Urban mobility in Prague 1989 – 2014
Success story?

Budapest
4.11.2014

Context

Year	1989	2014
Country	Czechoslovakia	Czech Republic
System	Socialism	Democracy
GDP p.c.	8,768 USD	13,097 USD
1 USD	28 Czechoslovak crowns	22 Czech crowns
Av. salary	3,170 CSK (113 USD)	25,500 CZK (1,160 USD)
Inflation		183,3% (1989 – 2013)

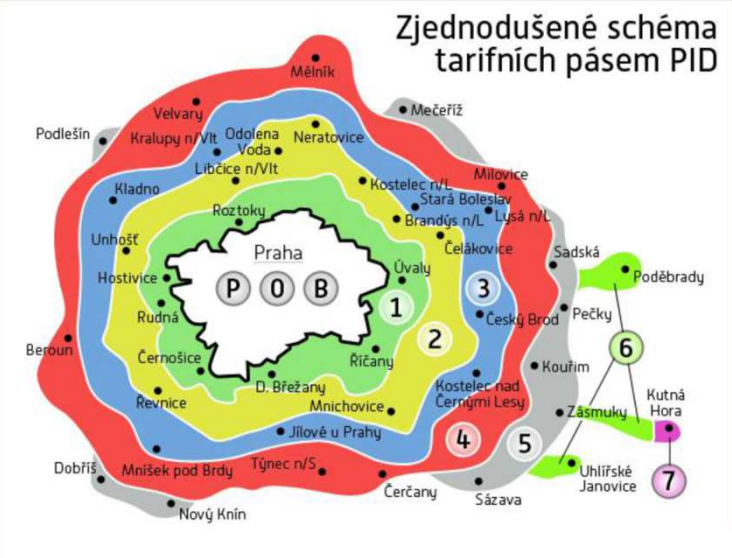
City of Prague

	1989	2014
Area	496 sq kms (0,3% of CS)	496 sq kms (0,6% of CZ)
Population	1.21 million (8% of CS)	1.25 million (12% of CZ)
Modal split	public transport 75%	public transport 57%
	car transport 25%	car transport 43%
Cars	270 / 1,000 inhabitants	765 / 1,000 inhabitants

PRAHA
PRAGUE
PRAGA
PRAG

Prague Integrated Transport

- Organized by Prague Municipality since 1991
- Area of Capital City of Prague + Prague East District + Prague West District + Central Bohemian Region
- Today 11 tariff zones (up to 70 kms from the City center)
- Prague Public Transit Co., Inc. + 16 other carriers
- Underground, tramway, railway, urban and suburban bus lines, funicular and ferries
- Common tariff conditions
- Timetable coordination



Dopravní podnik hlavního města Prahy

Public Transport in Prague

Metro

1989: 3 lines with 33 km and 33 stations, 2 depots
2014: 3 lines with 59 km and 57 stations, 3 depots
1989: 34% passengers using public transport
2014: 48% passengers using public transport
2014: average age of the fleet – 7.35 years

Tram

1989: 499 km of 27 day / 8 night lines, 8 depots
2014: 518 km of 22 day / 9 night lines, 7 depots
1989: 32% passengers using public transport
2014: 28% passengers using public transport
2014: average age of the fleet – 12.65 years

Bus

1989: 1,900 km of 168 day / 12 night lines, 5 depots
2014: 1,699 km of 119 day / 15 night lines, 5 depots
1989: 33% passengers using public transport
2014: 24% passengers using public transport
2014: average age of the fleet – 8.92 years

Prague Public Transit Co. in **1989**

- Largest public transport operator in Czechoslovakia
- 100% owned by Municipality of Prague

- 15,969 employees
- Average salary 3,821 CSK (136 USD)

- 527 vehicles in metro (105 trains of 5 wagons + 2 wagons)
- 984 tram cars (0% low floor, 3% articulated)
- 1,422 buses (0% low floor, 24% articulated)

- Basic ticket (1 ride) 1 CSK (USD 0.04)
- Annual ticket for adults 780 CSK (USD 28)
- 1.316 billion passengers per year (3.6 mio every day)

Prague Public Transit Co. in **2014**

- Largest public transport operator in the Czech Republic
- Joint stock company
- 100% owned by Municipality of Prague

• 10,750 employees	↓ - 33%
• Average salary 32,379 CZK (1,472 USD)	↑ + 847%
• 735 vehicles in metro (147 trains of 5 wagons)	↑ + 40%
• 885 tram cars (27% low floor, 23% articulated)	↓ - 10%
• 1,214 buses (64% low floor, 37% articulated)	↓ - 15%
• Basic ticket (90 minutes) 32 CZK (USD 1.50)	↑ + 3,200%
• Annual ticket for adults 4,750 CZK (USD 223)	↑ + 609%
• 1.23 billion passengers per year	↓ - 6%

Dopravní podnik hlavního města Prahy

Usage of public transport - 2014

City	Number of inhabitans	Number of passengers per year	Ratio pass./inh.
Stockholm	1 300 000	260 000 000	200
Dresden	530 000	150 000 000	283
Brusel	1 100 000	330 000 000	300
Berlin	3 400 000	1 050 000 000	309
Paris	11 900 000	4 000 000 000	336
Helsinki	600 000	230 000 000	383
Wien	1 710 000	838 000 000	490
Warsaw	1 800 000	910 000 000	506
Budapest	1 730 000	1 300 000 000	751
Brno (CZ)	378 000	352 274 000	932
Prague	1 246 000	1 230 000 000	987

Source: PPT internal research (2014)

Metro rolling stock - **2014**

81-71.M (465 wagons / 93 trains) – lines **A** and **B**

Siemens M1 (265 wagons / 53 trains) – line **C**

Tram rolling stock - **2014**

T3M (33 cars)

T3SU (118 cars)

T3R.P (350 cars)

T3R.PLF (33 cars)

T6A5 (146 cars)

KT8D5.RN2P (46 cars)

14T (59 cars)

15T (112 cars)

Fleet of buses - 2014

MIDIBUSES
(50)

5 **Ikarus** E91 Zeus (H)

Euro III

20 **SOR** BN 8,5 (CZ)

Euro V

25 **Solaris** Urbino 8,9 LE (PL)

Euro V

STANDARD BUSES
(651)

Euro I

5 **Karosa** 731 (CZ),
1 **Karosa** 732 (CZ)

Euro II

39 **Karosa** 931 (CZ)

1 **Karosa** C934 (CZ)

Euro II a III

298 **Citibus/Citelis** (F, CZ)

Euro III

131 **Karosa** 951

Euro IV

6 **IVECO** Crossway LE

Euro V

168 **SOR** NB12

1 **SOR** BN 12,

1 **SOR** BN 10,5

ARTICULATED BUSES
(443)

Euro I

21 **Karosa** 741 (CZ)

Euro II

98 **Karosa** 941 (CZ)

Euro II a III

50 **Citibus / Citelis** (F, CZ)

Euro III

31 **Karosa** 961 (CZ)

Euro V

241 **SOR** NB18 (CZ),

2 **SOR** NBH18 (CZ)

Dopravní podnik hlavního města Prahy

Emission limits of the buses

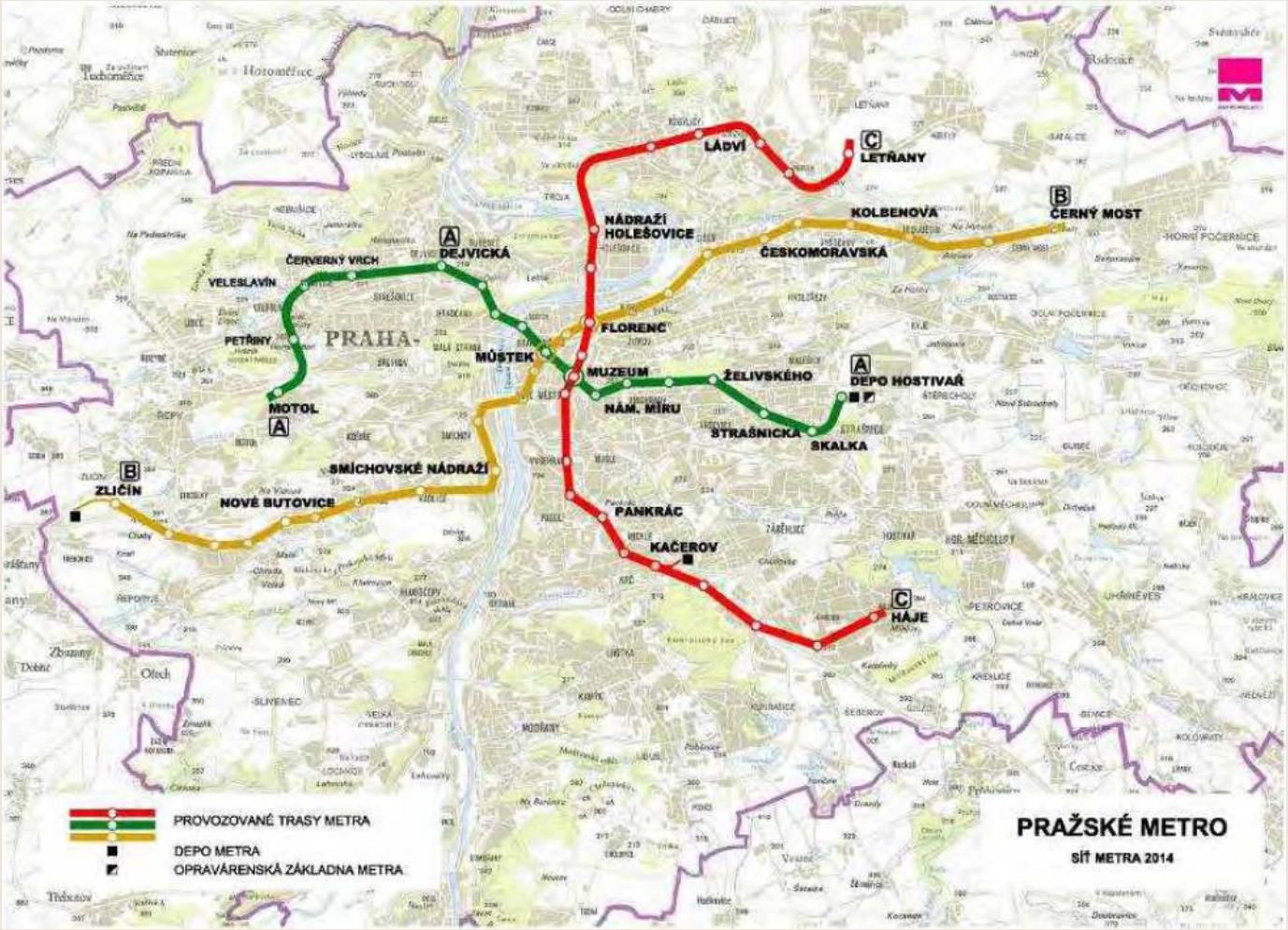
- EURO emission limits:

Buses	
EURO I	27
EURO II	292
EURO III	360
EURO IV	6
EURO V	458
EURO VI	1
TOTAL	1144

- Plan of fleet renewal
  - Elimination of EURO 1 and EURO 2 buses
  - EURO 1 buses completly eliminated by the end of 2014
  - Purchase of new articulated buses EURO 5

Metro network development - 1988

Metro network development - 2015



Barrier-free metro access - 2014

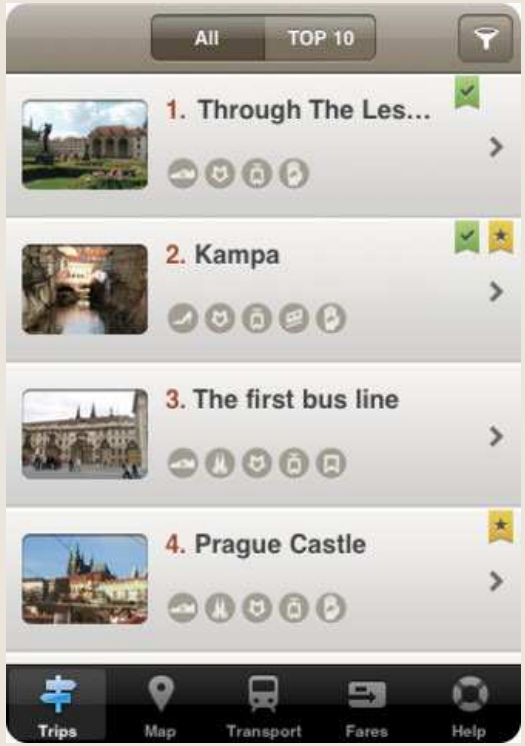
Ticketing system

- **Turnstiles in metro network** in period 1974 – 1985
  - Primitive turnstiles for one type of coin only (1 Kčs)
  - Incompatible system with other public transport modes

- **Paper short-time tickets and passes** after 1985
- **Smart chipcard „Opencard“** for residents of Prague since 2006
- **SMS tickets** (only for Czech residents) since 2007
- **SEJF Mobile Wallet** since 2013

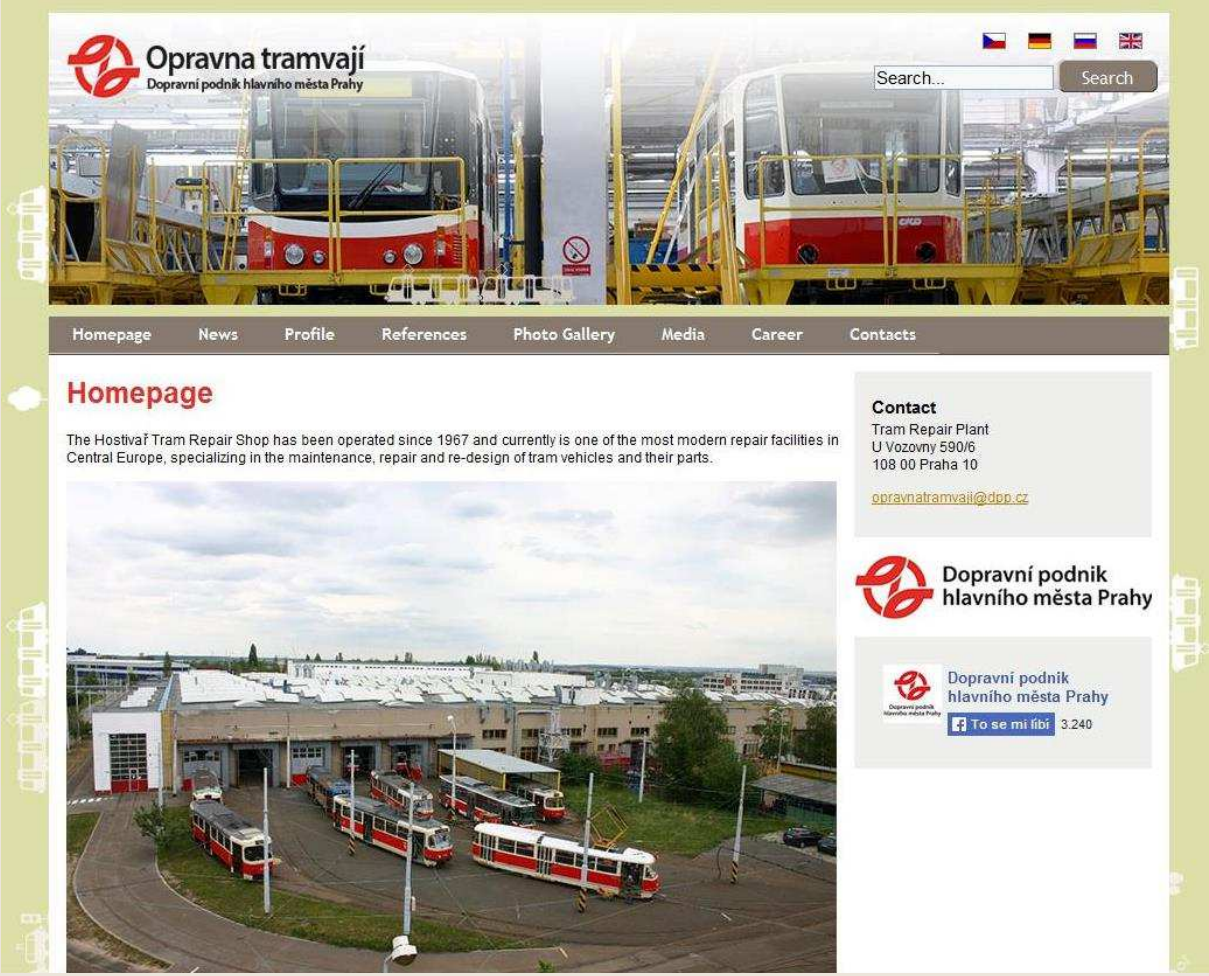
„New“ and social media

Google maps



Hostivař Tram Repair Shop

www.opravnatramvaji.cz



Lessons learnt

Environmental aspects
Modal split
New vehicles
Metro network extension
Accessibility
Barrier-free stations
Information system
Ticketing system
Social media

EuroTest QUALITY SAFETY MOBILITY

Public Transport 2010:
Test of 23 European Cities

	City		Traveltime 35%	Transfer 15%	Information 25%	Tickets/Fares 25%	Overall result
1	Munich	D	75,24	83,02	73,65	64,09	++
2	Helsinki	FIN	72,21	75,52	67,27	77,13	+
3	Vienna	A	71,88	77,04	70,64	72,54	+
4	Prague	CZ	61,27	65,34	64,30	99,38	+
5	Hamburg	D	72,23	78,05	73,79	66,47	+
6	Copenhagen	DK	74,39	70,05	63,98	74,92	+
7	Frankfurt	D	74,44	84,23	71,69	57,42	+
8	Barcelona	E	66,98	76,25	62,14	77,61	+
9	Leipzig	D	67,72	76,83	62,54	75,60	+
10	Cologne	D	67,37	84,12	71,64	61,23	+
11	Rome	I	64,47	69,47	51,11	89,02	+
12	Bern	CH	67,31	69,74	61,22	71,06	+
13	Paris	F	77,33	59,12	58,00	65,80	o
14	Brussels	B	63,04	65,42	62,02	77,05	o
15	Amsterdam	NL	67,24	66,97	70,32	61,76	o
16	Warsaw	PL	60,20	61,89	55,82	88,25	o
17	Oslo	N	71,70	65,98	69,78	53,63	o
18	Lisbon	P	57,26	66,16	64,27	77,80	o
19	Madrid	E	66,95	57,17	58,13	73,25	o
20	London	GB	67,78	70,37	77,02	44,00	o
21	Budapest	H	65,68	49,90	52,15	77,58	o
22	Ljubljana	SLO	65,15	54,03	47,34	69,00	–
23	Zagreb	HR	48,29	43,85	46,12	77,23	––

in Percent ++ very good + good o acceptable – poor –– very poor

Thank you for your attention

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Dopravní podnik
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