# The European Commission's INTELLIGENT CITIES CHALLENGE

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#### September 2022 (Draft 2)



## Bratislava City: Intelligent City Transformation Overview

#### ICC Final Deliverable



#### **Executive summary**

As the capital city, Bratislava is the economic, cultural, academic and political centre of Slovakia. Bratislava is a city of opportunities, but it has not yet managed to fully develop its innovation potential and take advantage of the presence of key players from the economic and academic worlds. Bratislava has a strong economic position in terms of macroeconomic indicators, and it is also home to many companies that contribute to the development of the economy. On the other hand, the innovativeness of SMEs is at a low level and there are little numbers of scale-ups. Bratislava has the largest concentration of academic and research institutions, but the number of students keeps decreasing for 10 consecutive years. The universities fail to meet the needs of employers regarding the quality and number of graduates. Bratislava has historically lacked meaningful connections with the academic and business sector, the city didn't have frameworks and models of cooperation. Creating the Bratislava Living Lab gave us the way to engage with research teams or companies that have solutions addressing our challenges. Through open pilots we can engage partners and test out solutions prior scaling and procuring them. The Innovation District is our physical demonstration of innovative ideas that should attract new talent and prevent brain drain as lacking behind of the city and the country. The first significant results of the innovation district will be tangible by 2030, however the structures need to be put in place now. As we have seen in Barcelona, it takes a decade to fully reflect such a systemic change and shift in public private partnership. Our goal in the next three years is to stabilize both projects financially, personally and organizationally so the projects are safely placed in a management structure and are able to flourish in the longterm.



## **Mayor Foreword**

When starting my term nearly four years ago, I have envisioned to put Bratislava on the map. I am a keen believer of learning from other cities and building strong international networks. As cities, we face similar challenges, and we understand each other much more easier than any other government body. We feel the pain of our residents and we are on the forefront of their day-to-day needs and dreams. The last four years were different as the ones I envisioned when I started office. My goal was to create a confident city, build upon its strengths and improve the quality of life for our residents. The pandemic and then the war in Ukraine changed our plans.

However, I believe we have to continue in our long-term vision and put innovation based on data, extensive research and citizens' needs towards building a portfolio of solutions that will help us tackle the challenges we are facing. After the hottest summer on record, we can all feel the climate change looming. Economic, climate and energy crises cannot be tackled alone, and we know that cooperation with stakeholders in the city will help us find a way forward.

My goal is to continue to build a strong, attractive and resilient city that is open to new ideas, enriches its residents' lives and plays a key role in the overall ecosystem.

Mayor Matus Vallo





# The city of Bratislava 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

	Preparation &	Ambition &	2 Implementation	Reported as one section
	<b>A assessment</b> 5 months: September 2020 – January 2021	<b>voadmap</b> 3 months: February 2021 – April 2021	<b>)</b> 15 months May 2021 – July 2022	2 months August 2022 – September 2022
Summary	Find out <b>where a city is, where it</b> <b>should go</b> and who in the ecosystem is going to <b>mobilise make things</b> <b>happen</b>	Develop a <b>concrete plan</b> to achieve <b>measured improvements</b> , collaborating with the community; push action with immediate benefits	Get "big moves" <b>done</b> and <b>see</b> <b>results</b> ; take <b>action in partnership</b> with others	Measure success, and commit to keep connections and improvements going





# The European Commission's INTELLIGENT CITIES CHALLENGE

Section

September 2020 to January 2021





# **Bratislava City : Preparation and assessment**

ICC transformation





### Introduction

Bratislava as the capital of Slovakia is the economic, political, educational and social hub of the country.

The city with its 17 districts has 430 000 inhabitants and it is an attractive destination for over 53 thousand students in 2018 which is 40% of total number of students in Slovakia. The metropolitan region covers the Bratislava region (NUTS 3), most of the Trnava and part of Nitra regions **attracting over 1,2 million people.** 

Slovakia is challenged by brain drain starting after high school graduation by choosing universities in Czech Republic and Austria. Bratislava is also a home of the key research institutions, The Slovak Academy of Sciences, the Slovak Technical University, the Comenius University and the University of Economics as well as other smaller and private universities, colleges and research institutes.

There are ties and connections between the city administration and the key research and academic institutions codified in a Memorandum of Understanding allowing further systematic and long-term cooperation.

Within ICC initiative, Bratislava is also seeking practical knowledge and experience in **connecting innovation ecosystems** similar to the one in Brno, Helsinki or Amsterdam and implementing the Living Lab Framework mentioned before. The goal is to increase cooperation in the strategic areas of climate change adaptation, mobility and energy efficiency, develop joint strategic PPP projects with a goal of attracting talent, increasing number of innovative businesses and their global potential.



## City needs: State of the city overview

#### Significance of insight to what we want to do on the ICC

Of critical importance to ICC journey and we should be working to change Of importance to ICC journey, and we should act to change this along the journey as opportunity presents Contextually relevant, but not major point of attention in ICC and unlikely to be impacted on the journey

#### The state of Bratislava today

Bratislava is a city of opportunities, but it has not yet managed to fully develop its potential in the field of innovation and use the presence of key players from the economic and research world. It is the creation of an interconnected open innovation ecosystem that will enable the city to face complex challenges and seek sets of solutions in the 21st century. Over the past 10 years Bratislava and Slovakia in general, has been lacking behind in attracting talent and supporting the growth of innovative businesses. The most talented were leaving the country to study in the nearby Brno or leaving for better opportunities to the other EU countries.

The innovation strategy passed the City Council and has been introduced with the aim to connect capital city existing projects and strategies, develop cooperation, support the development of urban innovations and achieve a quality place for citizens' lives.

The innovation strategy is part of the overall strategic plan (economic and social development plan) **"Bratislava 2030"** and builds on national, regional and municipal strategic documents. It also connects to the Missions stated by the European Commission, notably the 100 climate neutral and smart cities.

#### Key insights from Bratislava performance analysis

Higher performance observed	Lower performance observed
<ul> <li>High GDP per capita – high skilled professionals and jobs are concentrated in Bratislava</li> </ul>	<ul> <li>Increased living costs and year over year housing costs</li> </ul>
2 Low unemployment rate	2 Increasing income inequality
3 Highest concentration of academic and research institutions in the country	Over past 10 years decrease in the number as well as quality of students Inability to attract international researchers
<ul> <li>Highest concentration of fast-growing</li> <li>companies – scale ups</li> </ul>	Low innovation ability in SMEs
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The European Commission's INTELLIGENT CITIES CHALLENGE

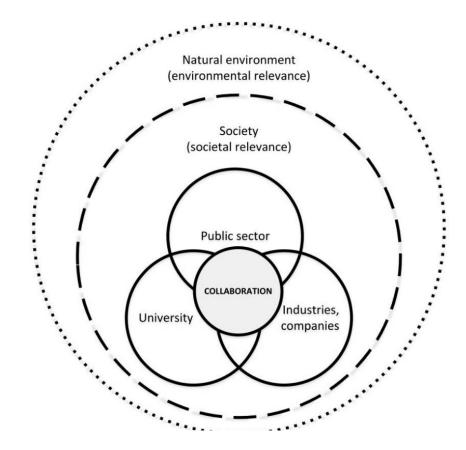
#### **City ecosystem - quintuple helix collaboration**

The city is a key factor in connecting different levels and areas of expertise. The means by which we can create a space for sharing knowledge and understanding is to create a so-called **quintuple helix collaboration.** The aim of quintuple helix cooperation is to enable the flow of knowledge and expertise between the key players in this case - the academic sector, the private sector and the public sector.

In addition, this innovative model emphasizes the need for socio-ecological change in society and the economy in the 21st century, which means that the quintuple helix is environmentally sensitive.

Historically, the cooperation was rather bilateral and project based. There was high-level of mistrust and self-interest. Over the past 3 years, the City of Bratislava has invested time and effort into building meaningful relationships with academic partners – The Slovak Technical University, Comenius University, the Slovak Academy of Sciences as well as the private sector. By creating transparent rules of engagement, the partners felt there are ways to cooperate with open and transparent competition – such as the framework for Bratislava City Lab.

Similarly, the partners have identified the need to create a joint initiative to tackle brain drain and lack of attractiveness on the city level. The Slovak Technical University and Comenius University are representing the academic sector, the Slovak Alliance for Innovative Economy – association with over 150 members and ESET, one of the largest Slovak IT companies, are representing the private sector.





## **City ecosystem in Bratislava – Our potential partners**

#### **Public Sector Partners**

Bratislava region as NUTS2 – managing the Council of Cooperation for the new programming period 21-27

Ministry of Investment, Regional Development and Digitalisation

Ministry of Transport

Ministry of Education

Ministry of Environment

17 City Districts

Municipal organisations – waste management company, public transport company, water management company

Chambers of Commerce and Embassies interested in building business ties – UK, The Netherlands, US

#### **Business Partners**

Associations such as SAPIE – Slovak Alliance for Innovation Economy and their members, specifically ESET as a developer of their Campus in Patronka, Neulogy as a network player - running acceleration programs such as Challenger, or Climate KIC lead in Slovakia

Startups in relevant verticals

Corporate partners interested in cooperation with innovation ecosystem and corporate urban responsibility, such as SwissRe

Coworking spaces, incubators and accelerators such as Nova Cvernovka (energy efficiency and climate change), The Spot by Vacuum Labs, Hub Hub, Campus Coworking

#### Academic Sector

Three key research universities – The Slovak Technical University – Faculty of Informatics and Information Technology, Faculty of Engineering and IT (Advanced Manufacturing Hub), Faculty of Architecture and Design (Creative centre), Comenius University, The Slovak Academy of Sciences

KINIT - advanced research in Al

#### Civic Society

Climate change associations – Znepokojene matky, Youth for Climate



## ICC strategy: Vision and ambition statements of the City of Bratislava

#### City vision based on the Bratislava innovation strategy

The goal is to create a resilient city that uses technology to improve the lives of its inhabitants, ensure a healthy and sustainable environment as well as promote the city's economic opportunities and attractiveness to students and educated people.

A key and most important ingredients are the city's decision to work with key stakeholders and meet the goals of a sustainable and resilient city through technology and innovation.

Ambition statement 1 Resilient City	Ambition statement 2 The city open to innovation	Ambition statement 3 The city of human scale	
- Creating a city that receives (absorbs), recovers and prepares for future economic,	- Build a city that is able to create, adopt and implement innovations and new technologies.	- The city that is an attractive place to live for its current and future residents.	
<ul><li>environmental, social and institutional changes.</li><li>Understanding the current situation, shortcomings and strengths of the city.</li></ul>	- Build a city that is able to encourage cooperation with key partners.	- The city that will increase the population's interest in improvement and give them the tools to make or contribute to this change.	
- Take measures to ensure that the city continues to prosper and develop.		<ul> <li>The city that is efficiently managed and uses modern digital technologies to deliver services to</li> </ul>	
- Setting the framework of measurable indicators and modeling the development of the economic and social situation.		the citizens	

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## Strategy: Thematic areas of innovation specialisation for City of Bratislava

#### 1. Effective urban mobility

- connects to the ambition of the city of human scale that allows for active mobility and public transport as a valid option to fulfil transport needs of residents and visitors
- interest in travelling by public transport has dropped during the Covid pandemic and the numbers are only slowly picking up not reaching the pre-corona levels
- create opportunities for testing and implementation of innovations in public transport, sustainable forms of transport, bicycle transport, develop opportunities within micro mobility
- preparation for autonomous vehicles
- explore the potential and needs of electric or hydrogen vehicles
- transport infrastructure management, effective parking policy
- urban mobility laboratory

#### 2. Building a resilient city

- climate change is the greatest threat to the modern way of life and requires complex and systematic solutions consisting of a large number of small experiments, which will be carried out in the form of applied experiments with clearly defined goals and measurable indicators.
- includes a wide range of solutions from how to collect relevant and regular environmental information (air quality, water, temperature and other meteorological indicators) and their evaluation, the creation of sustainable public spaces (blue and green infrastructure) or other innovative solutions that mitigate climate impacts changes, involve residents in the solution and provide the city with relevant data for decision-making
- this thematic area was selected as a priority within the consortium of academic institutions - the Slovak Academy of Sciences, the Slovak University of Technology and Comenius University, which decided to focus their research on finding solutions

#### 3. Energy efficiency and neutrality

- understanding energy needs of the city builds one of the corner stones of the resilient city and helps with mapping and gap analysis towards an energy neutral city in the future
- is linked to long-term goals and priorities within the reduction of emissions, to which the Slovak Republic has also committed itself - the goal of reducing CO2 emissions by 55% by 2030
- efficient energy management of public and private buildings using digital technologies and data
- opportunities in area of the governance of buildings and neighborhoods - energy neutral and positive neighborhoods



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Section

2

February 2021 to May 2021



# Bratislava City : Ambition and roadmap

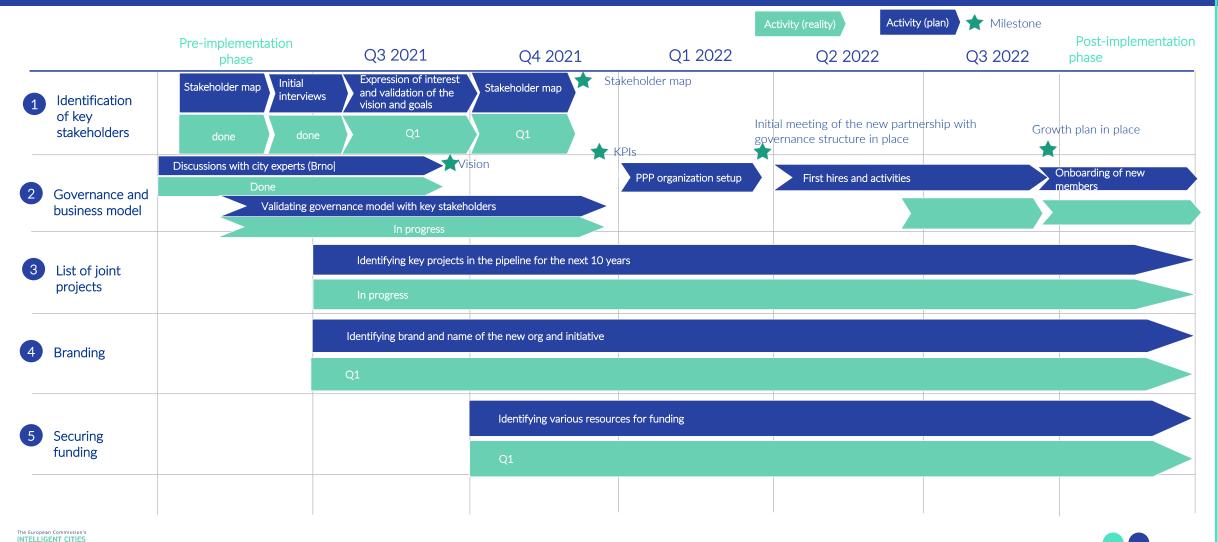
ICC Transformation



## "Innovation District Mlynská Dolina – Patrónka connecting three academic institutions, private businesses, the region and the city"

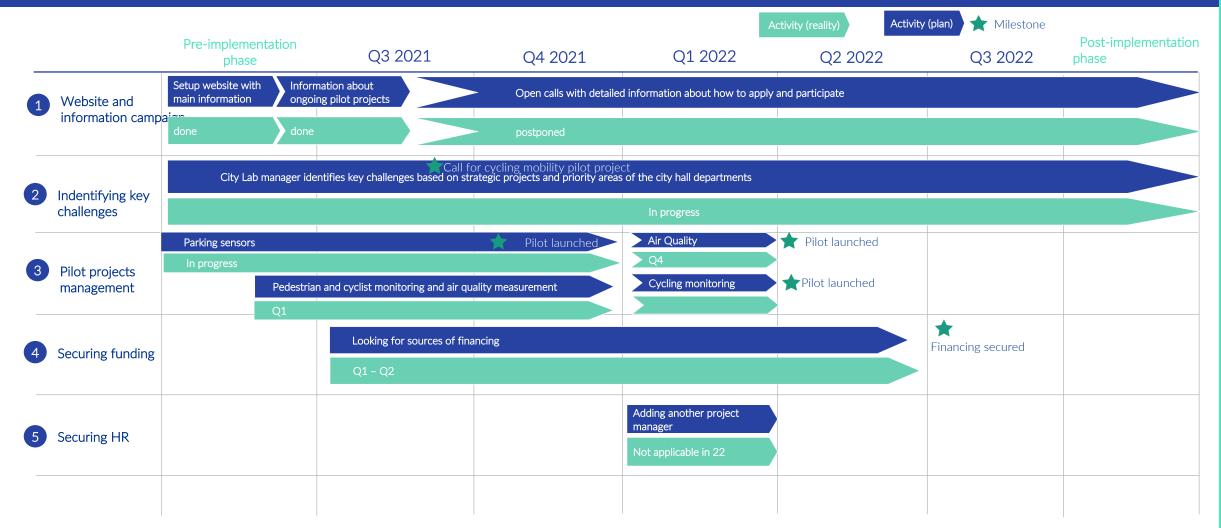
Solution 1: High level implementation roadmap

CHALLENGE



# "The Bratislava City Lab as an implementation mechanism to pilot innovative solutions and processes"

Solution 2: Bratislava Living Lab





## Rationale to road map

The roadmap has been planned in light of former discussions with stakeholders, internal planning sessions and workshops. It was aligned with ongoing projects as well as new activities and modelled on previous experience.

Since we were using experience from past projects, the tasks were supposed to enable one another. We were prepared for various scenarios and had mitigation strategies to be able to move forward with the projects.

For the Bratislava Living Lab we have chosen an interactive approach with smaller number of pilots to test out the internal processes and ability of the city to absorb these solutions. The pilots are not paid from the city budget, the partners need to secure financing. However, one of the key learnings is to allow for the city to allocate a small budget for rapid pilots.

The innovation district required a lot of meetings and constant alignment to build trust and co-create the mission together. One of the key aspects was a transparent governance structure with leavers and brakes for each partner to feel comfortable to commit.





### Initiative charter Solution 1: Innovation District Mlynská Dolina – Patrónka

Strategy	Strategy		Stakeholders involved		Inputs, outputs, outcomes and impacts	
	t is able to create, adopt and implement innovations and new to encourage cooperation among key partners.	Solution lead:	City of Bratislava – <b>Petra Dzurovcinova</b>	Source of funding and estimated	Approximately 1 billion EUR. Key founding members and available financial sources (RRP tools, EU funds, local administration/city budgets, private funds) Funding of 100 mil EUR has been allocated to upgrading several	
Mlynská dolin – creation of a g stakeholders o	blic-private partnerships (PPP) in area of research and innovation ir a – Patrónka governance structure and mechanisms enabling cooperation of of the city ecosystem enhancing innovation in key domains nctional and sustainable business model	Solution working team:	University representatives – Zuzana Lisonova, Rastislav Igliar. Private sector (representatives of innovative companies – Peter Moravcik, Michal Kardos		university buildings in the area.	
- promoting inr	To work with key stakeholders and meet the goals of a			Solution maturity	Solution 1 does not require using innovative technologies. It is focused on building innovation ecosystem. Main outpusts are as follows: - Identification of key stakeholders: done	
vision	sustainable and resilient city through technology and innovation. There is a limited development of innovation ecosystem, science, research and technology in Bratislava.	Contributors:	Bratislava region, Ministry of Investments, Regional Development and Informatization of the Slovak Republic, AmCham, SAPIE – business associations	outputs	<ul> <li>Governance and business model: in progress</li> <li>List of joint projects: in progress</li> <li>Branding: in the process of preparation</li> <li>Securing funding: : in the process of preparation</li> </ul>	
Link to ambition statement	The city open to innovation - build a city that is able to create, adopt and implement innovations and new technologies, build a city that is able to encourage cooperation with key partners.		: olitical will to create and join the entity ttractiveness for the key private players			
$\mathbb{C}$		- C	lanagement of stakeholders Clear mission, goals and KPIs of the new entity unding	City performance	Outcomes and impacts still to be seen and felt: Outcomes: – Existence of an institution	
Expected impact and timing	City that introduces innovations for its citizens on a regular basis. Impact of first activities to be seen in 2023.	– F e – F p – F – F	ation: unding to start the organization with xperienced staff unding for projects from public sources and rivate contributions of members olitical support from local municipalities auy in from key stakeholders televance for private sector	Development and support of an in Number of integrated projects     Increase investment through Horiz Increase in number of ERC grants Impacts:     Increasing the attractiveness of the	<ul> <li>Development and support of an innovation ecosystem</li> <li>Number of integrated projects</li> <li>Increase investment through Horizon Europe</li> <li>Increase in number of ERC grants Impacts:</li> </ul>	
The European Commission's INTELLIGENT CITIES CHALLENGE		7 -			<ul> <li>Increase in new companies in the strategic domains</li> <li>Increase in employment in the strategic domains</li> <li>Stabilization of the number of students</li> </ul>	

## **Initiative charter Solution 2: Living Lab**

Strategy		Stakeholders involved	Inputs, outputs, outcomes and impacts
Description	To build a framework for rapid testing of new technological solutions based on the needs identified by the city. Creating a transparent selection process to engage SMEs and academic teams and comparing relevant solutions prior procurement.	Solution lead:       Product Manager at the Innovation         Department of the City of Bratislava –         Solution         Working team:	Source of funding and estimated cost
Link to vision	To work with key stakeholders and meet the goals of a sustainable and resilient city through technology and innovation.	Contributors: City Administration – department of Environment, Transport department, Municipal Police and others	Solution       Website and information campaign         Maturity       Identification of key challenges         Pilot projects management       Securing funding         Securing HR       Securing HR
Link to ambit statement	adopt and implement innovations and new technologies, build a city that is able to encourage cooperation with key partners.	Risks and mitigation       Risks:         -       Ability of the city to manage projects effectively and absorb outcomes of the projects         -       Stakeholder interest         -       Cyber security         -       Financing of the pilots         -       Human resources in the city administration Mitigation:         -       Funding for each pilot project         -       Internal funding for project managers	City       Outcomes:         performance       -       Number of pilot projects successfully followed-up by scale-ups         outcomes and       -       Systematic data collection via sensor network         outcomes and       -       New policies build on top of the data         impacts       -       Implementation of municipal laboratory projects (cumulatively b
The European Commission	to new challenges in a creative as well as scientific way. First pilots have been already implemented.	<ul> <li>Communication of the projects and possible policy change</li> <li>Effective cooperation within the IT department</li> </ul>	<ul> <li>Public events promoting innovation, such as hackathons</li> <li>Citizen science engagement</li> <li>Evidence-based decision and policy making</li> <li>Development and pilot of adaptation to climate change solution</li> <li>Development and pilot of autonomous transport solutions</li> <li>Impacts:</li> <li>Digitization of the most important local government services an efficient processing of applications</li> </ul>

## **Key Performance indicators - overview**

Solution	Activities – Inputs and actions	Solution Maturity - outputs	City performance – outcomes and impacts
Solution 1 Innovation District	Identification of key stakeholders	o stakeholder map - v1	Setting up a governance and business model - Existence of an institution with the relevant projects and outputs related to the vision engaging representatives of the ecosystem
	Governance and business model	<ul> <li>functioning PPP organization setup</li> <li>number of staff</li> <li>number of active members</li> <li>number of joint initiatives</li> </ul>	<ul> <li>Development and support of an innovation ecosystem and knowledge transfer - including the involvement of SMEs in digital innovation hubs, innovation neighborhoods, incubator activities and accelerators</li> <li>Increase investment through Horizon Europe</li> <li>Increase in number of ERC grants</li> <li>Increase in new companies in the strategic domains compared to 2019 and increase in employment in these areas</li> <li>Stabilization of the number of students and PhDs compared with 2019 numbers</li> </ul>
	List of joint projects	o number of joint projects implemented	Increase in projects among more than 3 partners
	Branding	o number of campagin initiatives	Increasing the attractiveness of the city as a destination for innovative companies – increase in international founders, employees working in the city and international students



## **Key Performance indicators - overview**

Solution	Activities – Inputs and actions	Solution Maturity - outputs	City performance – outcomes and impacts
Solution 2 Living Lab	Website and information campaign	<ul> <li>functionning website with main information and information about ongoing pilot projects</li> <li>open calls for the expression of interest and validation of the vision and goals</li> <li>number of initial interviews</li> </ul>	<ul> <li>increased number of applicants to each pilot call</li> <li>increased awareness among residents and other stakeholders</li> </ul>
	Identification of key challenges	<ul> <li>o document with identified key challenges</li> <li>o regular updates on needs of the city and alignment with the strategic documents</li> </ul>	o increased number of key areas covered by pilot projects
	Pilot projects management	<ul> <li>number of pilot projects launched and implemented</li> <li>data evaluated and decisions made (annually)</li> </ul>	<ul> <li>number of pilot projects successfully finished and followed up either by better policy making based on data gathered or educated procurement</li> </ul>
	Securing funding	o plan with various resources for funding	<ul> <li>number of sources used for funding</li> <li>amount of funding secured from public sources</li> <li>amount of funding secured from private sources</li> </ul>
	Securing HR	o plan for HR approved	<ul> <li>new PO hired and the team is able to scale number of pilots</li> </ul>



### **Rationale to KPI approach**

Bratislava City Lab is a new structure which needed to be stabilised and introduced across the city hall and key stakeholders as a format for cooperation. At first stages, the project required identification of key stakeholders, their involvement, identification of key topics and potential first pilot projects. The KPIs reflected the timeline, experience from previous projects and similar frameworks from other cities.



## Governance structure for roadmap implementation: Solution 1 - Innovation District

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#### • Two academic representative **Steering Committee** ICC project new PPP entity Two business representatives • Executive and leadership • Two representatives of local body government (city/region) Team leader: • Approves strategic City of Bratislava - Petra direction Dzurovcinova Elected by the General • Assembly Executive team Initiative working team: • Elected by the Steering university representatives -Committee CFO + 5 FTF Zuzana Lisonova, Rastislav • • Leads with their team the Igliar organisation Private sector – Peter • Implements strategic activities **General Assembly** Moravcik & MIT City Science Lab Members are selected based • Development of research activities and their Contributors: • their approval by the implementation Public sector - Bratislava Steering committee region, MIRDI acceptance of the ethic code Associated members Private sector – AmCham. SAPIF – business ability to pay members • do not have the right to vote • may be representatives of associations fees Partners the Ministries and state • declare their support of the agencies vision and goals of the organisation

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### Governance structure for roadmap implementation: Solution 2 - Living Lab

#### ICC project

#### Team leader:

Product Manager at the Innovation Department of the City of Bratislava – Sabina Hrabinova

#### Initiative working team:

Other team members from the Innovation Department

Data department

IT department

#### Contributors:

City Administration – department of Environment,

Transport department,

Municipal Police and others

## Partners:

Invited to participate by thematic calls

#### Private sector

Academic teams



The European Commission's INTELLIGENT CITIES CHALLENGE

Section

3 + 4

February 2021 to May 2021



## **Bratislava City : Impact**

ICC Transformation



#### Impact executive summary

INTELLIGENT CITIES CHALLENGE

The Innovation District as well as the City Lab were planned before the city of Bratislava has joined the ICC. Given the previous commitment from the city leadership, we have used the ICC to cover challenges we couldn't solve locally due to the lack of experience. The network of cities and mentors helped us shed a light on possible governance models, ways of stakeholder engagement, financing and support tools for both projects. We were able to compare the approach from the City of Brno, that has been the main driver behind JIC (innovation centre founded 20 years ago) or Smart City Amsterdam that is mainly driven by the private sector. The major obstacle we have all experienced was the pandemic and then the war that impeded long-term investment and thinking and reallocated resources to these immediate issues. Online meetings were somehow effective; however, they couldn't replace hands on workshops that would be held in person. The innovation district project is at its beginnings, and it required more conceptual and strategic thinking across the key stakeholders who were often preoccupied with immediate crises. To ensure that the projects will continue they need to be stabilised personally, organisationally, and financially. City Lab is firmly established in the department of innovation and digital services with one FTE dedicated to the topic.

In the upcoming years, the city is seeking external funding for pilot projects to boost their numbers. Due to the current geopolitical and economic situation, the city is not able to allocate funding for pilot projects, however, is seeking funding through Recovery and Resiliency funds. We are also identifying key locations for physical pilot projects that would allow for fast tracking the pilots.

The Innovation District requires its own governance structure including public and private partners as well as financial resources to start. We have identified various resources for financing. Local, national and regional cross border cooperation is also crucial for its success. The goal is to setup the entity by the end of 2022 to led the activities forward.



## Assessment of city performance - progress against KPIs Solution 1: Innovation District Mlynská Dolina - Patrónka

	Where we started	Midway through the challenge	Final results
City performance			
Existence of an institution with the relevant content verified by a questionnaire form every year among the representatives of the ecosystem	Not founded	Not yet founded	Not yet founded
Development and support of an innovation ecosystem and knowledge transfer - including the involvement of SMEs in digital innovation hubs, innovation neighbourhoods, incubator activities and accelerators	Started	Continued	Continued
Number of integrated projects implemented	1	2	3
Increase investment through Horizon Europe	Not yet	Not yet	Not yet
Increase in number of ERC grants	No	No	No
Increasing the attractiveness of the city as a destination for innovative companies - year-on-year growth in the number of fast-growing companies in key areas of development related to smart specialization	Not measured	Looking for KPIs	KPIs not defined
Increase in new companies in the strategic domains compared to 2019 and increase in employment in these areas compared to 2019 data	Stable	Decreased	Decreased
Stabilization of the number of students and PhDs The European Commission's INTELLIGENT CHALLENGE	Data from 2019	No increase	No increase

## Assessment of city performance - progress against KPIs

Solution 2: Bratislava Living Lab

	Where we started	Midway through the challenge	Final results
City performance			
Number of pilot projects successfully followed-up by scale-ups	1	1	1
Systematic data collection via sensor network	Not implemented	Implemented	Implemented
New policies build on top of the data	Not implemented	In progress	In progress
Implementation of municipal laboratory projects – (cumulatively by 2030)	3	4	5
Public events promoting innovation, such as hackathons	1	2	3
Citizen science engagement	Not measured	Increased – unstructured engagement	Stable – unstructured
Evidence-based decision and policy making	Not implemented	Preparing data gathering	
Development and pilot of adaptation to climate change solutions	1	2	3
Development and pilot of autonomous transport solutions	0	1	1
Digitization of the most important local government services	NPS not measured	New digital services started, digital tax payment - NPS 91	NPS above 90

#### Assessment of city performance - discussion

- Timelines extended due to immediate issues such as pandemic or the war in Ukraine
- Implementation takes too long due to internal processes
- Lack of resources allocated towards long-term activities and focus on short-term projects
- Both solutions considered nice to haves rather than must haves due to short-term view and city financing structure



### Assessment of solution maturity - progress against KPIs

	Where we started	Midway through the challenge	Final results
Solution 1			
stakeholder map - v1	First version started	Improved and enhanced	Database started
functioning PPP organization setup number of staff number of active members number of joint initiatives	Not yet implemented	Preparation stages for PPP setup	
number of joint projects implemented	0	1	2
number of campaign initiatives	No public campaign	Various microcampaings	



### Assessment of solution maturity - progress against KPIs

	Where we started	Midway through the challenge	Final results
Solution 2	,		
functioning website with detailed information on open calls	Not implemented	Implementedd and updated – open calls	Implementedd and updated – open calls
document with identified key challenges number of updates of key challenges	Key challenges defined	Update towards climate change	Update towards climate change
number of pilot projects successfully finished data evaluated and decisions made (annually)	1	2	3
plan with various resources for funding	Various sources identified	Applied for public funds	Multiple public and private sources identified and consortium building
blan for HR successfully implemented	One FTE	One FTE	2 FTEs



#### **Assessment of solution maturity - discussion**

- Bratislava City Lab is a good start for collaboration with business and academic sectors, however without allocated budget and limited human resources it is hard to scale
- Implementation of projects takes longer due to slow or missing internal processes
- Innovation District has overall support of the city leadership however it requires resources dedicated to preparation and implementation. Also due to missing trust across the innovation ecosystem, things take longer and require significant effort and clear leadership. The city had to take on the leadership role, but it all takes longer than expected.



#### Assessment of city ecosystem and activities - progress against KPIs

	Where we started	Midway through the challenge	e Final results
Activities – solution 1			
stakeholder map - v0 expression of interest and validation of the vision and goals number of initial interviews	Not yet	Continuous engagement	Continuous engagement
number of discussions with city experts validated governance model by key stakeholders	Started	Engagement throughout the process	Continuous engagement
list of joint projects, number of key projects in the pipeline for the next 10 years	Started	First draft of the list	Preliminary list of projects based on city priorities as part of the City Strategy – Bratislava 2030
brand and name of the new org. and initiative identified	Not yet	Not yet	In progress
plan with various resources for funding	Not yet	First draft	Various financial sources identified



### Assessment of city ecosystem and activities - progress against KPIs

	Where we started	Midway through the challenge	Final results
Activities – solution 2 functioning website with main information and information about ongoing pilot projects open calls for the expression of interest and validation of the vision and goals number of initial interviews			
document with identified key challenges regular updates on needs of the city and alignment with the strategic documents	Drafted	Reviewed by key stakeholders	Officially approved
number of pilot projects launched and implemented			
plan with various resources for funding			
plan for HR approved			Not yet



### Assessment of city ecosystem and activities - discussion

- Challenging communication online
- Other conflicting priorities and immediate issues
- Alignment of stakeholders around goals and activities
- Effective governance models looking for the most suitable structures
- Identifying financial resources



## 5 key lessons

Lesson	Reflections	
1	Governance models are crucial for moving forward	
2	Clear vision and buy-in from key stakeholders	
3	Long-term financing is required for activities to move forward	
4	Each project needs to have allocated project manager	
5	Communication and progress reporting keeps stakeholders engaged	
The European Commission's INTELLIGENT CITIES CHALLENGE		

#### **Reflections on city collaborations**

- Valuable sharing of experience we are not the only ones dealing with the issue
- Deep dives on specific topics closer collaboration with Brno learning from their mistakes
- Understanding various governance structures and trying to find which suits best to our needs
- Building trust and transparency among stakeholders



## Commitments

Commitments to on-going resources	Commitments to on-going collaboration	Commitments to on-going KPIs
<further and<br="" developing="" processes="">governance for Bratislava City Lab&gt; <scaling pilots=""> <allocating for<br="" funding="" pilot="" projects="" to="">implementation&gt; <using as="" concept="" for<br="" of="" pilots="" proof="">procurement&gt;</using></allocating></scaling></further>	<allowing engage<br="" for="" more="" partners="" to="">in pilot calls&gt; <building across="" better="" networks="" the<br="">city hall&gt;</building></allowing>	<scaling pilots=""> <increasing number="" of="" pilots=""></increasing></scaling>



## **3 Year plan - ambitions**

Building on the ICC, what would will the city aim to achieve in 3 years time?	Establishing a governing body for the Innovation District to drive collaboration and projects across the city's innovation ecosystem. Stabilise the number of students and increase % of innovative companies compare to 2020.
What steps will you take over the next 3 years to achieve these goals?	<ul> <li>Align stakeholders around shared vision</li> <li>Agree on governance model and establish an entity</li> <li>Seek financing to secure long-term viability</li> </ul>



## 3 Year plan - targets

KPI	Category	What commitments will the city make to this end?
1	Ecosystem	Have founders of the innovation agency from academic, business sector and the city
2	Solution Maturity	Annual budget of at least 200 000 EUR for the Innovation Agency secured
3	Ecosystem	At least 10 new companies engaged each year
4	Ecosystem	Branding of the city created and recognised on EU scale
5	Solution Maturity	At least 2 new pilots a year solving key challenges defined by the city
The European Commission's	1	