



## General information

Project: Urban Manufacturing

Partner organisation: Bratislava the Capital of the Slovak Republic

Action Plan for the City of Bratislava: Boost for the innovative ecosystem

Country: Slovakia

NUTS2 region: Bratislava

Contact person: Jozef Lavička

email address: [jozef.lavicka@bratislava.sk](mailto:jozef.lavicka@bratislava.sk)

phone number: 00421 259 356 453



## Policy context

OPERATIONAL PROGRAMME RESEARCH AND INNOVATION, FOR PROGRAMMING PERIOD 2014 – 2020.

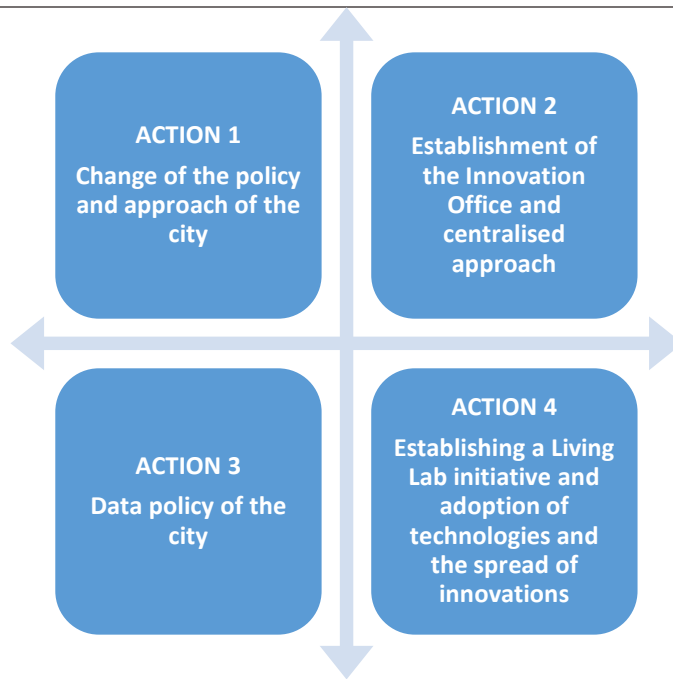
## Actions envisaged



*The city of Bratislava as part of the Urban M project defines the action plan for a sustainable support of the innovative and creative ecosystem within the city. The project was based on the needs analysis conducted with the main existing and potential partners of the city from the private as well as the public sector. Municipality wanted to map the main pain points of the partners, so they presented the partners with the possibilities to voice their concerns and problems as well as their expectations from the modern city. In order to capture the views from these key stakeholders active in the city, there have been several meetings including various actors on the local scene, from the start-up community, through non-governmental organisations to education and research institutions. These meetings focused on several topics including the role for the municipality to offer to partners, what they expect from a modern thriving city that enables the development of new technological and other projects. In total there were two large and countless small meetings with over 100 stakeholders that could benefit from a well-defined municipal approach and institutional set up with respect to the adoption of new technologies and a working sustainable scheme for future cooperation.*

*These meetings have helped to direct the proposals of the municipality to prepare a comprehensive framework for the support of the innovative and creative capacities within the city. The main skeleton of this framework is defined in this action plan, which identified four main activities that are identified as key to achieving the key goals of the project aiming at the preparation of the working sustainable operation of the Innovation office and the Living Lab intertwined with the changes in the approach of the municipality towards adoption of the new innovation and cooperation with the other key stakeholders in the city.*

*The Slovak Business Agency plan to carry out the suggested policy changes to enable the future activities in this area. This specifically relates to the current Operational Programme Research and Innovation and its future replacement.*



## ACTION 1

Change of the policy and approach of the city

### The background

*The determination to structure our project in this manner has developed through positive experiences from other project cities. Each of them has provided a certain positive example, from which we learnt an important lesson, which have been used in the preparation of our own project structure and to develop the change in the approach of the municipality. Based on these positive experiences from cities such as San Sebastian or Vilnius have provided basis for a discussion about the necessary changes to the approach of the Bratislava municipality. The specific case that was inspirational for the development of the policy change in Bratislava was the case of the Vilnius Tech Park Sapiegos and VGTU Link Menu fabrikas. These were especially insightful in providing background for the positive impact of the changes in the policy framework and how it impacts and motivates the efficient support mechanisms. These as well as other cities have shown Bratislava how changes in the municipal approach can be the key moment to ignite positive development.*

#### 1. Action (please list and describe the actions to be implemented)

The change of the approach and policies of the city towards the adoption and acceptance of innovations within the city. This change of approach was reflected directly after the election of the new mayor in November 2018 and later directly mentioned in the new Mayor's manifesto, which was approved by the Council in June 2019. It specifically calls for the starting of the cooperation with key stakeholders from the entrepreneurial, academic and the non-profit sector with the end to support the research and innovation activities within the city in order



to increase the attractiveness of the Bratislava city as a municipality opened to innovation and business - Bratislava Science City.

2. **Players involved** (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role)

Academia – The Slovak University of Technology, Comenius University, The University of Economics in Bratislava, The Slovak Academy of Sciences – the city has signed the Memorandum of Understanding about further cooperation among these institutions and support of innovation, research and collaboration

Business – Informal network of cooperation with key stakeholders including startups, scaleups and multinationals

Civic Society – Cooperation with creative and makerspaces such as Nova Cvernovka, Lab or FabLab

3. **Timeframe**

Therefore, this activity is enshrined in the manifesto of the new Mayor and is already in application from December 2018 and has been fully put into practice within the municipality through the passing of the manifesto in June 2019.

4. **Costs** (if relevant)

No direct costs associated

5. **Funding sources** (if relevant):

Not necessary

## ACTION 2

Establishment of the Innovation Office and centralised approach to new technologies, agile principles and project management

### The background

*The takeaways from the project were inspired in various areas from the technological setup through the involvement from different stakeholders to the specific project examples. The specific inspirations came in the following areas. In Kranj, Bratislava has been advised to establish an umbrella group for different craft organisations within the city with clearly defined goals, including the specific support and develop the existing makers with the capacities available to the municipality. There also was a stress on the element of the inclusion of the use of the modern technology to people skilled in the traditional crafts. In Birmingham, we have been inspired to build up a comprehensive connected ecosystem that would be introduced to the policy makers to help create a makers movement in Slovakia. In Vilnius the main inspiration was found in the Vilnius Tech Park Sapiegos, VGTU Link Menu Fabrikas, or the Užupis Art Incubator. These provide very good examples for Bratislava. Vilnius has made a very good use of the brownfields within the city area to inspire cooperation between communities and stakeholders. In Lisbon the main positive takeaway was the Startup Engine as the policy process for supporting the start-ups. This could be replicated with its 6 specific phases: Academy, Storming, Lab, Startupper, Go-to-market and Expansion. The benefits would be a better networking function and better support methodology.*

1. **Action** (please list and describe the actions to be implemented)

The main institutional aspect of the introduction of this new approach is the setup of the Innovation Office, which has just been established. This Innovation Office covers a twofold role:

- Horizontal office working across different municipal departments, which will be able to make use of its expertise and capacities to include the new technologies and the new practices in the entire portfolio of municipal processes.
- Contact point for the external actors to contact the Innovation Office in cases, when they would like to engage in the cooperation with the municipality or would like to receive help from the city in terms of non-financial or financial assistance.

The contact point must have a working relationship with all of the municipal organisations and businesses, so that when she or he is approached by an outsider interested in specific agenda, they know who is responsible, they can provide contact and they can make the contact cooperate - this requires overview as well as authority for the Innovation office across the municipal structures.

This implies not only the openness to innovations but also the capacity to include the mentioned contacts within the municipal organisations in an established framework for the evaluation of the proposals by the external actors. The result would be the overview of the innovative ecosystem (both internally and externally) to help identify people to move specific issues forward - there should be a *Map of Stakeholders* to identify best partners of the *Public Private Partnerships* of the city.

The main issues related to the building of the structure and the competences of this Innovation Office is that it needs to have clearly defined following attributes:

- a budget - with clear rules for its responsibility
- a defined responsibility - who in the office has what defined role
- a team of people responsible for the tasks of the Office

The Innovation Office is responsible for the preparation of a strategy of advertising the city in order to attract investments by creating an appealing environment for businesses and academic sector. This will depend on what type of **Branding and Communication Strategy** would be more appropriate for Bratislava. This leads to the identification of a smart specialisation for Bratislava by engaging key stakeholders from academic and business sector as well as partners across the EU (for example JRC).

Bratislava city needs to define **Vision** and **Mission** of the city - how the city wants to brand itself but also what is the direction of the economic and social transformation (development) of the city. The key themes will be:

- a. Mobility - "city of short distances" - different modes of transportation
- b. Responsible city - social infrastructure
- c. Long-term sustainability - tackle the heating associated with the construction and protect the parks and green areas

The main activity of the Innovation office will be the support of the Mayoral priorities and the evaluation of the impact of activities in practice. There is a need to change the mindset of the municipality into an innovative and learning one across the numerous departments of the city. The result will be the regular practice of using evidence-based solutions relating to the citizens' needs.

The Innovation Delivery team intends to cooperate closely with IT, data and other departments. Beginning with the data policy and its implementation across all of the departments of the City Hall, there will be a continuous deployment of e-government services including the proactive deployment of digital services above the legal requirements.

2. **Players involved** (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role)

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3. **Timeframe**

Within the current level of preparation, the time framework for the sustainable functioning of the Innovation Office is prepared for the next four years. With the current relatively small capacity of the Office there needs to be a further build up of the office hand in hand with the clear definition of responsibility in terms of the giving tasks, responsibility for the budget, responsibility for the execution and the definition of the Key Performance Indicators (KPIs) measuring the success or failure of the given municipal activity. The mission of the Innovation Office is to deliver valuable and progressive services to citizens to make Bratislava a modern, well-functioning city with the highest possible quality of life. There needs to be an agreed framework about the regularity of the measurements and their evaluation - current suggestion is quarterly evaluation.

4. **Costs** (if relevant)

The Innovation Office has already been established, currently consisting of a two person team that has been allocated both clearly defined competences and resources and has established a functioning business model, which has ensured a sustainable level of financing not just from internal sources, but also from the external partners.

5. **Funding sources** (if relevant):

There are other funds available from ESIF and Norwegian funds, which the Office can apply for.

**ACTION 3**

**Data policy of the city**

**The background**

*Within the visits to other cities, there was also an inspiration to create a platform or register of start-ups based on the collaboration between city and the stakeholders. The last two points were of a more technological nature, to consider cross-border projects based on the geopolitical data available and use the Internet of Things to promote such collaboration. Primarily, there have been inspiration of Bratislava from other project cities that have utilised the data policy in order to create better informed decision-making. The examples of this have been in Birmingham or Lazio. As for the positive example of Birmingham, the Innovation Birmingham Campus is the leading location for Birmingham's digital and tech community making a good use of the data-based approach. These data enable and support innovators, entrepreneurs and investors looking to develop or fund innovative digital start-ups with high growth potential. However, the good approach to the use of technology has to include other aspects, such as maximising the potential of different groups within the society. For example, the experience from San Sebastian suggested a stronger involvement of young people in the*

*innovative ecosystem. The basis for the development of the Bratislava Data policy is the identification of all the benefits such a policy can inspire.*

**1. Action** (please list and describe the actions to be implemented)

Building on the foundation of the Innovation Office, Bratislava city needs a clearly defined **Data policy** in order to enable the city to make a more informed and efficient decision-making and further evaluate its activities and be prepared to make quicker and more targeted reactions with respect to the needs of the inhabitants. This can result in savings of the public finances combined with a higher quality of living.

Data are a priceless source of information for the citizens as well as the local administration about the situation within the city. For the administration and the private or the NGO sector can use the data to provide better services and find the main pain points that need improvement.

Reacting to the current European trends and standards in the area of the data policy, reflecting the strategic and legislative documents at the national and supranational level with the goal of ensuring maximisation of the approach of the municipality towards data through different methods and from various sources, the city is committed to the implementation of the following principles into its data policy and processes.

- clear overview of the data available and collected in its processes to ensure that the data collected proactively, yet securely, without potential breach and with their evaluation and further use in the municipal activities - identification of the potential benefits of the data available
- ensuring of the necessary legal regimes for the use of data and protection against inappropriate contractual or procurement conditions as well as the licensing of the data for third parties. The city prefers the publishing of the data under the open licenses in the Open data formats (*Výnos č. 55/2014 Z. z. § 52 - Otvorené údaje*). The overall legal framework *PSI Directive*.
- In terms of the raising data security and privacy protection within the ICT solution, increase the use of the digital IDs, makes them applicable for the mobile platforms (the “confidentiality and security” principle).
- The municipality enables its citizens and businesses better administer its own personal data held by the municipality (the principle of “openness and transparency”).
- The city shall be responsible for the evaluation of the data generated within its premises by third parties, to whom the data belongs and with what objectives they are collected. The municipality is a partner of the entrepreneurial and academic sector with the goal of an efficient exchange of information, data and opportunities for their use for the benefits of the inhabitants.
- One of the main focus for the municipality is the full capacity of the electronic communication with the citizens and entrepreneurs. This requires all the sides to have sufficient digital skills (in line with the “digital as standard” principle).
- In line with the introduction of this principle at the national level, the municipality applies the “once is enough” principle - not to demand from population the same information more than once.
- The municipality introduces policies and measures allowing for the implementation of these principles all the levels and ensures the technical and content interoperability, alignment of formats and licences (this is the principle of “interoperability”).
- The city ensures the implementation of data policy in its organizational structures, municipal budgetary organizations or the municipal enterprises with 100% participation of the city. Within other organizations the city advocates the implementation of data policy to the extent in line with its exerted influence.
- The municipality approaches the provision of the digital services based on the needs of their users - the inhabitants of the city (the principle “citizen at the centre of the focus”).
- The city consults its own activities in the area of data policy with the independent experts with the objective to ensure the maximum possible quality, security and the usability of the data available.
- The city will adhere to the Declaration of the Digital Rights which has been joined in March 2019.

## ACTION 4

### Establishing a Living Lab initiative and adoption of technologies and the spread of innovations

#### The background

*The establishment of the Living Lab within the city has been inspired by the discussions with the representatives of other project cities. They have provided inspiration in terms of the need for an umbrella initiative to cover the various aspects of the reforms that Bratislava needs. This was obvious from various cities, which have succeeded with a comprehensive and coordinated framework. Thus, Bratislava has decided to follow their example. The specific example that inspired the Living Lab initiative was the STEAM house Birmingham as a viable format for a development of a sustainable model of the spread of innovations across the city. Our positive experience with the processes set-up at the Birmingham STEAM house have provided an opening for a discussion for the mechanisms adopted in Slovakia.*

#### 1. Action

(Living Lab is an initiative, based on which the city should be there as a partner for those driving innovations within the city through the cooperation regarding the use of the infrastructure so that the city becomes a testing 'living' lab for the application of the best and most viable of ideas in the practice. It is closely intertwined with the Activity number 3 and is dedicated to provide support for the **makers spaces and the creative industries** across the city. Deploying the scientific method to define project hypothesis, length of the testing period (usually 6-12 months) and key performance indicators defining success or failure of the project. Examples can be parking sensors, potential monitoring of energy waste, mapping of transportation problems. There were three types of cooperation identified:

- Joint projects - when the municipality is asked to become a partner in the given project - there must be an established evaluation procedure to identify promising projects
- Deployment of a working product or service in the city - something already works on a private basis and the partner wants to deploy it within the municipal infrastructure.
- Support for start-ups - financial and non-financial schemes:
  - Small grants - in the priority areas of the city
  - Test bed - projects to test potential viability of new technology in the city infrastructure.

The municipality will prepare both financial support in the form of microgrants for the projects that would appear most promising, based on the definition of criteria and goals. The non-financial support will be in the form of the provision of the municipal premises and infrastructure for testing of technology and data collection.

- Grant scheme based on the definition of city's goals and visions
- Co-investment scheme combining private and public funds to tackle city's greatest challenges

As Bratislava is a university city, there is a role for the Living Lab to further fuel the **Academic and Research Cooperation**. The specific framework of cooperation has been defined by the agreements that Bratislava City has signed with the representatives of the four major educational institutions (The Slovak University of Technology, Comenius University, The University of Economics in Bratislava and The Slovak Academy of Sciences). The main aspects of the cooperation focus on:

- Mutual investment projects and activities and the use of external sources of financing
- Experimental testing and validation of scientific theories, technologies and practices in a living urban environment
- Organisation of workshops aimed at preparing proposals for specific projects and activities



- Themes and topics provided by the city for thesis projects (Bachelor, Masters, PhDs) or general research
- Organisation of joint professional events
- Short-term internships for students at the Office of the Bratislava City Hall or its municipal organisations

The agreed areas of support were:

- mobility, quality of life, digital services, innovations, protection and maintenance of the cultural and historical landmarks, protection of the environment, life-long learning and the use of technologies

The vision of the Living Lab, initiative covering the experimentation within the city boundaries, is to have Bratislava open to technologies, collaboration with business, academic and third sector and enhancement of the digital services to ensure for the citizens to lead satisfying life in a sustainable environment reaching the full potential of the city.

2. **Players involved** (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role)

Public Private Partnership mentioned above must have clear rules and need to have a buy-in from both sides, the municipality as well as the partner from the private sector. This will also require an establishment of a local government structure to be able to become a partner in projects suggested by the potential partners.

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## The areas of activity of the Innovation Office

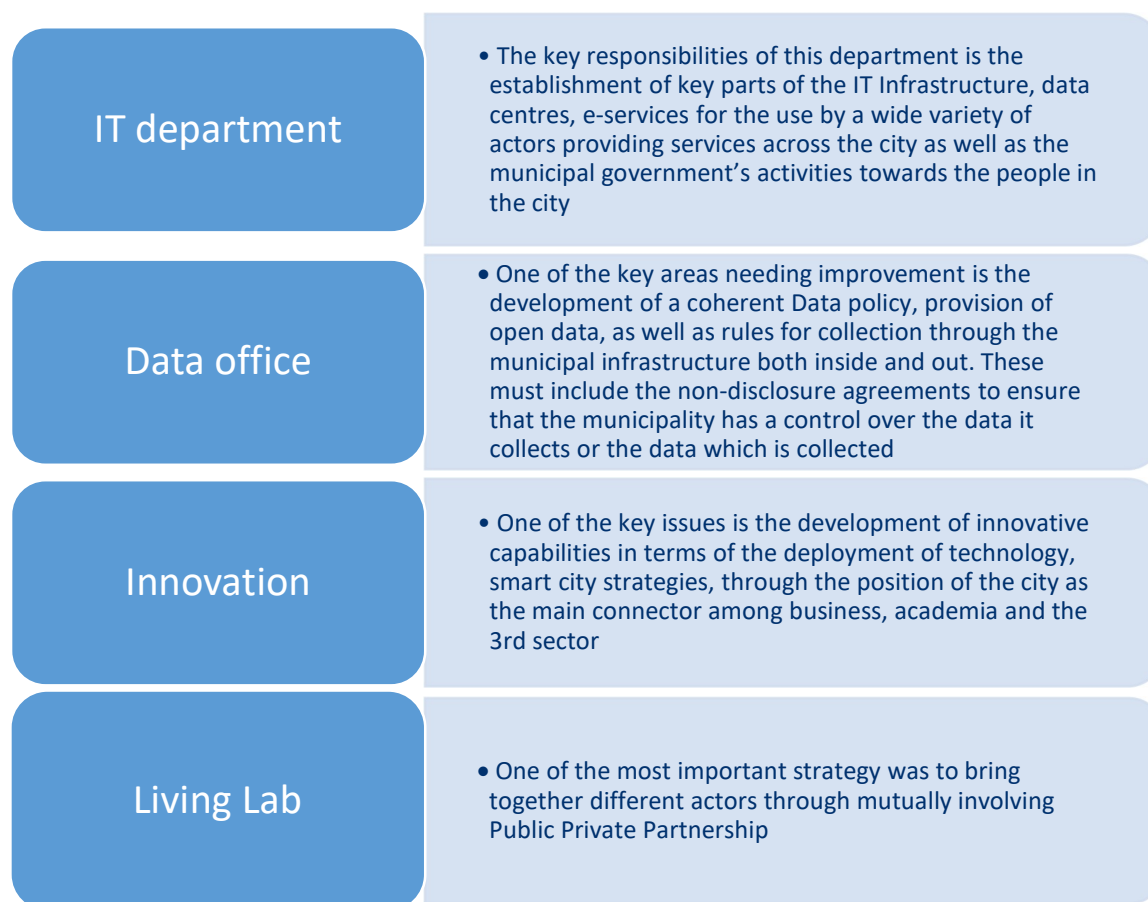
### The definition of the key City needs

Part of the preparation of the functioning of the Innovation Office was the definition of the key Municipal needs that the Office will need to face in the first months or years of its existence. The main municipal issues to be handled by the Innovation Office have been defined as:

- Inclusive data policy for the city and city organisations
- Technology-based services including experimental technology such as machine learning, blockchain or edge computing
- Improvement of the e-gov services - through the creation of the digital services based on citizens needs
- Smart city solutions including environmental, water, waste management and urban space
- Social Innovation with a special attention to services concerning young people, education, senior services, homelessness
- Culture and creative industries

### Structure of the Innovation Delivery Team

As part of the Innovation Office, one of the main features is to establish the Innovation Delivery Team, this is planned to consist of four parts that are interlinked in their operation:



## Priorities

In terms of the specific priorities the municipality wants to focus on the following several priorities. They are the following:

1. **To build technical, personal, process and legislative background for acquiring, processing, publishing and evaluating the newly generated data by the municipality and municipal institutions.**

This priority includes:

- construction of the technical infrastructure;
- establishment of the legal infrastructure with regard to legislative standards in the area of access to information, privacy, security, copyright, including contractual arrangements for ownership of information generated by third-parties with the use of public finances;
- strengthening of the skills and capacities of the human resources of the Municipality;
- the implementation of the processes, which ensure the data collection;
- include the "data clause" to all agreements that the city and city organisations sign;

2. **Build partnerships with third parties, in particular public institutions (city districts, regions, cities, public administrations), but also private-sector partners to unify data standards at both micro and macro-regional levels and enable partners to share data on urban platform.**

This priority includes:

- identifying potential partners in the government, public and private sectors;
- sharing experience and good practice with partners;
- within the available capacities there should be a legal and technical cooperation and assistance to partners - public and government institutions;
- cooperation with the private sector continually to improve the data provision for their effective use in the creation of the ICT solutions.

**3. Retrospectively ensure the compliance of existing city-owned data with established data standards and enable their processing, publishing and evaluation.**

This priority includes:

- analysis and evaluation of the existing datasets based on the prioritisation of needs for further use by the city and third parties;
- clearing, unification and completion of the selected datasets.

**4. In all of the priorities identify so-called “quick wins”, or easy to take and quick actions with immediate use in order to win the support of all the stakeholders for further and more complex activities.**

**5. To carry out support activities in the area of the education and training of workers and the residents of the city, municipal organisations and of the city districts.**

This priority includes:

- the education of the municipal employees and residents in the area of the data policy;
- implementation of the support activities for the building awareness in the field of data policy;
- the promotion and the corresponding support during the implementation of the data policy at the level of the municipal organisations and enterprises;
- partnership with municipal districts in the process of the penetration of the use of the data policy at the level of municipal districts.

**6. Regular meetings and information sharing with the stakeholders and (potential) partners of the city**

This priority includes:

- key players within the city suggested a need for the regular meetings (preferably within a well-defined framework). These meetings will take different forms of hackathons, meetups.
  - The stakeholders made a suggestion of an ongoing hackathon - format of an ongoing long-term discussion of the key actors regarding the priorities and the project implementation
- online publishing of the calls for partners as a part of the Living Lab
- definition of the specific measurable indicators that the specific projects of the city or its partners should achieve:
  - there should be a regular check against the intended outcomes of the projects at the municipal level
  - this will be associated with the preparation of the internal documents posing as rules for the cooperation between the municipality and its partners

**7. Support for the creative and educational ecosystem within the city**

The goal of this particular priority is:

- Linking the actors in the education sector with the professionals in other areas to share their expertise and experiences
- Platform for information sharing about upcoming projects and activities
- Support for the University Incubators

**Date:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Stamp of the organisation (if available):** \_\_\_\_\_