

Delivering the National Road Network Value for Money ?

November 2006

Engineers Ireland

Presented By

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Delivering the National Road Network Value for Money ?

Areas Covered

- Developing the Network – Transport 21
- European Comparisons
- Cost Trends - Ireland
- Project Assessment
- Industry Capacity
- Conclusion

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Developing the Network – Transport 21

Main Features

- 'Transport 21', launched 1 November 2005
- €34.4 billion investment in transport infrastructure
- Over €16 billion Exchequer funding for national roads to 2015
- Additional €2 billion in private finance

Key Inter-Urban Network

5 MIU Routes by 2010

N4/N6 Dublin to Galway

N7 Dublin to Limerick

N8 Dublin to Cork

N9 Dublin to Waterford

N1 Dublin to NI Border



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Developing the Network – Transport 21

Transport 21 and the Dublin Area

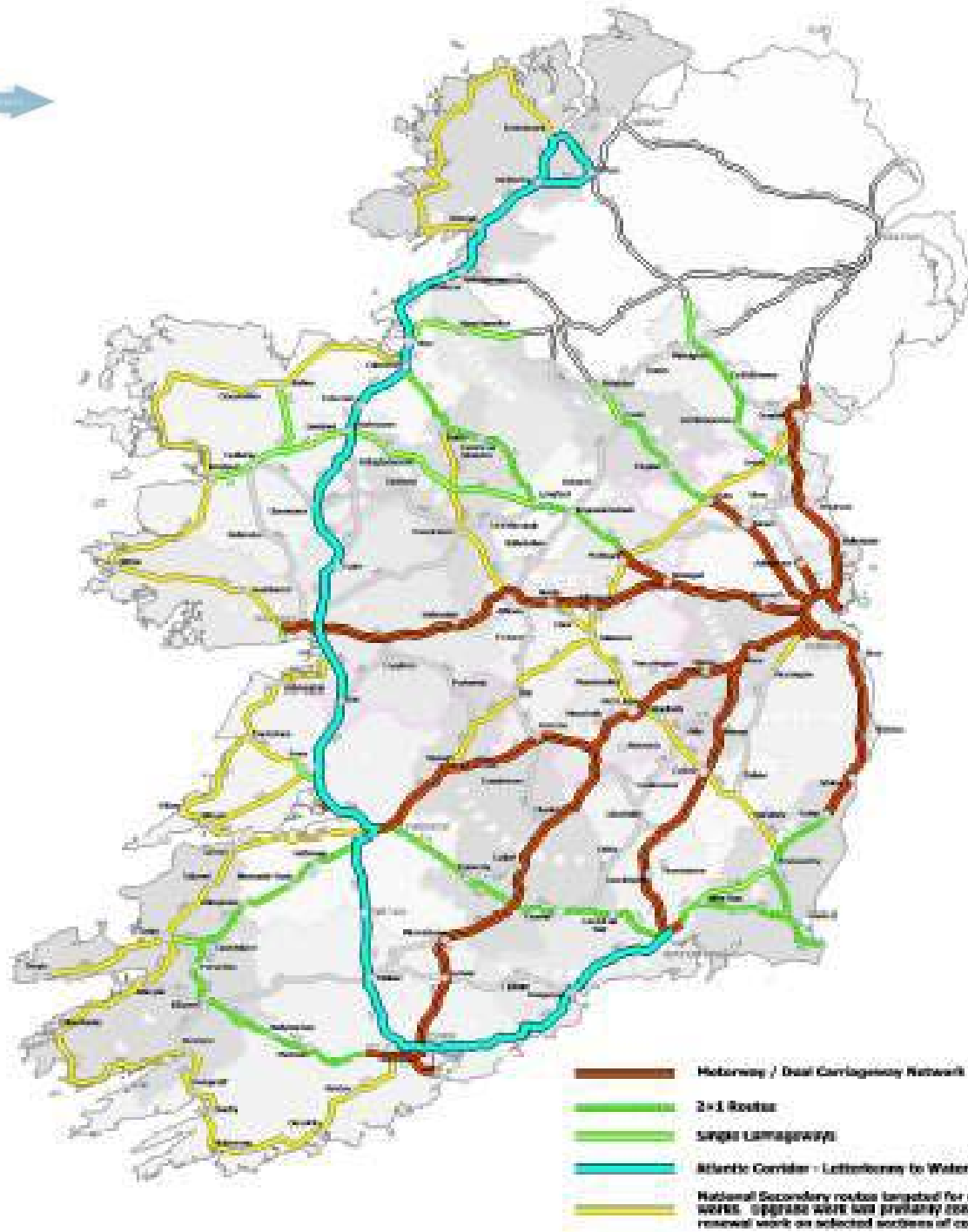
- €2 billion to be invested in national roads in the GDA under Transport 21 (excluding DPT)
- Priority project is the M50 Upgrade Scheme
 - 3 lanes in each direction plus ‘auxiliary’ lanes between junctions
 - Major junction upgrades to interchange standard
 - Electronic free flow tolling
- Phase 1 under construction – Phases 2 + 3 to start 2007

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Developing the Network – Transport 21

Other Elements of Transport 21

- Completion of dual carriageways to Ashbourne on the N2, Kells on the N3 and Gorey on the N11
- Improvement of strategic road links with Northern Ireland and to the west / northwest by upgrading the N2, N3, N4 and N5
- Development of the Atlantic Road Corridor from Letterkenny to Waterford.
- Improvements to other key national primary routes
- Targeted improvement of national secondary routes



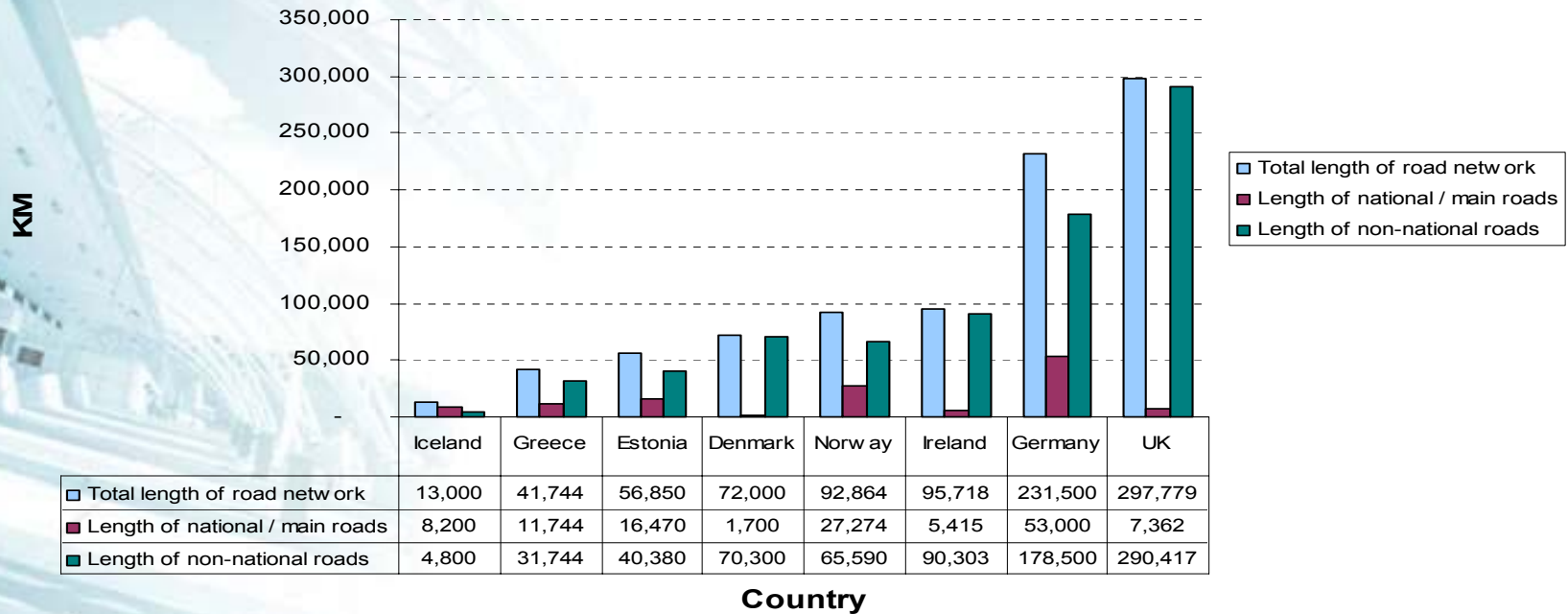
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European Comparisons

Size of Roads Networks

Road Details & Usage



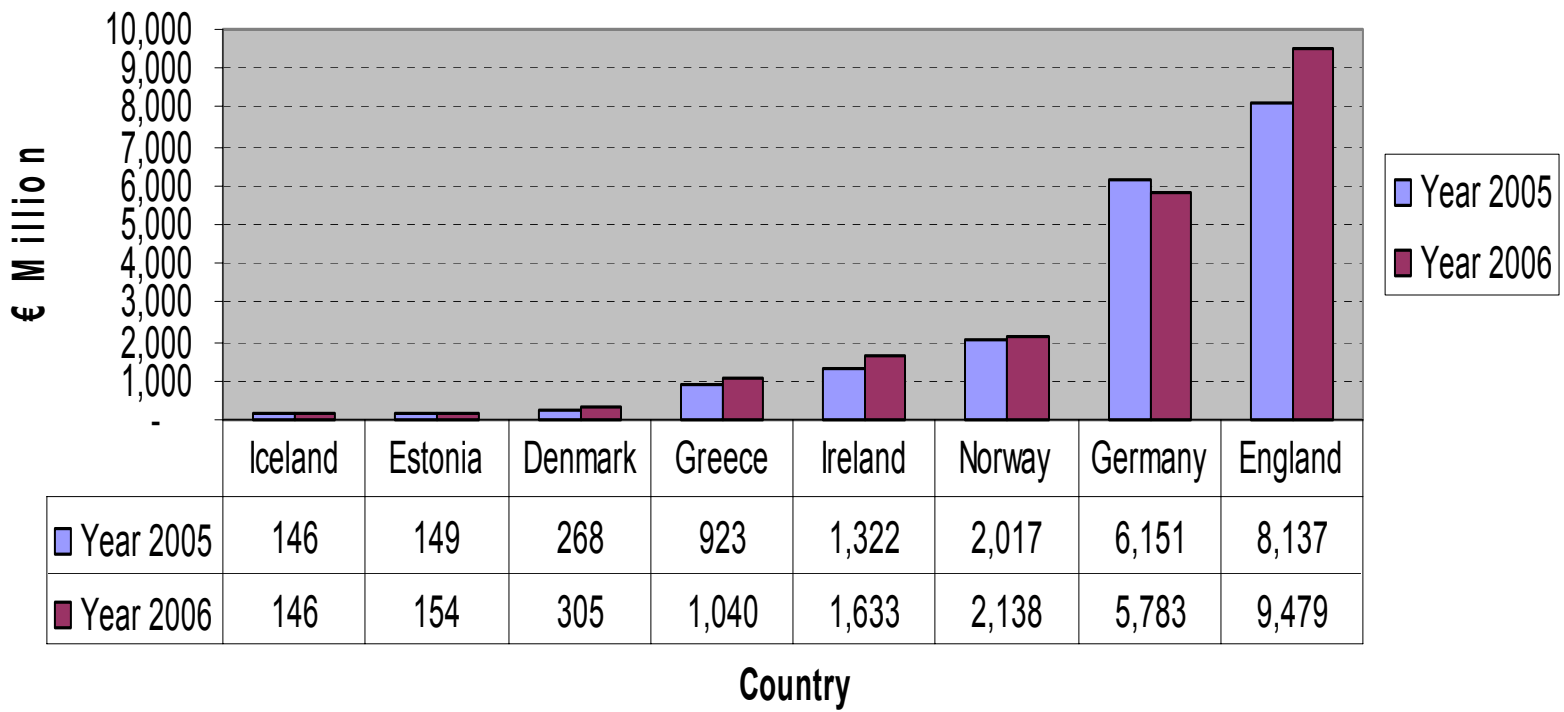
* **Comment:** Possible interpretation variance on classification of national/ main roads and non-national roads

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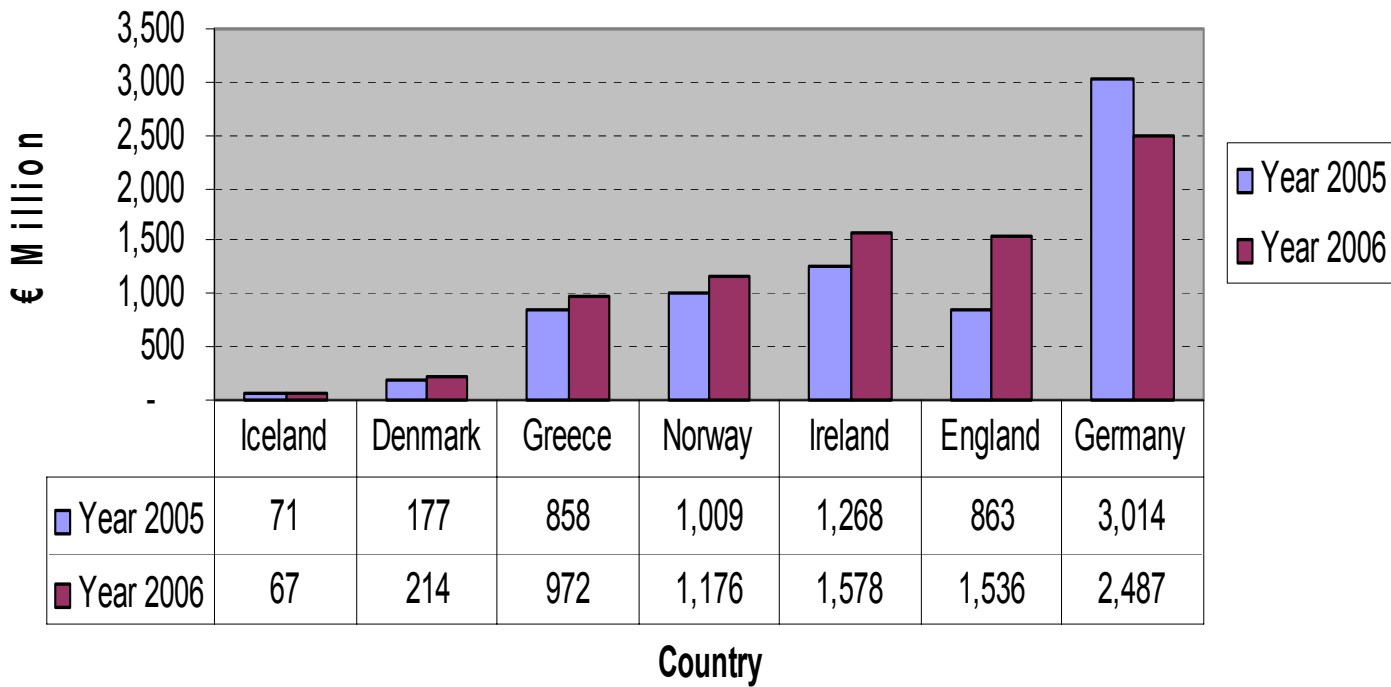
European Comparisons

Total National Roads Budget



Delivering the National Road Network Value for Money ? European Comparisons

New Construction Budgets

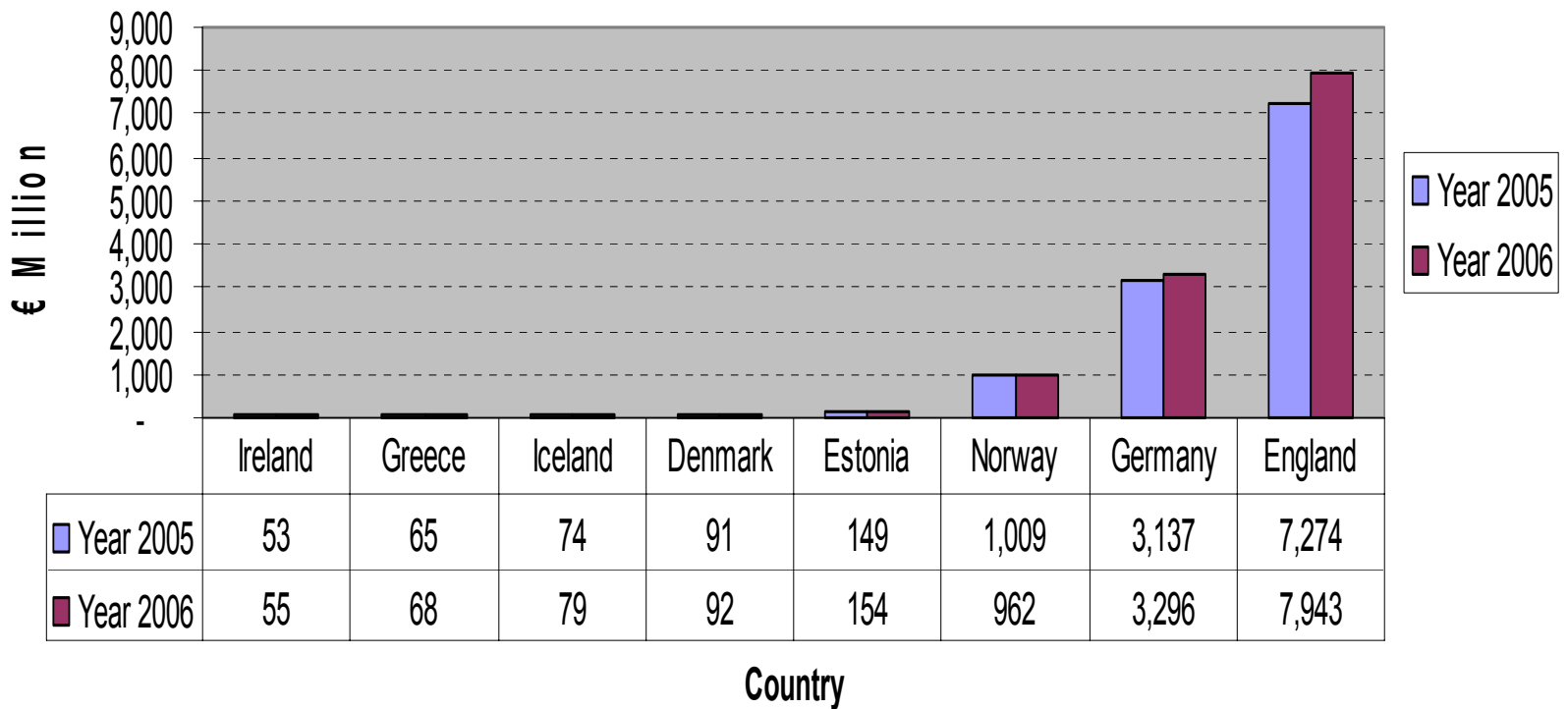


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European Comparisons

Maintenance / Operational Budgets

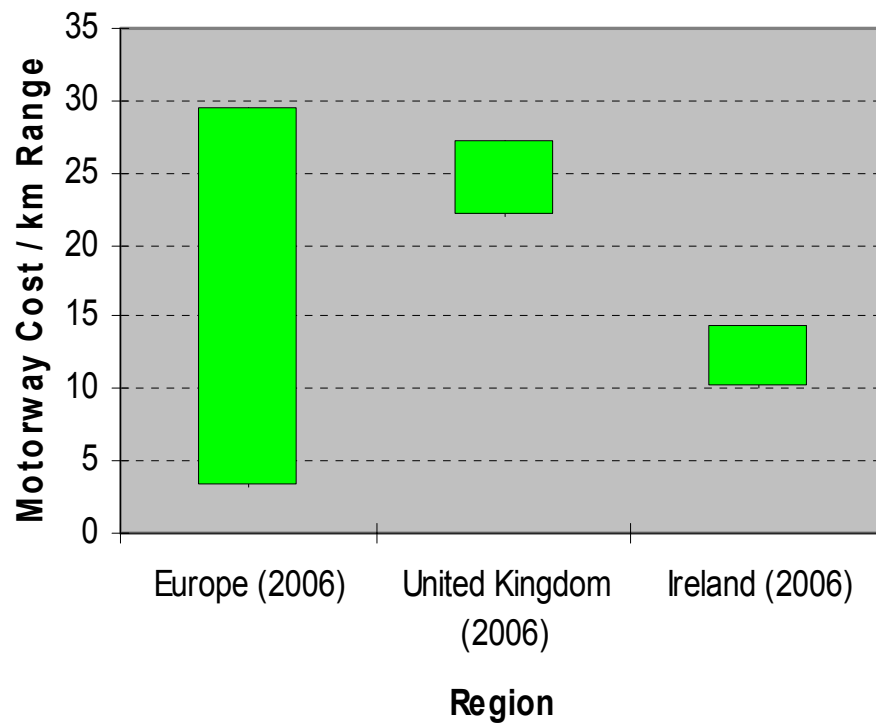


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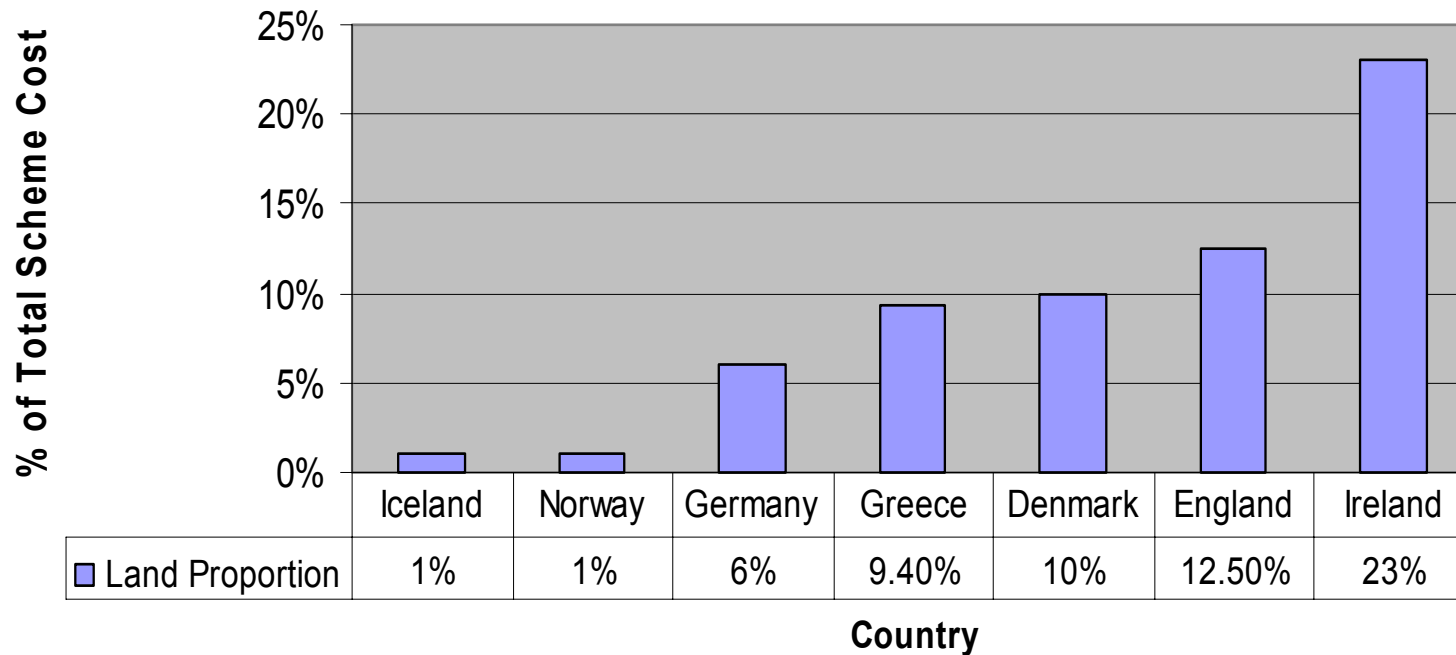
European Comparisons

All-in Motorway Costs / km



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Land and Property as a Proportion of Scheme Cost - 2006



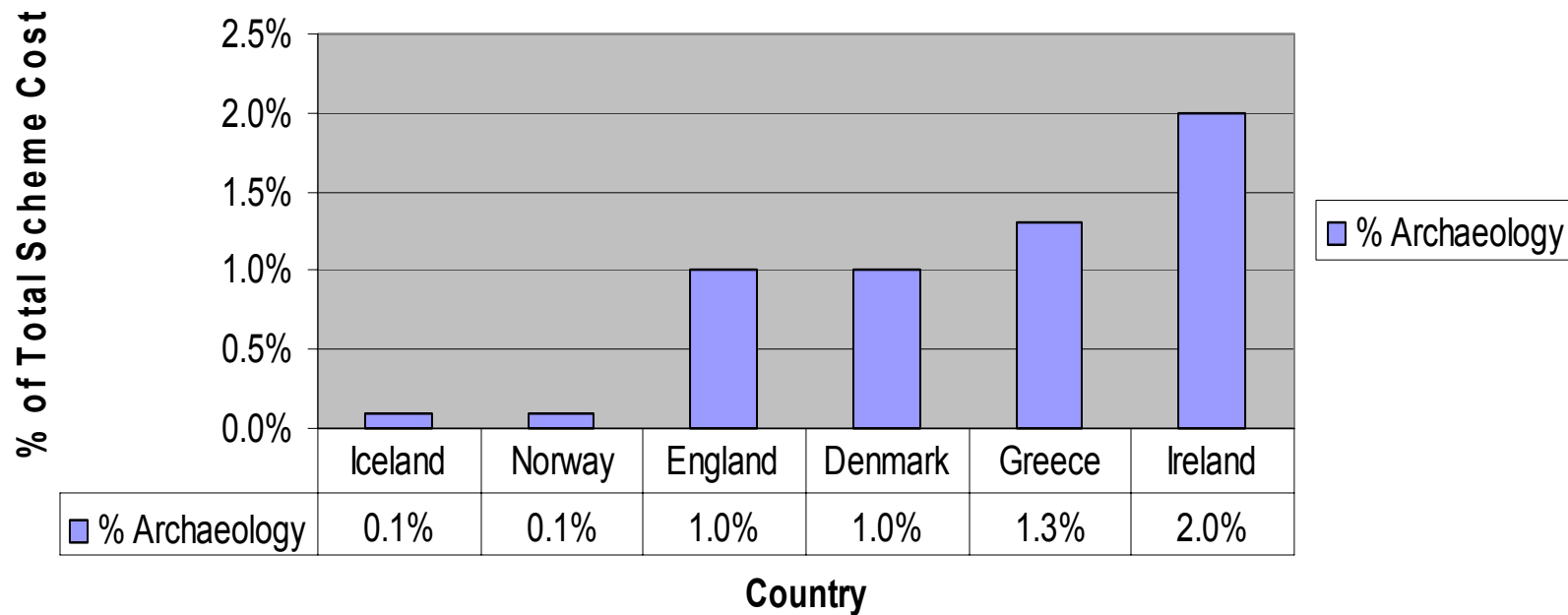
☐ Ireland's land proportion is highest

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European Comparisons

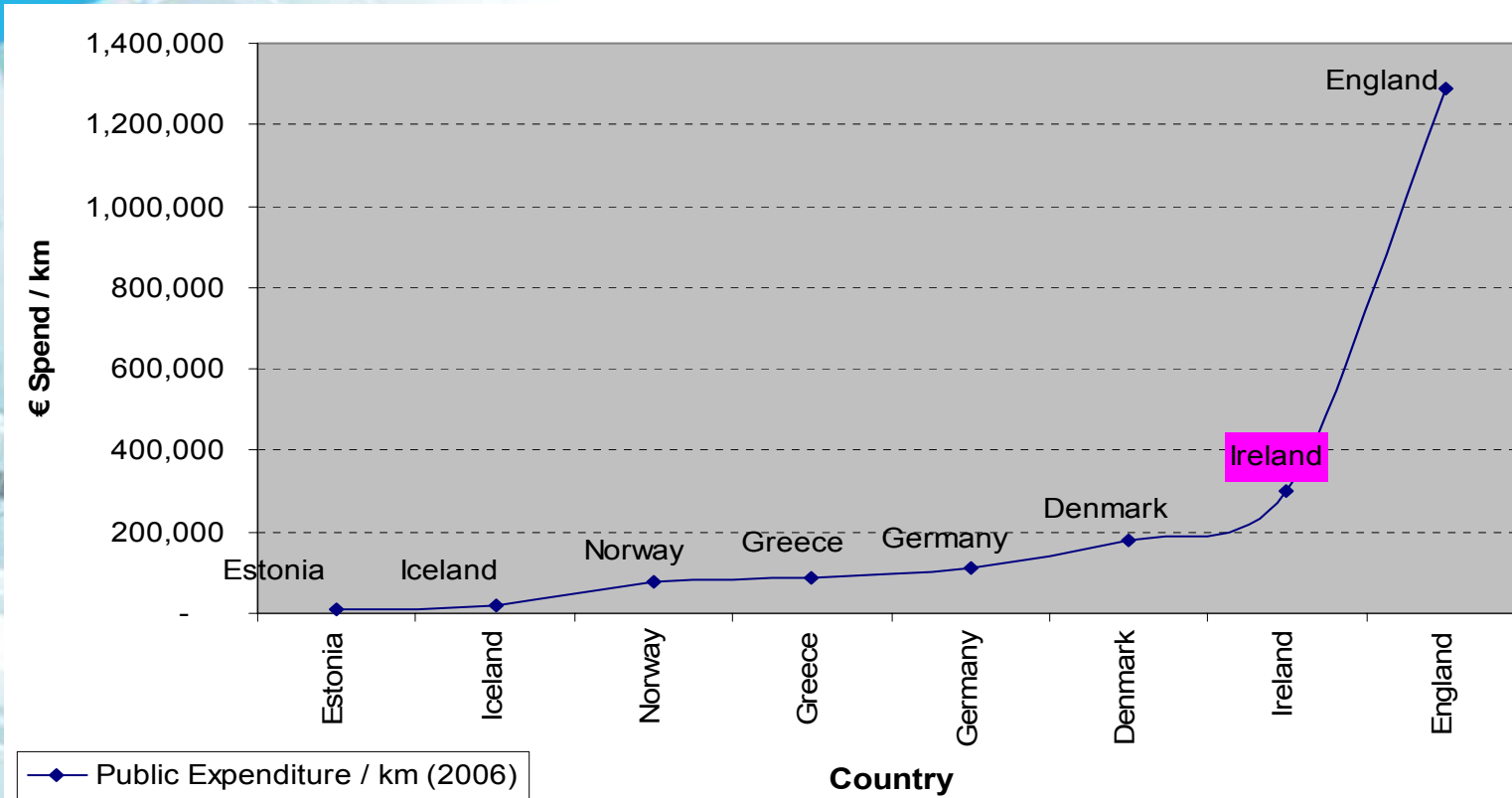
Archaeology as a % of Total Scheme Cost



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European Comparisons

Public Expenditure / Network km (2006)

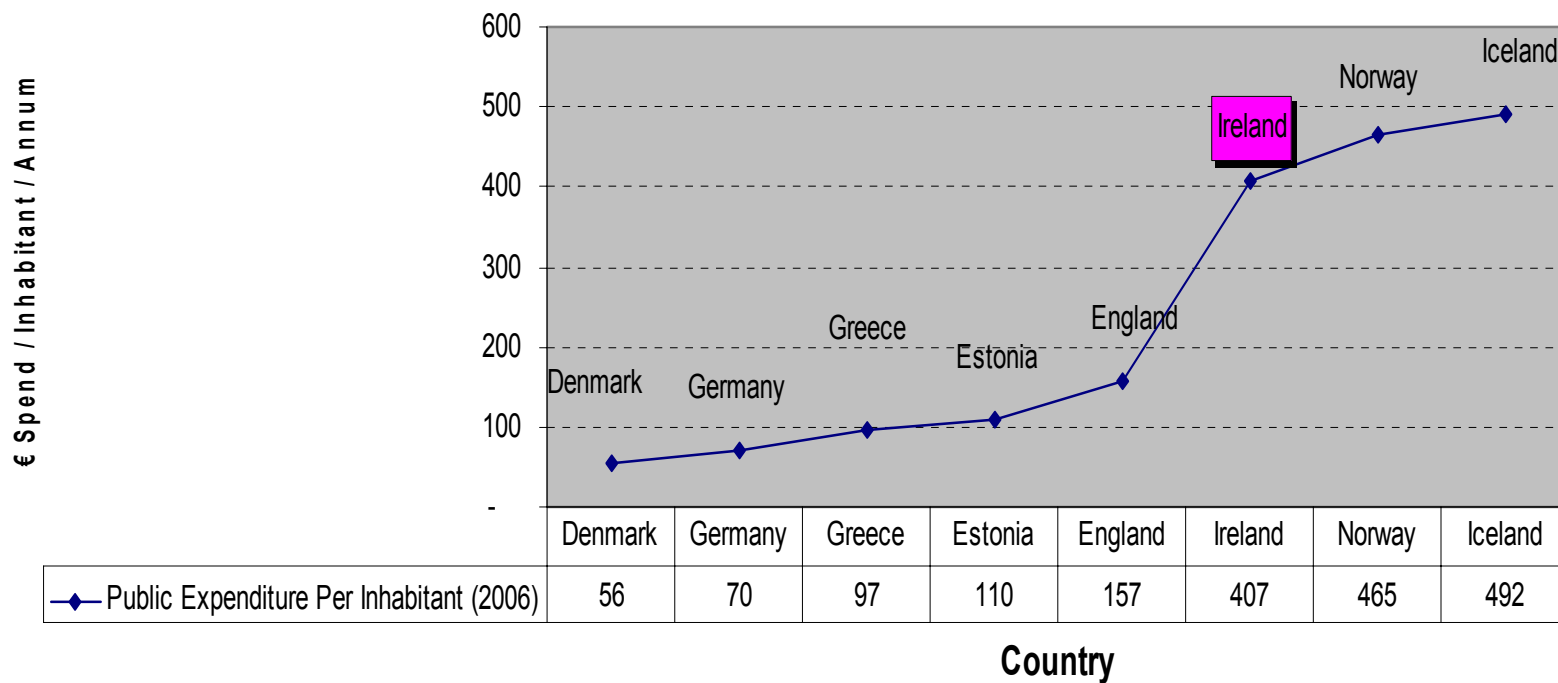


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European Comparisons

Expenditure on Roads per Inhabitant per Annum (2006)



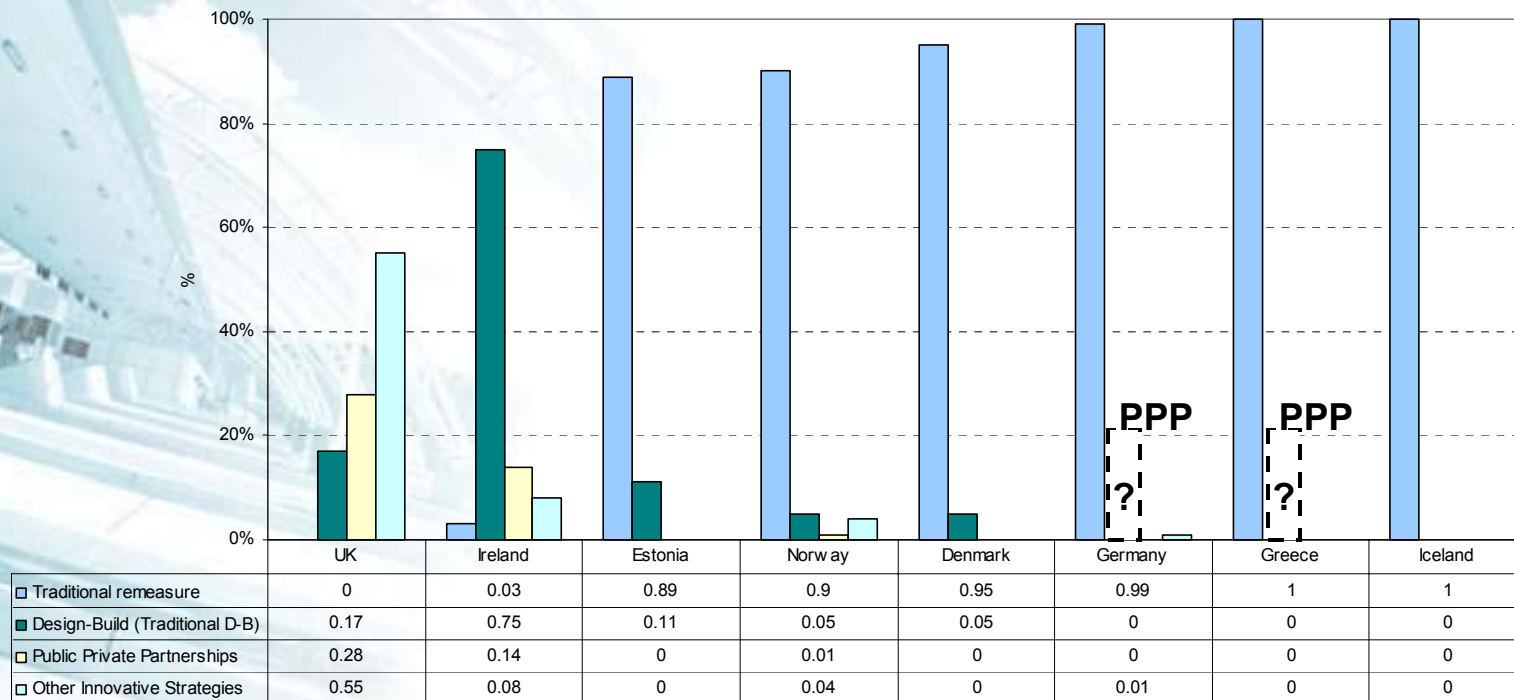
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European Comparisons

Comparison of Procurement Strategies

Procurement Route



Country

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European Comparisons

- Ireland has highly competitive construction costs
- As a % of Total Scheme Cost Ireland has highest land component
- Irelands expenditure on archaeology exceeds all European countries considered

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Cost Trends - Ireland

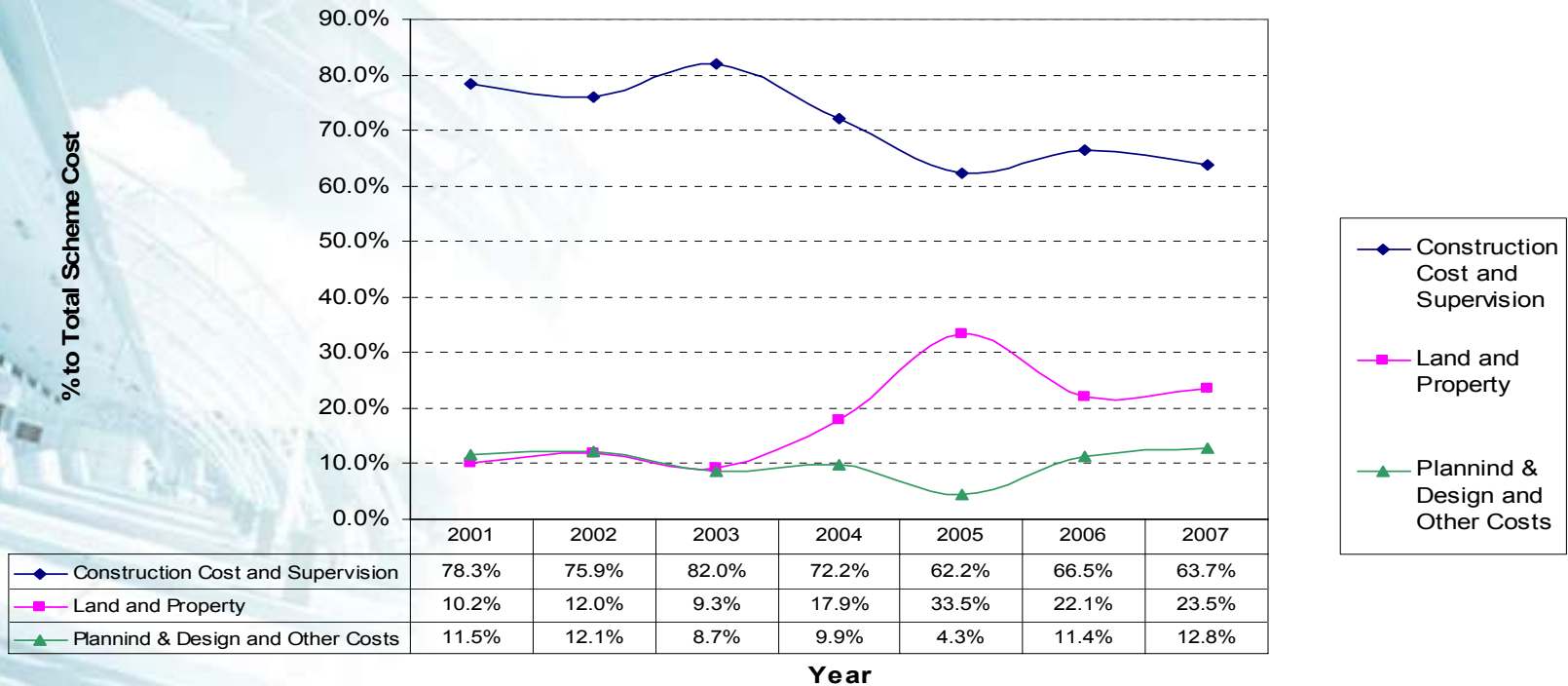
	COMPONENT	% BREAKDOWN		
		2002	2004	2006
1	Construction	75%	68%	66%
	<i>Labour</i>	31%	32%	30%
	<i>Materials</i>	26%	20%	20%
	<i>Plant</i>	18%	16%	16%
2	Land	9%	19%	22%
3	Design and Supervision	12%	10%	9%
4	Planning	4%	3%	3%

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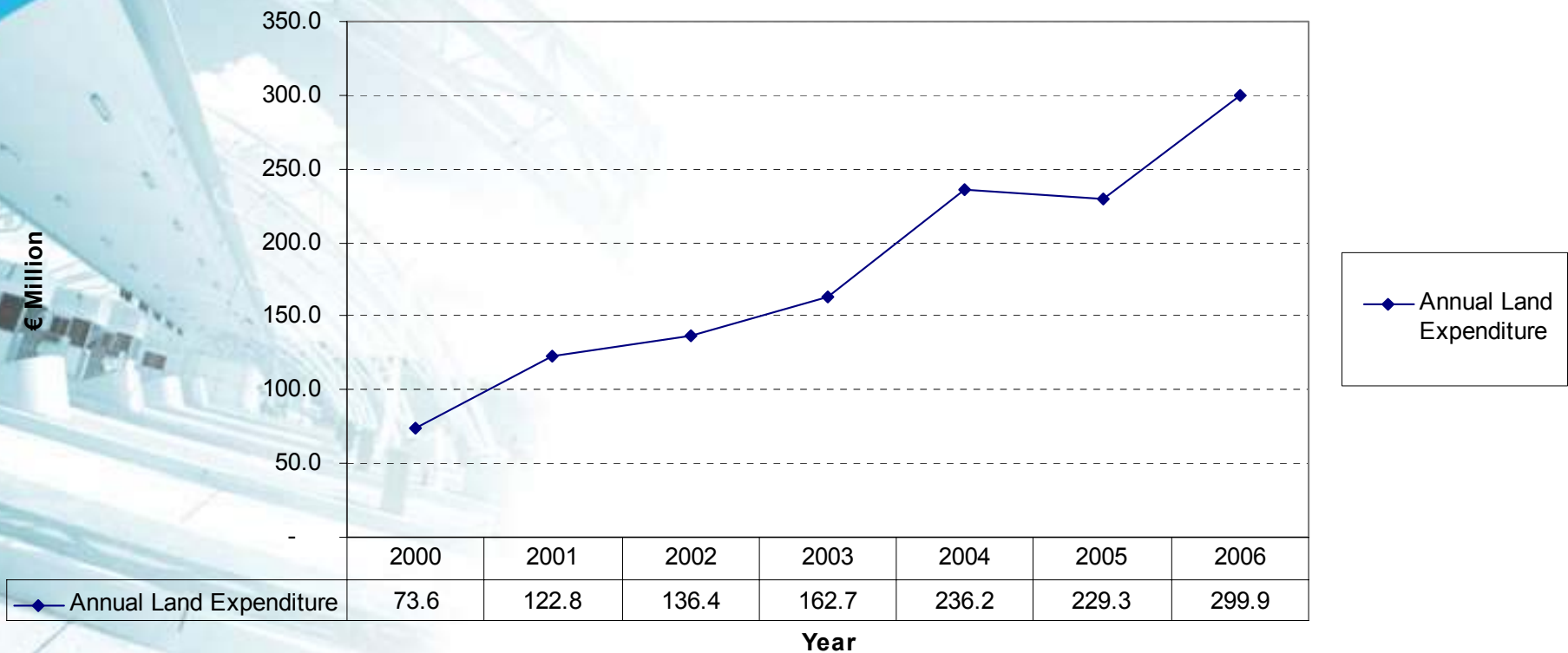
Cost Trends - Ireland

Key Project Elements Costs as % of Total Scheme Cost



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NRA Annual Expenditure on Land Acquisition

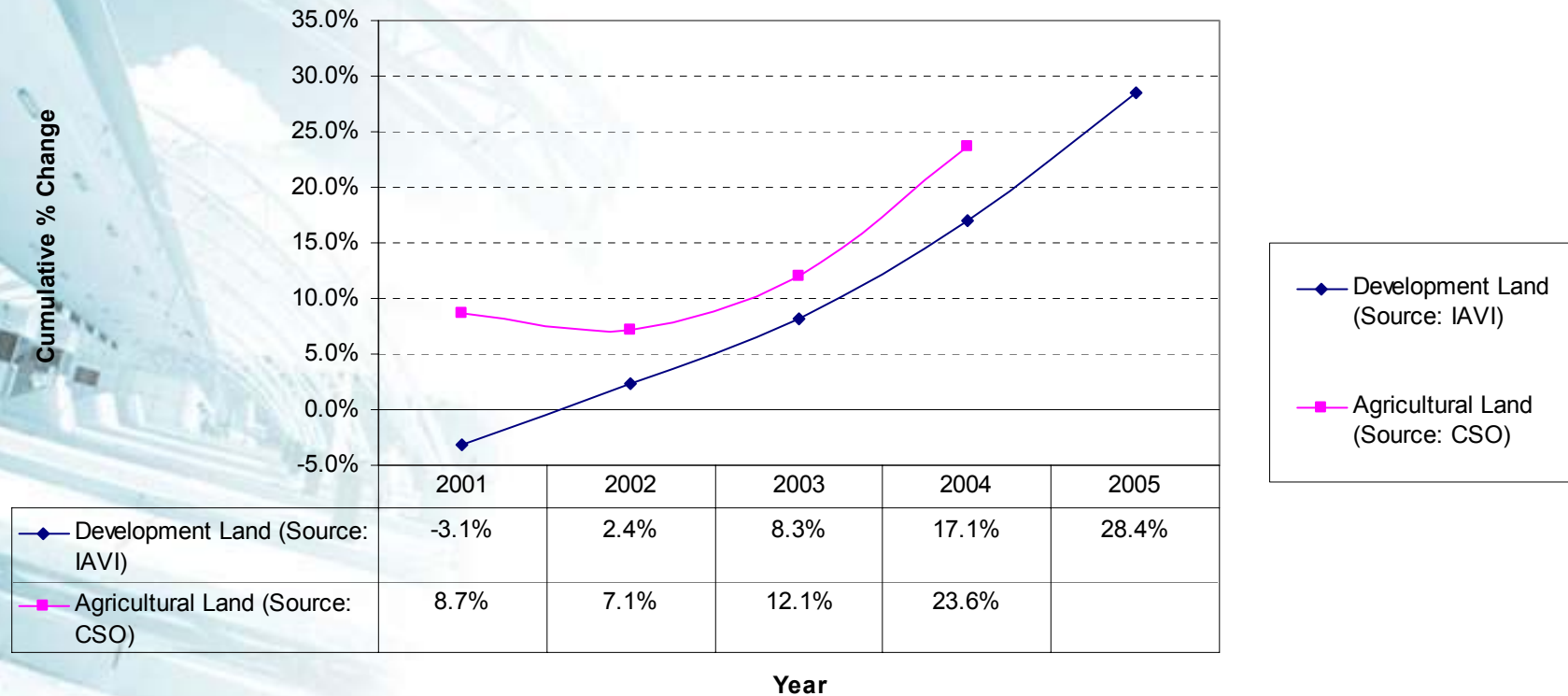


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Cost Trends - Ireland

Cumulative% Change in Average Price of Land per Hectare



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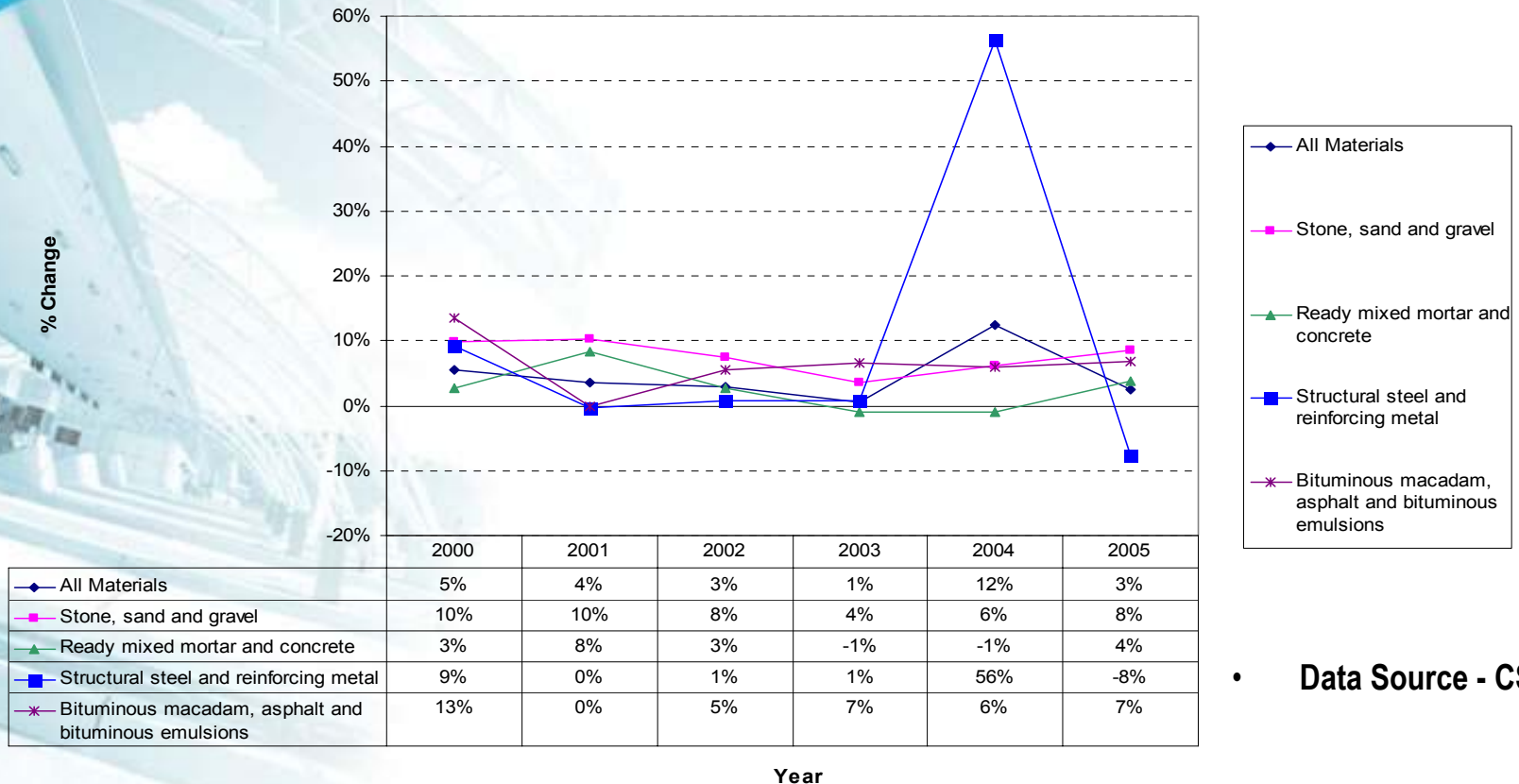
Cost Trends - Ireland

NRA Road Construction Inflation Components

- Labour & Supervision
- Plant
- Fuel
- Bituminous Materials
- Stone, Sand and Gravel
- Concrete
- Precast Products
- Steel Products
- Reinforcing
- Other Materials

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Changes in Construction Materials Costs – Materials Price Index



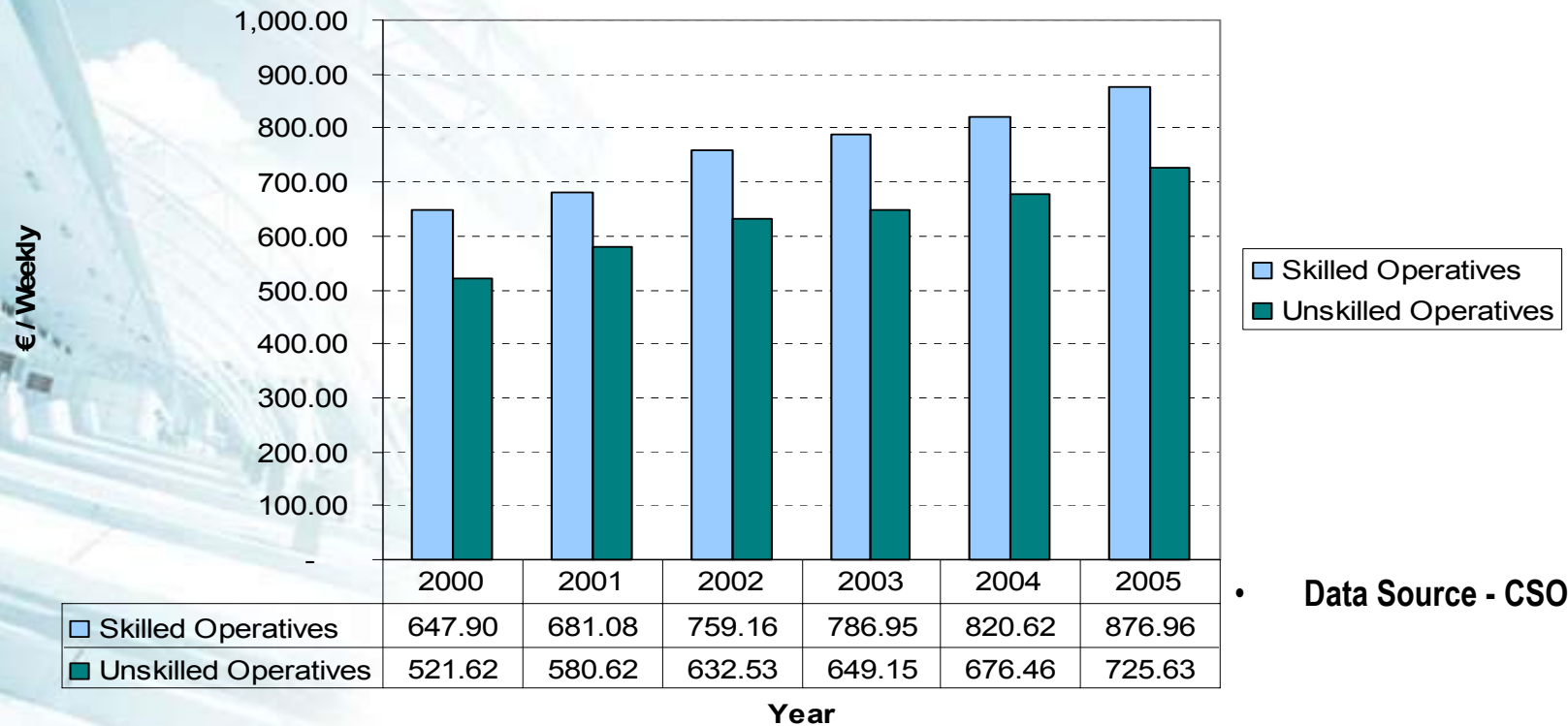
• Data Source - CSO

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Cost Trends - Ireland

Changes in Labour Costs - Average weekly earnings in Construction



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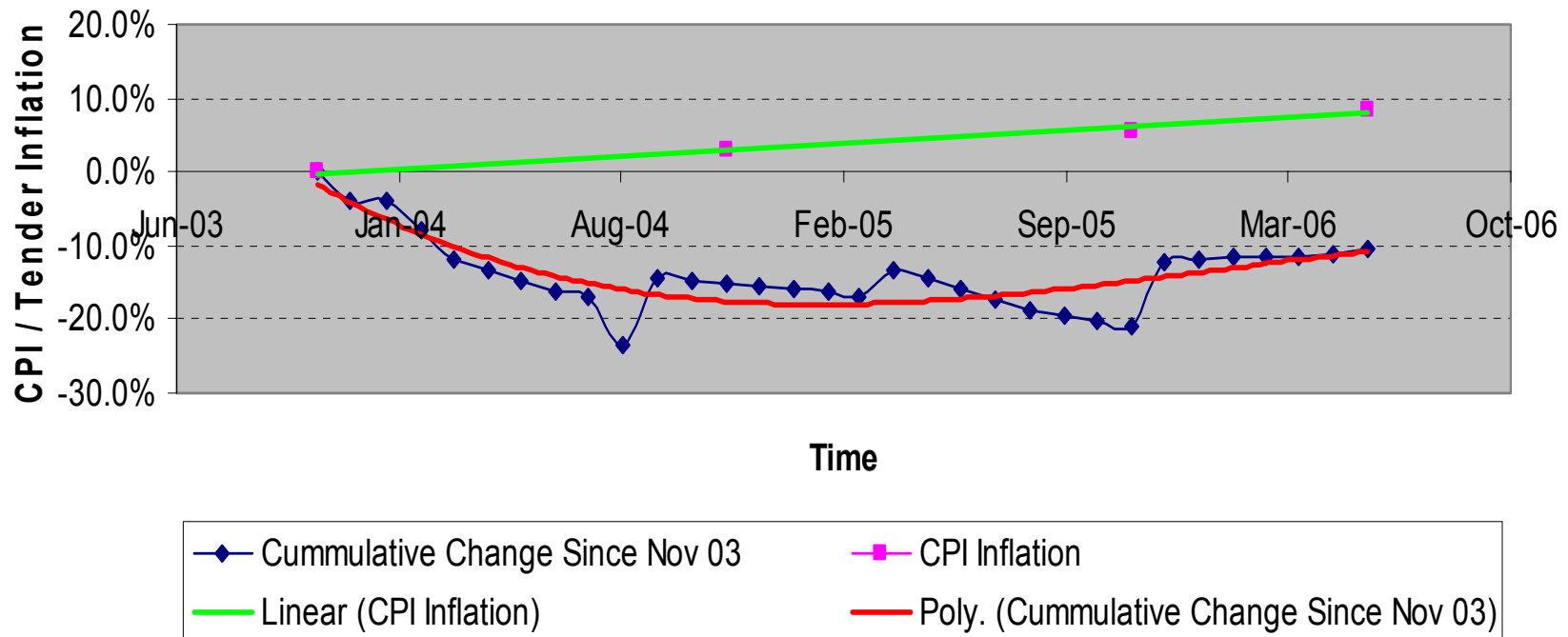
Cost Trends - Ireland

Overall Tender Trends

- Recent analysis of 24 contracts
- Analysis Period - overall 2003 to 2006
- Size of Contracts - €4 million to € 215 million
- Design Build
- Traditional Type Contracts
- Other Procurement Strategies

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Tender Versus CPI Inflation Trends



- Overall downward trend has stabilised

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Reasons for Tender Price Improvement

- **Intense Competition – Domestic & International**
- **Increased Productivity by Industry – New Plant, Management Experience**
- **Larger Projects – Possibilities of Economies of Scale**
- **Improved Processes and Procedures – Clients**
- **Continuity of Work**

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Project Assessment

Cost Benefit Inclusive of :

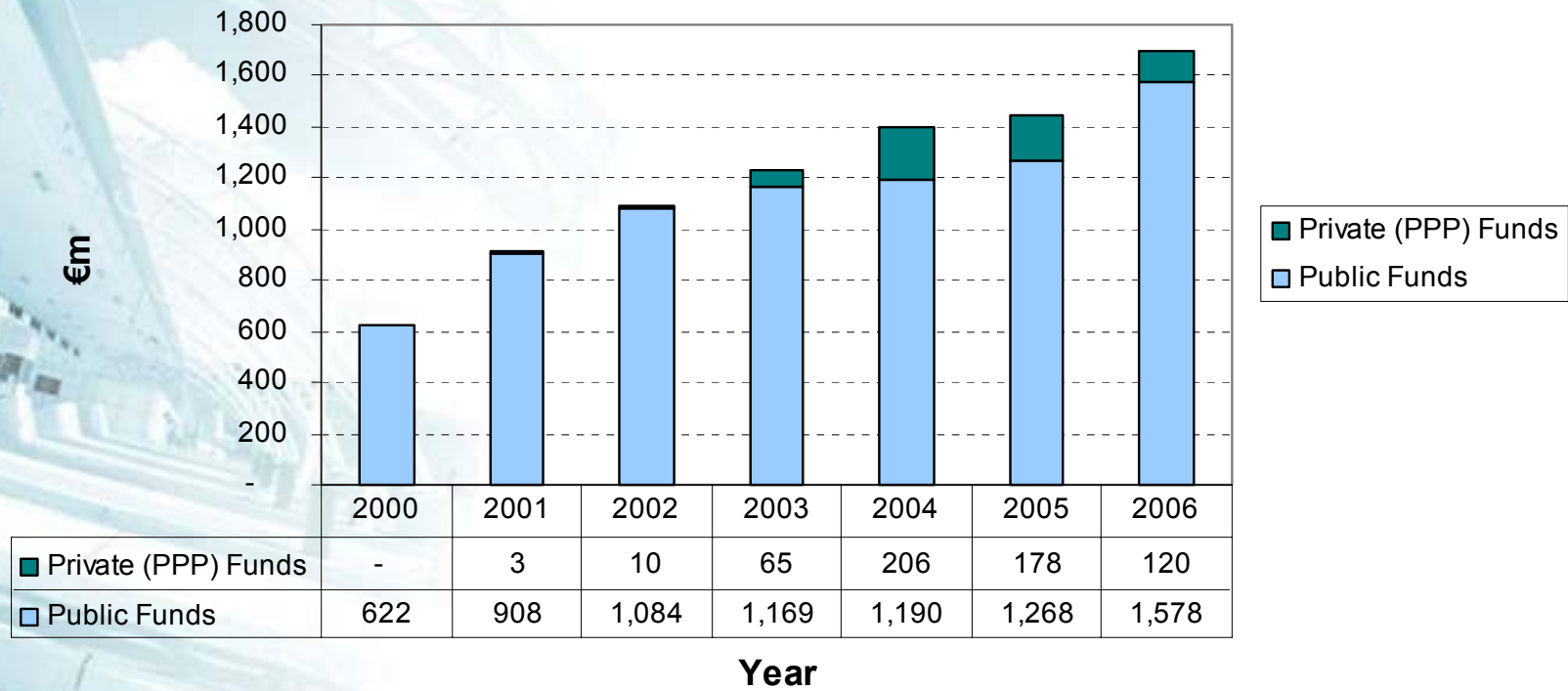
- Traffic
- Accidents
- Time Savings
- Vehicle Operating Costs

Wider Appraisal Issues :

- Environment
- Accessibility and Social Inclusion
- Government Policy/NDP/NSS/T21

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National Roads Improvements Expenditure Year 2000 – 2006 (Total €8.3bn)
(Excl. Maintenance)

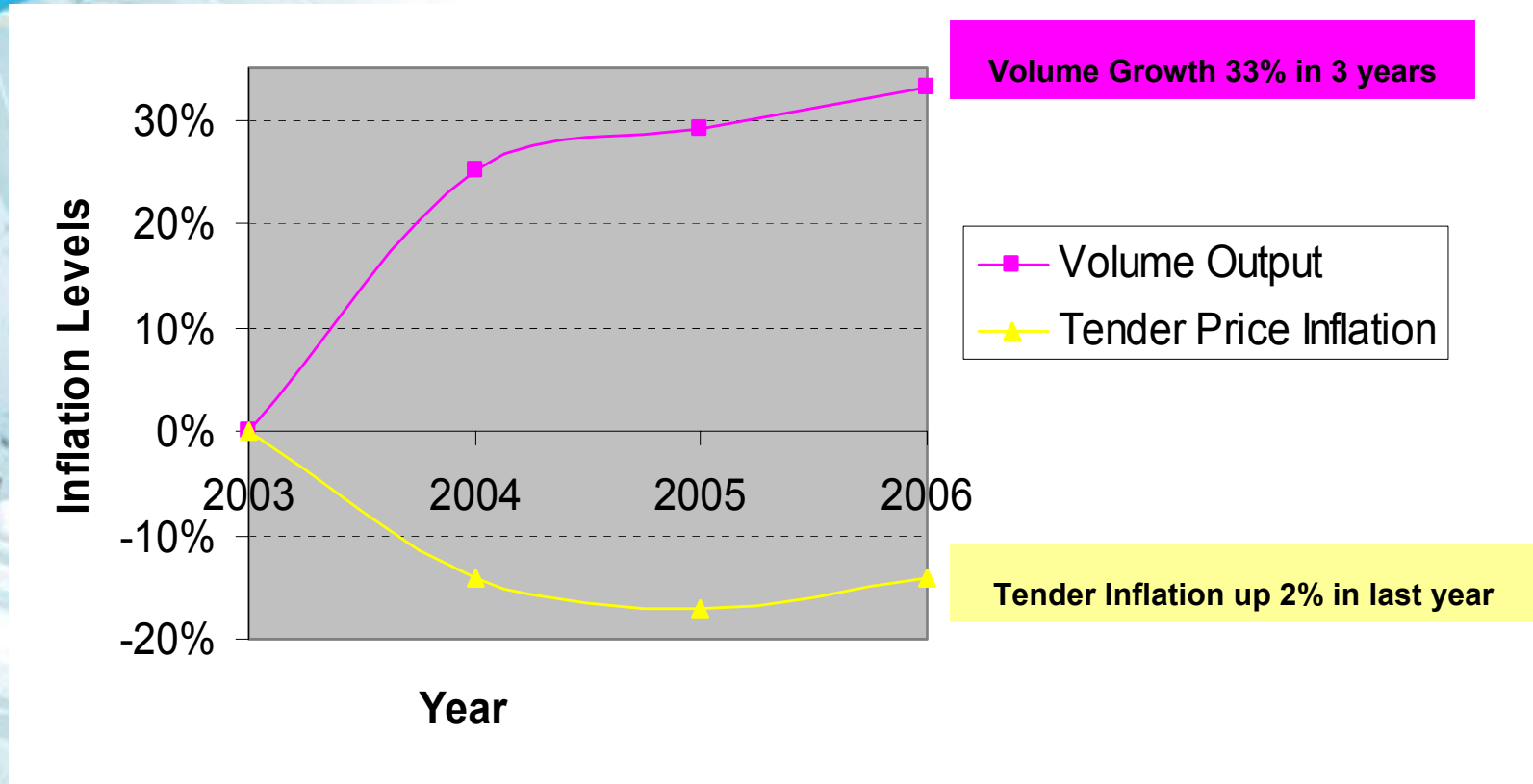


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Industry Capacity

Volume Outturn and Tender Price Inflation



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Industry Capacity

Industry Growth and Planned Volume Output

- Planned Output Constant for next few years
- Productivity & Resource Growth Allowed 33% Growth in 3 years with no cost inflation
- Industry Clearly Can Absorb Further Major Volume Increase

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Concluding Remarks

- Transport 21 – Major Investment in Road Infrastructure
- Roads Programme Significant by EU Standards
- Construction Costs Highly Competitive, Under Control
- Land Cost Increases Disturbing
- Industry Capacity Headroom Exists

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Acknowledgements

- **National Road Authorities**
 - » Denmark
 - » Estonia
 - » Germany
 - » Greece
 - » Iceland
 - » Ireland
 - » Norway
 - » England
- **Central Statistics Office**
- **IAVI**
- **Bruce Shaw**

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THANK YOU