



The Digital Twin of Pilsen

Od dopravního modelu k simulacím hluku
a znečištění ovzduší způsobeným dopravou

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Pilsen Smart City is not only about its digital twin

Smart City Pilsen

It's where we want to live

[View the Projects](#)

Mobility

Living

Economy

Environment

People

eGovernment



Mobilní aplikace FC Viktoria Plzeň



Karkulka PMDP



SIT Port, the port open to anyone.



Web města Plzně



Vybavenost základních škol



Využití dronů pro integrovaný záchraný systém



Eduroam



Plzeň - analýza satelitních snímků



HYDROGEN HORIZON AUTOMOTIVE CHALLENGE - H2AC



Moje PMDP



Stadionová WiFi FC Viktoria Plzeň



Bezpečnost dětí - opatření na ZŠ



TutaPlzeň



Elektronické vyřízení povolení pro předzahrádku



Tichá linka



Naše firmy - jak vybrat další školu



Pilsen CUBE II



Dynamický dispečink



Open data



Vizualizace intenzity dopravy



Kamery ve vozzech MHD



Síť internetu věcí



Plzeň To



Free WiFi



Bateriové troljbusy



Centrum Robotiky



Úhrada jízdného bezkontaktní platební kartou



Elektronický Portál Občana EPO



Inteligentní zastávky



Klíkači rozpočet města

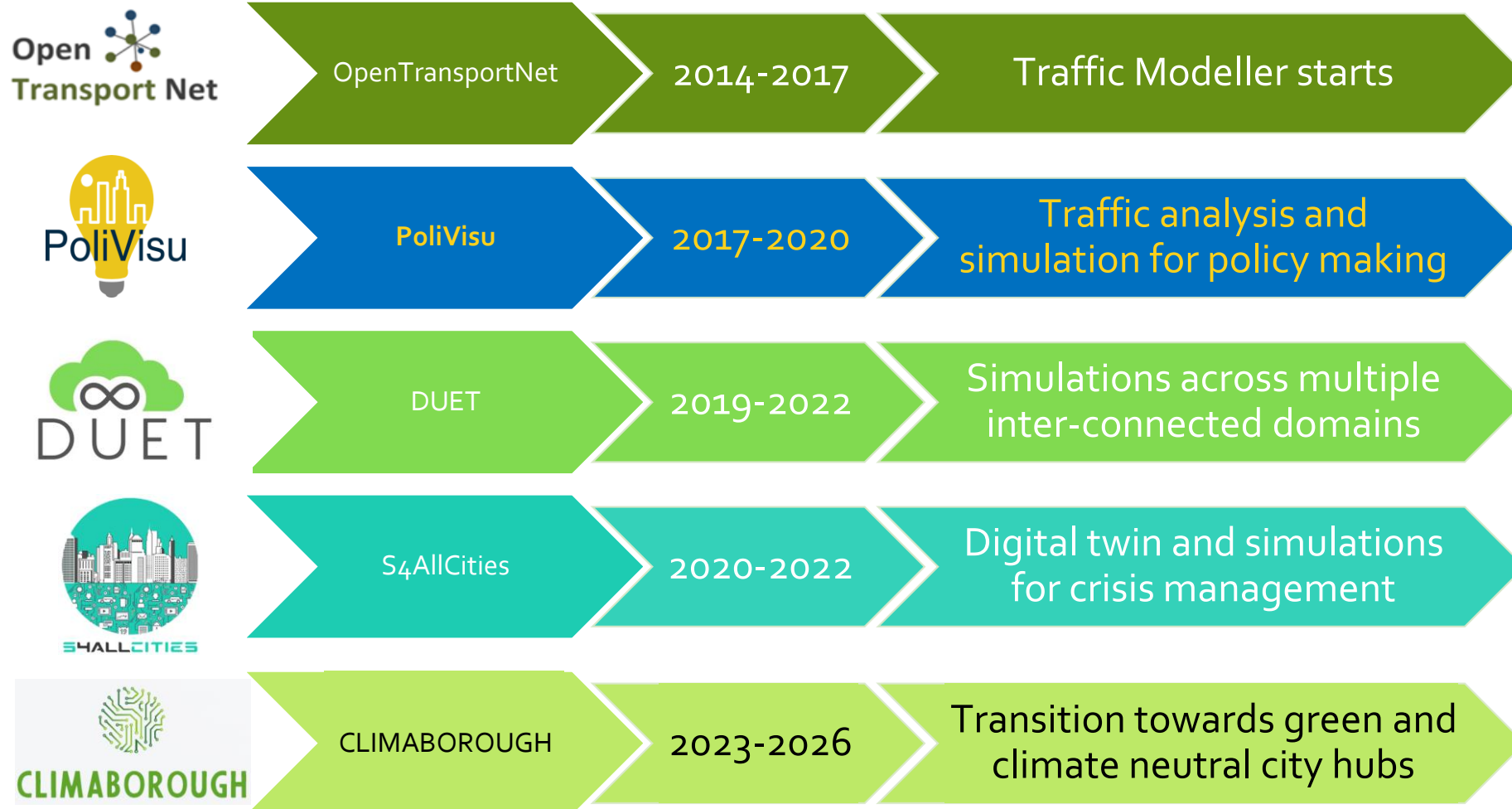


Aplikace Plzeň - občan



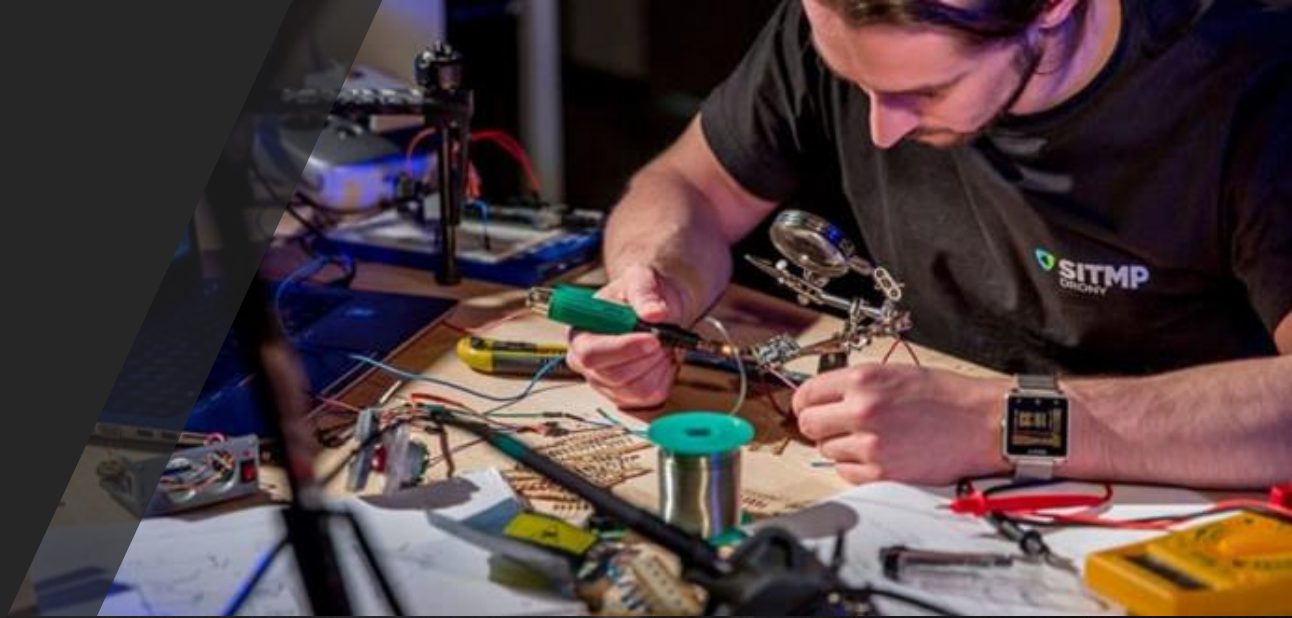
Plzeňská karta

Pilsen journey towards its digital twin



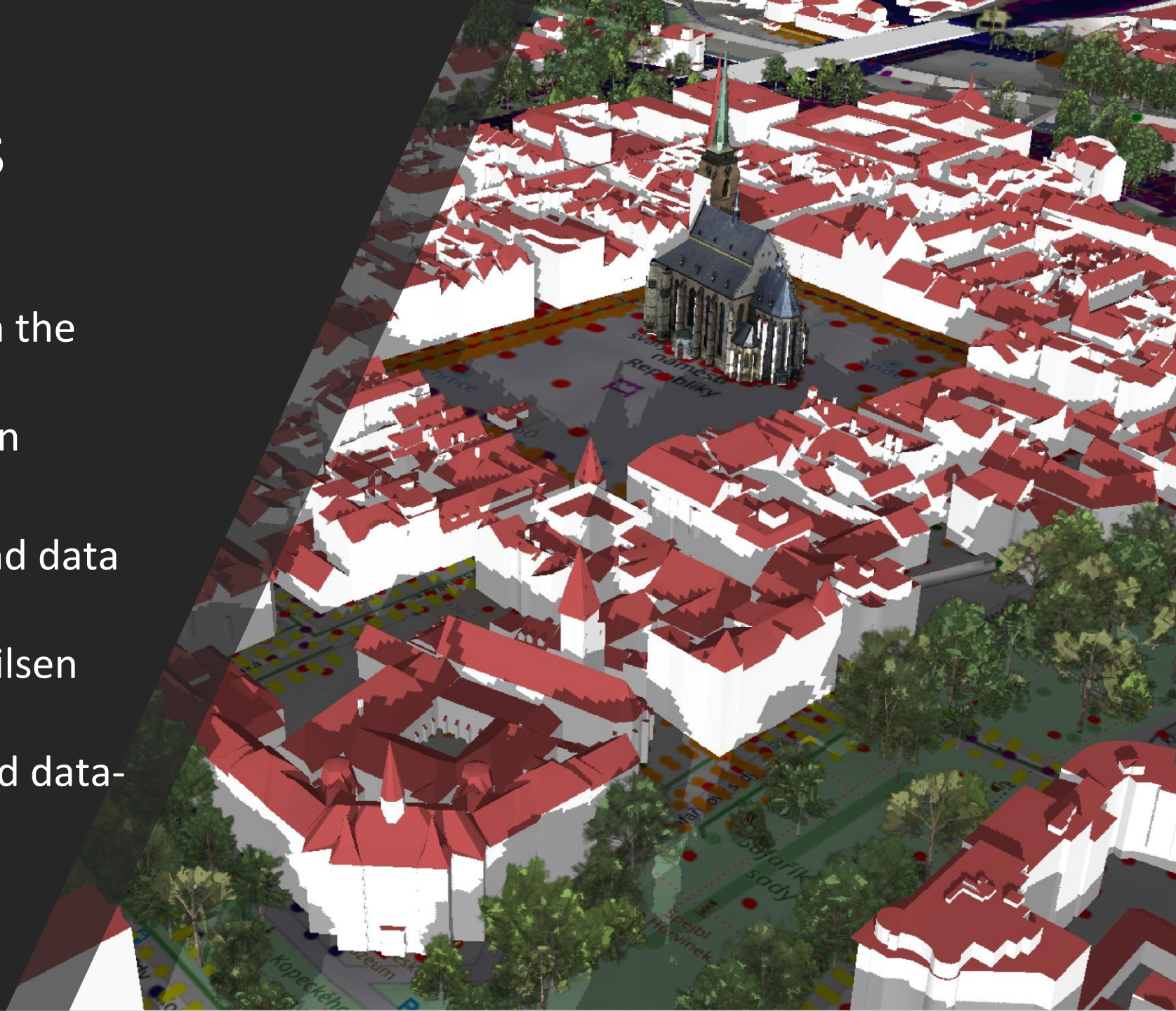
Our strengths since beginning

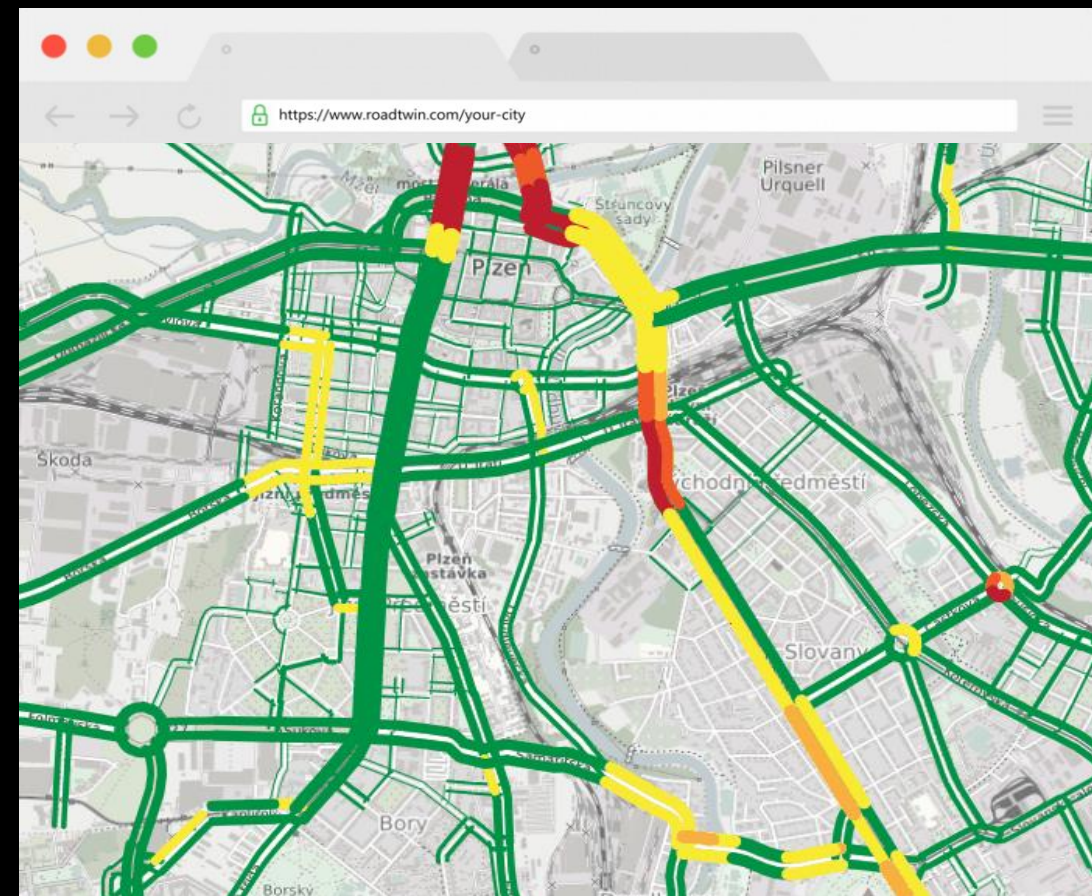
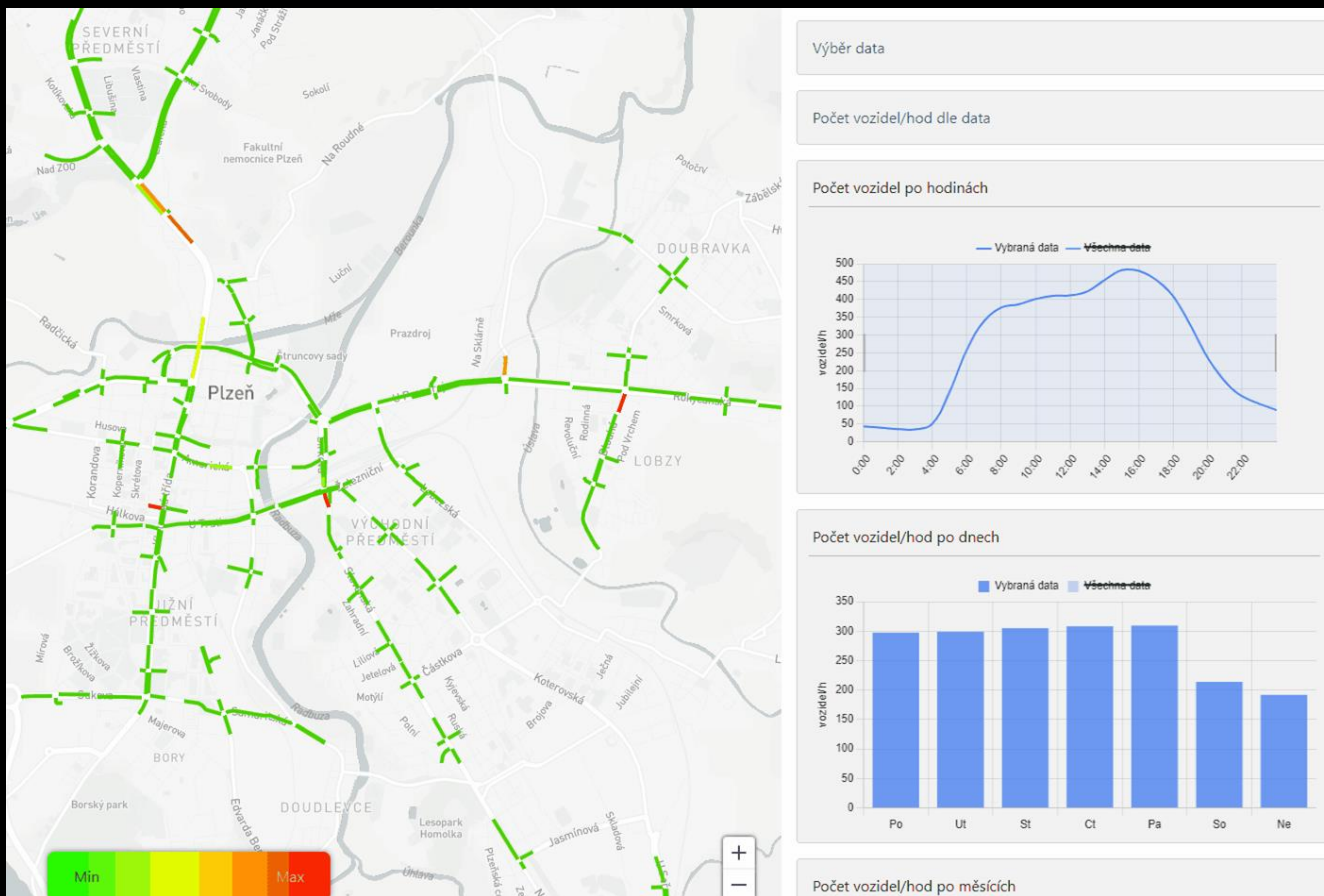
- Political support
- Smart city as an agenda approved by the City Council
- Technically skilled personnel
- Advanced technical infrastructure managed by the city
- State-of-the art UAVs



Expectations

- Improving mobility in the city
- Nourishing innovation
- Startups support
- Engaging students and data enthusiasts
- Extending scope of Pilsen Smart City
- Support informed and data-driven policy making





Traffic Visualisations

- 2D view & 3D view, delta visualization in the DT
- Sensor data, floating car data (historical and real-time) with GLayer
- Future traffic simulation with Traffic Modeller



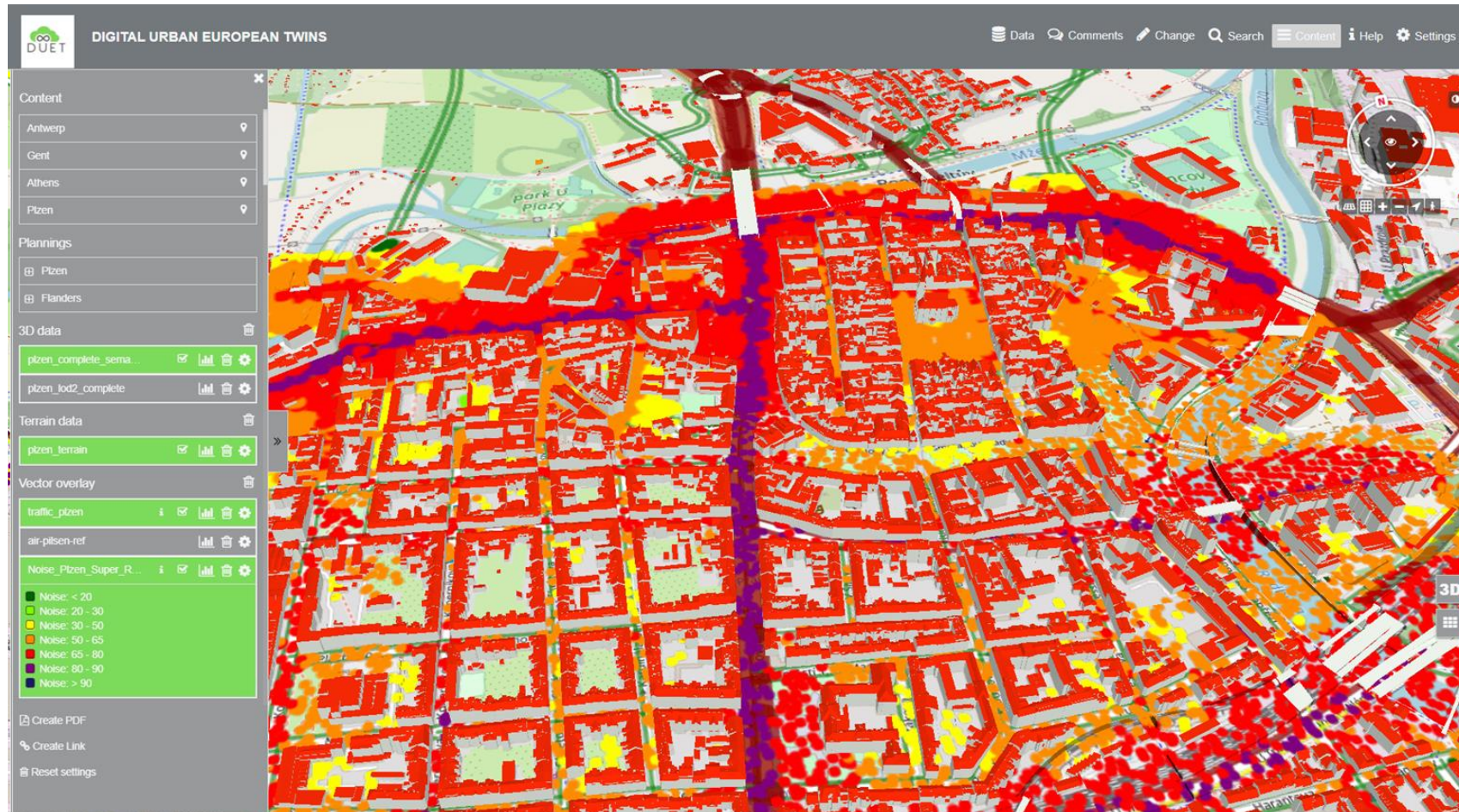
DUET's main added value for the city

- **interaction of simulation models** in different domains

Traffic

Air quality

Noise





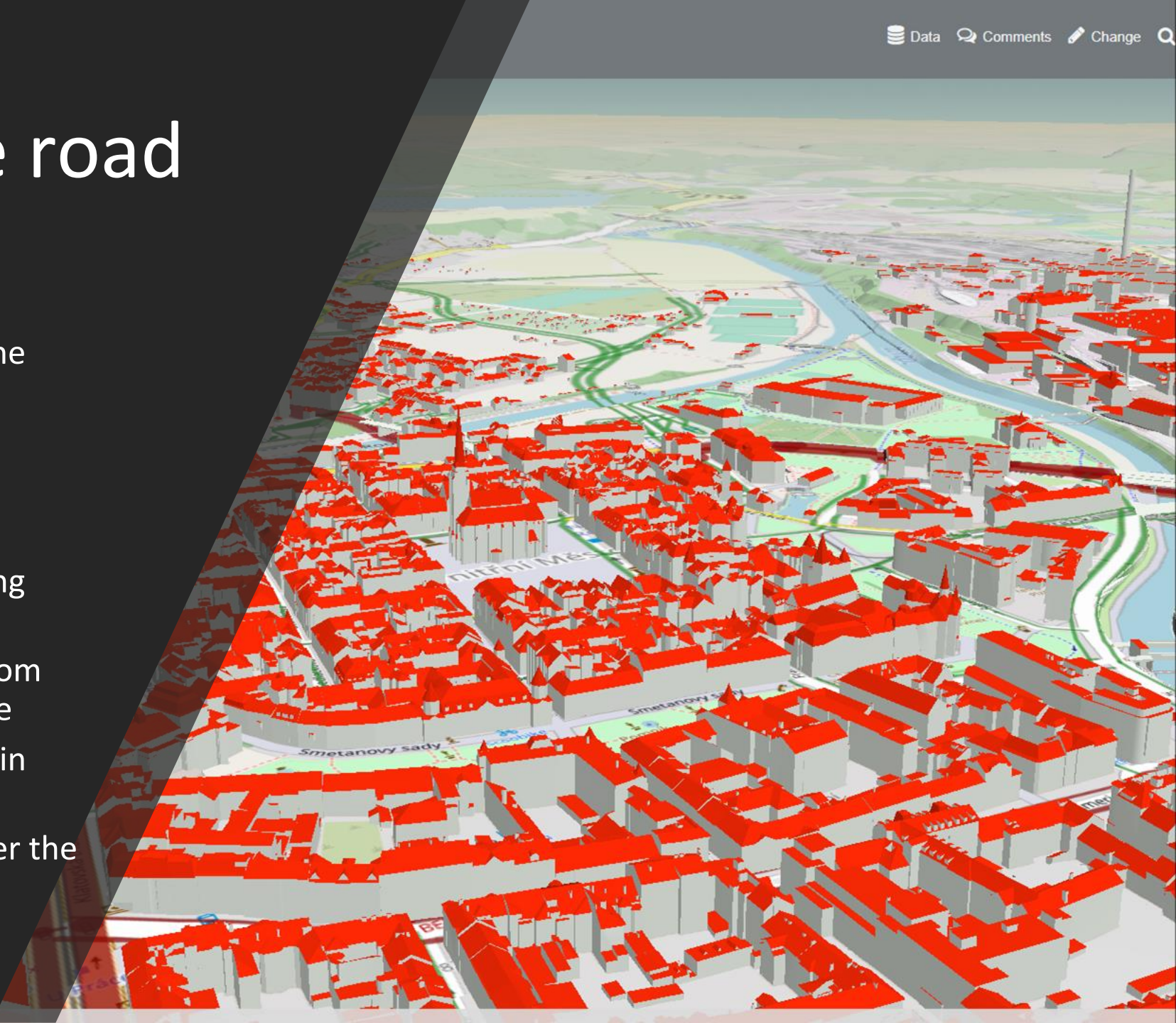
S4AllCities Pilsen pilot

- Digital twin for crisis management
- Technologies and simulation tools to prevent terrorist attacks, cyber attacks and other threats
 - 3D model
 - UAVs
 - Sensors
 - Crowd behaviour, traffic, fire & smoke modelling
 - Video analytics
 - Weapons detection
 - Suspicious behavior detection
 - Abandoned luggage detection
- participation of the Integrated Rescue System

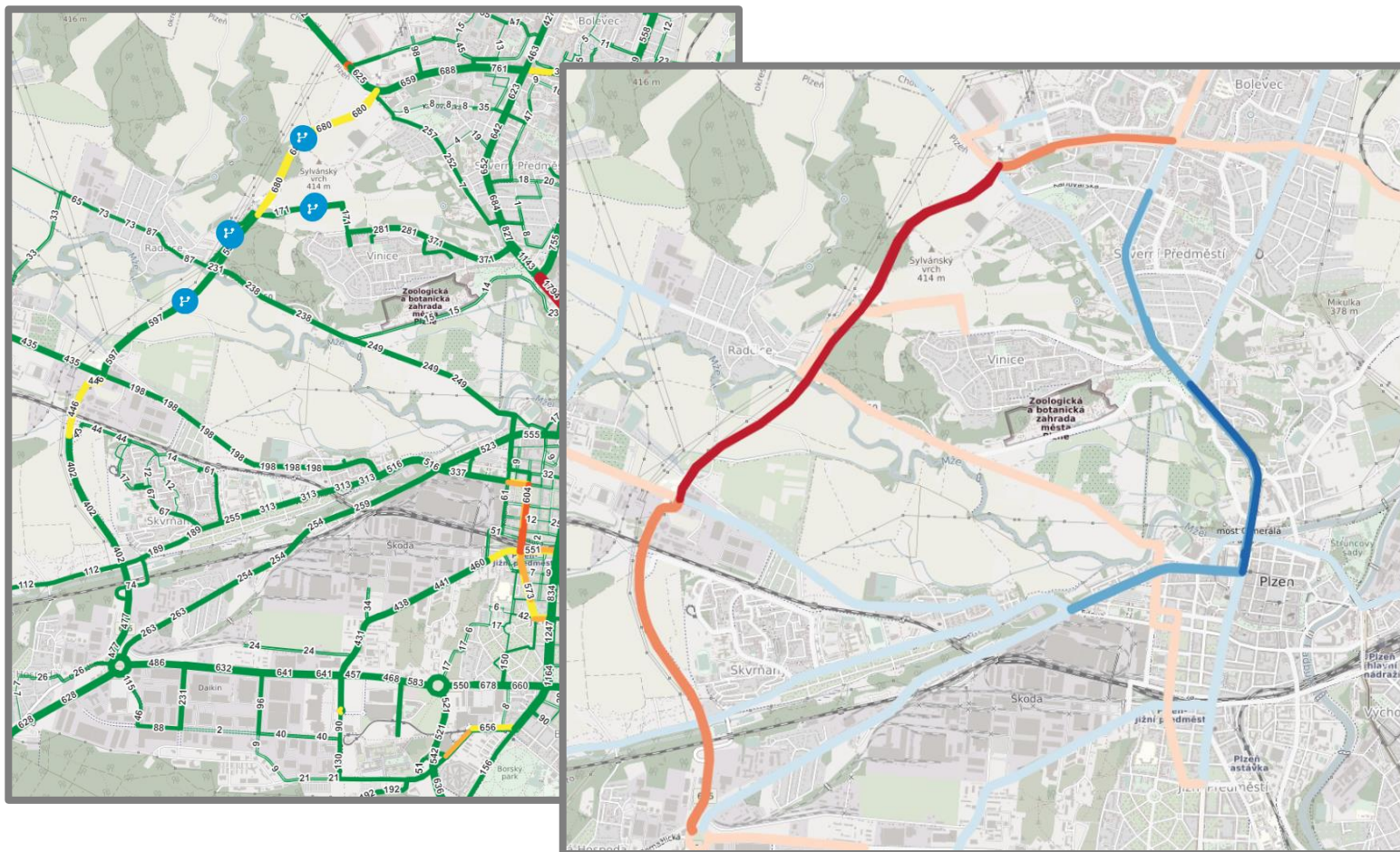


Bumps along the road

- Engagement and commitment of stakeholders and citizens
- Adoption of new technologies in the daily work of city administration
- Compatibility with existing tools
 - e.g with ESRI ArcGIS
- Additional investments needed to adopt new technologies both during and after innovation projects
 - e.g. module to publish data from the traffic management centre
 - Procuring 3D data of the city (in LOD2.3)
 - Maintenance and support after the project funding



Benefits



- New tools to support policy making
- Research and innovation
- New technologies
- New experience
- International contacts
- Reputation of the city
- EU funding



Lessons learned

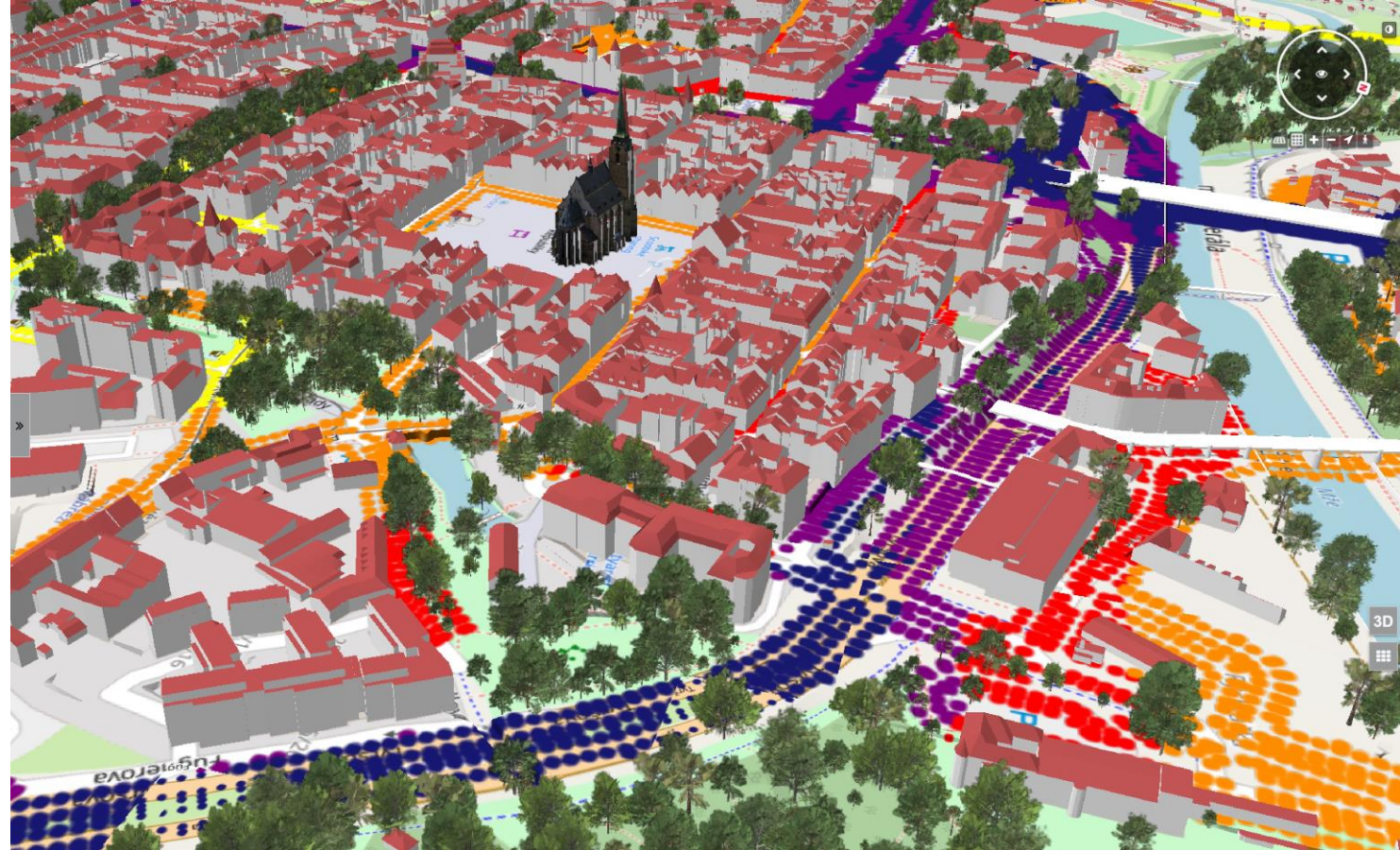
- Building expertise and personnel skills is a long run
- Additional investments in technology necessary
- Focus on achievable results that are realistic to be adopted and financed in the long term
- Next research project opportunities coming



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