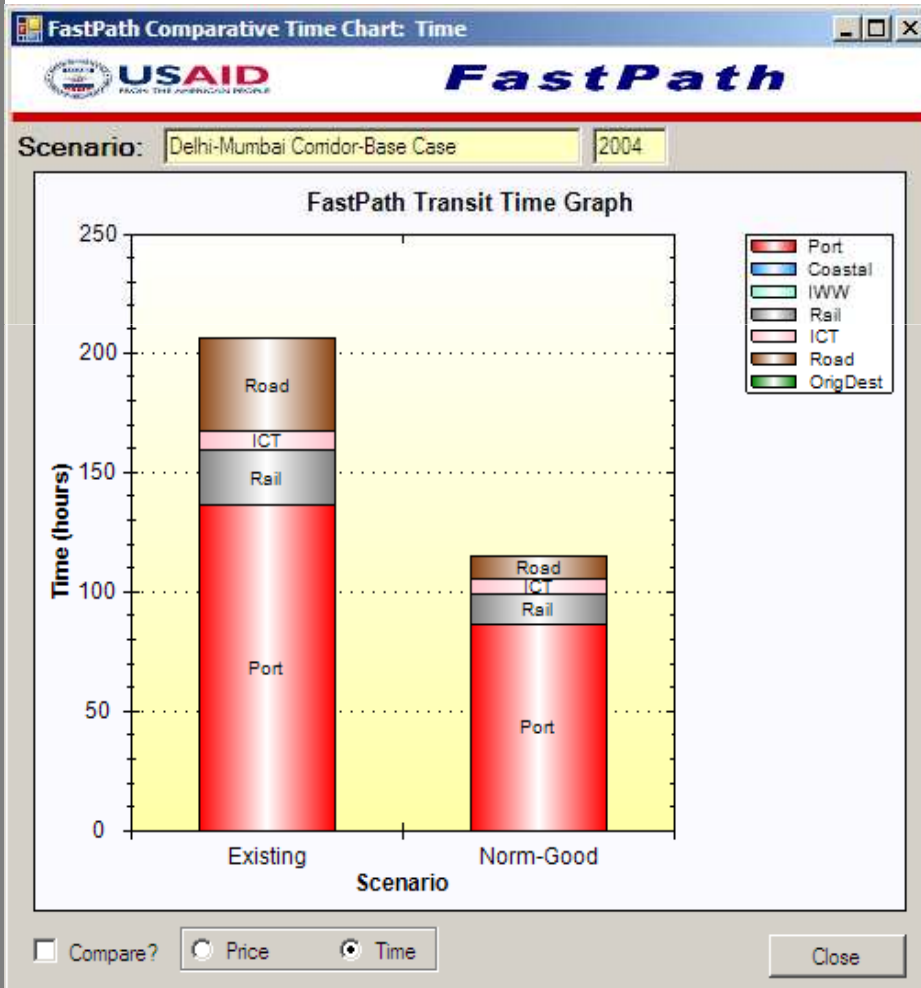
Details	Name	Logistics Score
<input checked="" type="checkbox"/>	Mumbai-JNPT	63
<input type="checkbox"/>	Rail Node	80
<input type="checkbox"/>	Tukhlabad	22
<input type="checkbox"/>	Delhi via TKD	0

Links

Details	Name	Logistics Score
<input checked="" type="checkbox"/>	Mumbai-Vadodara Jct...	71
<input type="checkbox"/>	Vadodara Jct - TKD ...	62
<input type="checkbox"/>	TKD - Delhi Connecto...	43

Buttons:

# 4. FastPath's Graphic Display of Results



## 4. Other *FastPath* Functions

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The *FastPath* software calculates:

- A general Logistics Score for each component of the Transport/Logistics Chain
- Logistics scores for the railway system
- Costs and benefits and Net Present Value
- The Economic Importance of a Transport/logistics Chain



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## *FastPath* in Other Regions

## 5. *FastPath* in other regions

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- **India**
- **Bangladesh**
- **ASEAN Countries\*\***
- **Sri Lanka**
- **Mozambique**
- **South Africa**

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# **Working with Stakeholder and Contractors**

## 6. Stakeholders

### Working with the Stakeholders, the *FastPath* team:

- Asks for information about logistics performance (price, time and reliability) in the corridor and data sources
- Consults with the stakeholders about the best sources for checklists and interviews
- Asks for comments on critical issues, accuracy of information
- Asks for information on initiatives for potential improvements
- Asks for comments on different reports
- Provides a tool for continuing corridor performance monitoring by stakeholders

## 6. Stakeholders and Contractor

### What we leave with the stakeholder group

- A diagnostic report
- Suggested actions
- Continued interaction between stakeholders and the contractor to continue corridor performance monitoring

### What we leave with the customer

- FastPath model with data for the corridor(s)
- The diagnostic report with suggested actions
- Final report
- A method to prioritize areas for improvement credibly and transparently
- The support of Nathan Associates Inc. to improve logistics systems and benchmark with other regions

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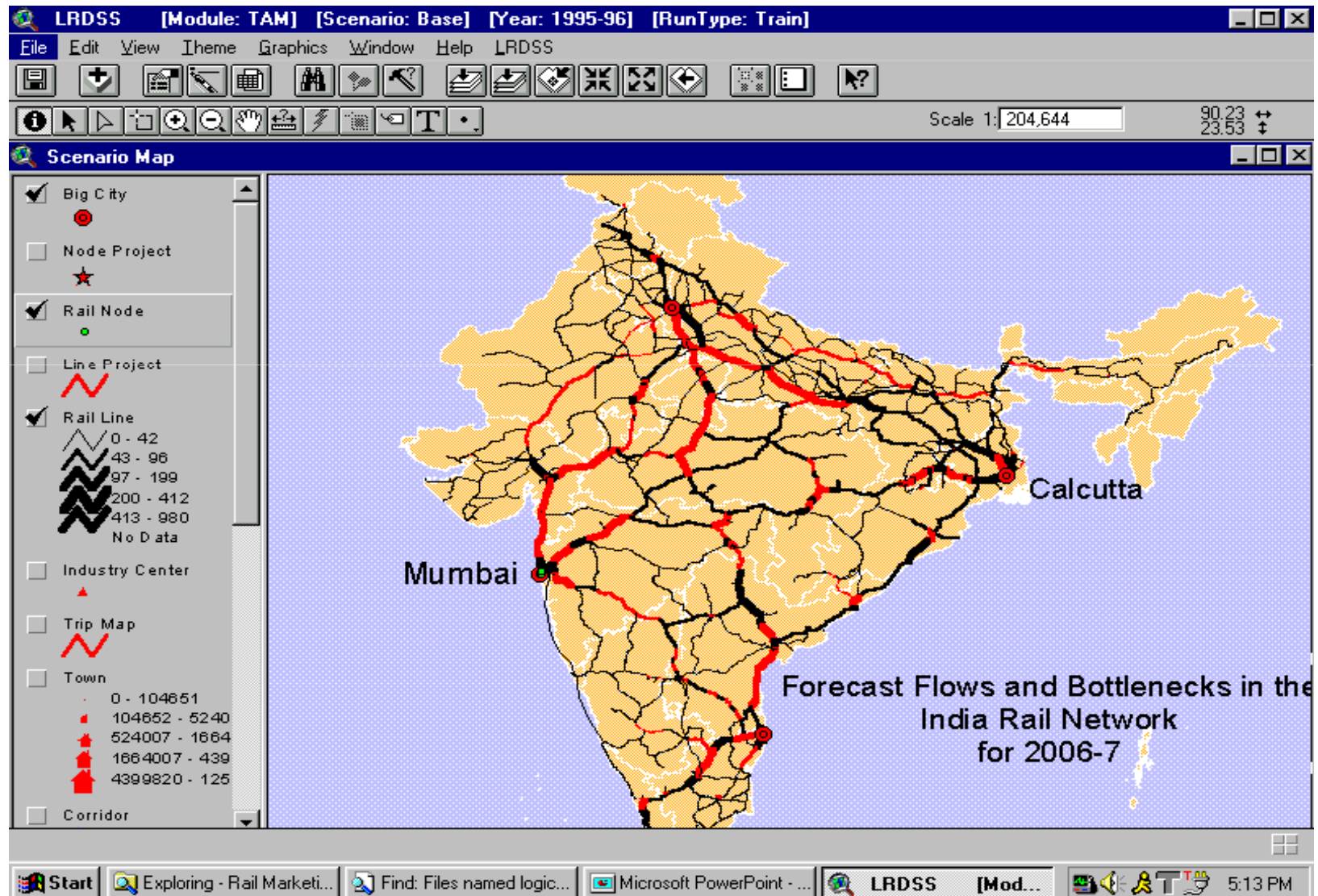
## **Future of *FastPath***

## 7. Future of FastPath

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- In the future FastPath will be able to present performance results on a GIS map using color coding and red flags for performance issues (see example)
- Also work with the World Bank is leading to development of further detailed output tables for cross-border analysis

## 7. Example of GIS Map-Base Performance Reporting







# **Conclusions**

# Conclusions

## Spain in the Global Context

- On the Doing Business Report Project Spain ranks 49/181 countries. Moderate position compare to other OECD countries and stakeholders of the project
- In trading across borders (Customs and Transport/Logistics) Spain ranks 52/181. Low position
- The gap between Spain and the OECD countries is significant in documentation for import and export and positive in time and cost for imports

# Conclusions

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## *FastPath*<sup>TM</sup>

- FastPath can identify logistics areas that government and stakeholders can address to improve the Central Pyrenees competitiveness.
- FastPath helps determine the priorities for where improvements should be made.
- FastPath provides the ability to benchmark performance to assess progress made from strategies that are implemented.
- FastPath help to reach consensus among stakeholders (Customs, Shippers, Consignees, Government, port, etc

# Conclusions

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- In the future FastPath will be even more effective in performance reporting
- The Fundacion Transpirineica or the ministry could play an important role in monitoring performance of the railway high capacity corridor.