

**DANUBE**  
**MONORAIL**



## What is a monorail

- A single rail serving as a track for passenger or freight vehicles
- In most cases rail is elevated, but monorails can also run at grade, below grade or in subway tunnels
- Vehicles are either suspended from or straddle a narrow guideway
- Monorail vehicles are wider than the guide way that supports them

## Why to use a monorail

- Cost effectiveness
  - Large monorails are usually under 10% of the cost of heavy rail subway systems
- Proven role models
  - Many systems are in use carrying millions of passengers per year especially in Japan and China
- Safety
  - Monorails are fully grade separated. Evacuation from one carriage to another, to a walkway or to the ground is possible. Monorails do not flood and are not below sea level
- Independence
  - No impact on existing transit systems which are already at or near capacity
- Operation
  - Monorails can be automated

## Monorail vs. other elevated systems

- Monorail has less visual impact than other high-capacity elevated systems



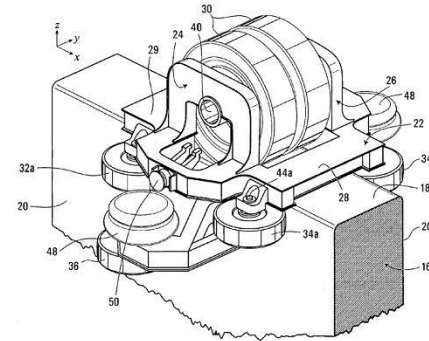
## Types of monorail

- High capacity monorails
  - Flat floor allows passengers to walk-through the train
  - Two tracks allow to travel in both directions
  - Hundreds of passengers per train
  
- Tourist monorails
  - Separate carriages - cannot walk through
  - Mostly short single-track loops
  - Under 100 passengers per train
  - Not suitable for public transport systems

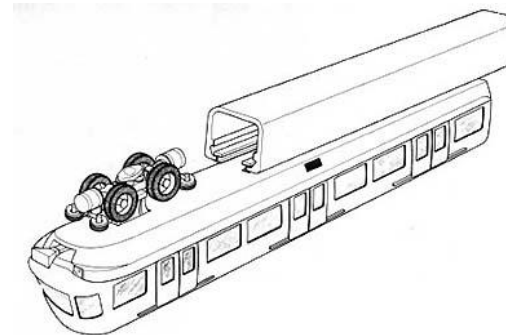


## Types of monorail

- Straddle beam
  - Rubber tires are on a beam



- Suspended
  - Rubber tires are in a beam



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## Region

- Targeted region of Bratislava, Slovakia:
  - Population: over 1 million
  - Area: 2053 km<sup>2</sup> (793 sq mi)
  - Density: 490 / km<sup>2</sup>
  - No. of cities covered: 7
  - No. of villages covered: 73
  - Main transportation hubs:
    - Bratislava, Senec, Pezinok, Malacky



## About Bratislava

- Capital city of Slovakia
- Founded: 113 BCE
- Population: 500 000
- Area: 367 km<sup>2</sup> (142 sq mi)
- Density: 1362 / km<sup>2</sup>

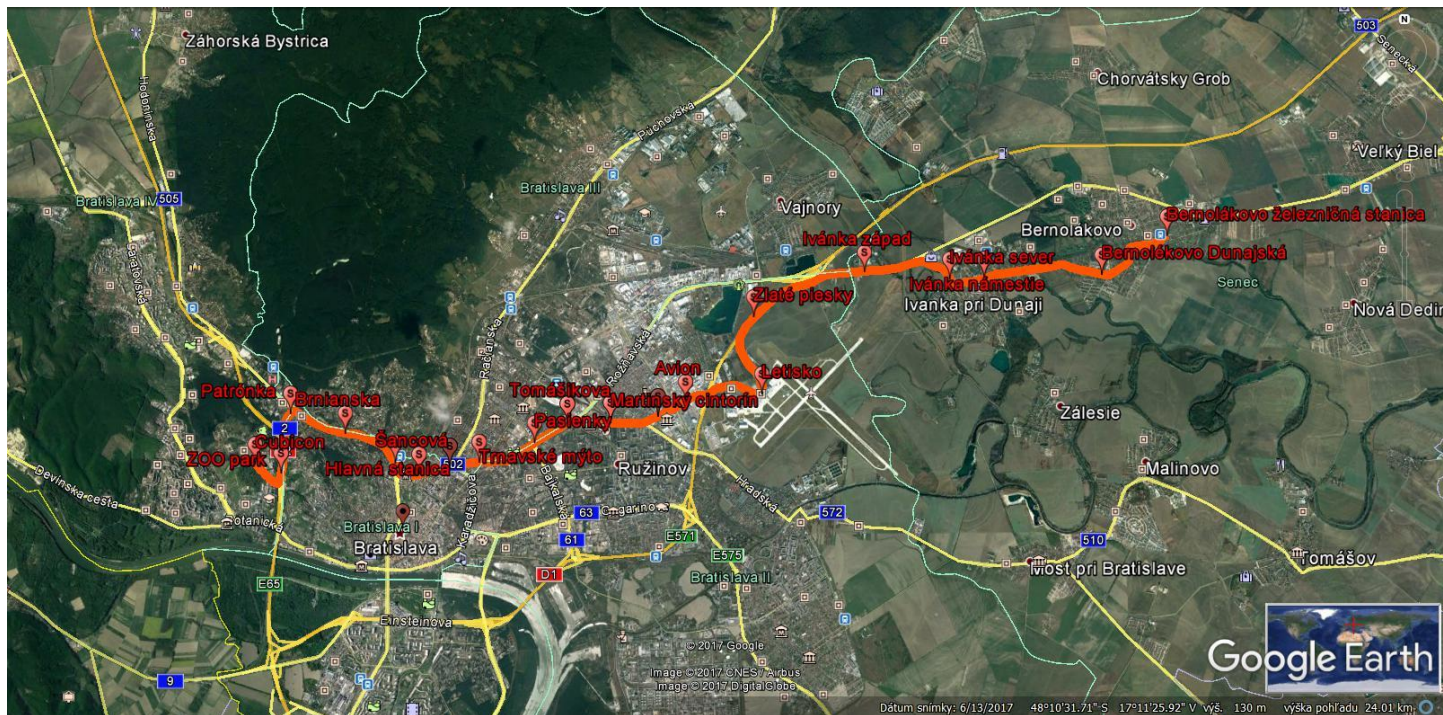


## Actual transportation system

- Bratislava city
  - Public transport for Bratislava with 3 pillars:
    - Buses
    - Trolleybuses
    - Trams
- Bratislava region
  - Inter-city public transport:
    - Buses
    - Trains

## Bratislava route

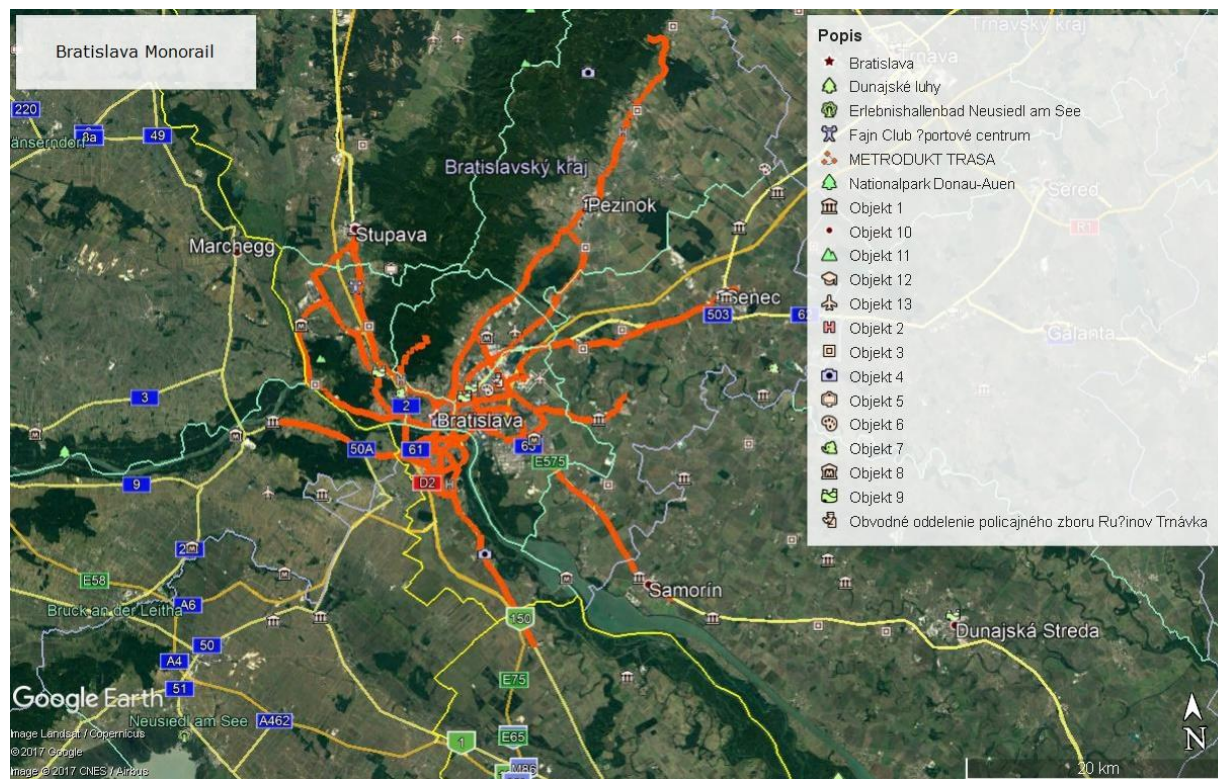
- Phase 1





## Bratislava route

- Phase 2



**Project launch**

**Summer 2018**

**Mr. Jaroslav Melišek**

Chairman of the Board of Directors

Danube Monorail

+421 902 444 464

[president@sacc-eu.eu](mailto:president@sacc-eu.eu)