



**Asia-Pacific  
Economic Cooperation**

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## **Public-Private Partnership Quality Infrastructure Projects in Saint Petersburg**

Submitted by: Russia



**Conference on Promoting Smart Cities  
Through Quality Infrastructure Investment  
in Rapidly Urbanizing APEC Region  
15 September 2021**

**PPP QUALITY  
INFRASTRUCTURE PROJECTS  
IN ST. PETERSBURG**



- 01 Population close on 5,5 mln, about 2 mln vehicles;
- 02 The second most-populous city in Russia, the 4<sup>th</sup> in Europe;
- 03 Important economic and scientific center of the Russian Federation, large transportation hub (sea port in the city center, federal highways, railway hub, airport);
- 04 World famous sights, tourism center, City center is Unesco World Heritage Site.

# VTB INFRASTRUCTURE HOLDING INTEGRATED APPROACH TO THE CITY INFRASTRUCTURE DEVELOPMENT



- In 2006 St. Petersburg was the first Russian region to pass a Regional Law concerning PPP, pioneering this form of cooperation between government and business.
- VTB Infrastructure Holding (VTB IH) has become St. Petersburg partner as a part of the first significant PPP-Projects, that are still the most notable:
  - Pulkovo airport implementation, reconstruction and operation;
  - Unique urban highway “Western High-Speed Diameter” construction and operation;
  - 7<sup>th</sup> and the 8<sup>th</sup> sections of toll highway Moscow - St. Petersburg construction and operation.
- VTB IH is also engaged and discusses partnership in the following projects related to St. Petersburg infrastructure development:
  - Development of metro engineering in St. Petersburg;
  - St. Petersburg environmental operator establishment;
  - Establishment of logistics centers within the Russian Federation, in the North-West region as well;
  - Social infrastructure development – new building of fever hospital;
  - Higher education infrastructure development;
  - Etc.

# EXAMPLE OF SMART-CITY DEVELOPMENT UNDER PPP – WSHD CONSTRUCTION AND OPERATION PROJECT IN ST. PETERSBURG

The **Western High-Speed Diameter (WHSD)** is a unique toll multilane highway project running through the densely populated metropolitan area.

**TOTAL LENGTH**  
**46,6 km**

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**OFF-RAMPS INCLUDED**  
**more than 70 km**

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**ARTIFICIAL STRUCTURES**  
**26,7 km**

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**TOTAL LANES**  
**4-8**

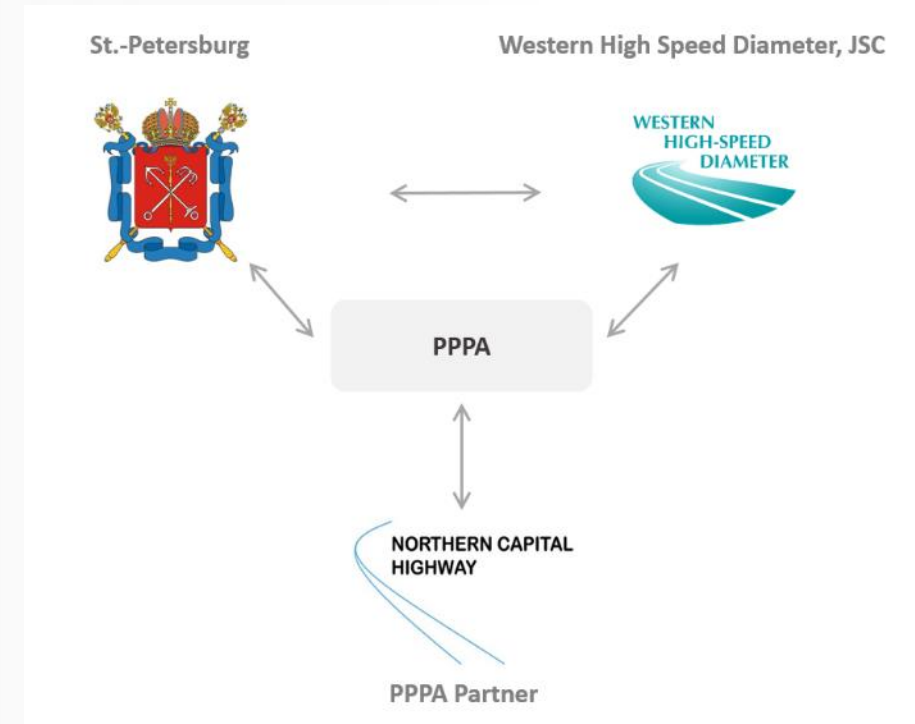
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**TRAFFIC INTERCHANGES**  
**10 (+3)**

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**PROJECT COST**  
**about 212 bln rub**

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# WHSD OPERATION – FIGURES AND CHARACTERISTICS

- 01** **393 000** transactions per day and almost **100 million** – per year;
- 02** **>93%** of electronic payments. Over **850 000** electronic tags are in use;
- 03** Electronic toll collection system - **Flow + >** motivation to acquire tags **>** reduction of congestion at toll plazas **>** new users attraction;
- 04** The first multifunctional mobile application (Yours WHSD 2.0) in the Russian Federation;
- 05** Over **160** units of specialized vehicle fleet, two Operation & Maintenance bases;



- 01 Automated traffic control system: over 800 cameras detecting incidents automatically, traffic control service, 24/7 traffic safety service, 240 variable message signs and display panels make WHSD 3-7 times as safe as comparables;
- 02 Pilot artificial intelligence pricing system, analyzing needs of the specific user results in additional traffic at WHSD and city roads traffic reduction;
- 03 The own mathematical transportation model for city roads and WHSD traffic statistics allowing for long-term infrastructure development and automobilization aimed at WHSD adaptation/new interchanges construction;
- 04 Transaction cost is calculated with consideration to a user's time cost;
- 05 And so on.

# WHSD ROLE AT SMART CITY DEVELOPMENT

## Transport situation

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- Average reduction of every trip in St. Petersburg **for 5 minutes**;
- WHSD saves **up to 40-60 minutes** for some trips within the city given that a trip throughout WSHD takes 25,5 minutes;
- Obvious improvement of transport link to Pulkovo Airport, Sea Port and Passenger Port of St. Petersburg, as well as to the federal highways;
- Year-round transport link to Vasileostrovsky district;
- General traffic congestion reduction;
- Significant Ring Road traffic reduction.

**01 ECOLOGY**  
Daily fuel consumption reduction – over 75 thousand liters, daily CO2 emissions reduction – over 170 tons;

**02 REAL ESTATE**  
Growth of demand for real estate within WHSD area of influence achieved **15-20%** due to transport accessibility improvement;

**03 SOCIAL DEVELOPMENT**  
About 5000 employees during WHSD construction and 1000 employees during WHSD operation, including unique competence specialists;

**04 NEW SIGHT**  
Over 60 thousand photos on Instagram.



# WESTERN HIGH-SPEED DIAMETER TOLL MOTORWAY ROAD

