1. FUNDAMENTALS

2. PORTUGUESE MODEL

3. INTERNATIONAL DESIGNS

4. CONCLUSIONS
Network: International, National
Planning. Objectives, Decision Making Criteria
Financial Management Tools (CNIR/NARI). UNITE project
Concession Contracts
➢ Road Non-Price Factors:
  ✓ Quality + Safety + Environmental
➢ Road User Charges
➢ Institutional Design
➢ Contract Enforcement Systems
1. FUNDAMENTALS

2. PORTUGUESE MODEL

3. INTERNATIONAL DESIGNS

4. CONCLUSIONS
PORTUGUESE MODEL

TRANSEUROPEAN NETWORK (TERN)

94% NOW COMPLETED IN PORTUGAL
PORTUGUESE MODEL

NATIONAL ROAD PLAN (PRN 2000)

75% COMPLETED
BY 2013
UNDER PRESENT CONTRACTS
• PPP perceived as an effective way for the rapid delivery of infrastructure and for the improvement of service to end-users

• Intensive PPP Program to anticipate the conclusion of PRN Plan
PORTUGUESE MODEL

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26th May 2010
Alberto Moreno – President InIR, IP
PRINCIPLES

• Social cohesion
• Intergenerational solidarity
• Long-term contracting
• Set up a global price of service
• Private sector participation
• Environmental efficiency incentives
• Road safety incentives
PORTUGUESE MODEL

InIR, IP – ROAD REGULATORY INSTITUTE

- Created in 2008
- Management of 16 State concessions
- Supervises user service levels
- Establishes technical standards
- Strategic network planning
- Income: Regulation Tax (vehicle . Km)
- Out of Government Budget
PORTUGUESE MODEL

ESTRADAS DE PORTUGAL - EP, SA

- Incorporated in 2008
- 100% State owned shares
- 75-year general concession
- Incentives related to quality & safety levels
- Contracts Subconcessions
- Future holding of State Concessions and total PRN 2000 Network
<table>
<thead>
<tr>
<th>Sources of Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR - % of Fuel Tax (annual 570 M€)</td>
</tr>
<tr>
<td>Real tolls (part of network)</td>
</tr>
<tr>
<td>Long-term bank loans</td>
</tr>
<tr>
<td>Subconcessions grant payments</td>
</tr>
<tr>
<td>European Community Funds</td>
</tr>
<tr>
<td>Other EP,SA revenues</td>
</tr>
<tr>
<td>Out of Government Budget</td>
</tr>
</tbody>
</table>
PORTUGUESE MODEL

EP,SA SUB-CONCESSIONS

BIDDING EVALUATION CRITERIA

• Net Financial Effort
  ➢ NPV toll revenues
  ➢ NPV Fixed Availability payments (€/km) + NPV Variable Service payments (€/traffic)

• Quality of Technical Proposal
PORTUGUESE MODEL

OTHER STATE CONCESSIONS & EP,SA SUBCONCESSIONS

- 30 yrs design, build, finance & operate
- Completion, operation, financing & traffic risk transferred to private partner
- State assumes force majeure risk
- State may reclaim early, paying off financiers
- Assets revert to State in good repair
- Environmental risk shared/minimised
### PORTUGUESE MODEL

#### RISK MATRICES

<table>
<thead>
<tr>
<th>RISKS</th>
<th>ASSIGNMENT TO:</th>
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<tbody>
<tr>
<td></td>
<td>STATE</td>
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<tr>
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<td>Environment</td>
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<td>Expropriations</td>
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<td>Construction</td>
<td>☐</td>
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<tr>
<td>O&amp;M</td>
<td>☐</td>
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<tr>
<td>Traffic</td>
<td>☐</td>
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<tr>
<td>Legislative</td>
<td>☐</td>
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<tr>
<td>Force Majeure</td>
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</tbody>
</table>
PORTUGUESE MODEL

Present Structure

GOVERNMENT - Grantor

Contractualization

InIR I.P. - Regulator

National Road Plan

Real Toll Concessions

Subconcessions

Estradas de Portugal, SA

Shadow Toll Concessions

Users

Government

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PORTUGUESE MODEL

Future Structure

GOVERNMENT - Grantor

Contractualization

InIR I.P. - Regulator

National Road Plan

Estradas de Portugal, SA

Real Toll Subconcessions

Other Subconcessions

Shadow Toll Subconcessions

Users

Government
## Present Concessions and Pricing System

### PORTUGUESE MODEL

<table>
<thead>
<tr>
<th>REAL TOLL</th>
<th>EP TOLL</th>
<th>SHADOW TOLL</th>
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<tbody>
<tr>
<td><strong>State Concessions</strong></td>
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<tr>
<td>BRISA</td>
<td>AENOR</td>
<td>NORSCUT</td>
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<td>BRISAL</td>
<td>G.LISBOA</td>
<td>EUROSCUT ALGARVE</td>
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<td>A.E. ATLANTICO</td>
<td>G.PORTO</td>
<td>BEIRA INTERIOR</td>
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<td>C.PRATA</td>
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<td>EUROSCUT NORTE</td>
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<td></td>
<td>BEIRA LITORAL E ALTA</td>
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<td><strong>EP Subconcessions</strong></td>
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<tr>
<td>D.LITORAL</td>
<td>TÚNEL DO MARÃO</td>
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<tr>
<td>EP + 7 Subconcessions</td>
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</tr>
</tbody>
</table>
PORTUGUESE MODEL

PPP’S BENEFITS

- Earlier availability of infrastructures
- Attend EU’s strict debt criteria solution through Project Finance (*before crisis*)
- Adoption of White Book recommendations
- Awareness of cost of use of public services & goods (*Public Comparator*)
PORTUGUESE MODEL

CRISIS EFFECTS

- Increased financial costs
- Reevaluation of new concessions calendar
- Introduction of real tolls in shadow toll concessions
- Reassessment of PRN 2000
CNIR/NARI (NATIONAL ACCOUNT FOR ROAD INFRASTRUCTURES)

- Assess all socio-economic costs & benefits of the road sector
- UNITE project principles (DG TREN, EU)
- Annual structure: 2008, reference year
- Finalizing “pilot account”, to be updated annually
Accurate accounting of all costs & benefits (including external)

Infrastructure costs compared to user charges

Support of decision making in pricing & planning policies

Enhanced monitoring of concessionaries financial performance
Infrastructure costs = O&M + depreciation (historic) + financial + others

User costs = tolls + vehicle operation + travel time

Environmental costs = global warming + noise + air pollution

Accident costs
PORTUGUESE MODEL

CNIR/NARI

Identification of other financial flows in/out and within the road sector

- Real and shadow tolls paid to concessionaires
- Fuel and vehicle taxes paid by road users
- VAT over tolls and fuels
- Taxes over concessionaires’ revenues
- Earmarked taxes (Road Service Tax, CSR)
- Subsidies, fines, etc
PORTUGUESE MODEL

CNIR/NARI: Cost Coverage Ratios

Road Concessions: revenues/costs ratios (2008)

- Total Revenues over Total Costs
- Toll Revenues over Total Costs

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2008 Costs = 2.8 B €  
2008 Revenues = 2.5 B €  

2008 Balance = - 0.3 Billion €
PORTUGUESE MODEL

CNIR/NARI: Annual Network Costs

2008 Total Network Costs = 23.7 Billion €
PORTUGUESE MODEL

CNIR/NARI: Annual Cash-Flows Generated

2008 Cash-Flows Generated = 5.6 Billion €
1. FUNDAMENTALS

2. PORTUGUESE MODEL

3. INTERNATIONAL DESIGNS

4. CONCLUSIONS
<table>
<thead>
<tr>
<th>Country</th>
<th>Financing Model</th>
<th>Management Model</th>
</tr>
</thead>
</table>
| Portugal  | • PPPs  
            • General concessionaire (EP)  
            - Own revenues + loans  
            - PPPs (sub-concessionaires) | Centralised: General concessionaire (EP)               |
| Spain     | Public funding + PPPs                               | Decentralised: Central Government & Regional Governments |
| France    | Public funding + PPPs                               | Decentralised                                         |
| Italy     | Public funding + PPPs                               | Decentralised: ANAS & regions                         |
| Austria   | Public funding + PPPs + ASFINAG debt                | Centralised: ASFINAG for non concessioned roads        |
| Brasil    | Public funding + PPPs (growing)                     | Decentralised: regions & municipal                     |
| Australia | Public funding + PPPs (smaller scale)               | Decentralised: whole network                          |
## Regulatory Model

<table>
<thead>
<tr>
<th>Country</th>
<th>Government Branch</th>
<th>Public Administration Body</th>
<th>Independent Regulator</th>
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</thead>
<tbody>
<tr>
<td>Portugal</td>
<td>-</td>
<td>Public institute</td>
<td>-</td>
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<tr>
<td>Spain</td>
<td>Road Directorate, Ministry of Infrastructures</td>
<td>-</td>
<td>-</td>
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<tr>
<td>France</td>
<td>Road Department, Infrastructures Directorate</td>
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</tr>
<tr>
<td>Italy</td>
<td>-</td>
<td>ANAS department</td>
<td>-</td>
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<td>Road Department, Infrast. Directorate</td>
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<tr>
<td>Brasil</td>
<td>-</td>
<td>Public agency</td>
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<tr>
<td>Australia</td>
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## Regulatory Scope (Sectors)

<table>
<thead>
<tr>
<th>Country</th>
<th>Transport</th>
<th>Land Transport</th>
<th>Road Transport</th>
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# Regulatory Scope (Competences)

<table>
<thead>
<tr>
<th>Country</th>
<th>Policy Definition &amp; Planning</th>
<th>Standardisation</th>
<th>Safety &amp; Quality</th>
<th>Supervision &amp; Enforcement</th>
<th>Technical Dissemination &amp; International Representation</th>
<th>Competition; Arbitration of Conflicts</th>
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1. FUNDAMENTALS
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CONCLUSIONS

➢ Whole network under Concession Contracts
➢ PPP ➔ Previous acceleration (1998-2005-09)
➢ Technical Regulation
  ✓ Quality, safety & environment enforcement
  ✓ *Same indicators for all contracts: benchmarking*
CONCLUSIONS

- Reevaluation of PRN (2009...)

- Economic Regulation

  ✓ Tools for Social economic costs & road pricing management
Thank you for your attention

alberto.moreno@inir.pt