CESMOD Centre for SMART & resilient regions

SMART for the future

#EaseTheFuture

CESMOD:
Research Center for Resilient, SMART, Innovative and Sustainable Czechia

Hana Brůhová Foltýnová

Project coordinator
Jan Evangelista Purkyně University
in Ústí nad Labem (UJEP)

We work with leading universities, experts and institutions to contribute to the sustainable and innovative development of our cities and municipalities in Czechia.

Who are the project partners?

Academic partners

- Jan Evangelista Purkyně University in Ústí nad Labem (UJEP)
- Czech Technical University in Prague, UCEEB (ČVUT)
- Prague University of Economics and Business (VŠE)
- VSB – Technical University of Ostrava (VŠB-TUO)
- Masaryk University in Brno (MUNI)

Application partners

- Innovation Center of the Ústí Region (ICUK)
- South Moravian Agency for Public Innovation (JINAG)
- National Network of Healthy Cities (NSZM)

Supporting partners

- STEM/MARK, a.s.
- Obce v datech, s.r.o.

How do villages, regions and cities want to face societal and environmental challenges in Czechia?

Via resilience of municipalities and regions through SMART solutions.

Hana Brůhová Foltýnová

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Technological change and hyperconnectivity

New work models

Smart solution

Environmental degradation

Increasing resource consumption

Growth of metropolises

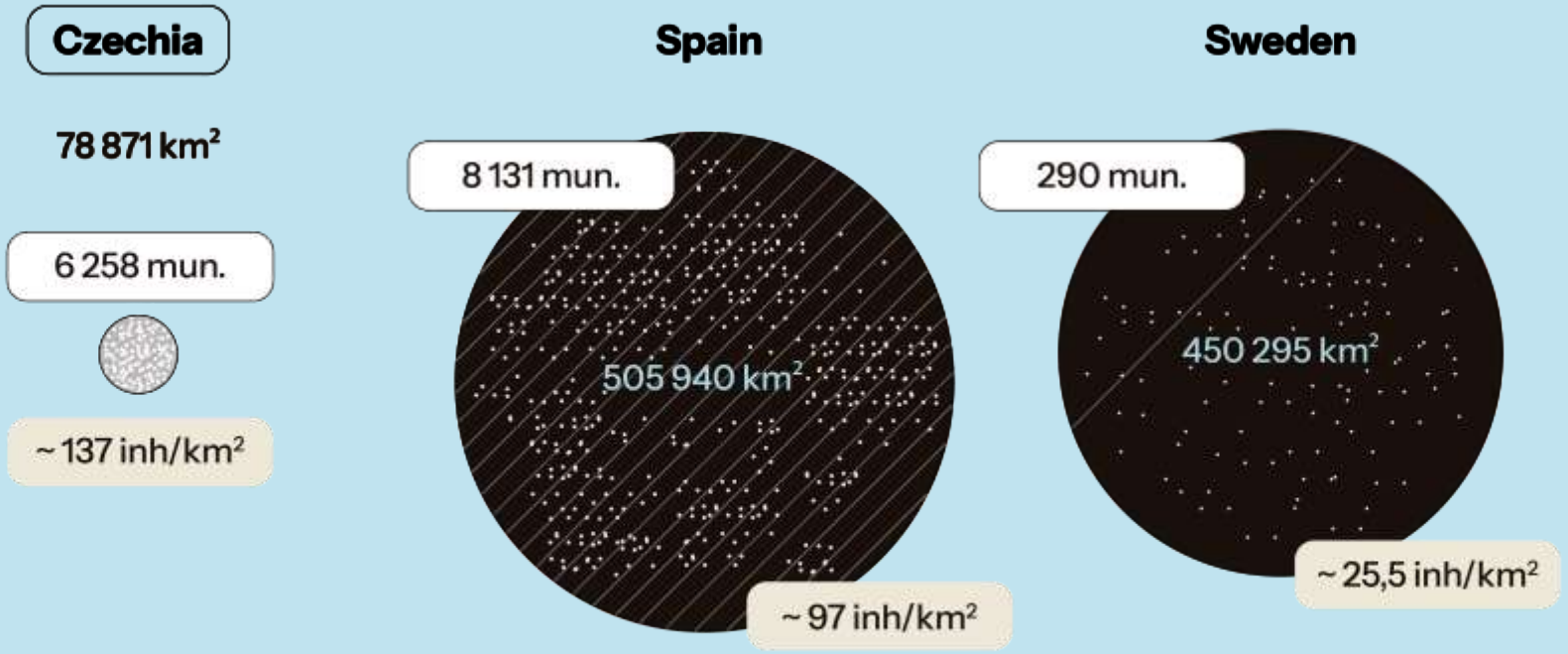
Aging population

New business models

Globalization of trade, supply chains and value

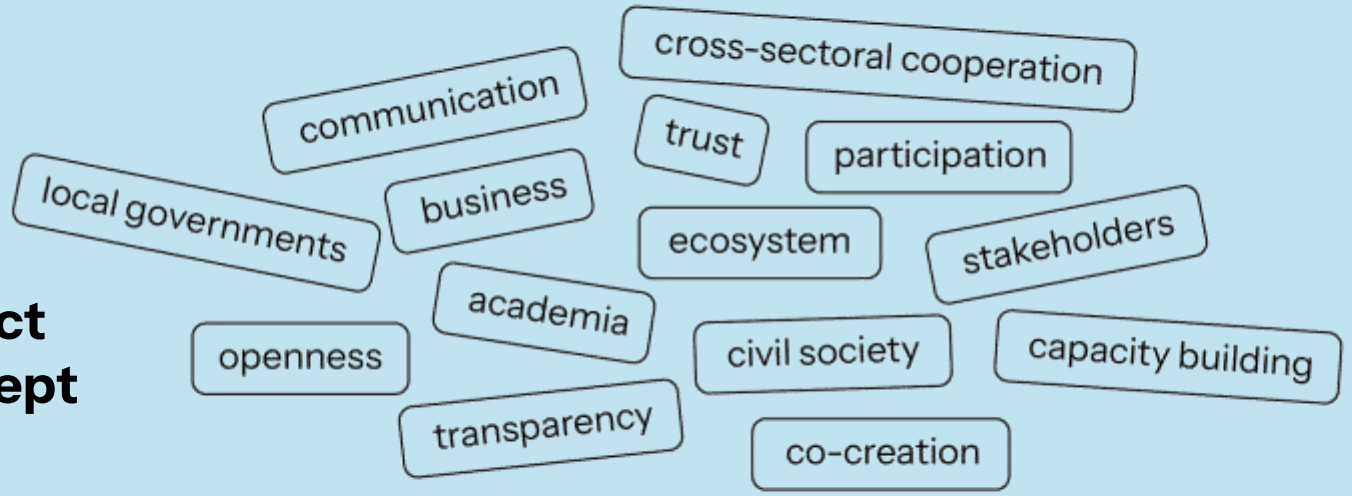
Sustainable urban mobility

Managing Public Administration in a Highly Fragmented System



What makes the Czech approach specific?

Holistic & Strategic Approach in Czech SMART concept



COLABORATIVE aspect in Czech SMART concept

What are the main CESMOD´s outputs?

- **SMARTNET.cz** – National network of innovation centers and **Innovation brokers** – connecting actors and boosting capacity
- **AI-powered data platform** – for informed policymaking
- **Smart Academy** – tailored education for public sector
- **Recommendations, Best Practices and Innovation Gaps** in the Czech Republic

We have initiated the creation of the national innovation platform SMARTNET.cz

Partik Reichl

Director, South Moravian Agency for Public Innovation

Objectives of the Platform:

Fostering collaboration within the Czech Republic's innovation ecosystem in the field of territorial innovation (smart concept).

Implementing **innovation brokering** at the regional level.

Ensuring a unified approach and establishing a shared brand identity.

What is innovation brokering?

Partik Reichl

Director, South Moravian
Agency for Public Innovation

We develop the AI Agents Studio for Innovation brokers.

A suite of specialized AI tools for different tasks and workflows.

Available Agents:

Data Collector
Document Analyzer
Story Writer
Distribution Manager
Performance Analyzer

Result: Save up to 70% time in creating and distributing success stories

Michal Kuzmič

Head of Sales and Multidisciplinary Collaboration, Centre for Energy Efficient Buildings

We create Success Stories Platform for researchers and innovators.

AI-powered system for the automated creation and distribution of success stories.

Key Highlights:

Multi-source data collection

AI-generated content

89% categorization accuracy

Multi-channel distribution

Michal Kuzmič

Head of Sales and Multidisciplinary Collaboration, Centre for Energy Efficient Buildings

We use data for smarter decisions.

Leonard Walletzký

Assistant professor,
Masaryk University in Brno

Analyzing **Smart stakeholder needs** across public and research sectors.

Identifying gaps in data accessibility, quality, and interoperability.

Mapping data flows and user expectations for **Smart governance**.

Auditing existing data sources for **Information and Data Platform usability**.

Designing of unified data standards and analytic tools **supporting evidence-based policymaking**.

We build an Intelligent Information and Data Platform.

Leonard Walletzký

Assistant professor,
Masaryk University in Brno

Modular, event-driven architecture for real-time data exchange

AI and Machine Learning for data validation, enrichment, and classification

Integration with national platforms – National Data Portal & Smart City Compass

Advanced indicator sets for energy efficiency, sustainability, and resilience

Interoperability and security across regional and national systems

We move from Research to Action.

Recommendations, Best Practices and Innovation Gaps in the Czech Republic

Lucie Nencková

Prague University of Economics and Business

Conceptualization of the theoretical framework usable for all stakeholders through **quadruple helix approach**

Identifying gaps and barriers (“white spots”) in the Czech innovation ecosystem and proposing measures to overcome them.

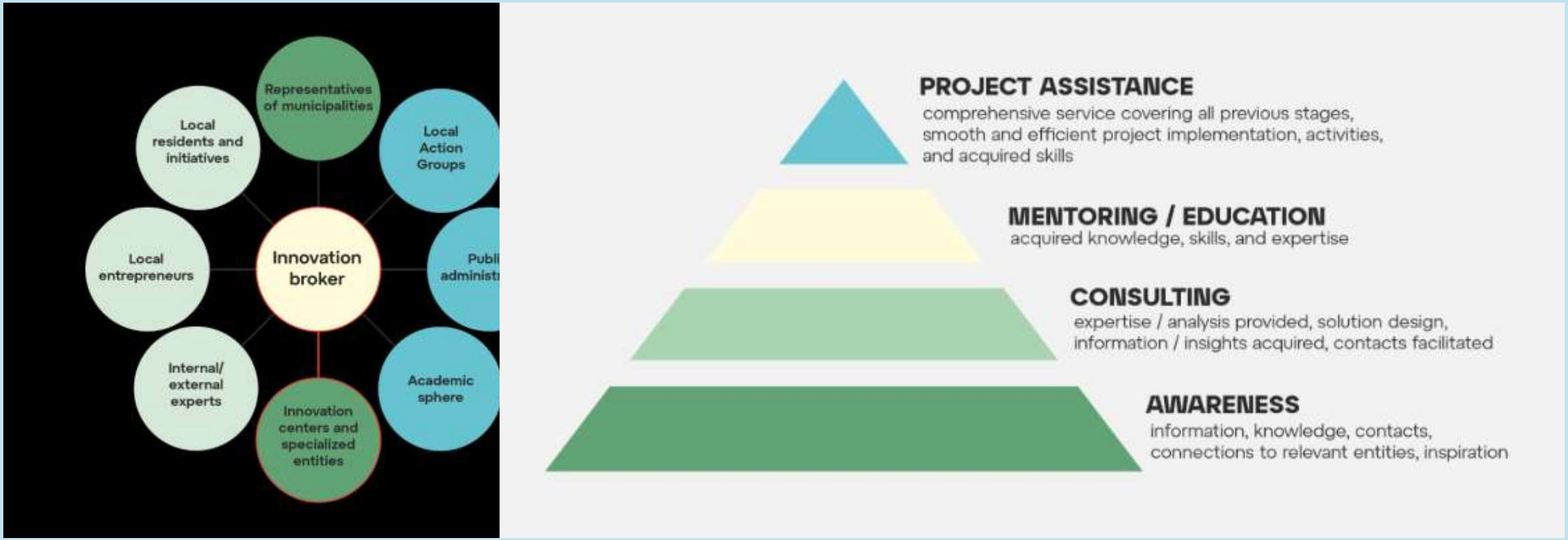
Developing legislative and non-legislative recommendations to improve conditions for innovation and strengthen cooperation across sectors.

Conducting a longitudinal nationwide sociological survey on citizens’ attitudes towards innovation, creativity and openness to change.

Creating a national database of good practices that showcases successful examples of innovative solutions and governance models.

#succesfullstories #goodpractices

#succesfullstories #smartregions



Innovation Brokering: A New Way to Bring Innovation into Local Governments

- pilot of the South Moravia Region

#succesfullstories #smartvillages

Village Přísnotice (878 ihn.): Rainwater management

#succesfullstories #smartregions #smartvillages

Neratov (13 houses): Revitalization of the almost abandoned mountain village

#succesfullstories #smartregions

Prachov Rocks: Unique features and specific activities – Composting Toilets

#succesfullstories #smartcities

Prague, Holešovice: House with a root-zone wastewater treatment roof

#succesfullstories #smartcities #smartregions #smartvillages #smartcare

Home is Home – Assistive Technology Portal for Seniors and Caregivers

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The end!

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