

# Catalogue of services

Description of services developed by  
participating institutions in

**EIT InfraBooster**

**2<sup>nd</sup> edition**



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Strategic Regional Innovations

# Catalogue of services developed and offered by participants of EIT InfraBooster (published on the website or in print).

2<sup>nd</sup> edition

[eit-ris.eu/infrabooster/](http://eit-ris.eu/infrabooster/)

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Centre for Socially Responsible Innovations

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# What is EIT InfraBooster?

EIT InfraBooster **promotes the effective use of** publicly-funded research infrastructures owned by universities or research institutes and relevant to the R&D efforts of private sector companies and startups.

EIT InfraBooster is a **modular training program** for representatives of scientific organisations that own research infrastructures. It was based on the **methodology** and experiences of RIS Research Infrastructure Network, **implemented** in 2021-2022 **by University of Warsaw**. It offers **capacity building** and **support** in designing infrastructure-based services that could be offered for companies.

EIT InfraBooster brings closer to the industry, increasing the collaboration, international exposure and innovativeness of institution, and **helping establish new sources** of revenues.

EIT InfraBooster **Practitioner is the second level** of EIT InfraBooster educational modules **helping better understand** the competitive edge of research infrastructures, design innovative infrastructure-based services, identify potential industrial partners and start industrial outreach.

Practitioner **module helps prepare** marketing collateral that highlights differentiators and benefits important for their target clients, **understand the needs** of specific industries/companies, **identify** potential clients and **initiate** service sales processes.

Find out more information on:

[eit-ris.eu/infrabooster/](https://eit-ris.eu/infrabooster/)

## Acknowledgements to participants and supporting institutions

Building on the success of the program's latest edition, next – the second edition of the catalogue **highlights the efforts, intensive work and dedication of** participants of the EIT InfraBooster 2024 edition. We would like to congratulate all individuals and teams **whose efforts and innovative thinking** have contributed to this diverse collection of innovative services. The commitment to teamwork and willingness to explore new opportunities **to use the publicly-funded research infrastructures** is what drives the success of our program.

We would also like to acknowledge the **excellent support provided by** the European Institute of Innovation and Technology and its Knowledge and Innovation Communities including EIT Climate-KIC, EIT Food, EIT Health, and EIT Manufacturing, and the team of experts from the Centre for Socially Responsible Innovations at Faculty of Management, University of Warsaw who delivered the training sessions, as well as other institutional partners who helped implement the program. Their **guidance, support, and resources** have been invaluable in bringing this program to fruition. The creation of an **environment for learning, development, and innovation** was instrumental in enabling participants to turn their ideas and possibilities into tangible services.

*EIT InfraBooster Team*

This catalogue presents a **diversified selection** of innovative services developed by participants of the EIT InfraBooster Practitioner program in 2024. Each service **addresses specific societal, environmental and economic challenges** encountered by potential industrial clients.

Some teams have **achieved key milestones**, generating KPIs by selling services exceeding €10,000, underscoring the practical **impact** and market **readiness** of their solutions, **validated by partner testimonials**.

Looking ahead, we see the ambitious development trajectory of these services and plan further **support in their refinement and scaling up** to further enhance industrial collaboration, and to solve problems important from the industry. Key areas will include:

- Enhancing collaborations with academia and governmental bodies;
- Expanding the geographical reach of EIT InfraBooster;
- Integrating new fields of activity;
- Fostering continuous improvement of EIT InfraBooster by ongoing feedback and iteration of educational services.
- Nurturing a culture of innovation and excellence, aiming to not only support the current cohorts but also inspire future participants.

We are looking forward to **continuing our contribution to the development** of innovative services and enhancements of the competitiveness of publicly-funded research infrastructures owned by universities and research institutes in Europe.

## Strategic outlook

*Adina BRINZEU, Executive Director, S.C.PROSPERO, Romania*



The **R&D services** provided by the University of Life Sciences "King Mihai I" of Timisoara (ULST) **have been highly valuable to our company**. They **supported the development** of bakery products using oilseed by-products like sunflower, rapeseed, and linseed pomace, improving nutritional profiles with higher protein and beneficial unsaturated fatty acids. Additionally, lavender essential oil boosted antioxidant and antimicrobial properties, extending shelf life and enhancing health benefits.

*Vaska Mojsovska, Owner, AGRO KALEM DOOEL, North Macedonia*



AGRO-KALEM is **highly satisfied with the services** of the UKIM Institute of Agriculture's Laboratory for Seed Control and Plant Health Analysis. Their professional 'one-stop-shop' service **saved us time and resources**, and the confirmation and recommendations were essential for obtaining a valid certificate for the health status of our mother plants. We **highly recommend** the Institute for its professionalism, expertise, and efficient service.

*Denitsa Kaleva, Quality Control, SAMI-M LTD, Bulgaria*



We **greatly value the R&D services** from the Laboratory of Food Quality and Safety at Trakia University. Using the MALDI-TOF MS system, we quickly identified microorganisms in our food products, significantly reducing analysis time compared to standard ISO methods. This **technology has helped us** analyze microbial communities, predict shelf life, and assess hygiene, all of which will enhance our production processes.

*Tanja Handžar, Director, Laks Export-Import d.o.o, Bosnia and Herzegovina*



Laks Export-Import d.o.o. is **pleased with its cooperation** with the Institute for Genetic Engineering and Biotechnology at the University of Sarajevo. Their **services supported the launch** of a new softmouth trout production line. Genetic testing confirmed the brood stock's indigenous origin and integrity, ensuring no hybrids with other salmonid species. The service was **timely, comprehensive, and included valuable recommendations for our** long-term precision breeding **strategy**.



This catalogue is a **comprehensive showcase of services** developed by the participants of EIT InfraBooster Practitioner 2024 edition. Our primary objective was to **present a diverse array of solutions and services** that have emerged during InfraBooster modules and **demonstrate the rich potential and capabilities** of our participants.

The scope of this catalogue extends beyond a mere listing of services. It **serves as a bridge** connecting innovators with potential users, stakeholders, and collaborators. Each section in this catalogue **provides a concise and informative glimpse** into the service offered, covering its core concept, potential applications, and the value it adds to its respective field.

EIT Infrabooster aims to **create a platform** that not only highlights these services but also fosters connections and collaborations, **fuelling further development**.

## Catalogue - focus and aims

# Catalogue sections

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## Sustainability and Advanced Technologies

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Mobile power quality diagnostics service	54



Bosnia and Herzegovina



Bulgaria



North Macedonia



Romania



Serbia



Türkiye



Ukraine





Service name:

**Permeatest: Permeation testing services**

Responsible institution / team:

**University of Sarajevo, Faculty of Pharmacy**

Contact:

- Prof. Alisa Elezović: [alisa.elezovic@ffsa.unsa.ba](mailto:alisa.elezovic@ffsa.unsa.ba)





## Service description

For **cosmetic companies** that **want to be compliant** with EU regulations, Permeatest offers permeability studies for safety assessments. Unlike other similar laboratories abroad, this **service provides expertise and results** in permeability studies, as well as consultation on optimizing formulations in terms of efficacy and safety. The service provides regulatory-relevant studies with **OECD-compliant** permeation studies, **with high throughput** permeation study **equipment** ensuring repeatability.

## Research infrastructures

The research infrastructure of the Faculty of Pharmacy at the University of Sarajevo includes: **Franz diffusion cells** with 9 cells, thermostated, along with **HPLC, UV/Vis spectroscopy** and auxiliary equipment for formulation optimization, including semisolid production equipment. This setup enables in vitro skin permeation studies, crucial **for the safety assessment** of cosmetic and pharmaceutical products. The lab's focus on **GLP and GMP standards**, as well as compliance with regulatory guidelines, ensures high-quality results. The ability to provide both permeation studies and formulation optimization makes this **facility unique in the region**.

## Service innovativeness

Permeatest offers a **unique combination** of permeability studies with formulation optimization using in vitro methods. Unlike other labs that may only provide standard testing, Permeatest provides **comprehensive support**, including expert evaluations by an **interdisciplinary team** and adherence to GLP and GMP standards. The service also stands out by making itself **accessible to companies** that may **not have in-house** expertise or infrastructure for these complex tests. The integration of permeation testing, formulation optimization, and compliance with regulatory standards is a key differentiator.





# Pitch deck

Permeatest: Permeation testing services

## The problem or need

- Important to **cosmetic companies** from Bosnia and Herzegovina and the Western Balkans who want to **be EU compliant**
- The EU Cosmetic Regulation requires cosmetic products to undergo **safety assessment that uses permeation data as a base for calculating exposure risks**

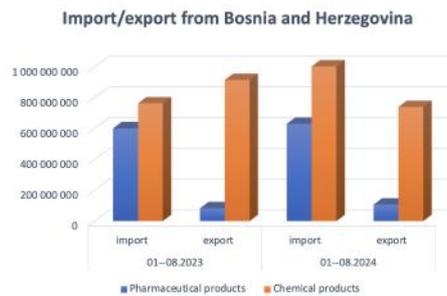


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## Target segment and personas

- Focus on SMEs in cosmetic industry in Bosnia and Herzegovina and the Western Balkans
- Great potential, but small companies need **support to grow**
- **EU cosmetic regulation compliance**



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NACE classification	Number of companies in B&H
20.42 – Manufacture of perfumes and toilet preparations	11
20.53 – Manufacture of essential oils	7
21.20 – Manufacture of pharmaceutical preparations	10

- Permeation studies require high level of **multidisciplinary expertise** (technology, analytics, toxicology, biochemistry), they are **time and labor intensive**





# Pitch deck

Permeatest: Permeation testing services

## The service



**Permeatest** - permeability testing services ensuring compliance with EU regulations

- ✓ Interdisciplinary approach
- ✓ Tailor made solutions
- ✓ Consulting opportunities
- ✓ Low cost compared to regional or EU companies/universities



- ✓ Accelerated product development
- ✓ Improved product quality
- ✓ Minimized R&D costs
- ✓ Reduced risk of regulatory penalties



## Competitors/alternatives and differentiators



Competitors:

- university labs;
- large multicentered commercial labs (e.g. EuroFins, EuroLab)
  - offering analytical services



**Permeatest** offers:

- Consulting on the formulation optimization for improved safety and efficacy
- Easily approachable locally





Service name:

**TrueWineID: Enhance quality with DNA testing for wine grape varieties**

Responsible institution / team:

**University of Sarajevo, Institute for Genetic Engineering and Biotechnology (INGEB)**

Contact:

- Prof. Belma Kalamujić: [belma.kalamujic@ingeb.unsa.ba](mailto:belma.kalamujic@ingeb.unsa.ba)





## Service description

TrueGeneID provides **DNA testing for wine grape varieties**, enhancing quality and reducing costs and time needed for analysis. This service utilizes a **fully equipped infrastructure** and **expertise** of INGEB for **every analytical step**, from test design and sampling to reaction optimization, data processing, and interpretation. Unlike competitors that may lack complete infrastructure or the necessary expertise, TrueGeneID offers a **comprehensive approach**, providing a **one-stop solution** for clients in the winemaking industry.

## Research infrastructures

INGEB research infrastructure uses a **3500 Genetic Analyzer** (Applied Biosystems) with **8 capillaries** and a **QIAcuity One digital PCR** (5plex) (Qiagen), combined with the **REBIDA database**. This combination allows for molecular biology analyses, including genetics, species identification, and kinship analysis. The equipment enables **high-throughput DNA-based analyses**, which support quality control, product branding, and product integrity assessments in the wine industry. The unique element is a combination of high-tech equipment with a comprehensive in-house database.

## Service innovativeness

TrueGeneID distinguishes itself with its complete, **in-house genotyping capabilities** for wine grape varieties. Unlike other genetic testing services that outsource parts of the analytical process, **TrueGeneID manages every step**, from test design to data interpretation, ensuring **accuracy** and **reducing costs and time** for clients. The service also benefits from a unique database with DNA profiles of grapevine varieties, which helps to deliver highly specific analyses. The ability to conduct **all stages of testing in-house**, coupled with the specialized database and experienced staff, sets it apart from other genotyping services.





# Pitch deck

TrueWineID: Enhance quality with DNA testing for wine grape varieties

**Market needs**

- **Growing demand** for vines with geographical origin seals
- Ensuring grape authenticity
- **Compliance** with local and global regulations
- Avoid subpar wine quality, legal issues, financial losses

**A GROWING FOCUS ON ORIGIN IS CONSUMERS' PREFERENCE**

**65.3%** of vines used for wines under the **Protected designation of origin (PDO)** classification

**17.1%** of vines used for wines under the **Protected geographical indication (PGI)** classification

Source: wine fogg, 2024. TrueWineID

The service	Target segment	B&H wine
<ul style="list-style-type: none"> <li>• Accurate Verification of Grape Varieties</li> <li>• Enhanced Quality Control</li> <li>• Improved Efficiency</li> <li>• Enhanced Regulatory Compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Winemaking industry;</li> <li>• Manufacture of wine from grapes;</li> <li>• Growing of grapes</li> </ul>	<ul style="list-style-type: none"> <li>• 11 000 wine producers:               <ul style="list-style-type: none"> <li>◦ 70 registered</li> </ul> </li> <li>• 3500 ha in total;</li> <li>• 2021- BiH (MVTEO, 2024):               <ul style="list-style-type: none"> <li>◦ exported €3.5M</li> <li>◦ imported € 15M</li> </ul> </li> <li>• Per capita consumption is increasing;</li> </ul>
<p>Vina iz BiH dobivaju oznaku podrijetla</p> <p>„...wine from BiH get GI indication...“</p>	<p>„...Wine from BiH gain worldwide recognition...“</p>	<p>U BiH se godišnje proizvede 18 miliona litara vina, oskudno obilježje za izvoz</p> <p>„...new regulation ease export...“</p>

TrueWineID





# Pitch deck

TrueWineID: Enhance quality with DNA testing for wine grape varieties



## Competitors/alternatives and differentiators

- Institute for Genetic Resources, University of Banja Luka (IGR) - part of the infrastructure needed for genotyping, requiring outsourcing.
- **TrueWineID - fully equipped**
- Reduces costs and time needed for analysis for our clients.

## Revenue Generation Plan

1. **analytical services** – first year to reach 3 biggest winemaking companies in BiH, perform 30 samples per month;
2. **collaborative R&D** – second half of the year to set-up new product development,

TrueWineID

For **winemakers** who need to ensure **grape authenticity** and compliance with regulations, we offer **advanced DNA testing** that verifies grape varieties and maintains the integrity of **high-quality wine**. Unlike private genetic labs, we provide a comprehensive service with a robust **DNA database and in-depth expertise**, ensuring accurate, efficient, and reliable results.

**Work in progress!**  
**„A wine journey like no other“**







Service name:

**GATE AVS: Advanced visualization solutions for cities**

Responsible institution / team:

**University "St. Kliment Ohridski", Big Data for Smart Society (GATE) Institute, GATE Open Visualization Lab**

Contact:

- Kaloyan Karamitov: [kaloyan.karamitov@gate-ai.eu](mailto:kaloyan.karamitov@gate-ai.eu)





## Service description

GATE Open Visualization Lab offers immersive **3D visualization solutions** using **advanced hardware-software integration**, such as LED displays and 3D glasses. This assists cities in planning, simulating, and optimizing urban developments. Through advanced tools provided by the GATE Open Visualization Lab, cities can **model** various **infrastructure scenarios**, **analyze environmental impacts**, and ensure sustainable development. The service addresses challenges such as the **complexity of urban planning** and lengthy approval processes, providing realistic models that enhance spatial understanding and decision-making.

## Research infrastructures

GATE Open Visualization Lab features a **state-of-the-art setup** including a large, specialized LED display, 10 virtual reality 3D active glasses, specialized hardware and software for 3D modeling. The lab uses the **Fusion studio** and **Visualization lobby** for visual demonstrations and data visualization. This unique combination of technologies facilitates **interactive data visualization**. GATE AVS service enables users to process and interpret data using advanced visualization.

## Service innovativeness

GATE AVS provides an approach to data visualization by integrating state-of-the-art hardware and software. Unlike services that offer surface-level visualizations, GATE's infrastructure provides in-depth, interactive tools that **enable real-time engagement** with data. The combination of a large LED display, 3D glasses, and specialized software allows users to immerse themselves in complex datasets, making the analysis process more **intuitive and comprehensive**. The service is unique because of its broad application context. It might be used in multiple sectors where visual decision-making and real-time interaction are critical, such as **smart city** infrastructure planning, **renewable energy system** modeling or **healthcare diagnostics**.





# Pitch deck

GATE AVS: Advanced visualization solutions  
for cities

## The Service



InfraBooster



### Immersive 3D Visualizations

Provides realistic models of urban infrastructure, enhancing spatial understanding.

Allows cities to model different scenarios, from infrastructure changes to environmental impacts.

## Target Clients



InfraBooster

**NET  
ZERO  
CITIES**

### Potential clients

Mission Cities involved in comprehensive urban planning, sustainability initiatives, and infrastructure projects

### Personas

Urban Planners, City Infrastructure Managers, Heads of Sustainability Departments, and Communication Officers





# Pitch deck

GATE AVS: Advanced visualization solutions  
for cities

## Competitors



InfraBooster



### University Visual Labs

Specialize in VR and 3D visualization, typically focused on niche sectors like engineering and architecture

### PR and Multimedia Agencies

Offer 3D visualizations and virtual walkthroughs, mainly aimed at real estate

## Differentiators



InfraBooster



### Immersive 3D Visualizations

Interactive 3D environments ideal for complex urban planning projects

### Enhanced Stakeholder Engagement

Allows cities to explore multiple urban scenarios dynamically, aiding in informed decision-making





Service name:

**Empowering business decisions with non hypothetical science-driven consumer insights**

Responsible institution / team:

**Ss. Cyril and Methodius University in Skopje, Faculty of Agricultural Sciences and Food, Laboratory of Behavioral and Experimental Economics Science (LaBEES)**

Contact:

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## Service description

For **food and beverage companies** making data-driven decisions, the Laboratory of Behavioral and Experimental Economics Science (LaBEES) offers advanced **consumer behavior research and market insights** through experimental economics and data analytics. As the first lab of its kind in the Western Balkans, LaBEES provides tailored, science-based insights that reveal **real-world consumer choices, pricing preferences, and product success factors** using non-hypothetical experiments. This allows companies to refine products, optimize strategies, and stay ahead of the competition. Unlike traditional market research, LaBEES uses realistic experiments for deeper, actionable insights.

## Research infrastructures

The research infrastructure of LaBEES centers around a **specialized computer lab** equipped with 12 computers and **zTree software**, designed to facilitate controlled experimental studies in behavioral and experimental economics. This infrastructure allows for real-time data collection and analysis. This enables to **conduct experiments** that generate insights **into consumer preferences and decision-making**. The lab also has a team of **experts in behavioral and experimental economics**. The facility is part of the Faculty of Agricultural Sciences and Food, Ss. Cyril and Methodius University in Skopje.

## Service innovativeness

The service stands out by offering a unique blend of science-based insights into consumer behavior. Unlike traditional market research, LaBEES leverages **controlled experimental designs**, allowing for the **isolation of specific factors** influencing consumer choices. The use of zTree software for economic experiments ensures **precise data collection**, while the expertise of the staff in behavioral economics allows for **in-depth interpretation of the findings**. The unique aspect is the combination of a controlled lab environment with expert staff for deeper understanding of consumer preferences.



# Pitch deck



Empowering business decisions with non-hypothetical science-driven consumer insights

## Who We Are



InfraBooster

### LaBEES

(Laboratory of Behavioral and Experimental Economics Science)

at Faculty of Agricultural Sciences and Food – Skopje, Ss. Cyril and Methodius University in Skopje



The first lab of its kind in the Western Balkans



## Q: Why LaBEES



InfraBooster

**A: Traditional social sciences can account for the cause and effect, but can't measure the human behaviour in between**





# Pitch deck

Empowering business decisions with non-hypothetical science-driven consumer insights

## LaBEES

Community Infrastructure Co-funded by the European Union

**Behavioral Economics**  
to understand your customers better, increase customer satisfaction, and increase your profits

**What?**

- **NON-HYPOTETICAL** Scientific Behavioural and Experimental Economic methods for Business Analytics
- Deep behavioural understanding and consumer profile (uncover real consumer preferences)

**Why?**

- Companies lack the non-hypothetical and science-based insights needed to understand the consumers better for precise business decisions

**Why it matters?**

- Increase the effectiveness in your marketing, pricing, e-Commerce, and brand

## Our services and targeted industries

Community Infrastructure Co-funded by the European Union

- 1. Behavioral Science-based Consumer Research** in any industry interested in (Cognitive strategies for improved marketing and sales, Product valuation, Brand Loyalty..)
- 2. Production of Prototype of Plant Bio-Waste along with Economic experiment for Consumer Willingness to Accept and to Pay for the product** (in cooperation with the Faculty of Technology and Metallurgy and City Lab for Biotechnology)

**Decisions in economics, marketing, entrepreneurship, leadership, computer science, nutrition, conflict resolution, group dynamics, education, financial planning, sociology, and political science**



Service name:

**AgriSmart solutions by BioBIT: Precision monitoring and sustainable crop management**

Responsible institution / team:

**National Research and Development Institute for Food Bioresources – IBA Bucharest, BioBIT**

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## Service description

For **large agricultural enterprises** aiming to improve crop management efficiency, AgriSmart Solutions delivers **custom sensor-driven systems** for **precision agriculture**. Developed within the METROFOOD-RI/ IBA national node network, service empowers agricultural enterprises with actionable insights **to optimize** resource use, **enhance** crop yields, and **promote** sustainability. The service combines real-time soil monitoring, aerial crop assessments, advanced data analytics, and a full spectrum of precision agriculture tools **to optimize input use** and **maximize yields sustainably**.

## Research infrastructures

The BioBIT research infrastructure, **part of** the METROFOOD-RI/ IBA national node network, **includes** 3D printers, 3D scanners and customized design capabilities, agricultural drones with NDVI checking and assessment capabilities by simulation processing station. These **tools facilitate advanced research** in precision agriculture **and smart food processing**. The network **integrates** laboratories, experimental fields, and small-scale plants, which enable comprehensive studies of food quality, safety, and authenticity.

## Service innovativeness

AgriSMART Solutions is **innovative** in its approach to precision agriculture **by integrating real-time data** and **comprehensive analysis** within the METROFOOD-RI/ IBA **national node network**. Unlike standard research labs, BioBIT **focuses on large-scale**, commercially oriented applications with ongoing support. While typical market solutions often provide isolated sensor data or basic drone imagery, AgriSMART service **integrates** both **technologies into a single, customizable platform**. This service leverages advanced tools, along with expertise in food technology and bioinnovation to provide customized solutions, including soil and crop management. It is distinctive for providing a **complete service**, from analysis to implementation, catering **to the entire agricultural process**.



# Pitch deck

AgriSmart Solutions by BioBIT: Precision monitoring and sustainable crop management

## The Need and Our Solution

 Community  
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 InfraBooster

- **Challenges in Agriculture:**
  - *High operational costs*
  - *Resource inefficiency*
  - *Demand for eco-friendly practices*
  
- **AgriSmart Solutions' Response:**
  - *Real-time data insights*
  - *Optimized resource use*
  - *Sustainable agriculture pathway*



## The Service

 Community  
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 InfraBooster

- **AgriSmart Solutions Overview:**
  - Comprehensive precision agriculture service leveraging real-time, sensor-based soil monitoring.

- **Core Features:**



**Soil Sensors:**  
"Real-time NPK & moisture data"



**Drone Imaging:**  
"Precision crop health monitoring"



**Data Analytics:**  
"Actionable insights"

- **Value Proposition:**

- Supports large-scale agriculture in reducing input costs, improving yields, and achieving sustainable practices.

# Pitch deck

AgriSmart Solutions by BioBIT: Precision monitoring and sustainable crop management

## Target Segment and Personas



- **Primary Market:** Agricultural enterprises, organic farms, and food manufacturing companies.

- **Personas:**

**Farm Managers:**  
"Cost-efficient resource use"



**Operations Managers:**  
"Boost crop yield, eco-focus"



**Supply Chain Managers:**  
"Traceability, quality standards"

- **Motivation:** It is a growing need for sustainable solutions for cost-efficient resource use, and boost crop yield and the agro-industry needs to keep high - quality standards and traceability of its products.

## Competitors/alternatives and differentiators



- **Competitors:**

- Traditional soil testing labs and standard agricultural consulting services.

- **Differentiators:**

- "Real-time monitoring" vs. "Periodic testing"
- "Integrated sensor and drone data" vs. "Basic soil testing"
- "Customizable insights" vs. "Generic data"



AgriSmart services stand out by delivering real-time, sensor-driven insights that empower farmers to **optimize** resource use with precision, offering a **unique blend** of advanced soil monitoring, drone imaging, and data analytics that **goes beyond** conventional solutions for **sustainable** and **efficient** agriculture.



Service name:

**NanoSense: Cradle of breakthrough inventions  
using nano- and micro-technologies**

Responsible institution / team:

**BioSense Institute**

Contacts:

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## Service description

NanoSense is a **one-stop shop** for nanofabrication and nanocharacterization, offering **state-of-the-art equipment** and **expert support** for **nanomaterial producers**. It provides facilities for fabricating nanomaterials, including synthesis, post-processing, and sintering. NanoSense also offers access to advanced **nanostructure fabrication equipment** and a variety of methods to deposit metals and dielectrics, including etching, along with training and consultations.

## Research infrastructures

BioSense Institute facility boasts a **unique collection of equipment** within clean room facilities of class ISO5, ISO7, and ISO8, with a total area of 143 m<sup>2</sup>. The equipment includes ICP CVD, PVD system, Deposition System, HR dual beam system, E-beam lithography system, Laser Writer, Mask Aligner, and NIL System. It also houses **characterization equipment** such as scanning electron microscopes (HRSEM), XRD, atomic force microscope, STA and DSC system and Dilatometer. This setup allows for the **fabrication** of high-quality materials and devices at the nanoscale, as well as comprehensive **characterization, supporting R&D** from **initial ideas to final products**.

## Service innovativeness

The NanoSense service is innovative due to its unique one-stop shop approach for nanomaterial fabrication and characterization. Unlike other facilities, BioSense provides a **full suite of services**, from material synthesis to device development, all within ISO 5 and ISO 7 clean room facilities. This customized support is combined with **training and consultations** to customers. The service provides access to state-of-the-art equipment, including nanolithography and thin-film deposition tools, along with expert support. This comprehensive offering is **unique in the Balkan region**, where other scientific organizations typically only offer material characterization.

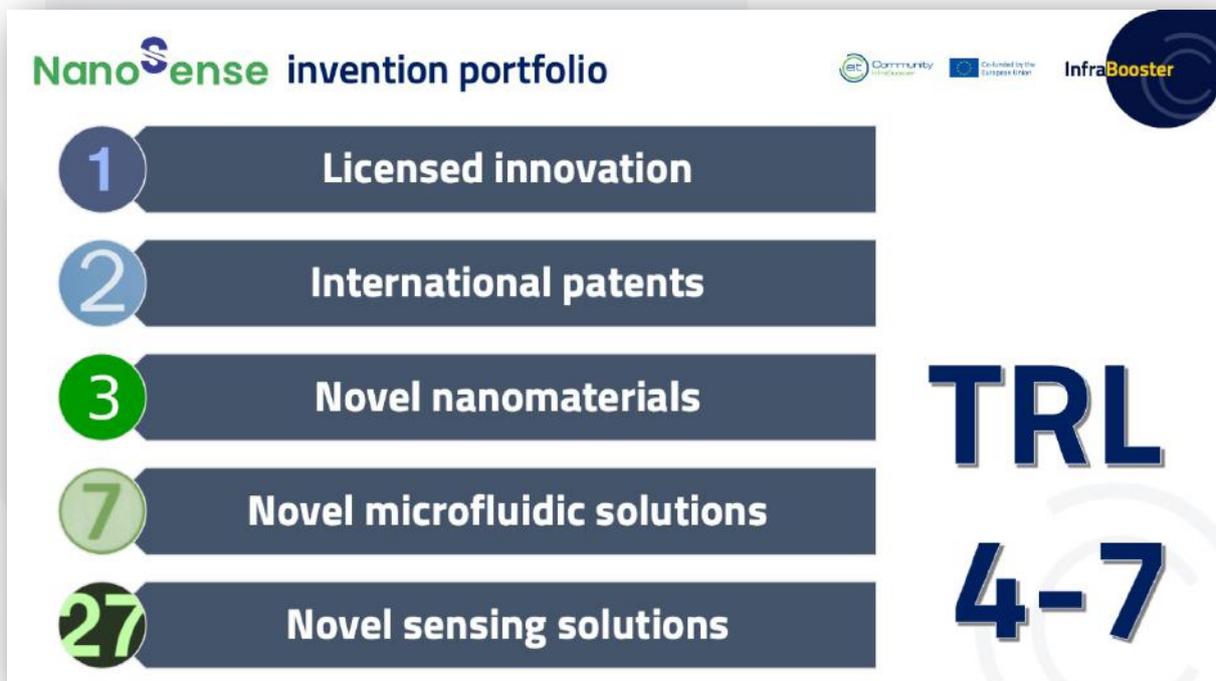
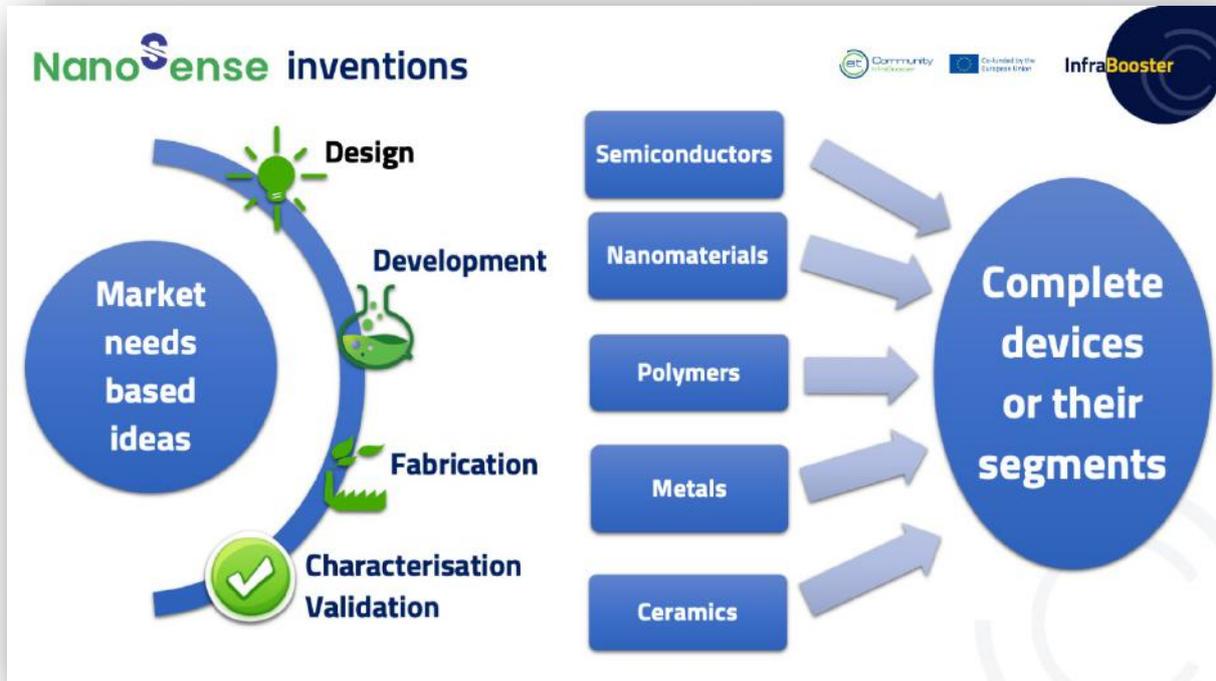




BioSense

# Pitch deck

NanoSense: Cradle of breakthrough inventions using nano- and micro-technologies





BioSense

# Pitch deck

NanoSense: Cradle of breakthrough inventions using nano- and micro-technologies

## NanoSense invention examples



### Nanomaterials

- synthesis, functionalization

### Microfluidics

- platforms, micromachining, chip, mixers, droplet generator, lab-on-chip

### Sensors

- pathogens, heavy metals, nitrogen, GMO, pesticides, residual gas, sulphide pollutants, toxic hydrocarbons, volatiles, oil derivatives, multispectral plant properties, food spoilage, organic carbon, mastitis detection

## NanoSense intentions





Service name:

**CharmsLab: Development of innovative techniques  
in food analysis**

Responsible institution / team:

**University of Belgrade, Faculty of Chemistry, Centre  
for Instrumental Analysis**

Contact:

- Tatjana Božić: [tbozic@chem.bg.ac.rs](mailto:tbozic@chem.bg.ac.rs)





## Service description

CharmsLab specializes in **advanced techniques for detecting** both known and unknown **contaminants in food products**. Utilizing cutting-edge mass spectrometry and chromatography methods, the lab ensures compliance with international food safety regulations (ISO/EIC 17025). The lab's tailored solutions help manufacturers address **safety challenges, reduce risks of recalls, and safeguard supply chains** by providing high-resolution, reliable results quickly.

## Research infrastructures

The CharmsLab infrastructure is equipped with **state-of-the-art instruments** including GC/Q-TOF, timsTOF Pro 2 LC-MS system, UPLC-QqQ-MS Waters Acquity UPLC H-Class and TQD, Orbitrap Exploris 240 and LTQ Orbitrap XL. This suite of instruments enables **comprehensive analysis** across various sample types and states, including **volatile and semi-volatile organic compounds**, and **complex mixtures** in **proteomics and metabolomics**. The infrastructure is designed for high-precision, tailored analytical solutions, supporting a wide range of industrial applications in the **agri-food, pharmaceutical, and environmental sectors**. The versatility of the equipment, along with the expertise of the research team, makes it particularly valuable for advanced R&D projects.

## Service innovativeness

CharmsLab distinguishes itself through its highly specialized focus on **high-resolution mass spectrometry** and **advanced chromatography**. Unlike other labs that provide more general analytical services, CharmsLab offers **high-precision, tailored analytical solutions** for **complex molecular analyses**. The service utilizes state-of-the-art equipment, along with unique in-house developed techniques. Additionally, CharmsLab's team has extensive **experience in international research**, which ensures that the service is aligned with the latest scientific advancements.





# Pitch deck

CharmsLab: Development of innovative techniques in food analysis

## Problem in food industry

-  Detection of **contaminants** that can compromise product **safety**
-  Methods to detect **known** and **unknown** contaminants from **complex samples**
-  **Financial losses**, brand damage and disruptions to the supply chain



## The service we offer



### Instrumental analysis

- LC-MS/MS
- GC-MS/MS
- ICP-MS
- NMR
- FTIR



### Ensuring compliance with international food safety regulations

Accredited to ISO/EIC 17025 certificates



### Tailored solutions for specific problem

Detection of known and unknown contaminants





# Pitch deck

CharmsLab: Development of innovative techniques in food analysis

## What is our target industry?



### Target segment

Manufacturers of food and food-related products

### Dairy



### Fruit juice

### Bakery sectors



## Why choose us?



### CharmsLab offers:

- ✓ **Faster, more precise** results
- ✓ **Tailored** contaminant **detection** methods
- ✓ Expertise in **complex food matrices**, offering a **customized approach**



### Other local and regional testing labs:

- ✗ Longer turnaround times
- ✗ Limited capability to detect complex contaminants
- ✗ Lack of tailored solutions





Service name:

**Microplastics extraction, identification, and particle number analysis**

Responsible institution / team:

**University of Belgrade, Faculty of Chemistry,  
Microplastics extraction and characterization  
laboratory**

Contact:

- Prof. Tanja Ćirković-Veličković: [tcirkov@chem.bg.ac.rs](mailto:tcirkov@chem.bg.ac.rs)





## Service description

The service focuses on **extracting, identifying, and analyzing microplastic** particles in various sample types. Using advanced techniques, the team quantifies particle numbers and determines their **shape, size, and chemical composition**, adhering to **ISO 24187:2023 standards**. With expertise gained from five research projects and two inter-laboratory studies, the Microplastic extraction and characterization laboratory from Faculty of Chemistry at University of Belgrade, offers reliable, quick, and affordable solutions for addressing global **microplastic pollution challenges**.

## Research infrastructures

The laboratory is equipped with a **MicroFTIR** (Fourier Transform Infrared Spectroscopy) with high-resolution imaging and wizard **software for ultra-fast mapping**. This enables the lab to perform both **qualitative** (chemical composition, shape and size) and **quantitative analysis** of microplastics, using a rich spectral database. This analytical setup, combined with validated sample preparation protocols, facilitates the comprehensive study of microplastics in different sample types. The laboratory provides a wide range of capabilities for analyzing the shape, size and chemical composition of microplastics.

## Service innovativeness

The service stands out due to its comprehensive approach to microplastic characterization. Unlike other services that provide only the mass of microplastics, this service **offers both identification and quantification** of microplastics in the sample, along with information about the shape and size of the particles. Using MicroFTIR with high-resolution imaging and wizard software, the service delivers detailed results, meeting the latest ISO 24187:2023 standards, which makes it highly **relevant for regulatory needs**. The service is also unique due to its affordability and fast turnaround, offering a more efficient **alternative to expensive international labs**.





# Pitch deck

Microplastic extraction, identification, and particle number analysis

## Why analyzing microplastics?



### Problem:

- Substantial waste
- Found worldwide
- Health concerns



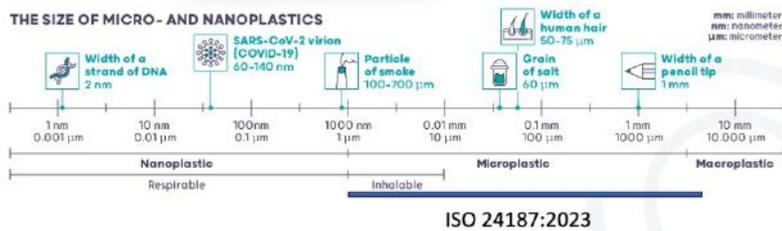
Plastic leakage is expected to double



Source: EU brochure on EU Action against microplastics pollution, 2023

### Need:

- Research
- Regulation
- Monitoring



## Our target segment



### M 72.1

Research and experimental development on natural sciences and engineering



Research and development scientists with work tied to:

- Water management, Food, Cosmetics and Pharmacy, Regulatory agencies, Academia...





# Pitch deck

Microplastic extraction, identification,  
and particle number analysis

## Why?

Zero Pollution Action plan of EU Green Deal

Microplastics released into the environment

Today      2030 target

Source: EU brochure on EU Action against microplastics pollution, 2023

- **Reliable microplastics data**
- **Standardization**
- **Increased funding**
- **Consumer Preferences**
- **Regulation gap**

Logos: et Community Infrastructure, Co-funded by the European Union, InfraBooster

## Competitors and differentiators

Other **universities** and **faculties**  
as well as **private laboratories**:

Their offer:

- Different equipment and approach
- Slower service
- Partial information
- Higher price

**Our offer:**

- **All the key information**
- **All sample types and plastic types**
- **Quick**
- **Affordable**
- **Reliable**

Logos: et Community Infrastructure, Co-funded by the European Union, InfraBooster



Service name:

## **Pharma quality control**

Responsible institution / team:

**University of Belgrade, Faculty of Pharmacy,  
Laboratory for Drug Investigation and Quality  
Control (LIKL)**

Contact:

- Prof. Biljana Otašević: [biljana.otasevic@pharmacy.bg.ac.rs](mailto:biljana.otasevic@pharmacy.bg.ac.rs)





## Service description

For small and medium-sized pharmaceutical companies that struggle with limited **expertise** in **analytical** and **pharmaceutical-technical quality control**, Laboratory for Drug Investigation and Quality Control (LIKL) offers **end-to-end analytical** and **consulting services**. The service ensures the rapid development of new methods and guarantees seamless compliance with international regulatory standards. Unlike other outsourced quality control providers, they combine **scientific expertise**, **GMP-certified processes**, and **cutting-edge instrumentation** to develop tailored solutions and **guide clients** through the entire product lifecycle.

## Research infrastructures

LIKL features a range of analytical **instruments compliant** with **GMP standards**. The infrastructure includes Carl-Fisher and potentiometric titrimeters, UV-VIS spectrophotometers, FT-IR spectrometers, (U)HPLC chromatographs with DAD/CAD/MS detection, stability monitoring chambers, and digital dissolution, disintegration, and friability testers. The lab also includes cutting-edge instrumentation such as LC-MS/MS and GC-MS/MS. This equipment facilitates comprehensive **drug quality control testing**, including **chemical entity identification**, **impurity profiling**, **stability** studies, and **bioavailability** studies. The lab's GMP accreditation and the availability of high-end equipment are key differentiating factors.

## Service innovativeness

The provision of GMP-compliant quality control (QC) with a **unique level of independence**. Unlike in-house QC labs in generic pharmaceutical companies, LIKL operates independently, ensuring **confidentiality and unbiased results**. LIKL also has cutting-edge instrumentation usually not present in standard QC labs, which enables it to provide **specialized analyses and interpretations**. The combination of routine QC services with specialized analytics and experts makes it a valuable **"one-stop" service** for the industry.





# Pitch deck

Pharma quality control

## Addressing Critical Needs in Pharmaceutical QC



- **Inconsistent Quality and Regulatory Compliance:** Many pharmaceutical companies face challenges with inadequate testing methods, leading to compromised product safety and regulatory hurdles that can delay market entry.
- **Key Stakeholders:** This issue is crucial for pharmaceutical manufacturers, regulatory bodies, and consumers, all of whom rely on safe and effective medications to protect public health and trust in the industry.
- **Importance of Collaboration:** By tackling these challenges together, LIKL offers a unique opportunity to enhance quality control processes, ensuring safer products and fostering innovation in the pharmaceutical sector.



## Tailored Solutions for Pharmaceutical QC



- **Comprehensive QC testing solutions**
  - HPLC method development
  - Content uniformity
  - Drug release testing, including biorelevant methods
  - Disintegration testing
  - Solid state characterization
  - Impurities, related substances, degradation products
  - Stability testing, including accelerated stability
- Outsourcing QC services to LIKL reduce operational costs by **20-30%** and can accelerate market entry, unlocking revenue growth potential



**Partnering with us means enhancing your product portfolio and innovating new formulations QC with expert guidance**



Serbia



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# Pitch deck

Pharma quality control



## Target segment and personas



### Targeted Products & Operations

- **Focus:** Pharmaceutical formulations, medical devices, dietary supplements.
- **Industries:** Pharmaceutical manufacturing, biotechnology, and nutraceutical companies; SMEs and start-ups
- **Expertise:** Advanced analytical techniques (HPLC, FT-IR, mass spectrometry), regulatory compliance, stability, and bioavailability testing

### Justification for Focus

- **Market Insights:** The **pharmaceuticals market worldwide** is **projected** to grow by 4.71% (2024-2029), driven by stringent regulations and increasing consumer demand for safety.
- **Geographical Strategy:** Targeting **Serbia and neighbouring countries** in the region (e.g. Macedonia), where our expertise meets the industry's growing needs for quality assurance and compliance

## Competitors/alternatives and differentiators



### Competitors Shortcomings

**Limited Services:** Focus on specific testing methods, lacking comprehensive solutions.

**Inconsistent Quality:** Failure to meet regulatory standards, risking compliance issues.

**Generic Offerings:** Competitors often provide one-size-fits-all solutions, not tailored to individual client needs.

### Our Unique Differentiators

**Comprehensive Solutions:** LIKL offers a full range of services, including advanced testing, stability studies, and bioavailability assessments—all in one place.

**Regulatory Expertise:** We ensure consistent compliance with local and global regulations, minimizing risks for clients.

**Customized Approach:** Our tailored service model meets the unique needs of each client, enhancing product safety and effectiveness. We provide follow-up for each service.



Serbia



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Service name:

**Prenatal GeneCheck: Preimplantation, prenatal, and precision medicine redefined for the Western Balkans**

Responsible institution / team:

**University of Belgrade, Institute of Molecular Genetics and Genetic Engineering (IMGGE)**

Contacts:

- Dr. Branko Tomić: [branko.tomic@imgge.bg.ac.rs](mailto:branko.tomic@imgge.bg.ac.rs)
- Dr. Nada Stanković: [nada.stankovic@imgge.bg.ac.rs](mailto:nada.stankovic@imgge.bg.ac.rs)
- Dr. Lidija Đokić: [lidija.djokic@imgge.bg.ac.rs](mailto:lidija.djokic@imgge.bg.ac.rs)
- Dr. Ivana Kostić: [ivana.kostic@imgge.bg.ac.rs](mailto:ivana.kostic@imgge.bg.ac.rs)





## Service description

Prenatal GeneCheck offers a platform for **comprehensive prenatal analysis** of multiple **genetic traits** and potential **genetic disorders**. It is innovative in offering prenatal analysis using advanced **next-generation sequencing**. Unlike traditional methods, this service enables the simultaneous analysis of multiple genes and samples, offering complete genetic information. This service delivers faster results, enhanced sample security, and cost-effective solutions, with communication in various languages, and provides more relevant results checked against a local genetic database. Unlike commercial sequencing services, Prenatal GeneCheck offers a more **personalized approach** with local expertise, and **tailored** bioinformatics **analysis**.

## Research infrastructures

The Institute of Molecular Genetics and Genetic Engineering (IMGGE) research infrastructure includes the **Illumina NextSeq 2000** sequencing system, which allows for comprehensive genetic analysis with a focus on prenatal testing and disease diagnostics. Combining cutting-edge hardware with sophisticated bioinformatics tools and top expertise in genomics and bioinformatics within the research group, this infrastructure allows for comprehensive prenatal **analysis, including multiomics, single-cell, and spatial analysis** ensuring the results are of highest quality.

## Service innovativeness

Prenatal GeneCheck distinguishes itself by offering a combination of rapid results, local expertise, and communication in multiple languages, along with results compared within the local genetic database. This service is **unique in the WB region** as local rivals offer only partial outcomes.





# Pitch deck

Prenatal GeneCheck: Preimplantation, prenatal, and precision medicine redefined for the Western Balkans

## The problem



- **1 - 2% genetic disorders (up to 10%)**
- **1% miscarriages after invasive testing**

**Access to reliable local genetic testing via NGS**

Samples are sent abroad, leading to:

- Sample Loss
- Result Delivery Delays
- Data Security Concern



**Births in 2023**  
**61K Srb, 170K WB**  
**11K (>35 y) Srb**  
**10K IVFs Srb**

**The limited time frame for prenatal analysis in the second trimester makes timely results essential for decision-making!**

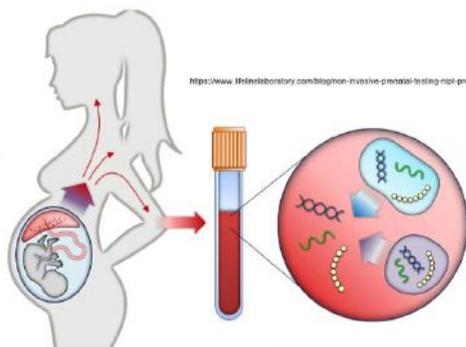
## The service



**Our service provides advanced analysis of possible genetic disorders**

**We offer:**

- non-invasive assessment
- faster time-to-insight
- enhanced accuracy and precision
- improved security (data protected by National Data Center)
- reduced costs
- data-driven innovation





# Pitch deck

Prenatal GeneCheck: Preimplantation, prenatal, and precision medicine redefined for the Western Balkans

## Empowering Hospital Labs to Lead in Precision Genetic Diagnostics



Our solutions for **Private Hospitals Labs** address the critical needs:

- **Advanced Genetic Testing Solutions**
- **Rare Disease Diagnostic Kits**
- **Data Analysis Software**
- **Biobanking Solutions**



### Specific Value for Lab Directors

- Reduced Costs and Greater Efficiency
- Enhanced Professional Reputation
- Improved Work-Life Balance



## Competitors/alternatives/differentiators



### Competitors

- Commercial Sequencing Service Providers (Illumina, BGI, Novogene)
- Core Facilities and Research Institutions
- Clinical and Diagnostic Labs

### Shortcomings

- Limited Reach in WB
- Lack of Brand Awareness
- Reliance on Local Genetic Database
- Potential for Pricing Sensitivity
- Ethical consideration (sample and data security)

### Prenatal GeneCheck

- **Local Expertise**
- **IMGGE provides genetic testing in Serbia**
- **Faster Results**
- **Seamless Communication**
- **Personalized Care**
- **Affordable Solutions**
- **Peace of Mind** (*your genetic data is safe with us*)





Service name:

## **Digital maturity consulting for business**

Responsible institution / team:

### **Kyiv National Economic University (KNEU), Digital Accelerator “Innovation Ukraine”**

Contacts:

- Prof. Larysa Antoniuk: [antoniuk@kneu.edu.ua](mailto:antoniuk@kneu.edu.ua)
- Prof. Tetiana Maiorova: [mayorova@kneu.edu.ua](mailto:mayorova@kneu.edu.ua)
- Prof. Denys Ilnytskyi: [ilnytskyi@kneu.edu.ua](mailto:ilnytskyi@kneu.edu.ua)
- Prof. Olha Denisova: [denisova@kneu.edu.ua](mailto:denisova@kneu.edu.ua)



## Service description

Digital maturity consulting for businesses offers **comprehensive digital transformation solutions** tailored for **SMEs** and **start-ups**. This service encompasses thorough **diagnostics** and digital **maturity assessments**, customized digital solutions leveraging deep **expertise**, advanced **analytics**, and **AI technologies**. Additionally, **expert consulting** is provided to boost productivity, competitiveness, and sustainability.

## Research infrastructures

The cornerstone of the service is the Digital Accelerator "Innovation Ukraine," which drives digital transformation and supports innovative projects **from ideation to commercialization**. It provides access to best practices, a rich knowledge base, and acts as a one-stop shop for personalized advice, data-driven insights, and training resources, ensuring informed decision-making and smooth transitions to digital innovation. The Accelerator also **connects businesses with KNEU's resources**, including educational and scientific labs, the Centre for Entrepreneurship, the Business Idea Clinic, the Science Park, and the Distance Learning Center.

## Service innovativeness

The service distinguishes itself through its **integration of cutting-edge technologies** such as AI, algorithmic tools, and advanced analytics, which streamline knowledge exchange and expertise sharing. AI-powered features include **project tuning**, automated **stakeholder matching**, collaboration tools, and tailored **learning paths**. As a central element of the national innovation ecosystem and the European Digital Innovation Hub "Win2EDIH," it **connects SMEs, innovators, investors, and educational institutions**. Unlike other services that may focus on specific aspects of development, this service provides **comprehensive support**, is tailored to the needs of Ukrainian customers, and strives for **sustainable growth**, a smooth **green transition**, and **social inclusivity**.

# Pitch deck

Digital maturity consulting for business



## The problem



Less than 30% of agricultural SMEs use digital tools effectively



Low productivity and competitiveness



Limited innovation and growth



Challenges in securing investments



Higher environmental footprint



We co-develop solutions that are directly aligned with your goals, ensuring a smooth digital transformation journey

## The services include



- ✓ Digital maturity assessment
- ✓ AI-powered chat-bot for quick project tuning

- ✓ Research and analytical services
- ✓ Online workshops and seminars for continuous learning

### Diagnostics

### Solutions

### Training

### Analytics

- ✓ Development of tailored digital solutions
- ✓ Repository of expert insights and best practices
- ✓ Personalized consulting by experienced professionals



# Pitch deck

Digital maturity consulting for business

## Target segment and personas



InfraBooster

- ✓ Independent farms
- ✓ Organic farms
- ✓ Vertical Farms
- ✓ Aquaculture Businesses
- ✓ Specialty Crop Producers
- ✓ Sustainable agriculture initiatives

**Producers**

**Agro-processing SMEs**

**Agricultural Wholesalers**

**AgriTech Startups**

**Filters**

- VECTORS COMPLIANCE
- HIGH TECH GROUP
- INVESTMENT READINESS
- PROJECT LIFE CYCLE STAGE
- INVESTMENT OBJECT
- INTELLECTUAL PROPERTY PROTECTION

**We target professionals involved in Business Development and Innovation**

## Differentiators



InfraBooster

**Holistic approach**



**Wide network**

Service name:

## **Mobile power quality diagnostics service**

Responsible institution / team:

### **Vinnytsia National Technical University, Renewable Energy Laboratory**

Contacts:

- Prof. Olena Rubanenko: olenarubanenko@ukr.net
- Dr. Viktoriia Vostriakova: vikazataydukh@gmail.com

## Service description

The mobile power quality diagnostics service provides **on-site, real-time assessments of power systems**, using a mobile laboratory and modern equipment. The service is focused on **low-voltage power grids** and provides **certified expert reports on power quality and recommendations** for improvement ensuring operational stability and **compliance with regulatory standards**. The service is designed to support green energy systems, reduce operational costs, and minimize environmental footprints.

## Research infrastructures

The Renewable Energy Laboratory utilizes modern **equipment for diagnosing, monitoring, and optimizing solar, wind, and hydroelectric** systems. The key feature of this service is its mobile laboratory for on-site diagnostics. This allows the team to provide **flexible, on-site assessments**, saving time and eliminating the need for equipment transport. The equipment is calibrated and provides certified expert reports on power quality, which supports compliance with power quality standards.

## Service innovativeness

Mobile power quality diagnostics service is distinguished by its **mobile, on-site diagnostic capabilities**. Unlike traditional power quality assessments, this service provides flexible, on-site evaluations, eliminating the need for equipment transport and saving valuable time. The service uses calibrated equipment and provides certified expert reports, ensuring compliance with power quality standards and helping avoid penalties. Unlike private laboratories and transmission system operators, the service offers flexible on-site assessment and is geared toward low-voltage power grids. The service's mobile nature, combined with **expert analysis and customized solutions for long-term improvements**, sets it apart from other electrical testing services.

# Pitch deck

Mobile power quality diagnostics service



## The problem



**The problem we are addressing**  
the frequent occurrence of power quality issues

**Addressing this need is essential to**  
improving operational stability



**This issue is particularly important for power distribution managers**

who oversee regional electricity networks, as they are responsible for maintaining reliable power quality standards

## The service



### Mobility, Precision, and Speed

Ensuring practical and immediate solutions that directly impact operational efficiency

### Compliance Assurance

Align operations with regulatory power quality standards

**Our service provides on-site, real-time power quality assessments using advanced, portable equipment.**



### Improved Reliability

The assigned support team or individual investigates the reported issue or fulfils the requested service.

### Cost Reduction

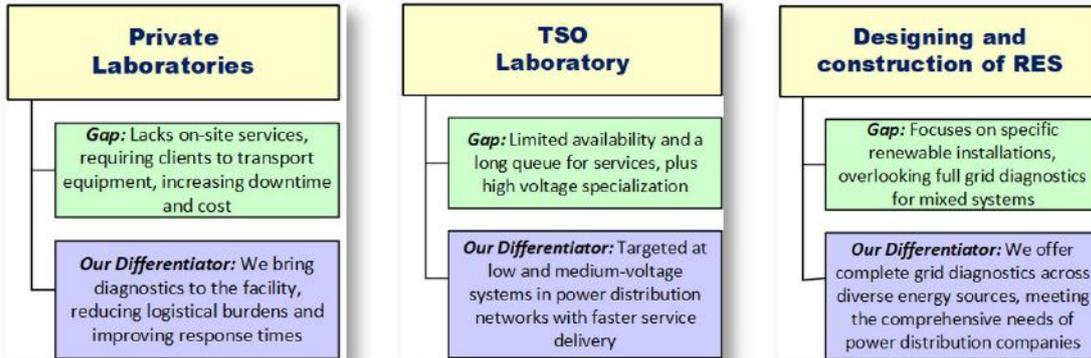
Lower maintenance and repair costs by preventing malfunctions

# Pitch deck

Mobile power quality diagnostics service

## Competitors

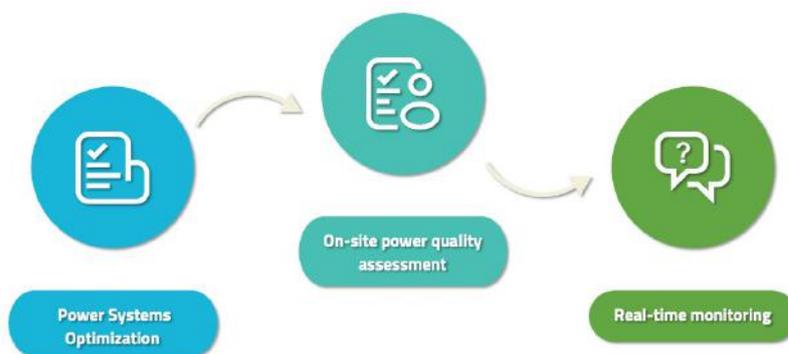
eit Community Infrastructure Co-funded by the European Union **InfraBooster**



**Our service fills these gaps with flexible, real-time on-site assessments, reducing both operational costs and downtime. This unique approach enables quick, precise diagnostics and compliance support tailored specifically for power distribution challenges.**

## Mobile Power Quality Diagnostics Services

eit Community Infrastructure Co-funded by the European Union **InfraBooster**



### Mobile Power Quality Diagnostics Services

**Let's explore how this solution can benefit your operations.**

Service name:

**PhytoLab: Development of valuable metabolites for the pharmaceutical industry**

Responsible institution / team:

**Marmara University, Faculty of Engineering, Plant Biotechnology Research Laboratory**

Contacts:

- Prof. Ahu A. Uncuoğlu: [info@phytolab.com](mailto:info@phytolab.com)
- Prof. Yıldız Aydın: [info@phytolab.com](mailto:info@phytolab.com)
- Dr. Ezgi Çabuk: [info@phytolab.com](mailto:info@phytolab.com)



## Service description

PhytoLab from Marmara University offers to produce **plant-based Active Pharmaceutical Ingredients (APIs)** and **therapeutic metabolites** through advanced in-vitro tissue culture methods. By addressing the seasonal and climatic challenges faced by traditional agriculture, the service ensures a consistent, sustainable, and eco-friendly supply of **high-quality ingredients for pharmaceutical companies**. PhytoLab's innovative approach focuses on spectrum **diversification and quantity induction using elicitors**, providing solutions tailored to the global pharmaceutical industry's needs.

## Research infrastructures

The PhytoLab is equipped with a range of tools for plant molecular biology and biotechnology, including **PCR machines, laminar flow, DNA sequencer, flow cytometry system, real-time PCR, automated plant growth cabinet, and plant growing rooms**. This infrastructure supports research in plant genetics and offers services for **producing genetically pure plant genotypes and micropropagation**. The equipment is tailored to the specific needs of plant-based research and development.

## Service innovativeness

Unlike other methods that depend on natural conditions, PhytoLab's **controlled environment** allows for the **unlimited production** of plants, which are the primary source of active pharmaceutical ingredients. This unique capability ensures a **consistent supply of plant material**, which is essential for the pharmaceutical industry. PhytoLab also distinguishes itself by combining **custom-made applications** high-tech infrastructure with **expert knowledge** in R&D and project management, offering a level of integration not typically found in other plant biotechnology labs.

# Pitch deck

PhytoLab: Development of valuable metabolites for the pharmaceutical industry

## The Need We Address

Community InfraBooster Co-funded by the European Union

The pharmaceutical industry needs consistent ingredients BUT;

- **Agriculture** faces seasonal and climate challenges.
- **Supply chain interruptions** increase costs, delay production.



**Our solution** ensures stable, eco-friendly production year-round, **reducing costs and supply chain interruptions.**



## The target segment

Community InfraBooster Co-funded by the European Union



Pharmaceutical companies are our primary focus, as they require a sustainable, high-quality supply of **plant-derived active pharmaceutical ingredients (APIs)** and specialized therapeutic metabolites.

### Targeted Products

- Critical for drug formulation
- Tailored solutions for specific therapeutic applications

### Our Core Expertise

- Rapid, scalable, and high-quality plant production
- Controlled, optimized production of therapeutic compounds





# Pitch deck

PhytoLab: Development of valuable metabolites for the pharmaceutical industry

## The service we offer

**Sustainable Plant Micropropagation**

**Customized Metabolite Enhancement**

**Year-Round Secondary Metabolite Production**

**Standardized Quality Control**

**PhytoLab**  
Business Company

## Competitors

	<b>PhytoLab</b>	<b>Phyton Biotech</b>	<b>iBio</b>	<b>samyang Biopharm</b>
<b>Focus</b>	<b>Plant-derived APIs</b>	Plant cell culture-based APIs	Plant-based biologics production	Sustainable pharma production
<b>Core Services</b>	<b>Customised In vitro production of plant-based APIs</b>	Sustainable production of pharmaceutical ingredients via plant cell culture	FastPharming platform for scalable, plant-based production of biologics	Development of APIs using plant cell culture and biotech-based methods
<b>Geographic Reach</b>	<b>Europe and expanding globally</b>	Global	Primarily U.S., expanding globally	Asia and expanding globally
<b>Key Products</b>	<b>High-quality, standardized plant-derived APIs</b>	Paclitaxel (anticancer API)	Vaccines and therapeutic proteins Magazine	Sustainable APIs, drug delivery systems

## Cooperation tips

For those interested in **learning more about the services** detailed in this catalogue or in collaborating with the service providers, please note the following **guidelines**:

- Each service listed in this catalogue has specific contact information to the responsible scientists. We encourage you to **reach out to them directly** for detailed inquiries, potential collaborations, or further information.
- When contacting the service providers, please be **clear** about the nature of your **inquiry** or interest **related to the service domain**. This will facilitate a more efficient and productive communication.
- Please **allow** some **time for responses**, as our service providers are often engaged in ongoing research and projects.
- InfraBooster service providers are leaders in their respective fields, bringing a wealth of expertise and innovative approaches to every collaboration. Don't hesitate to reach out with ideas for joint projects or tailored solutions.

# Application Form

## InfraBooster details

All information presented in this catalogue is based on the data available as of the date of publication. We strive to keep our information accurate and up-to-date; however, we recommend **verifying** with the service providers for the **most current details**.

The success stories, data, and outcomes mentioned in this catalogue are **attributed to the work of** participating **teams** of EIT InfraBooster Practitioner program **and their** respective **institutions**.

EIT InfraBooster Practitioner program, its objectives, and the details of the course have been sourced primarily from EIT InfraBooster website and related documents. For more comprehensive information, please visit the InfraBooster webpage: <https://eit-ris.eu/infrabooster/>

For more inquiries related to EIT InfraBooster program, please contact us at: [infrabooster@wz.uw.edu.pl](mailto:infrabooster@wz.uw.edu.pl). We are available to provide information about the program, participation requirements, and other general queries.

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# About CSRI



## Centre for Socially Responsible Innovations

The Centre for Socially Responsible Innovations (CSRI) at the Faculty of Management, University of Warsaw, **integrates social responsibility with innovation**. CSRI conducts **cutting-edge research** on socially responsible innovation and technology management, addressing **societal** and **environmental challenges**.

Initiatives include co-creating products with vulnerable groups, designing environmentally friendly solutions, and leveraging research infrastructures for economic and scientific advancement. CSRI **collaborates with industrial and academic partners** across Europe, with many projects funded by Horizon Europe, EIT Food, and EIT Health.

Flagship initiatives, such as the InfraBooster program, demonstrate our commitment to **bridging science and industry**, unlocking the potential of research infrastructures, and **promoting sustainable development**.

Join our projects in shaping innovations that drive societal well-being and global impact.

# Participating institutions 2024

<b>Albania</b>	Catholic University Our Lady of Good Counsel, Tirana
	Center for Development Evaluation and Social Science Research
	Institute for Genetic Engineering and Biotechnology, University of Sarajevo
<b>Bosnia &amp; Herzegovina</b>	International Burch University
	Public Veterinary Institute of Serbian Republic
	University of Banja Luka
	University of Sarajevo
<b>Bulgaria</b>	GATE Institute, Sofia University "St. Kliment Ohridski"
<b>Croatia</b>	Universtiy of Zagreb
<b>Italy</b>	Distretto Tecnologico Aerospaziale
	University of Siena
<b>Latvia</b>	Latvia University of Life Sciences and Technologies
<b>Lithuania</b>	Kaunas University of Technology
	Vilniaus Kolegija
<b>Moldova</b>	Institute of Pedology, Agrochemistry "Nicolae Dimo"
	Instituția Publică Centrul de Instruire și Inovații TIC-TEKWILL
	National Agency for Research and Development
<b>Montenegro</b>	Montenegro Bureau of Metrology
	University of Montenegro
	University of Montenegro
<b>North Macedonia</b>	Goce Delcev University, Stip
	Ss. Cyril and Methodius University in Skopje
	University "St. Kliment Ohridski", Bitola
<b>Poland</b>	Plant Breeding and Acclimatization Institute
	Poznan University of Technology
	Poznań University of Life Sciences
	West Pomeranian University of Technology in Szczecin
<b>Portugal</b>	Polytechnic Institute of Bragança
	Iasi University of Life Sciences (IULS)
<b>Romania</b>	National Institute of R&D for Potato and Sugar Beet, Braşov
	National Research and Development Institute for Food Bioresources – IBA Bucharest
	Research and Development Station for Cattle Breeding Dancu Iasi
	BioSense Institute, Novi Sad
<b>Serbia</b>	Institute for Biocides and Medical Ecology
	Institute for Biological Research Sinisa Stankovic
	Institute for Multidisciplinary Research
	Institute of Meat Hygiene and Technology, Belgrade
	Science-Technology Park Belgrade
	University of Belgrade
<b>Spain</b>	University of Basque Country
	Istanbul University
<b>Türkiye</b>	Marmara University
	TÜBİTAK
	Alfred Nobel University
<b>Ukraine</b>	Bukovinian State Medical University
	Dnipro Academy of Continuing Education
	Dnipro University of Technology
	Frantsevich Institute for Problems of Materials Science
	Institute of Renewable Energy, National Academy of Sciences of Ukraine
	International Scientific and Technical University
	Kharkiv National University of Radio Electronics
	Kyiv Academic University, National Academy of Sciences of Ukraine
	Kyiv National Economic University
	Kyiv National University of Technologies and Design
	Lviv Polytechnic National University
	Mykolayiv National Agrarian University
	Odesa National University of Economics
Paton Institute of Electric Welding	
Sumy State University	
V. Bakul Institute for Superhard Materials	
Vinnitsia National Technical University	

The list includes scientific organisations which participated in EIT InfraBooster Foundation training.

\*) marks institutions that progressed to the more advanced Practitioner level

# InfraBooster participants' countries 2024





EIT InfraBooster delivered by:

Centre for Socially Responsible Innovations  
Faculty of Management  
University of Warsaw



Centre  
for Socially  
Responsible  
Innovations

**WZ** Faculty of Management  
University of Warsaw



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