Bilbao AS-Fabrik Transfer Network

Investment Plan

for the
Capacity Boosting of the Innovation Ecosystem Department in Timisoara (INNO-TM)

Contents

SECTION 1: The Policy Context

1.1: NEEDS ANALYSIS IN THE TERRITORIAL CONTEXT

The Municipality of Timişoara is the urban space that geographically developed in the centre of Banat through the complex historical interaction among human factor, technology, culture and environment. Presently, the city is characterised by diversity in all domains, through the entanglement of traditional elements with modernism in industrial, commercial and cultural activities.

Mapping the local actors and analysing their activity in the socio-economic environment, show that Timişoara has all the ingredients for an innovation ecosystem – universities, R&D institutes, corporations, start-ups, intermediaries etc. – but these are barely exploited at the level of structure, collaboration and exchange of knowledge.

In this context, the main challenge to address through the Urbact Transfer Mechanism, as stated by the team of the Municipality, is in the dis-connection in the ecosystem, the lack of a mediator to facilitate collaboration between all the actors and help them achieve their goals.

This challenge is in line with the Transferability study of the project[1], which identifies the lack of mediation within the ecosystem, the lack of an effective, experienced and respected person or body that steers the strategy building process, brings players together and mobilises them towards a longer-term common goal". Timişoara will be inspired by the city of Bilbao to enhance the collaboration between local actors: public authorities, universities, research bodies, organisations and the economic environment in order to develop a joint strategy and take effective actions to its implementation.

The Urban Agenda of the European Union is a common initiative of European cities and states, and of the European Commission, adopted in 2016 through the Amsterdam Pact. Its main objectives are improving the regulatory framework in the field of urban development, determining the needs, practices and responsibilities along with improving the financial resources for the purpose of implementing efficient interventions in urban areas. At the same time, it highlights the necessity for improving the European knowledge base and finding solutions that are adapted to the major challenges Europe is facing, such as compliance with the legislation regarding the protection of people and of personal data, and the advancement of an interconnected open data system at the level of the EU.

The implementation of the Urban Agenda of the EU and of the set of Urban Innovation Actions (UIA), with the use of related financing, is a priority of the Municipality of Timişoara as well. As the **capital city of the Western Region**, a region categorised as "modest innovator"[2], Timişoara makes sustained efforts to develop on all sides in order to become a city that is both smart and green. The transition won't be easy, as it requires knowledge-based development, the involvement of all local actors and the efficient utilisation of funds attracted from available finances. Urban development is necessary in all fields and Timişoara takes on the definition and implementation of sustainable solutions that would integrate the economic aspects with the social and environmental ones. By its industrial structure, richness of resources, educational

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[1] Willem van Widen, Transferability Study (AS-Transfer, September 2021)

[2] https://op.europa.eu/en/publication-detail/-/publication/ce38bc9d-5562-11e7-a5ca-01aa75ed71a1/language-en/format-PDF

infrastructure and well-qualified labour force, Timişoara offers proper conditions for **innovation based** development in almost all areas.

Industry 4.0 is taking off across Europe[3]. It introduces the concept of smart factory, similar to the concept of smart city, involving digital development of the SMEs. Nevertheless, it is not only about technological R&D, but about cultural mind-set, preparation and qualifications.

The institutional infrastructure of the city is centred on 3 primary pillars: (i) the institutions of local administration, (ii) universities and research institutions, and (iii) small and medium-sized enterprises and large companies. The move into knowledge-based development and a defined journey towards Industry 4.0 require a close relationship between the above mentioned pillars of the triple helix. Including the citizens, as partners and beneficiaries of the urban innovation process, leads us to the need of implementing a model of quadruple helix[4] for the interaction network of the public and private organisations. Moreover, because of the specific structure of the city, characterized also by the presence of large companies and the existence of specific structures such as clusters, the interactions to be developed within the ecosystem must be much more complex. Thus, the challenge is to address these interactions, to develop and enhance them, so that the ecosystem become ready to move to Industry 4.0.

1.2: THE POLICY RESPONSE

The development policies for the West Region are defined under the umbrella of the Regional Development Agency, in collaboration with public and private institutions, with clusters and innovation centres.
The main instrument that defines the medium- and long-term development of the West Region is The **Strategy for Regional Development** for the period 2021-2027. Based on it, two other documents were produced, The Plan for Regional Development of the Western Region and The Regional Strategy for Smart Specialisation RIS3. These documents outline the main orientation of the region in all development domains and serve as strategic guides for accessing European funds available through the Cohesion Policy.

At regional level, RIS3 defines the smart specialisation domains through the development of which the region aims to raise the bar for innovation, moving the region to the "moderate innovator" category, at realising technology transfers and at applying the results of research such that the Industry 4.0 revolution becomes a reality (Figure 1).

Implementation of strategies, plans and subsequent actions will be the result of interactions between businesses, politicians, the research community of the region, and the regional anchor point, the West Regional Development Agency.

Timişoara is considered to be the most important urban growth opportunity (pole) in the Banat area. At the same time, the municipality of Timişoara and the neighbouring localities have developed complex relations that cover a multitude of topics of common interest: public transport, jobs, supply of agricultural products, etc.

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[3] https://www.interregeurope.eu/40ready/

[4] Carayannis, E. G., and D. F. J. Campbell. 2009. "Mode 3' and 'Quadruple Helix': Toward a 21st Century Fractal Innovation Ecosystem." *International Journal of Technology Management* 46(3/4): 201–234

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In this context, the road to Industry 4.0 of the Municipality of Timișoara ecosystem can't be separated from regional strategies and policies. Integrated in the region, Timișoara developed its own strategic documents, sectorial or local.

Figure 1 – Smart specialisation in West Region
Source: *https://adrvest.ro/wp-content/uploads/2021/01/Strategia-Regionala-de-Specializare-Inteligenta-a-Regiunii-Vest-2021-2027-RIS3-.pdf*

The main strategy and policy documents regarding the urban development of Timișoara are in different phases of design, publication and implementation.

The **Integrated Urban Development Strategy** (SIDU) of the Timișoara Growth Pole refers to the 21 adjacent localities included in the growth pole, with Timișoara as its central point. SIDU is the basis for the most important resource allocation decisions available at the level of the communities involved. In this respect, its value as a public policy document depends essentially on how all stakeholders perceive it as a relevant benchmark for community development.

The city took advantage of the expertise offered by the European Commission through the Intelligent Cities Challenge initiative and assessed its digital maturity, identified solutions for growing and going towards being smart. A set of useful KPIs were identified in order to measure the city performance, the maturity of the solutions proposed by the ICC team and the progress in their implementation. The main lesson learned from ICC initiative is that the city has the capability to identify and implement a set of activities that will serve to become smart and green.

The **Smart City and Digital Transformation Strategy Timișoara 2021-2027** is the main document that defines the focus of urban development for the period 2021-2027. Based on a large consultation of the companies and organisations regarding their needs (Figure 2), the document[5] defines 7 ambitions to be addressed on the road to become a real smart city:

(i) Every citizen has a voice;
(ii) The city for all;
(iii) Vibrant innovation ecosystem;
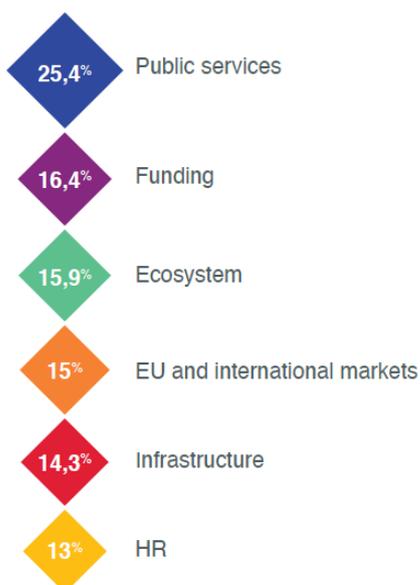
Figure 2 – Categories of needs identified by enterprises and organisations

[5] The Smart City and Digital Transformation Strategy Timișoara 2021-2027 (presentation 27.01.2022)

(iv)   Timișoara: an attractive city for international talent;

(v)   The sustainable city;

(vi)   Smart City is Fun City;

(vii)   Smart and impactful public investments.

Even if these documents don't address clearly the move to Industry 4.0, the policies are formulated for an integrated development of the city, where the actors will become more technological, smarter and more digital.

As *innovation* and *ecosystem* are among the main concepts included in almost all existing strategies, the "Vibrant innovative ecosystem" was chosen as the ambition that is able to boost the development of the city to become more innovative, smart and green. This will be the strategic challenge addressed by the URBACT Transfer Mechanism (UTM), and the Investment Plan that will be drawn-up should be the basis for obtaining public or private funds for its implementation.

SECTION 2: The Investment Proposal

2.1: THE BACKGROUND OF THE PROPOSAL

Given the infrastructure of the city and the existing policies or those in the process of being developed, the administration of the Municipality of Timișoara decided to look for European cities with a similar structure that obtained remarkable results in urban development and apply the methods of such cities.

The URBACT UTM project offers those good practices that Timișoara needs and, through the adaptation and transfer of those good practises, the city will make important steps in the direction of Industry 4.0 policies. **AS-FABRIK, implemented in the City of Bilbao**, has 3 key elements[6]: 1) talent ecosystem dealing with the human resources in terms of training (technical, business, administration), 2) start-up boosting dealing with the establishment and development of new businesses and 3) network brokering, that deals with partnership brokering & networking actions between the main stakeholders in the ecosystem. This last aspect of the project was chosen to be transferred to Timisoara, through the Investment Plan created by the Municipality in collaboration with the Urbact Local Group.

As identified from the very beginning, in Timisoara the main ambition of the city is to build a vibrant **innovation ecosystem** that is able to drive its actors towards Industry 4.0. The challenge addressed by the project is to build / improve the connections between the actors in the economic ecosystem, to help partnership creation and boost innovation. The target is to enhance the partnering activity between all kinds of players: companies, universities, research institutes and public bodies. AS-FABRIK has shown that it is possible to connect players that otherwise might not meet and that new partnerships are needed to foster competitiveness. Timisoara wants to learn from Bilbao how to explore and develop new partnerships in a systematic way: first, by looking at how existing firms could combine their complementary resources and team up, and second, by analysing which type of knowledge/expertise is still missing and could be developed.

The innovative workshops organized within AS-TRANSFER have shown that partnership brokering is not an easy task. From the lessons learnt, the following mainly apply to Timisoara: 1) the process is time consuming, hence expensive 2) it relies strongly on the credibility of the actor(s) who organises the process and 3) the need of public funds to support the brokering. Some of the companies - SMEs, start-ups or big firms - wish to participate in the partnering process, as they see an opportunity to improve the business.

The governance of AS-FABRIK is in the hands of Mondragon University, that a large local player, with strong interest in the further development of knowledge-intensive services and Industry 4.0. The governance of the transferred project is assigned to the Municipality of Timisoara, through INNO-TM. The City is the player that has the power to bring actors together and to link them in a well organised ecosystem. INNO-TM aims at offering services to the ecosystem in order to boost innovation and Industry 4.0.

The Urbact Local Group (ULG) is organised by the Municipality of Timișoara and is made up of representatives of the City, universities, companies, associations and professionals in different fields. At the first meeting of ULG, after presenting the project and its purpose, a brainstorming-like activity took

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[6] Willem van Widen, Transferability Study (AS-Transfer, September 2021)

place, with the purpose of defining the investment proposal, the required objective to be assumed by the Municipality of Timişoara regarding the transfer of good practises. During the brainstorming, the participants drew-up a map of the main actors that are involved in the city development and clearly stated the challenge to be addressed: the dis-connections in the ecosystem and the lack of a mediator to facilitate collaboration between all the players. Thus, our goal is to build and operationalize an actor capable and willing to act as linchpin/mediator/ facilitator in order to develop and implement successful joint projects and activities to the benefit of the citizens and with their co-operation. The investment plan will be prepared for Capacity Boosting of the Innovation Ecosystem Department in Timişoara (INNO-TM).

Apart from innovation as the guiding thread of the ecosystem, our approach to the project's goal is highly innovative: the resulting department is planned to be a real link between all the actors identified in the ecosystem and will offer integrated services to all of them. Until now, in Timişoara, no organisation has set out to meet such an ambition: to truly build and operationalize a vibrant innovation ecosystem.

2.2: OUR STARTING POINT

The starting point was identified and the definition of the problem was refined during the first two meetings of the ULG, through presentations and facilitated brainstorming sessions. A **draft mapping of the ecosystem** revealed the following:

(i)   There are several public and private universities, but the ULG considered that the two important public universities: Politehnica University Timişoara and West University Timişoara, competing with each other. There are strong relations between universities and the business sector (corporations, SMEs, even start-ups), since most students will eventually be hired by these companies. Analysing these actors, it turned out that there is a definite need to improve relations between the two universities and focus on cooperation;

(ii) The West Regional Development Agency (WRDA) has an essential role in the ecosystem, having strong relations with all the actors, especially with public institutions. The main activities of West RDA are: management of EU structural funds, by means of the Regional Operational Programme and former Sector Operational Programme for Economic Competitiveness; regional planning and programming of the region's economic and social development in partnership with regional stakeholders; leadership of the Ro-Boost SMEs Consortium (within Enterprises Europe Network); clustering and innovation; internationalisation, regional marketing and promotion of investments; promoting the West Region nationally and internationally; attracting foreign direct investment; and participating in projects with a major impact on the regional development, like cluster promotion or business support services.

(iii) Other members of the ecosystem are: public institutions, including administration (Municipality, County Council) and other local/regional organisations (e.g. Chamber of Commerce). There are strong relations between the Municipality and subordinate structures, such as Incuboxx and CERC (Regional Centre for Skills and Supplier Development in the Automotive Sector), but there is a great need to further improve and empower these structures and the relationships between them. On the other hand, there are weak relations between other actors, which could cause problems in the future because cooperation is essential to the success of a joint initiative or project.

The Urbact Local Group made further analysis and refined the current situation of the ecosystem. According to this analysis and in the framework of the Transferability study[7], the main elements of our starting point are:

- The public - private collaboration is anything but smooth. The main problem is the lack of mutual trust between the two sectors, which makes common projects very difficult;
- The education offer is mainly theoretical and, for getting properly skilled staff, the companies hire students for part-time activities as a kind of non-official internship. The Romanian education system is still bureaucratic;
- The pay gap between the public sector and the private sector makes the best graduates migrate towards the industry. Thus, the universities are not able to retain the research talent that could increase the quality of education;
- A large part of the industry (estimated 66%) are multinationals, with good offers in terms of salaries, jobs and work environment, but they often keep research and innovation as a task of the mother company (mostly located outside Romania).
- The locally-grown companies operate with a lower level of technology and are somehow suffocated by the large companies. Yet, there is an emerging number of local companies that offer advanced services, based on a relevant business culture. Among these, a special role is played by the start-ups, mostly microfirms in the field of IT, software, AI, automotive parts, smart houses or robotics, supplying to multinationals.
- The local organisations, such as clusters or other associations, give support in certain projects but they don't have the "big-picture" which is necessary to bring together the whole ecosystem and boost its development.

Nevertheless, there are local and regional initiatives that aim at supporting the different actors of the ecosystem towards real collaboration, mostly with funding opportunities and know-how for advanced services and innovation, catalysts for Industry 4.0. Such initiatives are:

- Tehimpuls Association, the Regional Centre for Innovation and Technology Transfer, an important intermediary between research, innovation and companies, offering services for internationalisation, technological audits or consultancy;
- Incuboxx, an infrastructure owned and managed by the Municipality, that functions as business incubator mainly for microfirms and SMEs in the field of ICT;
- CERC, the Regional Centre for Skills and Supplier Development in the Automotive Sector, owned and managed by the Municipality, mainly offering training and infrastructure on a pay-per-use basis;
- Clusters in the fields of IT&C, Automotives, and Renewable energy, supporting the collaboration between the member companies and organisations;
- Applications made by the Municipality or different associations for obtaining funds in order to build Digital innovation hubs, Centres of excellence or similar tools for supporting collaboration.

At this moment, the main **barriers** identified by the ULG in the attempt to create an effective local innovation ecosystem and make it work to boost Industry 4.0 in the benefit of the city and the citizens, are:

- the bureaucracy within public institutions and over-regulation in the legal environment, including fund management;

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[7] Willem van Widen, Transferability Study (As-Transfer, September 2021)

- the reluctance to change in many organisations, including the fear of doing things in a new way;
- the low level of trust between public and private organisations (with certain exceptions);
- the low flexibility of the education system in Romania, in general, and in the local universities, in particular;
- the lack of resources and / or lack of knowledge to access existing funding;
- the low level of wages in certain smart specialisation sectors.

2.3: THE ADAPTED VERSION OF THE UIA PROJECT

The practice chosen to be transferred from the City of Bilbao is related to the **Partnership brokering & networking** actions between the main stakeholders. This action aims to foster new types of collaboration, the main goal that was assumed also by Timisoara.

The project team was inspired by the lesson learnt and results obtained by Bilbao. Actions will be taken in all the phases of the partnership development that are identified in AS-TRANSFER: design/ scoping/ create/ manage/ sustain[8]. Inspired by the expertise of Bilbao, the Urbact Local Group became aware that collaboration is not a spontaneous process. It had to be created and co-created by all the actors within the ecosystem as a whole. The **INNO-TM** should be created to gain the ability to transform interactions and transactions that are already in place between the different entities in the ecosystem into collaboration practises and long-term partnerships. Moreover, the aim is to guide these partnerships towards the concept of innovation and its realisation.

After defining the goal and the actors (Figure 3), there is the need for structuring the process of creating partnerships, to support their strategic dimension and to manage them during their entire life-cycle.
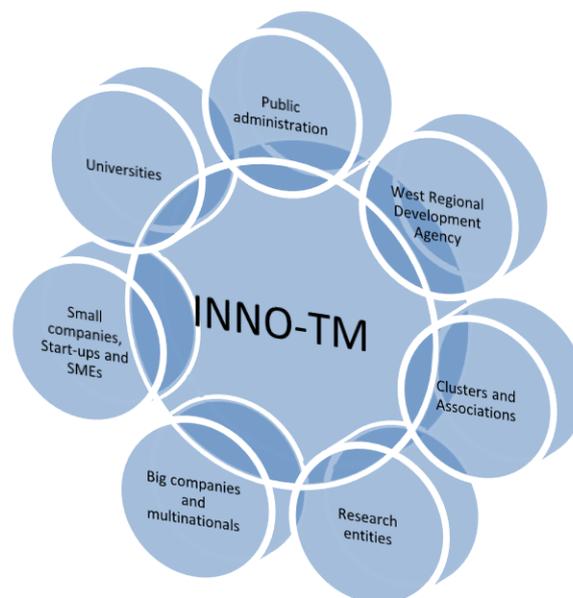
Figure 3 - The actors that are part of the innovation ecosystem in Timișoara

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[8] Nekane Morales López, As-Transfer Partnership Brokering (ppt)

The 4Ws Tool[9] was used for further framing the problem, describing it and refining the interpretation. The answers to the question gathered in the four categories, as in Figure 4, helped to better understand the problem to be solved, in which manner our project will be useful for the City and, later, to formulate the Value proposition for the innovation project.

Figure 4 – The 4 Ws
Source: *https://urbact.eu/4ws*

The answers were given during the first facilitated brainstorming of the ULG. The following statements summarise the 4 Ws for our Investment project: Capacity Boosting of the Innovation Ecosystem Department in Timişoara (INNO-TM)

WHO:
- All the actors in the ecosystem (Figure 3) face the problem of the lack of a person or a body that brings players together, manages the innovation strategy and boosts its implementation.
- The direct beneficiary of the Investment Plan will be the Municipality of Timişoara where INNO-TM will be located and organised to supply the appropriate services to the ecosystem. Later, the winners of the implementation of the project will be the organisations that benefit from the newly designed services while the ultimate beneficiaries will be the City and the citizens.
- The problem came up repeatedly in the discussion among the different stakeholders, it is confirmed by the actors in the ecosystem and is validated by the ULG.

WHAT:
- Working in the socio-economic environment of Timişoara, all the members of ULG agree that the ecosystem is missing an organisation capable of acting as moderator, linking the actors, supplying them with services and building partnerships.
- The lack of a body to facilitate partnership building was openly stated by various actors in the ecosystem and it is proved by the weak relationships between them, by the low level of collaboration and knowledge they have about each other.
- In the case of approaching complex innovation projects, even if there is appetite for innovation, deficiencies are observed in the culture of innovation and the professional training of the talent within the ecosystem. For this reason, there is a necessity for focusing on innovation, but also on education regarding an effective transition to Industry 4.0.

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[9] https://urbact.eu/4ws

WHERE:
- The need for a linchpin or partnership facilitator for the ecosystem is experienced in almost all situations that are based on collaboration: defining policies, training the labour force, writing applications for funding, designing local supply chains, communicating with the local authorities, marketing activities and local branding.
- The problem is observed in various contexts, mainly when one organisation, either public or private, takes the initiative to boost the production or services, to look for financing or co-operate with other organisations from inside or outside of the ecosystem.

WHY:
- The problem is worth solving for the benefit of all the stakeholders, the City and the citizens. A better structure of the innovation ecosystem, smooth partnership creation and carefully designed appropriate services will lead to improving the economic environment, to making the city more liveable, smart and green.
- Creating, operationalizing and boosting the capacity of INNO-TM is needed now, when the innovation ecosystem exists with a certain level of maturity, it is becoming more and more self-aware and needs support for further development.
- As Timişoara is the largest city in the West Region, its mission is to reinvent itself through innovation and education, boost the development in the region towards increasing the GDP to be in line with the most developed regions in Romania.

2.4: THE INTEGRATED APPROACH AND THE PARTICIPATIVE PROCESS

The Municipality of Timişoara decided to embrace the URBACT methodology and to use the capacity of transferring the expertise in partnership brokering. The goal is to create INNO-TM and boost its capacity for structuring the innovation ecosystem and offering services for the benefit of the local actors.

The Municipality of Timişoara, as a partner in the AS-Transfer project, appointed a project manager in charge of organising the ULG and facilitating its activity. From the very beginning, the participative approach was put in place as the main actors of the ecosystem were invited to be part of the ULG, thus creating and co-creating the INNO-TM for themselves, their organisations, the city and the citizens.

The Investment Plan is the result of the **participative process** in which, in addition to the ULG members, experts and professionals are involved, who bring their expertise gained in the economic environment of Timişoara. The meetings of the ULG are organised by the Municipality, online or onsite, according to the restrictions due to the Sars-Cov-2 pandemic.

The ULG is made up of representatives of the Municipality, Politehnica University of Timişoara, companies (Continental Corporation, SafeFleet Telematics, Nokia), associations: (Incuboxx, CERC Timişoara), and professionals (engineers). A consulting company, being itself part of the ecosystem, helps the work of ULG with both facilitating some meetings of the group and giving support in drawing-up the Investment Plan. The group will be extended by involving other actors. The invitation is extended to: West University of Timişoara (UVT), the Chamber of Commerce Timişoara (CCIAT), clusters (IT&C), associations (Banat IT, students' entrepreneurial associations), further companies and professionals, representatives of start-ups and NGOs, and representatives of the localities from the metropolitan area.

An important actor of the ecosystem is the Regional Development Agency (ADR Vest), but they won't be invited to be a member of ULG because it was considered a conflict of interest: ADR Vest is the main financier in the region and the management authority for many national and EU programmes. Thereby, its participation in drawing up the Investment Plan could raise questions regarding impartiality.

The sectoral focus of INNO-TM, its structure and organisation, services, the funding resources, the targets, goals and benefits will all be defined through the ULG meetings, through **facilitated activities** like brainstorming, mindmapping, Gopp, World Café, Open Space. The results of these activities are processed by the core team of the Municipality, supported by innovation experts, and will be the backbone of the new INNO-TM and the Investment Plan drawn for it.

SECTION 3: The Adapted Innovation Project

3.1: THE VALUE PROPOSITION

The Value Proposition of the Investment Plan drawn by the Municipality of Timişoara:

In this Investment Plan we propose to set up a specialised structure within the City Hall, with trained staff that will act as connectors within the innovation ecosystem in Timişoara, and be able to engage the actors in partnerships and joint projects, to empower relationships within the quadruple helix made up of public institutions, business, universities and research bodies and civil society. The companies will benefit from dedicated services to enhance public-private collaboration and boost Industry 4.0, the universities will have the opportunity to partner with other players (companies and public bodies) in order to implement R&D projects, while the whole city will benefit in terms of increasing competitiveness and innovation capacity, raising GDP and the standard of living of the citizens. The structure supporting the innovation ecosystem will be ready and operating with an appropriate financial background by the end of 2023.

3.2: THE WORKPLAN

As discussed in the ULG, after creating the INNO-TM, its work plan will be focused on putting together the existing organisations and their resources, making them work and collaborate in a real, innovation-oriented ecosystem for the benefit of the city and the citizens. The planned actions will address all the key actors, as presented in Figure 5.
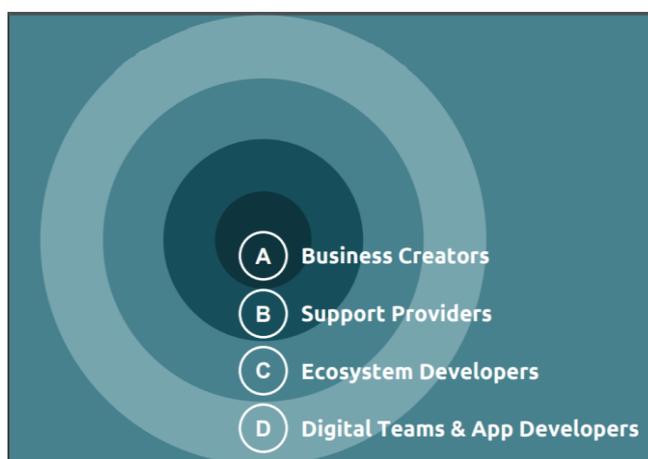
Figure 5 – Ecosystem key actor segment[10]

3.2.1: Defining the services for the start-up and innovation ecosystem in Timisoara

The discussion topics for the first four ULG meetings are consistent with the holistic vision of the ecosystem's development (Figure 6) and lists particularities of the local innovation ecosystem that will be addressed by the Investment Plan.

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[10] Source: https://www.startupcommons.org/uploads/2/1/0/9/21090978/ecosystem_key_actor_segments.pdf

The facilitated questioning and brainstorming within the ULG, using a combination of presentation, discussions and the Mentimeter tool (https://www.mentimeter.com), revealed the sectoral focus of the INNO-TM and the services it should provide. The group agreed that the entire activity of INNO-TM should be centred on innovation and education, and its purpose should be the transition to Industry 4.0.
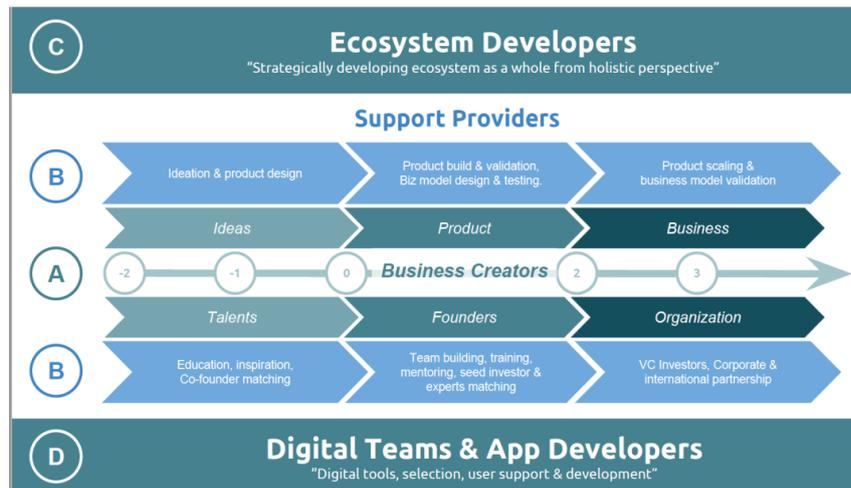
Figure 6 – A holistic view of the ecosystem's development[11]

- The sectoral focus of the activity of INNO-TM will be aligned with the intelligent specialisation sectors identified in the region. The facilitated activity with the members of the ULG pointed out that the sectoral focus of INNO-TM should be: education (with 28% weight in the wordcloud voting), green and efficient energy (20%), IT&C (20%), automotives (17%), followed by equal percentage obtained by the sectors of producer industry, culture and creation, health and quality of life.
- All the actors of the ecosystem will be involved in the implementation of the Investment Plan: universities (35% weight in wordcloud), private companies and firms (30%), funding bodies (20%), the Chamber of Commerce, clusters and other organisations (15%).
- The main services INNO-TM will offer the actors in the ecosystem and stakeholders are: 1. mapping of organisations, knowledge and resources, 2. One stop shop for information and partnership brokering, 3. Partnership building among the local ecosystem actors, 4. Organizing events, 5. Promoting local success stories within the ecosystem, 6. Web presence & social media.
- The participants evaluated these services regarding importance and feasibility, arriving to the map in Figure 7.

Figure 7 – The Importance vs Feasibility rating for the services

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[11] Source: https://www.startupcommons.org/uploads/2/1/0/9/21090978/ecosystem_key_actor_segments.pdf

- In the context of Industry 4.0, the technologies relevant for the local ecosystem were: IoT (50% of the answers), Smart automation (22%), Robotics (10%), Additive manufacturing (9%), Big Data (9%).
- The positive results of the implementation of the Investment Plan will be measured by key performance indicators (KPIs). The value of these will be weighed with the importance that ULG considers relevant for the local innovation ecosystem: Number of new start-ups, Number of exporting companies, Number of innovation partnerships between local actors, Number of innovative services and products, Number of research and testing labs open to the local companies, Number of business accelerators and incubators, Number of incentives for entrepreneurship and innovation (Figure 8).
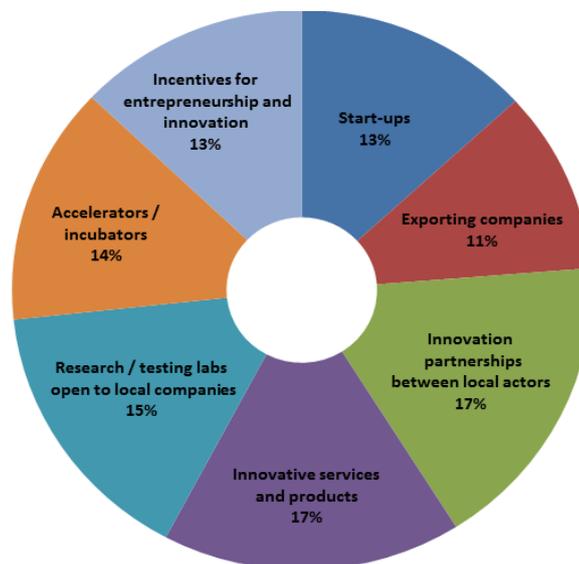
Figure 8 – The importance of the result indicators (first draft)

3.2.2: Refining the services for INNO-TM

After discussions on the **good practices** of organizing innovation-based ecosystems with the support of various EU projects, the members of the ULG took part in a **survey** about their needs and offerings, possible contributions to the implementation of the Investment Plan for INNO-TM. The data are aggregated and presented to the group. A new round of facilitated discussion revealed a slightly modified structure for the proposed services (Table 1) along with a set of ideas to be considered when building the investment plan.

Table 1 – The new structure of the services

No	The services	Explanation
1	Mapping	Mapping of the local start-up and innovation ecosystem, as well as creating the mechanism for joint use of existing infrastructures (labs, testing facilities etc.)
2	Partnership building	Partnership building among the actors in the ecosystem, and facilitation of partnerships with international companies / ecosystems e.g. attracting technology based companies from abroad, supporting local companies to participate in international exhibitions and networks

3	One-stop-shop	One-stop-shop for ecosystem actors and newcomers – on-premises and digital platform, communication, web and social media presence
4	Proof of concept	Validation of innovative ideas, both in terms of technology and business readiness levels
5	Hosting of events	Organizing and hosting events e.g. create an "own brand" event of the Timisoara ecosystem, targeted to entrepreneurs and innovators from all over the world, host an online international elevator pitch event
6	Promoting success stories	Promotion of success stories from the local ecosystem

3.2.3: Where are we now and where do we want to go

A second survey using the same tool, revealed the state of the art, the main drivers, technologies and opportunities related to Industry 4.0 in Timisoara. Aiming to identify the present stage of adoption of Industry 4.0 in Timisoara, the technologies and their adoption in the ecosystem are synthetized in the charts in Figure 9 and Figure 10.
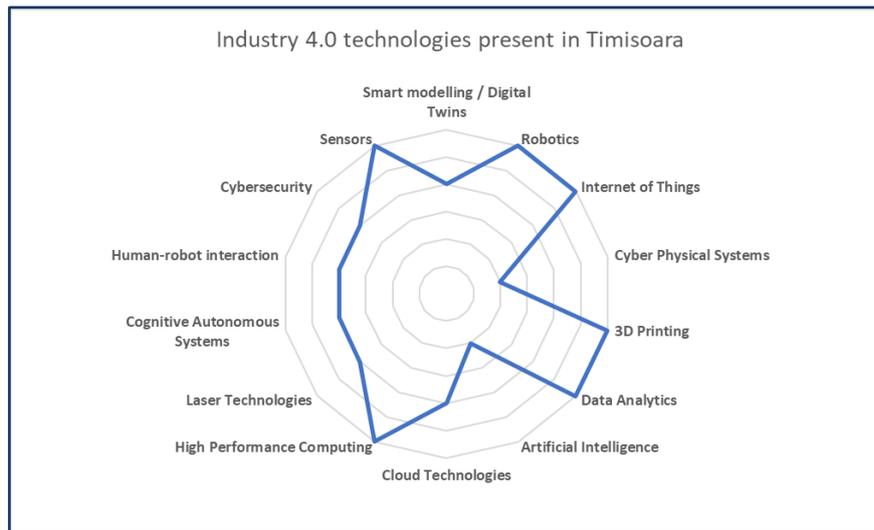

Figure 9 – The presence of Industry 4.0 technologies in Timisoara
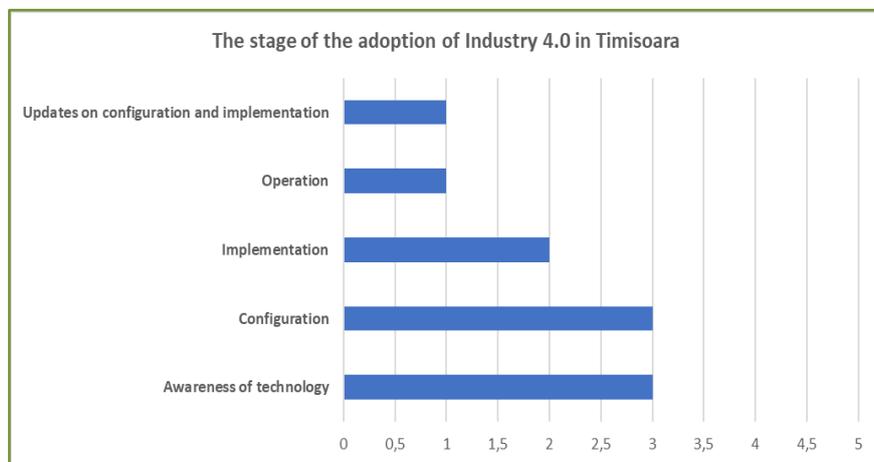
Figure 10 – The stage of adoption of the technologies, on a 1 – 5 scale

The main sectors that deal with Industry 4.0 technologies are: Automotive, Computer & software, Research & Development, Energy and Chemical.

Going further, the following considerations came out from the facilitated brainstorming and the results of the surveys:

- The local ecosystem is primarily supporting early-stage companies, and not growth / scaling stage
- The top 3 needs identified belong to the category of "intangibles" (i.e. access to joint communication platform, promotion of success stories from the local ecosystem, and access to international partners and networks)
- Weak point of the ecosystem was identified to be: corporations / universities do not open their labs and facilities to start-ups / SMEs.

In conclusion: in Timisoara we have a fragmented and underperforming industry 4.0 ecosystem that has to be improved. Our goal is to develop an integrated and innovation-rich industry 4.0 ecosystem. As financed by the EC through the URBACT program, the Investment Plan will be the primary tool to achieve this goal.

When designing the Investment Plan, the ULG should take in consideration the drivers of Industry 4.0 (according to ATKearney) and the degree to which they influence the ecosystem in Timisoara. Figure 11 presents the results within the same survey – the participants were asked to estimate the influence of the drivers on the ecosystem, on a scale from 1 to 5. The chart presents the average of the given marks.
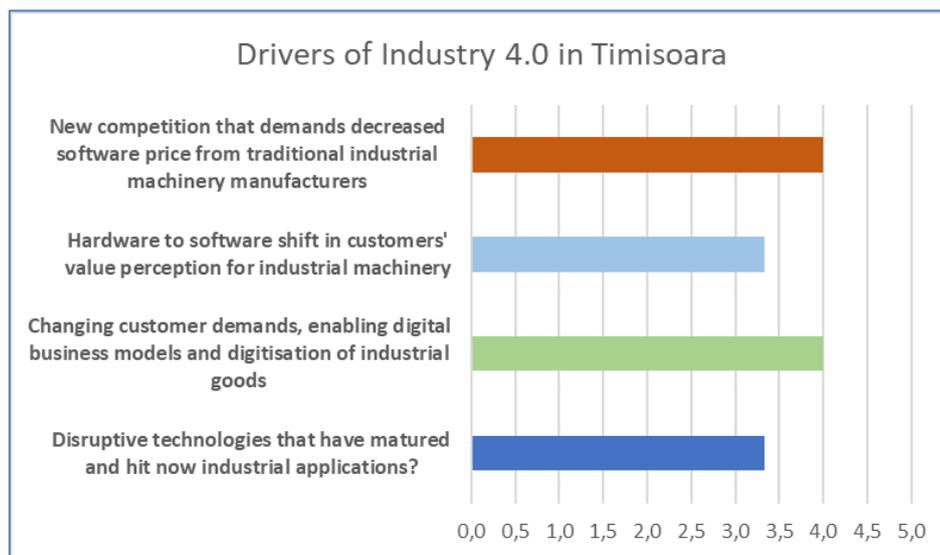
Figure 11 – The drivers of Industry 4.0 to be considered when designing the IP

The participants to the survey, considered that all the 6 services (Mapping, Partnership building, One-stop-shop, Proof of concept, Hosting of events, Promoting success stories) should have an equally balanced uptake of Industry 4.0 in the INNO-TM Investment Plan. Furthermore:

- It is crucial to focus on the input and output of the SME category within local ecosystem players
- The support services have to be based on needs analysis of the client segments (e.g. start-up, SME, scaleup etc.), as well as the support services' performance will be measured by clear and specific KPIs
- The rollout of the Investment Plan implies a gradual implementation (calendar)
- Timisoara should target international key players and invite them to invest

- The services must have a client-centric approach, with precise client segmentation (start-ups, SMEs, scaleup, innovators etc.)

3.2.4: The workplan and risk analysis

During the **on-site meeting** in Timisoara, the ULG was supported by the project partners in a breakout session on the Portfolio of services, using a Process strategy chessboard[12]. The facilitated activity selected the three main **Specific Objectives** of the ecosystem to be achieved through implementing the Investment Plan:

- (SO1): Match level of connectedness to the benchmarked high-performance ecosystem
- (SO2): Boost partnerships between the stakeholders within the ecosystem, conducive to innovative products, services, processes and business models
- (SO3): Encourage, nurture and promote scalable start-ups

For these specific objectives, the brainstorming identified activities leading to idea generation, Idea selection, Development of projects and Continuous improvement. Then, the contribution of each service to the achievement of these specific objectives was estimated.

In correlation with the Specific Objectives, the performance measurement of the Investment Plan encompasses the following underlined intended results. These will be translated in **result indicators**, correlated with a baseline value, the value at 12 month and the value at 24 month (Table 12)

(R1) 150% increase in number of innovative partnerships between stakeholders within the local ecosystem

(R2) 200% increase in number of local start-ups

(R3) 50% increase in number of innovative products, services, processes and business models, generated at local level

(R4) 200% increase in number of research and innovation infrastructures (labs, equipment and testing facilities within universities, corporates, R&D institutes), open for use by local companies

The workplan is the result of all the activities of **creating and co-creating** the Investment Plan, of interpreting the answers to the surveys and of informal interaction between ULG members and the actors in the ecosystem. The workplan assumes that all the six services will be considered from the beginning and the project schedule is planned for **24 months** and the services will be also supplied after the conclusion of the project. The workplan is presented in the Table 2 – Table7.

Table2 – Workplan for the Mapping

MAPPING			Contribution to the Specific Objectives:	(SO1) 10%	(SO2) 20%	(SO3) 20%
No.	Activity	Time frame (month)	Risks	Risk treatment		
Map1	Identify all the relevant actors / stakeholders – database research	mo1 – mo4	Not all the relevant actors are identified The staff performing the data collection is	Designing and setting-up an adequate search methodology Involving sufficient staff		

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[12] IMP³ROVE Partner adaptation

No.	Activity	Time frame	Risks	Risk treatment
			overloaded or not properly trained	Organising the training of the staff
Map2	Interview of the actors / stakeholder regarding the services offered, needs and expectations	mo3 – mo10, (continuously, see the Gantt chart)	Not all the actors can be contacted Not all the actors agree to be the interviewed The collected data is incomplete, incorrect or not relevant. The staff performing the data collection is overloaded or not properly trained	Using alternative sources for obtaining updated contact data Explaining the goals / benefits of the mapping Organising awareness raising events Revisiting the interviewees and completing the data Involving sufficient staff Organising the training of the staff
Map3	Building a database with the actors, relevant data, needs, offerings and possible shared resources	mo8 – mo12	The collected data is not properly structured The database is difficult to use There are mistakes, overlapping or bottlenecks when populating the database	Data cleaning Revisiting the interviewees Interdisciplinary collaboration with the computer specialists building the database Training the staff on the use of the computer tools
Map4	Drawing a Catalogue of shared resources	mo10 – mo12	Not all the resources are included in the catalogue Not all the actors / stakeholders are willing to share to available resources	Explaining the goals / benefits of the mapping Organising awareness raising events Revisiting the interviewees
Map5	Updating continuously the data and the database	mo5 – mo24	The data is not updated regularly	Designing and putting in place an adequate update methodology for: -Identifying new actors -Revisiting the actors -Operating on the database Involving sufficient staff Organising awareness raising and the training of the staff

Table3 – Workplan for the Partnership building

PARTNERSHIP BUILDING		Contribution to the Specific Objectives:	(SO1) 40%	(SO2) 25%	(SO3) 20%
No.	Activity	Time frame (month)	Risks	Risk treatment	

PB1	Go to fairs and expositions / Identifying the adequate events and organising company missions	mo6 – mo36 depending on the events' calendar	Fail to identify the relevant fairs or expositions Companies have not enough budget for fees and travel expenses Companies consider that participating to fairs is too expensive vs the benefits	Cooperating with specialised players, e.g. Chamber of Commerce and the organizers of fairs Awareness raising talks at companies Identifying alternative resources, e.g. sponsors, projects or re-budgeting Training of the staff that will organize the mission and support the companies After a company mission, organizing a follow-up event with other actors
PB2	Identifying free spaces / incubators / large companies willing to host partner meeting	mo3 – mo12	There are only a few adequate spaces / available location The identified spaces are not in good condition or are not properly equipped	Cooperating with local actors to identify proper spaces Budgeting a minimum equipment used in the meetings, e.g. laptop, video-audio device, etc Identifying resources to improve the condition of the spaces
PB3	Organising speed dating with /between different companies, including start-ups	mo6 – mo24 (monthly, with different companies)	Fail to identify the relevant actors / stakeholders Not all the invited actors accept to participate	Cooperating with experienced companies and support organizations Awareness raising by explaining the goals / benefits of speed dating Training of the staff that supports the companies during the event
PB4	Organising meetings and brainstorming sessions with various type of actors, including universities, research entities, start-ups, SMEs, large companies and support entities	mo3 – mo24 6/year	The subject of the meeting is not relevant for the ecosystem or for the stakeholders Not all the actors / stakeholders are willing to participate Lack of funding for such meetings	Cooperating with the actors within the ecosystem for choosing the most relevant subjects for the meetings Awareness raising by explaining the goals / benefits of speed dating Cooperate with professional facilitators and / or training own facilitators Identify adequate public or private resources

PB5	Defining and implementing a Partnership building pilot project	mo12 – mo18	Low interest between the actors of the ecosystem Lack of funding for partnership building	Organising facilitated activities for awareness raising Identifying a highly motivating partnership goal Identifying and applying for public or private funding
PB6	Supporting partnership expansion and creation of strategic alliances	mo18 – mo24	Low interest and lack of time between the actors for extending partnerships Fail to work with players from outside of the ecosystem Lack of funding for large and sustainable partnerships	Identifying a highly motivating partnership structure and cooperation goal Identifying and applying for public or private funding

<p align="right">Table4 – Workplan for the One-stop-shop</p>

ONE-STOP-SHOP			Contribution to the Specific Objectives:	(SO1) 20%	(SO2) 15%	(SO3) 15%
No.	**Activity**	**Time frame (month)**	**Risks**	**Risk treatment**		
Oss1	Defining the role of the One-stop-shop and validating it with the actors / stakeholder in the ecosystem	mo4 – mo7	Fail to identify the relevant goals/ services for the One-stop-shop structure Confusing the definition of One-stop-shop with other structures, such as Digital Innovation Hub or Technology Transfer entity	Cooperating with all type of actors / stakeholders Organizing facilitated activities for improving and validating the structure and the services Cooperate with other structures (e.g. DIH) to avoid the overlapping		
Oss2	Organizing and put in operation of the One-stop-shop, including among others *Build validation capabilities and *Support for IP protection	mo9 – mo11 mo15 – mo18	Lack of funding Fail to identify an adequate location Lack of properly trained staff	Cooperating with local actors to identify a proper location Identifying and applying for public or private funding Budgeting the salary of the staff and the training Cooperating with other actors / support organizations to acquire or bring in all the needed competences		
Oss3	Including new services like *Business basics and modelling support and *Scale-up support	mo22 – mo24	Lack of properly trained staff Lack of funding	Cooperating with other actors / support organizations to acquire		

			or bring in all the needed competences Identifying and applying for public or private funding

PROOF OF CONCEPT		Contribution to the Specific Objectives:	(SO1) 10%	(SO2) 5%	(SO3) 0%
No.	Activity	Time frame (month)	Risks	Risk treatment	
Poc1	Support for assessing TRL and BRL	mo12 – mo14	Fail to perform a correct assessment Lack of properly trained staff Lack of funding	Cooperating with other actors / companies or research bodies to acquire or bring in all the needed competences Identifying and applying for public or private funding	
Poc2	Select and support the building of Minimum viable products and their market validation	mo18 – mo24	Fail to identify the product with the best growing potential Lack of properly trained staff Lack of funding	Supporting professionals from the ecosystem of outside of it for consultancy and validation of the concepts and/or products Cooperating with other actors / companies or research bodies to acquire or bring in all the needed competences Identifying and applying for public or private funding	

EVENTS		Contribution to the Specific Objectives:	(SO1) 15%	(SO2) 20%	(SO3) 30%
No.	Activity	Time frame (month)	Risks	Risk treatment	
Ev1	Defining and organizing a "brand" event for Timisoara city	mo2 – mo4 mo7	Fail to identify the right event for Timisoara brand Lack of knowledge and organizing skills Lack of funding	Organizing at least two facilitated activities for defining the "brad" Cooperating with other actors, specialised and/or experienced in organizing events. Identifying and applying for public or private funding	

No.	Activity	Time frame	Risks	Risk treatment
Ev2	Organizing networking and targeted events, e.g. *Hackathons, *Start-up weekend	mo5, mo12, mo16, mo23	Fail to identify the right target group Many of interested potential participants will not attend the event Lack of funding Lack of properly trained staff The event will not reach its goal to contribute to the development of the ecosystem	Training or hiring a person with event organizing knowledge / skills / expertise and/or Cooperating with other actors, specialised and/or experienced in organizing events. Carefully select the topics and the target group of the event Conducting an adequate marketing and advertising campaign Identifying and applying for public or private funding Enforce a calendar and regularity to each type of events Organize a "debriefing" and follow-up after each event, to receive feed-back from the participant and other stakeholders.
Ev3	Organizing business focused events, like *Pitch days, *Investor lounge, *Dragon's den sessions, *Award events	mo16, mo20, mo24	Fail to identify the right target group Lack of funding Lack of properly trained staff for organizing or facilitating the event	Carefully select the topics and the target group of the event Identifying and applying for public or private funding Cooperating with other actors / professionals to acquire or bring in all the needed competences

Table7 – Workplan for the Promoting of success stories

SUCCESS STORIES		Contribution to the Specific Objectives:	(SO1) 5%	(SO2) 15%	(SO3) 15%
No.	Activity	Time frame (month)	Risks	Risk treatment	
Sto1	Gather the case studies, build a "database" with local success stories	mo2 – mo24	Fail to identify the most relevant success stories in the ecosystem The staff performing the data collection is overloaded or not properly trained	Designing and putting in place an adequate update methodology Besides the official information, rely on personal relationships and informal discussions withing the ecosystem	

				Keep record of all potential good practice Allocate sufficient staff, with good knowledge of the ecosystem
Sto2	Select the best success stories and role models	mo2, mo7, mo11, mo16	Fail to select the success stories that are most relevant for the ecosystem	Designing a methodology and defining adequate criteria for selection Cooperate with other actors / professionals during the selection process
Sto3	Promote the selected stories through newsletters, social-media, as best practice presented at events or by organizing national or international thematic events	mo3 -monthly mo5, mo12, mo16, mo23	Fail to identify the right promotion type for each success story Lack of properly trained staff for the design and creation of the promotion material	Training or hiring a person with knowledge and expertise in design and/or promotion Cooperating with specialists and/or professionals, experienced in marketing and promotion activities Enforce a calendar and regularity for the dissemination and promotion activity, e.g. regular newsletters, posts on social-media, etc

3.3: THE GOVERNANCE AND DELIVERY MODEL

Throughout the implementation phase of the Investment Plan, the **governance objectives** are as follows:
- **Effective coordination** of the IP implementation;
- **Impactful institutional building** – setting-up of the structures and human capabilities within the City Hall of Timisoara;
- Creation of the favourable framework conditions for the **wide engagement of ecosystem players**;
- Sound management of the **INNO-TM portfolio of services**;
- Ensuring the adequate **transparency and traceability** of the IP implementation.

The governance model will engage **3 entities**:

Municipality of Timisoara – City Hall of Timisoara
Role: By means of the newly established INNO-TM facility within the City Hall of Timisoara, the Municipality will ensure the leading role for the IP implementation, acting as a neutral actor within the local entrepreneurial and innovation ecosystem. Moreover, the INNO-TM structure will assume the executive and operational role for the IP implementation.

INNO-TM Steering Group

Role: Deliberative, executive and operational, with a focus on the principles of governance and implementation, as well as providing proactive support and recommendations for monitoring, assessment of progress and improvement of the implementation roadmap. The AS Transfer Urbact Local Group will be the core of the Steering Group, to be enlarged based on needs and relevant inputs from future members. Given that most of the members of the current ULG expressed an interest in being partners during the implementation of the IP, they will be engaged as direct partners in the delivery of the portfolio of services.

Timisoara Innovation Ecosystem Alliance

Role: Consultative, to be gradually engaged, depending on interest and opportunity, throughout the implementation. As a result of the mapping service, the "Alliance" will be promoted via the digital platform, as a pool of ecosystem resources for networking and joint growth.

The Innovation Ecosystem Alliance will start as a community / an informal meeting platform, and the earliest members will be the organisations that are featured in the mapping and database.

Furthermore, in a later stage, after the first 24 months of the IP implementation, in the case that it is deemed necessary by the INNO-TM Coordinator and Steering Group, there could be *setup a company (limited liability) as vehicle for maintaining the entrepreneurial and innovation ecosystem*, especially considering funding and financing opportunities.

The breakdown of tasks among the 3 entities is presented in Table 8 and explained below.

Table8 – The governance of the main tasks

	Will organise	**Will participate**	**Will supervise**
Training and capacity building	INNO-TM structure	Steering Group	City Hall
Internal guidelines and procedures	INNO-TM structure	Steering Group	City Hall
Management of the portfolio of services	INNO-TM structure	Steering Group, Alliance	City Hall
Digital platform, database and engagement tools	INNO-TM structure	Steering Group, Alliance	City Hall
Communication	INNO-TM structure	Steering Group, Alliance	City Hall

Explanation:

- "ORGANISE" = complete organisation and delivery,
- "PARTICIPATE" = co-creation, co-decision, and active co-production,
- "SUPERVISE" = overseeing of the process, including endorsement of progress indicators.

3.4: THE OVERALL PROJECT SCHEDULE

Assuming that all the services will be implemented as a result of the Investment Plan, the schedule for the projects timeframe is summarized in the Gantt chart presented in Figure 12.

Mo/ Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Map1	X	X	X	X																				
Map2			X	X	X	X	X	X	X															
Map3								X	X	X	X	X												
Map4										X	X	X												
Map5					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PB1					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PB2			X	X	X																			
PB3										X				X				X				X		
PB4			X				X					X				X				X				X
PB5												X	X	X	X	X	X							
PB6																		X	X	X	X	X	X	X
Oss1				X	X	X	X																	
Oss2								X	X	X	X													
Oss3																						X	X	X
Poc1												X	X											
Poc2																		X	X	X	X	X	X	X
Ev1		X	X	X			X																	
Ev2					X							X											X	
Ev3																X				X				X
Sto1		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sto2		X					X				X						X							
Sto3			X		X							X						X						X

Figure 12 – The schedule for implementing the Investment Plan

SECTION 4: BUDGET

4.1: PROJECT COSTS

The total cost of the Investment Plan's implementation is estimated at 281,700 EUR, and the detailed breakdown and description of the cost categories are presented in Table 9.

Table 9 – Cashflow forecast

	Month							Total
A	Service title	Mapping	Partnership building	One-stop-shop	Proof of concept	Events	Success stories	
	Money in (€)							
B	EU Structural Funds	72,500	64,100	50,500	0	0	0	187,100
	Own funds	5,000	5,000	5,000	5,000	5,000	5,000	30,000
	Income from services	10,000	0	5,000	20,000	15,000	0	50,000
	Other (EU funds, national funds, private funds etc.)	0	10,000	0	0	15,000	0	25,000
C	Total Money in	87,500	79,100	60,500	25,000	35,000	5,000	292,100
	Money out (€)							
D	Personnel	40,000	40,000	40,000	12,500	22,500	22,500	177,500
	Marketing costs	1,000	3,000	5,000	3,000	1,000	1,000	14,000
	Travel costs	500	100	0	100	0	0	700
	Subcontracting	30,000	20,000	5,000	15,000	5,000	10,000	85,000
	Other costs	1,000	1,000	500	1,000	500	500	4,500
E	Total Money out	72,500	64,100	50,500	31,600	29,000	34,000	281,700
F	Balance (€)	15,000	15,000	10,000	-6,600	6,000	-29,000	10,400

Assumptions:
- Personnel: up to 4 FTE, starting with 2 FTE (equally shared between Mapping, Partnership and One-stop-shop), then adding 1 FTE at Proof of concept, 0.5 at Events, and 0.5 at Success stories. Average monthly rate of 2,500 EUR gross salary.
- Marketing costs: lump sum, varying on sought impact per service.
- Travel: up to 10 EUR per one local travel.
- Subcontracting: lump sum, covering advisory services for implementation, digital services (web design, database), catering etc.
- Other costs: lump sum, any deemed cost incurred during the implementation.

4.2: INVESTMENT SOURCES

The estimated revenues and costs forecast is presented in Table 11, and it captures (*i.e.* in "Sales forecast"), exclusively the sales share of the total income, with the relevant assumptions that were taken into consideration.

Table 11 - Revenues and costs forecast

	Quarter	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Total
A										
	Sales forecast									
B	Mapping	0	0	0	500	1,000	1,000	3,000	7,000	**12,500**
B	Partnership building	0	0	0	500	500	600	650	1,250	**3,500**
B	One-stop-shop	0	0	0	0	0	0	0	0	**0**
B	Proof of concept	0	0	0	0	3,000	6,000	6,000	9,000	**24,000**
B	Events	0	1,000	1,500	1,500	1,500	1,500	1,500	1,500	**10,000**
B	Success stories	0	0	0	0	0	0	0	0	**0**
	Costs forecast									
D	Mapping	12,000	12,000	10,000	9,000	8,000	7,000	7,000	7,500	**72,500**
D	Partnership building	8,000	10,000	12,000	12,000	10,000	5,000	5,000	2,100	**64,100**
D	One-stop-shop	5,000	5,000	8,000	8,000	8,000	7,500	6,000	3,000	**50,500**
D	Proof of concept	0	0	0	4,600	5,800	7,700	9,500	4,000	**31,600**
D	Events	0	2,400	2,500	4,500	5,500	5,600	5,000	3,500	**29,000**
D	Success stories	0	0	0	0	9,000	9,000	8,500	7,500	**34,000**

E	**Assumptions**	Mapping service: subscription fee (<= 25-50 EUR) Partnership service: fee upon signature of the partnership agreement between the parties (<= 500 EUR) One-stop-shop: no fee incurred Proof of concept: fee upon delivery of the PoC validation and action plan service (>= 2,500 EUR) Events: participation fee (>= 15-20 EUR) Success stories: no fee incurred

With the aim to attract the EU Structural Funds managed at national level in Romania, as well as other EU funds with direct management from the European Commission, the INNO-TM should seek to apply for the below types of funding:

i. EU funds managed at regional and national level:
- Regional Operational Programme, West Romania – Specific Objective 4: Development of the competencies for smart specialisation, industrial transition and entrepreneurship
- National Plan for Recovery and Resilience Romania – component "Business environment and entrepreneurship ecosystem"
- Operational Programme Education and Employment – at least 2 specific objectives

ii. EU funds managed by the European Commission:
- I3 – Interregional Innovation Investments – consortia around SMEs, supporting the development of innovative products.
- Horizon Europe – *e.g.* European Innovation Ecosystems.

SECTION 5: MONITORING AND EVALUATION

5.1: THE MONITORING AND EVALUATION APPROACH

Monitoring and evaluation mechanisms are important elements when a strategy or an investment plan is implemented. There is no standardized approach to the development of an evaluation and monitoring system, as it needs to be adapted to the specifics of each region[13] or city.

Monitoring aims to check if the activities are carried out according to the plan, and the funds are correctly used to achieve the proposed goals

Evaluation is impact oriented, most of the time, it aims to analyse the effects of the actions undertaken in the framework of implementing a strategy or a plan.

By participating in the Interreg-funded Monitoris3 project, the West Region participated in the exchange of best practices on monitoring and assessing the impact of innovation policies[14]. Three types of indicators are recommended:

- **Context indicators** that measure the performance of the region / city against the average of other similar regions / cities. These indicators are usually attached to the transversal objectives of a strategy.
- **Output indicators** that measure the progress of actions taken to achieve the expected results. The monitoring of the output indicators is done at the level of each project financed and implemented by the beneficiaries of various programs that aim at supporting the innovation.
- **Outcome indicators** selected for each component of the strategy contributing to the strategic objectives, or in particular to the innovative transformation on the region / city.

    These transformative effects are directly related to the impact of the implementation and are directly linked to the ambitions or specific objectives addressed by the Investment Plan.

5.2: THE MONITORING AND EVALUATION FRAMEWORK

The conceptual framework behind the structure of indicators is essential in identifying the direction in which changes are taking place, being a basis for assessing progress and results. The Key performance indicators proposed for the Investment Plan to be implemented by the Municipality of Timisoara will measure the impact of the services that have been created in the ecosystem.

These indicators will show the extent to which the implementation of the Investment Plan for INNO-TM has created value for the local ecosystem and can further support innovation and partnership brokering.

The KPIs proposed for monitoring the roll out of the Investment Plan in Timisoara are presented in Table 12 and Table 13. The **result indicators** are designed in correlation with the Intended results (R1) – (R4) detailed in sub-section 3.2.3. The **output indicators** are designed in correlation with the Activities detailed in Sub-section 3.2.2 and time-framed in Sub-section 3.4 (Gantt).

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[13] https://adrvest.ro/wp-content/uploads/2021/01/Strategia-Regionala-de-Specializare-Inteligenta-a-Regiunii-Vest-2021-2027-RIS3-.pdf
[14] https://www.interregeurope.eu/monitoris3/

Table 12 – KPIs for the implementation of the services supported by INNO-TM

KPI	Description (result indicator)	Present Value (2021)	Value at 12 mo (2023)	Value at 24 mo (2024)
(R1)	Number of innovative partnerships between stakeholders within the local ecosystem	6	10	15
(R2)	Number of local start-ups	420	800	1260
(R3)	Number of innovative products, services, processes and business models, generated at local level	14	17	21
(R4)	Number of research and innovation infrastructures (labs, equipment and testing facilities within universities, corporates, R&D institutes), open for use by local companies	3	5	9

Table 13 – KPIs for the implementation of the services supported by INNO-TM

Activity	KPI	Description (output indicator) - the baseline is considered 0 -	Target value	Source of information
Mapping (Map 1 – Map5)	(O1)	Database with relevant actors / stakeholder, data, offerings, shared resources	1	IT system of the Municipality
	(O2)	Number of interviews with relevant actors / stakeholders	200	Interview sheets
	(O3)	Number of re-visitings for updates of data and database	75	Written notes IT system of the Municipality
Partnership building (PB1 – PB6)	(O4)	Number of missions to relevant fairs (expositions)	5	Mission reports
	(O5)	Number of meetings, brainstorming, speed dating	8	Activity report
	(O6)	Number of different stakeholders involved	40	Participant sheet
	(O7)	Number of implemented partnership projects / strategic alliances (pilot)	2	Project documentation

One-stop-shop (Oss1 – Oss3)	(O8)	Number of services implemented in a new, validated and operationalized One-stop-shop	4	Validated project for defining and operationalizing the one-stop-shop Functioning rules for the services
	(O9)	Number of users	10	Activity reports
Proof of Concept (PoC1 – PoC2)	(O10)	Number of assessments supported / conducted (TRL and/or BRL)	3	Assessment reports
Events (Ev1 – Ev3)	(O11)	Defining and organizing a "brad" event for Timisoara	1	Activity report
	(O12)	Number of networking and / or business focused events	8	Activity report
Success stories (Sto1 – Sto3)	(O13)	Number of success stories selected and promoted	5	Newsletters, social-media, Reports on the participating to thematic events

5.3: THE MONITORING CANVAS

The monitoring canvas is a working tool made available through the URBACT project[15]. By slightly adapting the canvas and integrating the information from the different sections of the Investment Plan, we obtain a useful overview of the evaluation and monitoring of the implementation (Figure 13)

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[15] Béla Kézy, *Planning for results, monitoring progress,* AS Transfer presentation, 20 May 2022

MONITORING CANVAS
INTERVENTION LOGIC AND RESULT INDICATOR

SITUATION:		CHANGE:
The start-up and innovation ecosystem in Timisoara is fragmented and underperforming in terms of Industry 4.0	⟶	The goal is to develop an integrated and innovation-rich Industry 4.0 ecosystem. *The companies will become more innovation oriented, will develop businesses and increase the job offer; the universities will have the opportunity to partnering with other players (companies and public bodies) in order to implement R&D projects; the whole city will benefit in terms of increasing competitiveness and innovation capacity, increasing the GDP and the standard of living of the citizens.*
		SPECIFIC OBJECTIVES: (SO1): Match level of connectedness to the benchmarked high-performance ecosystem (SO2): Boost partnerships between the stakeholders within the ecosystem, conducive to innovative products, services, processes and business models (SO3): Encourage, nurture and promote scalable start-ups
		INTENDED RESULTS (R1) 150% increase of number of innovative partnerships between stakeholders within the local ecosystem (R2) 200% increase of number of local start-ups (R3) 50% increase of number of innovative products, services, processes and business models, generated at local level (R4) 200% increase of number of research and innovation infrastructures (labs, equipment and testing facilities within universities, corporates, R&D institutes), open for use by local companies

TABLE 12 (Result indicators)

TABLE 13 (Output indicators)

Figure 13 – The Monitoring canvas