Action Plan
Final version

PROJECT WEBSITE

June 2022

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1 General information

Birmingham (UK), Gävle (Sweden), Tartu (Estonia) and Nyíregyháza (Hungary) have been working together since 2019 under the leadership of Genoa (Italy) in the framework of an Interreg Europe project called **BETTER – Stimulating regional innovation through better e-government services**. BETTER offers an innovative approach to a crucial priority for the EU: **encouraging public authorities to develop Regional Innovation Strategies in which e-government solutions can stimulate regional innovation chains** (as well as improve their services). The key issues of the project are:

- Physical and virtual infrastructure to support innovation
- How to develop and apply new innovative products and services
- Processes to support new business models and cross-sector (private-public-community) cooperation
- People and skills to make it happen

This Action Plan describes the lessons learnt during the Exchange of Experience process and how those will be utilized to improve the policy instrument tackled by the **Municipality of Nyíregyháza** (P5).
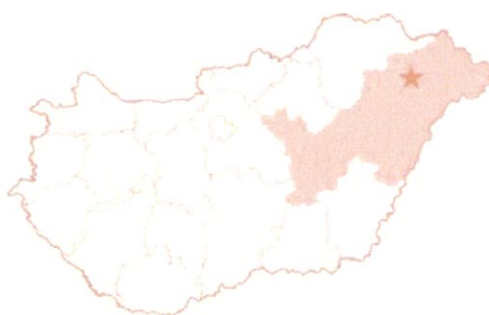
1 The coloured area on the map is the relevant NUTS2 region in Hungary: the Northern Great Plain.
Source: own editing

HOW DID WE GET HERE?

The journey of Nyíregyháza towards attracting investment and fostering innovation (especially digital) is certainly not new, but there has been no strategy behind it until 5 years ago, when the city joined an URBACT project called **TechTown**. By exploring **how small- and medium sized cities can maximize the job creation potential of the digital economy**, this network examined (1) whether there is potential for spillover from stronger city level digital economies, (2) how clusters can work, and (3) what cities can do to support businesses to access the digital skills and innovations they need in order to start, grow and compete.

Their work continued in the framework of another URBACT project called **TechRevolution**, providing an opportunity for six cities from across the EU to adapt a good practice developed and delivered in Barnsley, UK: a successful business support programme and a landmark hub for creative and digital business in the town centre. Nyíregyháza "used" this network to fill its newly established **Technology Transfer Centre** with content, mostly **business support services**.

All in all, these projects led to **the establishment of an investment team in Nyíregyháza**, the leader of which is now the contact person of the city for the BETTER project.

PROJECT DATA

Project name	*BETTER* *Stimulating regional innovation through better e-government services*
Partner organisation	*P5 Municipality of Nyíregyháza*
Other partner organisations involved (if relevant)	*NR*
Country	*Hungary*
NUTS2 region	*Northern Great Plain*
Contact person	*Dávid Bartók*
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EXCHANGE OF EXPERIENCE – HOW?

The process the partners envisioned for the BETTER project was a rather straightforward and clear plan based on **a continuously narrowing and deepening focus on case studies/good practices**, and despite the coronavirus throwing a wrench in the works, the learning exchange was successful.

1. **Analysing the partners' plans through four THEMATIC EVENTS**
   Each of these online and face-to-face events focused on a specific theme and they were hosted by Gävle, Tartu, Birmingham and Nyíregyháza. Every partner had the chance to present good practices from their region; the partnership designed a **Register of Good Practices** which lists summaries for **44 GPs**.

2. **Studying the identified GPs through ten STUDY VISITS**
   Based on the partners' learning needs arising after the Thematic Events, each of them undertook at least two **in-depth** Study Visits. The topic of every meeting was determined by the visiting partner who **prioritized between the GPs** and selected **only a few** for a better learning experience.

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3. **Adapting a few selected GPs through five (one/partner) IMPORT WORKSHOPS**
   While the SVs were centred around learning as much about the selected GPs as possible, the Import Workshops facilitate the **operative adaptation** of only a few 'chosen ones' to the adapter's context, outlined in the Regional Action Plans.

The first two **Thematic Events** were personally attended by the partners in **Gävle** *(October 29-30, 2019)* and **Tartu** *(January 27-29, 2020)*, focusing on:

- Innovation hubs, smart city labs, virtual platforms and their supporting services, cluster organisations and the role of leadership; and
- Public administration products and services to enable (open) business innovation, e-governance solutions and win-win public-private partnerships, respectively.

After the pandemic has reached Europe in March 2020, **Birmingham** and **Nyíregyháza** had to restructure their TEs into an **online** format:

- *June 16-18, 2020* (three online workshops organized by Birmingham)
  Topics: building partnerships for data collection, data visualization, using data to support integrated management models
- *November 3, 2020* (online workshop organized by Nyíregyháza)
  Topics: behavioural barriers of innovation, bottom-up innovation heroes, human-focused service design, talent management

Based on the challenges of Nyíregyháza identified in the project application phase (and later), the city selected **Birmingham** and **Tartu** as **Study Visit** partners:

- *June 7 & 9, 2021* (online workshops organized by Birmingham)
- *June 10, 2021* (online workshop organized by Tartu)
- *February 16, 2022* (face-to-face visit in Tartu)

The **Import Workshop** is still ongoing – the project partner who assists P5 in this endeavour is **Gävle** (online workshop: *February 22, 2022*).

The details of and key learnings related to these events will be discussed in *Chapter 2* of this document.

REGIONAL STAKEHOLDER GROUP – WHO?

The local stakeholder group that supported both the transnational learning exchange and the elaboration of this document – and will also support the latter's implementation – is composed of representatives of the following organizations:

- **Municipality of Nyíregyháza** – the owner of the policy instrument addressed by the BETTER project
- **MEGAKOM Ltd.** – the external expert contracted to facilitate the BETTER Phase 1 activities locally
- **Lechner Knowledge Centre** – providing a thematic expert

- **Nyíregyháza Industrial Park Ltd.** – providing services for businesses based in the area and for new investors
- **NYÍRINFO Nonprofit Ltd.** – operating the computer equipment/softwares in the Mayor's Office, implementing IT developments
- **NYÍRVV Nyíregyháza Urban and Property Management Nonprofit Ltd.** – managing the urban spaces (parks, playgrounds, sidewalks, etc.) and properties of the city
- **Giganet Internet Ltd.** – a local internet and IT provider
- **Móricz Zsigmond County and City Library** – a frontrunner of digitization and database management
- **Digital Makerspace (Nyíregyháza Vocational Training Centre)** – an open workshop providing high quality digital and technology-related education to a wide range of age groups
- **University of Nyíregyháza** – a representative of Hungarian education, researching the practical applications of IT, especially in agriculture, transport and logistics, and advising the group on innovative ways to increase the citizens' participation in democratic processes through ICT solutions

The RSG had **five** official **meetings so far** during the project, with **two** more **still planned** until the end of July 2022.

1. *April 22, 2020* (online meeting)
   The thematic expert of the project presented the general situation of Hungarian municipalities in terms of the focus areas of BETTER (infrastructure, services, collaborations/new business models, etc.) as well as practical examples such as Open Data Debrecen, the Innovato-R URBACT project and Budapest Dialog. Every participant shared the **current issues they were facing due to the pandemic** and **what** they thought **this project could do** to make their operation easier.

2. *March 17, 2021* (online meeting)
   This meeting centred around an **interview** with the director of the Móricz Zsigmond County and City Library who introduced some of their good practices and planned projects **related to digitalization**.

3. *April 15, 2021* (online meeting)
   After hearing about the learnings of the four Thematic Events, the methodology of the Study Visits, the structure of the Regional Action Plan and the GPs of **Birmingham** and **Tartu**, the participants had the chance to **rank the good practices to compile a TOP 3 list for both cities**, narrowing down the focus of the knowledge transfer.

4. *October 8, 2021* (face-to-face meeting)
   The participants discussed the merits of **a possible pilot action** for the RAP in the framework of the BETTER project *(see Action #2)*.

5. *March 16, 2022* (face-to-face meeting)
   The delegation of the city presented their **findings from the** "offline" **Study Visit in Tartu**.

The next RSG meeting is planned for the end of May in 2022 to discuss the **results of the Import Workshop** *(see Action #1)*, while the last event should be a **summary presentation and evaluation of the Exchange of Experience process**, concluding the BETTER project.

2 Policy context

Policy type	☐ Investment for Growth and Jobs programme
	☐ European Territorial Cooperation programme
	☒ Other regional development policy instrument
Policy name	Integrated Urban Development Strategy of Nyíregyháza (IUDS) → **Sustainable Urban Development Strategy for 2021-2027**
Policy owner	P5 Municipality of Nyíregyháza

OUTLINE OF THE "ORIGINAL" POLICY DOCUMENT – IUDS

The Urban Development Concept defines Nyíregyháza's long-term vision for its social and economic environment, while **the IUDS outlines the objectives** to be achieved **in the medium-term** (4 to 10 years), the interventions and the implementation process. The municipality prepared both documents **according to the regional priorities of the 2014-2020 period** and as the **controlling and implementing power** over the strategy, ensuring and regularly evaluating its success and redesigning it for the next (2021-2027) programming period is also **the city's responsibility**.

There are no statistics at local level about e-governance, but the **Digital Economy and Society Index** (DESI) shows that **a significant number of citizens still only use basic online services, rather than advanced ICT solutions in Hungary**: the country has one of the largest proportion of internet users on social networks in Europe (74%), but only 5% of the population take part in online consultations or voting in civic or political issues, for example – this number is unlikely to be higher in Nyíregyháza. **Cognitive and motivational reasons** are dominant: **lack of trust in digital procedures and the government in general, disinterest in new technologies**, etc. Hungary – and the county, as the most disadvantaged region – also falls behind in the level of innovation, e.g. the development of new generation networks, more complex IT applications supporting businesses and cloud services. National and regional documents identified other problems, too: **the administrative burden perceived by the public and companies is high during government procedures** and digital solutions are not suitable for service in many areas.

As a county capital, Nyíregyháza is the center of several public services, therefore, an emphasis was placed on the **development of citizen-friendly and efficient e-administration** in the framework of the 4th Thematic Objective (TO) of the strategy (*"High quality human services"*). These efforts are supposed to go towards solving the last two problems mentioned above. Raising the awareness, trust and motivation of citizens and promoting the potential benefits of new e-governance solutions gets less attention even though public disinterest makes introducing new technologies abortive. Methods to drive further innovation in the public sector should be sought out and incorporated into the strategy, too. Better coordination with the relevant national and regional policy instruments – like the Operational Programmes (OPs) – is also necessary: strengthening the coherence between them can produce new insights.

Although reviews of the 2014-2020 IUDS are still ongoing, its place in urban planning for the next EU programming period (2021-2027) has been taken over during last year by the **Sustainable Urban Development Strategy (SUDS)**. The methodology of writing it originates from the national government and although is (in some ways) based on the IUDS, some parts have undergone significant changes – many of them supporting the goals of the BETTER project.

Analysing the current situation and establishing specific objectives and intervention areas must be done now in line with **five** pre-determined **dimensions of resiliency**:

- Prosperous City, mainly referring to local economic development
- Green City, including energy transition, but also waste and wastewater management and every urban area which is connected to environmental pollution directly or indirectly
- **Digital City, with the aim of integrating digital technologies, smart solutions into urban life**
- Retaining City, covering social inclusion and equal opportunities, among other social processes
- Service-provider City, concerning urban land use, the utility infrastructure, the built and natural environment, etc.

These areas serve as horizontal factors that must "weave through" the whole SUDS, but two of them are getting even more attention – as part of the action planning (i.e. defining specific interventions), two **separate chapter**s were dedicated **to discuss** the green and **digital transformation** of cities.

DIGITAL TRANSFORMATION AGENDA

This document is part of the SUDS – it is, in fact, only the preparatory stage for a digital transformation, leading to systematic changes in the field. The dedicated chapter starts with a short summary about the city's level of readiness and then it formulates **specific goals connected to** the **local challenges** that can be addressed by using digital solutions. These goals must also harmonize with the six aspects of smart cities: **smart governance, smart mobility, smart people, smart economy, smart environment and smart living conditions. No specific projects** must be defined here, **only development areas**; however, there's a mandatory follow-up document that has to be prepared by the relevant cities **until 2024**: the **Digital Transformation Action Plan** will identify not just priorities, but also **specific solutions**, including their implementation and monitoring details (result indicators, procurement, etc.).

The documents mentioned above (the SUDS and its two supplementary papers) have become a lot more important than the IUDS: **funding from the national OPs can only be applied for based on the thematic priorities and intervention areas which are included** in them. Therefore, if Nyíregyháza wants to reach its self-defined indicator (a 10% increase in regional innovation activity stimulated by e-government initiatives) and contribute to the project level result indicator (influencing a certain amount of funds), they must focus on **influencing the content of both the Digital Transformation Agenda and the Digital Transformation Action Plan**. Learnings from BETTER have already been included in the Agenda *(see Action #0)*, but the goal for Phase 2 is to **set up and support the creation of the Action Plan**, leading to **projects and interventions which originate from BETTER** but will continue after it ends.

Consequently, **the partner's end goal in this project is the achievement of a**

STRUCTURAL CHANGE *("Type 3: Change in the strategic focus of the policy instrument")*, **focusing on innovation in the public sector and raising the awareness, trust and e-governance skills of the citizens**. Improving the existing measures in place concerning innovation and e-governance and creating new ones about awareness-raising and citizen participation can help ensuring that truly innovative and user-friendly solutions are born, AND they will be used by the target group.

On the topic of funding sources: changes in the Operational Programmes of Hungary are also favourable for our purposes. Besides the **sectoral OPs** (i.e. the Territorial and Settlement Development OP Plus) **supporting smart city-related interventions**, now there's a separate horizontal OP called **Digital Renewal Operational Programme Plus** with funding for four priority areas: *Intelligent Hungary* (digital economy and innovation, e-government), *Hi-tech and green transformation* (energy sector, circular economy, etc.), *Connected Hungary* (digital infrastructure) and *Digital citizenship* (education and training, social equality, etc.).

KEY LEARNING POINTS

The first stage of the process detailed on pages 3 and 4 consisted of **four Thematic Events**. After every event, the partners – including Nyíregyháza – had to summarize their key learnings and remaining questions, using them as guidelines when selecting the GPs to study during the next step.

- **CULTURE OF INNOVATION**
  Peter Drucker famously said: *"Culture eats strategy for breakfast."* Developing the skills for digital innovation is only one thing, **creating an accepting and open cultural environment** for it is quite another – it should start as early as possible (i.e. for kids in schools). **Resistance to change** is a common barrier when introducing innovative approaches – it is normal but dealing with it **should be planned for**: making wins/benefits more visible, creating a reward system, highlighting local success stories, etc. *Relevant GPs:* Digital Tree Innovation Habitat (Genoa), Car-free avenue + METALLICA case study + Sandbox (Tartu)

- **INNOVATION HUBS**
  There are different levels of development at partners when it comes to innovation infrastructure. Nyíregyháza is at the early stage, already having some *physical* infrastructure in place. A city needs **places that inspire, catalyse and enable the innovation process – innovation hubs**. But these are much more than just physical infrastructure – in fact, having the physical infrastructure is the easiest part; **making it work**, filling it with content **is the real challenge**. A well-functioning innovation hub is an important driver in the local economy and helps local businesses to remain relevant, adapt and be competitive. For Nyíregyháza, the most important priority and first order of business was, therefore, to learn from partners **how to develop and run an innovation hub**, adapt the learnings and apply them locally. The idea of **organizing a study tour to the Gävle Innovation Hub to better understand the business model, services and policies** has originated from this reasoning (although it couldn't happen due to COVID). *Relevant GPs:* SMEs and Startups Showcase (Genoa), Serendip Smart City Incubator (Birmingham), Gävle Innovation Hub, sTARTUp Day

- **E-SERVICES**

  The goal of making a city smart is to make the life of its citizens BETTER. Therefore, the right way to make a city smart is to **understand the small problems, inconveniences** citizens face in their everyday life and **find efficient, easy-to-use solutions**. Innovation should be **human-focused**, with the real needs of people at its core – this can only be achieved through **open and honest dialogue between the stakeholders**. The **design thinking approach** has come up as a useful method to experiment with/apply to improve local public services and the innovation capacity of the local authority, involving as many stakeholders as possible (not just the "usual suspects"). **Understanding and adapting the service design methodology of Gävle and running a small-scale pilot at the municipality** was identified as a possible RAP action as early as the third Thematic Event. *Relevant GPs:* Citizen booklet (Genoa), Service design/design thinking in e-service development + The Good Life in Gävle 2030, ARNO + SPOKU (Tartu)

- **DATA MANAGEMENT**

  Without action – and before that, analytics – data is just noise, but the opposite is also true: **without an up-to-date local database it is almost impossible to come up with any project that brings reliable and sustainable change to a community**. Do cities even know what they have? The answer is often no. Maybe there *is* data somewhere, but then the city must find out who has it and how they can get it; this requires open dialogue and networking. **Gathering data that already exist** and can be made available through negotiation (purchase, trade, collaboration, etc.) is often time-consuming, (more) expensive and, therefore, entirely unnecessary. **Partnerships with organizations and/or citizens** (e.g. crowdsourcing) are powerful tools. Important questions to keep in mind:

  1. What can the city offer to those who provide their data? a.k.a. INCENTIVE
  2. How can the city show what it is doing with the data? a.k.a. TRANSPARENCY
  3. Does the city need in-house capacity? a.k.a. HUMAN RESOURCES
  4. How can the data become meaningful for the whole ecosystem? a.k.a. SCALABILITY

  Nyíregyháza has determined that **taking stock of data available in the public sector** locally **and designing the concept of a local data partnership** should be part of the RAP.

  Relevant GPs: Population monitoring (Genoa), Birmingham Basket, Data visualization + Open data + Data lake (Gävle), Tartu City's GIS

2 Pictures from (and connected to) the Thematic Events in Gävle, Tartu, Birmingham (online) and Nyíregyháza (online)
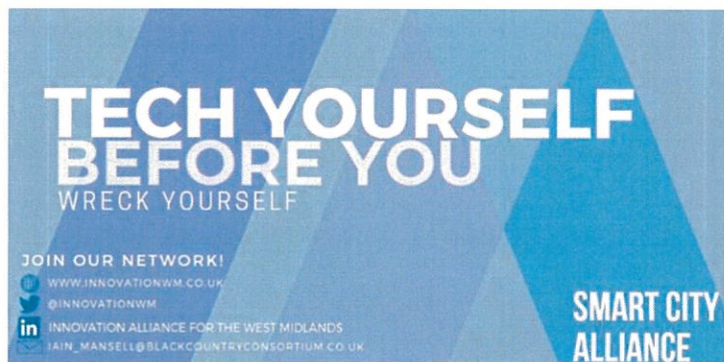
The second stage of the process consisted of **three Study Visits**.

Birmingham (two online workshops)

GPs: Serendip Smart City Incubator, Smart City Alliance, West Midlands 5G, Virtual Innovation Team

The local incubator (the Technology Transfer Centre) is at the very beginning of the process to become a true catalyst for innovation. So far, they have "basic" business support which means that the Centre offers a place (co-working offices) to businesses and mediates between the municipality and private companies (cutting through the red tape, so to speak). Based on this Study Visit, however, **what the city is missing is a healthy innovation culture in both the public and the private sector** – there are significant **systemic barriers in the way of progress**, especially in the case of public sector innovation.

Engaging the local community must be the first step to start the journey towards something similar to the situation in Birmingham. Reaching critical mass is only possible by **creating partnerships with local organizations, or even other cities**, focusing on cooperation, not competition (or at least some form of "coopetition"). An innovation centre's role can be similar to a bumblebee: **connecting SMEs, the public sector and other stakeholders** (through information exchange, etc.). Ideas and good practices are often there already (in the possession of local SMEs, for example) – what they need is someone to provide a **platform for sharing**. If the city finds dedicated and reliable people and creates strong partnerships, they can **lessen the costs** (e.g. they don't have to pay rent for meeting places) and **share responsibilities**. Nyíregyháza needs **more colleagues with expertise in innovation management** who can coordinate this process.

Actions to consider

Problem-oriented design thinking events (e.g. hackathons) with a challenge-based approach geared towards solutions and the active involvement of SMEs, the city and the citizens

Showcasing local businesses from a diverse background who have implemented small, but novel solutions to common problems to create/instil an atmosphere open to innovation

3 Slides from the Birmingham Study Visit workshops

Tartu (one-day online meeting)

In general, **canvassing for areas where the administration isn't efficient in the way it is currently done** can be a first step to **identify problems and work on digital** (or other) **solutions**.

Designing an online product/service is not just about the **features**: **user experience** is crucial, and also the **benefits** it can provide to the customers; it must react to the users' **needs** (expectations) and **pains** (negative experiences) regarding the given field/area of their life. Every new thing can be confusing for the citizens at first, but an **easy-to-use interface** facilitates the learning process. However, there is a fine line between **functionality and style**, function and form. Fancy graphics should only be involved if they aren't distracting. **Convenience** is also important – pre-filling documents using the data already in the system is one way to not waste the users' time and to make the service more popular. Moreover, it should be kept in mind that in the case of several municipal services, turning to **online solutions can** actually **be detrimental** to the overall user experience: e.g. social services (i.e. applying for them) are an area where a **"personal touch"** is needed.

"People don't need data, they need information."

Data is often there but isn't used for anything, or at least not shared with the citizens. Looking at the **available data** and finding a way that it can be used to **solve urban problems** is a smart approach to **resource efficiency**.

Actions to consider

Nyíregyháza Dashboard, incorporating information from many different databases and sources into one place in a visual and easily understandable way for citizens

Municipal complaint registry system – a way for the citizens to send in pictures and text if they find a fault or problem somewhere
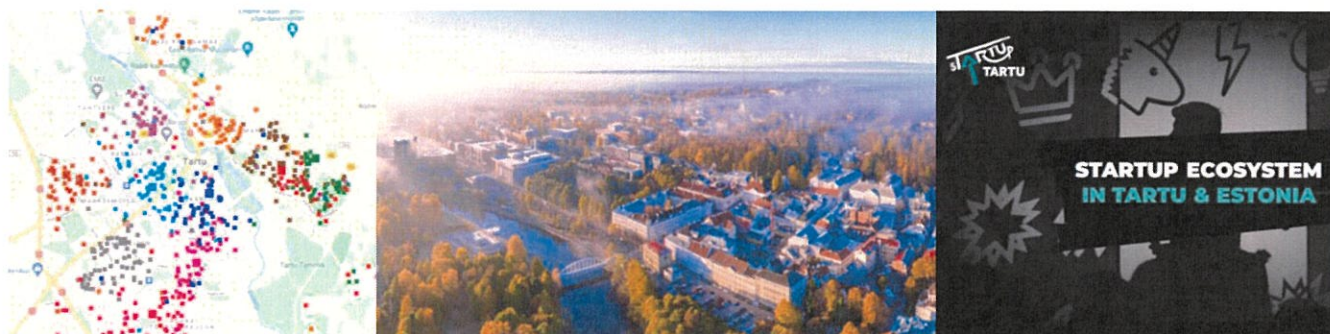
4 Slides from the online Study Visit of Tartu

Tartu (one-day offline meeting)

Only two SVs per partner were mandatory, but Nyíregyháza was interested in a **face-to-face meeting in Tartu** after learning about their GPs and deciding on implementing an action related to GIS/spatial data. Since the BETTER budget allowed a third event to take place due to the online format of the previous ones, a Hungarian delegation managed to visit Tartu personally **in February 2022**.

GPs: Delta Sandbox, e-ESTONIA, Smart Tartu, GIS solutions, Tartu Science Park

Digitalization is rarely a question of technology (that exists already) – a city needs **digital-minded leadership**, determined to make e-governance a reality. However, this doesn't happen overnight – a city also needs to **start small** (with "easy" wins) and then **build on the little successes**.

Estonia has always focused on what the end-user demands and how the government can make people's lives easier. Authorities must offer their offline portfolio of services online as well (as a norm). The government is also very **proactive**, approaching the citizens when they become entitled to certain services. Any type of data related to an individual can only be collected by one specific institution, thereby **eliminating duplicate data and bureaucracy**. Moreover, **the citizens own their personal data** – the government authorities only *handle* them but need to ask for explicit consent. This also means that every Estonian can see who accessed their information (and why), creating total **transparency** and providing **security**. In addition, Tartu **deliver**s **information to** its **citizens in the least intrusive way possible** (e.g. through infographics and dashboards).

Acquiring and then using real-time data in management decisions are crucial. For example, Tartu utilizes data-based modelling to determine a real-time modal split in the city which can be the basis for urban mobility decisions. The municipality also has a City Heartbeat – a dashboard of management information with the most important data shown every day.

Action to consider

Introducing two web applications in Nyíregyháza: the Municipal GIS Platform and the Municipal Public Building Database – a long-term goal that cannot be accomplished in Phase 2 but *can* be started with a few preparatory activities *(see Action #2 for more)*

5 Pictures from the offline Study Visit in Tartu

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The third stage is still in progress, and it involves an **Import Workshop** with the support of Gävle.

Gävle (one online workshop with Gävle → local service design workshop → online debrief with Gävle)

GP: Service design/design thinking in e-service development

People are predisposed to find solutions to poorly defined problems – they don't like to dwell on the latter, so they concentrate on the former as soon as possible. However, a city cannot be objective about their own habits and operations; therefore, **they need to talk with the real users** in their own environment and learn to let it go ("it" = the idea they had about the possible solution), changing direction if needed. They often have several solutions in mind already but then will **actually discover the need/underlying problem** behind them. (Sometimes they DO have the solution but can still use design thinking to determine the best way to implement it.)

The original "workshop" is a 2-day course, but Nyíregyháza has to shorten it. The methods (observations, service safari, interviews, etc.) can be combined and selected based on the problem/service.

First, the city must identify the problems of the service, therefore, **defining the challenge**.

> *Example: The First Home Scheme is a "non-mandatory" support by the municipality that provides financial contribution to first-time home buyers. Although the eligibility criteria are fairly permissive, there are still available funds by the end of each year. It is possible that potential applicants are not reached by news of the grant due to its ineffective promotion, or the lengthy assessment process scares them off.*

In this case, **user interviews** can have especially high value so the city must contact people who have used the service and talk with them, making careful notes.

The next step is to **design a pilot version of the methodology** (i.e. a script) and **test it before Phase 2** – this will most likely happen on *May 10, 2022*. Based on the learnings from that event (and the debrief session after it), the city plans to organize **two more service design workshops** during Phase 2 *(see Action #1 for more)*.

6 Slides and screenshot from the first part of the Import Workshop with Gävle

3 Detailed actions

ACTION 0 (implemented in Phase 1)

Background	The **Digital Transformation Agenda** is a **subchapter of the SUDS** (which has become the "successor" of the originally chosen policy instrument, the IUDS). The SUDS (including this subchapter) has become a lot more important than the IUDS recently: **funding** from the national Operational Programmes **can only be applied for based on the thematic priorities and intervention areas which are included in it**. Therefore, if Nyíregyháza wants to requisition more money for regional innovation and digitalization in the next few years, they had to focus on **influencing the content** of the Agenda which was **due in February 2022**.
Action/results	Learnings from the BETTER Exchange of Experience have been included in the SUDS (and the Agenda) in the following ways, influencing its structural focus: • In the situation analysis, **the BETTER project was officially established as an input provider** of the current document and its future annexes (i.e. the Digital Transformation Action Plan due in 2024). • One of the specific objectives in the Agenda is *"Creating the right conditions for the development of digital pedagogy"*. **Tiger Leap** – a good practice from Tartu involving providing digital equipment and training in schools – has been included in its description to indicate what kind of projects the city is looking for in this topic. • Another specific objective is the *"Digital development of public services"* – **Action #1** of this RAP **is included** in its description **as a pilot action**. • The *"Application of digital technologies in urban management and public services (with a focus on data-based administration)"* specific objective **includes Action #2 as a pilot action and preparatory activity**. • The **Delta Sandbox** good practice of Tartu has been added to the *"Developing the quality and methodology of university ICT trainings (i.e. contact between science, business and the public sector)"* specific objective as an example for local projects planned in the future.

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Indicators	NR **Future monitoring:** The inclusion of these actions and good practices in the SUDS is important because they focus the projects the city will plan in the 2021-2027 period towards certain directions – **the Digital Transformation Action Plan due in 2024 will use the objectives above to outline specific projects which the municipality will apply for**, using national Operational Programme funds.
Players involved	Municipality of Nyíregyháza (policy owner) MEGAKOM Ltd. (RSG member and the external expert contracted to write the SUDS) Other RSG members (discussing possible actions for this RAP which were included in the SUDS)
Timeframe	September 2021 – February 2022
Costs (if relevant)	6 350 000 HUF (approx. 17 000 EUR) for writing the whole SUDS
Funding sources (if relevant)	National funding: TOP Plus-1.3-1-21 Supporting Sustainable Urban Development Strategies

ACTION 1

Background	When visiting **Gävle** for TE1 and meeting with their inhouse expert team that supports the municipal departments and companies in their development work by using **service design**, Nyíregyháza was certain that introducing the **methodology** locally would be an important step towards making the city's services more user-friendly and innovative. Only the first part of the Import Workshop for adapting this GP has been organized so far: an online meeting with the experts of Gävle who instructed a small local team on how to plan a pilot service design workshop. The second part will be the local in-person workshop itself in May 2022, followed by a debrief session with Gävle to discuss the learnings and finalize the adapted methodology for Phase 2.
Action	After ironing out the details with the experts of Gävle in the framework of the Import Workshop, Nyíregyháza will have a pilot version of the locally adapted methodology (i.e. the script and learnings of the event). Based on these, the city plans to **organize two more service design workshops within the municipality**. These events have three main goals: 1. Making the two **services** selected as the topics of the workshops **more user-friendly by introducing digital** (and other) **solutions** with the involvement of the users – the citizens – themselves 2. Introducing the service design/design-thinking **mindset** to as many public officials as possible 3. Testing the methodology on a larger scale and – by achieving quick and "easy" wins through focusing on one service at a time – enabling its **inclusion in other** government-funded **projects** and its **integration into the municipal system** The 3rd point above is directly connected to a **planned policy change** (more specifically, a new line of measures). Nyíregyháza included the *Digital development of public services* as an objective in the Digital Transformation Agenda based on BETTER *(see Action #0)* – **by testing the service design methodology successfully** in Phase 2 (and 1), **the city will be able to justify including specific project proposals based on it in the Digital Transformation Action Plan**, leading to **new projects**.

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Indicators	**2** service design **workshops – min. 10 participants/event** **2 proposals for changes** in the selected municipal services based on the results of the workshops **At least one project proposal involving the methodology** for the 2024 Digital Transformation Action Plan of Nyíregyháza *(see Action #3)*
Players involved	**Municipality officials** (from the Department of Urban Management and Development, the Department of Social Issues and Public Education, etc., depending on the selected public services) **Citizens** who have used, are using or are targeted by the selected services (according to the methodology, they will serve as interview and test subjects to identify current problems with the services and get feedback on the planned changes)
Timeframe	Workshop #1: September-October 2022 Workshop #2: March-April 2023 Project proposal(s) until July 31, 2023 *(see Action #3)*
Costs (if relevant)	Approx. 4 000 EUR (1 500 000 HUF), including organizing, facilitating, catering and documenting the workshops and preparing the proposals
Funding sources (if relevant)	National funding: TOP Plus (1.2.1-21 Liveable Cities) – the city has already submitted an indicative proposal to apply for the money Municipality budget – in case the application process mentioned above can't be finished in time

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ACTION 2

Background	Nyíregyháza had several opportunities to learn about the **GIS solutions of Tartu** during TE2 and two Study Visits. Since most of the services a city must take care of and provide are connected to **spatial data**, the municipality was interested in how to create an **integrated platform which can manage data from different sources and also be used for sharing information with the citizens**. However, it was obvious that establishing a platform like Esri ArcGIS (used by Tartu) is **not** an **easy or cheap** endeavour, therefore, the city wasn't certain that they can include this GP as an action in their RAP. Luckily for Nyíregyháza, the thematic expert of the project is a colleague of the **Lechner Knowledge Centre** in Hungary – they were responsible for **developing web applications based on spatial data** recently in the framework of the Smart City central platform service project, using Monor as a test subject. They have produced two systems: • The **Municipal GIS Platform** is an easy-to-access **map application** that can manage different levels of access and displays spatial data from central and local sources (including 3D images in either a model-based or a realistic view). The platform can be reached through an internet browser by logging in, or even without an account, providing limited access to citizens. **Almost any data can be uploaded** (public lighting, surveillance cameras, plants, etc.) – **the challenge is in gathering the data sources**, since most of the data are already available in some form in cities. The platform cannot provide internal calculations, such as operating budgets, but **retrieving data is an option in the form of reports**. • The **Municipal Public Building Database** organizes the municipality-owned and -managed buildings into a transparent database which includes **digital 3D models**. The buildings can be **broken down into their components** (i.e. rooms) to which contracts (e.g. lease agreements), usage data (e.g. capacities detected by sensors), equipment and energy-use data (e.g. meter reading photos) can be assigned. The system retrieves data from several central systems using various interfaces so that they don't have to be entered here manually one-by-one. **Reports can be exported** as PDF and/or Excel documents which contain charts and diagrams in addition to raw data.

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	Realizing that there's no need for developing a new (and very expensive) platform, the city decided to start the process of introducing these in Nyíregyháza in Phase 2 of BETTER.
Action	Joining digital platforms like the above must be preceded by careful preparation: • Within the municipality (and the city), it is necessary to **find out who are really interested and motivated to participate**, including IT professionals who will be able to help with the technical side of the implementation (e.g. a database designer who can tell what the platform will be able to connect to locally and how). • Based on the User Manual and Methodology Guide provided by the Lechner Knowledge Centre, the municipality and the stakeholders must discuss **what available data sources can be added to the platform** and which **data layers** can be of real benefit to the city. If this negotiating/planning phase is successful, the city will try out some features through a demo interface in 2024 but first has to **ensure more financial resources** (national funds) **to continue the project by including it in the 2024 Digital Transformation Action Plan – this is the planned policy change** for Phase 2, leading to a **new project**.
Indicators	**Local data partnership** with at least 5 members (besides the city) and 2 meetings during Phase 2 **Demo interface plan** – a paper identifying at least 5 data layers (e.g. public lighting can be one layer) to use in the pilot version of the apps **Project proposal** for the 2024 Digital Transformation Action Plan of Nyíregyháza
Players involved	**Municipality officials** (especially those working in IT and/or urban areas in which data are available for the platform) **Data owners** (The canvassing process will probably identify organizations who have data they can – and would like to – share with the city, similarly to Tartu's agreement with mobile service providers to transfer their GPS data that cannot be linked to a specific user, on the basis of which a real-time modal split is calculated based on the speed of travel.) **Lechner Knowledge Centre** (as the developer of the platforms)

Timeframe	Establishing the data partnership until the end of 2022 Creating a demo interface plan until the end of April 2023 Writing a project proposal until the end of July 2023 *(see Action #3)*
Costs (if relevant)	Approx. 4 000 EUR (1 500 000 HUF), including organizing, facilitating, catering and documenting the meetings of the local data partnership and preparing the demo interface plan and the project proposal
Funding sources (if relevant)	National funding: TOP Plus (1.2.1-21 Liveable Cities) Municipality budget
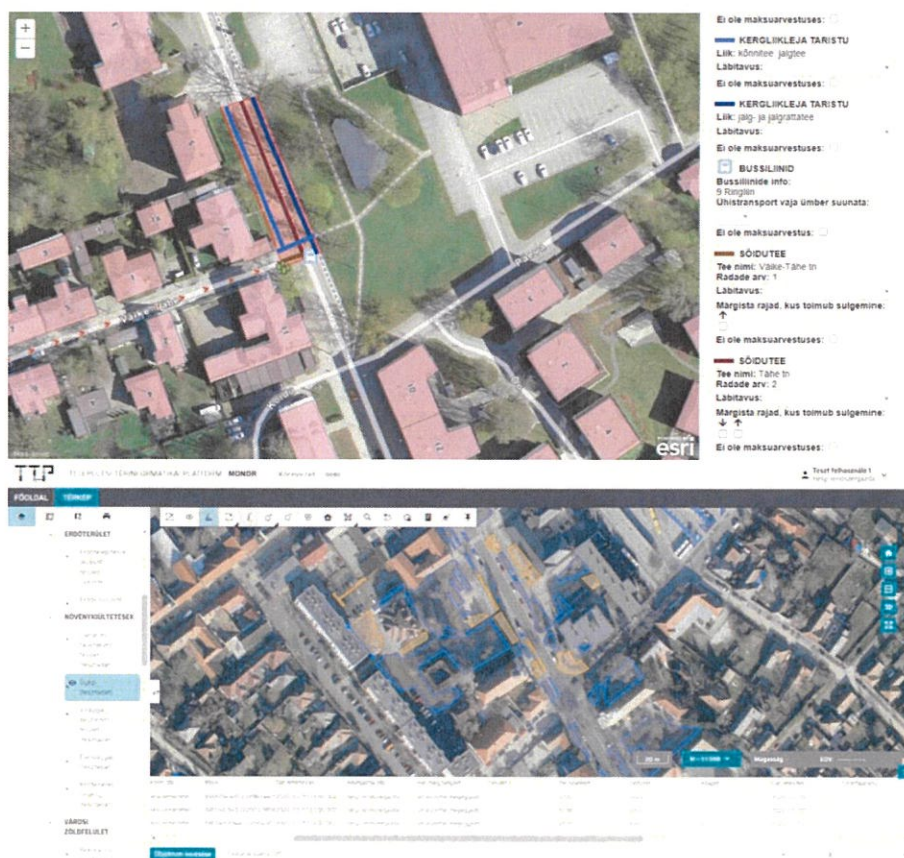
7 The pictures above demonstrate the similarities of the GIS platform of Tartu (up) and the application developed for Monor (down).
Sources: Municipality of Tartu, Lechner Knowledge Centre

ACTION 3

Background	Nyíregyháza has a lot more ideas than the two that ended up in the RAP as Action #1 and #2, especially related to establishing a digital ecosystem with a thriving business community (Birmingham), developing and running an innovation hub (Gävle) and utilizing universities in public and private sector innovation (Tartu). The time constraints of BETTER Phase 2 does not allow the city to implement actions related to every GP they have discovered and found interesting. However, **the learnings from the Exchange of Experience *should* appear in the strategic documents of the city** in order to achieve a **STRUCTURAL CHANGE** and lead to **NEW PROJECTS**, showcasing the impact of the knowledge transfer.
Action	The exact methodology and timeline of designing the Digital Transformation Action Plan is not known yet, but 2024 is the deadline to produce it, therefore, Phase 2 is in the ideal time range to **write a proposal based on the BETTER project – a paper including specific projects** based on the partners' GPs. The city commits itself to **include the content of this paper in the Digital Transformation Action Plan** either within Phase 2 (if possible) or after the project ends. The recently (March 4, 2022) finished Digital Transformation Agenda – in which the BETTER RAP actions are included too – has **12 digital objectives** to which specific projects must be assigned in the Digital Transformation Action Plan until 2024. 1. Creating the right conditions for the development of **digital pedagogy** 2. Developing the quality and methodology of **university ICT trainings** (i.e. contact between science, business and the public sector) 3. Raising **awareness** and expanding the **digital knowledge of citizens** 4. Digital development of **public services** (including the competency training of municipal employees) 5. Application of digital technologies in **urban management** and public services, with a focus on **data-based administration** 6. Deploying **smart mobility** management solutions in public transport

7. Digitization of **air quality data management**
8. Application of digital technologies in optimizing **energy networks and energy use** (e.g. public lighting, smart grids, real-time monitoring)
9. Facilitating the creation of **new businesses in the ICT sector**
10. Supporting the **digital transformation of businesses**, disseminating modern digital solutions and technologies
11. Developing the **local R&D&I capacities** based on digital technology
12. Application of smart city solutions in the fields of **culture, recreation and tourism**

Indicators	One document (with at least 12 project concepts)
Players involved	Municipality officials, Regional Stakeholder Group members (i.e. people who have participated in Phase 1 of BETTER)
Timeframe	April 1, 2023 – July 31, 2023
Costs (if relevant)	Approx. 2 600 EUR (1 000 000 HUF)
Funding sources (if relevant)	National funding: TOP Plus-1.3-1-21 Supporting Sustainable Urban Development Strategies (already secured)

June 16, 2022 (Nyíregyháza)

dr. Ferenc Kovács, mayor
<signature and stamp>