

The European Commission's
**INTELLIGENT CITIES
CHALLENGE**

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Szombathely: Intelligent City Transformation Overview

ICC Final Deliverable

Executive summary

Szombathely is the administrative centre of Vas county in West Hungary, with about 90,000 inhabitants. Its key economic sector is the automotive industry, with centralised decision-making, limited local influence and relatively low local added value. Szombathely is located close to the Austrian border, thus having a strong pull effect due to daily cross-border labour mobility.

Szombathely's industry is characterised by the dominance of large automotive companies. As its industrial structure is mainly labour-intensive, it is highly exposed to automation, digitalisation, robotisation and Industry 4.0 - the currently ongoing **industrial restructuring**. On the one hand, it is extremely crucial for the city to **assess the real needs of local manufacturers** with two-way communication, and to assist their activities in the above-mentioned processes, ensuring **high-quality research and development**, innovation and educational background. This will contribute to creating long-term, high-quality, crisis-resilient workplaces and to integrating knowledge-led elements into the labour-intensive industry.

However, to make Szombathely's economy and industry more stable and knowledgeable, diversification is crucial, i.e. the creation of a second leg that can also function as a breaking point. This stable leg is the **healthcare industry**, which on the one hand responds to European Union and national development priorities, while also building on the long history of thermal baths, sports rehabilitation and health tourism of the region. To encourage the establishment of healthcare manufacturers, **it is necessary to ensure an R&D&I and educational background focused on the healthcare industry**.

Our goals, in line with the city's vision statement in the ICC challenge, are to **promote the transformation of local industry, initiate more effective and transparent interaction with residents and develop smart city & smart traffic initiatives**. To achieve this, we have several initiatives, such as the creation of a new production environment for 5,000 people, which translates into an increase in the number of workplaces. When Szombathely joined the ICC, the city decided to involve relevant stakeholders in the process to achieve the goals in line with the vision statement.

These stakeholders together with the city's team of experts have created the 10-year development programme for the city, called **Szombathely2030** and the stakeholders have also undersigned a cooperation agreement connected to it.

Mayor Foreword

Thanks to the constant joint work – together with a wide range of local and regional stakeholders – that was initiated by the 100 Intelligent Cities Challenge programme, Szombathely City with County Rights is able to provide a quality environment for its residents and businesses as a regional organizer. Competitiveness and modern city life are achieved by partnership and open communication regarded as core values.

The ICC programme has granted Szombathely visibility and integration on European level and the possibility to network with other participant cities as well as with the European Commission. Thanks to this initiative the city was able to start the planning of its industrial restructuring with tailored EU mentoring and guidance which resulted in a 10-year economic and urban development programme, the Szombathely2030 and the partnership that was built around it which works now as an innovation ecosystem in the region.

For the future we hope to gain more insights about financing tools and opportunities – maybe even hope that dedicated funds will be allocated for the participating cities –, just as to take part in the development of more international projects.

Section

1

September 2020 to January
2021

Szombathely: Preparation and assessment

ICC transformation



Introduction

Challenges for Szombathely

Szombathely is a city with county right and the site city of Vas county, West Hungary with close to 90,000 inhabitants. The key economic sector is the automotive industry with relatively low locally added value and centralized decision making, with limited local influence. Szombathely is situated close to the Austrian border and there is a strong pull effect by daily cross-border labour mobility. Traditional higher education of the city is a teacher college. Over the last two decades technical and health sciences subsidiaries have been established by different universities headquartered in Budapest and Pécs. The City should establish a second leg of its economic basis. Because of aging population of the cross-border region and higher education basis and the teaching hospital status, health-care industry development with higher added value is in focus for Szombathely.

Why has Szombathely joined ICC?

The **100 Intelligent Cities Challenge (ICC)** is a unique opportunity for evolving EU cities to join a community that leverages advanced technologies, to tackle the pandemic crisis and reconstruct their economies while steering them in the direction of green smart sustainable growth.

Our goals in the challenge

- Promote the transformation of local industry: set up new production environment for 5,000 people and increase the number of workplaces.
- Initiate more effective and transparent interaction with residents: involvement of 10,000 residents in strategy/program development and implementation.
- Start to develop smart traffic initiatives: Complete the bike route network in the city and develop 1,000 new smart parking places.
- Set up actions towards a greener waste management: Provide the access of selective waste collection for every household in Szombathely.

The city of Szombathely pursued an EU-supported transformation over four main stages, and this document details that journey by these sections

Overview to the city's journey and structure of this document



1 Preparation & assessment

5 months:
September 2020 – January 2021

The City established its ambition and vision statement. In order to attract people and main industry players for the implementation of main ambitions, **communication with relevant stakeholders of the healthcare industry** was started.



2 Ambition & roadmap

3 months:
February 2021 – April 2021

After several stakeholder meetings **main initiatives** were brought forward to achieve during the ICC:

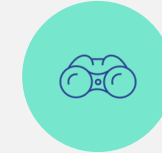
- 1) **Promoting industrial change to attract health-industrial businesses**
- 2) **Strengthening the circular economy for a greener city**



3 Implementation

15 months
May 2021 – July 2022

- **Construction of R&D&I centre** and equipment, as well as development of educational programme
- **Provision of new technologies** to ensure the digitalization of health industry



4 Review & way forward

2 months
August 2022 – September 2022

- **Collaboration** strengthened between involved stakeholders.
- **International experience** introduced.
- Szombathely will try to involve business representatives deeper in the discussions how all activities could help them to develop their business, and also how new business partners could be attracted to the city and to the region.

Reported as one section

Summary

Szombathely needs | State of the city overview

The state of Szombathely today

1. Economy of Szombathely is built dominantly on one industry - automotive. Additional influencing global factor is digitalization that is transforming the international supply chain by many mature economies.
2. Under-exploitation of the regional university teaching hospital is a strong potential asset. In the health domain the Pécs University has a Faculty of Health Sciences in Szombathely. These academic basics have to lead to the attraction of health-care related industries with local research background.
3. Citizens in Hungary have limited trust in the public institutions and bodies, meanwhile the newly elected city leadership promised to build on open and direct communication with the citizens.
4. Traffic is a significant bottleneck of the city. With respect to accessibility, beltway is not complete, city bicycle roads are not integrated, and the traffic flow management is not organized.
5. Szombathely spent resources for building waste material depot, yet it is close to its maximum capacity. Conversion of the waste into energy, further use of selective collection of waste could contribute to the circular economy and sustainable urban life.

Key insights from city performance analysis

Higher performance observed

- 1 Economic growth: the city's unemployment rate is lower than the regional average.
- 2 There is Digital Innovation Hub in the city, but it is still not very accessible for companies in traditional sectors.
- 3 Separate collection of most waste categories usually applies.
- 4 Good accessibility of health-care system.
- 5 Strong commitments from stakeholders to cooperate.

Lower performance observed

- 1 Circular Economy
- 2 Only isolated initiatives have been taken to involve civil society in urban planning and management activities.
- 3 No use of open data in policy making.
- 4 The city has good knowledge of resources needed, but recurrently available resources are insufficient.

Szombathely Ecosystem

Key topics for discussion

- **Shared aspirations and vision** – Stakeholders became very familiar with the idea that it is timely to set a Szombathely 2030 vision regarding the forthcoming EU Recovery Plan 2021-2023 and the European Green Deal 2021-2027 programmes.
- **What we bring and how we work together** – Based on the initial ICC EoI a core stakeholder group with 8 people was established which has been widened to 16 along the needs of Szombathely 2030 strategy development process. From the first week of October 2020 the stakeholder group met every week in the City Hall. Since mid November 2020 the team has set online meetings every second week until Christmas. Draft version of Szombathely 2030 has finished for mid January 2021 in the new year and public debate has started. Weekly online workshop has been organised with local residents by each district of the city. Parallel to the involvement of inhabitants, ICC team leaders have initiated one to one personal discussion with key industries of Szombathely about the overarching goal on '*Promoting industrial change*' in the Szombathely 2030 vision. Website of Szombathely 2030 was developed in Hungarian and English in the last week of January, including a questionnaire also available in both languages. (See: szombathely2030.hu)
- **Urban resources for transformation** – Szombathely belongs to the European Digital Innovation Hub, universities in Szombathely are highly engaged with the idea to develop the city's economy related to health-care industry. They promote the process with their human capital and network, the city provides sites for the new initiatives in this field.

ICC strategy: Vision and ambition statements

Szombathely is able to provide a quality environment for its residents and businesses as a regional organizer. Competitiveness and modern city life are achieved by partnership and open communication regarded as core values.

Ambition statement 1 *Promoting industrial change*

- 1.1. Attracting health-industrial businesses
- 1.2. *Supporting added value growth of current employers*
- 1.3. Ensuring infrastructure
 - traffic and industrial site infra development

Ambition statement 2 *Green, intelligent city*

- 2.1. Strengthening the circular economy
- 2.2. *Water management*
- 2.3. *Urban heat map and nature-based solutions*
- 2.4. *Promotion of green transport*
- 2.5. *Smart city solutions*

City strategy: justification of the overall strategy

How do the solutions interact?

Solutions are closely related to each other as the solutions connected to industrial change and green, intelligent city can reinforce each other. By **promoting industrial change** and **specializing on complex rehabilitation** within the health industry, the city will contribute to the improvement of the standard of living. Climate change is affecting all people, meaning that the city shall **focus on green initiatives** which helps adapting to this changes. **Digitalization and smart solutions** will support the emergence of health industry in Szombathely.

If you could boil down your strategy to three thoughts that have best guided you on your way, what would they be?

- It is extremely significant to the city to assess the real needs of local manufacturers with two-way communication and to assist their activities in the currently ongoing industrial restructuring via ensuring high-quality research and development, innovation and educational background.
- In order to encourage the establishment of healthcare manufacturers, it is necessary to ensure an R&D&I and an educational background with a focus on healthcare industry.
- Communication and good collaboration with all stakeholders is essential to create a stable community.

What are the key factors that define success across all of your solutions?

- **Participation:** involving new stakeholders and attracting new participants of the health industry.
- **Visibility:** creating the website of Szombathely 2030 Strategy to make it visible for industry participants and local communities.

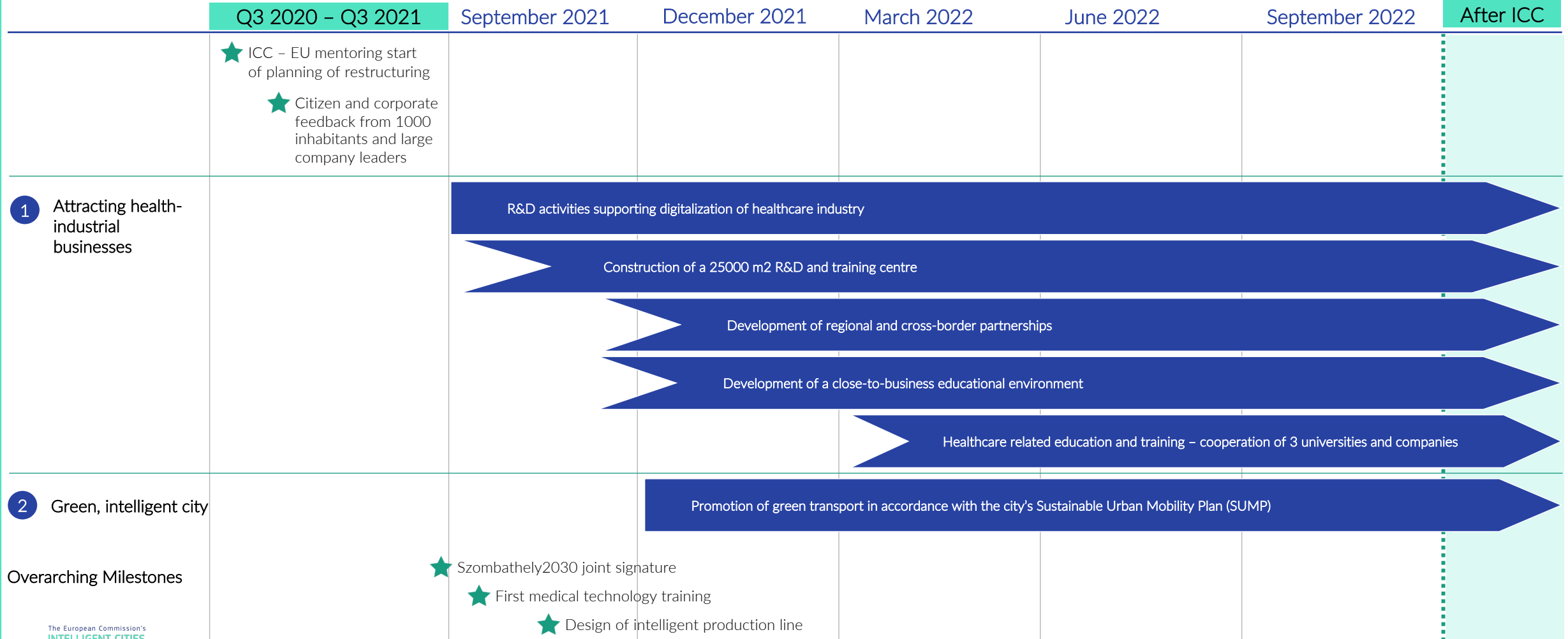
Section 2

Szombathely: Ambition and roadmap

ICC Transformation

February 2021 to May 2021

High level implementation roadmap (“10000m plan”)




Rationale to road map



How was the roadmap planned out?

- On the basis of the local features of Szombathely and its region, as well as the needs of local businesses, two key areas have been highlighted: the soonest realization of which can contribute to strengthening the economic structure of the city and building a crisis resilient knowledge economy to the largest extent, according to a wide range of shareholders. The clear aim of the defined focal points is the two-directional support and promotion of the successful industrial restructuring.
- For the ICC project, the City of Szombathely selected 2 main initiatives which are promoting industrial change and green, intelligent city solutions.
- In the context of ICC, the main aim of participating was to get in touch with cities with similar – or nearly similar – initiatives, to understand the best practices in health industry and to learn about additional funding channels.
- Including the local stakeholders and ecosystem was almost an important point of view.

Initiative charter for attracting health-industrial businesses

Strategy		Stakeholders involved		Inputs, outputs, outcomes and impacts	
Description 	The solution is part of an overarching goal for promoting industrial change of the city by focusing on education, and research-and-development activities regarding health-industry.	Solution lead: Municipality of Szombathely 	Solution working team: Municipality of Szombathely 	Source of funding and estimated cost 	25 million EUR, mostly public and partly private
	Link to vision 	Contributors: Private sector, universities 		Solution maturity outputs 	Establishment of Szombathely2030 Strategy website; R&D activities supporting digitalization of healthcare industry; Construction of a 25000 m2 R&D and training centre
	Link to ambition statement 	Risks and mitigation 		City performance outcomes and impacts 	City provides business location for health-care related industries and services. Universities develop labs, set new education programs and EU funded R&D&I projects.
Expected impact and timing 	There is an emerging market by aging population on both side of Hungarian-Austrian border. City's economy may stand on second stabile leg. 2023				

Initiative charter for strengthening the circular economy

Strategy		Stakeholders involved		Inputs, outputs, outcomes and impacts	
<div>Description</div> <div></div>	<p>In contrast to the linear economic model, the central idea of a circular economy is the sustainable use of natural resources, which serves both the protection of the environment and the spread of innovative developments. The Szombathely2030 programme aims to ensure simultaneous enforcement of both aspects.</p>	<div>Solution lead:</div> <div></div> <div>Municipality of Szombathely</div>	<div>Solution working team:</div> <div></div> <div>Municipality of Szombathely</div>	<div>Source of funding and estimated cost</div> <div></div> <div>22 million EUR, mostly public and partly private</div>	<div>Solution maturity outputs</div> <div></div> <div>Complete the bike route network in the city and develop 1,000 new smart parking places; Promotion of green transport in accordance with the city's Sustainable Urban Mobility Plan (SUMP); Implementation of smart city solutions</div>
<div>Link to vision</div> <div></div>	<p>The vision the solution links to is: „Start to develop smart traffic initiatives and initiate more effective and transparent interaction with residents”</p>	<div>Contributors:</div> <div></div> <div>Private sector, universities</div>	<div>Risks and mitigation</div> <div></div> <div>Low rate of citizen engagement.</div>	<div>City performance outcomes and impacts</div> <div></div> <div>Promoting start-ups. Applications in European Green Deal calls.</div>	
<div>Link to ambition statement</div> <div></div>	<p>The ambition statement the solution links to „Green, intelligent city”</p>				
<div>Expected impact and timing</div> <div></div>	<p>Decreasing CO2 emission, cleaner air, more healthy environment 2023</p>				

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Key Performance indicators - overview

Solution	Main activities	Activities – Inputs and actions	Solution Maturity - outputs	City performance – outcomes and impacts
<i>Attracting health-industrial businesses</i>	Preparatory work and preliminary negotiations regarding the construction of the 25 000 m2 R&D&I and training centre	Establishment of Szombathely2030 Strategy website	<ul style="list-style-type: none"> Platform introducing the main goals and achievements of the Szombathely2030 program 	Done. Increase the visibility of initiatives
		R&D activities supporting digitalization of healthcare industry	<ul style="list-style-type: none"> Szombathely2030: Future in design conference with 3 organisers, 12 performers and 200+ participants First medical technology training in the Szombathely2030 program Design of intelligent production line 	Preparatory phase Enhanced stakeholder participation
<i>Strengthening the circular economy</i>	Green and intelligent city	Promotion of green transport in line with the city's Sustainable Urban Mobility Plan (SUMP)	<ul style="list-style-type: none"> Survey among citizens connected to the main issues in the local transportation system 	Enhanced stakeholder participation and citizen engagement
		Implementation of smart city solutions	<ul style="list-style-type: none"> Workshop and conference on the traffic situation of Szombathely 	Knowledge transfer, enhanced stakeholder participation
		Complete the bike route network in the city and develop 1,000 new smart parking places		Preparatory phase

Key Performance indicators - Cross cutting indicators

Cross cutting indicators

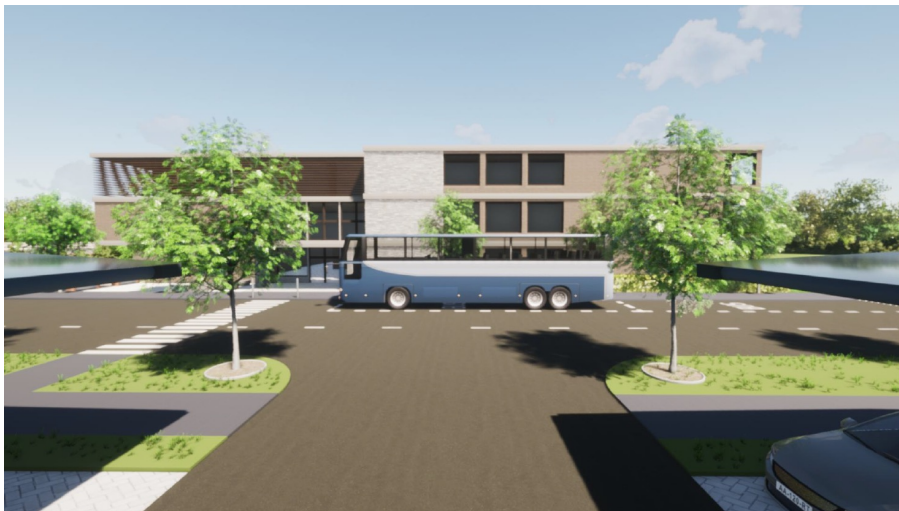
Number of new businesses in health industry

Number of new students in health-sector engineer and international joint degree education

Average annual GDP growth

- The KPI's were chosen for each project/solution by the involved city and affected stakeholders.

Visual design of the 25 000 m2 R&D&I and training centre



Governance structure for roadmap implementation

Steering Committee *Municipality of Szombathely*

The ICC Project Steering Committee is the governing body who's main responsibility is to review overall progress, make decisions and sponsor the overall roadmap. The committee ensures that the goals set during the Project is achieved.

The team includes **two committee members** who oversee the project from the beginning till the end, provide guidance and support throughout the project lifecycle.

ICC project experts *KPMG*

There is **one ICC project Lead Expert** (LE) from KPMG, who is currently involved in the project. The LE is responsible to provide suggestions and guidance on provision of industry leading practices and gives advice on project management.

One KPMG member is supporting the LE in terms of constructing reports and communicating with the City team.

Core Team *Municipality of Szombathely, PNB*

The Core Team is responsible for carrying out the main tasks during the project implementation. The team currently involves **10-13 members**.

PMO *Municipality of Szombathely*

Provides administrative support for overall project implementation

Local ecosystem

The local ecosystem includes mainly private sector (large companies, SMEs), universities, who have been engaged on the ICC project through a set of workshops during the ICC Challenge.

Section

3+4

Szombathely: Impact

ICC Transformation

February 2021 to May 2021

Impact executive summary

Major success during the ICC project

As flagship project of the program, a complex development has been designated which physically unites the most significant elements of the two key areas detailed previously. This means **the creation of a research and development, innovation and education centre (R&D&I centre)** in one of the focal points of the North Industrial Area which has specifically advantageous characteristics.

Major obstacles during the implementation of planned activities

- Availability of local budget funds;
- Limited access of EU financing;
- Lack of resources.

Commitments for the next 3 years

Szombathely will continue to work R&D activities supporting digitalization of healthcare industry by including academic and business sector. In order to achieve this initiative, over the next 3 years the City will:

- 1) provide quality educational and research and development services for businesses already existing in Szombathely to increase the efficiency of their activities;
- 2) provide an attractive value proposition for new businesses when making their decision on establishment;
- 3) dynamize new local businesses, start-ups.

Goals should be achieved working together with all ecosystem members, also looking for the funding opportunities within the different EU financing programmes.

Assessment of city performance - progress against KPIs

City performance			Final results
1	KPI 1	Establishment of Szombathely2030 Strategy website	100% - Szombathely2030 Joint signature – cooperation agreement of 7 organizations , including 3 universities
2	KPI 2	Szombathely2030: Future in design conference with 3 organizers, 12 performers and 200+ participants	100% - More than 200 people attended to hear presentations on the interface between design, AI and the healthcare industry
3	KPI 3	First medical technology training in the Szombathely2030 program	100% - 4 university students with scholarship
4	KPI 4	Design of intelligent production line	No quantitative results yet, as we are in the preparatory phase,
5	KPI 5	Survey among citizens connected to the main issues in the local transportation system	100% - Online survey: 1151 people responded; Paper-based survey: 48 people responded
6	KPI 6	Workshop and conference on the traffic situation of Szombathely	100% - 20 local stakeholders involved

Assessment of city performance - discussion

Our main idea is that we as a city can improve only if we move forward in the field of Research&Development. Our participation in the ICC also served this purpose, and also helped to increase the visibility of our initiatives.

The main challenge we faced during the preparatory phase of the R&D centre that how we can involve all the relevant stakeholders in the project and how we can build the infrastructure on an efficient way.

One of the main achievements in promoting industrial change in the health-care industry that in September 2022, we will welcome our first PhD student from Porto, thereby strengthening the international cooperation and our international appearance at European level.

Assessment of city ecosystem and activities - discussion

Including all relevant market players and local stakeholders in our solutions and actions was extremely significant as this way we could address the real needs of the healthcare industry and local manufacturers with two-way communication.

As a result, we have a good and strong connection with local players who are involved in e.g. the development of the R&D&I training centre. In the future, we wish to continue this strong cooperation.

All initiatives were implemented or in the process of implementation and Szombathely will continue to work on developing the other new possibilities in the city for whole society, including academic and business sector as well.

5 key lessons

Lesson	Reflections
1	Active participation of stakeholders and continuous communication with them is highly important in planning and implementing the city-wide solutions.
2	During ICC, it would be useful to have the opportunity to personal networking to see how other cities done similar initiatives.
3	Although ICC did not provide any financial support, we see that the participation in the program will be an advantage when applying for support in the future.
4	The motivation behind participating ICC was the realisation that we can only move forward and improve if we move forward in the field of Research&Development. ICC helped us in achieving this overarching goal.
5	Lack of physical events made knowledge transfer between cities less effective.

Commitments

Commitments to on-going resources

Szombathely will continue to work on the topics:

- health related education;
- R&D activities supporting digitalization of healthcare industry;
- promotion of green transport.

Commitments to on-going collaboration

- Increasing communication with local stakeholders.

Commitments to on-going KPIs

- Creation of a unique production simulation infrastructure for the optimization of production technology processes.
- Looking for financing and funding opportunities.

3 Year plan - ambitions

Building on the ICC, what would the city aim to achieve in 3 years time?

- Provide quality educational and R&D services for businesses already existing in Szombathely to increase the efficiency of their activities
- Assist the work of large companies, new local businesses, start-ups

What steps will you take over the next 3 years to achieve these goals?

- Creation of a research and development, innovation and education centre (R&D&I centre) in one of the focal points of the North Industrial Area

3 Year plan - targets

KPI	Category	What commitments will the city make to this end?
1	City performance	The City will increase its presence in healthcare related education possibilities both on national and international level.
2	City performance	We will increase using digital technologies to improve the digital transformation of health industry.
3	Activities & ecosystem	Based on the work in ICC, the city will look at possible cooperation with ecosystem actors and stakeholders. Established network will be used in order to achieve this ambition.
4	Activities & ecosystem	According to our second ambition statement, we will continue promoting the green solutions in public transport.