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ПРОГРАМА  
НАУЧНИ ИЗСЛЕДВАНИЯ,  
ИНОВАЦИИ И ДИГИТАЛИЗАЦИЯ ЗА  
ИНТЕЛИГЕНТНА ТРАНСФОРМАЦИЯ

**AI** EDIH

North  
Central  
Bulgaria

## SERVICES

DECEMBER 2024

## Introduction

The European Digital Innovation Hubs (EDIHs) are a key element of the EU's Digital Europe programme aimed at accelerating digital transformation. Their role is to support companies and the public sector by promoting digitization and facilitating access to new technologies.

AI EDIH North Central Bulgaria, part of the EDIH network, is the main point of contact in North Central Bulgaria, with a special focus on sectors such as mechatronics, informatics and ICT - areas of smart specialization for the region. The main objective is to provide a wide range of services to accelerate innovation processes, including access to technical expertise and the opportunity to "test before investing", innovation services, as well as advice on financing, training and skills development that are essential for successful digital transformation. A leading technology in the delivery of these services is artificial intelligence, along with accompanying technologies such as the Internet of Things, digital twins, robotics and automation.

## Eligible candidates

European Digital Innovation Hubs (EDIHs) provide services to different categories of applicants, including small and medium-sized enterprises (SMEs), large enterprises and public sector organisations. In order to be an eligible candidate for services, it is important to check that you meet the criteria and restrictions associated with each category.

**Small and medium-sized enterprises (SMEs)** are the main beneficiaries of the wide range of services provided by an EDIH. They are eligible for all services, the value of which must not exceed EUR 300 000 over three years. These services can include access to technical expertise, innovation advice, training, testing capabilities and digital transformation support, which can help SMEs to absorb new technologies and improve their competitiveness.

**Large enterprises** can only benefit from training and re-skilling services. These services are aimed at developing skills and knowledge in new technologies and innovation, focusing on improving employee competences and adapting businesses to digital transformation.

**Public sector organisations** can obtain services related to their non-economic activities. This includes support for the implementation of innovations and technologies that will support the efficiency of public services, but not economic activities. These services can be aimed at improving the management and optimisation of public sector processes through the use of new digital technologies.

The services provided by EDIH are classified as de-minimis aid, which means that they are subject to specific subsidy rules that must be respected by the recipients.

More information on the definition of SMEs can be found in the European Commission's official guide [here](#).

## Services of the AI EDIH North Central Bulgaria

### Test before invest

The services in this category aim to provide access to specialised research infrastructure and expertise to test innovative products and services in order to accelerate their market deployment.

Service	Price
<p><b>Process modelling and testing for precision machining and process optimization through the application of AI</b></p> <p><i>The service includes prototyping new products for rapid testing and design optimization, working with hard-to-find materials such as titanium, stainless steel and composites, simulating and presenting real-world scenarios that show how to minimize errors in manufacturing processes, experimenting and demonstrating methods to optimize production time by applying AI algorithms.</i></p>	5 500 BGN / day
<p><b>AI research and implementation for intelligent maintenance</b></p> <p><i>The service involves the use of artificial intelligence and machine learning to analyse data in real-time to identify patterns and early indicators of wear or faults, enabling planned maintenance, reducing downtime and production losses.</i></p>	1 500 BGN / day
<p><b>Testing IIoT (Industrial Internet of Things) in automated systems</b></p> <p><i>The service includes testing of IIoT solutions for automated manufacturing processes, including sensor integration, connectivity and real-time data analytics, enabling the testing and optimization of manufacturing processes and their control to achieve greater efficiency and sustainability.</i></p>	4 500 BGN / day
<p><b>Testing and validation of linear automated processes</b></p> <p><i>The service includes validation testing of new packaging, closure systems and materials, validation of manufacturing process optimization concepts through the use of AI for monitoring and tuning automated processes.</i></p>	4 500 BGN / day
<p><b>Photomicroscopy, specimen capture and analysis for experimental research and documentation purposes</b></p> <p><i>The service includes high quality sample capture and analysis for experimental research and precise documentation. The service is suitable for scientific, industrial and educational applications, providing detailed visualization and measurement of microstructures.</i></p>	2 000 BGN / day
<p><b>Print quality optimization and control</b></p> <p><i>The service includes checking print densities, color stability and print density wear assessment, checking print resolution and details to improve the quality of packaging decoration and reduce the level of print waste.</i></p>	2 500 BGN / day

<p><b>Development, prototyping and analysis of plastic products and materials with a focus on recycling, reuse and innovation</b></p> <p><i>The service includes testing of homogeneous and inhomogeneous mixtures to reduce the use of plastics (re-duce), integration of post-consumer and post-industrial waste (re-use), as well as the creation of complex configurations of high added value products (re-cycle), prototyping and development of plastic products, including customised products and replication of physical objects, conducting material property studies, optimising extrusion processes for energy efficiency, designing and developing innovative materials and creating new materials from plastic blends.</i></p>	<p>5 500 BGN / day</p>
<p><b>Testing to determine the reliability, quality characteristics and climate resistance of products and materials</b></p> <p><i>The service includes lifecycle tracking of coatings, articles and packaging materials, including tests for colour change, crack initiation and other physical and mechanical characteristics, as well as conducting qualification tests, stress screening and climatic durability aimed at research purposes and assisting SMEs in improving their products.</i></p>	<p>2 000 BGN / day</p>
<p><b>Prototyping, testing, and demonstrating concepts for digital environmental twins</b></p> <p><i>The service involves the use of advanced technologies such as IoT, Cloud and big data for simulation, monitoring and analysis, supporting the management and sustainability of ecosystems by creating virtual models reflecting real conditions in a given environment.</i></p>	<p>25 000 – 75 000 BGN</p>
<p><b>3D design and prototyping</b></p> <p><i>Providing 3D design and printing services for prototype products, enabling rapid and accurate creation of models for testing and optimization.</i></p>	<p>1 800 BGN / day</p>
<p><b>AI chatbot prototyping and demonstration</b></p> <p><i>The service includes prototyping of custom AI chatbot solutions tailored to specific needs, demonstration of real interaction and integration testing in various systems.</i></p>	<p>50 000 - 100 000 BGN</p>

## Training and capacity building

The services in this category aim to provide specialized training and workshops aimed at enhancing the capacity of the public and private sectors on issues related to the deployment of technologies such as artificial intelligence, industrial IoT, digital twins, cyber security, etc.

Service	Price
<p><b>Practical AI training</b></p> <p><i>The training is based on a customized training curriculum including practical exercises, real-world case studies and guidance on specific AI frameworks and tools, with participants also receiving personalized guidance.</i></p>	<p>1 500 BGN / person</p>
<p><b>Practical training in digital technologies</b></p> <p><i>Practical training in digital technology encompasses programmes to develop digital skills and systematic inventive thinking, design thinking and the generation of innovative ideas to acquire key competencies for the successful application of digital technologies and creativity in a variety of professional fields.</i></p>	<p>1 500 BGN / person</p>

<p><b>Practical training in augmented and mixed reality technologies</b></p> <p><i>Training on the technologies used in augmented and mixed reality with an interactive "demonstration" component in the Digital Twins Lab.</i></p>	1 500 BGN / person
<p><b>Practical STEM training</b></p> <p><i>A practical training program for STEM teachers focused on teaching methodology and creating multidisciplinary curriculum content in areas such as programming, maths, physics, biology, and entrepreneurship with the provision of STEM kits and tools for practical use upon course completion. Hybrid learning – in-person and online.</i></p>	2 000 BGN / person

## Access to finance

The services in this category are aimed at providing expert assistance in preparing project proposals, establishing connections with appropriate partners and identifying funding opportunities to accelerate the successful realisation of innovations.

Service	Price
<p><b>Screening for innovation funding opportunities</b></p> <p><i>Seek appropriate opportunities to finance innovation through appropriate national and international funding programmes, grant instruments or other investment initiatives.</i></p>	10 000 BGN / year
<p><b>Consultation and support</b></p> <p><i>Personalised support and consultation for SMEs on research and innovation funding programmes, innovation management and successful commercialisation of innovative products and services.</i></p>	1000 BGN / day
<p><b>Developing a concept for financing innovation</b></p> <p><i>Developing a comprehensive concept for funding innovation, including an analysis of the idea, the objectives and the steps necessary to apply for appropriate programmes and initiatives. Advising on the development of a project proposal.</i></p>	15 000 BGN

## Partnerships and networking

The services in this category aim to provide expert support to access partner organisations, including research institutes, companies and NGOs, in order to build sustainable partnerships. Encouraging and stimulating networking through the organisation of joint initiatives, thematic events, conferences and knowledge and experience sharing platforms to facilitate collaboration and co-development of innovative solutions.

Service	Price
<p><b>Innovation use-case creation and management</b></p> <p><i>A comprehensive service including activities to facilitate public-private partnerships between SMEs and research organisations and to assist SMEs in establishing contacts with international partners through EDIH, EEN and other networks. The service includes shaping and disseminating innovation use-case in partner networks.</i></p>	<p>20 000 BGN / year</p>

## How to request a service?

The process for applying for service with AI EDIH North Central Bulgaria involves several key steps. While specific procedures may vary depending on the specifics of your organization, the general process is as follows:

- **Step 1: Eligibility check**

Before applying, make sure your organisation meets the eligibility criteria for receiving services. This includes confirming whether you are a small or medium-sized enterprise (SME), a large enterprise or a public sector organisation.

SMEs can apply for a wider range of services, while large enterprises may be limited to training and retraining services and public sector organisations can access services related to non-economic activities.

- **Step 2: Identify required services**

Determine which specific services your organization needs from the list of services in this document. An organization may identify one or more services to be provided as a "package".

- **Step 3: Send an application**

Email [edih@ric-gabrovo.com](mailto:edih@ric-gabrovo.com) with information about your organization, the specific services you need, and the purpose of the service. Include any necessary documentation, such as details, that you feel will be helpful in the next application evaluation process

- **Step 4: Evaluation**

After receiving your email, the AI EDIH North Central Bulgaria team will evaluate your application based on eligibility criteria and availability of services. If necessary, the team will contact you for further information or clarification.

- **Step 5: Delivery of service/s**

If your application is approved, you will receive a formal agreement outlining the services to be provided. The services you will receive can be classified as 'de-minimis' aid, which means they are subject to EU state aid rules.

Upon finalization of the agreement, AI EDIH North Central Bulgaria will begin providing the agreed services, which may include access to technical expertise, digital innovation consulting, training, new technology testing or support for specific digital transformation projects.

During and after the provision of services, AI EDIH North Central Bulgaria may request periodic reports on the impact of the services received, including progress in your digital transformation or innovation efforts.

