The Smart City concept in cluster cooperation

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NEMZETI KUTATÁSI, FEJLESZTÉSI ÉS INNOVÁCIÓS HIVATAL

PREPARED WITH THE PROFESSIONAL SUPPORT OF THE DOCTORAL STUDENT SCHOLARSHIP PROGRAM OF THE CO-OPERATIVE DOCTORAL PROGRAM OF THE MINISTRY OF CULTURE AND INNOVATION FINANCED FROM THE NATIONAL RESEARCH, DEVELOPMENT AND INNOVATION FUND

Tamás GYULAI

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Description of professional background

- Graduated as Electrical Engineer at the Technical University of Budapest
- Network Development Engineer at landline telecom operatior (3 years)
- CEO at Regional Development Agency in Szeged, Hungary (10 years)
- CEO at technology transfer centre of the University in Szeged, Hungary (3 years)
- Living Lab Expert at Slavici University in Timisoara, Romania (4 years)
- Expert for Innovation at Enterprise Europe Network in Timisoara, Romania (3 years)
- **Cluster Manager at IQ Kecskemét Industrial Research Ltd** in Kecskemét, Hungary (since 2019**)** where I took part in the work of national Coalition for Artificial Intelligence
- **Smart City Expert at PBN** in Szombathely, Hungary (since 2020) where I work on Digital Twins for Smart Cities as member of the team of am-LAB that is the cross-border Digital Innovation Hub between Austria and Hungary
- **Coordinator at STEPP Cluster** in Szeged, Hungary (since 2022) where I work on cluster cooperation and cross-border economic development

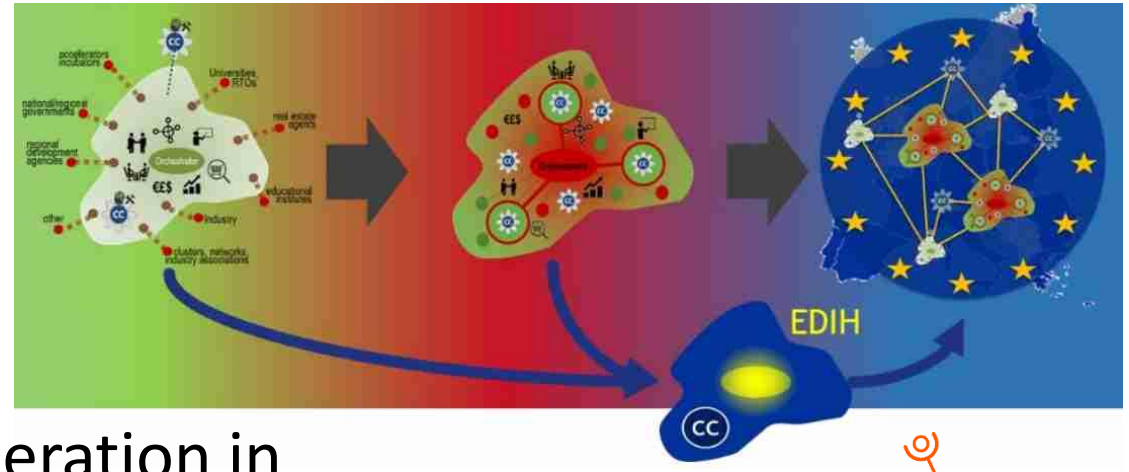
MIÉNK Magyar Innovatív Építőipari Nyílt Klaszter

PBN advanced management

STEPP HUNGARIAN LASER CLUSTER

Responsible innovation in urban development

Territorial Responsible Research and Innovation and Smart specialization



Cooperation for urban innovation

Digital Cities Challenge (2015-2019)

Intelligent Cities Challenge (2020-2022)

Expert teams of **Cantabria** (Spain), **Karlsruhe** (Germany), **Tampere** (Finland) and **Szeged-Timisoara** (Hungary-Romania) worked together to design policy recommendations and implement pilot actions for responsible innovation

Cooperation in industrial innovation

- Pannon Business Network Association (Szombathely) – host organisation of "am-LAB" acting as Digital Innovation Hub
- IQ Kecskemét Industrial Research Kft. (Kecskemét) - coordinator of construction cluster MIÉNK in Hungary
- DUTIREG Nonprofit Kft/ STEPP Cluster – new Digital Innovation Hub for photonics and smart manufacturing in Szeged with support by EPIX project

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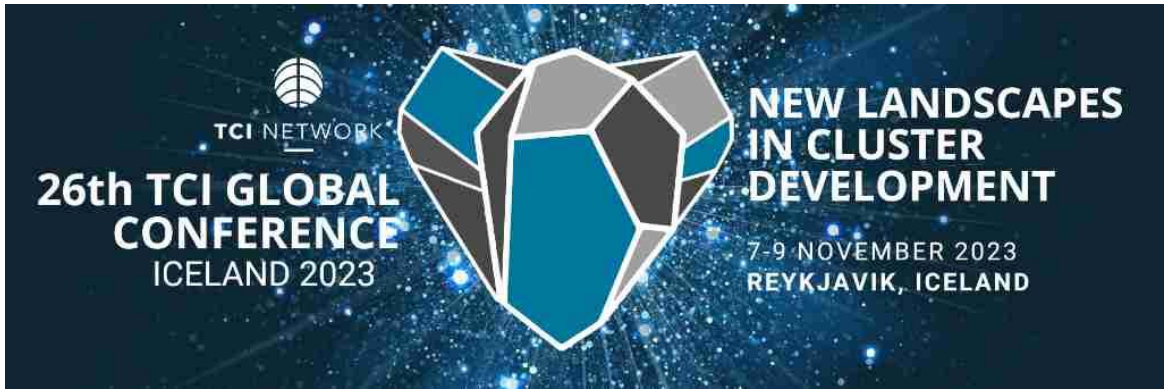
Dél-alföldi Regionális Innovációs Ügynökség

Digital Innovation by clusters in Hungary

Actions implemented by cooperation with universities

Experience in cluster cooperation with global scope



National Association of Innovative Clusters

- National projects with innovative clusters
- Regional DIH with Territorial Innovation Platforms
- Cross-border cooperation with Arad and Timisoara
- Renewed membership from 2024 in TCI Network

Hungarian Cluster Alliance

- a bottom-up alliance fully recognised and supported by Hungarian cluster policy
- umbrella organization, network and community
- membership in European Cluster Alliance (ECA)

magyar klaszterközösség

Klaszter EXPO 2024

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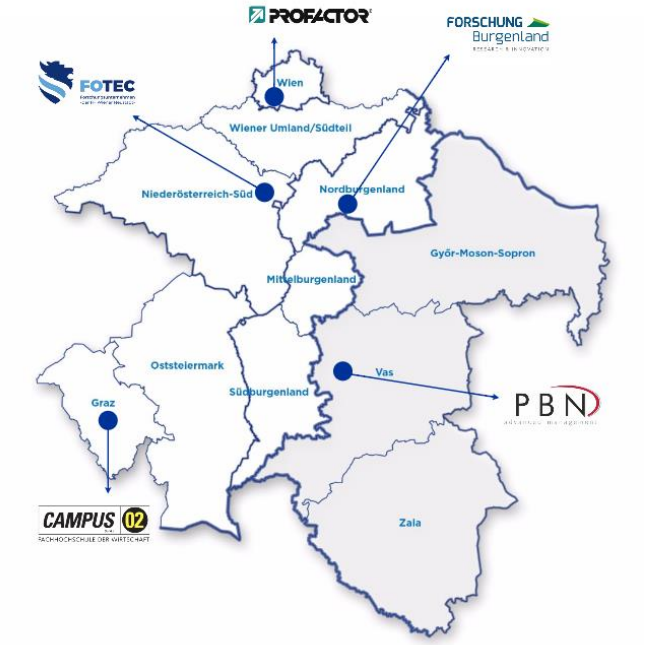
SZÉCHENYI EGYETEM UNIVERSITY OF GYŐR

Social innovation and clusters in Europe

Actions implemented with Social and Environmental Responsibility

Cross-border network of Digital Innovation Hubs



EPIX

STEPP HUNGARIAN LASER CLUSTER

ClusterXchange visits in 2023: Industry Fair (Hannover), RRI conference (Tampere), Smart City Expo (Barcelona)

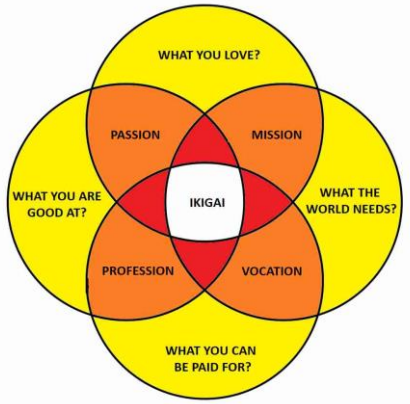
Webinar series in 2024 on smart public procurement, inter-cluster cooperation, Industry 5.0, AI and robotics in smart cities that join **Local Green Deal** and **Pact for Skills**

Special session on „Regional and urban innovation ecosystem by Industry 4.0 & 5.0" at **RSAI Conference (Kecskemét)** in April 2024 with possibiliy to **CxC visit**

Project events are open to SMEs in all industrial clusters with focus in Hungary on **smart manufacturing** and **photonics** until May 2024

Industry 5.0 Community of Practice

Example from Japan: **Society 5.0** implements human-centered **smart** city development



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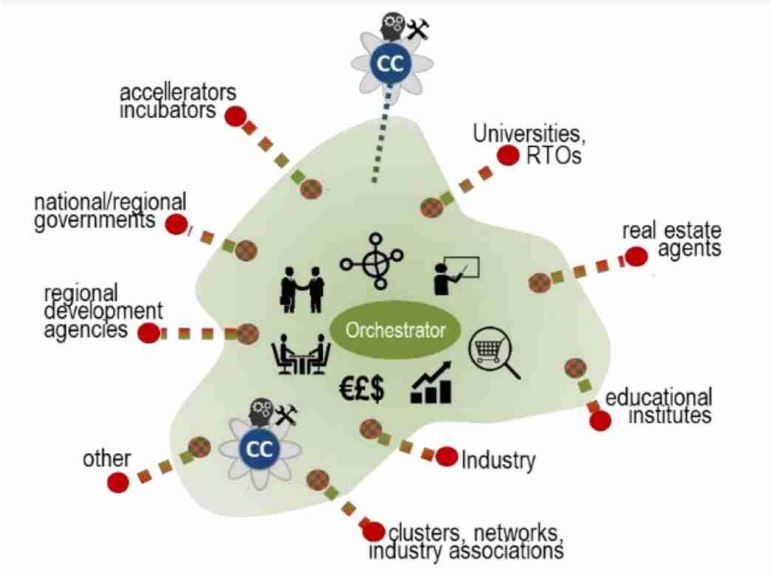
Digital innovation and circular economy in the Danube region

“Danubians Cradle-to-Cradle Architecture and construction processes” (DECORATOR): is linked to the New European Bauhaus initiative, as it pursues the circularity and the transition towards a sustainable future not only as a technological but also as an aesthetic project.

cradle-to-cradle (C2C): holistic and transformative value creation approach to integrate technological, socio-cultural and economic aspects of the cycle in architecture and building construction, supported by advanced technologies

C2C methodology for policy design: considers building materials as raw materials in metabolic building cycles and in processes aimed at prolonging the quality of raw materials so that waste can be completely eliminated.

- a new collaborative model with associated tools to implement a circular approach to construction, inspired by the New European Bauhaus initiative and supported by advanced technologies involving relevant local stakeholders and actors.
- integration of advanced technologies, art and culture, architecture and design, highlighting its different aspects (regional, conceptual, resource, etc.).
- C2C approach as a complex technological, socio-cultural and economic enterprise



Experience in Szombathely:

- Smart City best practice coordinated by DIH
- Mentoring support for DIH in Szeged

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Thank you for your attention !

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