



**UNECE**



**Graduate  
School of Management**

St. Petersburg State University



## **UNECE PPP Best Practice Guide for Road Sector**

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International PPP Forum:  
“Implementing the United Nations 2030 Agenda for  
Sustainable Development through effective, people-first  
Public-Private Partnerships”

Geneva  
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- ✓ The United Nations Sustainable Development Goals (SDGs), recently adopted by the UN General Assembly, identify Public-Private Partnerships (PPPs) as the key mechanism for its achieving. It implies the need to increase the **quantity** and **quality** of PPP projects in the road sector.
- ✓ Many Governments face problems due to the lack of available information about PPP models and payment mechanisms, traffic forecasting and traffic risk allocation, which could lead to unsuccessful implementation of the project.
- ✓ PPP Best Practice Guide for Road Sector based on review of extensive practice of **successful** and **failed** PPP projects in road sector will ensure:
  - receiving of detailed and comprehensive information on projects, instruction for their structuring and implementation by Governments;
  - no repetition of common mistakes in managing PPP projects in the road sector;
  - increasing the number of sustainable PPP projects in the road sector and the private sector's interest to participate in them.

## Introduction

- Objective and Background
- Way to Use the Guide
- Selected PPP Projects in Road Sector

## Section I

- Evaluation and Analysis of the PPP Models in Road Sector
- Financing models
- Tariff and Technical Aspects of PPP Roads Operation
- Optimal Allocation of Risks in PPP Projects in Road Sector

## Section II

- Selected Countries PPP Experience in Road Sector
- Description of Selected PPP Projects in Road Sector

## Annexes

- Table 1 “Features of Selected PPP Projects in Road Sector”
- Table 2 “Financial Aspects”
- Table 3 “Risks Matrix”



# Selected PPP Projects

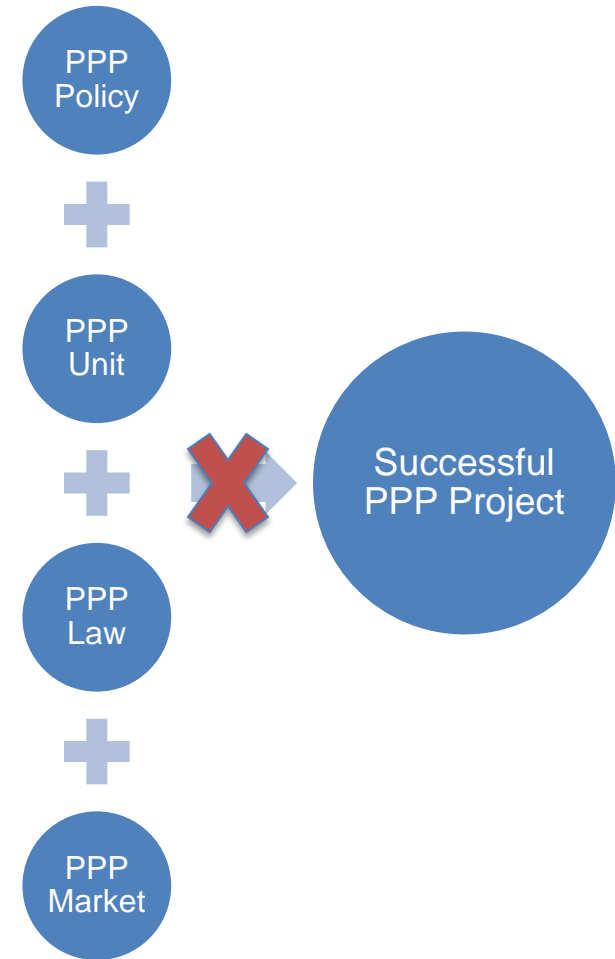
1. A19 Dishforth to Tyne Tunnel, UK
2. A2 Motorway, Poland
3. Athens Ring Road - Attiki Odos, Greece
4. BA-093 Highway, Brazil
5. Dakar-Diamniadio Toll Highway,
6. Dushanbe-Chanak Toll Road, Tajikistan
7. E18 Grimstad-Kristiansand, Norway
8. Istrian Y Toll Motorway, Croatia
9. Jiyuan-Dongming Highway (Xinxiang-Changyuan), China
10. Lekki-Epe Expressway, Nigeria
11. M6 Toll BNRR, UK
12. M7 Motorway, Australia
13. M11 Moscow–St. Petersburg Highway (15-58 km), Russia
14. North South Expressway, Malaysia
15. Orlovski Tunnel under the Neva River, Russia
16. Rosario-Victoria Bridge, Argentina
17. Sea-to-Sky Highway, Canada
18. Roads in the residential area “Slavyanka”, Russia
19. Tuni Anakapalli Annuity Road, India
20. Western High-Speed Diameter, Russia

# Selected Countries and PPP Projects in Road Sector

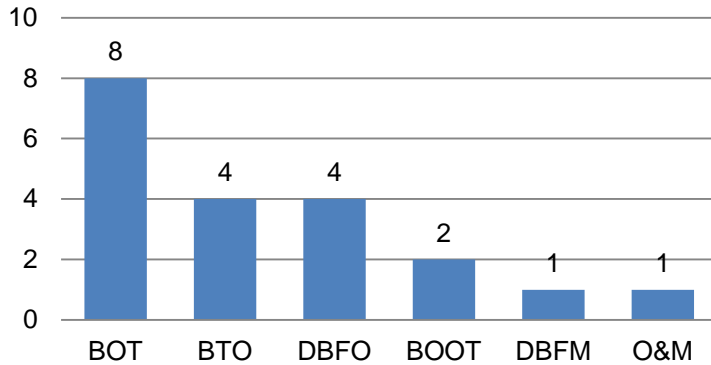


# PPP Development in Selected Countries

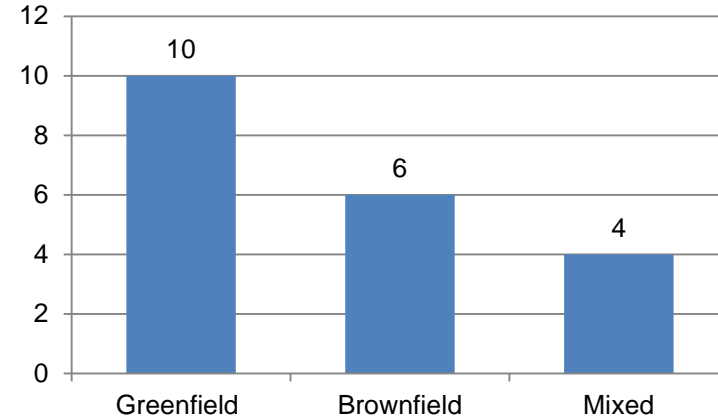
PPP Project	Country	Level of PPP Development	PPP Public Policy	PPP Institutional Framework	PPP law
Rosario-Victoria Bridge	Argentina	Nascent	NO	√	√
M7	Australia	Mature	√	√	NO
BA-093	Brazil	Mature	√	√	√
Sea-to-Sky	Canada	Mature	√	√	NO
Jiyuan-Dongming	China	Emerging	√	√	NO
Istrian	Croatia	Developing	√	√	√
Athens Ring Road	Greece	Developed	√	√	√
Tuni Anakapalli	India	Developed	√	√	NO
North South	Malaysia	Emerging	√	√	NO
Lekki-Epe	Nigeria	Emerging	√	√	√
E18 Grimstad-Kristiansand	Norway	Developed	√	NO	NO
A2	Poland	Emerging	NO	√	√
M11 (15-58 km), Orlovski Tunnel, Slavyanka Roads, WHSD	Russia	Emerging	NO	√	√
Dakar-Diamniadio	Senegal	Emerging	NO	√	√
Dushanbe-Chanak	Tajikistan	Nascent	NO	√	√
M6 BNRR	The UK	Mature	√	√	NO



## PPP Models of Selected Projects



## Type of PPP Projects



- ***BOT (BOOT, BTO) Toll Roads,***
- ***PFI – DBFM(O) Availability Payment Roads,***
- ***DBFO(M) Roads with Performance-Based Payment Mechanisms.***

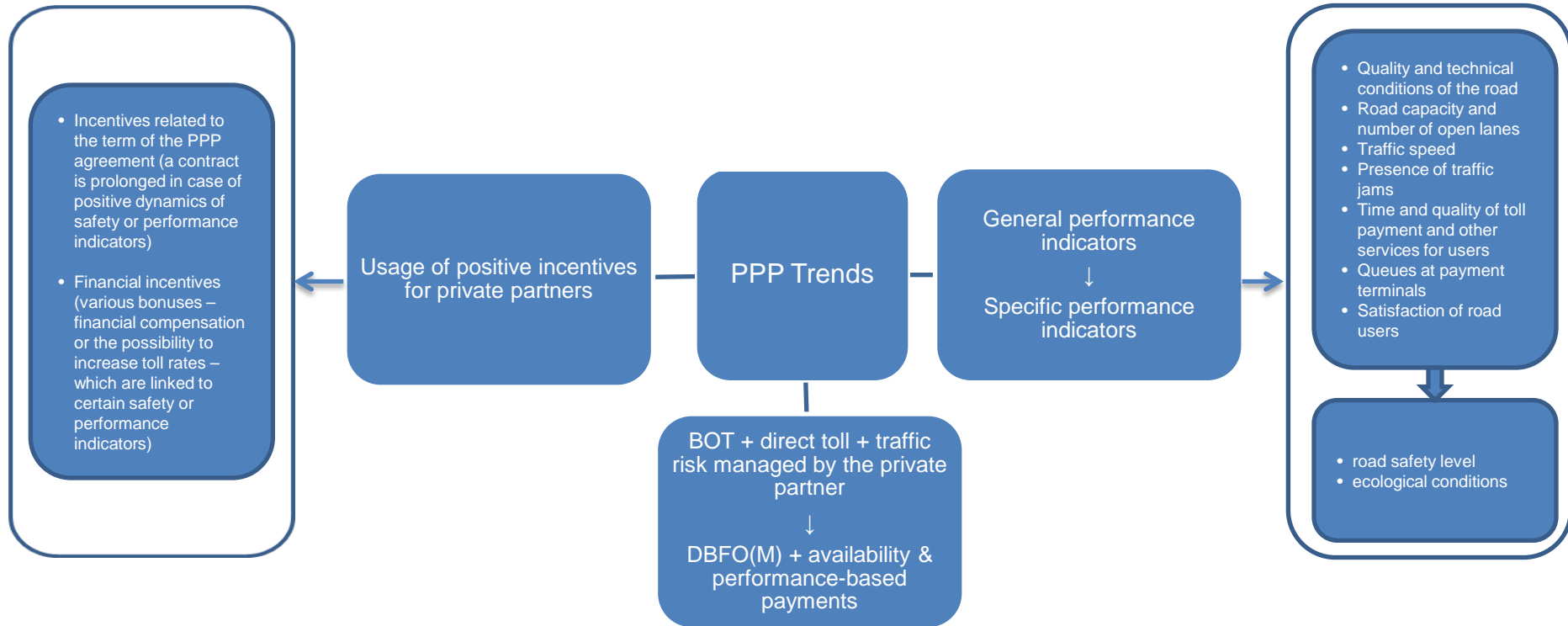


# Potential Benefits and Losses of PPP Models

Benefits	Models	Losses
<p><u>For Private Partner:</u></p> <ul style="list-style-type: none"> <li>owner of the road→               <ul style="list-style-type: none"> <li>- broad rights,</li> <li>- benefit to use the road as an asset in collateral agreements with the lenders</li> </ul> </li> </ul> <p><u>For Public Partner:</u></p> <ul style="list-style-type: none"> <li>transfer of the traffic risk to the private partner</li> <li>non-participation or limited participation in the project financing</li> </ul>	BO(O)T	<p><u>For Private Partner:</u></p> <ul style="list-style-type: none"> <li>potential serious problems with traffic risks in the case of absence of risk mitigation mechanisms</li> </ul> <p><u>For Public Partner:</u></p> <ul style="list-style-type: none"> <li>restrictions on his own right and limited participation in the process of managing various operation indicators of the road</li> </ul>
<p><u>For Private Partner:</u></p> <ul style="list-style-type: none"> <li>long-term business with public guaranteed fee</li> </ul> <p><u>For Public Partner:</u></p> <ul style="list-style-type: none"> <li>transfer of the asset-based risks (including design, construction, and operation)</li> <li>public ownership of the road</li> <li>provision of risk-free long-term road services of a guaranteed standard by the private partner</li> </ul>	DBFM	<p><u>For Private Partner:</u></p> <ul style="list-style-type: none"> <li>bearing of all key risks of PPP project</li> </ul> <p><u>For Public Partner:</u></p> <ul style="list-style-type: none"> <li>need for full compensation of the private partner's investments by public partner</li> <li>absence of user payments</li> </ul>
<p><u>For Private Partner:</u></p> <ul style="list-style-type: none"> <li>dependence of revenues not only on tolls collected, but also on the quality of services provided</li> </ul> <p><u>For Public Partner:</u></p> <ul style="list-style-type: none"> <li>involvement in the process of managing various operation indicators of the road</li> <li>control over private partner's activities</li> </ul>	DBFO	<p><u>For Private Partner:</u></p> <ul style="list-style-type: none"> <li>financial risks associated with the possibility of short-received revenue</li> <li>control from the part of public partner</li> </ul> <p><u>For Public Partner:</u></p> <ul style="list-style-type: none"> <li>need for detailed study and constant monitoring in order to find the balance of motivation and remuneration of private partner</li> </ul>
<p>similar to benefits of DBFM and DBFO models + additional benefits <u>For Society:</u></p> <ul style="list-style-type: none"> <li>higher KPIs during operation and maintenance</li> <li>financial incentives for the private partner</li> <li>stricter requirements concerning operation of the road and quality of services provided</li> </ul>	DBFMO	



# Recent International Trends





## For Toll Road

- ***BOT with the Direct Toll mechanism***, as well as with the shared traffic risk management by public and private partners
- ***DBFO(M) with Direct Toll and Performance-Based mechanisms***

## For Free Road

- ***DBFM with Availability Payments***
- ***DBFO with Shadow Toll mechanism***

## General Recommendation

***PPP hybrid models in road sector  
(combination of DBFMO and toll roads)***

## Criteria and factors affecting the choice of an appropriate model for a PPP road sector project:

- The goals of the public partner and public needs;
- The level of the road construction complexity;
- Toll or toll free system of road operation;
- Forecast of traffic intensity;
- The preliminary calculation of tariffs;
- The suggested allocation of the traffic risks;
- Citizens' ability and willingness to pay;
- Presence and number of alternative free passes and duplicating roads, and presence of infrastructure providing access to the road;
- Presence of legislative constraints in the national, regional and local regulatory acts that prohibit transferring roads into the private property;
- The cost of the project implementation;
- The accessibility of long-term commercial loans;
- The presence of requirements on sponsors' side about the obligatory transfer of the road into the private property for the time PPP contract has legal force (e.g. for insurance, bails, etc.);
- Interest in project of the key companies that execute construction and operation of roads, including PPP projects.

## Budget size of PPP projects:

**Small**  
< \$300M

- Free roads built under DBFO / DBFM model

**Medium**  
[\$300M, \$1B]

- Toll roads built under DBFO / DBOM model

**Large**  
> \$1B

- Toll roads built under B(O)OT / BTO model

## Major sources of funding:

**DEBT**

- Usually the most popular source – more than 45% in majority of projects
- Types: commercial loans, loans from development banks, infrastructure bonds (in large projects)

**EQUITY**

- In general, much smaller share (5-15%) than that of debt financing in order to achieve high leverage -> higher ROE

**Public Financing**

- An extremely important source in developing economies (Russia, Argentina, Greece) – 30-60% of total funding
- But almost no public financing in developed countries

# Payment mechanisms

## Direct toll mechanism

- Used in large-scope B(R)(O)OT projects as well in some DBFO projects
- Combined with revenue-sharing schemes and MRGs

## Shadow toll mechanism

- Used instead of direct toll mechanism when DTs are inappropriate due to social or political risks (i.e., road should be free for users)

## Availability payments

- Often used both in free and toll DBFO(M) projects in case when the public partner bears a significant share of demand (traffic) risks

## Performance-based payments

- A recent trend to use PBPs in road PPP projects in order to create incentives for the private partner to improve performance and safety

Combinations of these mechanisms are sometimes used (direct tolls + performance-based payments; direct tolls + availability payments)

## Closed System

- $Ta = Tb \times Ch \times Cf \times Ce \times Cvc \times Ct \times Nkm$

## Open System

- $Ta = Tb \times Ch \times Cf \times Ce \times Cvc \times Ct$

## Mixed System

## Key Elements of Tolls

- **Nkm** - actual travelled distance on toll road

- Cvc – vehicle category;
- Ce – using automatic and/or electronic systems of toll collection;
- Ch – weekend, holidays, and days preceding them;
- Cf – travel frequency;
- Ct – time of a day (morning peak hour; evening peak hour, etc.);
- **Tb – basic toll**
  - saved time
  - distinction between toll roads and their free alternatives
  - customer's desire and necessity to use a particular road

➤ Accuracy of demand forecast:

- positive deviation
- negative deviation

➤ Right to define the tariff policy:

- public partner
- private partner

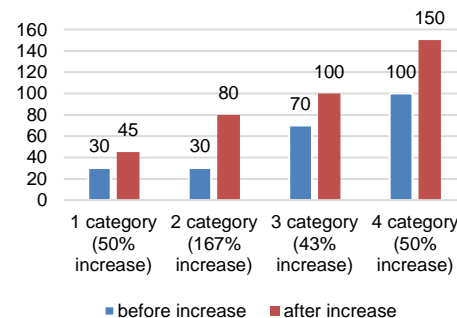
➤ Changes in the tariff:

- increase
- decrease

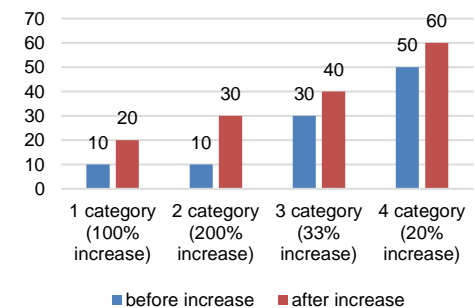


political and social risks

Increase in **day** fares of the WHSD section  
"KAD -Blagodatnaya Street"

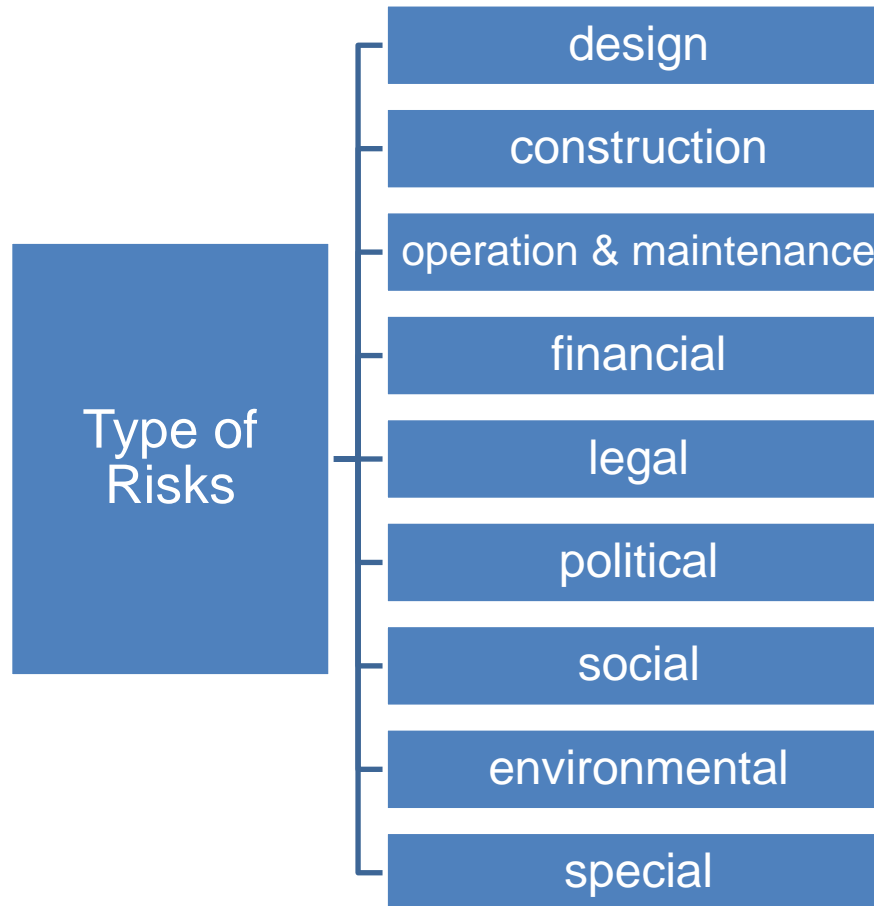


Increase in **night** fares of the WHSD section  
"KAD -Blagodatnaya Street"





**Risks in PPP projects in road sector** - potential events that may occur in the implementation of PPP in road sector and negatively affect the PPP project from the point of cost, time and quality.



# Optimal Risks Allocation in PPP Projects in Road Sector



- “Adequate risk allocation is essential to reducing project costs and to ensuring the successful implementation of the project. Conversely, an inappropriate allocation of project risks may compromise the project’s financial viability or hinder its efficient management, thus increasing the cost at which the service is provided” [UNCITRAL]

## Main principles of risks allocation:

Risk is assigned to the party which is able to better manage this risk

Risk should be borne by the party that will have necessary resources for risk management

It is important to have balance between the desirable and the possible, because ‘imposed’ risks may destroy PPP project in road sector

Parties of PPP project should not avoid the joint decision making process

Risks allocation and re-allocation can be realized during implementation of PPP project in road sector

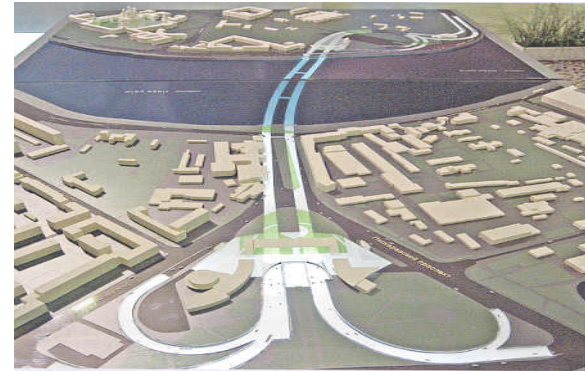
# Risks Matrix

Type of risks	← →						Risks mitigation		
Completion risk	<b>Totally Private Partner</b>	√					<b>Totally Public Partner</b>	<ul style="list-style-type: none"> <li>• providing contingency fund,</li> <li>• lump-sum turnkey contracts,</li> <li>• construction monitoring by the independent engineer,</li> <li>• penalties,</li> <li>• liquidated damages,</li> <li>• compensations clauses for both parties</li> </ul>	
Risk of poor quality construction		√			√				
Archaeological risk					√				
Site risk						√			
Risk of latent defects		√							
Risk of building materials availability		√							
Risk of design risks				√				<ul style="list-style-type: none"> <li>• non-compete clauses,</li> <li>• revenue sharing mechanisms,</li> <li>• flexible-term contracts,</li> <li>• minimum revenue guarantee,</li> <li>• financial re-balancing</li> </ul>	
Traffic risk				√					
Tariff risk					√				
Revenue risk			√						
Risk of provision of free alternative route						√			
Establishment of the freight vehicles routes						√		<ul style="list-style-type: none"> <li>• non-compete clauses in agreement,</li> <li>• flexible conditions of PPP agreement,</li> <li>• penalties for non-compliance with contractual criteria</li> </ul>	
Risk of the decrease of road safety			√						
Risk of harm to an animal population or flora				√					<ul style="list-style-type: none"> <li>• implementation of valid ecological programs</li> </ul>
Risk of social tensions					√				
Risk of strikes of users			√			<ul style="list-style-type: none"> <li>• public relations campaign,</li> <li>• introduction of reduced payments for frequent users,</li> <li>• consistent improvement of road's quality for better public perception</li> </ul>			

M-11 Moscow – St Petersburg  
Highway (Russia)



Orlovski Tunnel  
(St. Petersburg, Russia)



Western High-Speed Diameter  
(St. Petersburg, Russia)



Slavyanka Road  
(St. Petersburg, Russia)



# M11 Moscow - St. Petersburg Highway (section 15-58 km), BTO Model

## Legal Aspects

- Federal Law of the Russian Federation "On Concession Agreements"
- Grantor- Russian Highways (Avtodor) representing the Russian Federation; Concessionaire - North-West Concession Company
- Term of the PPP agreement – 30 years

## Financial Aspects

- Payment mechanism – direct toll
- Total funding – 62 billion rubles
- Share of government financing – 39%

## M11 (section 15-58 km)



## Risks

- Environmental risks
- Traffic risks
- Social risks:  
tariff reduction by 29-33% →  
traffic increase by 15-20%

## Features

- Part of the Moscow - St. Petersburg Highway, construction of which is carried out in several stages – independent investment projects

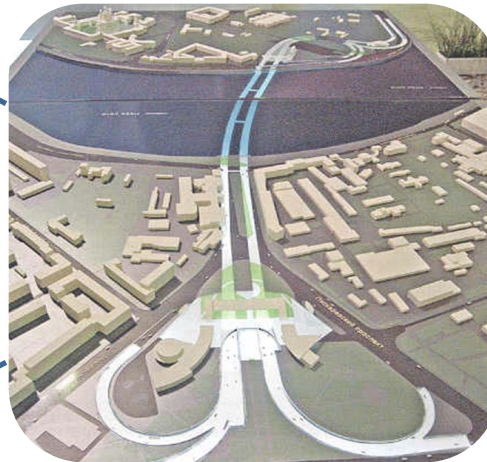
## Legal Aspects

- Federal Law of the Russian Federation “On Concession Agreements”
- Grantor- Federal Road Agency (later withdrew the project) and Government of St. Petersburg; Concessionaire - Nevskaya concession company
- Term of the PPP agreement – 30 years

## Financial Aspects

- Payment mechanism – direct toll + availability payment based on availability of the road
- Total funding – 54,5 billion rubles
- Equal shares of financing - 33.3% of the investor, the city budget and the investment fund of the Russian Federation

## Orlovski Tunnel



## Procurement Process

- Two stage, highly competitive procurement process based on two criteria:
  - technical criteria with value 0,2
  - financial criteria with value 0,8

## Features

- Project cancellation
- Political risks realized
- Trial: public partner was ordered by Paris Arbitration pay the private partner compensation amounting to EUR 15 million for breach of the concession agreement. Russian Courts allowed not to implement these obligations.



# Western High-Speed Diameter, BOOT Model

## Legal Aspects

- St. Petersburg Regional Law on PPP
- Public partner - Government of St. Petersburg; Private partner - Northern Capital Highway; OJSC "Western High-Speed Diameter"
- Term of the PPP agreement – 30 years

## Financial Aspects

- Payment mechanism – direct toll mechanism + Minimum Revenue Guarantee
- Total funding – 120 billion rubles
- Debt/Equity ratio - 49%/7%
- Share of government financing – 44%

## WHSD



## Procurement Process

- Highly competitive procurement process with participation of 3 international consortia: Ltd. "Baltic Concession Company 'Magistral'"; LLC "Northern Capital Highway"; Samsung C&T Corporation (South Korea)
- two evaluation criteria:
  - legal criteria with value 20%
  - financial criteria with value 80%

## Features

- Trilateral agreement
- Tariff increase in May 2015 by 20-200% depending on the time of day and vehicle's category
- Traffic level is above the forecasted level
- Complicated process of land acquisition and expropriation



# Roads in residential area “Slavyanka” in St. Petersburg, DBFM Model

## Legal Aspects

- St. Petersburg Regional Law on PPP
- Public partner - Government of St. Petersburg; Private partner - “SlavDorService” LLC
- Term of the PPP agreement – 12 years

## Financial Aspects

- Payment mechanism – availability payment: public partner pay principal payment + compensate the maintenance costs
- Total funding – 1,1 billion rubles

## Slavyanka Roads



## Procurement Process

- Highly competitive procurement process with three participants: LLC “SlavDorServis”, LLC “NSC-Monolith”, JSC “General Construction Corporation”
- Evaluation criteria:
  - amount of the principal payment
  - term of the construction
  - amount of maintenance costs
  - amount of rent

## Features

- Buyout of roads by the public partner
- The first free road PPP project in Russia

# Features of Selected PPP Projects

PPP Project	PPP Model	Type of road		Payment mechanism				Ownership		Type of project		Traffic risk			Success		
		toll	free	Direct toll	Availability	Shadow toll	Performance based	Private	Public	Green field	Brown field	Private	Public	MRG	Profitable	CSF	Inter. Awards
1. A19 Dishforth -Tyne Tunnel, UK	DBFO		√			√	◊		√		√	√			√	√	
2. A2, Poland	BOT	√		√ <sup>1</sup>	√			√		√		√	√		√	√	√
3. Athens Ring Road, Greece	BOT	√		√				√		√		√			√	√	√
4. BA-093, Brazil	BROT	√		√				√		√	√	√			√	√	
5. Dakar-Diamniadio, Senegal	BOT	√		√				√		√		√			√	√	
6. Dushanbe-Chanak, Tajikistan	O&M	√		√					√		√	√			-	-	
7. E18 Grimstad-Kristiansand, Norway	DBFO	√		√ <sup>1</sup>	√	*	◊		√		√	√*	√*		√	√	
8. Istrian, Croatia	BTO	√		√					√	√	√		√	√	√ <sup>2</sup>	√	√
9. Jiyuan-Dongming, China	BOT	√		√				√		√		√			-	√	
10. Lekki-Epe, Nigeria: 1 <sup>st</sup> section	BOT	√		√				√		√	√	√			-	-	
2 <sup>nd</sup> section			√			√		√		√	√	√			-	-	
11. M6 BNRR, UK	DBFO	√		√	√				√	√	√	√			-	-	
12. M7, Australia	BOOT	√		√				√		√		√			√	√	√
13. M11 (15-58 km), Russia	BTO	√		√					√	√	√	√			√	√	
14. North South, Malaysia	BOT	√		√				√		√	√		√	√	√	√	
15. Orlovski Tunnel, Russia	BTO	√		√	√				√	√		√	√	√	-	-	-
16. Rosario-Victoria Bridge, Argentina	BTO	√		√					√	√		√			√	√	
17. Sea-to-Sky, Canada	DBFO		√			**	√		√		√	√**			√	√	
18. Slavyanka Roads, Russia	DBFM		√		√				√	√		-	-	-	√	√	
19. Tuni Anakapalli, India	BOT Annuity		√		√			√			√	-	-	-	√	√	
20. WHSD, Russia	BOOT	√		√				√		√		√	√	√	√	√	√

<sup>1</sup> - toll revenues are transferred to public partner

\* - compensation to private partner for extra road wear should the traffic level exceed a certain level compared with those forecasted by the government

\*\* - vehicle usage payments - a 1.2 per cent change in the payments to private partner if there is a 10 % variance in traffic volume (either increase or decrease) - Provincial Base Case traffic forecast in any given year

revenues from tolls are not sufficient to cover project costs

<sup>x</sup> - revenues from tolls are not sufficient to cover project costs, profitability is reached due to public contributions

◊ - performance based incentives for private partner

# BOT Model

PPP Project	PPP Model	Type of road		Payment mechanism			Ownership		Type of project		Traffic risk			Success			
		toll	free	Direct toll	Availability	Shadow toll	Performance based	Private	Public	Greenfield	Brownfield	Private	Public	MRG	Profitable	CSF	Inter. Awards
Athens Ring Road, Greece	BOT	✓		✓				✓		✓		✓			✓	✓	■
BA-093, Brazil	BROT	✓		✓				✓		✓	✓	✓			✓	✓	
Dakar-Diamniadio, Senegal	BOT	✓		✓				✓		✓		✓			✓	✓	

# BTO Model

PPP Project	PPP Model	Type of road		Payment mechanism			Ownership		Type of project		Traffic risk			Success			
		toll	free	Direct toll	Availability	Shadow toll	Performance based	Private	Public	Greenfield	Brownfield	Private	Public	MRG	Profitable	CSF	Inter. Awards
M11 (15-58 km), Russia	BTO	✓		✓					✓	✓	—	✓			✓	✓	
Rosario-Victoria bridge, Argentina	BTO	✓		✓					✓	✓		✓			✓	✓	



# DBFO Model

PPP Project	PPP Model	Type of road		Payment mechanism			Ownership		Type of project		Traffic risk			Success			
		toll	free	Direct toll	Availability	Shadow toll	Performance based	Private	Public	Greenfield	Brownfield	Private	Public	MRG	Profitable	CSF	Inter. Awards
A19 Dishforth - Tyne Tunnel, UK	DBFO		✓			✓			✓		✓			✓		✓	
Sea-to-Sky, Canada	DBFO		✓			**	✓		✓		✓		✓**			✓	✓

PPP Project	PPP Model	Type of road		Payment mechanism				Ownership		Type of project		Traffic risk			Success		
		toll	free	Direct toll	Availability	Shadow toll	Performance based	Private	Public	Greenfield	Brownfield	Private	Public	MRG	Profitable	CSF	Inter. Awards
E18 Grimstad-Kristiansand, Norway	DBFO	✓		✓	✓	*			✓		✓		✓*	✓*		✓	✓



# DBFM Model

PPP Project	PPP Model	Type of road		Payment mechanism			Ownership		Type of project		Traffic risk			Success			
		toll	free	Direct toll	Availability	Shadow toll	Performance based	Private	Public	Greenfield	Brownfield	Private	Public	MRG	Profitable	CSF	Inter. Awards
Slavyanka Roads, Russia	DBFM		√		√				√	√		-	-	-	√	√	

# Financing Models

Project	Country	Total cost	Budget size	Type of road		Payment mechanism (for private party)	Debt / equity ratio (in % of total funding)	Share of government financing
				toll	free			
1. A19 Dishforth -Tyne Tunnel	UK	GBP 30 mln.	Low		√	Shadow toll		
2. A2	Poland	EUR 1.6 bn.	High	√		Direct toll & availability payment	88%/12%	-
3. Athens Ring Road	Greece	EUR 1.35 bn.	High	√		Direct toll	50%/12%	31%
4. BA-093	Brazil	R\$ 1.6 bn.	Medium	√		Direct toll	...	
5. Dakar-Diamniadio	Senegal	\$ 0.26 bn.	Low	√		Direct toll		
6. Dushanbe-Chanak	Tajikistan			√		Direct toll		
7. E18 Grimstad-Kristiansand	Norway	EUR 0.35 bn.	Medium	√		Availability payment (with performance bonuses & penalties)	80% - debt	-
8. Istrian	Croatia	EUR 1.2 bn.	High	√		Direct toll (with MRG and revenue sharing scheme)	85%/15% (1A) 65%/15% (1B)	0% (1A) 20% (1B)
9. Jiyuan-Dongming	China	CNY 2.6 bn.	Medium	√		Direct toll	65%/35%	-
10. Lekki-Epe: 1 <sup>st</sup> section	Nigeria	\$ 0.45 bn.	Medium	√		Direct toll	83%/17%	-
2 <sup>nd</sup> section					√	Shadow toll		
11. M6 BNRR	UK	GBP 0.9 bn.	High	√		Direct toll & availability payment	69% - debt	-
12. M7	Australia	\$ 2.3 bn.	High	√		Direct toll (with revenue sharing scheme)	55%/45%	-
13. M11 (15-58 km)	Russia	RUR 59.6 bn.	High	√		Direct toll		39%
14. North South	Malaysia	\$ 3.2 bn.	High	√		Direct toll (with MRG)	49%/12%	39%
15. Orlovski Tunnel	Russia	RUR 54.6 bn.	High	√		Direct toll & availability payment	0%/33%	67%
16. Rosario-Victoria Bridge, Argentina	Argentina	\$ 0.43 bn.	Medium	√		Direct toll	17%/35%	48%
17. Sea-to-Sky	Canada	\$ 0.8 bn.	Medium		√	Availability payment (with performance incentive payments and vehicle usage payments)		
18. Slavyanka Roads	Russia	RUR 1.1 bn.	Low		√	Availability payment		
19. Tuni Anakapalli	India	\$ 70 mln.	Low		√	Availability (annuity) payment	75%/25%	-
20. WHSD	Russia	RUR 120 bn.	High	√		Direct toll (with MRG and revenue sharing scheme)	49%/7%	44%

<sup>[1]</sup> Using a typology similar to that of BENEFIT project (<http://www.benefit4transport.eu/index.php/reports>): Low (< EUR 300 mln.), Medium (EUR 300-1000 mln.), High (> EUR 1000 mln.)

<sup>[2]</sup> Debt includes both loans of commercial banks and development banks (e.g., EIB, China Development Bank, etc.)



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Thank you for your attention!

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