

***The past and the present of
the Budapest fixed-rail
public transport; operational
considerations***

March 2012, London

Legal predecessors:

1865 Pest Public Road Rail Tracks Company (PKVT)

1867 Buda Public Road Rail Tracks Company (BKVT)

1878 Buda Public Road Rail Tracks Company (PKVT bought up BKVT)

1889 Budapest Suburban Railways Joint-Stock Company (BHÉV)

1922 Budapest Metropolitan Transport Company Limited by Shares (BSZKRT)

1949-1967 New smaller transport enterprises provide the transport services

1 January 1968 BKV – Budapest Transport Company was established

1 January 1996 BKV Rt. – Budapest Transport Limited

6 February 2006 BKV Zrt. – new name: Budapest Transport Closely Held Corporation

Positioning of the company



- Nearly 200 years history
- 5 integrated branches (bus, tram, metro, suburban railway/HÉV, trolleybus) + cogwheel railway, funicular, chairlift, boat
- More than 12 000 employees
- 21.4 billion place km
- 1,5 billion passenger/year, 3 million passenger/day, 51-53 thousand persons cross the administrative boundary of Budapest daily)
- Budapest gives 36.7% of the GDP in Hungary

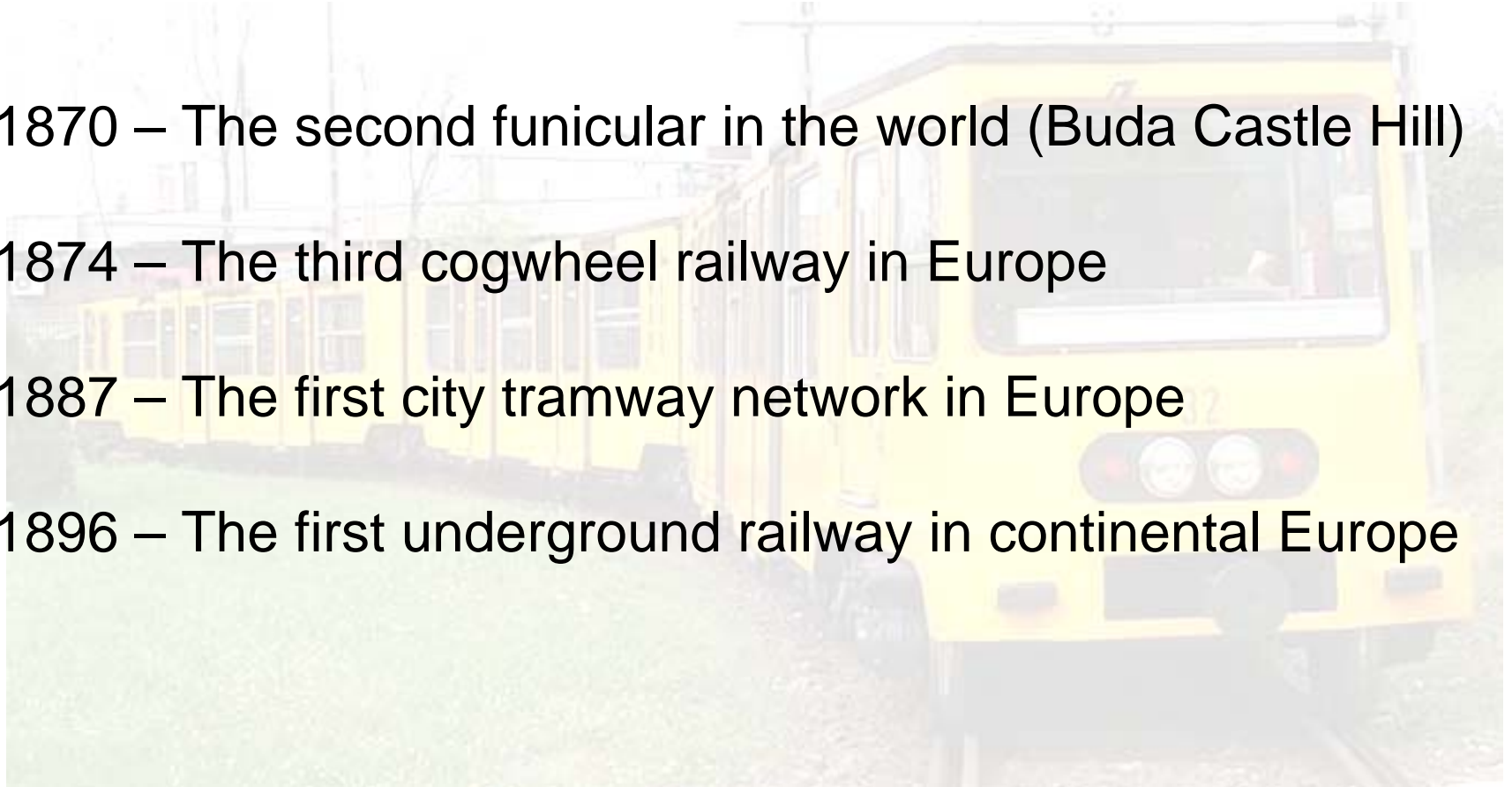


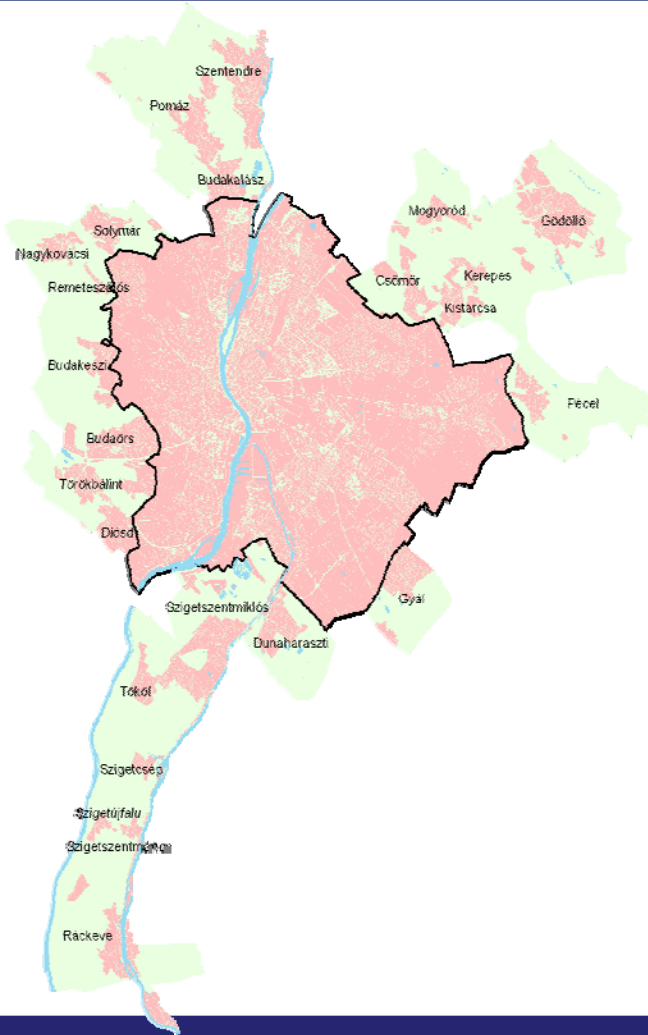
1870 – The second funicular in the world (Buda Castle Hill)

1874 – The third cogwheel railway in Europe

1887 – The first city tramway network in Europe

1896 – The first underground railway in continental Europe

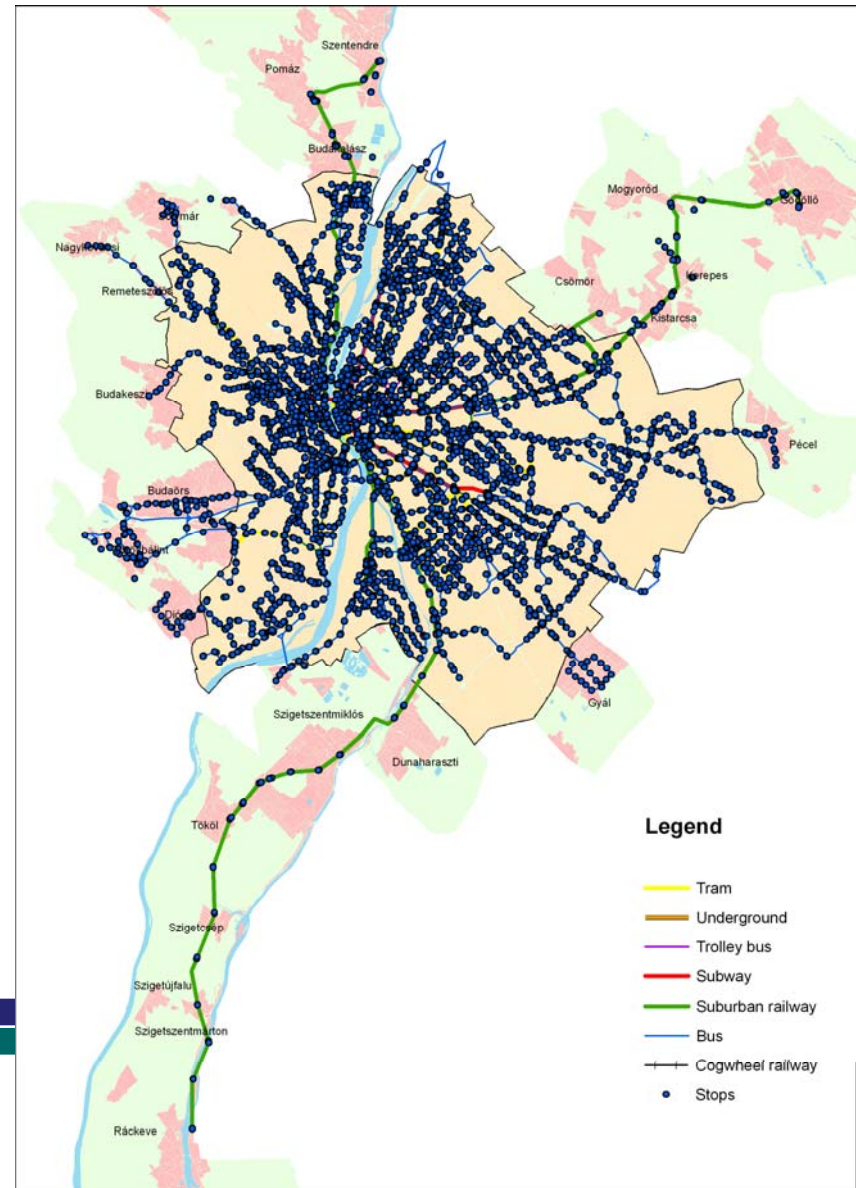




- **Owner: the Municipality (100%)**
- **Services: Public transportation of Budapest and the agglomeration (~2 million residents)**
- **Owner, competent authority and contracting party: Municipality of Budapest**
- **Contract: 2004 - 2012**

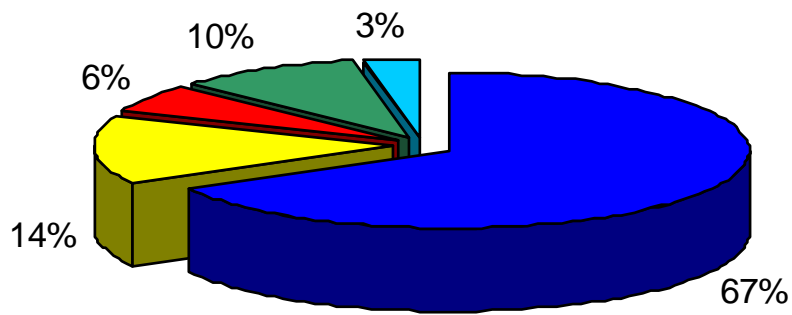
Our services

- Average circulation speed: 16.5 km/h
- Total number of headcount: 12,679
- Service in the 28 surrounding settlements
- Population of the capital has decreased by 16 per cent since 1990
- Population growth in the conurbation zone was 28 per cent at the same time
- 36 per cent of people moving from Budapest settles down in the conurbation zone



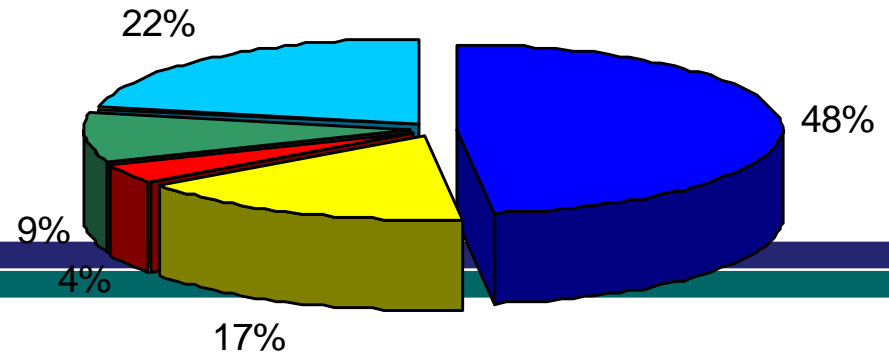
Network in branches

■ Bus ■ Tram ■ Trolleybus ■ HÉV ■ Metro

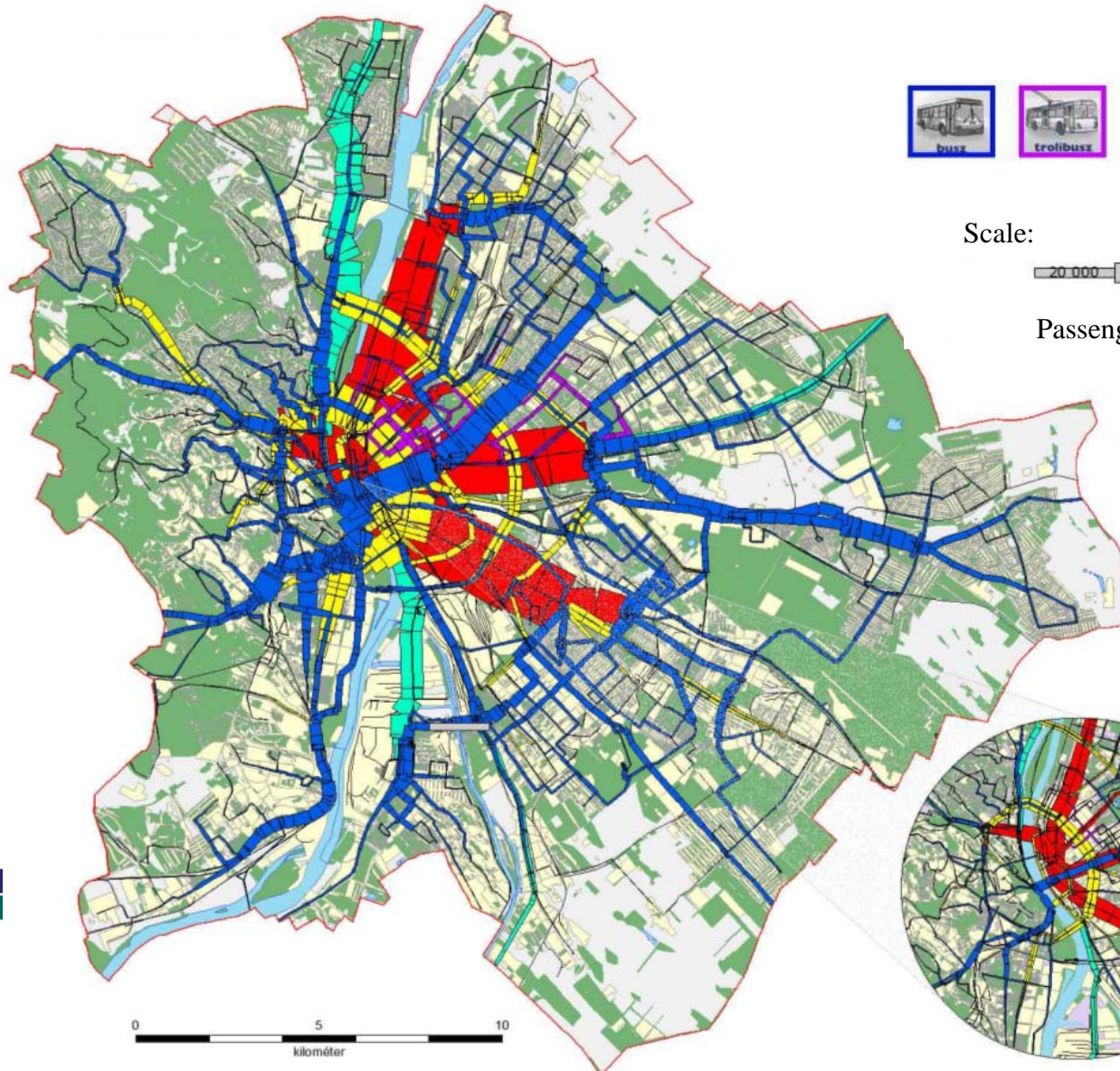


Performance [passengerkm]

■ Bus ■ Tram ■ Trolleybus ■ HÉV ■ Metro



Passenger flow and trip distribution



Scale:

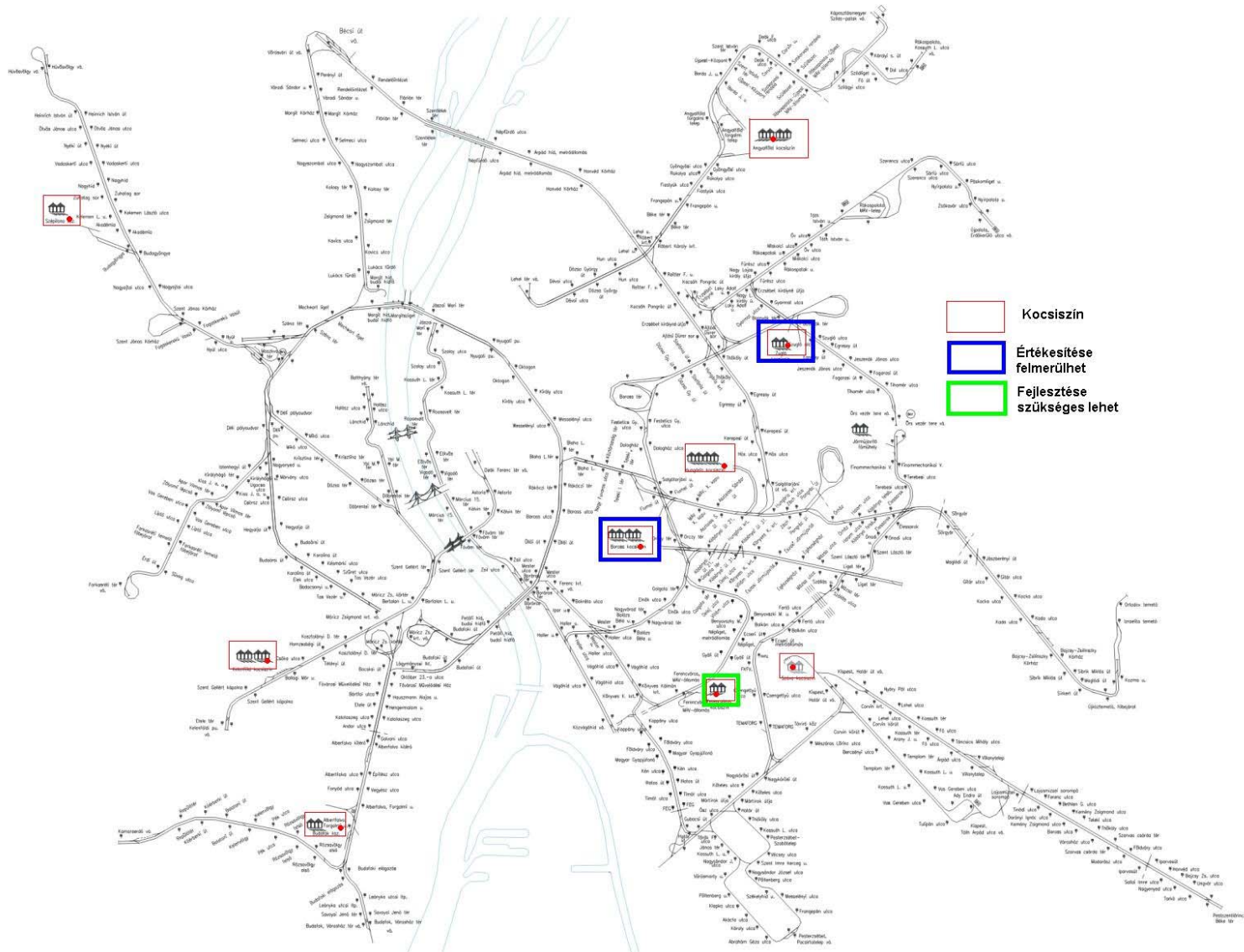


Passengers/day/2 directions



- **Around 600 vehicles in four main type (German, Czech, Hungarian)**
- **10 depots (with Cogwheel railway)**
- **40 new Siemens Combinos (54 meter long vehicles)**

Depots in Budapest



Operation of the Siemens Combinos



High operational costs, but no big problems (with high availability - 90 % on peak hours)

Energy consumption



Lower consumption for drive, higher for heating and AC

Second hand acquisition



Tw6000 trams main datas

260 built in Germany

102 now in Budapest (second and „third”hand)

26 meter long

2,4 meter width

Around 170 passanger

Prices, expenditure

Last 16+10 we bought in 2010-2012

Buying price: 30000 GBP per vehicle

Price with overhaul and conversation: 200 000 GBP per vehicle

Around 25% of a new 25-30 meter low floor one

Prices, expenditure, overhaul



Second hand acquisition

High platform solution



Trolleybus operation, main datas



160 vehicles, also 70 buses in Pongrác depot

Solaris vehicles



Sixteen are in operation, only 10% of the whole fleet

Mixed fleet

5 type in operation (4 main in the tram division also)

- **Advantage:** less dependence from suppliers

- **Disadvantage:** higher assortment cost



European partners



Only three or four players in European market, high purchasing prices

Second hand acquisition



Vintage cars



125 years anniversary in 2012 (Tram and Suburban railway)

Thank you for your attention,
Laszlo Szedlmajer BKV chief
engineer