New Research and Innovation Strategy for Construction in Europe

The Strategies for the Networks in the Process of Integration and Development of Europe

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Autostrade Group Delegate in Aiscat

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1. Critical steps toward integration of European networks
2. Emerging trends in toll motorway industry
3. Closing Remarks
## General Overview

### Network Construction
- **’50s – ’80s**
  - Post war economy
  - Iron curtain
  - State/Government owned companies
  - Toll system/taxes to finance investments
  - Lack of pressure from the market

### Liberalization Privatization
- **1990s**
  - Unified European Market (380 million inhabitants)
  - De-concentration of productive activity
  - High competition in the global market
  - Urgency to sell national assets to meet budget targets
  - Users are more likely to accept the concept of paying for service operated by private subjects

### New Structural Model
- **21st Century**
  - EU enlargement to Eastern Countries (450 million inhabitants)
  - Demand for new infrastructure and services
  - International interchange imposes logistic and technological interconnection
  - Need for private funding
  - M&A driven by large investments required to face new demand

### Context
- Post war economy
- Iron curtain
- Unified European Market (380 million inhabitants)
- De-concentration of productive activity
- High competition in the global market
- Urgency to sell national assets to meet budget targets
- Users are more likely to accept the concept of paying for service operated by private subjects
- EU enlargement to Eastern Countries (450 million inhabitants)
- Demand for new infrastructure and services
- International interchange imposes logistic and technological interconnection
- Need for private funding
- M&A driven by large investments required to face new demand
The European Transport Politics

- TEN-T implementation is one of the main pillar towards European phisical integration

- The tools allowing the development of TEN-T networks are “real” as well as “virtual”

- The EU White Paper “European Transport Policy for 2010: time to decide” is under revision:

  - **Threats**: rising congestion; increasing pollution, lack of safety and security

  - **Opportunities**: the mobility of people and goods as a tool to enhance economic growth, social welfare and job creation

Integration as the key-solution for sustainability in transport system
Creation of integrated Trans-National Networks: 30 priority project defined by Van Miert high level group to be launched before 2010

TEN-T network operators are in charge to manage infrastructures together with the services necessary for the operation of these infrastructures

Creation of global logistic networks, as EU White Paper forecasts a 38% increase in the demand for goods transport by 2010
Critical Asset for TEN-T Implementation

- **Construction:**
  - encouraging private operators to invest
  - stimulate competition through competitive tendering

- **Interoperability:**
  - pushing towards harmonisation of common rules
  - achieve standardisation of ETC systems

- **Sustainability:**
  - improving safety
  - reevaluating economic and environmental dimension of projects

- **Co-modality:**
  - develop all single mode, focusing on cross-border projects and concentrating on junctions between transport systems
Table of Contents

1. Critical steps toward integration of European networks

2. Emerging trends in toll motorway industry

3. Closing Remarks
Over the last 15 years motorway industry is experiencing some significant changes:

1. Evolution towards Toll system
2. Privatisation
3. Consolidation
4. Business Integration
Evolution Towards Toll System

- **Latin Countries**: Toll motorways
- **Central & Northern Europe**: Shadow Toll \(\rightarrow\) Toll introduction
- **Eastern Europe**: Network under development

<table>
<thead>
<tr>
<th>Motorway Network</th>
<th>Total Km</th>
<th>Tolled Km</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-15</td>
<td>53,000</td>
<td>31,000</td>
</tr>
<tr>
<td>EU New Comers</td>
<td>3,000</td>
<td>500</td>
</tr>
</tbody>
</table>
Shareholding Structure

- 50,1% Schema28 (Edizione Holding, Italian financial institutions, Abertis)
- 49,9% Floating

- 59% ACS + Spanish financial institutions
- 41% Floating

- 68% Vinci
- 32% Floating

- 46% Portugal Financial institutions
- 10% Abertis
- 44% Floating
In each Southern European country a major private operator controls a market share of 50% (ASF + Cofiroute) to 80% (Brisa) of total national network.

### Italy

<table>
<thead>
<tr>
<th>Operator</th>
<th>Km</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autostrade Group</td>
<td>3,408.1</td>
<td>52%</td>
</tr>
<tr>
<td>Gavio Group</td>
<td>973.4</td>
<td>15%</td>
</tr>
<tr>
<td>Anas</td>
<td>894.0</td>
<td>14%</td>
</tr>
<tr>
<td>Other concessionaires</td>
<td>1,211.8</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Total network</strong></td>
<td>6,487.3</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Portugal

<table>
<thead>
<tr>
<th>Operator</th>
<th>Km</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brisa</td>
<td>1,006.7</td>
<td>81%</td>
</tr>
<tr>
<td>Ado and others</td>
<td>236.9</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Total network</strong></td>
<td>1,243.6</td>
<td>100%</td>
</tr>
</tbody>
</table>

### France

<table>
<thead>
<tr>
<th>Operator</th>
<th>Km</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinci/ASF</td>
<td>3,867</td>
<td>49%</td>
</tr>
<tr>
<td>Eiffage/APRR</td>
<td>2,198</td>
<td>28%</td>
</tr>
<tr>
<td>SANEF</td>
<td>1,683</td>
<td>21%</td>
</tr>
<tr>
<td>Others</td>
<td>224</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Total toll network</strong></td>
<td>7,972</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Spain

<table>
<thead>
<tr>
<th>Operator</th>
<th>Km</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acesa</td>
<td>599</td>
<td>22.9%</td>
</tr>
<tr>
<td>Iberpistas</td>
<td>417</td>
<td>16.0%</td>
</tr>
<tr>
<td>Aurea</td>
<td>506</td>
<td>19.4%</td>
</tr>
<tr>
<td>ENA</td>
<td>479.5</td>
<td>18.4%</td>
</tr>
<tr>
<td>Europistas</td>
<td>84.3</td>
<td>3.2%</td>
</tr>
<tr>
<td>Others</td>
<td>526.4</td>
<td>20.1%</td>
</tr>
<tr>
<td><strong>Total Toll Network</strong></td>
<td>2,612.2</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Abertis is the result of 3 operators integration. 58.3% of national network; 1,522 km.
The traditional concession contract concerns financing, construction and management of the infrastructure until the end of the concession period.

Right and obligations are stipulated by the parties, consistently with the legal environment of each country.

European Parliament is going to define specific rules regarding concession as a particular contract in PPP framework.

The new legal scheme should consider the emerging trend towards business integration.
The New Business Integration Model

Core business

New Infrastructure
- Airport
- TLC
- Logistic

Value added services
- Safety systems
- Infomobility
- ETC

International development
- Nord Europa
- Est Europa
- America Latina
- Far East

Urban areas
- Telematic control of traffic in Urban Areas
- Global service
- Parking

Traditional services
- Service areas
- Assistance
- Advertising
- Tower management
Table of Contents

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The largest operator of toll motorways in Italy:

- 3,408 Km under concession, equal to 61% of Italy’s toll road network
- €11 billion investment committed for road enhancement

No. 1 operator in Europe for dynamic tolling with over 5 million TELEPASS® customers in Italy

Interconnection function:

- 15 regions
- 60 cities
- 11 metropolitan areas
- 260 railway stations
- 26 ports
- 19 airports
During 2005, the Group’s total spending primarily for social and environmental purposes amounted to €1,002 million: €398 million in current expenditure and €604 million in investments. This represents an increase of 25% on 2004.

### SOCIAL AND ENVIRONMENTAL INVESTMENTS AND EXPENDITURE OF THE AUTOSTRADE GROUP’S MOTORWAY CONCESSIONAIRES (€ M)

<table>
<thead>
<tr>
<th>Investment/Expenditure Description</th>
<th>2005</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investments in Infrastructure, Safety and Environment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction of third and fourth lanes and other upgrading works</td>
<td>468.0</td>
<td>315.7</td>
</tr>
<tr>
<td>Work on crash barriers, parapets, guardrails, acoustic barriers and landscaping works</td>
<td>33.3</td>
<td>28.3</td>
</tr>
<tr>
<td>Road signs, information and telecommunications</td>
<td>4.7</td>
<td>9.4</td>
</tr>
<tr>
<td>Development of automation and network modernisation</td>
<td>26.5</td>
<td>24.1</td>
</tr>
<tr>
<td>Work on infrastructures, tunnels, toll stations and related works</td>
<td>65.1</td>
<td>66.6</td>
</tr>
<tr>
<td>Surveillance, hydraulic regulation and monitoring of landslips barriers</td>
<td>1.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Upgrading of winter de-icing salts storage structures</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Workplace improvements</td>
<td>4.1</td>
<td>6.9</td>
</tr>
<tr>
<td>Total social and environmental investments</td>
<td>604.5</td>
<td>454.3</td>
</tr>
<tr>
<td><strong>Expenditure on Safety</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work on road surfaces</td>
<td>157.5</td>
<td>141.6</td>
</tr>
<tr>
<td>Maintenance works designed to ensure working order and efficiency of infrastructure</td>
<td>63.2</td>
<td>57.7</td>
</tr>
<tr>
<td>Parapets, guardrails and other safety works</td>
<td>41.2</td>
<td>31.2</td>
</tr>
<tr>
<td>Motorist assistance, information, road signs, motorway patrols</td>
<td>39.8</td>
<td>27.9</td>
</tr>
<tr>
<td>Lighting, facilities</td>
<td>15.2</td>
<td>16.3</td>
</tr>
<tr>
<td>Cleaning and pest control</td>
<td>9.5</td>
<td>9.5</td>
</tr>
<tr>
<td>Green engineering works</td>
<td>10.2</td>
<td>9.1</td>
</tr>
<tr>
<td>Winter operations</td>
<td>44.0</td>
<td>36.2</td>
</tr>
<tr>
<td>Toll collection equipment innovation and other maintenance works</td>
<td>6.7</td>
<td>8.0</td>
</tr>
<tr>
<td>Workplace improvements</td>
<td>8.6</td>
<td>9.2</td>
</tr>
<tr>
<td>Research and development</td>
<td>2.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Total social and environmental expenditure</td>
<td>398.1</td>
<td>348.6</td>
</tr>
<tr>
<td><strong>Total Social and Environmental Investments and Expenditure</strong></td>
<td>1,002.5</td>
<td>802.9</td>
</tr>
</tbody>
</table>
Looking at the Future

**Infrastructure Management**
- Increase efficiency and improve service to users

**Tolling**
- Achieve an harmonized and multi-operable payment system throughout different countries and States, managing the transition before the shift towards Satellite tolling Systems

**Traffic Management**
- Introduce innovation in traffic monitoring and control systems, with positive impact on smoother traffic flows, lower pollution levels and reduced stress

**Information Management**
- Segment customer needs and create an advanced mobility system

**Safety**
- Enforce the advanced speed control system (Tutor) to detect the average speed of vehicles on a variable length section

**R&D**
- In all construction and operation fields