

CLIMATE BUDGETING IN KRAKÓW



Interreg
Baltic Sea Region



Co-funded by
the European Union



ENERGY TRANSITION

Climate-4-CAST

Source: Kraków.pl
Fot. Jan Graczyński

UBC Sustainable Cities Commission meeting

KONRAD SZPAK
Municipality of Kraków
01/10/2025

Some facts about KRAKÓW

Second-largest city in Poland with a rich historical heritage

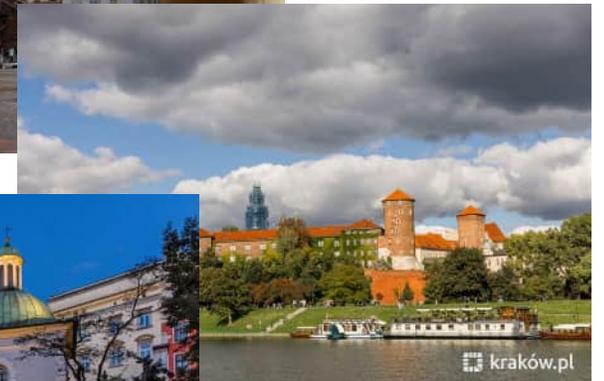
- Population: approximately 800,000
- One of the largest academic centers in Poland, with numerous universities and a high level of education among residents

A city close to nature, with well-developed urban infrastructure

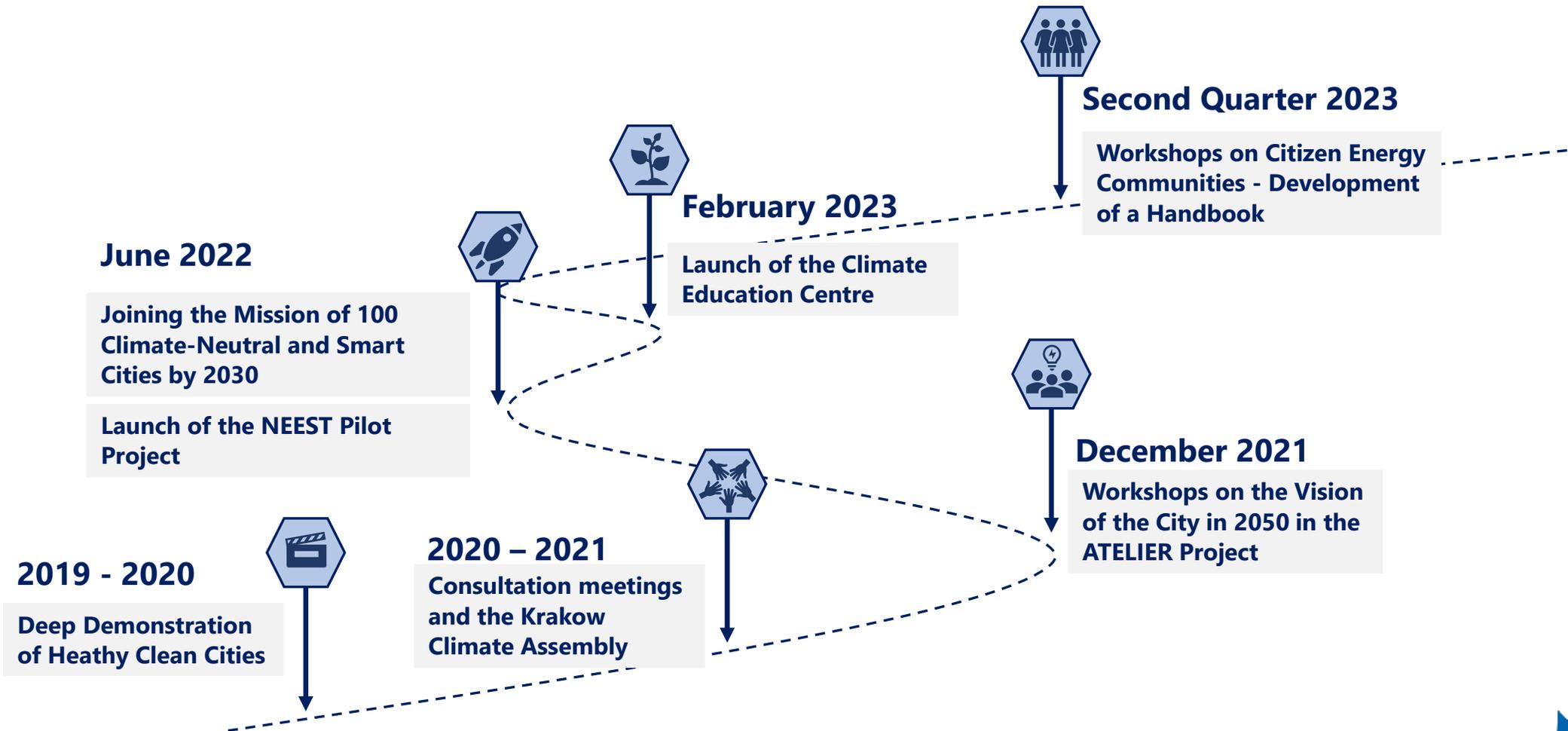
- Historical capital of Poland and part of the Kraków metropolitan area
- Numerous city parks and green areas
- Area: 327 km², 6 rivers, incl. the Vistula, and 3 landscape parks

A center of innovation and business development in Poland

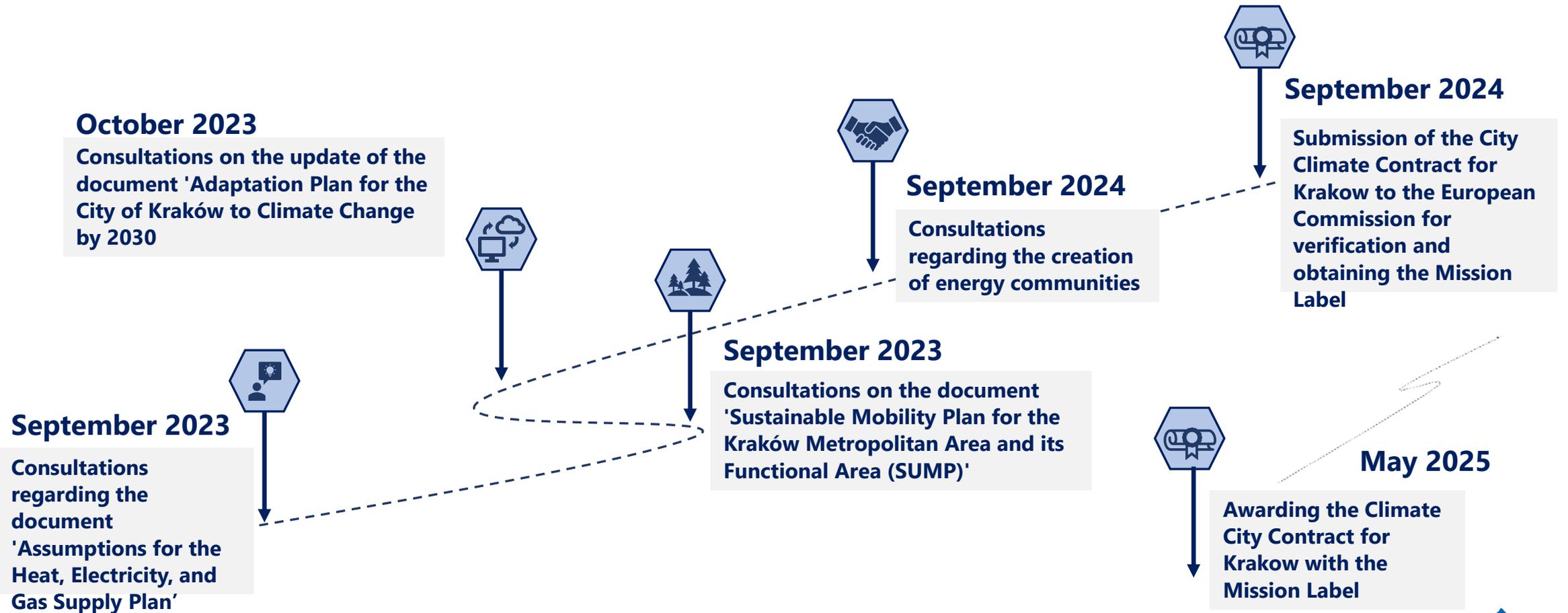
- Headquarters of many international companies, incl. IT and finance sectors
- One of the most important business outsourcing (BPO/SSC) hubs in Central and Eastern Europe
- A dynamically growing startup market, especially in the new technologies sector



Kraków on the Path to Climate Neutrality



Kraków on the Path to Climate Neutrality



What is the main goal of the Climate Contract?



The goal set in the Kraków Climate Contract is to reduce greenhouse gas emissions by 80% by 2030, compared to 2018 levels (reduction of 6 087 thousand tonnes

CO₂e).



A large part of the emission reduction (4 473 thousand tCO₂e) comes from actions implemented after 2018 or planned in the city's strategic documents and the Polish government's plans.

... 21% ...

... 59% ...

The contract includes a detailed description of an additional **58 actions** that should be taken at the local level to achieve an additional emission reduction of 1 614 thousand tCO₂e.



Climate neutrality in Kraków



How much does it cost?

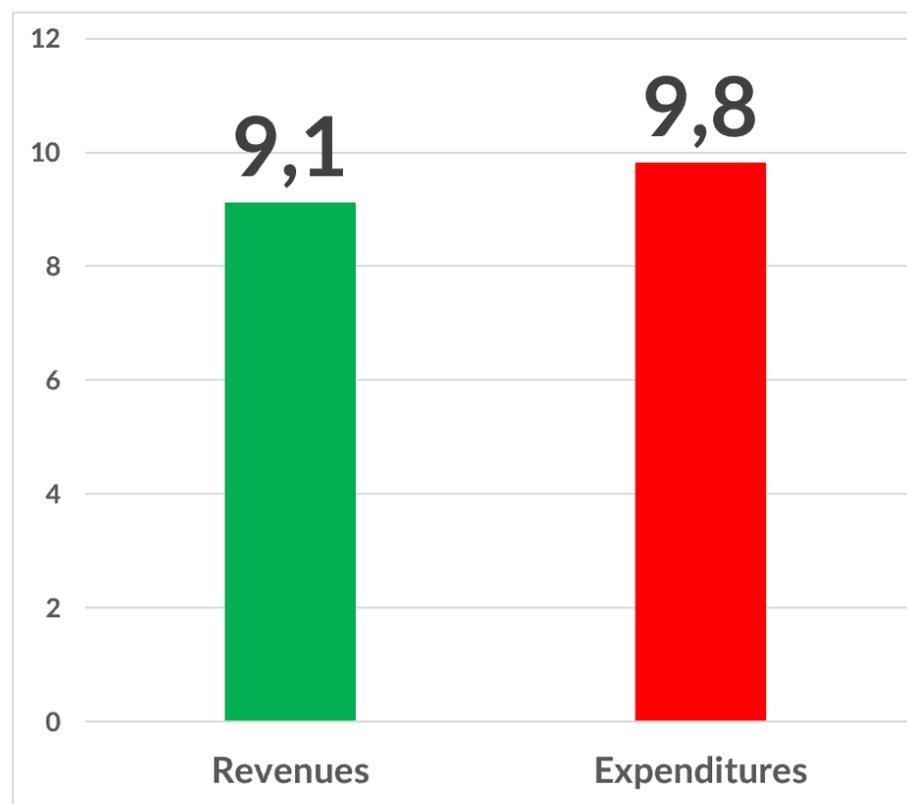


| | | |
|---------------------------|-------------------|--------------|
| | | 28.77 bn PLN |
| CLIMATE NEUTRALITY | 58 ACTIONS | 6.74 bn EUR |
| | | 74.58 bn SEK |

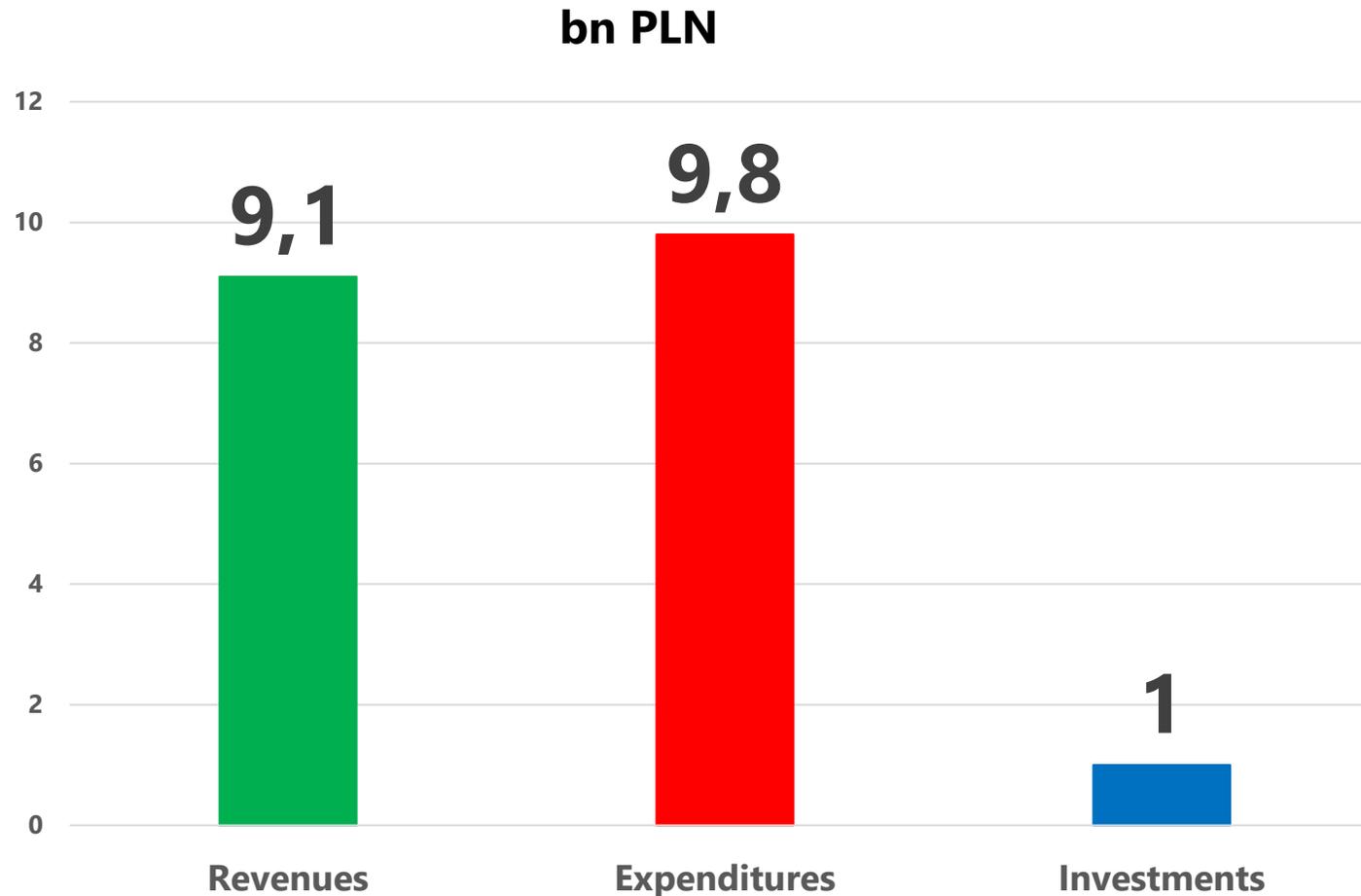


Kraków's budget (2025)

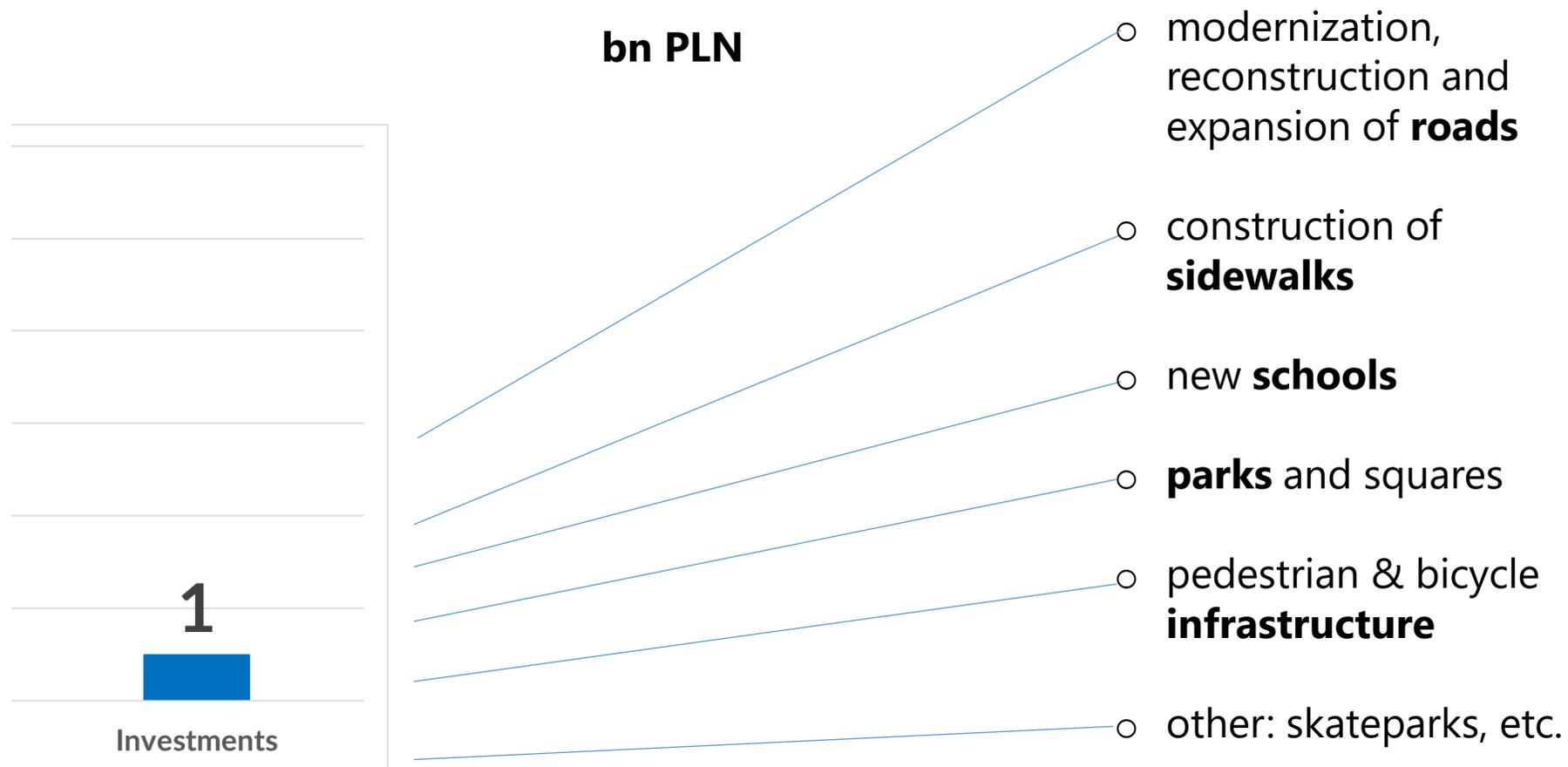
bn PLN



Kraków's investment budget (2025)



Kraków's investment budget (2025)

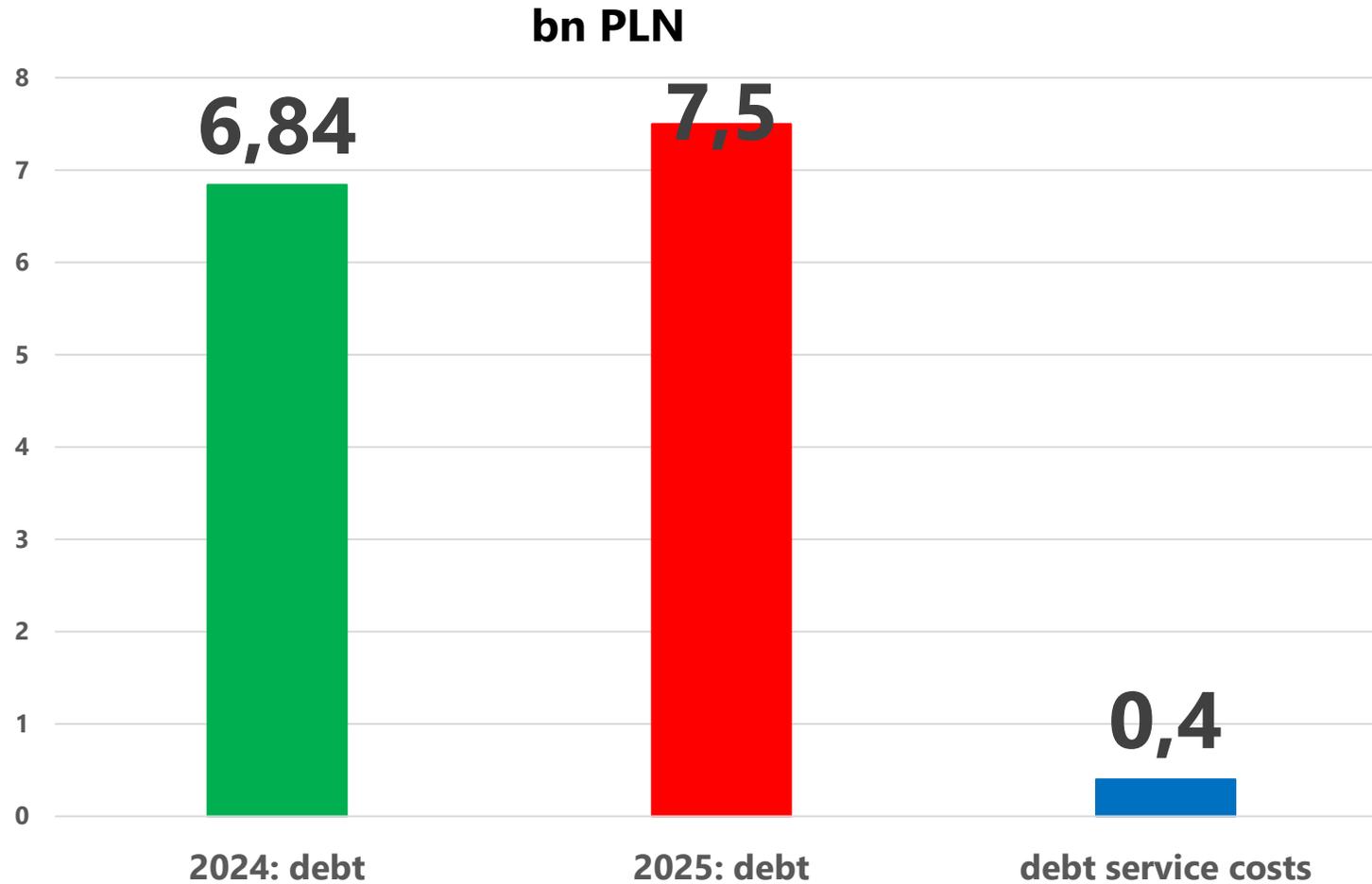


Kraków's budget CHALLENGES

- **plenty of needs**
- **fixed expenditures (+60%)**
- **debt...**



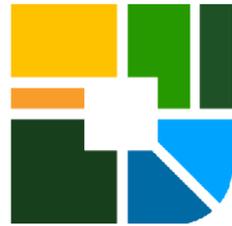
Kraków's budget CHALLENGES



Kraków's initiatives

- portfolio of projects „Zero-Emission Kraków” + Advisory Group
- municipal companies + tax deduction
- NEEST project





NEEST
NetZero Emission
and Environmentally
Sustainable Territories



This project has received funding through NetZeroCities from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036519.



REPEATABILITY OF SOLUTIONS

five types of buildings were selected, for which detailed solutions were designed



Single
building



VS

Buildings &
surroundings



3d digital scanning



Kraków



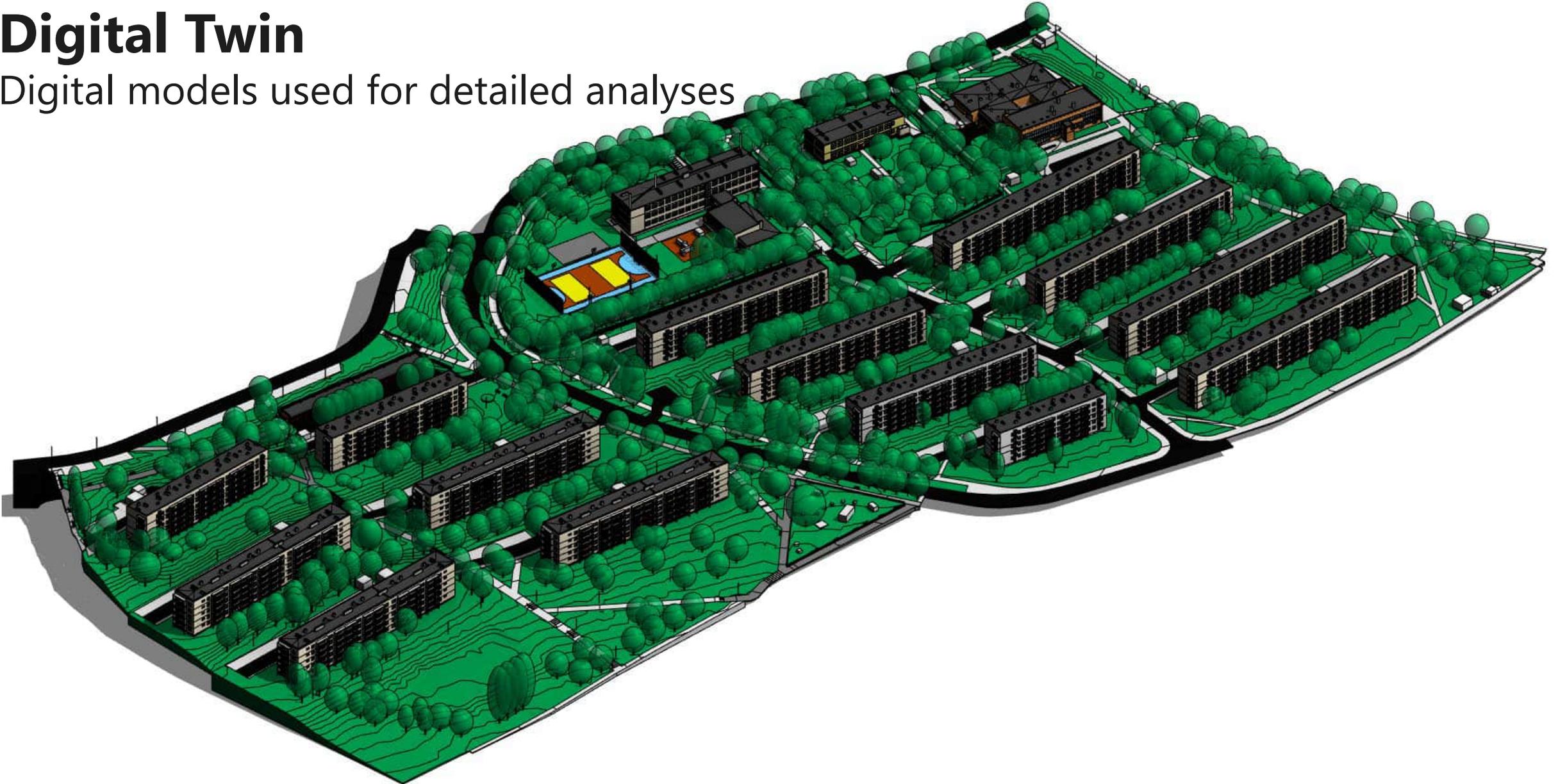
Area: 12,5 ha

Inhabitants: 2,5 tys.

Number of buildings: 17

Digital Twin

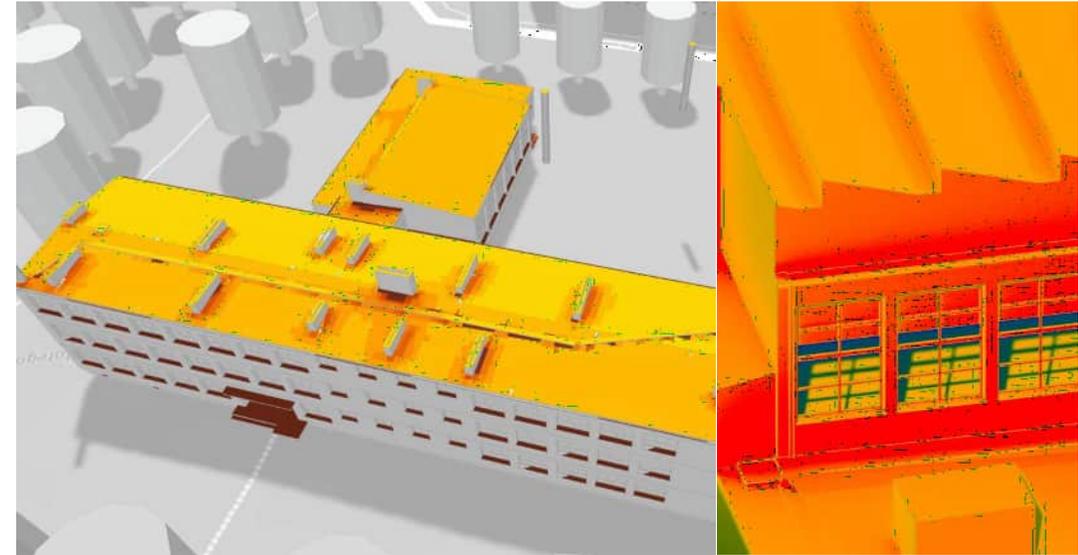
Digital models used for detailed analyses



Parametric analyses – urban scale



Parametric analyses – building scale





EXTENSIONS + ELEVATORS

Reconfiguration of the road system for pedestrians and vehicles.

Adding shelters and bicycle paths.



Kraków

multi-family building = NOW



Kraków

multi-family building = **FUTURE**

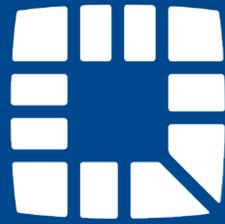


Kraków's needs

- **financial resources** (other than loans/credits); **financial engineering**
- **cooperation** (stakeholders, incl. business, academia, NGO, residents, etc.)
- **tools** for climate forecasting and budgeting



**Alone, you can go FAST.
Together, you can go FAR.**



Kraków

Thank you for your attention!