

# Historical Development of the Urban Transport System

The form of human settlements is determined by the people's natural need to carry on trade and consequently transport people and goods. It means the key factors defining the geographical location of cities and their internal structure are economy and transport. It happens based on various evolutionary processes, but also through major or minor creative initiatives. The aim of this article is to illustrate it by an example of one of the most beautiful cities of the world – the Czech capital of Prague.

The development of Prague can be divided into four basic periods:

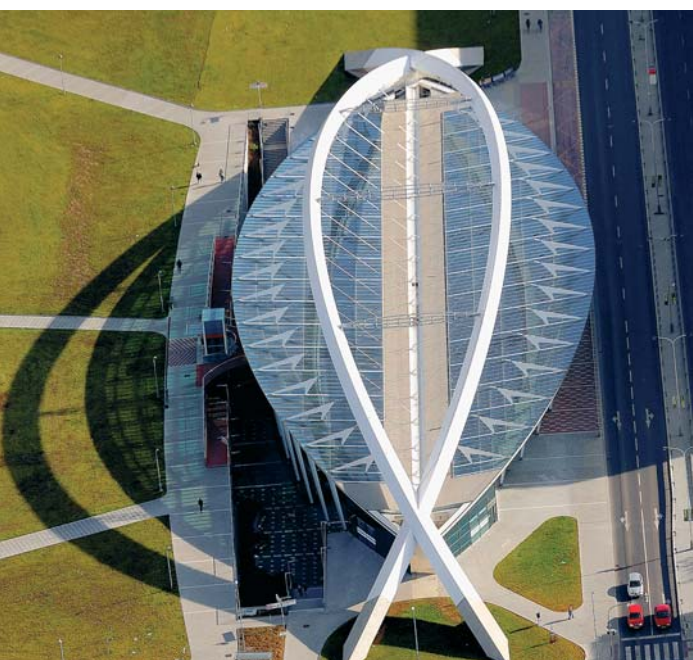
- the first stage between the 9<sup>th</sup> and 14<sup>th</sup> century, characterised by evolutionary processes, then first routes and settlements are founded in the area of today's Lesser Town and Old Town,
- the second stage, started by construction of the New Town connecting Vyšehrad and the Old Town and finished by the first impacts of the industrial revolution,
- the third stage in which the city starts to grow in the 2<sup>nd</sup> half of the 19<sup>th</sup> century, the outer walls are pulled down and first urban transport systems get to Prague,
- the fourth stage starting in the 1960s, characterised by mass development of individual motoring, to which Prague adapts itself only with big difficulties.

## FIRST STAGE - EVOLUTIONARY

Since the first days of the modern human society, trade and transport rank among basic

*Letecký pohled na novou stanici metra na trase C Střížkov*

*An aerial photograph of the new underground station of Střížkov (line C) Foto: David Neugebauer*



factors that determined and still determine the form of urban settlements and location of cities in general. The Old Town Square was an important market place, a crossroad of long-distance routes in the Premyslides era, and Ungelt (the prince's custom house) was situated right next to it. As Emanuel Poche and Josef Janáček say in their book "Prague Foot by Foot": "It seems these sites, located near trade and manufacturing centres, are places where the origins of the permanent settlements out of which Prague developed should be looked for, and that both the ancient settlements, Hradany and Vyšehrad, were built to guard and protect those centres. Out of these, it was the settlement of Prague that thanks to the political consciousness and aggressiveness of its governors, Czech princes of the Premyslides dynasty, in the 2<sup>nd</sup> half of the 9<sup>th</sup> century grew to become the most important site of not only the tribe of Bohemians but in the whole country, and put Vyšehrad into the shade: it got under the Premyslides in the 10<sup>th</sup> century a became their secondary seat."

It seems that the feature known as the settlement's genetic code, originates in the same place. If we let both the authors, Emanuel Poche and Josef Janáček, speak again, we will learn more. When you listen to stories about establishment of new settlements along routes, it reminds you of the current thoughts about a phenomenon known as multiplication effect of transport development: "Numerous small Bohemian settlements, marked by small parish churches, were established and continued to develop on the main routes from the market place to both the ancient settlements and in their vicinity. Those were the settlements of Podskali, Opatovice, Zderaz, Rybníček, Bojiště, Psáče on the right bank and Obora, Nebovidy, Újezd and the core of the actual extramural settlement in the today's Sněmovní street with three churches on the left bank."



*Vyobrazení konkurenčního boje mezi omnibusy (v pozadí) a nastupujícími konšpěznou tramvajemi v roce 1875*

*Zdroj: Archiv Dopravního podniku hl. m. Prahy  
An illustration of a competitors fight between omnibuses (at the back) and new horse trams in 1875  
Source: Archives of Dopravní podnik hl. m. Prahy*

## SECOND STAGE STARTED BY CONSTRUCTION OF THE NEW TOWN

After that Prague went through several phases of dynamic development. Establishment of the Old Town, then the Lesser Town and especially foundation of the New Town by Charles IV, a quarter that was at that time unique especially due to its wide streets. What more, three natural trade centres were formed: the Horse, Cattle and Hay Markets. The construction of the New Town by Charles IV was most probably inspired by Jerusalem, which was considered the heart of the Christian world, Prague was meant to take a similar position in Europe.

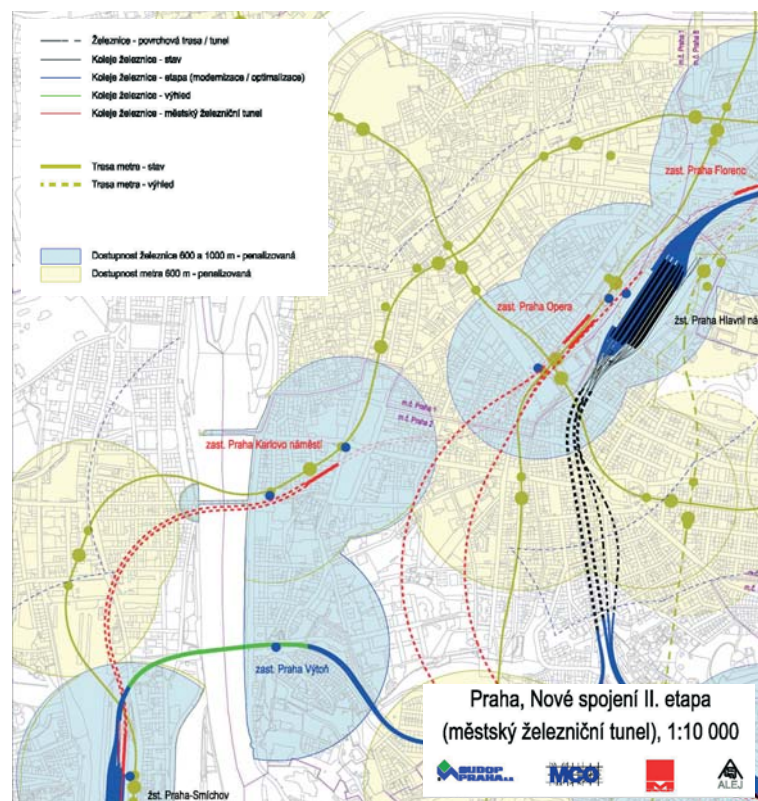
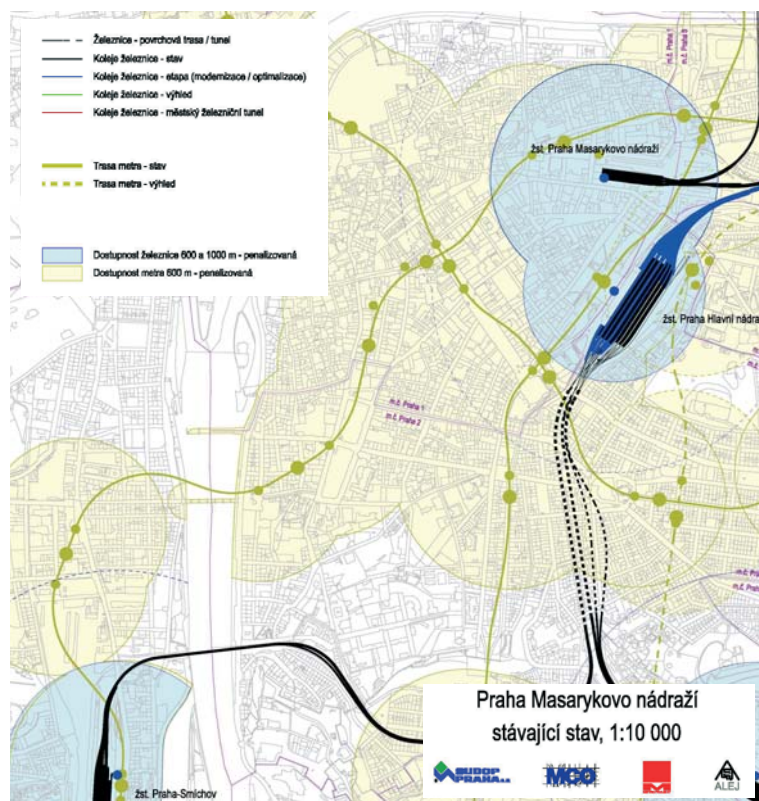
Construction of the New Town was a grand-scale project. It was necessary to interconnect three main squares, which was achieved by Jindřišská and Vodňanská streets, as well as to connect the New Town with the Old Town, which was secured by Spálená and Jungmannova streets. The similarity of two streets, Ječná and Štěpánská, with alike structured streets in Old Jerusalem is often stated as a proof of the fact Charles IV was really inspired by Jerusalem.

As concerns the settlement's genetic code, in case of Prague (or its historical centre) it probably originates in the period between the 10<sup>th</sup> and the 14<sup>th</sup> centuries. In that period the basic structure of the city, its road network, centres of trade and crafts (present squares) were defined. However, today it is very difficult to imagine that time and the look of Prague of the period. The key information is that regardless whether it was an evolutionary development or a well-considered act of humans, in both cases the city was formed based on the needs of trade and therefore of transport – the first thing that existed was a route connecting the castle with the market place, and only then human settlements and market places (today's important Prague squares) were gradually established along that route, their interconnection played an important role in construction of the New Town in the 14<sup>th</sup> century.

## PRAGUE AND INDUSTRIAL REVOLUTION

In the early 19<sup>th</sup> century the industrial revolution brings huge changes to the structure





Současný stav Železničního uzlu Praha

Zdroj: SUDOP PRAHA

The current status of the railway junction in Prague

Source: SUDOP PRAHA

another phenomenon – individual transport.

A possibility to produce in a more massive scale together a new source of energy obtained from oil (despite the fact oil was known for centuries, the first commercial oil well was made only in 1859 in Pennsylvania) caused that automobiles became available to more people.

Naturally, at the moment when cars started to replace the then existing transport means nobody thought of problems the individual automobile transport could bring in the future. At the beginning, the praise focused on fewer horse excrements in the cities. An alarming signal was the 1960s and the first signs of more massive development of motorism. The individual automobile transport slowly became a serious competitor of the public transport and people started to realise gradually that Prague (and especially the Old Town and the Lesser Town) with many narrow streets was not built for mass automobile transport. What more, Prague was adversely affected by construction of the north-south trunk road that crosses the city centre and separates two important buildings, the National Museum and the Central Station, from the historical centre.

That became fully evident in the 1990s, when another radical change occurred: a passenger car became a natural part of people's life style. The problem of Prague, or its historical centre, was revealed in full: the centre cannot absorb the increasing traffic intensity. It is up to transport experts to propose a structure that will allow both the main modes of transport – public and individual – to be combined, naturally with regard to Prague's unique historical centre.

Underground was finally built in the 2<sup>nd</sup> half of

the 20<sup>th</sup> century. It had been planned for decades, in 1898 the son of a famous ironmonger Ladislav Rott invited the Prague Council in a letter to start to think about construction of underground railway, but without success, another plan was prepared by Vladimír List and Bohumil Belada in 1926, but it was not implemented either. Actual construction started only at the turn of the 1960s and 1970s. Prague originally planned a underground tram system, but after completion of the first part the design was changed to a traditional underground system that was put into operation on 9 May 1974.

### FUTURE OF PRAGUE TRANSPORT SYSTEM

What are the main projects that will influence the future form of transport in Prague? In case of individual transport, there are two essential projects:

- construction of the Prague and Urban Rings including necessary radial roads with the aim to deflect main traffic intensities from the city centre (which means from the north-south trunk road or other streets of the New Town), at present the urban ring section Malovanka - Pelc-Tyrolka is being constructed, its major part leads in a tunnel structure known as Blanka,
- reduction of individual transport in the historical part of Prague – it means narrowing the north-south trunk road in the city centre, at the same time bringing it under ground between Nuselský bridge and the Central Station, it should give a more human face to the space around the National Museum. The second expected project is introduction of a toll system in Prague, which should enable to collect fees for entry to the historical centre (Prague Historical Area).

Of similar importance is further development of public transport that will consist in the following projects:

- modernisation of the Prague – Kladno railway

Předpokládaný stav Železničního uzlu Praha po realizaci městského železničního tunelu (Nové spojení II)

Zdroj: SUDOP PRAHA

The expected situation of the railway junction in Prague after completion of the urban railway tunnel (New Connection II)

Source: SUDOP PRAHA

line including its connection to Ruzyně airport, that is an important element for transport of passengers from and to the airport, as Prague lacks a service of sufficient capacity. Additionally, construction of underground is planned for that area, which should serve Prague 6 from Dejvice to Motol and the airport,

- solution of the rail junction in Prague, to make the junction passable, not terminating at Masarykovo station, to connect new stations of Praha Florenc, Praha Opera and Praha Vršovice by a new urban railway tunnel,
- development of the urban mass transportation system with a big emphasis on the transport quality, which is a key argument against individual automobile transport for the future. Individual automobile transport has important weaknesses (mainly in cities) that can be used by the public transport and win passengers by using its strengths in full. That applies also to more extensive inclusion of railway transport to the urban mass transportation system.

### CONCLUSION

The structure of every city and its transport network are a living system that changes in the course of time. Prague is no exception, as proved by huge changes it went through throughout the centuries. The 21<sup>st</sup> century will not be different in that respect. Many important decisions are to come. Decisions that will affect transport and life of the capital's citizens again. Let's hope they will be made with respect to one of the most valuable architectures of this planet. ■

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