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RePanel: Rethinking the Future of Aging Prefabricated Concrete (Paneláky) Buildings

Sustainable Renovation Towards Carbon Neutral, Affordable, and Climate-Resilient Housing

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Potential call: HORIZON-CL5-2025-05-Two-Stage-D1-05

Adaptation to Climate Change: Effectiveness and Limits





Needs and Interests

Challenge: Aging *prefabricated concrete buildings* require renovation —the iconic prefabricated housing blocks across Central and Eastern Europe— risk of social decline, energy inefficiency, and missed climate targets.

Opportunity: Upgrading Paneláky to meet **climate goals**—including **carbon neutrality** and **climate change adaptation**—while enhancing safety, accessibility, and aesthetics = sustainability.

Interests:

- Communication and implementation of sustainable principles to engage municipalities, and stakeholders in the renovation of *Paneláky*
- Climate risk assessment and proper building adaptation solutions
- Circular principles and digitalization for a quick retrofitting process
- Green urban integration: upgrading surroundings in partnership with municipalities





Contributions



- Our Department offers expertise in the built environment and urban context
- Sustainability assessment, Life Cycle Assessment of buildings and products, and BIM implementation
- Climate risk assessment framework co-design for specific locations. Study of climate change adaptation indicators at the different spatial scales.
- Nature-based solutions design and testing activity at the building- and infrastructure-level.
- Support in the development of the decision-making model for cities and municipalities
- Definition of the methodology for pilot activities design.





More information





CTU UCEEB – University Centre for Energy Efficient Buildings Czech national leader in sustainable building technologies, energy systems, blue and green infrastructure, and climate adaptation → Key expertise in building renovation, life cycle assessment, climate risk assessment methods and green building rating systems, and stakeholder engagement





Interreg SuPeRBE – Supporting Cross-scale Planning and Policy Readiness for a Resilient Built Environment website

Development of a climate risk assessment methodology for buildings aligned with SECAPs Interreg Central Europe SO2.2 Increasing Climate Change Resilience





Horizon Europe NBSinfra Citynature-based Solutions Integration to Local Urban Infrastructure Protection for a Climate Resilient Society website

HORIZON-CL3-2022-INFRA-01-02





Horizon ARV – Climate Positive Circular Communities <u>website</u>

Demonstrates scalable renovation strategies aligned with the EU Green Deal H2020-EU.3.3. - SOCIETAL CHALLENGES

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Thanks for your attention!



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