

Innovative ways for Financing Transport Infrastructure



Table of Contents

List of Figures	ix
List of Tables	ix
Chapter 1. Transport Infrastructure Financing Theory and Practice – an overview.....	1
1.1. Tasks to be financed	1
1.2. Sources and instruments of transport infrastructure financing	2
1.2.1. Primary and secondary sources	2
1.2.2. Financing instruments.....	4
1.2.3. Taxation.....	6
1.2.4 User charges.....	9
1.2.5. Non-user funding	12
1.2.6. Borrowing and private sector involvement	12
1.2.7. Criteria for selecting and evaluating funding sources	15
1.3 Case studies on financing transport infrastructure	17
Chapter 2. Public-Private Partnerships	23
2.1 Introduction	23
2.2 PPP Models	23
2.2.1. Types and Examples of Transport Sector PPPs	23
2.2.2. Best Practice.....	24
2.3 Policy and Legislative Framework.....	24
2.3.1. Ensure PPP policy and legislation is robust and consistent with other policies	24
2.3.2. Prepare an evidence-based delivery plan.....	25
2.3.3. Obtain formal support for the structure and policy from potential lenders.....	25
2.3.4. Ensure that there is political and civil service support	25
2.3.5. Develop a focussed specialist office to manage the programme	25
2.3.6. Establish a suite of standard procurement protocols and documentation	26
2.4. Economic context and affordability	26
2.4.1 Carry out transparent business case assessments for each project.....	26
2.4.2. Ensure the programme will enable competitive project financing	26
2.4.3. Develop a standardised ‘shadow’ cost model against which to compare value	26
2.4.4. Offer robust payment security that guarantees investment return and debt repayment.	27
2.4.5. Establish robust long-term governance structures and processes.....	27

2.4.6	Develop an economic framework for fiscal commitments.....	27
2.5.	Planning, Timing, Objectives, and Business Cases	27
2.5.1	Develop a clear planning context for the PPP programme	27
2.5.2	Establish clear and objective approval processes.....	27
2.5.3	Establish a robust format for business cases	27
2.5.4.	Use clear and objective output-based specifications	27
2.5.5.	Consider the use of a 'Reference Solution'	27
2.5.6.	Incorporate robust business case risk allocation and value for money assessment....	28
2.6	Training and Resources	28
2.6.1	Plan programme management resources and training	28
2.6.2.	Build strong, objective commercial understanding into project teams	28
2.6.3	Develop a robust induction and support programme for stakeholders.....	28
2.7	Market Assessment and Engagement	28
2.7.1	Realistically match capacity	28
2.7.2	Draw on proven experience.....	29
2.7.3.	Clearly set out risk transfer proposals	29
2.8	Transparent Procurement and Management Processes	29
2.8.1	Implement robust and transparent programme governance	29
2.8.2	Standardise the procurement process and procedures	29
2.8.3	Evaluate tenders transparently and publish formal evidence of value for money	29
2.8.4	Promote Zero Tolerance to Corruption	30
2.8.5	Record and publish procurement and management information.....	30
2.9	Sector Specific Issues	30
2.9.1	Regulation	30
2.9.2.	Patronage.....	30
2.9.3	Mixed Economy Infrastructure	31
2.9.4	Cost Overruns.....	31
2.9.5	Early Termination Arrangements.....	31
2.10	Case Studies	31
2.10.1.	Nottingham Express Transit	31
2.10.2.	Railway Infrastructure Enhancements.....	34
2.10.3.	Rolling Stock Procurement.....	37
2.10.4.	Analysis of contractual structures for procurement of net phase two	38
2.11	Conclusions	45

Chapter 3 Electronic Tolls	46
3.1. Introduction	46
3.2. Main technologies for electronic toll collection systems	47
3.2.1. Electronic vignette	47
3.2.2. Electronic distance-based systems	49
3.3. Necessary factors for successful deployment of electronic toll system	55
3.3.1. Legislation, some specificity for electronic toll system	55
3.3.2. Enforcement	56
3.3.3. Public acceptance	58
3.3.4. Users of roads	59
3.3.5. Road network.....	60
3.4. Life cycle overview	61
3.4.1. Definition of transport policies	61
3.4.2. Feasibility	62
3.4.3. Planning.....	62
3.4.4. Contracting.....	63
3.4.5. Project setup	63
3.4.6. Project start.....	63
3.4.7. Project operation	63
3.4.8. Extension / Renewal / Migration / Elimination.....	64
3.9. Case studies	64
3.9.1. BelToll – Belarus’ electronic toll collection system.....	64
3.9.2. Chile	65
3.9.3. viaTOLL – Poland’s electronic toll collection system	66
Chapter 4 Alternative Ways to finance transport infrastructure	68
4.1 Land Value Taxation.....	68
4.1.1 The advantages of Land Value Tax.....	69
4.1.2 LVT Finances transport infrastructure	70
4.2. Infrastructure plus Property approach.	74
4.3. The regulated asset base (RAB) model.	75
4.4 The Least Present Value of Revenue’ (LPVR) mechanism.....	77
4.5 Non-fare box revenue (NFR)	78
4.6 Ride sharing services	79
Chapter 5 Conclusions and recommendations	82
References	87