

*Clean bus operation - experience in Tuscany,  
Netherlands and Slovakia*

**SUMP- based development of bus transport  
solutions,  
the case of Bratislava – extension of the trolley  
bus network and fleet renewal**

*JASPERS*

*26<sup>th</sup> - 27<sup>th</sup> June 2018*



# List of some projects co-financed by OPII (MoT) and IROP

Both OPII & IROP support SUMP's (regions&cities)

Projects co-financed by **OPII**:

- The modernization of tram tracks in Košice
- Tram purchase in Bratislava
- Trolleybus fleet renewal in Prešov
- Trolleybuses fleet renewal in Žilina
- DPB, Modernization of the maintenance base - 2nd stage

Projects co-financed by **IROP**:

- Purchase of Electric buses in Bratislava
- Informatization of public transport in Bratislava - Information Tables

# SUMPs

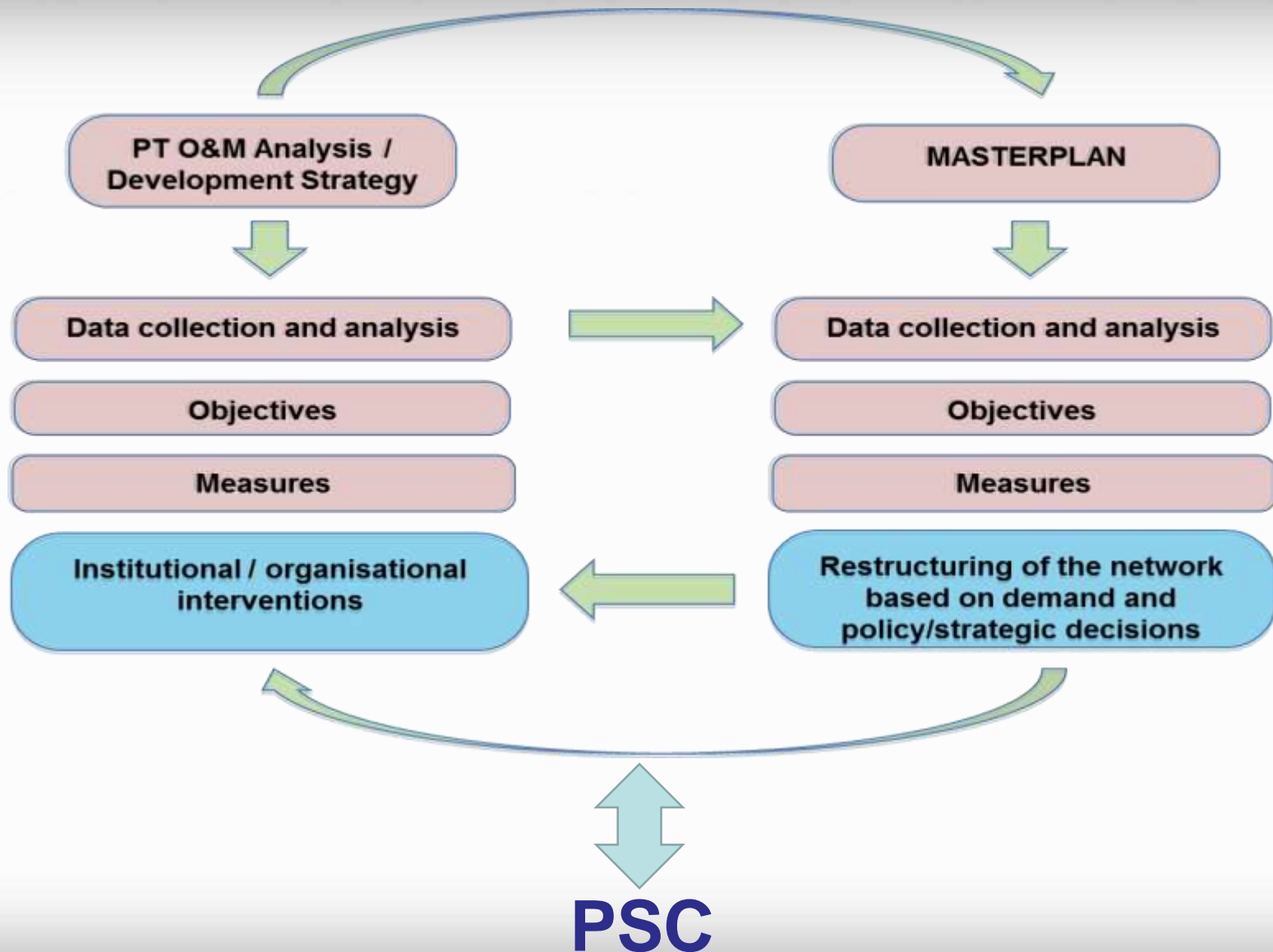
## Clean transport, Urban transport

- Sustainable Urban Mobility Planning is the most important topic in the Commission's Urban Mobility Package.
- The Sustainable Urban Mobility Plan concept considers the functional urban area and foresees that plans are developed in cooperation across different policy areas and sectors, across different levels of government and administration and in cooperation with citizens and other stakeholders.

Source: 19<sup>th</sup> June 2018 [https://ec.europa.eu/transport/themes/urban/urban\\_mobility/urban\\_mobility\\_actions/sump\\_en](https://ec.europa.eu/transport/themes/urban/urban_mobility/urban_mobility_actions/sump_en)

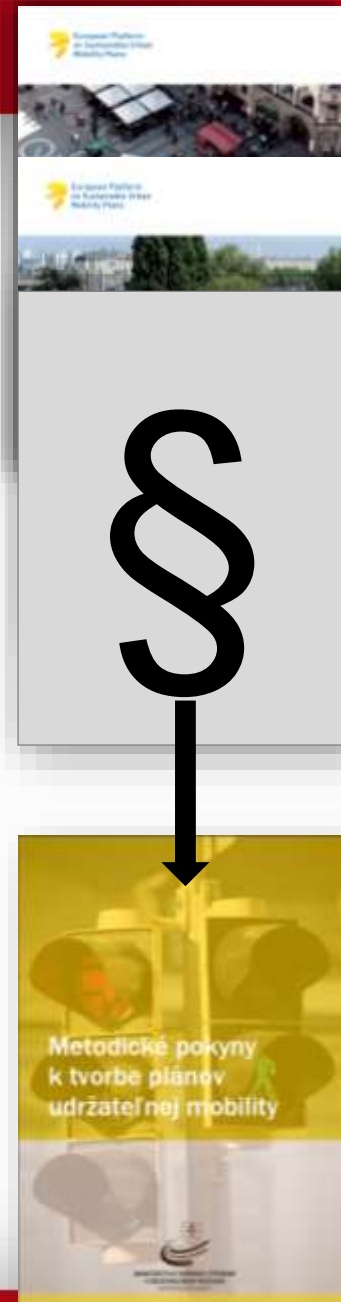
**Important:** Transport Planning should always consider the three fundamental layers of a transport system – Organisation, Operation, Infrastructure – and be independent from funding / not constrained by administrative borders

# SUMPs and Public Transport



# SK approach/methodology

- SUMP are required by both main Slovak OPs for funding transport projects
- Common methodology was prepared taking into account several sources:
  - Guidelines: Developing and Implementing a Sustainable Urban Mobility Plan (SUMP methodology)
  - The Poly-SUMP Methodology: How to develop a Sustainable Urban Mobility Plan for a polycentric region (Poly-SUMP methodology)
  - ToRs in some cities in Slovak Republic (2013 – 2015)
  - Law regulation on spatial planning
  - Recommendations of Jaspers
- Extent of SUMP is based on population
  - cities with population over 50 000 and regions should prepare a full version of plan whereas
  - other cities can prepare a lite version of plan or can be part of the „regional“ SUMP



# SK example: Košice

- Population: 240 688, metro area: 555 800
- Previous master plan:
  - obsolete (prepared in 1984)
- New master plan:
  - prepared 2014 – 2015 incl. SEA, approved 2016
  - based on national transport strategy
  - link between analysis, objectives and measures
  - projects tested in transport model
  - accent on sustainable transport modes and also organizational and operational areas
- Some no-regret projects funded with EU funds were supported in Bratislava and Košice prior to developing new strategies
- All new projects must comply with the new plan



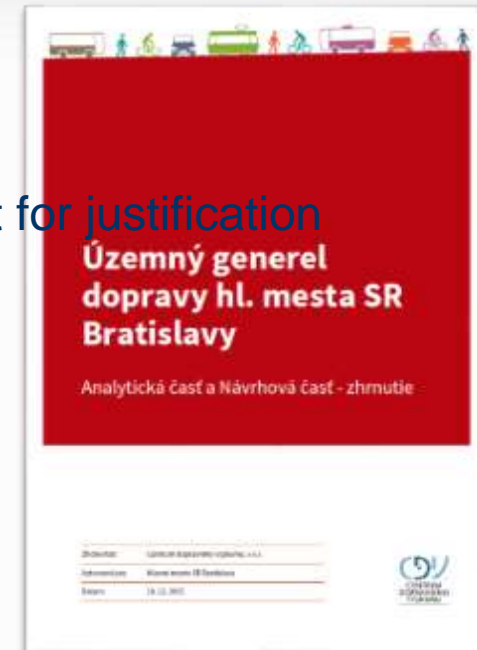


## City of Bratislava

# *Transport Master Plan – Summary and Current Status of implementation*

# Bratislava SUMP - summary

- Population: 432 801, metro area: 659 578
- Previous master plan:
  - list of wishes – usable for land use plan purposes only, not for justification of projects
  - not real transport strategy
- New master plan:
  - prepared 2013 – 2015, incl. SEA, approved 2016
  - strong and clear link between analysis, objectives and measures –  
Example - Issue: Low travel speed of public transport -> Measure: Preference of public transport in areas with high demand for transportation -> Project: All modernized tram tracks will be equipped with priority of trams at crossings -> separate project improving signaling is being prepared
  - projects tested with traffic model





# Bratislava SUMP – some of the main outcomes

- Main measures identified by the Plan:
  - Priority of PT in areas of high demand for transportation (increase of comfort/reliability of PT travel)
  - Priority of existing PT (bus lanes)
  - Recommendation to realize selected proposals of the Territorial Plan of Bratislava ZÁKOS (base road network) - related to increasing the capacity of roads with dedicated lanes reserved for PT
  - Connecting main tram radials with a second level PT system to absorb this demand -> type tbd according to demand/FS (tram/bus/trolleybus)
  - Parking Policy
  - P + R Parking Facilities
  - Construction of integrated PT terminals ("TIOP") including suburb. Railway
  - Bike transportation development

# Tram line number 1 to Petržalka crossing the Danube river – 1<sup>st</sup> segment (already in operation)



# Tramway Extension to Petržalka Borough – 1st Segment

Number of passengers from and to Petržalka

- 1<sup>st</sup> Q of 2017: 3 417 884
  - 1<sup>st</sup> Q of 2018: 4 677 866
- represents a 37% increase in the number of passengers  
(the passengers were counted by the ACP system)



Redesign of the entire bus network around the new tram



# Tramway extension to Petržalka borough – 2nd Segment

- EIA final statement – issued 30<sup>th</sup> June 2017
- Red FIDIC
- Bratislava is preparing also an Urban development study in Petržalka - deals with the development of the surroundings of the tram line -> redesigning the entire urban environment together with the transport(bus) network
- Modelled shift to tram (est. 3/4 from bus and 1/4 car)
  - +67 th. tram passengers per working day
  - 61,8 mil. pass.km / year (whole Petržalka tram project)  
(over 49 mil. pass.km netto 2nd stage)
  - 2,66 pass.h / year (whole Petržalka tram project)  
(over 49 mil. pass.km netto 2nd stage)

# Tram fleet renewal

Tram Škoda 29T co-financed from **Operational Program Integrated Infrastructure: 15** one-way vehicles low-emission, low-emission pollutants, low-floor and increased attractiveness to promote sustainable urban development



From the **Operational Program Transport (OPT) 45** low-floor trams were purchased

# Trolleybuses fleet renewal

The project was co-financed from Operational Program Transport (OPT) – **120** trolleybuses of which:

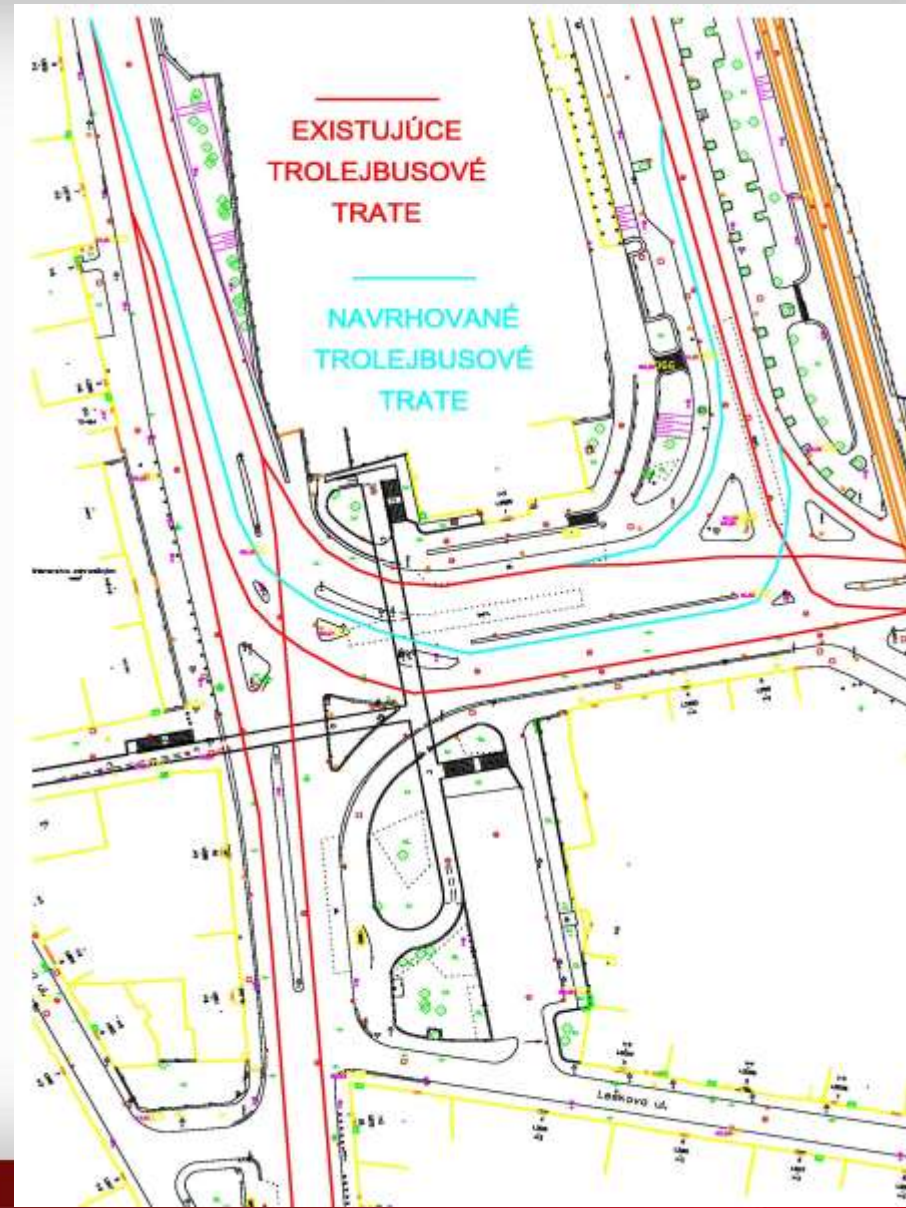
- Articulated trolleybuses: 70
- Solo trolleybuses: 35
- Solo trolleybuses with additional power unit (APU):15

Project ran in parallel with the SUMP (“no-regret” measure)

Precondition: FS and O&M study by DPB

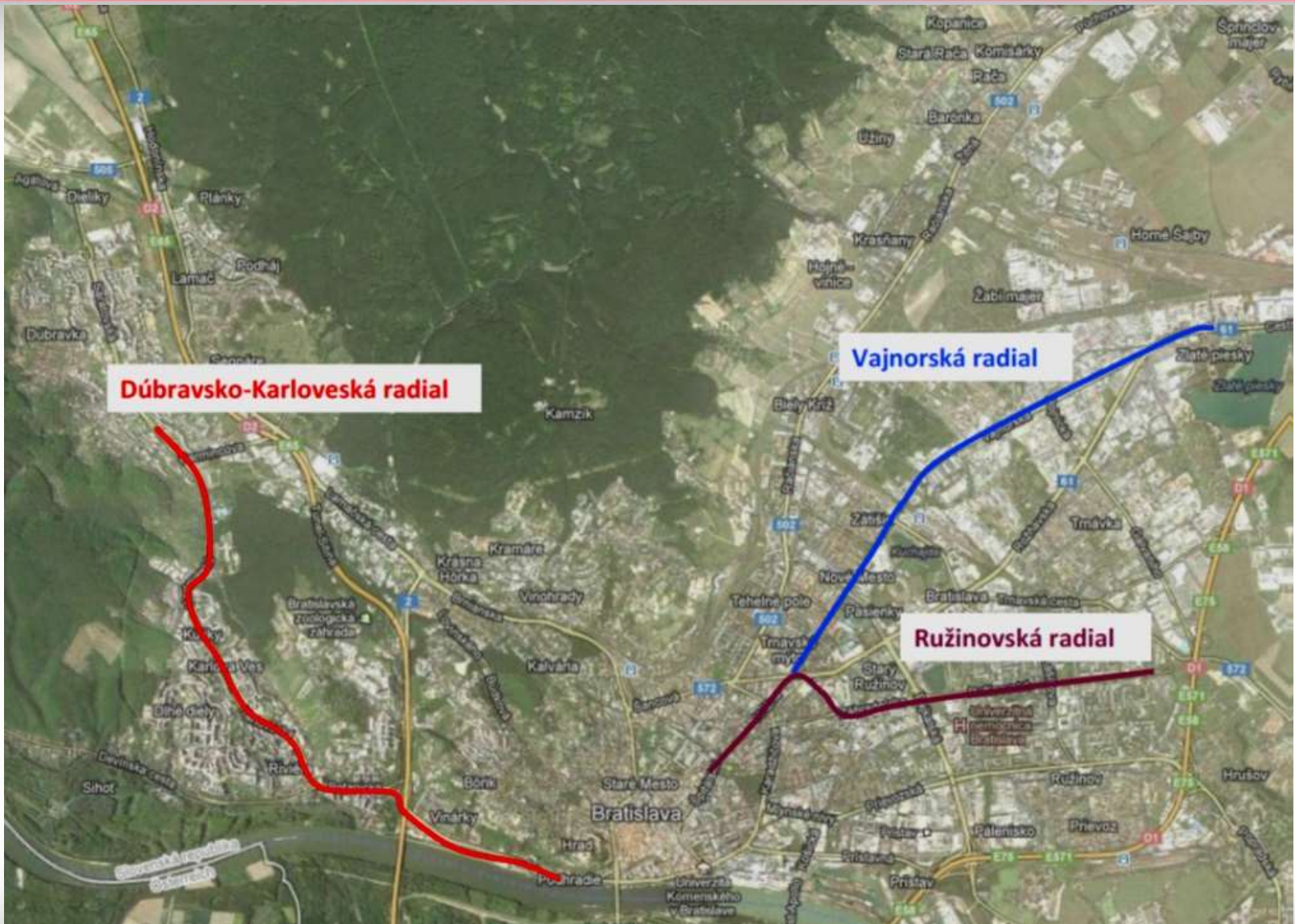
# New trolleybus line Patrónka – Riviéra

- Measure resulting from the SUMP
- Feasibility study finalized in June 2018 (based mainly on SUMP outcomes)
- Final design ongoing
- Preparing grant application



# Modernization of main tram radials:

1<sup>st</sup> (Dúbravsko-Karloveská rad) to start works by end of 2018





# Implementation of Public Transport priority (1)

## Priority of PT at Signalized Intersections

- **Priority for trams at signalized intersections** will be part of the project of the modernization of the tram radials (the radials Dúbravsko-karloveská, Ružinovská and Vajnorská).
- The City in cooperation with Dopravný podnik Bratislava has prepared a **list of signalized intersections to be modernized with public transport priority** (trolleybuses and buses) with the aim of using financing from the Integrated Regional Operational Program (IROP). The list was finalized in May 2017 and contains **42 intersections**, which are controlled by **28 controller units**. Public transport priority will be established in the city parts **Petržalka** (buses), **Ružinov** and **Old Town** (buses and trolleybuses). **Building permits are not required for the modernization of controller units and detection points at intersections.**
- The **intersection No. 225 Vrakunská – Hradská will be rebuilt** including a separate BUS lane for trolleybuses and buses (lines 75, 201, 202) and replacement of the overhead trolleybus catenary. This project will require a building permit.
- The City is currently preparing public procurement for the modernization of intersections.

# Implementation of Public Transport priority (2)

## Realized Measures – 2017

- Public transport priority at signalized intersections **Mýtna – Imricha Karvaša** (tram lines 1 and 2) and **Žilinská – Štefanovičova** (tram lines 1 and 2 and trolleybus line 203) was launched in February 2017.
- **The BUS lane on Košická Street** approaching the intersection with Miletičova Street was realized in May 2017.



Source of photos: [www.imhd.sk](http://www.imhd.sk)

# Public Transport Information System (IROP)

- 124 informative tables
- re-announcement of a call for tenders in March 2018
- Final phase of Public procurement in July 2018
- Realization of the project until October 2018
- Total Costs: 1 878 765 EUR (1 596 950,25 Cohesion Fund)
- Managing Authority is Ministry of Agriculture and Rural Development of the Slovak Republic

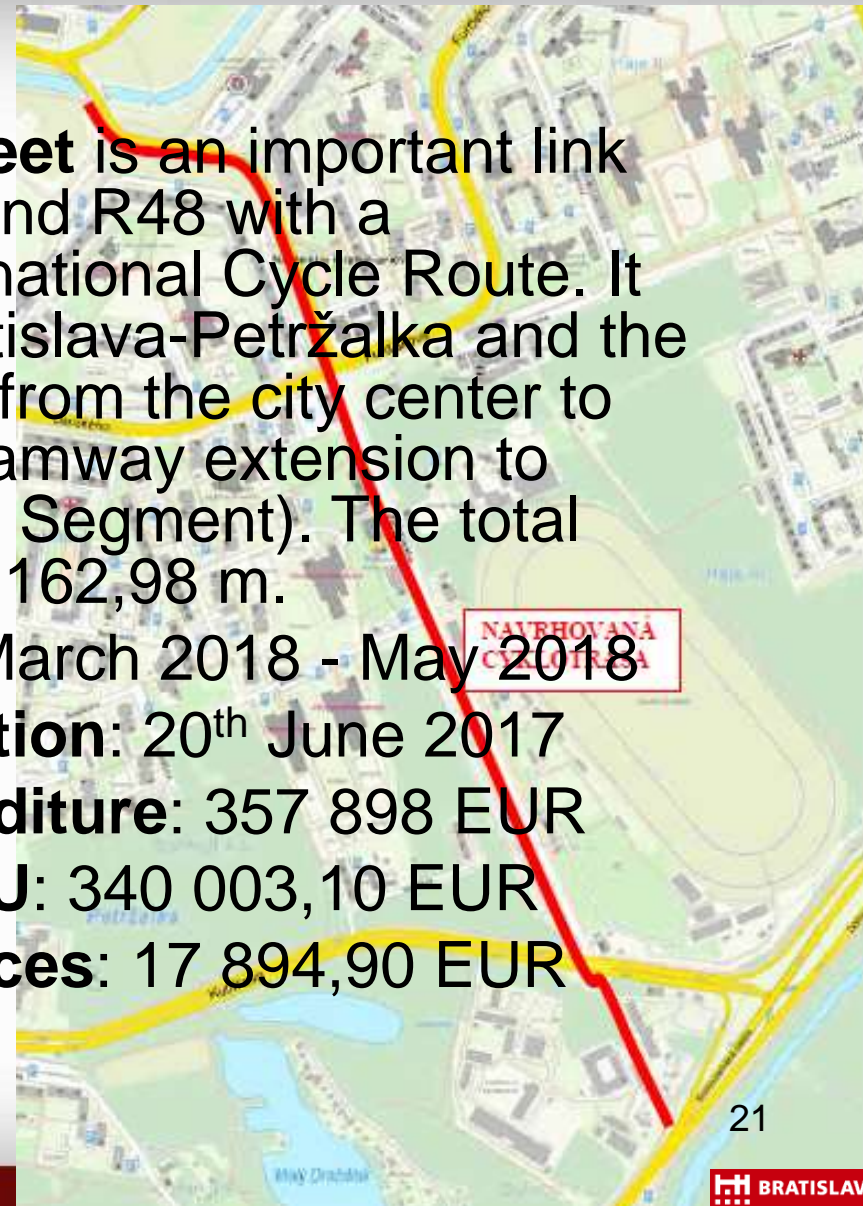
# Electric buses in Bratislava (IROP)

- The aim of the project is to buy 16 electric buses up to 12.2 m with a pantograph and 2 electric buses up to 9 m with a pantograph and fully use them in urban public transport.
- In operation instead of regular buses: lines No. 27,151,53,65 and 80
- Realization of the project until March 2019
- 4 vehicles already in operation
- ...future plans...



# Construction of cycling trail Starohájjska, section: Rusovská cesta - Dolnozemská cesta

- Cycling trail on **Starohájjska Street** is an important link to the main city biking trails O4 and R48 with a connection to the Eurovelo International Cycle Route. It is an important link between Bratislava-Petržalka and the planned public transport system from the city center to the end of Petržalka (projects Tramway extension to Petržalka borough – 1st and 2nd Segment). The total length of the realized section is 1162,98 m.
- **Schedule of implementation:** March 2018 - May 2018
- **Date of submission of Application:** 20<sup>th</sup> June 2017
- **Total amount of eligible expenditure:** 357 898 EUR
- **Requested amount from the EU:** 340 003,10 EUR
- **Co-financing from own resources:** 17 894,90 EUR



**THANK YOU**

# More Information

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**For info or further questions on this seminar and the activities of the JASPERS Networking Platform, please contact the JASPERS Networking and Competence Centre at the following email:**

**[jaspersnetwork@eib.org](mailto:jaspersnetwork@eib.org)**

**JASPERS Networking Platform:**

**[www.jaspersnetwork.org](http://www.jaspersnetwork.org)**

**JASPERS Website:**

**[jaspers.eib.org](http://jaspers.eib.org)**

