

# Clusters as platforms for business-research (B2R)/research-business (R2B) relations

## Experience of Hungary – main findings and proposed roadmap

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Zoltán Bendó, Tenderix Ltd.

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# Collaboration between business and research is a hot issue in Hungary

## Current situation in Hungary

- Hungary is an emerging innovator (EIS 2021)
- Summary Innovation index is at 67.9 relative to EU 2021 (100). Largest lags in:
  - Doctorate graduates, R&D expenditures in public sector, SME business process innovators, PCT patent applications, Design applications, Employment in innovative enterprises
- Enterprises carrying out innovation activities 28.7% (EU average 50.1%)
- **Between 2016-2018 only 10% of innovative enterprises had cooperation with higher education institutes and 3.5% with public research institutes**

Poor innovation and cooperation indicators have induced a number of public programmes

## Actions taken - more actions to come

- **Open laboratories:** use of laboratory equipment for innovative SMEs
- **Higher Education and Industry Collaboration Centres (FIEK)**
  - Joint R&D activity and knowledge creation that involves both the university and business actors
  - R&D activity performed on demand by the university according to the needs of a business entity as a customer
- **Science and Innovation Parks**
- **University Innovation Ecosystem**
- **Priority Axis No.2 of the Economic Development and Innovation Operational Programme Plus (2021-2027)**  
- see next slide

# Stimulating knowledge transfer through the support of cooperation

## Priority Axis No. 2 Research and Development and Innovation of the Economic Development and Innovation Operational Programme Plus (2021-2027)

1

Support to **knowledge creation**  
through infrastructure  
investment and capacity  
building

2

Stimulating **knowledge  
transfer** through the support of  
**cooperation**

- Competence centres
- Science and  
innovation parks
- National laboratories
- Science centres

Focus on long-term  
cooperation instead  
of project-based  
cooperation

3

Stimulating **utilisation of  
knowledge** through the  
increase of RDI activities of  
companies

# Cluster landscape in Hungary

## Number of clusters

- 26 accredited clusters
- Further 19 registered cluster
- There may be more clusters – as registration is not compulsory

## Date of establishment

- Most clusters have been established in 2001-2008 that are in operation currently
- Few clusters have been established after 2013

## Cluster size (in terms of cluster members)

- 30-40 on average

## Legal status

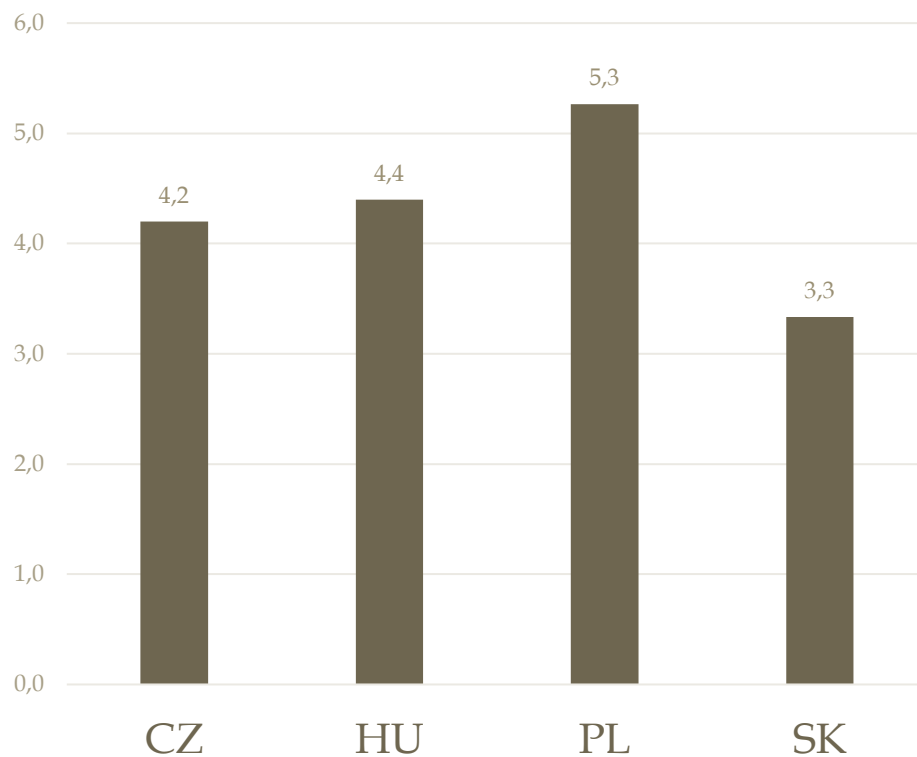
- Clusters do not have a legal entity
- They are founded by a deed of foundation of the establishing members
- The cluster management organisation has legal entity in most cases

## Research sector representatives in clusters

- 2.3 universities and 0.6 research organisations on average in clusters (result from project survey)

# Cluster provide a highly suitable platform for various modes of business-research collaboration

## Average number of cooperation forms applied in clusters

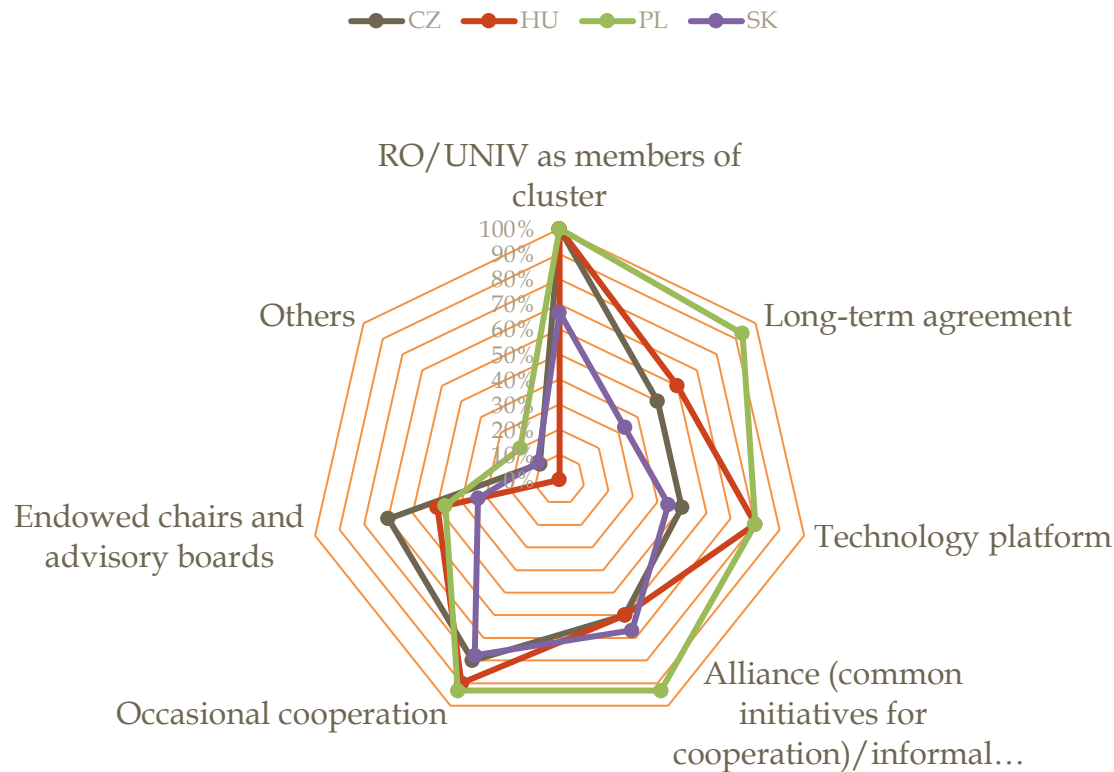


- We asked clusters to select such cooperation forms between firms and RO/UNIV within their cluster that are used
- Six forms of cooperation have been predefined and cluster managers also had the option to list further cooperation forms
- Multiple choices were possible
- **Results show that clusters give floor to different modes of cooperation in the V4 countries**
- **Clusters provide a highly suitable platform to various kinds of cooperation in each of the V4 countries**

Source: own elaboration based on data from in-depth interviews

# Various forms of cooperation are used in V4 countries

## Forms of cooperation between firms and RO/UNIV

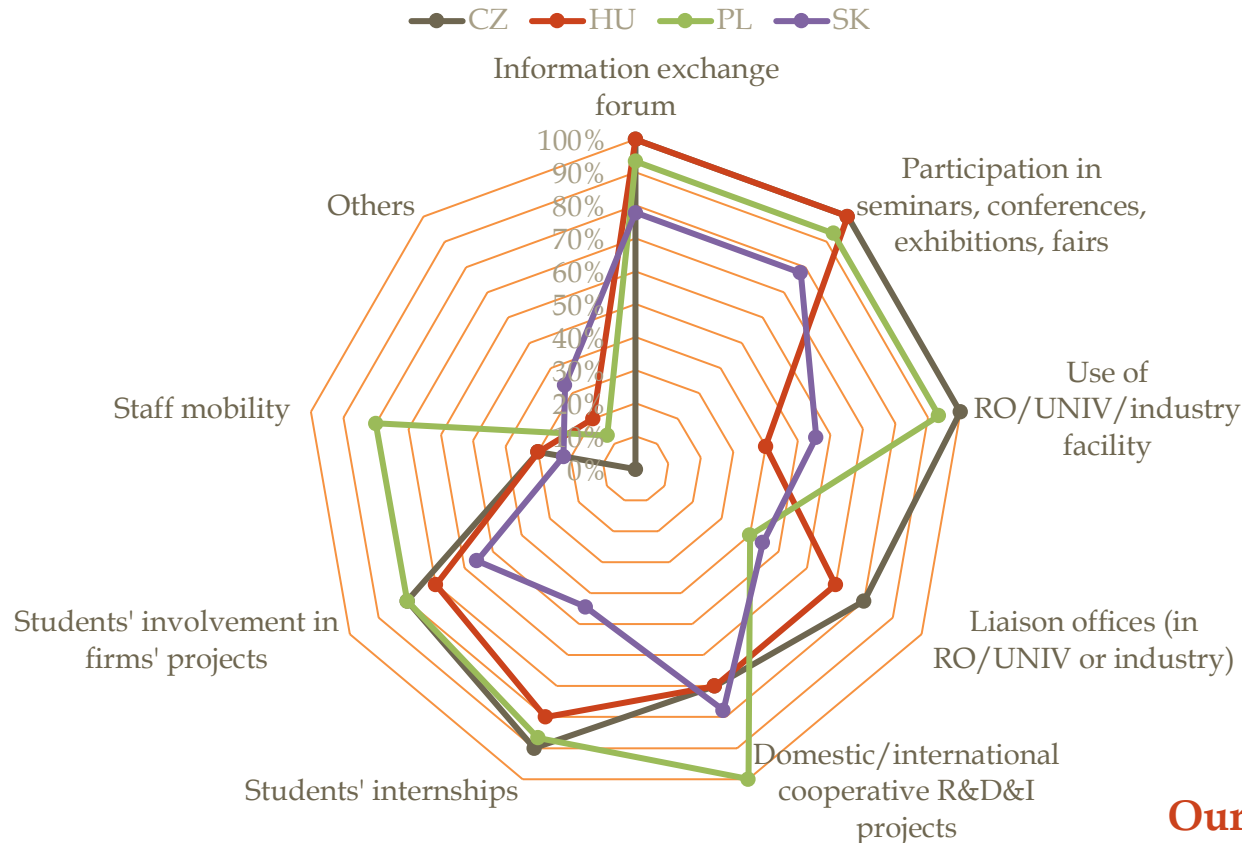


- Research organisations and universities are almost always members of clusters
- Occasional cooperation is used very actively in all 4 countries
- Long-term agreements are widespread in PL, but often used in HU and CZ, too
- Technology platforms used in a lot of clusters in PL and HU

Source: own elaboration based on data from in-depth interviews

# Activities in the frame B2R/R2B cooperation in the V4 countries

## Activities as part of B2R/R2B cooperation



- Information exchange fora and participation in seminars, conferences, exhibitions, fairs are the types of activities that are carried out by most clusters in V4 countries
- Use of RO/UNIV industry facility very high in CZ and PL - but roughly half of SK and HU clusters report this activity, too
- Domestic/international cooperative RDI projects are frequent all four countries

**Our project confirms that clusters provide a great platform to facilitate B2R/R2B collaborations**

Source: own elaboration based on data from in-depth interviews

Clusters in Hungary need to overcome challenges in the eyes of policy makers:

- Many non-operational clusters due to the proliferation of clusters in 2007-2012
- Clusters are not the only type of organisations that can facilitate B2R/R2B cooperation
- Size of accredited clusters relatively small - however, accredited cluster together represent a fair share of the Hungarian economy
- Regaining confidence through performance



# Highlights from our proposals

## Creating conditions for cooperation

- Support for RDI activities should be primarily focused on accredited cluster organizations
- Introducing direct and indirect support measures for the training of cluster managers
- Introducing support measures that result in the growth of clusters in terms of their membership
- Better coordination of policies related to clusters among public institutions and stronger involvement of clusters in policy making

## Initiation of cooperation

- Support measures that help clusters become international
- Promoting long-term agreements among business and research in clusters
- Making clusters active in European Digital Innovation Hubs
- Facilitation of collaboration among clusters

## Cooperation and its results

- Promoting the achievements of cluster companies outside the cluster - building credibility of their activities
- Introducing a cluster trademark to products/services developed through business-research cooperation in clusters
- Greater emphasis on the implementation of university R&D results and applications to the industry

Thank you for your attention!

Zoltan Bendo  
managing director  
Tenderix Ltd.

[Zoltan.bendo@tenderix.hu](mailto:Zoltan.bendo@tenderix.hu)  
+36-30-436-0431