



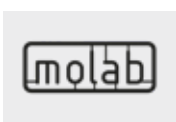
New Life of Praha Hlavní nádraží

Mikko Saukkomaa

2nd Year Bachelor

(United Kingdom)

Logo Faculty of architecture
Logo MOLAB

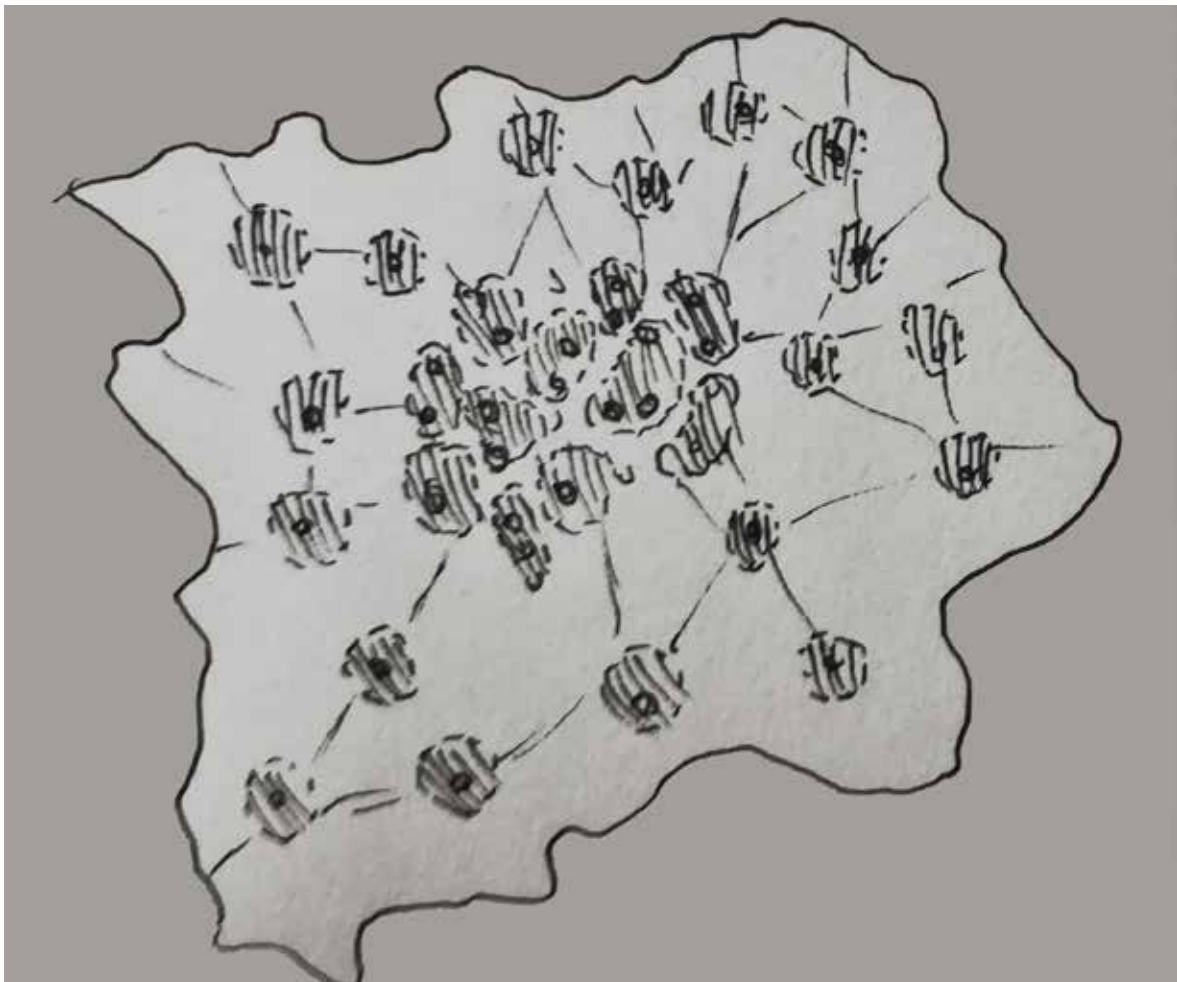


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Faculty of Architecture
Czech Technical University in Prague

'Driverless Future' design studio presents possibilities for the next generation of Prague which functions with automated and interconnected infrastructure. The threats of global heating and mass extinction of wildlife require radical changes for the forms of mobility and interrelated consumption. At the same time, decreased car dependence has clear benefits for the health of citizen and the structure of the city. Both the challenges and the possibilities of the future technologies will push great changes for the city interface during the next years.

We assume that interconnected Prague will become centred around local transport hubs which provide great variety of connections to the rest of the city. The connections can come in form of shared car pods, shared bicycles, trams, trains, metro or cable cars. The network will make sure that any distance between transport hubs can be crossed only within 20-40 minutes, thus making shared mobility a prominent mode of movement.

Another assumption is based on the idea of Mobility as a Service (MaaS) which allows the traveller to choose from pay-as-you-go method or from tailored journeys designed according to the traveller's interests. For example a journey from A to B could be travelled by just choosing transport modes which seem most useful OR by choosing from computer-generated journeys like calm route, exercise route for bike, tourist attraction route or green route. Algorithms can make exploration of the city fun and exiting experience for both locals and tourists.



INTRODUCTION

In the driverless future public transport modes create the main connections between Prague's transport hubs, whether in form of metro, trains, or trams. However, when in a need to move even beyond Czech Republic, the future of Prague's Central Station (Praha Hlavní nádraží) can offer a significant reduction in travel time. Considering the prime location of Prague in central Europe, the station has high potential to become a key long-distance hub for the surrounding countries. Therefore, at the heart of Prague, the station is also at the heart of whole Europe.

The future of short proximities requires new thinking for the vast space surrounding the central station. Currently the historic art-nouveau station building is isolated from the rest of the city by wide Magistrála road on the west and by the rail tracks on the east. The separation is inefficient, and it creates unfortunate inequalities for the surrounding areas. Better connections through the station area would not only benefit the passengers but they would also heal the social and economic divisions of the central city.

The proposal presents a new phase of development on top of the station railway tracks. Upon completion, the development will stitch together the city and create a highly competitive international hub for tourists, businessmen/-women, students and residents alike. By combining all the main modes of transport – long-distance trains, metro, trams, bicycles, and shared pods – the district will become a lot more than just a dull waiting area. A place of destination: to meet, to work, to exercise, to relax and to stay.



The station pictured from the air with New Town (Nové Město) in front and Žižkov opening on the back. Note the considerable height difference which puts Žižkov higher than the station building and the railway. The station front is filled with cars brought by wide Magistrála road which travels in the edge of New Town through central Prague.



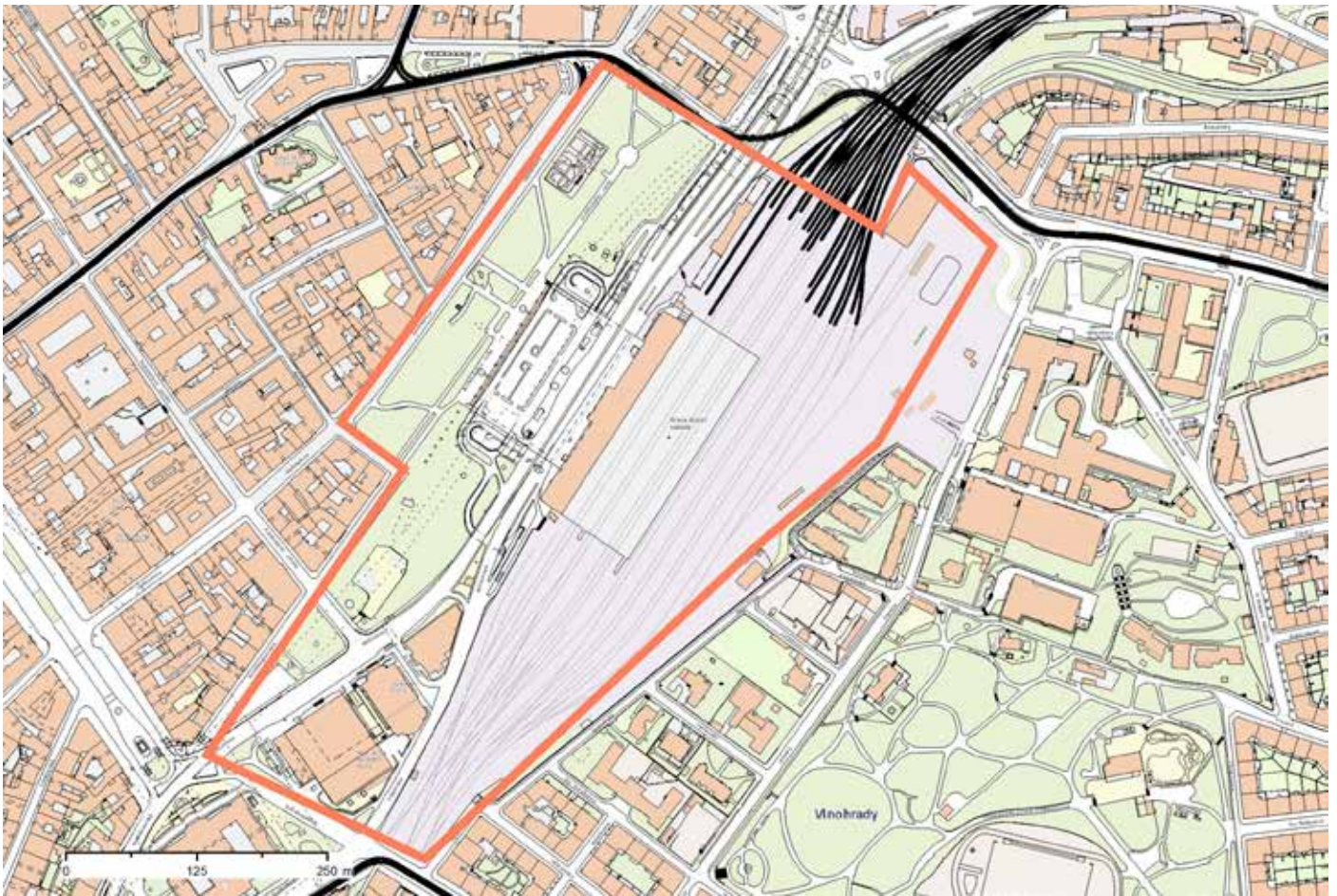
In the end of the 19th century the station was still located on a calm area at the edge of the core city. As the drawing depicts, the park included a pond at the site of the metro line and station built between 1972-1979. Although history can not be brought back, the 'driverless future' can give the station back its peaceful atmosphere.



LOCATION

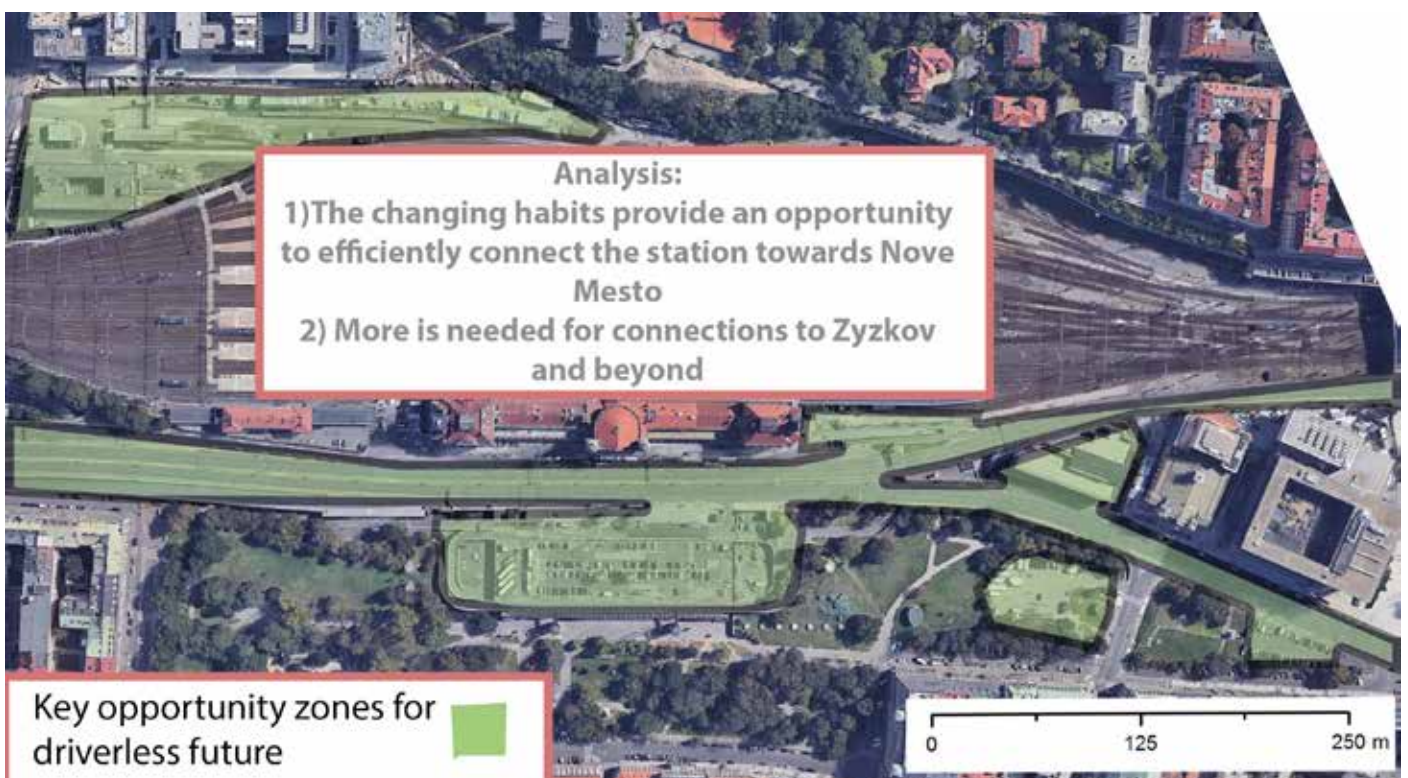
Historically the station is located at the edge of Prague, on the former grounds of New Town walls. Therefore, the built environment around the railway tracks is for most parts from the past 150 years in comparison to a lot more historic setting of New Town at the west. The location is a great strength of the station, as it is within walking distance from many major tourist attractions such as Prague's national museum and Václavské náměstí leading all the way to the Old Town. Yet, the station serves poorly many residents who need the station for every-day travelling to and from the eastern side of the railway tracks.

To ensure that travelling by train remains a viable option for all citizen in the 'driverless future', the station needs to become more accessible, permeable and simply speaking fun to approach. Travelling can be a stressful experience but it should by no means be worsened by the built environment.



Site map bordered to showcase the scale of the project

The surrounding space around the station is dominated by parking, storage areas and wide lanes for cars. By providing more efficient linkages across the central city, the same space can be used to increase public sphere and to create more resilient green network. However; connecting Žižkov to the station requires more ambitious approach which should at the same time respect the unique built environment.



CONCEPT

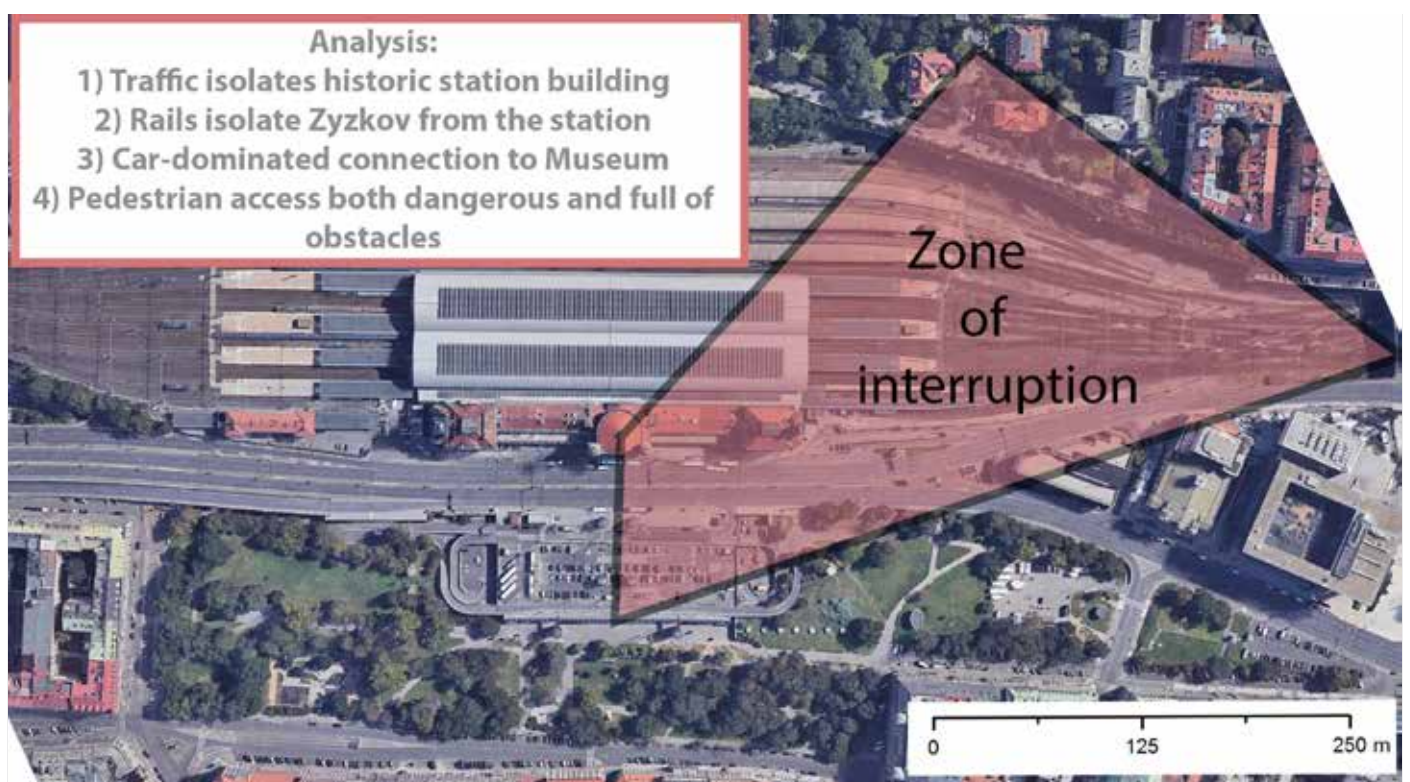
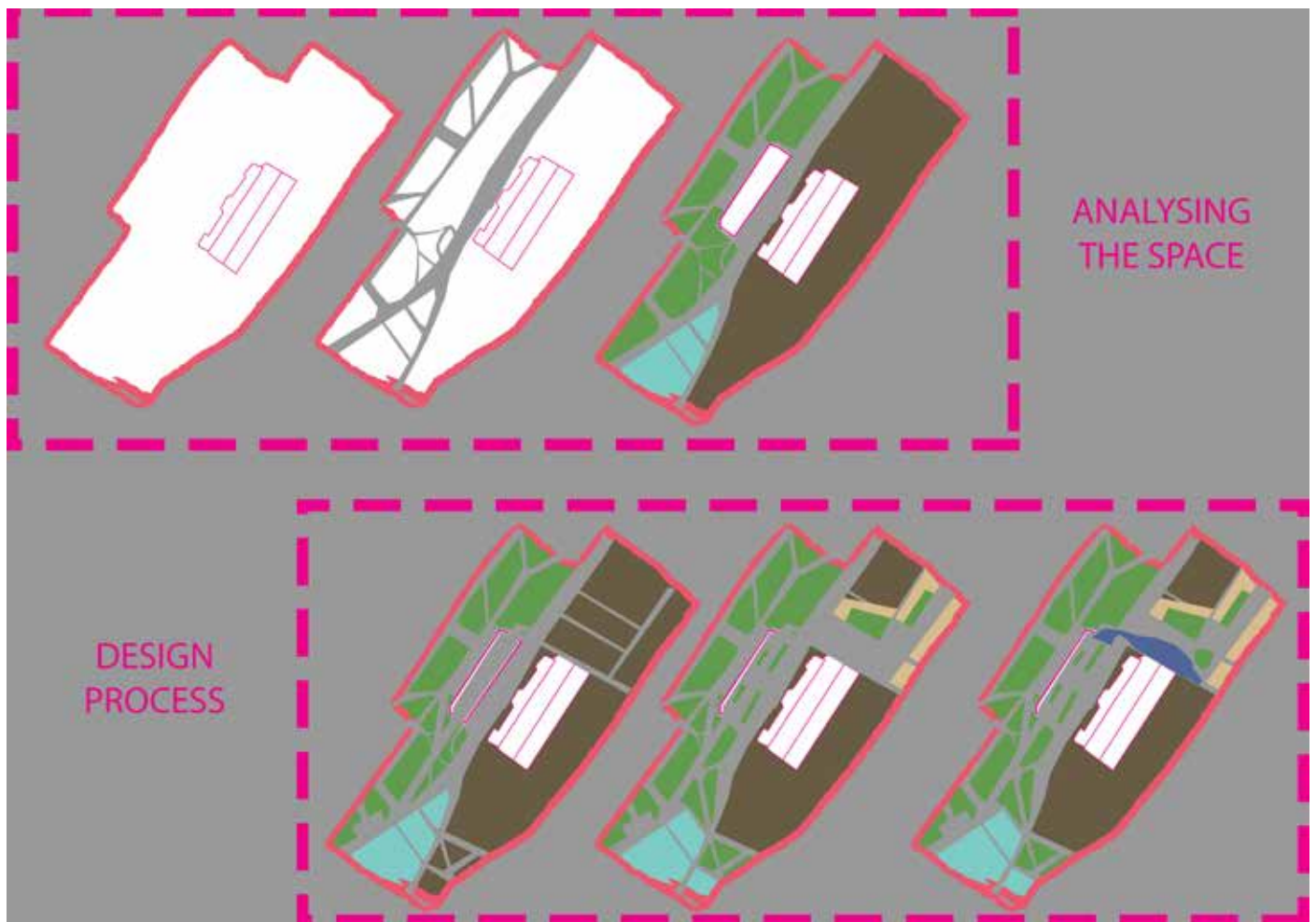
The design concept can be divided into two major operations:

1) Green connection towards Museum requires an extension of the existing park across the Wilsonova and parking spaces, including the demolition of the parking building next to the National Opera. The park will take a form of esplanad leading straight from the concrete station platform to the front of the Opera and the Museum.

A new platform over the railway on the side of the Museum allows a smooth green access from the station to the Vinohrady park - thus constructing a 'green corridor' in the central city. The green platform gives also calm and unparallelled views towards the station and the railway, which significantly enhances the current environment behind the Opera. The platform will also include 5 floor culture centre for both tourists and local residents in a need of a work/research space.

2) The project assumes that Prague continues to develop its local railway by creating so-called Metro S connection under the central city. Thus, all local railway connections could be delivered underneath the existing railway which would serve long-distance purposes. This will significantly help with the current capacity problems of the current station with its 7 platforms.

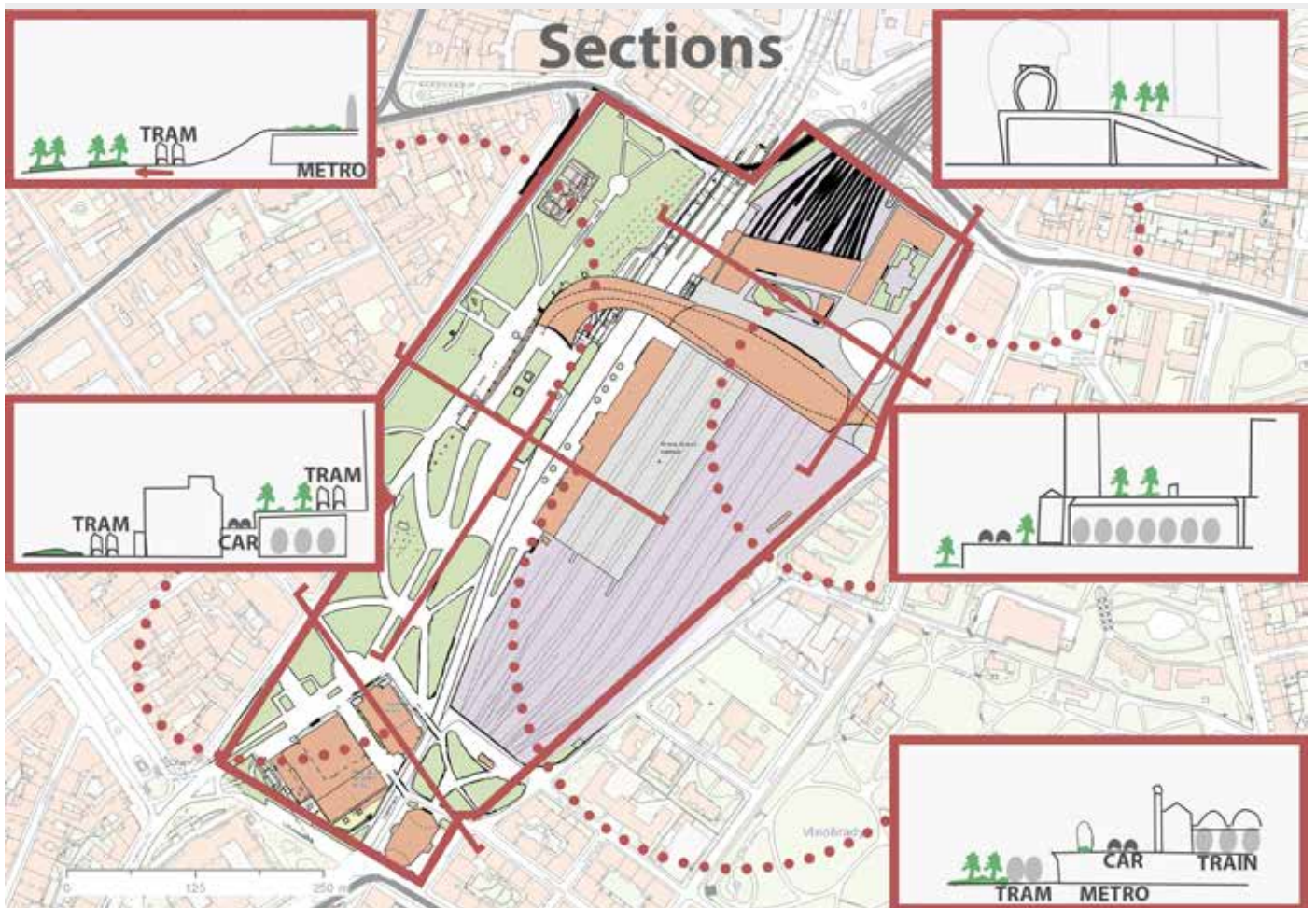
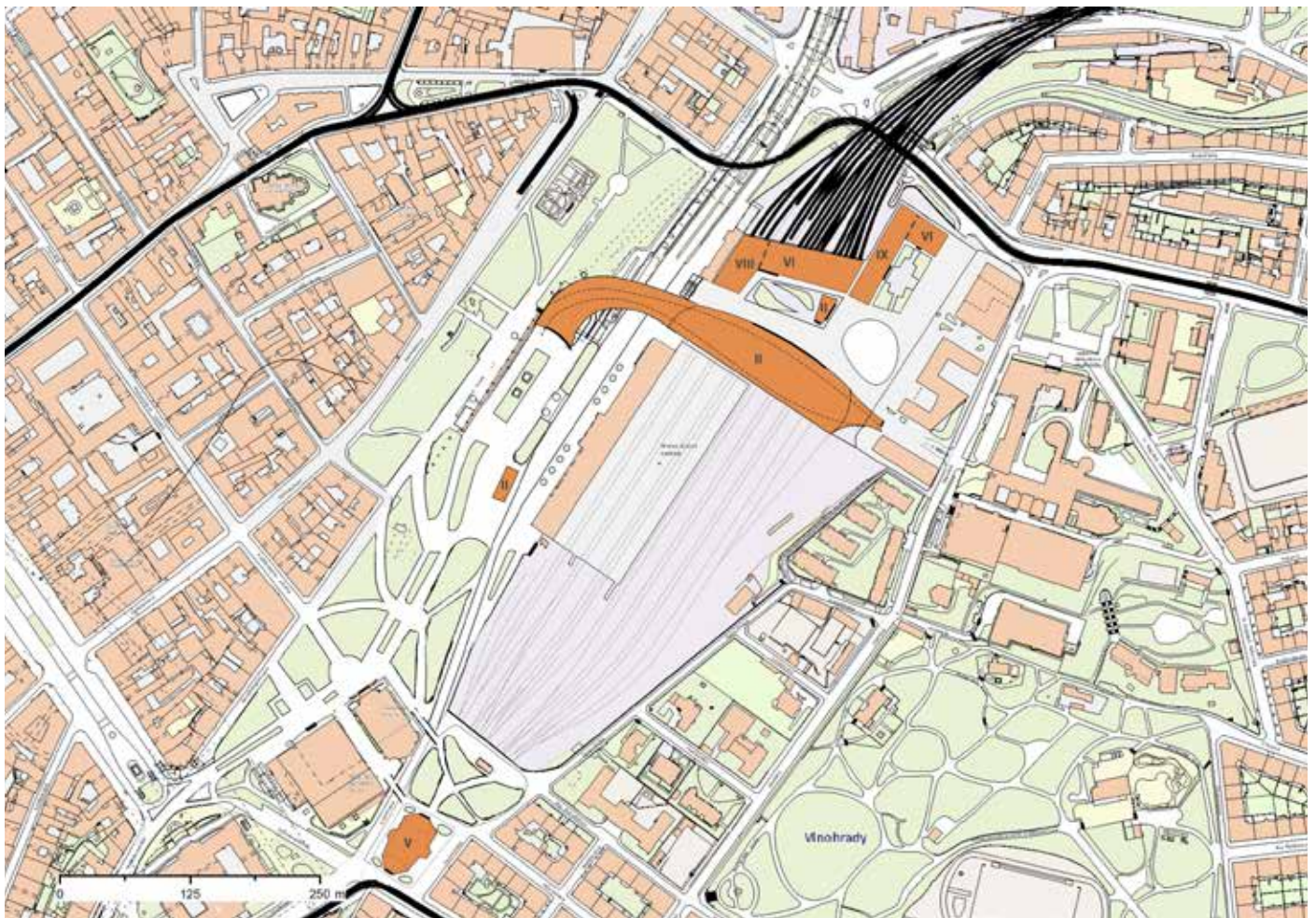
To serve the increasing flows of international travelers, the project proposes a new long-distance terminal on the north side of the station above the tracks. It could be connected with a bridge to the concrete platform in front of the historic station, thus making the space a central point for meeting and waiting. In addition the project proposes a new knowledge quarter in front of the long-distance terminal. The quarter would enhance the already developed office district at the north-eastern side of the station and promote new innovation with the nearby university campus.



DESIGN

The hilly terrain of Prague is a major challenge for the design but during the process it became also its main advantage. By focusing on the development of vast public spaces around the railway, the site was transformed from a space of speed and traffic to a space of leisure and joy.

At the same time, the design does its best in preserving the views across the historic station with its unique architecture while also promoting additional development behind it. The history proves that the station has been under constant change throughout its lifetime which is why its best qualities should be kept while the more problematic ones can be radically changed to serve needs of today.



DESIGN

As a major decision, the separation of Magistrála road at the opera into two wide roads will be put to halt by promoting alternative modes of movement in front of the Opera. The result gives clear coherence for the currently chaotic interface of the Opera and the Museum next to it. It also gives space for pedestrians, cyclists and trams to move from the Museum and Václavské náměstí.

However, the change should not mean that the car traffic should be allowed to continue on Legerova as it is. Instead half of the current space for cars will be given to the cycle lanes which will also be added at the esplanad. From the esplanad the cyclist is allowed to rise up to the roof of the new long-distance terminal and enjoy great views while travelling to Žižkov. In the driverless future, pedestrians will be given the best available options for movement and cyclists will follow close behind.

Detailed information of new development

Art-nouveau station

- 2-4 floors
- Museum space for station and Czech railway history (~1000 m²)
- Ground floor cafe and museum shop (~200m²)

Hotel with

- 6-8 floors
- 200 rooms (~8000 m²)
- Roof terrace restaurant (~100 m²)
- Ground floor conference & lounge space (~500m²)
- Gym & Pool (~200m²)

Multi-purpose innovation center

- 6-9 floors
- Ground floor retail (~500m²)
- Shared working space with professional tools (~2000m²)
- Rental apartments for students (~7000m²)
- Rooftop garden and solar panels (~500m²)

Culture Center

- Five floors
- Ground floor conference & info space (~200m²)
- Terraces for south & north
- Quiet & co-working spaces (~500m²)
- Research space (~500m²)

Long-distance Station

- 10-meter high interior space with retail and waiting space on two floors (~1000m²)
- Roof "bridge" and lookout space (~200m²)

The vast parking space in front of the historic station should be freed for public usage and the station building opened as a museum with retail

The reduced car usage allows the parade front space of opera and the Museum to be left for pedestrians, cyclists and trams

A new knowledge quarter next to the new high-speed railway hub offers a place for international innovation combined with flexible lifestyle for nearby university students and office workers

Problematic approach from the south towards the station can be solved by building a platform over the tracks with both public spaces and with a culture centre to enhance the chaotic environment. Legerova should continue to provide a route for shared cars through the central

MOBILITY

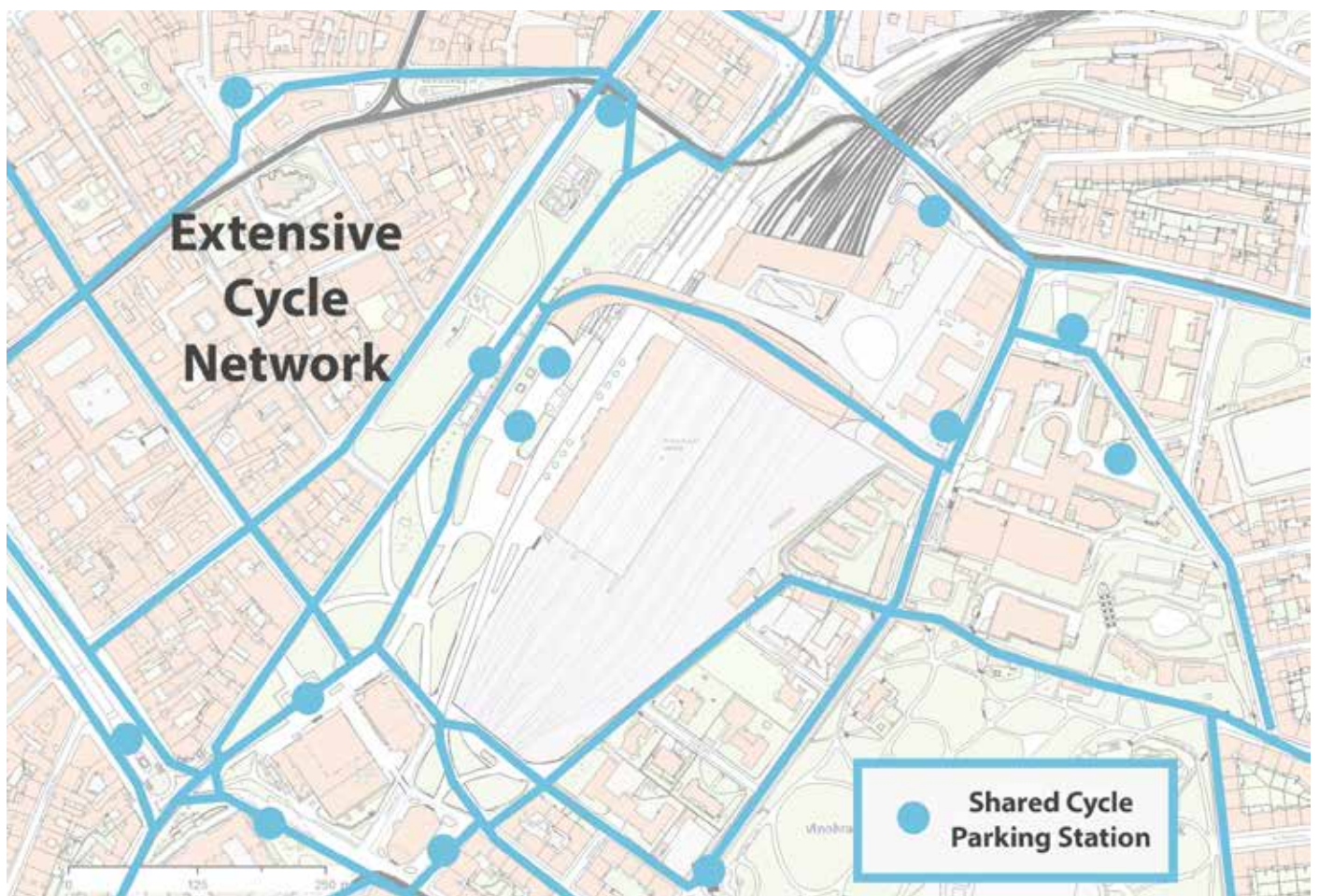
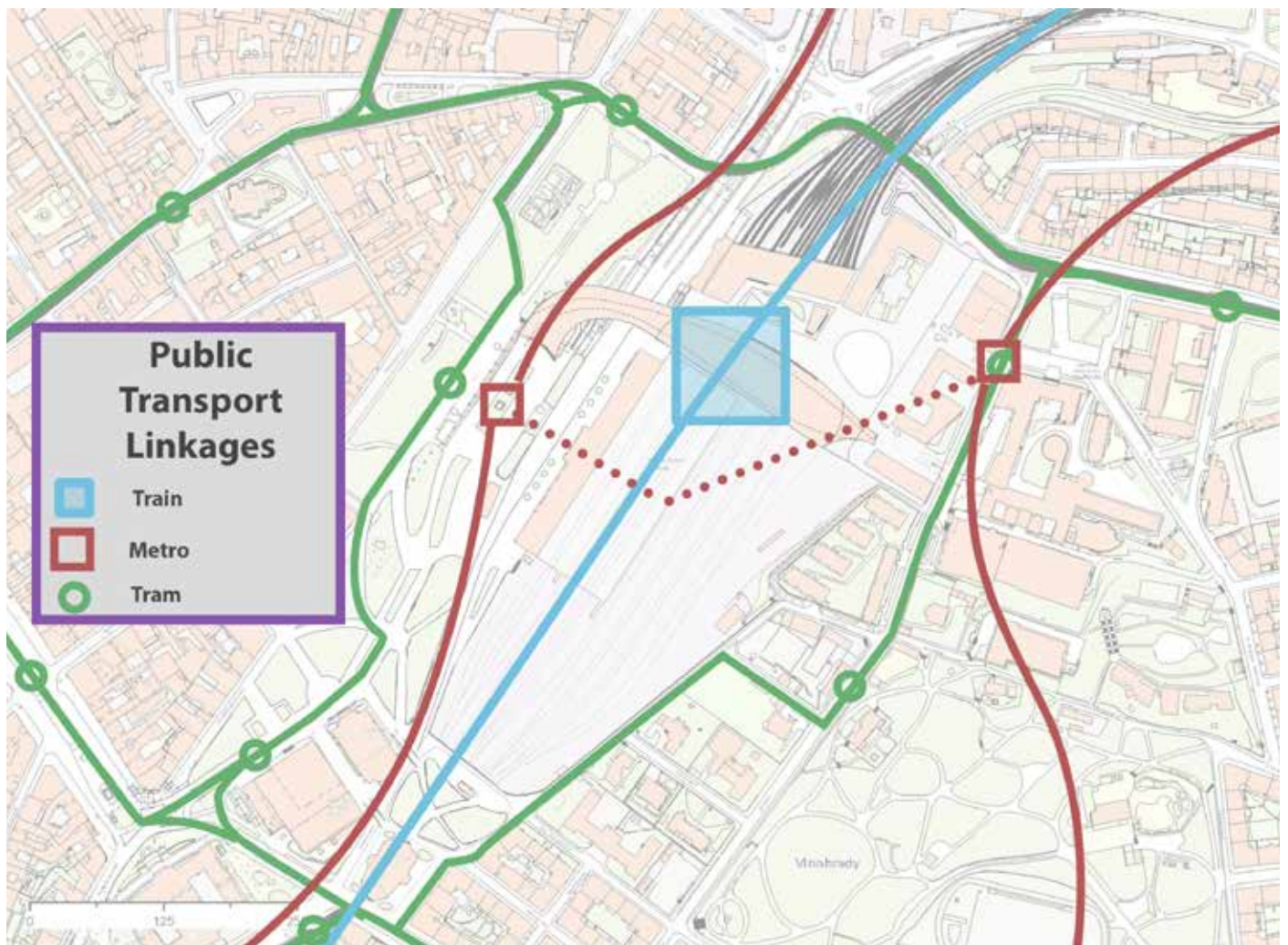
Under Mobility as a Service (MaaS) Prague's Central Station offers extensive options for travel to the rest of Prague. An user is spoiled of choice: from riding a bike, taking a tram, going underground to metro or to local train, while there is always an easy option to travel by foot.

Three regions near the station are particularly practical for mobility

1) Front of the station has a tram access, a metro access, a car pod access, a shared bike access and of course a train access.

2) At the border of university campus and the new knowledge quarter will be a new metro station coined with a new tram station. There will be many shared bike parking spaces nearby and of course fast access to the train.

3) In front of the Museum the current metro and tram linkages will be increased by shared bike parking spaces and many new tram lines.

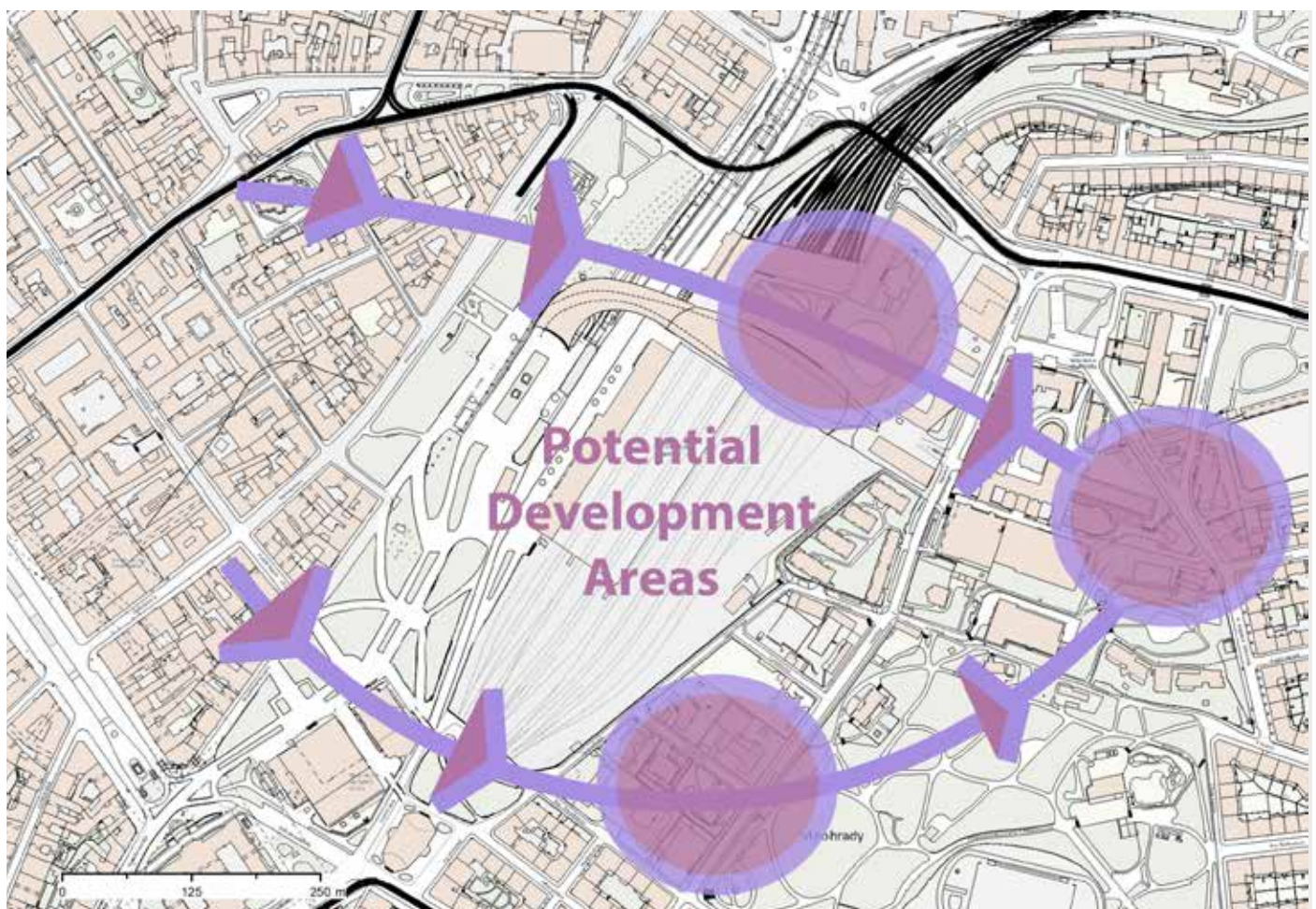
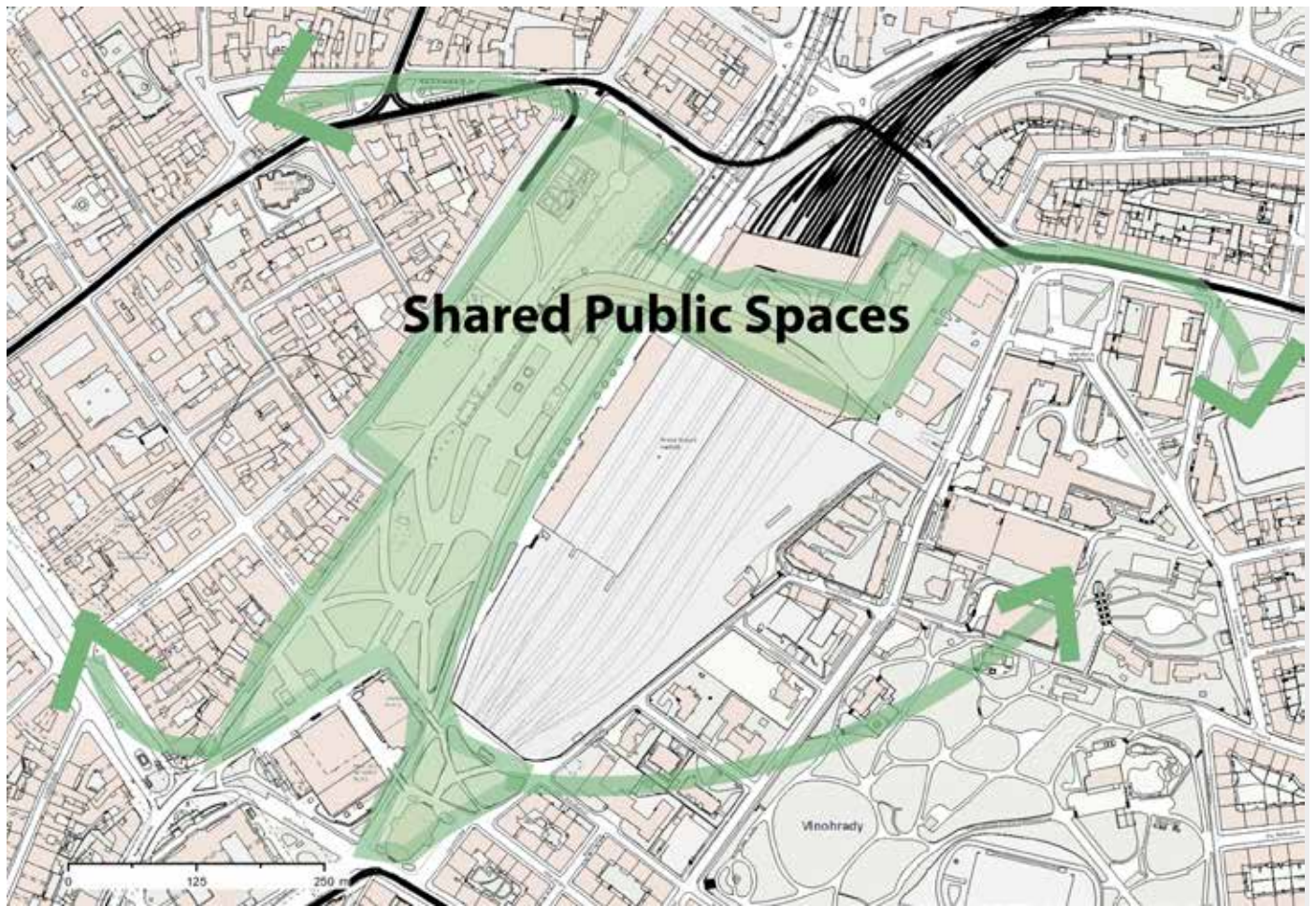


BENEFITS FOR THE CITY

There are countless benefits to mention of the proposal but here we have focused on the following:

1) The refurbished and extended public sphere will attract residents around the city to meet people or to just simply enjoy the surrounding sights. Better maintained and better connected park push away the current misbehaviour and promote well-being for both people and the wildlife.

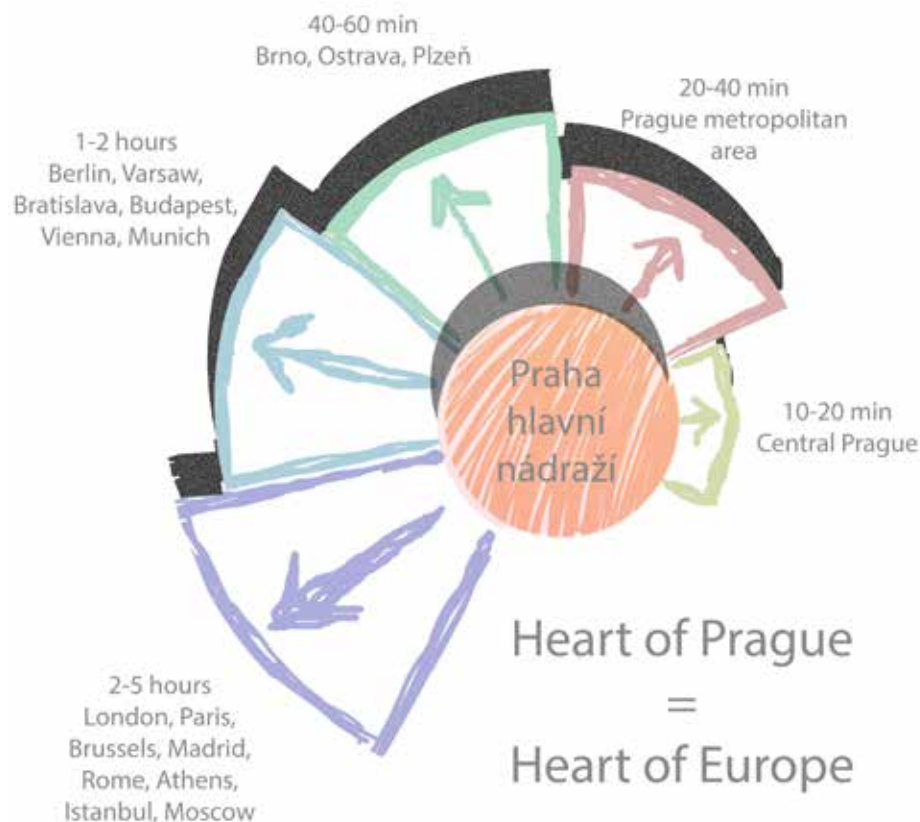
2) Žižkov has a possibility to become the next key zone of development as its housing is recognised to be at a key location. The economic and social benefits brought by new amenities nearby will create cycles of prosperity for the region. Its university campus can rise to become a hotspot of innovation with constant flows of international visitors using the long-distance terminal and connection to the airport. In comparison to more culturally flourishing New Town, Žižkov can become famous of its progressive creativity.

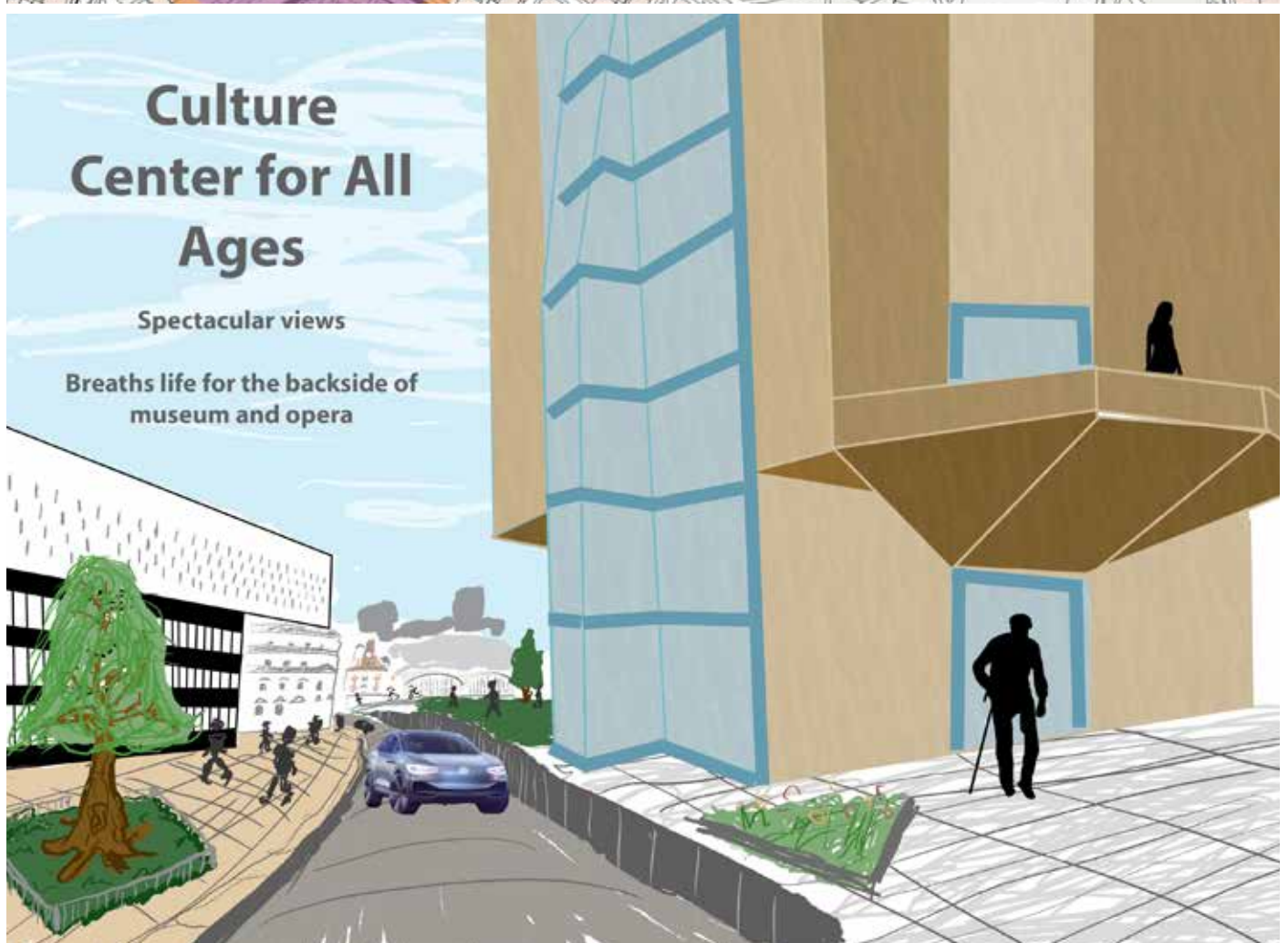
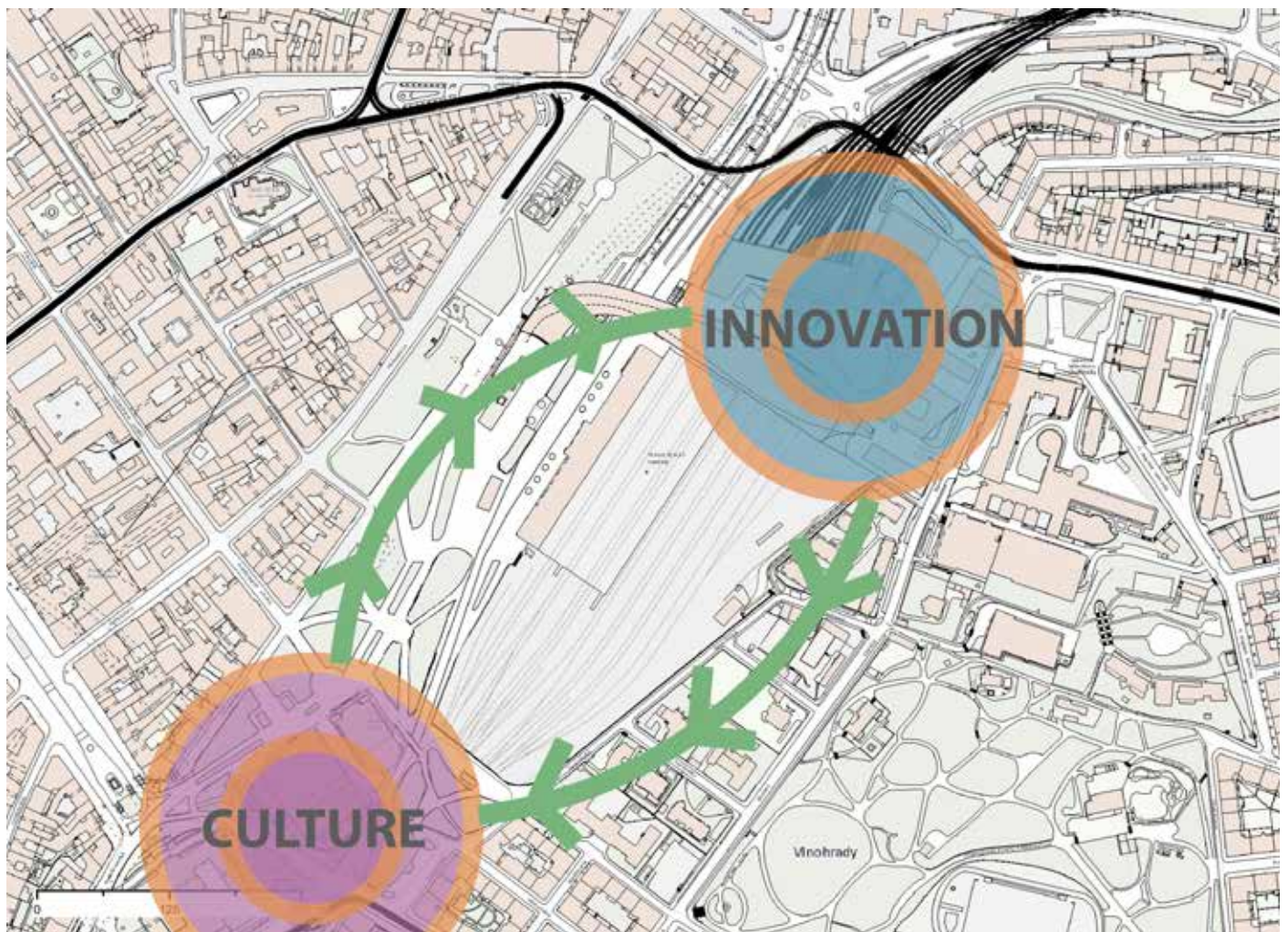


BENEFITS FOR THE CITY

3) The previously mentioned contrast of culture and innovation at the both sides of the station has also a possibility to create efficient conversation. Innovations can only prosper if they are based on sound cultural foundations, while culture requires innovation to stay relevant for the audience of today. The proposal believes that for such a conversation to function, there is a need for quality public sphere which is accessible, permeable and fun.

4) With the new long-distance terminal, the station can answer to the increasing demands for more capacity. Czech Republic plans to develop four high-speed lines which would significantly reduce the travel time in the future and make central station also a major transit hub for arriving travellers. There are hardly many cities in the central Europe located as strategically as Prague and the city should take all the benefit from its natural advantage.





Acknowledgments:

The project was inspired by our design studio trip to Rotterdam where new developments saw no limits, at least before the lockdown.