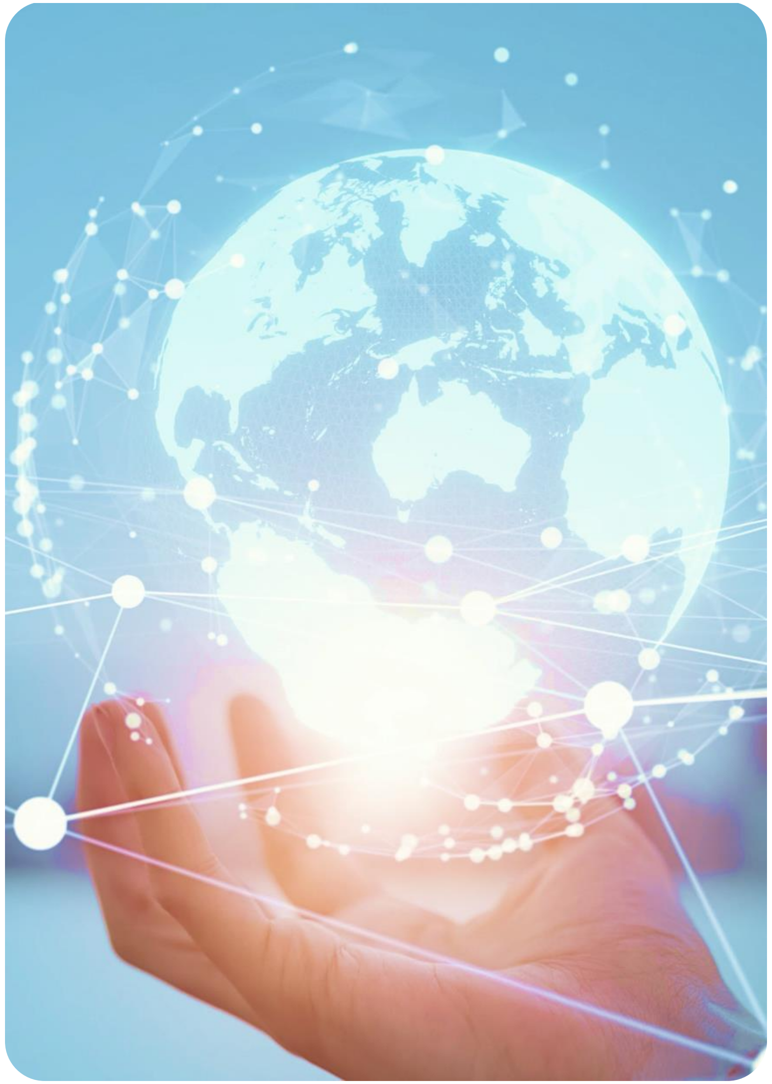
SUSDAT

July 2025



SUSDAT

END TO END HW & SW FOR SIGNAL COLLECTION

HW design and prototyping with seamless SW for data **collection**

DATA MIRACLES FOR SUSTAINABILITY

Machine learning methods for data **evaluation and decision-making to achieve sustainability goals** by **energy, health, safety, security and resilience optimization**

OUR FOCUS

01
Industrial automation

02
Computer vision

03
Image analysis

04
Machine learning

05
Data ingestion

06
Computer simulations

07
Cloud computing

08
Edge computing

09
Task automation

10
Decision making

OUR EXPERIENCE

1

Computer vision

Processing of camera data in real time using machine learning methods for objects detection and classification. Systems can be used in security and defense projects focused on creation of anti-threat solutions based on processing of visual data.

2

Decision support systems

Creation of software tools for decision making using internal and external data sources such as sensoric and GIS data.

3

Sustainability simulations

Computer simulations predicting the behaviour of complex systems such as prediction models of populations focused on neurodegenerative diseases.

4

Machine Learning

In our projects, we are using various machine learning methods for data evaluation and anomaly detection

5

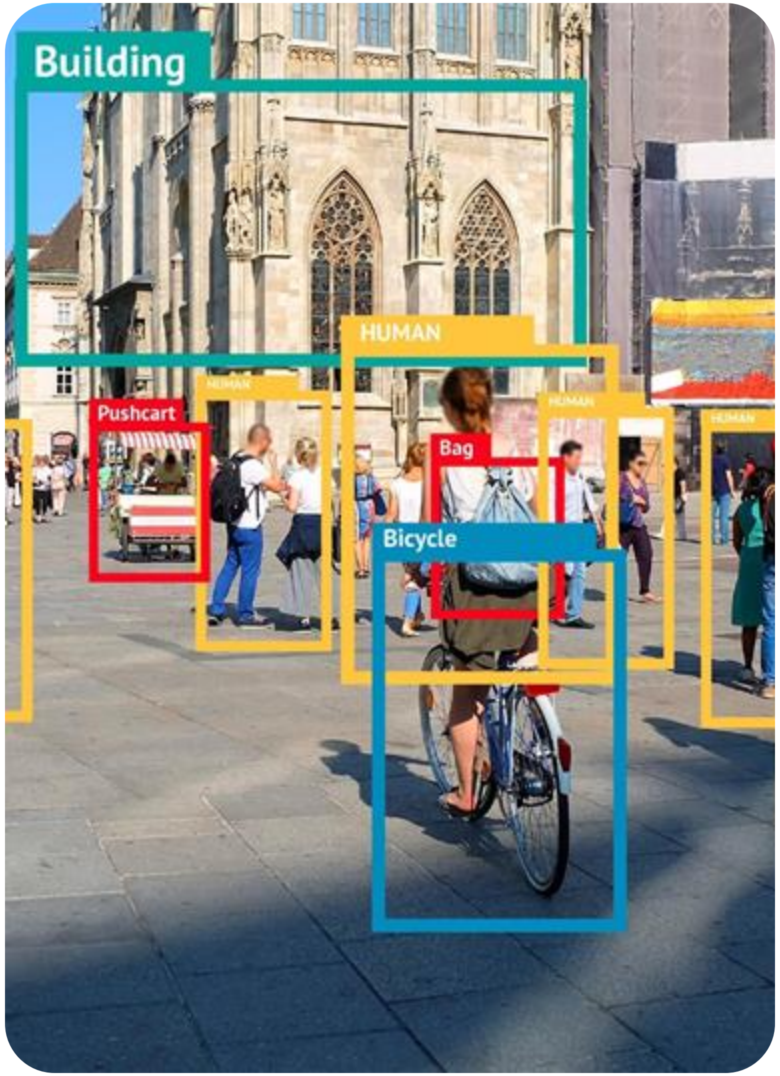
Remote control systems

We combine the design of hardware solutions together with custom control software. We create a custom hardware and designated software for remote control.

6

Image analysis

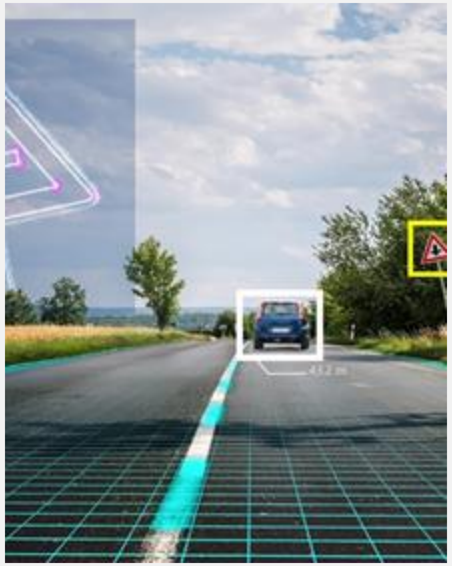
We develop and test algorithms and solutions for image analysis with automatic detection and classification.



COMPUTER VISION

Processing of camera data in real time using machine learning methods for objects detection and classification.

Systems can be used in **remote inspection, security and defense** e.g. real time air threat detection or intruder alert.



SUSTAINABILITY SIMULATIONS

Computer simulations predicting the behaviors of complex systems, such as **prediction models of disease propagation** or **prediction of effects of environmental stressors.**

DECISION SUPPORT SYSTEMS

Creation of software tools for **AI supported decision-making** using internal and external data sources.

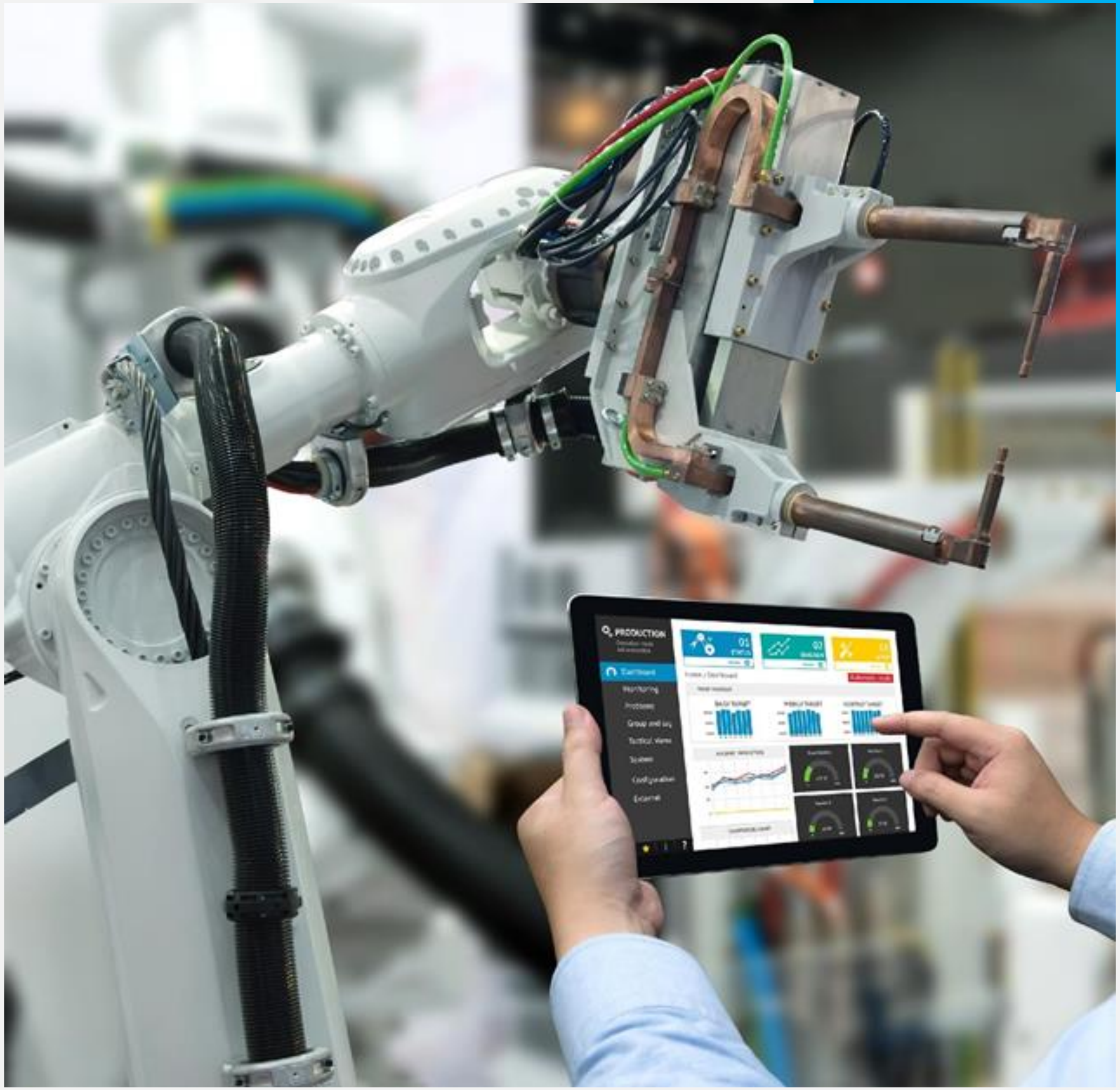
Situational awareness and decision-making support.

Fusion of various data types such as sensorics, cameras and GIS data for optimal decision-making in real time

Decision-supported **planning and process monitoring tools operable in offline or online modes.**

MACHINE LEARNING FOR INDUSTRY AND DIGITAL TWINS

Developing of machine learning applications for data evaluation and anomaly detection, e.g. for **task automation, movement optimization, line configuration** or signal pattern recognition in **predictive maintenance solutions**



HW & SW AND REMOTE CONTROL AND SYSTEMS

Design **custom hardware** solutions together with **custom control software**, incl. **remote control**

Cloud and Edge computing

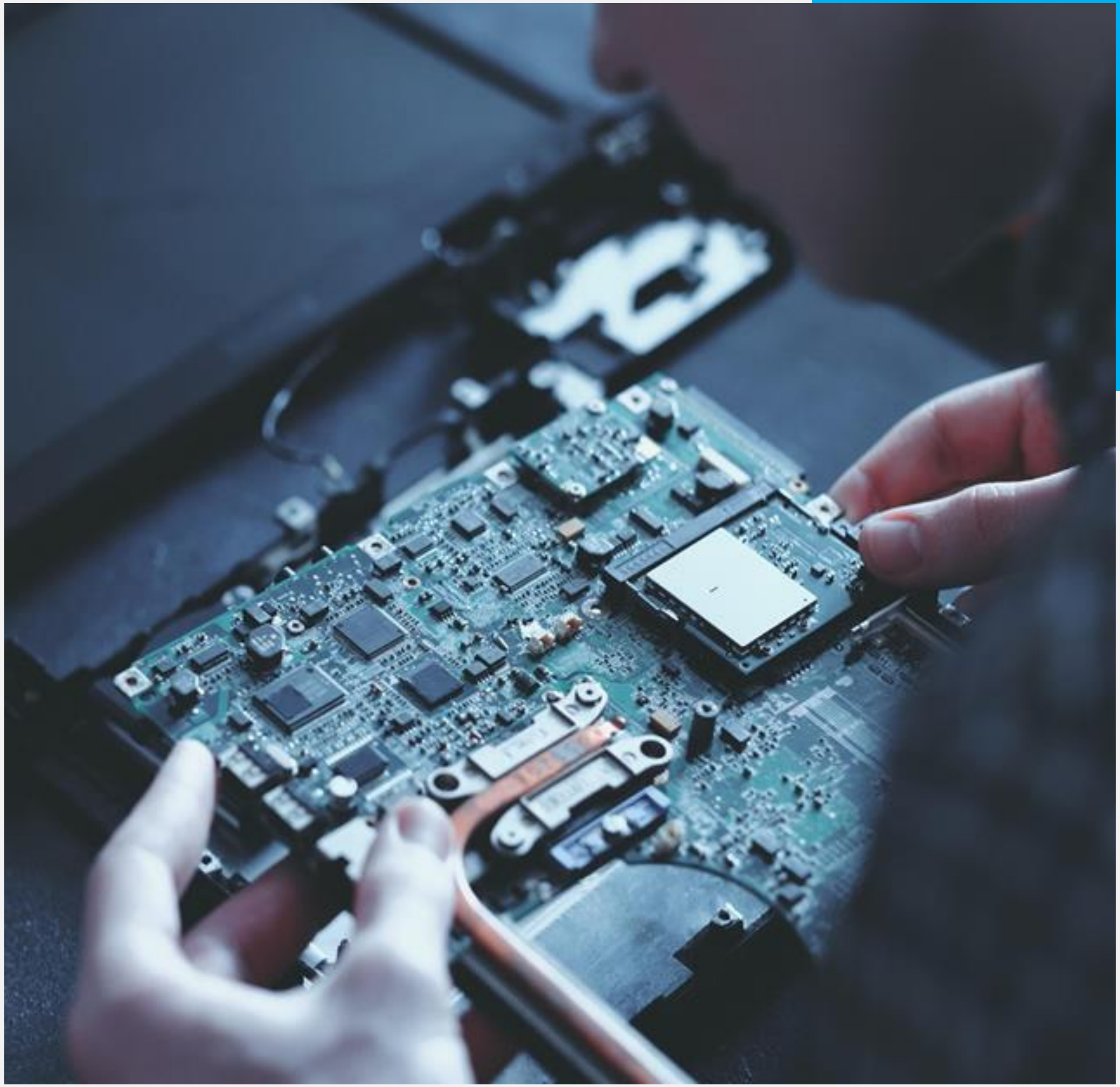
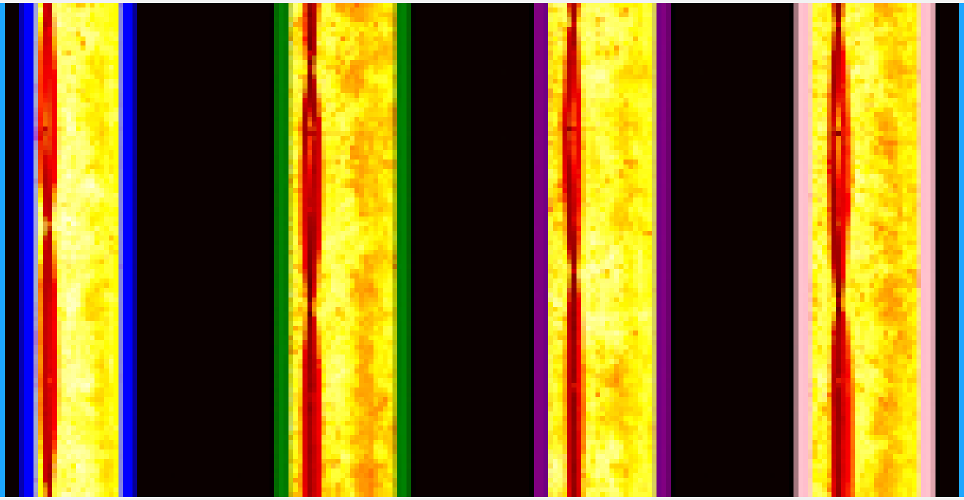


IMAGE ANALYSIS

Test algorithms and solutions for **image analysis with automatic detection and classification**

Medical image analysis, aerial photos evaluation for crop stress analysis



HORIZON EUROPE INTEREST

Cluster 1 - Health

- HORIZON-HLTH-2025-03-DISEASE-02-two-stage - Innovative interventions for mental, behavioural and neurodevelopmental disorders
- HORIZON-HLTH-2025-01-TOOL-03 - Leveraging multimodal data to advance Generative AI in biomedical research
- HORIZON-HLTH-2025-01-TOOL-05 - Boosting translation of biotech research into innovative health therapies
- HORIZON-HLTH-2025-01-DISEASE-04 - Leveraging AI for pandemic preparedness and response
- HORIZON-HLTH-2025-03-ENVHLTH-01-two-stage - Impact of pollution on brain diseases
- HORIZON-HLTH-2025-01-CARE-01 - End-user driven application of Generative AI in healthcare (GenAI4EU)
- HORIZON-HLTH-2025-01-DISEASE-07 - Tackling high-burden and under-researched medical conditions

HORIZON EUROPE INTEREST

Cluster 3 – Civil Security for Society

- HORIZON-CL3-2025-01-FCT-01 - Modern information and forensic evidence analysis and frontline policing
- HORIZON-CL3-2025-01-FCT-03 - Improved intelligence picture and enhanced prevention of organised crime
- HORIZON-CL3-2025-01-BM-01 - Efficient border surveillance and maritime security
- HORIZON-CL3-2025-01-DRS-03 - Testing/validating tools and data for cross-border disaster response
- HORIZON-CL3-2025-01-DRS-04 - Autonomous systems and robotics for high-risk disaster response
- HORIZON-CL3-2025-01-INFRA-01 - Preparedness for disruptions of critical infrastructures
- HORIZON-CL3-2025-01-SSRI-05 - Data repository for security research and innovation

HORIZON EUROPE INTEREST

Cluster 4 – Digital, Industry and Space

- HORIZON-CL4-2025-03-DATA-08 - Large-scale pilots for Connected Collaborative Computing Networks (3C networks)
- HORIZON-CL4-2025-04-DIGITAL-EMERGING-01 - Advanced sensor technologies and multimodal sensor integration
- HORIZON-CL4-2025-03-DIGITAL-EMERGING-07 - Robust and trustworthy Generative AI for Robotics and industrial automation
- HORIZON-CL4-2025-03-DIGITAL-EMERGING-09 - Challenge-Driven GenAI4EU Booster
- HORIZON-CL4-2025-03-HUMAN-14 - Core technologies for virtual worlds
- HORIZON-CL4-2025-03-HUMAN-15 - Generative AI for Virtual Worlds
- HORIZON-CL4-2025-01-TWIN-TRANSITION-02 - Physical and cognitive augmentation in advanced manufacturing

HORIZON EUROPE INTEREST

Cluster 5 – Climate, Energy and Mobility

- HORIZON-CL5-2025-04-D6-01 - Advancing remote operations to enable the sustainable and smart mobility of people and goods
- HORIZON-CL5-2025-04-D6-12 - Safe Human-Technology Interaction in vehicle systems
- HORIZON-CL5-2025-02-D3-17 - Control and operation tools for a RES-based energy system
- HORIZON-CL5-2025-02-D3-19 - Innovative solutions for a generative AI-powered digital spine of the EU energy system
- HORIZON-CL5-2025-02-D3-20 - Innovative tools and services to manage and empower energy communities
- HORIZON-CL5-2025-02-D2-08 - Coordinated call with India on waste to renewable hydrogen
- HORIZON-CL5-2025-02-D3-04 - Development of hydropower technologies and water management schemes

HORIZON EUROPE INTEREST

Cluster 6 – Food, Bioeconomy, Natural Resources, Agriculture and Environment

- HORIZON-CL6-2023-FARM2FORK-01-7: Innovations in plant protection: alternatives to reduce the use of pesticides focusing on candidates for substitution
- HORIZON-CL6-2025-03-GOVERNANCE-09 - Delivering Earth Intelligence to accelerate the green and digital transition
- HORIZON-CL6-2025-03-GOVERNANCE-11 - Enhancing sustainability and resilience of agriculture, forestry and rural development through digital twins
- HORIZON-CL6-2025-01-CIRCBIO-09 - Unleashing the potential and advancing the impact of the digitalization/AI of the climate-neutral bio-based value chains
- HORIZON-CL6-2025-01-ZEROPOLLUTION-06 - Provide digital solutions tailored to small and medium-sized farms to monitor and sustainably manage agricultural inputs and natural resources
- HORIZON-CL6-2025-01-BIODIV-05 - Assessing and modelling ecosystems' dynamic processes to guide restoration activities and to improve models used for climate
- HORIZON-CL6-2025-01-BIODIV-04 - Large-scale in situ biodiversity observations for better understanding of biodiversity state, drivers of its decline and impacts of policies
- HORIZON-CL6-2025-03-GOVERNANCE-08 - Effective environmental observing systems and associated governance

OUR REFERENCES

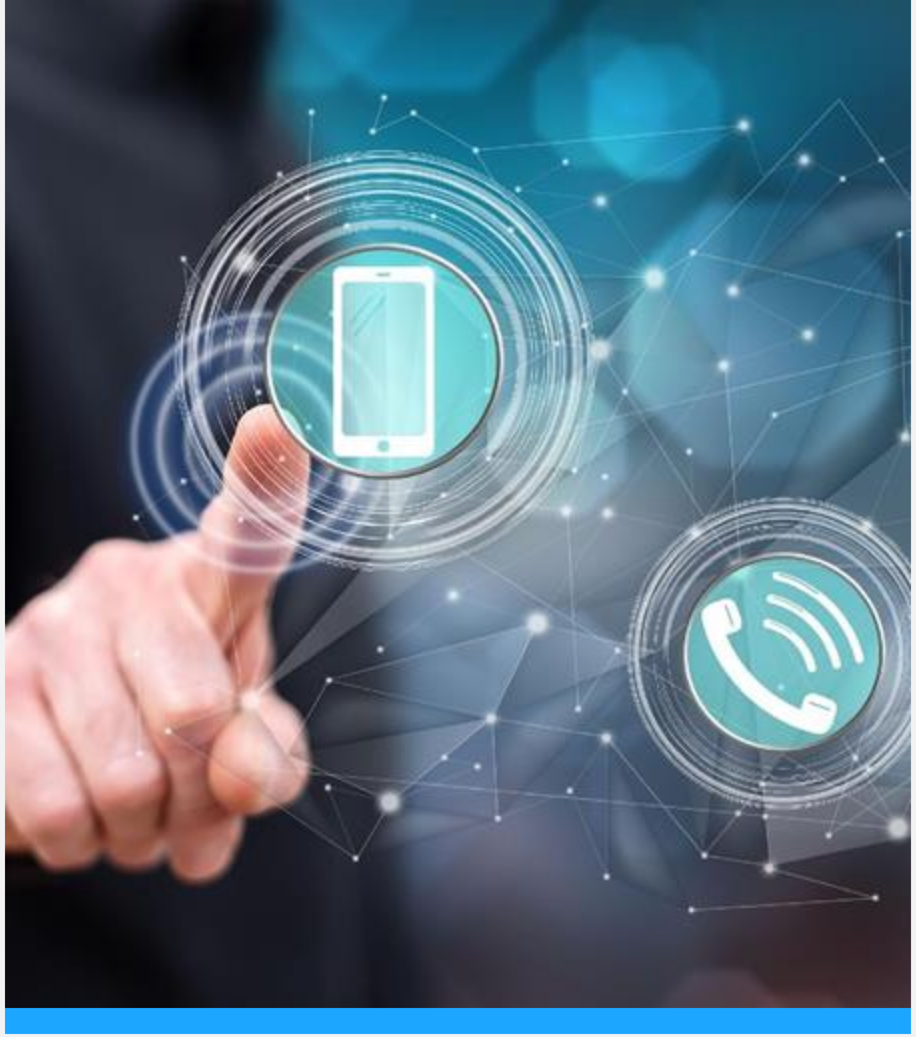
TRILAB
A PRUSA RESEARCH COMPANY

kokoro lingua

ESSENCE LINE

HUNGRY ECOCITIES
A S+T+ARTS RESIDENCIES PROJECT

DIGI4CIRCULAR



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