



# Regional Action Plan

**INNOVASPA  
PROJECT**



University of Debrecen

# Table of Contents

<b>Part I. General information</b> .....	2
Project: InnovaSPA - Innovative health solutions for thermal spa regions.....	2
<b>Part II. Policy Context</b> .....	2
1. Policies of the European Commission's cohesion policy objectives for the period 2021-2027:.....	2
2. EU Operational Programs for the 2021-2027 Programming Period (planned for the Enterprise Development and Innovation Operational Program) .....	3
<b>Part III. Action Plan</b> .....	6
I. Abstract of Action Plan.....	6
II. Keywords: .....	6
III. Background of AP and links with the project.....	6
IV. Action plan: challenges, objectives and actions.....	8
V. Regional context, definition of initial problem/policy challenge.....	8
VI. Focus and objectives.....	9
VII. Actors and stakeholders involved.....	10
VIII. Actions, schedule.....	10
IX. Funding schemes.....	<a href="#">3225</a>
X. Main points of innovation .....	<a href="#">3225</a>
XI. Process and methodology in drafting the AP .....	<a href="#">3326</a>
XII. Risk analysis.....	<a href="#">3326</a>
XIII. Communication plan.....	<a href="#">3427</a>
XIV. Conclusions and summary .....	<a href="#">3427</a>
<b>Glossary of Abbreviations</b> .....	<a href="#">3528</a>

## Part I. General information

<b>Project:</b>	<b>InnovaSPA</b> - Innovative health solutions for thermal spa regions
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<b>Country:</b>	Hungary
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## Part II. Policy Context

### The Action Plans aims to impact:

- ✓ The aim is to influence policies (operational programs) on the basis of the Good Practices identified
- ✓ Improving policies aiming 'supporting knowledge transfer'
- ✓ Making health care more efficient
- ✓ Promoting innovation in the field of preventative health and thermalism
- ✓ Job creation
- ✓ European Territorial Cooperation
- ✓ Support for other Regional Development Policies

### Policy instruments addressed:

#### 1. Policies of the European Commission's cohesion policy objectives for the period 2021-2027:

According to the European Commission, after 2020 it will focus its resources on 5 of the 11 "thematic objectives" for the period 2014-2020. Of these, "Smarter Europe" will appear as Objective 1 and "Europe closer to citizens" as Objective 5.

#### Policy Objective 1: "Smarter Europe"

**Details of the context of the Directive and how the Action Plan will improve the tools of the Directive:**

The main focus of the more intelligent Europe objective is on innovation, digitalization and economic transformation through providing support for small and medium-sized enterprises.

#### **Policy Objective 5: “Europe closer to citizens”**

##### **Details of the context of the Directive and how the Action Plan will improve the tools of the Directive:**

The objective envisions achieving a Europe closer to its citizens, which supports locally-organised development strategies and sustainable urban development across the EU.

The Hungarian tourism investments planned between 2021 and 2027 are also in line with the above-mentioned Objective 5. As the planning process currently stands, investments will focus on the following three main areas of development:

1. Cultural heritage sites
2. Health tourism
3. Active and ecotourism, development of the tourism network

## **2. EU Operational Programs for the 2021-2027 Programming Period (planned for the Enterprise Development and Innovation Operational Program)**

##### **Details of the context of the Directive and how the Action Plan will improve the tools of the Directive:**

The changes of the 21st century have also presented Hungarian companies with challenges that require the development of technology, the introduction of innovative solutions, and the wider application of digitalization. The Operational Programs for the 2021-2027 Programming Period (including the Entrepreneurship Development and Innovation Operational Program [VINOP] currently available in draft form) are designed in connection with the EU policy objectives 1 (“Smarter Europe”), 4 (“A more connected Europe”) and 5 (“Europe closer to citizens”).

VINOP is planned to cover the development of several policy areas, including business development, digitalization, innovation, R&D and tourism and heritage protection.

##### Planned priority axes of the Operational Program:

#### **Priority Axis 1: Enterprise Development, Development of Key Strategic Sectors, Digitalization**

The development and stability of SMEs are the basis for sustainable economic growth. According to the plans, the priority is therefore aimed at

the growth of SMEs, improving their competitiveness, increasing their productivity and strengthening their economic resilience. It is important to encourage the creation and strengthening of entrepreneurial capacities among SMEs, which enables the application of new, highly sustainable technologies and the improvement of the efficiency of business processes.

This is planned to include the following:

- Supporting the further development of high-performance businesses
- Encouraging the overall technological, organizational and strategic renewal of the SME sector, which is a key part of the economy
- Supporting enterprises operating in key strategic sectors and manufacturing enterprises with high growth potential related to the green economy

### **Priority Axis 2 "Research, Development, Innovation":**

The priority is planned to strengthen research and innovation capacities, and focus on the introduction of advanced technologies, which are planned to include, among others, the following activities:

- Supporting knowledge production: creating and developing research infrastructures and their networks, making better use of the potential of international research infrastructures, promoting stronger integration into the European Research Area and supporting competitive research projects
- Facilitating the flow of knowledge by supporting collaborations between knowledge production arenas and market players, by creating and developing an economic-research ecosystem that supports all of this
- Encouraging knowledge utilization by supporting companies' research, development and innovation activities

### **Priority Axis 6: Tourism, heritage protection**

In the 2014-2020 EU budget cycle, the development of health resorts was ensured by the resources named in the Economic Development and Innovation Operational Program (GINOP Priority 7 Tourism Constructions). It was possible to apply for the development within the framework of the GINOP-7.1.3-15 and GINOP-7.1.9-17 calls for tender. The calls for tender were aimed at the development of the settlement centre, the immediate surroundings of the spas and the services complementary to the natural healing factor, but the development of the spa infrastructure was not supported.

Developments for the 2021-2027 planning period are planned to be split between two Operational Programs:

1. Enterprise Development and Innovation OP (VINOP), formerly the Economic Development and Innovation Operational Program
2. Competitive Hungary OP (VMOP), formerly the Regional and Settlement Development Operational Program

According to the latest status of the Operational Program, dated 15 January 2021, tourism and heritage protection would be included as priority axes 6 within the framework of VINOP, i.e. improving the quality of tourism services within the following focus areas:

- Complex development of spas and health resorts in tourist areas
- Complex development of heritage sites in tourist areas
- Development of integrated products and services in tourist areas

The main goal of the complex development of spas and health resorts is to develop the basic infrastructure of spas (which was delayed in the period 2014-2020), to develop products and services, and to develop the settlement environment of spas and health resorts.

The Managing Authority also proposed a new call for the development of spas, the aim of which is to develop spas operating in certified spa locations and registered by the Public Health Department of the Budapest Government Office (ÁNTSZ until 31 March 2017) as tourist attractions in order to preserve or increase the competitiveness of the region.

The call for tenders is prepared according to the principles below:

- Providing a significant resource base to give as many spas as possible opportunities for development.
- Development of a spa is also a direct object, for example: the development of water treatment technology, energy efficiency investments
- Supporting the introduction of innovative products and services, e.g.: drinking treatments, inhalation

The objectives of the Action Plan are in line with the policy Objective 1 set out by the European Commission, which aims for a smarter Europe, inter alia by supporting R&D and innovation activities. The 5 policies formulated by the European Commission, the goal of a Europe closer to its citizens, include complex developments in the field of health tourism, which are also in line with the objectives of the Action Plan. In addition, the contents of the Action Plan are in line with the plans of Hungarian tourism investments planned between 2021 and 2027. The targeted developments are for the priorities of the Operational Programs (planned for VINOP), the “Enterprise Development, Development of Key Strategic Sectors, Digitalization” focus area, “Research, Development, Innovation”, and the priority axis “Complex

Development of Spas and Health Resorts in Tourist Areas". They are also linked to the Authority's proposals to support health development.

## **Part III. Action Plan**

### **I. Abstract of Action Plan**

The action plan was prepared in connection with Hungary's participation in the program entitled "Interreg Europe Program, InnovaSPA project - Innovative health solutions for thermal regions". The document explores, as a kind of outcome product, the main actions to be implemented, the development of which was created through the experience and knowledge transfer gained during the program.

### **II. Keywords:**

tourism, innovation, health tourism, cure package, competitiveness, prevention, health preservation, novel treatments, networking, medicinal water

### **III. Background of AP and links with the project**

The goals of the University of Debrecen as a Hungarian project partner by participating in the project:

- i. Gaining and sharing experience and information in an international field
- ii. Networking and maintaining contacts with European centers of medical tourism
- iii. Getting to know regional development policies and partners' good practices
- iv. Identifying good practices that can also be applied in the region and look for possible solutions to achieve the following goals:
  - Strengthening the position of the region in domestic and international tourism, in the field of health tourism
  - Creation of new innovative tourism products and program packages based on scientific research results for the purpose of health preservation and prevention
  - Design and implement a coordinated marketing campaign to increase competitiveness and raise awareness of the destination

Hungary gives priority to the development of tourism: the National Tourism Development Strategy 2030 adopted by the Government in early

October 2017 defines the framework in which the state and the market will think together about the future of Hungarian tourism.

Act CLVI of 2016 on the State Tasks of the Development of Tourist Areas shifts the focus of tourism developments from individual attractions to tourist areas, stating that increasing Hungary's tourism potential lies in tourist destinations, by providing, managing and marketing complex tourist experience packages, which represent a significant increase in demand for the areas concerned. The new approach logic of attraction development and basic infrastructure development, which complements the destination approach, ensures the socio-economic sustainability of the developed attractions, and provides a quality experience for visitors. In addition, it designates the direction and main content requirements of attraction developments when the attraction development takes place inside or outside the destination. The Strategy focuses on the presentation of the new, integrated institutional system of state tourism management and the definition of the role of the state in tourism.

Government Decree 429/2020 (IX.14.) defined the areas that can be well identified from the point of view of tourism marketing by naming the settlements. The former development-focused approach will be replaced by a focus on marketing and sales. By designating the regions, the aim is to make the performance of tourism tasks more efficient, to create well-communicable and remarkable reception areas in accordance with the goals of the National Tourism Development Strategy 2030 (NTS 2030) completed in 2017.

*The government has designated the following tourist regions:*

- Balaton
- Sopron region
- Bük and Sárvár
- Tokaj and Nyíregyháza
- Eger region
- Gyula region
- Győr and Pannonhalma
- Szeged region
- Pécs region
- Debrecen and surroundings
- Greater Budapest

Nowadays, various forms of medical tourism or health tourism play an increasingly important role in world tourism. This trend will play a key role in the supply side of tourism market in Europe and in Hungary in the future. The need for natural medicine, a healthy lifestyle and outlook on



life, good physical fitness, maintaining proper fitness, and disease prevention is growing globally. The increase in the average European life expectancy and the extension of the active retirement age contribute to an increase in demand.

The Hungarian thermal water resource is a special feature of Hungary's hydrography, outstanding in terms of quantity and quality. The thermal waters here are unique in the world in terms of their medicinal and balneological effects. In addition to Iceland, Japan, the United States, France, Italy, China, and New Zealand, the largest thermal water reserves exist here. There are few other places with such high-quality thermal and medicinal water suitable for the treatment and prevention of so many types of disease. There are currently about 500 thermal water sites, which means that 70% of the country's territory has natural water warmer than + 30 ° C.

#### **IV. Action plan: challenges, objectives and actions**

By centralizing tourism developments, as well as sales and marketing activities, and by concentrating resources, product-based and target group-oriented development will become more valuable. The definition of priority areas and geographical delimitation exclude settlements from the development and branding process that have spas of national and regional significance. The tourist area of Debrecen and its surroundings in Hajdú-Bihar County is confined to seven settlements: Debrecen, Hajdúszoboszló, Balmazújváros, Hajdúböszörmény, Hortobágy, Egyek, and Tiszacsege.

The action plan sets out objectives that are in line with the development policy of the European Commission for the 2021-2027 budget cycle and the objectives of Hungarian tourism investments planned to develop health tourism between 2021-2027.

#### **V. Regional context, definition of initial problem/policy challenge**

Hajdú-Bihar county and the Észak-Alföld region are one of the most important tourist destinations in the country in the field of health tourism. The utilization of thermal water for tourism purposes has a tradition of almost a century; nearly 200 thermal wells, thermal baths, spas and the spa culture and tourism superstructure built on it have subsequently developed. Wellness and spa hotels, beaches, water attractions and a well-established medical background have created a health tourism industry, which is considered to be the region's leading tourism product. In Hungary however, municipally owned spas often operate at a loss, and their revenues often barely cover depreciation. In recent decades, most spas have been able to provide maintenance only due to depreciation,

as a result of which it has now become necessary to upgrade the technical condition of the basic infrastructure. However, with the exception of large, internationally known complexes, spas are unable to finance this from their own resources, so they need to use external sources for development.

In tourism, one of the classic forms of networking, the process of clustering, does not have a long tradition in Hungary either. In addition to clusters operating in the field of trade and industry, there exist several clusters in tourism, and at least four in the field of health tourism (Southern Great Plain Thermal Cluster, Pannon Thermal Cluster, Thermal- Health Industrial Cluster, Northern Hungary Medical Cluster), as well as the Danubius Hotel Chain in the hotel industry.

In the Észak-Alföld region, in 2005 the Thermal-Health Industrial Cluster laid the foundations with 48 member companies operating in the field of health industry and health tourism. The primary goal of the organization, which mainly comprises thermal baths and hotels, is to promote professional interest representation and product-based developments, research, human resource training and the continuation of coordinated marketing activities.

At present, the clusters are struggling from a lack of funds; they do not receive support from the central budget or any other domestic sources, but are very successful in international tenders, accessing direct sources in Brussels.

## **VI. Focus and objectives**

The main objective of the action plan is to promote the development of health tourism based on the following:

- In addition to policy objectives, regional interests should prevail
- In addition to research and development, the health industry should receive more attention and resources for the maintenance and operation of cluster management organizations.
- Bringing together the actors in health tourism through networking and the continuous development of their tourism offers, and bringing them to the market for the appropriate target groups, thus improving and increasing their competitiveness
- Encouraging target group-based developments: separation of wellness and medical tourism in the development of services through the definition of profiles
- Assisting the operation of spas, supporting the professional training of human resources (swimming pool attendant, swimming pool operator, sauna master, training of physical and balneotherapy specialists, introduction of holistic training)

- Development and dissemination of innovative supply elements in the fields of wellness, selfness, and wellbeing
- Encourage collaboration with local suppliers
- Innovative production of local products
- Solving the issue of financing medical treatments, increasing the support of the National Health Insurance Fund of Hungary (NEAK), separating market-based and state-funded treatments in space and time
- Supporting coordinated marketing activities to strengthen the thermal region brand

**VII. Actors and stakeholders involved**

- i. University of Debrecen
- ii. Thermal Health-Industrial Cluster and its member companies: spas, hotels
- iii. Public Administration Bodies
- iv. Managing Authority
- v. NEAK
- vi. Spas, spa hotels
- vii. Municipalities
- viii. General practitioners, specialists
- ix. McKenzie Institute
- x. Hungarian Baths Association
- xi. Spa developers and operators
- xii. National Water Directorate and regional water directorates
- xiii. Ministry of Agriculture
- xiv. Hungarian Tourism Agency
- xv. Travel agencies, tour operators
- xvi. Primary, secondary and higher education institutions
- xvii. Small and medium-sized enterprises

**VIII. Actions, schedule**

<b>Action I. Service development</b>	
Relevance of the project	Below the surface of Hungary there is a large amount of thermal water, for the utilization of which there are thermal baths in many settlements. In Hungary, the thermal water resource is the focal point around which the mosaic nature of tourism can and should be organized. Not only is it capable of fully realizing the job-creating effect, but is also the cheapest possible way of producing GDP with the least investment. The development of thermal water-based tourism has been ongoing in Hungary for decades, but still with unsatisfactory results. For this reason, it is necessary to launch large-scale programs for the development of thermal tourism. The already well-established medical and thermal health tourism service and hospitality system, the existing

operating companies, the efficient marketing and sales network, the international recognition of Hungarian balneological treatment, as well as the high level of training of doctors and medical staff providing it can be a good basis for the innovation of services, in addition to our many decades of bathing culture. Along with the excellent existing facilities, it is also perceptible that through the development of services we are able to supply and receive a larger health tourism clientele.

Obtaining official permits and certifications in order to introduce the internal use of thermal water classified as medicinal water in Hungary, and then building on this, **drinking therapy** as a paid and publicly funded (social security subsidized) medical service can be introduced as a new form of balneotherapy. Introducing it as a new treatment can also create new jobs. Supporting the introduction of innovative products and services, including drinking cures, is also part of the Managing Authority's proposal for the development of spas.

The importance of exercise, including physiotherapy, is becoming more and more important, and it is also characteristic of the Hungarian population that they spend little time exercising and that lifestyle can be the cause of many illnesses. "The WHO recommends a total of at least 150 minutes of physical activity per week to reap the benefits of exercise." The McKenzie method (also known as MDT, or "Mechanical Diagnosis and Therapy"), or **McKenzie exercises**, was developed by physiotherapist Robin Anthony McKenzie, who believed in developing a treatment tailored to the patient. It is a method of examination and treatment used by physiotherapists and doctors in 40 countries around the world. The McKenzie exercises in Hungary are not currently one of the NEAK-supported health services, so a specialist cannot prescribe a health care provider contracted with a NEAK at the expense of social security, they can only suggest to the patient that the specialist apply McKenzie practices to their problem. As a result, it is used by far fewer patients than would be justified by their state of health. McKenzie gymnastics is provided in the form of paid care by various spas, private practices, private clinics, musculoskeletal centres, and health centers. It can be paid for a special Hungarian debit card, called SZÉP card (with this card one can pay for recreational services). It can also be accounted for by a voluntary health insurance fund, if the therapist gives an invoice to the user.

The use of medical treatments in Hungary during the 2019 study tour in Chaves and Verin has huge potential to increase the efficiency of domestic health care, both in terms of prevention and treatment. Therapeutic facilities with thermal water can contribute to disease prevention through **therapeutic water inhalation**, thus helping to develop a healthy lifestyle. Supporting the introduction of innovative products and services, including inhalation treatments, is also part of the Managing Authority's proposal for the development of spas.

The InnovaSPA project addresses the challenges of an aging society and seeks to demonstrate that thermal therapy, through the introduction of innovative therapies and care solutions, can become a sector with huge potential for making health care more efficient. The importance of a healthy lifestyle and prevention is expected to become more widespread, thus expanding the target groups in the area. It is not enough to use thermal water treatments alone to achieve this. Continuing with the experience in Lithuania, the guest is advised to go through a complex series of therapies, in which the beneficial effect of thermal water is only one of the most important elements. Other parts include gastronomy, night rest conditions, exercise, natural / close-to-nature activities, and ecosystem services. A kind of “training camp” service may also be provided where, on request, an activity package is offered for the entire stay of the guest. Of course, all this can be done with self-organization. These packages seek to bring the individual close to the ‘state of flow’ and can serve as a model for organizing their daily lives, where they can learn to create a healthy work-life balance. With this, a physical and mental balance as well as fitness can be maintained even into old age.

One of the good practices observed in connection with the study trip to Portugal is **product development from thermal water**, and its marketing and market support. While in Hungary services based on thermal water stand out (medical treatments, wellness, and hotel packages with spa treatment), in Portugal several products are produced from thermal water. Almost all baths and hotels also sell soaps, cosmetics and water sprays based on the local medicinal water. This is done in beautifully graphically designed packaging with a perfect local supply chain. Buying such

	<p>products gives you the feeling that you can take the “spa” home! There is great potential in this.</p> <p>The medical services available in Hungarian spas are used by both domestic and foreign visitors. In the case of Hungarian visitors, unfortunately, therapies based on medicinal water are not always to the fore in the treatment of an already established disease or illness. There are several reasons for this, but one of the main reasons is that patients, and in many cases doctors, do not want to use medicinal water in therapy due to a the lack of knowledge. During the study trips, each of the foreign spas had a visitor centre, which is not typical in Hungary. <b>Visitor centers</b> can play several roles, as a result of which medical services may become more popular among both the domestic population and foreign visitors. In the case of wellness complexes integrated with a spa, the visitor center can also help to introduce other services. These centres also serve educational purposes and can introduce young people to the potential of medicinal water.</p>
Main goals of the Action	<p>One of the aims of the action is to introduce drinking therapy as a type of treatment in order to expand the range of existing spa treatments and to utilize the available medicinal waters in a new form. If our medicinal waters receive the necessary qualification suitable for human consumption (currently few in the country have such a qualification), the oral treatments that can be built on it, such as drinking therapy or inhalation with social security support, also in the form of publicly funded support (NEAK support or full funding), will be provided for the population and Hungarian guests of medical tourism. The use of medicinal water can significantly reduce drug therapy with side effects, so patients who cannot take medication can access a solution to their health problems by means of this new type of treatment. Drinking therapy can be used to treat many conditions such as diseases of the stomach, kidney, intestine, gallbladder, liver, as well as diabetes, bronchitis, and osteoporosis. After the introduction of drinking therapy, the goal is to introduce and sell the treatment to both Hungarian and foreign patients and guests. If treatment is administered to patients, long-term plans may include the establishment of a medicinal water drinking hall, which could serve medicinal water certified for consumption directly to patients and guests for on-site (cure-like) consumption. In the case of a sufficient number of consumers, the establishment of a bottling plant may be included in future plans.</p>

**McKenzie exercises** aim to become part of a complex spa treatment package as part of spa treatments available in spas. The goal of McKenzie exercises is not only to eliminate the complaint, but also to prevent the problem from recurring, which, along with movement therapy, can be provided tailor made.

In addition to the above, the campaign also aims to introduce thermal water **inhalation treatments** in Hungarian spas and medical facilities with medicinal water. The primary advantage of the method is that it can be used for drug- and side-effect-free treatment of upper respiratory diseases, which contributes to health preservation and disease prevention. To achieve this, it would be key for the therapy to be a treatment funded by the National Health Insurance Fund. Thermal water inhalation is primarily recommended by a specialist. Based on targeted test results, doctors can prescribe the composition and amount of medicinal water to be inhaled by the patient. It also determines the duration of the treatment and the frequency of its use. Acquisition of the necessary equipment for the implementation of the therapy is a primary task, and it is essential to employ qualified personnel. The automatic dosing of the aerosol generators used in the Chaves thermal bath allows for ease of use. Thermal water is delivered to the nasal cavity or pharynx at regular intervals using an appropriate supplementary device. Automation guarantees that the patient adheres to the required rest periods between the vibration phases and that the delivery of the necessary aerosol particles into the body is optimized.

The action aims for the **efficient use of resources** through the implementation of the following points:

- Utilization of renewable energy sources in all suitable areas.
- Minimizing the amount of energy used in tourism and services, increasing energy efficiency: "the cheapest energy, the unused energy".
- Gentle use of thermal water supplies, use of re-injection options and further research to maintain bed pressure. Utilization of geothermal energy in service facilities for heating purposes (e.g. cascade systems).
- Construction of passive buildings (this is also prescribed by the building regulations coming into force from 2021: 7/2006 (V. 24.) Decree of the Minister

	<p>without Portfolio on the determination of the energy characteristics of buildings</p> <ul style="list-style-type: none"> <li>• Meeting the energy needs of buildings (spas, sanatoriums, hotels, sports facilities, etc.) exclusively from renewable energy sources.</li> <li>• Passive energy solutions: canopy shading, application of light and thermostatic building structures, renewable humidifier, water cooling facilities, forest cooling-heating effect, heat pumps, local renewable electricity generation equipment (e.g. solar panels on electricity poles and vertical wind turbines)</li> <li>• Local transport: general use of bicycles, development of the electricity network, introduction of electric buses, taxis, e-bikes, expansion of the charging stations network;</li> <li>• Promoting sustainability to guests.</li> </ul> <p>Another goal of the campaign is to make thermal water more widely available, to display products on the palette that have not been available in Hungary until now. With the new products, a new dimension can be created in the utilization of thermal water and medicinal water and in the guest / patient-provider relationship. In <b>product development</b>, the legal background is given, but it should be mentioned that the domestic administrative environment does not promote product development in the field of medicine at all. For each license, lead times are long and the required quality indicators are often unachievable. At present, many spas do not want to be involved in the development of cosmetic products based on domestic medicinal water because of bureaucracy and the slow administration. Of course, we also have good examples in Hungary, such as the thermal crystal (minerals extracted and crystallized from thermal water) in Sárvár and the cosmetics in Bükkfürdő, which demonstrate that there is a demand for high-quality, tastefully packaged cosmetic and beauty products. A good example of course exists not only in Portugal, but also in Vichy. The packaging and sales channels of the products can strengthen the feeling that this is a premium or possibly luxury product, which cannot be accessed in every store, but only with the help of key partners.</p> <p>The campaign also aimed to create a <b>visitor center</b> so that Hungarian spas could present their range of services and products to those interested at a European level. A visitor center provides an opportunity for travel agencies and tour operators who plan to send guests to the given unit, to learn more about the complex; usually they arrive as members of</p>
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	<p>study tours and receive a unique experiential presentation about the complex. The aim is also for the visitor center to present possibilities for using thermal water to those interested, even school groups, in accordance with social responsibility.</p>
<p>Description of Action</p>	<p>Medicinal water, even if it is classified as mineral water, can be used not only during bath treatments, but also as a drinking therapy. <b>Drinking therapy</b> needs to be recommended by a doctor. Based on an examination and the patient's complaints, the specialist prescribes which medicinal water the patient should consume, in what amount, and at what temperature. The timing, frequency, method, and duration of the drinking therapy are also determined. The therapy can increase the effect of spa treatments, and can therefore be used together with a spa treatment in cases of certain diseases and complaints. During the course of treatment, the patient consumes half a litre of fluid more than the usual daily amount. This extra amount of fluid is also effective on its own because the excess fluid cleanses the body. In the case of a sufficient number of consumers, the establishment of a bottling plant would greatly facilitate the cure-like consumption of medicinal water. The establishment of a plant can be viewed as an R&amp;D project that could be integrated into tourism through cooperation with SMEs. The objective is thus in line with the planned priority 1 of the Operational Program for the 2021-27 programming period (including VINOP).</p> <p>The <b>McKenzie Method</b> (also known as MDT, or “Mechanical Diagnosis and Therapy”) is an internationally recognized method for examining and treating spinal and limb pain. The method was developed by physiotherapist Robin McKenzie. The method can only be used by and certified by physiotherapists and physicians who have attended and are certified in courses taught by the International or Hungarian McKenzie Institute. The first step in the exercise is to assess the condition and then to determine the practices. The goal is to centralize the pain, followed by the definition of the pain, then the stabilization of the condition with muscle strengthening, and finally the home physiotherapy, and newer exercises tailored to the patient's condition.</p> <p><b>Inhalation</b> is a gentle therapy during which air ions, medicinal water, or drug solutions, broken down into small particles, are delivered to the airways using various techniques. Medicinal waters, when inhaled, have a beneficial effect primarily on respiratory diseases, but their use can be beneficial for other health problems too. Medicinal waters act in several ways</p>

when inhaled. They contain ingredients that can not only enter the body through the skin, but are also effectively absorbed through the lungs when inhaled. Spas with iodine and sulphur water in particular can be highlighted in this respect: iodine has anti-inflammatory effects and sulphur has vasodilation properties that stimulate respiration, improve cardiovascular supply and metabolism. It also helps healthy people overcome mental and physical fatigue. The biggest advantage of the procedure is that it delivers the desired drug to the respiratory tract in a targeted way, so that it does not cause stomach upset in those who are sensitive to it, nor does it burden the heart. This is because the concentration of the drug in the bloodstream is responsible for the unpleasant side effects, but the effect of the inhaled drug results in a high concentration of the drug in the lungs and a low concentration of the drug in the bloodstream. The therapy is effective in treating the following diseases: asthma bronchiale (asthma), emphysema pulmonum (emphysema), bronchitis acute or chronica (bronchitis), bronchiolitis (viral bronchitis), certain allergies, and laryngitis (laryngitis).

Types:

- "dry" inhalation procedure
- "wet" inhalation procedure

During the dry process, also known as spraying, the substance to be introduced reaches the smallest airways. The active ingredient is inhaled as a powder-air mixture, which has the advantage that the dosage of the active ingredient can be controlled very precisely. The disadvantage, however, is that the patient's air intake must be adjusted to the rate of drug discharge to achieve the desired effect. As a result, these types of inhalers are less suitable for treating infants and children. The dry inhalation procedure is most commonly used in the treatment of asthma, to administer bronchodilators and anti-inflammatory agents. During wet inhalation, the patient inhales an evaporating vapour. Depending on the technology used, a distinction can be made between ultrasonic, compressed air (compressor) or membrane (mesh) inhalers. The active ingredient is inhaled in small droplets that can be precisely sized to optimally target the upper, middle or lower respiratory tract. Inhalers operating with this method are excellent for treating a wide variety of respiratory diseases. Their advantage is that they do not require special breathing techniques and inhalation can be

	<p>easily performed with the help of a mask. These types of inhalers are great for treating children and infants.</p> <p><b>More efficient use of resources</b> begins with water management. Water is a more important element in creating a liveable environment. Both global and domestic water management currently face serious challenges. Problems in Hungary include drought, the threat of desertification, the pollution of the earth and aquifers, urban climate regulation, and the lowering of subterranean water levels. Water is a key element of the InnovaSpa project and the action plan, so it is important to manage it well. Utilization of rainwater for building operation, and in park maintenance, and in places where rainwater can be used. (Application budget: HUF 20 billion)</p> <p>Management and storage of surface water flows.  Several goals are achieved: irrigation of crops, replacement of subsurface layers, replacement of the natural environment, sustainable use of drinking water resources, microclimate tempering, development of water sports facilities (rowing, fishing, bathing, etc.), aesthetic landscape elements (increases diversity, landscape), landscape services (provides an aesthetic experience, reduces the formation of the municipal heat island, rain storage function).</p> <p>Facilities for sports activities where facilities required (e.g. forest, forest walks, expansion of public parks, obstacle courses, rest islands, slackline, other traditional sports fields, cycle paths).</p> <p>Utilization of opportunities provided by local conditions, in accordance with hydrographic and morphological conditions (development of mountain winter-summer sports facilities and water sports activities (e.g. connection of Mátraszentimre - Parádfürdő).</p> <p>Support for research topics and pilot projects in the following topics:</p> <ul style="list-style-type: none"> <li>- complex thermal water utilization (energy-medicine-tourism);</li> <li>- wastewater treatment (utilization possibilities of used thermal water);</li> <li>- re-injection, water replenishment;</li> <li>- the study of the physiological, psychological and social effects of a complex welfare, lifestyle-shaping service;</li> <li>- study of the tolerance of the natural environment</li> <li>- feasibility study of a near-urban environment</li> </ul>
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With the **development of new products**, the development of new therapeutic forms can also be realized, which can then be used effectively in Hungarian medicine and during wellness treatments. Health preservation, rehabilitation and more effective treatments can be provided with the aid of new products and through the services provided. If a valued guest/patient can take home the positive experience and the product itself they can continue the treatment at home. Through this we can also pay attention to maintaining the good health and well-being of patients, as well as promoting a healthy lifestyle. Participants in product development as an R&D project could include Hungarian spas, universities and research organizations, as well as small and medium-sized enterprises, in addition to the authorities. The importance of cooperation between the partners should be emphasized, as while the legal background can be provided by the authorities and ministries, the theoretical background can be provided by the participating organizations, e.g. the Hungarian Baths Association and universities. However, the previous two are worthless if they are not or difficult to adapt for spas with practical experience. Small and medium-sized enterprises could help sell products, for example by setting up gift shops. Thus, the action would also target the development of small and medium-sized enterprises. The objective is thus in line with Priority 1 of the Operational Program (including VINOP) planned for the 2021-27 programming period.

Of course, there are good examples of this in Hungary as well, such as the thermal crystal of Sárvár, the soaps made with minerals extracted from thermal water in Kumánia complex in Kisújszállás, and the recently released cosmetics line from Bükfürdő. In the case of the latter, the medicinal water of Bükfürdő is incorporated in moisturizing face creams, body lotions, hand creams, massage creams and shower gels. These product developments should also be introduced to the general public in medical spa complexes. Of course, social media and web stores can also serve as sales and marketing channels, but as is the case in France, even pharmacies can serve as sales outlets. We can even use mainstream media as a marketing communication tool, but social media can provide a communication platform through which we can provide more information to interested parties and provide for an immediate dialogue (question-answer) between buyer and seller. If the spas also provide the specialist background for this, then credibility can be successfully communicated to the target audience.

The creation of a **visitor center** requires a conference room, where it is possible to show films and even view functional

	<p>models that illustrate the different utilization possibilities of thermal water, especially the healing effects of medicinal waters. There is a need for audio-visual equipment with which the guide can share information with the participants during the actual complex presentation. It is a common problem that the spas in the spas and visitors create noise and participants do not receive proper information during the tour. The visitor centre and a subsequent professional tour would definitely have a positive impact on the sales opportunities of a complex. Another application option is the reception of school groups, even with the possibility of holding outsourced lessons. Geography, physics, biology, and chemistry classes can also be held by presenting the different utilization possibilities of thermal water. The training, informing and education of young people plays a decisive role in forming their attitudes later in life regarding thermal water. It is important that the complexes also serve future generations, and it is important to keep in touch with young people so that they do not turn away from often prejudiced against thermal baths (“only old people go there”) but realize that they are of value to all ages. They need to be catered for when they just want a simple spa experience, and they need to be catered for when a potential illness needs to be prevented. For complexes where in addition to the spa there is an outdoor beach or an indoor adventure pool, it is possible to introduce younger age groups to the units that may be more attractive to them at a given age. There is no possibility to advertise the services within the school buildings, but if children visit the complex then the dissemination of knowledge and knowledge transfer has an advertising value in itself; as a result complexes can also hope for an increase in revenue. In this way, the pleasant will be associated with the useful, and social responsibility with profitable operability.</p>
Keywords	<p>Medicinal water, thermal water, certified water, drinking therapy, medicinal water classification, mineral water, respiratory disease, asthma, spa medicine, prevention, health preservation, metabolism</p> <p>Physiotherapy, individual physiotherapy, therapy, condition assessment, McKenzie method, rheumatology, locomotor, health preservation, treatment package, healing effect</p> <p>Inhalation treatments, respiratory diseases, respiratory treatment, treatment without side effects, aerosol generator Thermal therapy, innovative therapies, more efficient healthcare, flow experience, renewable energy sources</p> <p>Innovative product development, cosmetic products using medicinal water, research and development, small and medium-sized enterprises</p>

	Visitor centre, social responsibility, knowledge centre, dissemination of knowledge
Tools to be used	<ul style="list-style-type: none"> <li>• Consultation meetings with experts in the field</li> <li>• Training courses with relevant professionals</li> <li>• Product promotions</li> <li>• Employee training courses</li> </ul>
Stakeholders and other organisations involved	<ul style="list-style-type: none"> <li>• Spas, spa hotels</li> <li>• NEAK</li> <li>• Municipalities</li> <li>• General practitioners, specialists</li> <li>• McKenzie Institute</li> <li>• Hungarian Baths Association</li> <li>• Spa developers and operators</li> <li>• National Water Directorate and regional water directorates</li> <li>• Ministry of Agriculture</li> <li>• Hungarian Tourism Agency</li> <li>• Travel agencies, tour operators</li> <li>• Primary, secondary and tertiary education institutions</li> <li>• Small and medium-sized enterprises</li> </ul>
SMEs role and engagement (if applicable)	<p>Small and medium-sized enterprises committed to more efficient energy use and a greener future could be involved in implementing the actions.</p> <p>The result of product development as an R&amp;D project would be integrated into tourism through the participation of small and medium-sized enterprises. Not only small and medium-sized domestic enterprises could play a role in the production and sale of products, but the establishment of a bottling plant and the sale of bottled products might also take place with the involvement of SMEs.</p>
Expected results	<ul style="list-style-type: none"> <li>• Job creation</li> <li>• Preserving the health of the population, preventing disease</li> <li>• Use and document experiences, prepare for future research</li> <li>• Providing knowledge on the topic to stakeholders</li> <li>• More efficient energy use, optimal resource utilization</li> <li>• Indirect benefits (commitment) for the product distributor</li> <li>• Improving the image and visibility of a given destination</li> <li>• The short-term effect of the results should serve the visitors of the complexes with a new approach, support sales, and create and deepen brand</li> </ul>

	<p>awareness and product awareness amongst younger generations.</p> <ul style="list-style-type: none"> <li>• Development of small and medium domestic enterprises</li> </ul>
Indicators Results	<ul style="list-style-type: none"> <li>• Number of jobs created</li> <li>• Number of patients treated</li> <li>• Number of consultation meetings and number of participants</li> <li>• Renewable energy utilization rate</li> <li>• Decrease in the value of variables measuring environmental impact (e.g. air pollution)</li> <li>• Quantity of product sold</li> <li>• Number of business and non-business visitors</li> </ul>
Time frame	2020-2022
Indicative Costs	max. HUF 1.8 billion (not as an independent project)
Indicative funding sources	Operational Programs of the EU 2021-2027 programming period (planned VINOP) and own resources
Additional comments	<p>Phase 2 is about the actual implementation, funding, concrete steps and events related to the projects, monitoring the policy. At present, the service developments described in the action are being envisaged through and within the framework of the Operational Programme for Economic Development and Innovation Plus 1.0 (GINOP Plus 1.0). The conditions for obtaining support should be specified in the individual calls for proposals of the Operational Programme. This should include a concrete business plan prepared by the stakeholders with a timetable for implementation. With an indicative budget of HUF 150 billion for the development of spas, tenders are expected to be launched next year and closed by 2025, meaning that implementation will take place over the next 4 years. Further details of the tender are not yet known.</p> <p>In particular, under Priority 6 (Tourism and Heritage), calls for proposals are expected to be launched in relation to the activities identified in the Action Plan. In the 2021-2027 development period, the priority objective is to develop spas and their surroundings with a tourist attraction, which will contribute to a rapid recovery from the current crisis, to increasing competitiveness and to improving the service infrastructure of spas. The developments should be in line with the horizontal aspects of the National Tourism Development Strategy 2030 which includes:</p> <ul style="list-style-type: none"> <li>- the renewal of the technical infrastructure of spas, including the exploration of alternative connections (energy use)</li> <li>- product and service development, with particular attention to spa research (evidence based)</li> <li>- improving spas and their environment - providing a complex experience.</li> </ul>

	<p>Considering the objectives of the InnovaSPA project, priority 2 (Research, Development, Innovation) could also be a major opportunity for future calls.</p> <p>In particular, the area of Stimulating knowledge flows could be addressed here, where the aim is to create, support and develop organisations supporting higher education, academia and business cooperation, which undertake RDI activities to focus on the needs of business partners by strengthening their research capacities. In Hajdú-Bihar County, projects in the field of innovative thermal therapies (building a complex system for different target groups) can be launched based on the research potential of the University of Debrecen and the cooperation of stakeholders. Clusters are also expected to participate as applicants in this field, as the Thermal and Health Cluster brings together important thermal and health industry players in the region, including the University of Debrecen.</p> <p>In Priority 6, the individual spas are expected to be the beneficiaries, while in Priority 2, PP2 may apply together with stakeholders (even with several at the same time).</p> <p>The permanent direct connection with the Ministry of Finance as the GINOP's Managing Authority is essential during the project phase 2, so that we can provide our comments on the calls for proposals both in person and through the socialisation process. The preparation of the proposals by the deadline for submission and the implementation are usually done by our own staff. Of course, in the case of consortium applications, continuous coordination and cooperation is essential.</p>
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<b>Action II Networking, cooperation</b>	
Relevance of the project	<p>Government Decree 429/2020 (IX.14.) defined 11 tourist areas, which are as follows:</p> <ol style="list-style-type: none"> <li>1. Balaton</li> <li>2. Sopron region</li> <li>3. Bük and Sárvár</li> <li>4. Tokaj and Nyíregyháza</li> <li>5. Eger region</li> <li>6. Gyula region</li> <li>7. Győr and Pannonhalma</li> <li>8. Szeged region</li> <li>9. Pécs region</li> <li>10. Debrecen and surroundings</li> <li>11. Greater Budapest</li> </ol> <p>There are outstanding spa settlements in these 11 tourist areas, and an area (Sárvár-Bük) based exclusively on medical tourism. Hungarian baths currently employ almost 18,000 people and have generated revenues in excess of HUF 70 billion in recent years. The successful operation of</p>



	<p>these spas has a rolling economic impact as many hotels and services are built on them. These hotels and service providers contribute to positive economic performances through the employment of tens of thousands of people.</p> <p>The most important driving forces of domestic tourism are clearly domestic spas. There are 13 spa towns among the 15 most visited destinations; 71% of guest nights are in a settlement with a touristically relevant spa.</p>
<p>Main goals of the Action</p>	<p>Our bathing culture dates back hundreds of years. Our baths include spas, thermal baths, beach baths, adventure baths, and swimming pools. From the point of view of tourism, they all address different target groups, but one of the biggest shortcomings in Hungary is the lack of segmentation. Every municipality that has a thermal well would like to introduce medical treatment services immediately, but skilled labour force is not always available. It is also problematic that settlements which are very close to each other try to attract visitors to their spas in competition with each other - but not together. Unfortunately, destination thinking only appears in empty promises; however, the Hungarian Tourism Agency, in it's role as the government's official tourism office, has already taken some steps in this direction. In each and every case, the aim should be to develop appropriate segmentation and coordinated service development through the cooperation of destinations.</p>
<p>Description of Action</p>	<p>Networking – cooperation</p> <p>Based on the experience gained during the AUVERGNE-RHÔNE-ALPES REGION study trip in France in March 2019, the action plan was proposed mainly as a good practice of cluster-level professional cooperation and the development of innovative prevention and health programs to improve people's quality of life.</p> <p>The activities of the French organization Cluster Innovatherm greatly contribute to the formation of the tourism policy there, and to the development of the health tourism strategy of the region. Adopting good practices presented in the field of research and marketing can also help domestic processes in the field of health preservation and prevention. The “ThermStress” and “Physical activity education” projects of the cluster were based on scientific research.</p> <p>One of the good practices observed during the study tour in Portugal was the inland baths and cross-border cooperation with the Spanish baths in Chaves-Verin and its surroundings. In Hungary, similarly to the Kajla program coordinated with the help of the Hungarian Tourism Agency and the Tourninform network, it is possible to explore the spas in the</p>

	<p>region with the help of a passport, with the difference being that adults participate in the program here. Hungarian tourist destinations could also cooperate in a similar way, as is already the case with the Transdanubian bathing tour, where Zalakaros, Sárvár and Bükfürdő come together. The essence of the initiative is that all three baths distribute stamps to their visitors, and when the stamp collection booklet is full, the guest can gain admission to one of the three baths at a discounted price. Similar collaborations can be established elsewhere, e.g. in the Thermal Health Industry Cluster based in Debrecen or the Heart of the Great Plain Regional Tourism Association based in Szolnok. The former could include Hajdúszoboszló, Nyíregyháza, Kisújszállás, Martfű, Püspökladány, and Debrecen; in the latter case the tourist attractions of Cserkeszőlő, Berekfürdő, Kisújszállás, and Karcag. In this case, such a program could be of great help to hotel service providers, where, with appropriate marketing activity, a tourism package covering the entire region could be created.</p> <p>The most important thing to do in order to design new regional thermal strategies so as to measure the impact of health preservation and thermal therapies is for participants in the Hungarian bathing culture to have a proper exchange of ideas. One of the beautiful fields of this is the commission work of the Hungarian Baths Association, which has taken part in several medical research programs for medical purposes, also in cooperation with the European Association, ESPA. Domestic good practices can also be exported abroad, and there have been numerous examples of this. This requires effective cooperation with the Ministry of Foreign Affairs.</p> <p>In the case of priority tourist areas, regional co-operation is necessary, the actors of which are the spas, accommodation and tourist attractions in the area. At the local and settlement level there are several good examples in Hungary as well: in the cases of Gyula, Debrecen, Kisújszállás, and Hévíz there also exist collaborations between tourism service providers and partners.</p> <p>Urban cooperation should be extended first to regional and then to cross-border partnerships, where feasible.</p>
Keywords	networking, cooperation, cross-border cooperation
Tools to be used	regional and cross-border meetings
Stakeholders and other organisations involved	Local, regional and cross-border tourism and health care organizations, businesses, municipalities

SMEs' role and engagement (if applicable)	Tourism (mainly medical tourism) small and medium-sized enterprises that want to join in with the cooperation as service providers
Expected results	<ul style="list-style-type: none"> <li>• Creation of new packages and tourism products</li> </ul>
Indicators Results	<ul style="list-style-type: none"> <li>• Number of packages sold</li> <li>• Number of users and buyers of new tourism products</li> </ul>
Time frame	2020-2021
Indicative Costs	max. HUF 1.8 billion (not as an independent project)
Indicative funding sources	Operational Programs of the EU 2021-2027 programming period (planned VINOP) and own resources
Additional comments	<p>In the development of cooperation, it is essential to hold a series of meetings to flesh out the cooperation opportunities described in the action, at the end of which the partners involved will sign a contract setting out all the details of the cooperation. The meeting will take place with the participation of the stakeholders. Such cooperation could, for example, include joint sales and marketing activities, as described in the Action, targeting a group of guests who are open to visiting several spas in a given area in exchange for an incentive. The meetings should take place at the latest after the publication of the calls for proposals, but earlier timing is recommended as there may not be sufficient time between the call for proposals and the deadline for submission of applications to work out all the details of a complex cooperation. It is also necessary to carry out a public opinion survey to question the consumers/customers of the cooperating service providers. The survey should focus primarily on the needs of guests and their willingness to participate in such a cross-bathing programme, for all age groups. The research could be funded by stakeholders and from own resources.</p> <p>As mentioned above, actions related to clusters can be found in the GINOP Priority 2 (Research, Development, Innovation). In the current unpredictable situation, it is perhaps even more important to promote cooperation between actors in the thermal sector and to implement innovations. At the start of the InnovaSPA project, the actors envisaged the implementation of a complex thermal-based special economic zone, including innovative thermal therapies, catering, energy use, purification and recycling of thermal water (scarce resource), cooperation between spas (Spanish-Portuguese model) and the installation of tourist attractions for guests.</p> <p>2.6. Tourism, heritage protection</p> <p>2.6.1 Promote integrated local social, economic and environmental development, cultural heritage and safety, including in rural and coastal areas, including through community-led local development;</p>

2.6.1.1 Fund interventions Types of action concerned

Complex development of spas and their surroundings in rural areas: the priority objective for the 2021-2027 development period is to develop spas and their surroundings with a tourist attraction, which will contribute to a rapid recovery from the current crisis, to increasing competitiveness and to improving the service infrastructure of spas. The developments should be in line with the horizontal aspects of the National Tourism Development Strategy 2030. Improving the technical infrastructure of spas: In the past decades, many investments in technical infrastructure have been limited to maintenance, which has led to the renewal of the basic infrastructure's technical state as a priority. The renewal of the infrastructure will be fully effective if it is accompanied by improvements to the buildings and service areas, with the aid being used to renovate, extend and redefine the function of existing pools and pool areas. Technical upgrading of natural springs (thermal water) and wells, drilling of new wells to ensure safe operation, provision of thermal and spa water with a constant temperature and flow rate, maintaining the natural curative effects. Upgrading of water engineering and mechanical systems related to the operation of the building and the development of automated monitoring systems for the operation (including complete building surveillance and access control systems). Renewal of water and air treatment technologies, focusing on economical, environmentally friendly water extraction and use. Use of environmentally friendly and efficient energy recovery technologies linked to water extraction. Exploring alternative connections and implementing a complex programme for the use of thermal water, including energy recovery outside the spa, mainly for public purposes (e.g. complex recovery of extracted heat for other purposes such as heating or energy production). Product and service development: Consistent product and service quality has a fundamental impact on the guest experience on the demand side and on the marketability on the supply side. While capacity expansions in previous decades have led to increased visitor numbers and revenues, the increase in plant size has also been accompanied by a large increase in maintenance costs, which has had (and continues to have) a negative impact on profitability. Product and service development can be ensured by defining specific product development directions, tailored to the needs of target groups and maintaining high service standards. The priority task in defining the development directions for the spa as a product is to reassess and optimise existing capacities - there is no aim to significantly increase the water surface area of spas, but to separate functions by rearranging pools and interiors, and in some cases to expand capacities and redefine them thematically by guest segment. The separation and

thematic development of recreational areas (indoor water parks, indoor slides, children's zones, open air baths, beaches), relaxation areas (saunas, "quiet" baths) and therapeutic areas (thermal pools, therapeutic treatment) is recommended. Product development includes research into medicinal waters, which has been missing for decades but which guarantees reliability and credible marketing for spa guests, and which will enable not only the real exploitation of the evidence-based medicine of the medicinal water resource (which is the basis of health tourism in Hungary), but also the development of products and services that ensure the differentiation of individual spas. Developing spas and their surroundings: Today's tourists do not buy products and services when they travel, but rather an 'experience', the full extent of which is determined by the condition of the environment, infrastructure and leisure facilities in the municipality (or, in the case of municipalities with a spa certification, in the area) surrounding the spa. The creation of a spa image and atmosphere in municipalities that rely on tourism is a key element of the interventions, which will encourage longer stays and higher spending by increasing the comfort of the guests. The intervention include the regeneration of the spa environment (e.g. car parks, parks, promenades, etc.), the creation of urban image interventions, and - the renewal of the attractions available in and around the municipality and the provision of the necessary conditions and systems for packaging products and services. 2.2.1. Strengthening research and innovation capacities and the uptake of advanced technologies 2.2.1.1. Fund interventions. Types of actions. Knowledge creation. Support for knowledge creation. Support for knowledge creation is based on the expansion of domestic research capacities and the development of RDI infrastructures that provide the institutional and infrastructural basis for cooperation between actors in the RDI system and for internationalisation. An important policy objective is to strengthen the existing capacities (human resources and research infrastructure) in public research centres, to bring them closer to international standards and to make the best possible use of the available capacities. Ensuring and developing the human resources involved in knowledge production includes ensuring a supply of researchers, including making careers in research more attractive, creating opportunities for those interested in research to become involved, exploiting the potential of our scientific excellence and preparing them to participate in this research. The importance of research infrastructures for scientific output is crucial. Research facilities with state-of-the-art research infrastructures create opportunities for more effective research: an attractive research environment enables researchers to engage more effectively in

international research collaborations. Research infrastructures ensure that researchers remain in their home countries and return to work abroad, thereby increasing the number of researchers and boosting competitiveness. They also provide the necessary conditions for knowledge-generating collaborations between higher education and research institutions and external partners. The effective functioning of research infrastructures can be achieved through cooperation in networks, and the priority axis will therefore support their development, expansion and stronger integration into international networks at national level. Our aim is to develop the RDI infrastructure and strengthen the related professional background to contribute to the development of high value-added production processes in Hungary. Stimulating knowledge flows. The aim is to create, support and develop organisations supporting higher education, academia and business cooperation that undertake RDI activities to focus on the needs of business partners by strengthening their research capacities. The action will stimulate coordination and synergies between the different phases of the R&D process and feedbacks by strengthening cooperation between higher education, academia and business, and will directly contribute to the uptake of advanced technologies. The action will develop thematic R&D capacities of excellence and an effective cooperation model, enabling actors in the domestic RDI system to better integrate into international research networks... Intersectoral cooperation will contribute to the creation of a green, carbon neutral, resilient and competitive Europe through their research results and the use of advanced technologies to address economic and societal challenges. A "Stimulating knowledge exploitation by supporting business RDI activity A significant proportion of Hungarian businesses do not innovate or do not feel the need to innovate - this has a negative impact on the competitiveness of the national economy. In order to stimulate the exploitation of knowledge by enterprises, the aim is to make them more competitive and indirectly increase their productivity by strengthening different types of innovation, by increasing their RDI capacity and improving their technological performance. Interventions will target enterprises at different stages of development or with different innovation capacities. The basis for strengthening knowledge exploitation is to support innovative start-ups or early-stage enterprises through direct support to start-ups and spinoffs on the one hand, and by strengthening the network of incubators/incubators for their incubation on the other. One element of the interventions is to stimulate innovation activities of micro and small enterprises, enterprises that have not yet innovated, by supporting their market-oriented innovation projects. The next area of intervention will support the production of innovative products,

technologies and services by innovative enterprises, thus contributing to the creation of competitive products, technologies and services with significant intellectual added value. At the same time, it will support the establishment of long-term sustainable and strategic collaborations between domestic companies and research knowledge intermediary organisations with a view to generating new scientific results. Companies that develop for the global market, are able to scale up rapidly and have a high innovation potential can make a significant contribution to the development of the national economy and the creation of high added value jobs. However, their projects are too risky for the credit and capital markets and they have little or no access to the funding needed to continue their development. The use of financial instruments for RDI avoids financing gaps in the development of start-ups or existing businesses' projects with risky returns, thus strengthening their innovation capacity and their ability to market their products or develop them to meet international market needs. Fostering stronger integration into the European Research Area is reflected in several pillars. Fostering integration into the European Research Area is key to strengthening the international embeddedness and connectivity of domestic research and innovation organisations and, in particular, to encouraging more successful participation in the EU's Horizon Europe research and innovation framework programme. Action to this end will be pursued by strengthening the domestic funding scheme, supporting the integration into international RDI networks, preparing collaborations, encouraging the exploitation of RDI results from international collaborations, ensuring domestic co-funding of international programmes and projects, and supporting domestic projects that are highly ranked by international evaluations but not funded from international sources. Actions under the specific objective (i) of Article 2(1)(a) of the ERDF shall be linked to the objectives of the "Prosperity for the Danube Region" pillar of the Danube Strategy, in particular those responding to the industrial or environmental challenges of the region. They are directly linked to the objectives of "PA 7 Developing a knowledge-based society through research, education and information technologies" and "PA 8 Supporting the competitiveness of enterprises, including the development of regional cooperation between enterprises (clusters)". The main target groups are research knowledge intermediary organisations, including publicly funded research institutions, higher education and vocational training institutions, majority-owned companies of higher education and vocational training institutions, legal entities maintaining/operating higher education institutions, governmental institutions, companies, non-profit organisations, NGOs, research institutions, governmental

	<p>institutions, non-profit research centres, intersectoral cooperation, municipalities. Actions guaranteeing equality, inclusion and non-discrimination Excellence in research and innovation is the main selection criterion for the actions envisaged, as well as ensuring equal opportunities and sustainability. Projects should contribute to cooperation and networking between the sectors of the quadruple helix (academia, business, government and civil society) wherever possible. Preference will be given to projects that support knowledge flows, technology transfer, incubation or intersectoral linkages. Projects that are in line with S3 objectives or sectoral and/or horizontal specialisation orientations may be supported. Identification of target areas, including the intended use of territorial instruments Country coverage. Inter-regional, cross-border and transnational actions. Cross-border and transnational action is relevant under the Support to Knowledge Creation measure. Reinforced research infrastructures can be attractive in attracting international knowledge, enhancing researcher mobility, facilitating brain circulation, and their enhanced services can contribute to the competitiveness of businesses and regions. Research infrastructures can serve as a tool for the implementation of "open laboratory" initiatives and can play an important role in promoting "open innovation" and strengthening cross-border activities. The creation of domestic hubs linked to distributed international infrastructures can help to foster international integration and research collaboration, while increased supply opportunities can empower businesses and strengthen their international links. In the context of the action to promote greater integration into the European Research Area, actions to support access to international RDI networks, preparatory actions for cooperation and the exploitation of research and innovation results from international cooperation will give priority to interregional, cross-border and transnational actions, such as those under the Danube Region, EUREKA or EUROSTARS programmes. The process of supporting knowledge creation, promoting knowledge flows and stimulating knowledge exploitation requires a highly complex planning and development effort at all stages. At each stage, financial instruments need to be optimised for the objective/objectives of the stage, because knowledge and technology-intensive enterprises, including start-ups and spin-offs, can operate at high capital costs and require complex services from both public and market actors. However, outputs are uncertain and research failures and risks are high, making returns on investment difficult to estimate. For these reasons, we need to support this target group primarily through differentiated financial instruments combined with non-reimbursable</p>
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	elements, focusing on early-stage companies with high innovation potential.
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## **IX. Funding schemes**

Operational Programs of the EU 2021-2027 programming period (planned VINOP) and own resources

- i. the size of the budget allocated to the priorities has not been finalized yet, but it is expected that a budget of HUF 60-100 billion will be available for the planned development of spas
- ii. Projects carried out in the standard procedure can receive a minimum of HUF 350 million and a maximum of HUF 1.8 billion as a non-refundable subsidy, with an aid intensity of up to 100%
- iii. goal: modernization of spas, improvement of energy efficiency, reduction of ecological footprint

In addition to the subsidies available, it is also necessary to ensure adequate self-sufficiency from the resources of the companies concerned or from low-interest bank loans, which are currently available in various forms.

## **X. Main points of innovation**

The aim of the actions is to develop new tourism products and health care packages that promote health and prevention, in addition to traditional and applied products based on medical and wellness treatments, all supported by medical research.

In the form of a work-shop, health industry actors and market participants receive direct information, while new service elements based on scientific results are used to assemble tourism products, combining the positive effects of exercise, nutrition, a healthy environment and medicinal water. Following the compilation of joint program packages for hotels and spas, a marketing strategy will be developed, on the basis of which a n extensive health tourism campaign will be implemented in relation to the domestic and international tourism market.

Development of tourism provisions for health preservation and prevention for special target groups and marketing communication of marketable, and innovative packages (e.g. well-being, burn out, dieting, hypertension, vasoconstriction, diabetes, etc.) can be a new opportunity for further tourism development. The goal is to conduct coordinated research, and the organization of attractive and sustainable programs.

## **XI. Process and methodology in drafting the AP**

Prior to the compilation of the action plan, the experiences gained during the study visits and the good practices seen were discussed. At these meetings, the stakeholders reviewed which good practices might be adapted to the domestic environment and those for which resources may be available in the near future. This was done across several meetings. This was then followed by detailed elaboration upon individual actions, which were also discussed in meetings and finally adopted. The members of the team undertook to develop a 1-1 action, and then formulated further proposals for the actions developed in this way.

## **XII. Risk analysis**

Due to Covid-19 and expected future pandemics, tourism as an industry is vulnerable. At the same time, the good news is that the implementation of the actions named in the project depends only in part on tourism, as it also applies to services and innovations that can be used by the local population. In this respect, a medium risk rating is justified.

Prior to the pandemic, a shortage of professionals was a risk, but today there are many professionals out of work due to redundancies. At the same time, this remains a medium risk factor as many have migrated from the sector and sought employment in others.

Financially, providing the necessary self-sufficiency could constitute a serious risk, but there are also a number of favourable loan schemes available to small and medium-sized enterprises that can be used to provide self-sufficiency.

Another risk factor is the long time span for the implementation of projects. Over time costs may increase significantly, which may mean that the budget originally planned may not be sufficient to conclude a project. This risk can be significantly reduced by thorough preparation and rethinking of the project, as well as by budgeting for unforeseeable expenses.

In the case of infrastructure developments, the risk of congestion in the construction industry must also be taken into account. Labour shortages in the sector have already reached serious proportions, but from 2021 onwards the construction industry can be expected to continue to be burdened due to the expected increase in demand due to, among other things, home renovation support. However, this risk is only present for projects that include infrastructure development.

Failure to implement the planned actions also carries risks. Without product development, spas lag behind local, regional and cross-border competition. Their long-term sustainability will also be jeopardized, as revenues will fall if the actions are not implemented, which in turn has a negative effect on job retention. Lack of health-preserving and restorative

product developments also leads to deterioration in general health. Establishments of clusters and a lack of or inadequacy in cooperation also lessens the chances of sustainability and ultimately has a similarly negative effect as a lack of product development.

### **XIII. Communication plan**

Regional conferences and press conferences where the action plan will be presented. Meetings, consultations, workshops and online (common) interfaces and platforms bring the content of the action plan closer to the stakeholders.

### **XIV. Conclusions and summary**

The main goal of the 2021-2027 development period is to develop spas and health resorts with tourist attractions, which will contribute to rapid recovery from the crisis situation caused by the Covid19 pandemic, increase competitiveness, as well as expand the range of spa services and develop infrastructure.

The development of the health industry and health tourism in this region can be based on excellent existing facilities and the superb cooperation between the University of Debrecen, the Thermal Health Industrial Cluster and the corporate - hotel, spa – sector.

## Glossary of Abbreviations

**ÁNTSZ** – National Public Health and Medical Officer Service (A former Hungarian authority)

**Észak-Alföld** – Northern Great Plain

**GINOP** - Economic Development and Innovation Operational Program

**MDT** - Mechanical Diagnosis and Therapy

**NEAK** - National Health Insurance Fund of Hungary

**NTS 2030** – Hungarian National Tourism Development Strategy 2030

**R&D** – Research and Development

**SMEs** - Small and medium-sized enterprises

**SZÉP card** - A special Hungarian debit card with which one can pay for recreational services

**VINOP** - Entrepreneurship Development and Innovation Operational Program

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