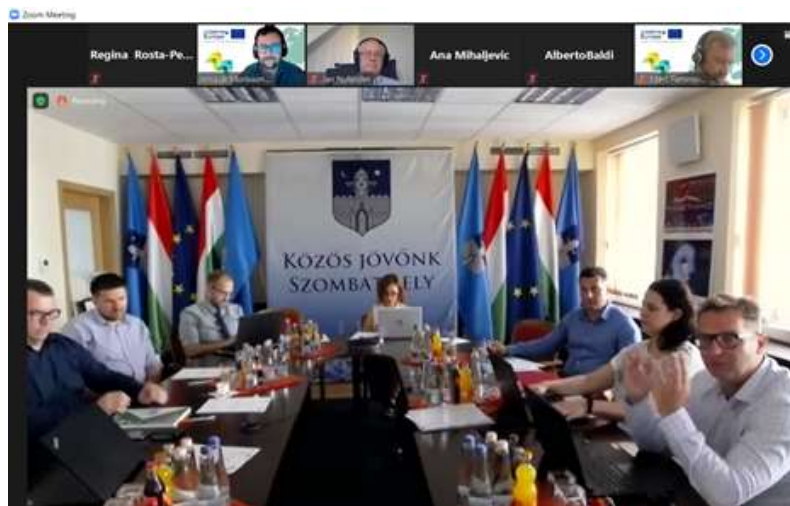


PROMOTE ECONOMIC DIVERSIFICATION AND ATTRACT MANUFACTURING INDUSTRIES IN THE HEALTH SECTOR

A Policy Learning Platform peer review
29th and 30th June 2021 – hybrid meeting

Final Report



Background

The economy of Western Hungary is dominated by automotive industry. Western Hungary is one of the fastest converging regions in the entire European Union. GDP per capita on PPS improved from 55% of EU average to 78%, though since then it is stagnating. International car industry has boosted capital dramatically, human resources adapted to multinational working culture, necessary competitive infrastructure was developed.

On the backside of the decades the research-and-development activity was cut back significantly – dropped to one-tenth, based on calculations measured on GDP. University struggles to initiate and maintain engineering education for the industry, and the key selling point was favourable cost structure. It eroded the value locally created, leading to loss in net disposable income, which is especially painful in the proximity of Austria.

The tendency outlined above is further endangered by the technological transformation of the automotive industry – change of international value chain, digitalization of the production systems, modification of the powertrain, etc.

Realizing these tendencies, the municipality of Szombathely – supported by the analytical and organizational work of Pannon Business Network (PBN) – initiated a paradigm shift. The visionary programme was established on two pillars, namely the support of manufacturing change (e.g.: robotics, artificial intelligence) and promoting the development of a new industrial orientation – health sector manufacturing. Szombathely applied and was granted in summer of 2020 the support of the Intelligent City Challenge of the Commission (only city in Hungary from the countryside), which acted as a formal starting point for the programme development. The municipality established a working group with 3 universities, association of scientific engineers, scientific institute of transportation, chamber of industry and PBN. Six months of programme development was finished by the end of 2020. The first version of Szombathely2030 was circulated among citizens, company managers contributed, and the document was finetuned. It was discussed and agreed by the general assembly of the city, integrated into the county-level territorial operative programme and presented on national government level with the member and vice president of the Parliament.

Motivation to apply for peer review and thematic blocks

During the planning phase it was already obvious that additional impulses are necessary to ensure quality target setting, proper focus areas and international connectivity. On behalf of the Szombathely2030 consortium the municipality applied, and the following thematic elements were defined:

- definition of educational potential
- connectivity and build on research and development areas
- ways to ensure positive output on capital attraction
- relevant European funding schemes.

Built on the focus areas, thematic blocks were agreed:

- policies and initiatives to attract manufacturing industries in the health sector
- policies and initiatives for skills, research, university-industry collaboration to promote the health sector
- EU funding opportunities to promote the health sector.

It was also essential to find a diverse geographical coverage with the peers, that underwent similar economic restructuring process. Advanced regions were preferred, with senior experts coming from the practice.

On top of the individual consultation with external experts it was also a 'get together' possibility for the local stakeholders. Spending two days at the same location, during the pandemic was challenging. By the peer-review there is a structured format to think through scope and elements from multiple angles, reinforcing joint intellectual efforts..

Participants

Members of the beneficiary organisation

City of Szombathely		
András Nemény	City of Szombathely	Mayor
Adrienn Bokányi	City of Szombathely	Councillor

Local stakeholders involved

City of Szombathely		
Károly Balogh	Chamber of Commerce and Industry	General Secretary
Krisztina Bárdos	Scientific Association of Mechanical Engineering	Managing Director
Johannes Hunschosky	EIT CLC East GmbH	Managing Director
György Eigner	Óbuda Technical University	Director of AI Institution
András Haklits	Pécs University Health Institute	Szombathely representative
Norbert Horváth	SME manufacturing company	Manufacturing expert
Zsolt Kis	Multinational manufacturing company	Manufacturing line expert
Balázs Barta	Pannon Business Network	Managing Director
Regina Pethő	Pannon Business Network	Project Manager

Peers

Peers		
Nora Mack	Business Upper Austria	Manager MedTech-Cluster
Iñaki Gutierrez-Ibarluzea	BIOEF	Director of Innovation
Alberto Baldi	Bioindustry Park	Cluster Manager
María García	Sodena	Investment Project Manager
Jan Nylander	Glasis AB	CEO

Interreg Europe team

Interreg Europe		
Etienne Verhelle	Interreg Europe	Policy Officer
Ana Mihaljevic	Interreg Europe	Policy Officer

Policy Learning Platform		
Marc Pattinson	Policy Learning Platform	Thematic Expert in Research and Innovation
Arnault Morisson	Policy Learning Platform	Thematic Expert in Research and Innovation
Elena Ferrario	Policy Learning Platform	Thematic Manager
Raluca Toma	Policy Learning Platform	Communication Manager

Policy Recommendations

In order to ensure the smooth implementation of the peer review, preparatory and introductory online meetings were organized by the PLP. There was a strong mutual interest to implement the workshop in physical presence, yet due to Covid limitations it was organized in a hybrid format.

The meeting was broken down into two very distinctive parts. The first day was focusing on in-depth understanding of the local ecosystem, with the active participation of the local stakeholders and on the potential good practice review of the peers.

Key learnings of the 1st day are as follows

Narrower, more precise scope is to be considered within health. Inputs for consideration by the peers were:

- identify the sustainable competitive advantage that build on local strengths – thermal water has a potential
- dermatology to be investigated as one of the potential ways
- define what is the offer to the market players that others do not have – e.g.: thermal water; border proximity of 3 countries with cultural heterogeneity; world class manufacturing orientation
- act as a test area for larger companies or dedicated businesses. Like involvement of app. 500-1.000 households with seniors and act as a living lab for product tests and launches
- define how we want to be seen. Potentially as a Central European living lab, a ‘rehabilitation valley’. Or also as a manufacturing centre of excellence in rehabilitation.
- talking about rehabilitation, it is both preventive and therapeutic. The dilemma if that is not it too much.
- clinical studies are essential to gain interest. They could be organized, in cases where rehabilitation is a focus.
- Point of Care laboratories could be attractive. The question is how to apply them into the local ecosystem, and on what functionalities to build.
- Lab for Rent can be an essential element of a complex service portfolio. The right size, equipment definition, role of technical experts and VC to be defined.
- AAL demo region seems to be an exciting concept. Even if Hungary is not part of the AAL community anymore, can we learn from it and adapt it.
- deeper in our rehabilitation focus that are locally relevant are like stroke, seniors, sports. Potential concept could be complex rehabilitation, which is basically musculoskeletal system oriented. Within complex rehabilitation further deepening could be physically disadvantaged.

- Shared System of Scientific Equipment and Infrastructure – SIESS – are relevant yet expensive devices that are accessible for test and experimentation. Part of the service portfolio potentially. Questions vary about amortization, staff costs and sustainability.
- digital health twin is an exciting possibility for the rehabilitation purposes. The challenge is how to apply it. Elements, technical conditions have to be established, and should we fulfil. Connectivity to centre of excellence in Upper Austria.

Additional scopes to be thought about:

- circular economy that grows in importance – e.g.: recyclable for the packaging companies. Application of full product life cycle approach for hospitals.

Identify key learnings of the peers:

- bioindustry park – challenge is the adaptation due to difference in size - how to realize it in a smaller and less developed area. Definition of the ignition point. Possible connectivity by becoming a “B” spot for them.
- Spanish investment fund, as a possible benchmark. Venture capital form to incentive local health industry initiatives.
- Cross KIC test beds would be important in providing service for companies in rehabilitation. EIT Manufacturing and EIT Health are both regionally located in Vienna, connectivity and exploitation of geographic proximity make it very attractive for joint thinking.

Implementation challenges and hints:

- Spanish example builds on intelligent public sector. In case local need improvement Szombathely2030 consortium could replace this role and act as a development agency.
- the hospital could also be a starting point. The teaching hospital is owned by the central government, with very strict national rules – from procurement to data access. Challenge is how to manage it, therefore focus could rather be on the smaller rehabilitation institutes or new private clinics.
- decide how to promote entrepreneurship in a cultural setting which is not risk-taking
- a dedicated infrastructure is a must to start with. A health and science centre, where key functionalities are located – incubation, research labs, training facilities, digital hub, demo functions, meeting place.
- a radius of 250 km is rational, in our case it would include Bratislava, Vienna, Graz and Maribor. The service portfolio and positioning should be finetuned based on discussions with them.
- Technology Transfer Office, intermediating of academic knowledge and business opportunities is an enormous opportunity. Local actor has to be dedicated to this role.
- joint certificate is a perfect way of getting interest towards our education. Challenge is how to partner in them, whom to contact and start to elaborate curriculum.

- attracting talents, researchers, students from all over Europe is a general goal. The question is what specialization to offer them for learning and personal development.
- I3 is an important tool to focus on. Partnering in that is essential.
- events, conferences have to be organized around, to gain visibility, awareness.

Key learnings of the 2nd day are as follows, broken down by building blocks

Policies and initiatives to attract manufacturing industries in the health sector

- Pursue diversification in related health sectors and make strategic bets. Target one or two value chains and become really good in these areas.
 - focus on sectors that already are in the region—wellness and rehabilitation—and these can encompass many niches (elderly people needs, pets, sports).
 - from the mapping and analysis on localised capabilities, invest on a new and promising sector (e.g.: smart health, P4 medicine) and sustain it in the mid-long term.
- Mainly target the main pieces of the puzzle (or the missing ones).
- Take Technology Transfer from non-healthcare-industry into consideration, build on fundamental strengths of the region and transfer them to healthcare.
- Launch “AAL pilot region” (AAL = Active & Assisted Living) focusing on rehabilitation.
- Develop an environment that allows the validation of medical products related to rehabilitation.
- Discuss with the central-government strategic and action plans and obtain the status of referral centre (rehabilitation).
- Provide added value services to those industries aiming to shift sector.
- Have a small team dedicated to attract foreign investments and work with existing specialised networks or agencies.

Policies and initiatives for skills, research, university-industry collaboration to promote the health sector

- Set up a “hot spot” / establish “innovation campus” at the teaching hospital / real-estate where all the relevant experiences, players and expertise will start to be concentrated.
 - includes incubation, testbed for complex rehabilitation, research labs, maker space, office space, community space
 - with a view to stimulate local companies and startups
 - a place for companies/people to meet and collaborate
- Set up a technical school (e.g.: the German Fachschule can be a model) or initiate joint degree programme
- Ecosystem/community animation - leverage and strengthen the existing assets along the value chain
- Alignment of curricula to required workforce skills.

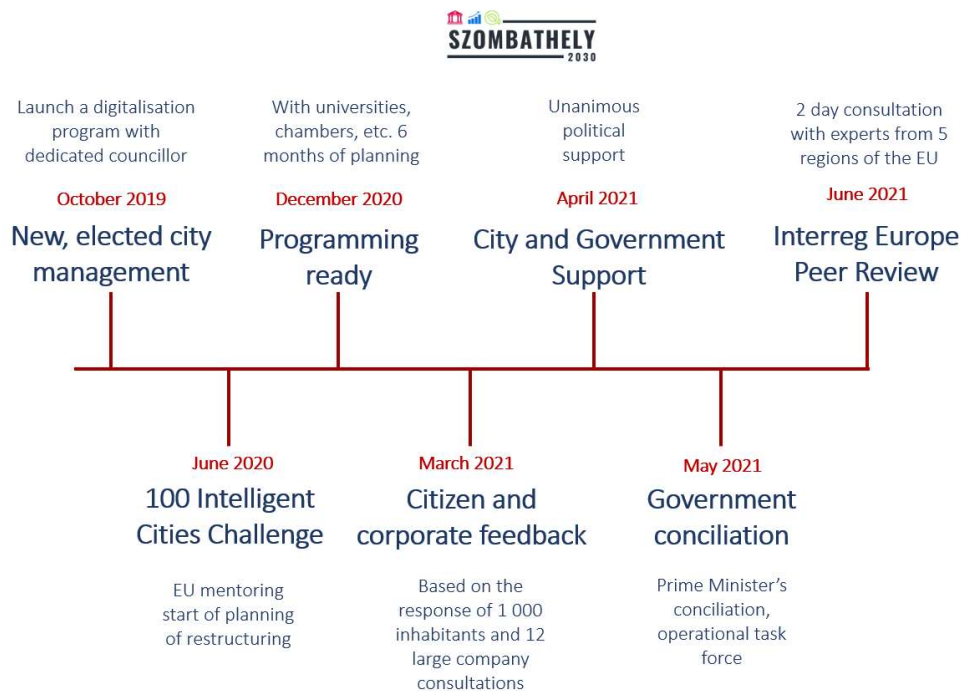
- Attract quality employers and talent from other areas or regions in the selected thematic area. Present a competitive tax-package/land/serviced-lands/supports
- Focus on offering highly specialised services and developing infrastructures
 - Local hospitals could offer services for conducting clinical trials related to some health area (rehabilitation).
 - Establish a Centre of Excellence for clinical studies
 - Establish/ expand Technology Transfer Office (TTO)
 - Create joint training centre with companies

EU funding opportunities to promote the health sector

- Have access to dedicated office / task force able to deal with the EU funds complexity and capable to maximise the opportunities
- Align funds and be coherent. The different EU funding opportunities can be combined in order to cover different parts of the big plan or individual projects
- Aim for Public-Private Partnerships
- Diversify funding sources to match opportunities
- Facilitate the interchange of knowledge and skills with other regions/institutions through building capacities calls.
- Interact with established consortiums and networks funded by the European Union (see EIT)
- Access to cross-border funds to invest on required infrastructure and foster cross-border partnerships.
- Communicate that this increased yield on public funding, a € in Szombathely is the best investment, public or private


Possible calendar of implementation

The initial phase was implemented as outlined in the background chapter, and as indicated hereby:



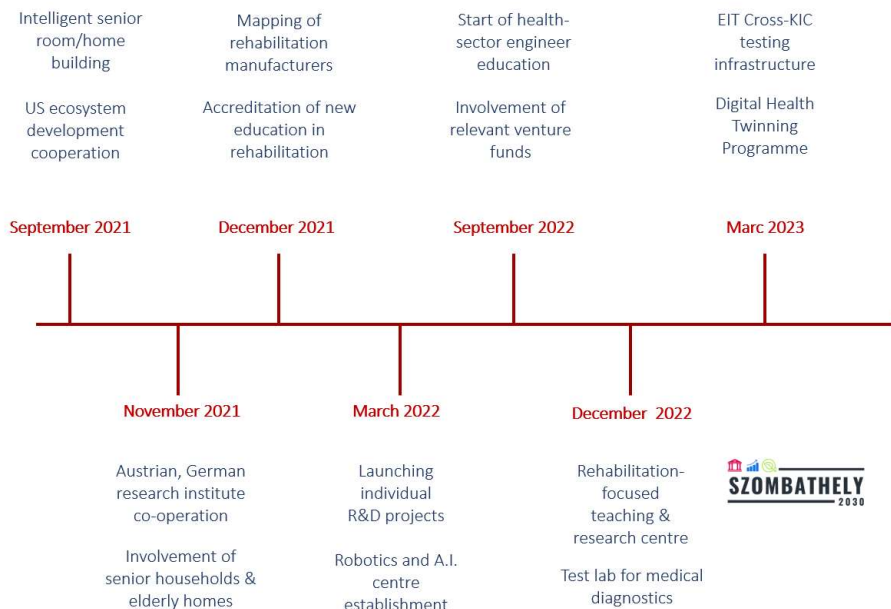
This preparatory phase will be concluded on the 6th of September, when the mayor of Szombathely, rectors of the 3 universities, president of the chamber of industry, managing director of PBN will sign the Szombathely2030 programme document. It will be a formal event, broadcasted by the media.

During the summer, following the peer review, work started focusing on the 'hot spot' of the entire initiative, a physical centre accommodating all the decisive functionalities. New website, social media sites will be kicked-off by the end of August. The flagship initiatives of Szombathely2030 have been defined. These activities were either initiated or reinforced by the 2-day peer review sessions.

	R & D & I institutions	Test before invest environment	Skills development	Start-ups and FDI
 25.000 m ² R & D center	Rehabilitation-focused teaching & research centre	EIT Cross-KIC testing infrastructure	Accreditation of new education in rehabilitation	Science and Technology Park title
	Robotics and A.I. centre establishment	Test lab for medical diagnostics	Launch of international joint degree diploma	Mapping of rehabilitation manufacturers
	Austrian, German research institute co-operation	Intelligent senior room/home building	Start of health-sector engineer education	Screening of rehabilitation cream producers
	US ecosystem development cooperation	Involvement of senior households & elderly homes	Vocational training re-orientation	Involvement of relevant venture funds
	Launching individual R & D projects	Mobilization of thermal / tourism operators	Digital Health Twinning Programme	Facilitating local start-ups and companies

It is also an essential milestone, that the partnership applied and was positively evaluated by ENRICH USA, which is an EU-USA initiative reinforcing partnering of ecosystems from the two continents. Its formal signature will also take place on the 6th of September. Allocated potential partners are in Boston, Philadelphia and Austin.

The Szombathely2030 partnership also agreed on key milestones of the coming months/year, to be implemented.



It is an overall consensus by each local participant that follow-up on spot meeting in Szombathely with the PLP experts would be extremely useful. Additionally, follow-up meetings are foreseen with some of the peers during the second half of 2021.

Conclusions

The peer review proved to be a vital component of the development process of Szombathely2030. It contributed to eye-opening of the beneficiary organization and of the local stakeholders. It was essential in defining specific focus areas within the health sector – complex rehabilitation – that is widely accepted and supported locally.

The peer review exceeded the 2-day framework by far, impacting the entire focus, key elements and consideration of innovative elements – like digital twin in rehabilitation, demo region potential, etc.

As anticipated, the peer review was also successful from aspect of high-level political involvement and content-related authenticity of the defined programme.

Szombathely, 19th August 2021