

Horizon Europe: R&D Consortium Partnership Offering

Work Programme 2026-2027

CLUSTER 4: DIGITAL, INDUSTRY AND SPACE

WHO ARE WE

BioSistemika is a Slovenian SME specializing in custom software, AI-enabled solutions, data platforms and systems integration for laboratories, healthcare and advanced industrial environments. Our interdisciplinary team of scientists, software engineers, and domain experts delivers end-to-end digital solutions.

We develop high-performance data analytics, scalable data-management systems, GMP-compliant solutions and advanced software for connected instruments.

With experience in both single-beneficiary projects and multi-partner consortia, BioSistemika contributes technical leadership and reliable delivery from concept to implementation.



CALLS OF INTEREST IN CLUSTER 4

BioSistemika is looking for consortium partnership in the following calls:

Apply AI: Challenge-Driven AI Innovation Booster in Apply AI prioritised sectors (RIA)

[HORIZON-CL4-2027-04-DIGITAL-EMERGING-04](#)

Deadline: 18 March 2027

New approaches for Human/AI collaboration for the workforce of the future (RIA)

[HORIZON-CL4-2027-02-DIGITAL-EMERGING-52-two-stage](#)

Deadline Stage 1: 2 February 2027, Deadline Stage 2: 2 September 2027

New approaches for decentralized, federated and sustainable AI data processing (RIA)

[HORIZON-CL4-2027-04-DATA-03](#)

Deadline: 18 March 2027

**Apply AI: AI-Driven Robotics for Industry: Enabling System Integration and Adoption (IA)
(Partnership in AI, Data and Robotics)**

[HORIZON-CL4-2027-04-DIGITAL-EMERGING-05](#)

Deadline: 18 March 2027

Fast Track to Research and Innovation for breakthroughs in industrial technologies

[HORIZON-CL4-2027-01-MAT-PROD-61](#)

Deadline: 2 February 2027

Facilitate the engagement of European stakeholders in international digital standardisation (CSA)

[HORIZON-CL4-2027-04-HUMAN-07](#)

Deadline: 18 March 2027

TASKS BIOSISTEMIKA CAN CONTRIBUTE TO IN CLUSTER 4

01 AI-Enabled Applications and Decision Support

- AI application development from proof of concept to scalable deployment
- Predictive analytics, algorithm integration and decision-support software
- Human-in-the-loop review, explainability and performance monitoring
- Healthcare and laboratory use cases grounded in domain expertise

02 Human-AI Collaboration and User Experience

- Intuitive interfaces for complex industrial and scientific workflows
- Knowledge capture, guided work and digital training tools
- Inclusive, accessible design and human factors
- User research, usability testing and validation in real environments

03 Distributed Data and Systems Integration

- Secure edge, cloud and federated data architectures
- APIs for instruments, robots, IoT environments and legacy systems
- Data quality, harmonization, traceability and visualization
- Privacy-preserving processing and reliable data pipelines

04 Compliance, Validation and Cybersecurity

- Software layers for automation and AI-driven robotics integration
- Modular components, configuration tools and reusable integration kits
- Testing, verification, risk management and deployment support
- EU AI Act, GDPR, Cyber Resilience Act and cybersecurity by design

POTENTIAL CONSORTIUM ROLES IN CLUSTER 4

WORK-PACKAGE LEAD

Lead or co-lead software engineering and AI application work packages.

APPLY AI USE-CASE PARTNER

Deliver healthcare or laboratory use cases for the Apply AI challenge.

HUMAN-CENTER DESIGN LEAD

Lead human-centered design, knowledge capture and user validation.

DATA & SYSTEMS INTEGRATION PARTNER

Design federated data workflows, system integrations and software layers.

VALIDATION & CYBERSECURITY LEAD

Lead testing, cybersecurity and regulatory or certification readiness.

SUBCONTRACTOR

Deliver clearly defined software development, AI integration, testing, cybersecurity or technical consulting tasks.

WHY INVITE BIOSISTEMIKA

- **Extensive experience** in EU-funded R&D projects
- **Strong communication and collaboration skills**, with a solid understanding of EU funding mechanisms
- **Expertise in developing high-quality proposal content** and contributing to competitive project proposals
- **Strong track record** and valuable assets, including references, awards, patents, SME status and other credentials that strengthen project proposals
- **Based in Slovenia, a Widening country**, enabling broader regional reach and strengthening geographical balance and Widening participation in consortium projects
- **Innovative, user-friendly software** solutions for research and diagnostic laboratories

TRACK RECORD IN COMPETITIVE EUROPEAN GRANTS

- **PEARL-DNA** (Horizon Europe – EIC Pathfinder) | **Coordinator**
Development of an end-to-end platform for DNA-based digital data storage built on interoperable systems for block-by-block assembled DNA. (2023-2026)
- **DATANA** (H2020 - EIC Accelerator) | **Single Participant**
Development of novel DNA data writing technology by utilizing DNA for the storage of data. (2021-2023)
- **RAPID-COVID** (IMI/H2020) | **Partner**
Development of a point-of-care molecular diagnostic tool for the rapid and cost-effective diagnosis of COVID-19 and 30 other common pathogenic respiratory bacteria and viruses. (2020-2021)
- **GeneH** (Horizon Europe) | **Partner**
Establishment of the center of excellence in gene therapy through strategic cross-sector partnerships. (2025-2029)
- **AutoMTP** (Austrian Life Sciences Programme 2022) | **Partner**
Development of the production of in vitro 3D tissues for clinical trials. (2023-2025)
- **NATO-DIANA GuarDNA** (NATO DIANA) | **Single Participant**
Demonstration of data storage technology including successful storage and retrieval of cryptocurrency wallets and other critical information. (2025)
- **GuarDNA** (Eurostars) | **Coordinator**
Development of an innovative platform for safe and sustainable data storage, leveraging the deoxyribonucleic acid biomolecules as a medium. (2025-2028)
- **Auto3dMSC** (Eureka) | **Partner**
Development of the first robotized and centralized platform for automated 3D mesenchymal stem cell culture. (2020-2023)

We are interested to participate as a partner in R&D calls and we are looking for project consortiums.

Let's explore how BioSistemika can contribute.

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