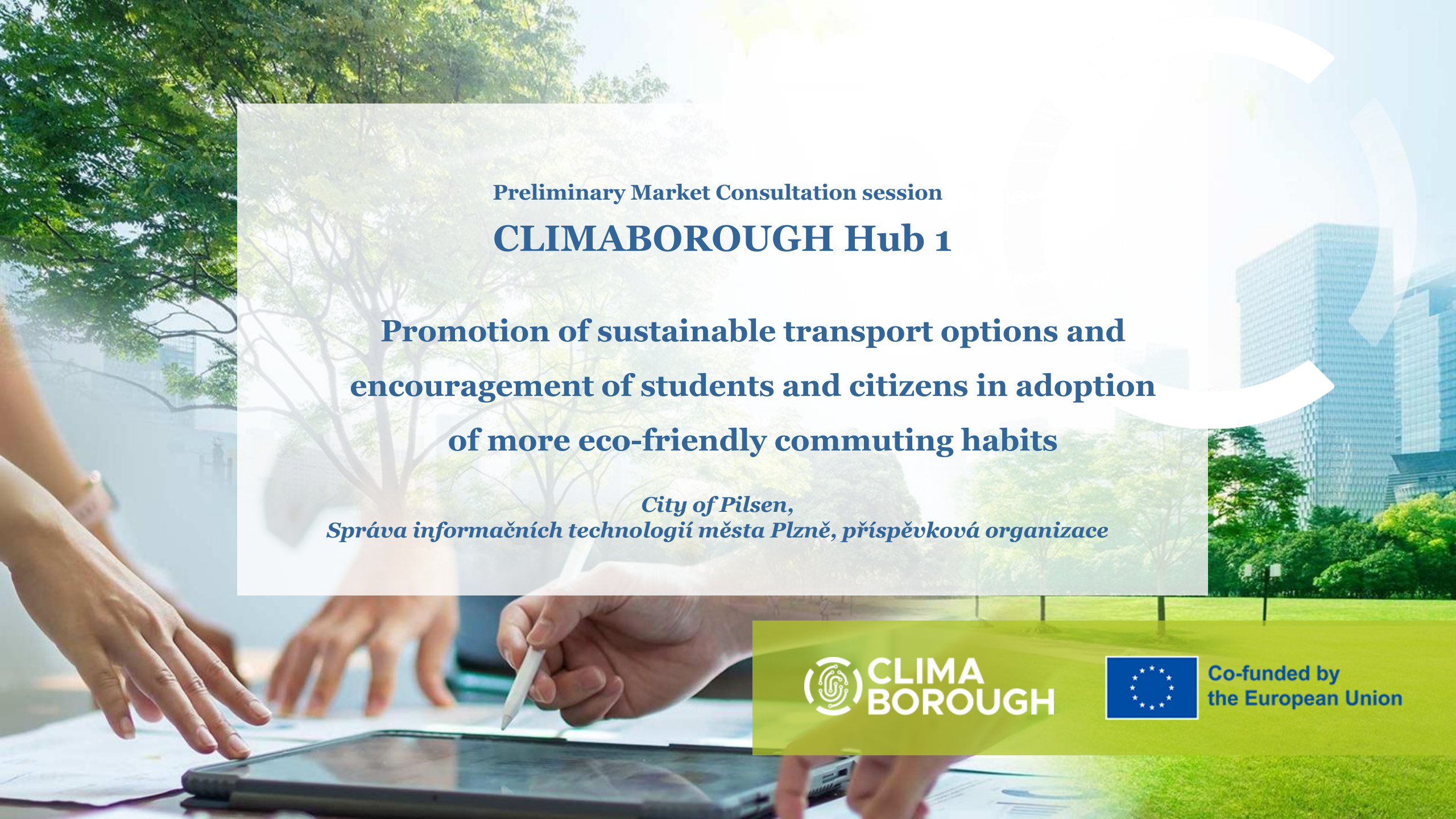


Preliminary Market Consultation session

CLIMABOROUGH Hub 1

Promotion of sustainable transport options and encouragement of students and citizens in adoption of more eco-friendly commuting habits

City of Pilsen,
Správa informačních technologií města Plzně, příspěvková organizace

CLIMA BOROUGH

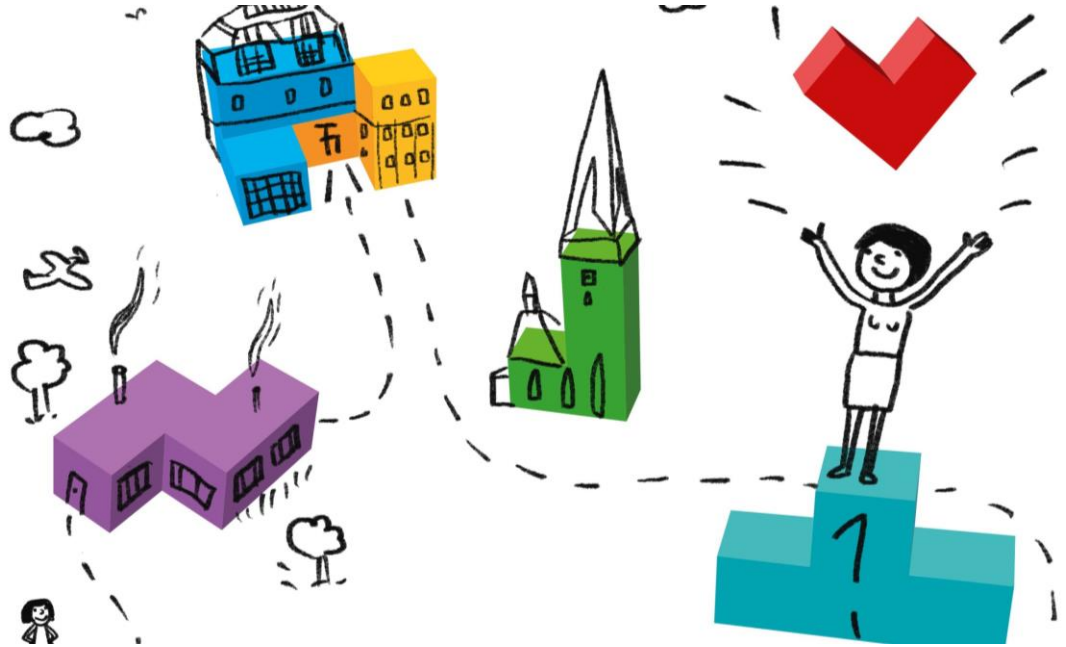
Co-funded by the European Union

Short Introduction – About SITMP

SITMP is the in-house **IT company of the city of Pilsen**

We Innovate Pilsen
We use modern technology to **make life easier,** to **develop talent,** and to **inspire entrepreneurship.**

We are working together to create a smart city
www.sitmp.cz/en



Founding member of PINE – Pilsen Innovation Ecosystem https://www.plzeninovativni.eu/en/

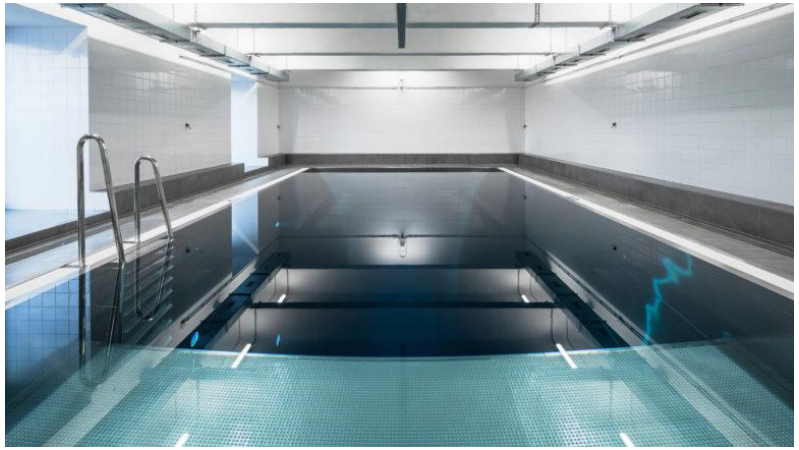
PINE Pilsen Innovation Ecosystem

You already know Pilsen

City of Traditions

City of Pilsen

City of Innovations



City of Pilsen

Short Introduction

Fourth largest city in the Czech Republic
Capital of the Pilsen Region
Founded in 1295
Total area: 137, 65 km2
Population: 186,000 inhabitants

Located about 78 kilometres west of **Prague,**
70 km from the **German border**
Developed road, highway and railway network

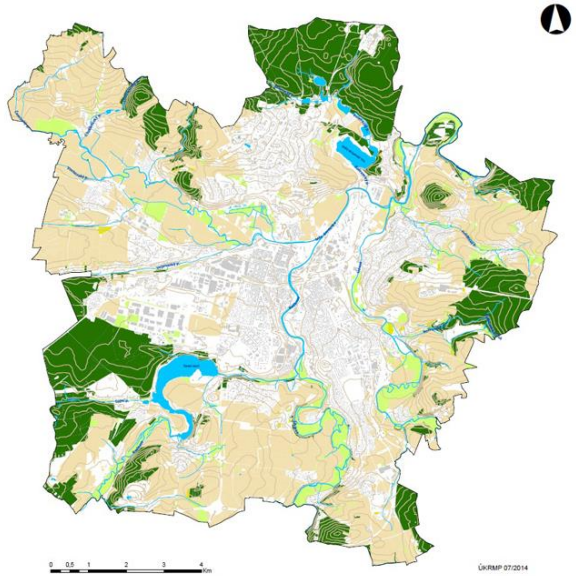
Pilsen Brewery + Engineering complex Skoda
Advanced engineering, machinery and electrotechnics industry
Innovation hub, attracting multiple companies providing solutions in the fields of software development, sustainable mobility, artificial intelligence, UAVs, digital twins, autonomous driving

University of West Bohemia in Pilsen
Charles University Prague – Faculty of Medicine in Pilsen

Short Introduction

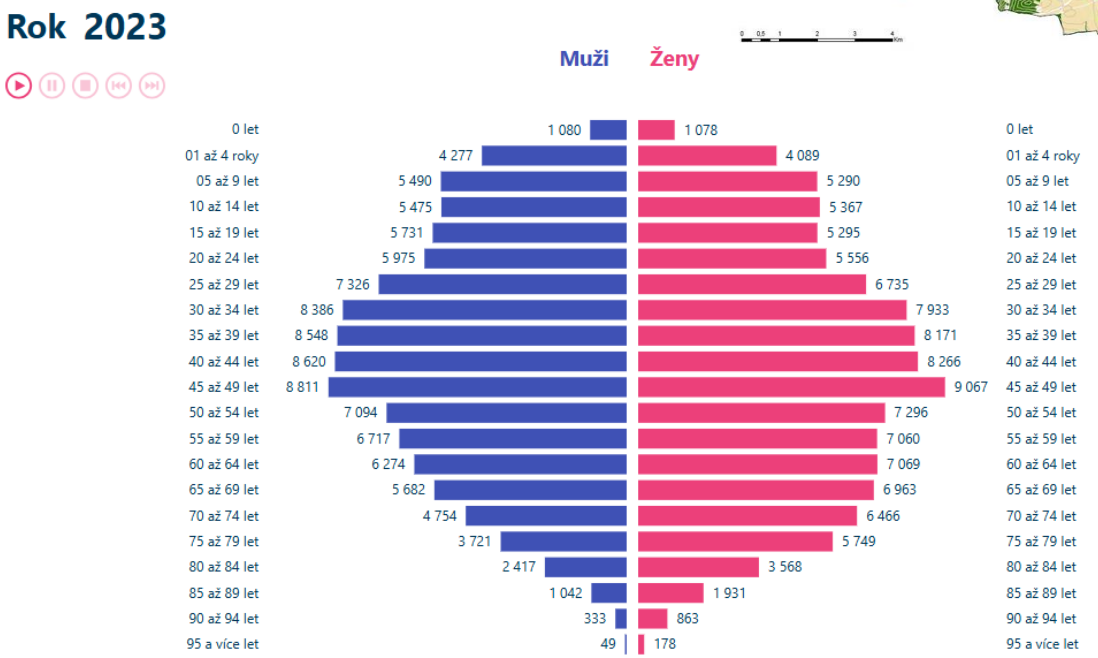
Geography

- at the confluence of 4 rivers
- 310 m above the sea level
- Several hills elevated more than 400 m



Demography

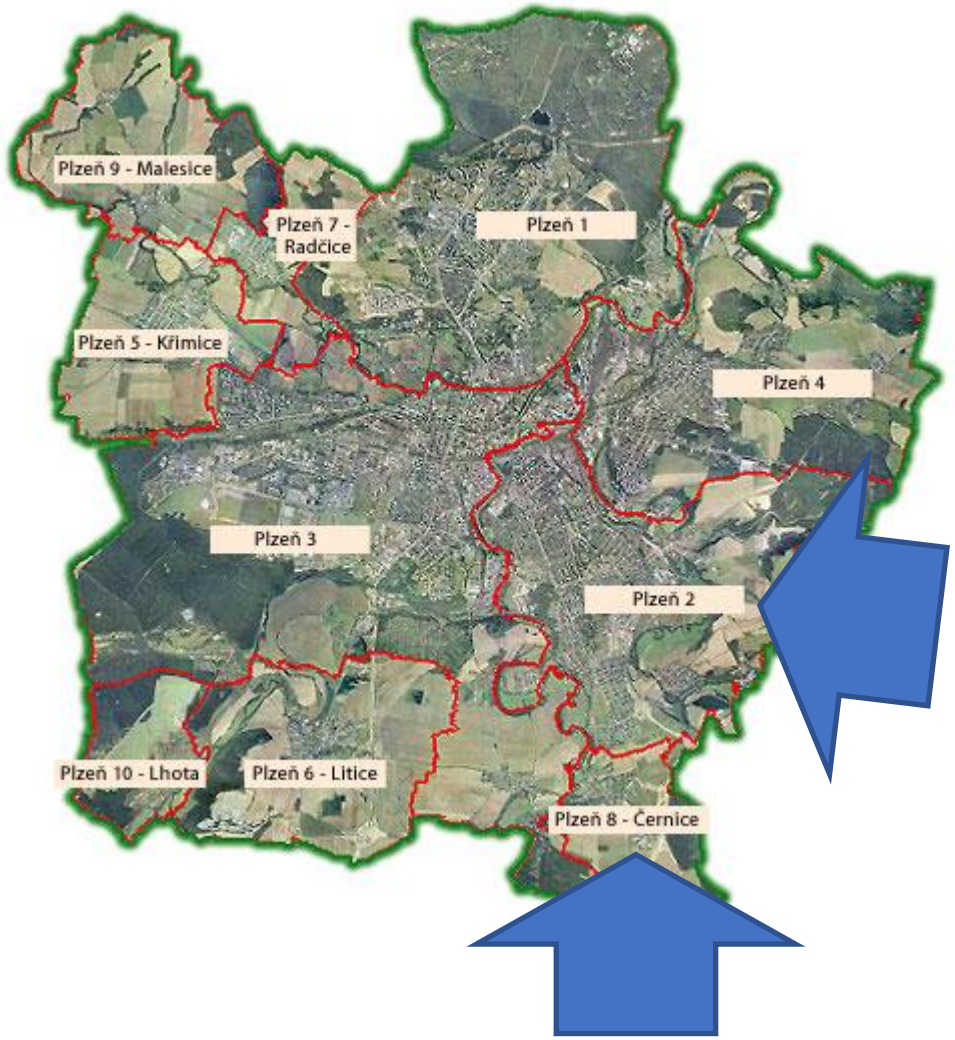
- Over 300 000 residents in the Pilsen agglomeration
- Population density
- 0-19 years: approx 27,000 (2023)



Short Introduction

Administration

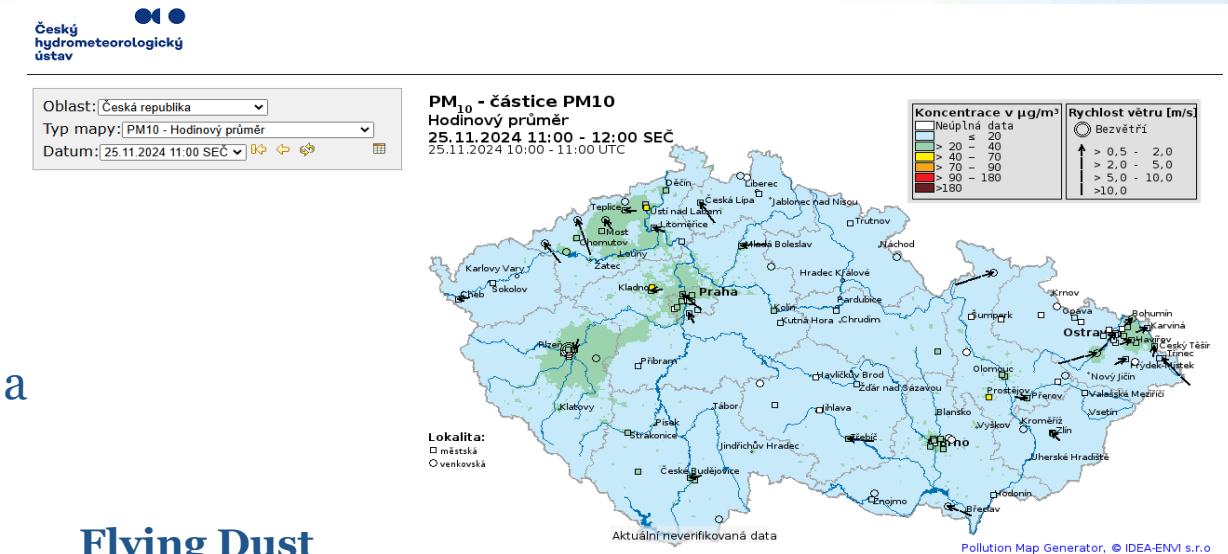
- 10 city districts
- Location of the experiment Plzeň 2 and Plzeň 8
- Plzeň 2: 18,64 km2 with approx. 35,000 residents
- Plzeň 8: 5 km2, approx. 1,739 residents



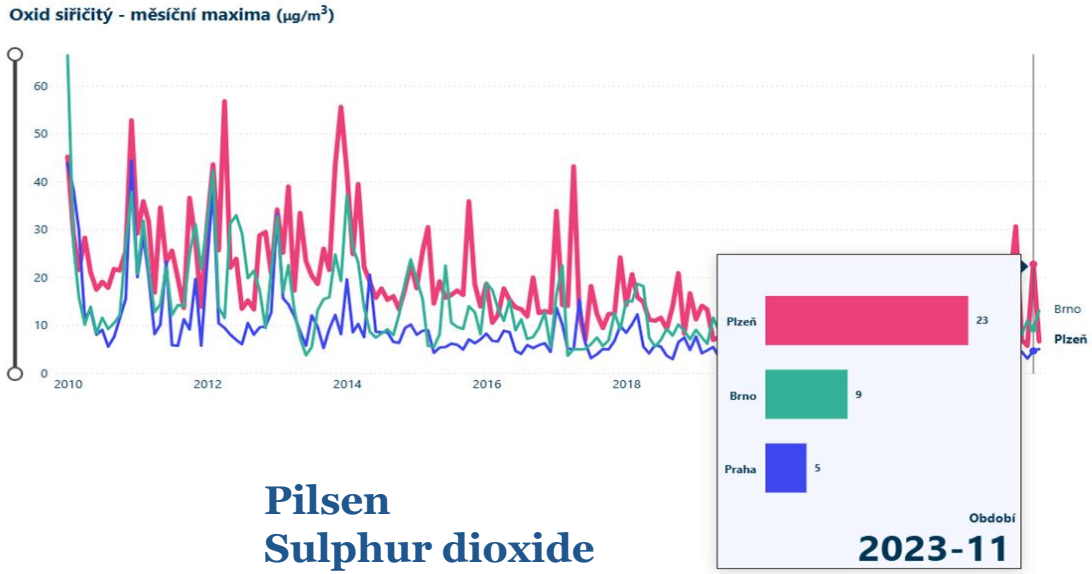
City‘s Strategic Goals

Relevance to the city’s strategic goals and Climaborough’s objectives:

- **Strategic Plan of the City of Pilsen (2023 update):** The city of Pilsen is preparing for climate change and among others aims reduce the environmental impact of traffic. The aim is to create a cleaner and healthier city for all residents.
- **Sustainable mobility plan (SUMP)**
- **Programme for improving air quality in the city of Pilsen:** A desirable side effect of the measures in transport is also a reduction in emissions of the main greenhouse gas, carbon dioxide.
- **Micromobility Study** analyses the situation in Pilsen and proposes the necessary steps to optimally manage micromobility in Pilsen.



Flying Dust
Particulate Matter PM 10



Pilsen
Sulphur dioxide

Baseline

Like many urban centres, Pilsen faces significant challenges related to **traffic congestion, air and noise pollution,** much of which is caused by high levels of **individual car traffic.**
To improve the quality of its environment, Pilsen is placing an emphasis on promoting **sustainable transport options.** This includes diminishing dependence on private cars by promoting **alternative modes of transport,** as well encouraging **behavioural change** among its citizens.

Baseline

In particular, Pilsen promotes the adoption of **more sustainable commuting habits** within students and their community. The city aims at reducing the environmental impact of car traffic, especially at **morning peak hour,** in the proximity of schools, by introducing **temporary street closures.** This should not only diminish congestion and improve **traffic safety** around schools but should also decrease the students' high exposure to **air pollutants** emitted by vehicles, and lower **CO2 emissions** and **noise level** in these areas.

Baseline

Importantly, Pilsen envisages engaging the local community in these efforts to foster a sense of ownership and **encourage behavioural changes** that promote sustainability.

Challenge Definition

- Defining the challenge – survey among secondary school students: **“We want to hear what’s bothering you”**
5 school classes in 3 selected Pilsen secondary schools;
200 teenage students and young people and received over 180 responses.

- Importance of **„young influencers“** and their communities:
By reaching one individual, you are reaching many.

- „Drop in the ocean“

Challenge Definition

“There’s no way I’d ride a bike to school.”

Challenge

To promote sustainable transport options and encourage students and citizens to adopt more eco-friendly commuting habits.

Objectives and Desired Outcomes

To improve quality of the environment in the city

- To promote sustainable transport & commuting habits, reduce congestion, reduce carbon emissions, environmental impact (air & noise), increase awareness, behaviour change & citizen engagement, enhance safety around schools

Expected benefits for (not indicative):

- **The city:** better environment, increased adoption of sustainable means of transport, increased use of public transport, higher rates of modal split, reduced traffic congestion, reduced carbon footprint, development of new infrastructure, replicability & further deployment within other city-established schools.
- **The community:** improved quality of life, reduced air and noise pollution, health and psychological benefits, safety near schools, traffic congestion around schools, positive changes in behaviour.
- **Other stakeholders:** enhanced collaboration, climate curriculum.

Indicators or metrics for success (e.g., CO_2 reduction targets, stakeholder satisfaction scores, adoption rates, number of participants) + suggested: CO_2 emissions (individual routes/ways) with preference of sustainable transport, Air quality, Noise levels, Modal Split (increase towards sustainable transport), Citizens actively contributing, Demonstrated impact on sustainable mobility preference), Safety around schools (not indicative)

Challenge – UMO8

For the purpose of the project, two primary schools in Pilsen are considered:

Tyršova ZŠ a MŠ:
Address: U Skoly 7, 326 00 Plzen, N 49°41.80173′, E 13°25.07750′
City district: UMO 8 (Cernice)
School capacity: 74 (kindergarten) + 153 (primary school) students
Website: **https://tyrsovazsams.plzen.eu/**

Challenge – UMO2

For the purpose of the project, two primary schools in Pilsen are considered:

25. Základní škola Plzeň
Address: Chvalenicka 17, 326 00 Plzen, N 49°43.37122′, E 13°24.20208′
City district: UMO 2 (Slovany)
School capacity: 960 students
Website: https://zs25.plzen.eu/

Solution envisaged (general)

- **Solution envisaged:** To promote sustainable transport options and encourage students and citizens to adopt more eco-friendly commuting habits.

- By means of SITMP, its in-house IT company, **the city of Pilsen will install sensors to monitor air quality and cameras to detect the number of cars around schools.**
- The data will start being collected before the project starts and thus will provide baseline data to evaluate the performance of the project.
- Initial steps regarding car traffic restrictions are expected to be taken by the city.

- The solution and the solution provider should be able to deliver at least five of the following results.

Solution envisaged - examples (1/2)

- **Traffic Measures around Schools:** Analyse current traffic situation around involved schools (e.g. school mobility plan or similar), and propose further traffic measures (such but not limited to street closures for vehicles, pedestrian zones K+R parking, temporary barriers, one-way streets, innovative curb-side use or likewise). Provide traffic engineering / urban space planning expert support, documentation and consultancy services needed to propose and administratively approve the selected measures with the relevant public authorities (city departments, police, city district etc.).

- **Innovative Solutions:** Develop tool(s) to encourage active citizenship and behavioural change towards more climate-responsible mobility decisions. They shall facilitate students and community engagement, increase awareness about the environmental impact of their mobility choices, and encourage change of commuting habits. For example, these tools can include (but are not limited to) interactive education content, data visualisation dashboards, gamification tools, or similar. Consider different users and their needs (e.g. students, schools, municipality, community).

Solution envisaged - examples (2/2)

- **Data-Driven Education:** Detect data needs, facilitate understanding of environmental data, use innovative solutions to analyse and visualise data to evaluate the impact of the adopted measures, identify trends, and support informed decision-making.

- **Education and Training:** Support teachers in climate education with know-how and education content for classroom activities, and provide training to the community, as well as to local governments.

- **Gamification:** Incorporate game elements within classroom and community activities to motivate and reward sustainable behaviour. For rewards, consider existing city services programmes comprising, but not limited to, sports and cultural events and facilities, public transport, mobility services, and similar.

- **Community Engagement:** Organize community activities, workshops and/or events to stimulate the behaviour change of students and citizens.

- **Communication and Outreach:** Engage with the public and individual stakeholders to raise awareness.

Data Source

Infrastructure
- Cycling Paths in Pilsen

Maps
https://mapy.plzen.eu/ GIS layers

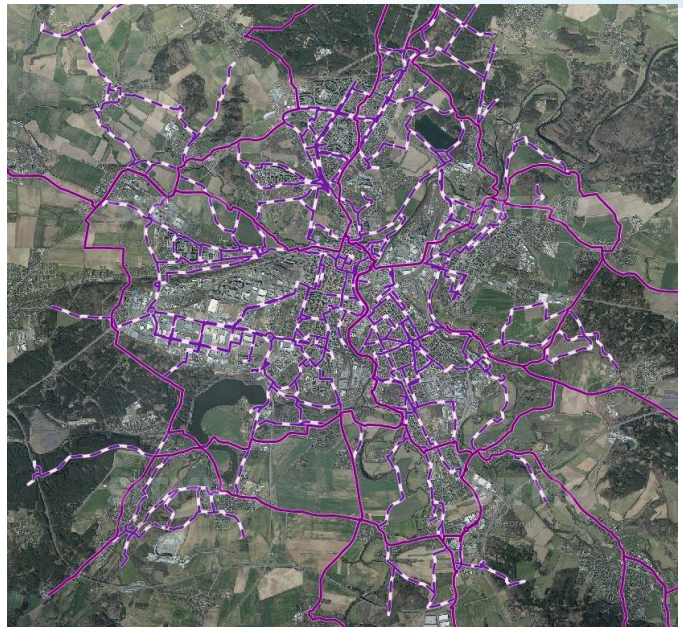
Public Transport
- in-house Public Transport Company of the city of Pilsen
- Children 6-15 free of charge

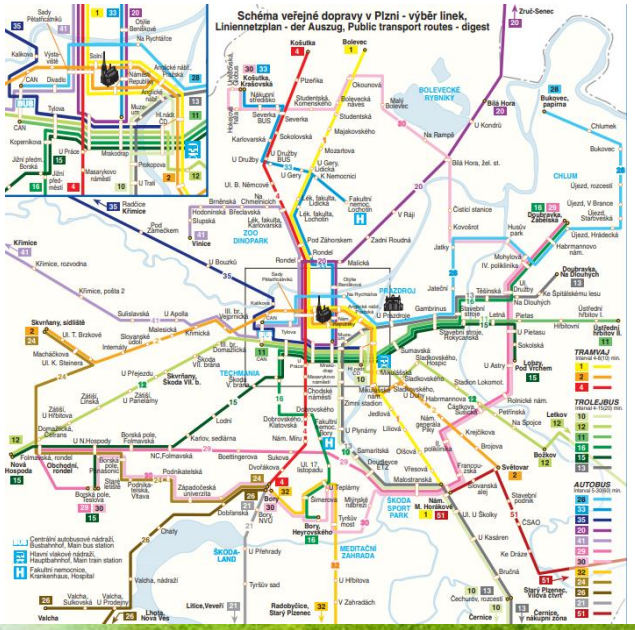
IoT network
Sensors (traffic, noise, air pollution) will be installed and data will be provided by the city, i.e. sensor installation is not needed for the project.

Traffic restrictions
Initial steps regarding car traffic restrictions are expected to be taken by the city.

Data availability
- https://data.plzen.eu
- https://plzen.trafficmodeller.com/

Information on schools in Pilsen
- https://www.plzenskeskoly.cz/





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Questions?

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