THE DUBLIN PORT TUNNEL – A PROJECT MANAGEMENT PERSPECTIVE

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Dublin Port Tunnel

Promoting & Delivering Large Public Projects in an Urban Environment

Introduction

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1. Brief History

• Slide 1 shows the main milestones

• Project firstly secured by the DTI Study ('93)

• Government decision in ’95 confirmed a twin bore urban motorway tunnel

• Project is the largest motorway urban motorway tunnel in Europe
Project History

- 1990 Transportation Studies
- 1995 Tendering for Engineering Consultants
- 1997 Amendment of Dublin City Development Plan
- 1999 Public Enquiry
- Dec 1999 Scheme Approved
- Dec 2000 appointment of NMI Consortium
- June 2001 Work on-site started – Design Construct Contract

High quality access route for HGV’s between M50 C-ring and Dublin Port
2. Present Position

• Tunnel opened to HGVs on 20th Dec ’06

• Tunnel opened to cars on 28th Jan ’07

• Current through put is 6,000 HGVs and 2,000 cars per day (night closures to cease 5th Mar ’07)

• Impact examples in reduced HGV traffic
  ➢ East Wall Road - 87%
  ➢ Essex Quay - 25 to 35%
  ➢ Arran Quay - 25 to 35%
2. Present Position (Cont’d)

• Overall Project Budget remains €751m

• Tunnel Operator appointed by the NRA

• Over 5,000 persons worked on Construction

• Over 8 million man hours expended without a single fatal accident

• A nationally, regional and city wide major strategic piece of infrastructure has been delivered by Dublin City Council
3. Project Promotion (Keeping the Flame Alive)

- 95% of Major Urban Initiatives/Interventions Fail
  - 50% - of wrong promotion team and mix
  - 45% - Client Organisation incapacity
- Until recently no formalise appointments of project sponsor/charter/director
- Leadership emerged organically
- A multiplicity of Agencies are immediately involved
3. Project Promotion (Keeping the Flame Alive) (Cont’d)

• A robust socio-economic needs and benefit analysis, underpinning projects’ justification, is often missing at Concept through Development stages

• Invariably the complexity and time involved in Statutory Procedure are underestimated

• Little or no early stakeholders involvement occurs

• This is vital to the building of a “Civic Consensus” required to support the project. Current very formalised Public Consultation processes do not achieve this and are too late in the process
3. Project Promotion (Keeping the Flame Alive) (Cont’d)

• None or totally inadequate budgets and resources are allocated to PR/Media issues during the early development phases

• Institutional Memory is invariably lost or ignored (i.e. organisations “lose the recipe”)
Dublin Port Tunnel

Typical Listing of Stakeholders

• 18,000 Businesses in the City Centre

• DCC Management Team and Senior Staff (including Roads, Traffic, Water, Drainage, Law, Planning, Development and Architects Depts.)

• Local Authorities and Bodies
  ➢ County Managers
  ➢ Director of Transportation in Greater Dublin Area Local Authorities
  ➢ All Elected Council Members in DCC, Fingal, DLR and South Dublin
  ➢ Dublin Local Authorities Fingal, South Dublin & DLR Co Co
Dublin Port Tunnel

Typical Listing of Stakeholders

• Politicians
  ➢ All TDs, Senators and MEPs in Dublin
  ➢ Party Spokesperson on Transport

• Government Departments
  ➢ Transport
  ➢ Environment
  ➢ Press Office for each

• National Roads Authority
Dublin Port Tunnel

Typical Listing of Stakeholders

• Chambers of Commerce in Ireland
  ➢ 4 Dublin Chambers
• Utility Companies (Gas, Phone, Electricity, etc)
• Residents Associations (5No.)
• Over 1,000 Residents & Property Owners
• Garda Siochana
• Dublin Fire Brigade
• AA & RAC
Dublin Port Tunnel

Typical Listing of Stakeholders

• Dublin Transportation Office
• Road Safety Authority
• Dublin Airport
• Dublin Port & 100 Agents on Port Authority list
• Hauliers / HGV Drivers
  ➢ 1,000 hauliers
  ➢ Approx 200 Hauliers / HGV drivers with 20-60 staff
  ➢ 1 Haulier with 1,600 staff
• Petroleum Companies
Dublin Port Tunnel

Typical Listing of Stakeholders

- 355 Logistics and Freight companies
- Large Fleet Companies
- Industrial Estates – Management Companies
- Top 1,000 Companies in Ireland
- Commuters – leaflets for 5 Motorway / Bridge Toll Booths
  - East Link
  - West Link
  - Drogheda
  - M4
  - Port Tunnel Operator
4. Construction & Project Management

• Dublin City Council has a long tradition & strength in the procurement and delivery of construction projects.

• Like other public bodies it can be shown to occasionally have weaknesses in the Concept, Development and Maintenance Phases, with attendant problems downstream. The “why are they doing this” question persisted through the construction phase.

• Procurement route selected was a Design & Construction Contract (ICE Third Edition)

• Strategy was to transfer risk and have a single responsible entity
4. Construction & Project Management (Cont’d)

• Full gamut of Modern Project Management Structures and Practices were employed. (Refer to Presentations of 15th Oct ‘03 at IEI Clyde Road and 15th Feb ’05 to IEI Thomond Region)

• Benefits and Appropriateness of D & C are seriously constrained by Ireland’s Legislative and Regulatory Framework

• Where risks cannot be fully identified and priced the success of their transfer can be undermined.

• Supervision & Design Compliance did require elaborate, time consuming, highly procedural and expensive measures
4. Construction & Project Management (Cont’d)

• On such a pioneering project, advanced in a hostile public environment, self-certification was not a viable or feasible option
PROJECT CONTROL STRUCTURES
(Simplified)

Employer
Dublin City Council

Employer’s
Representative

Ind. Experts
• Legal
• Finance
• H & S
• Geotech
• M&E
• Insurance
• Others

Construction Supervisor
• Design Compl.
• Construction Compl.
• H & S Compl.
• QA / QC
• Doc. Control
• Prepare Certificates

Project Procedures

Implementation & Control

Design & Construct Contractor
NMI Consortium

Nishimatsu
• Bored Tunnel
• Rail Crossing
• Design ConsLs.
• H & S
• QA/QC
• Doc. Control

Mowlem I.
• C & C Tunnels
• Roads
• Buildings
• M & E
• Design ConsLs.
• H & S
• QA/QC
• Doc. Control
MAIN PROJECT MANAGEMENT PRACTICES

- Scope Management
- Communications Mgt.
- Time
- Risks & Insurances Mgt.
- Cost
- Procurement
- Quality
- Integration
- Health & Safety
- Community Relations
- Human Resources
- P.R. / Media
5. Maintaining The “Civic Consensus”

• Project Managers of Public Projects must understand that Project’s exist in two parallel “dimensions” and must be managed accordingly – External and Internal Dimensions

• “EXTERNAL DIMENSION” -
  - The physical works themselves and their impacts on their environment
  - Contract Administration, Supervision and Relationships
  - Legal Framework  CPOs, Property Guarantee Schemes, maintaining good neighbourlyness with affected parties, etc
  - Traditional Project Management concerns, tending to focus on goals/achievements/progress/costs
5. Maintaining The “Civic Consensus” (Cont’d)

• “INTERNAL DIMENSION” -
  ➢ Organisation’s own Management & Political interests, including those of the sponsoring Government Department’s and Agencies
  
  ➢ Immediate Stakeholders, interested parties, Residents Associations and Property Owners
  
  ➢ The vital “meeting of minds” between all of these parties requires constant communications and feed-back.
  
  ➢ Expectations must be managed and “mission creep” avoided – learn to say “No” diplomatically
5. Maintaining The “Civic Consensus” (Cont’d)

- An improved understanding by all of the technical and financial reasoning behind all aspects of the project is required for their buy-in and support.

- Formalised Public Consultation as required by EIS and Planning legislation is not achieving the political, national or community civic consensus required for the acceptance and non-confrontational delivery of major public projects.

- Explaining, talking, promoting projects must start at their earliest development.
5. Maintaining The “Civic Consensus” (Cont’d)

- The media’s monoploy* on the dissemination of project information/misinformation and its obsession with controversy must be suborned and countered by the much earlier and widespread use of websites, “blogs”, internet, etc (but beware of “on-line insurgency” and malicious postings – i.e. vigilance required).

*(Note: When you are in the headlines the news is usually bad and the media interest is insatiable)
6. Delivery & Results

- Public Organisations are good at delivery but weak at concept, development, promotion and close outs phases.

- The tendency to oversell benefits, to get things off the ground without first proving the socio-economic justification leads to downstream problems

- Failure to measure/monitor benefits and counter negative perspectives (e.g. M50 at present) is a feature of public bodies

- Public Organisations do not continue a long term involvement but leave it to others to criticise without responding.
6. Delivery & Results (Cont’d)

• Normally Public Awareness campaigns and budgets die at project completion.

• Specialist expertise is dissipated and “institutional memory” is lost

• Non continuous involvement with major projects curtail public bodies’ ambitions (think of the people and organisations that gave us Ardnacrusha, Bord na Mona, Rural Electrification, Sugar Co, etc) and then the gap in the country’s development in the ’50s – ’90s)
6. Delivery & Results (Cont’d)

• This generation of Project Managers and Engineers must encourage younger Project Managers and Engineers to master the management of the “Inner and External Dimensions” of desired projects. The assiduous attention to the cultivation of both will be required of the future successful, public bodies project managers
7. Strategic Importance of DPT

- Flagship Project of NDP’s Roads Programme
- Vital if Port is to survive
- Vital to City Centre’s regeneration and restoration to the citizens
- HGV Ban not possible in its absence
- Reduction in fatal traffic accidents at conflict points (e.g. > 5,000 pedestrian per hour at Batchelors Walk/O’Connell St junction)
7. Strategic Importance of DPT (Cont’d)

• Improvement of Air Quality & Noise in City Centre

• Feasibility and technology of tunnel construction pioneered in Dublin and successfully demonstrated – if not no Rail Interconnector or Metro

• Political Capital Preserved

• Confidence in the promoting organisations’ engineering competence has been demonstrated and Public confidence maintained

• Willingness to “think big” established in transport policy makers
7. Strategic Importance of DPT (Cont’d)

- Quantum steps needed if transport in Dublin is to be carried through the urban systems “tipping point” (i.e. can we “NOT” afford to do certain things)
8. Lessons for Project Managers

• No longer enough to be proficient in the traditional Project Management skills and techniques. Greater organisational awareness and network building skills are essential

• Project Managers must understand the importance of the project’s “external” and “internal dimensions” and master the management and direction of both, as they are the two sides of the same coin

• Recognise that the same person may not necessarily have the personality, skills, contacts and presentational skills to manage both dimensions. It is then vital that they network and bring on board such skills.
8. Lessons for Project Managers (Cont’d)

• There is no substitute for organisational leadership – if you do not have it within your employment position then it must be acquired by designation or association (i.e. get yourself and the project a “champion” or “prince”)

• If you believe in a project you must be passionate and be prepared to openly promote and defend it

• Breakfree of the media monopoly as far and as early as possible

• Unless you are a natural performer, media and presentation skills training are as important as your professional training. They will be essentail competencies required for Project Management appointments
8. Lessons for Project Managers (Cont’d)

• However Perception is not Reality, if you do not deliver you do not survive, in the public and/or private sectors
9. Acknowledgements

- DCC as Employer & Project Implementor
- NRA as promotor and funding source
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- Nishimatsu Mowlem Irishenco – Contractors
- Kellogg Brown & Root Ltd – Construction Supervisors
- Haswell/Carlbro – Lead Designers
- Mott MacDonald – Design Checkers
- Geoconsult Arup JV – Preliminary Design & Procurement
Some Typical Photographs

Northern Approaches

Aerial View of Northern Portals

Internal View of Finished Tunnel

Aerial View of Toll Plaza

Tunnel Control Centre – Video Wall