SUSDAT

January 2023

SUSDAT
DATA MIRACLES FOR SUSTAINABILITY

- We are implementing **smart cloud systems** for monitoring, reporting and reacting to the given data.
- We help companies and public organizations to work smart with data and to achieve their sustainability goals (**energy, health, safety, security and resilience optimization**).
- We are using **machine learning methods** for data **evaluation and decision-making**.

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

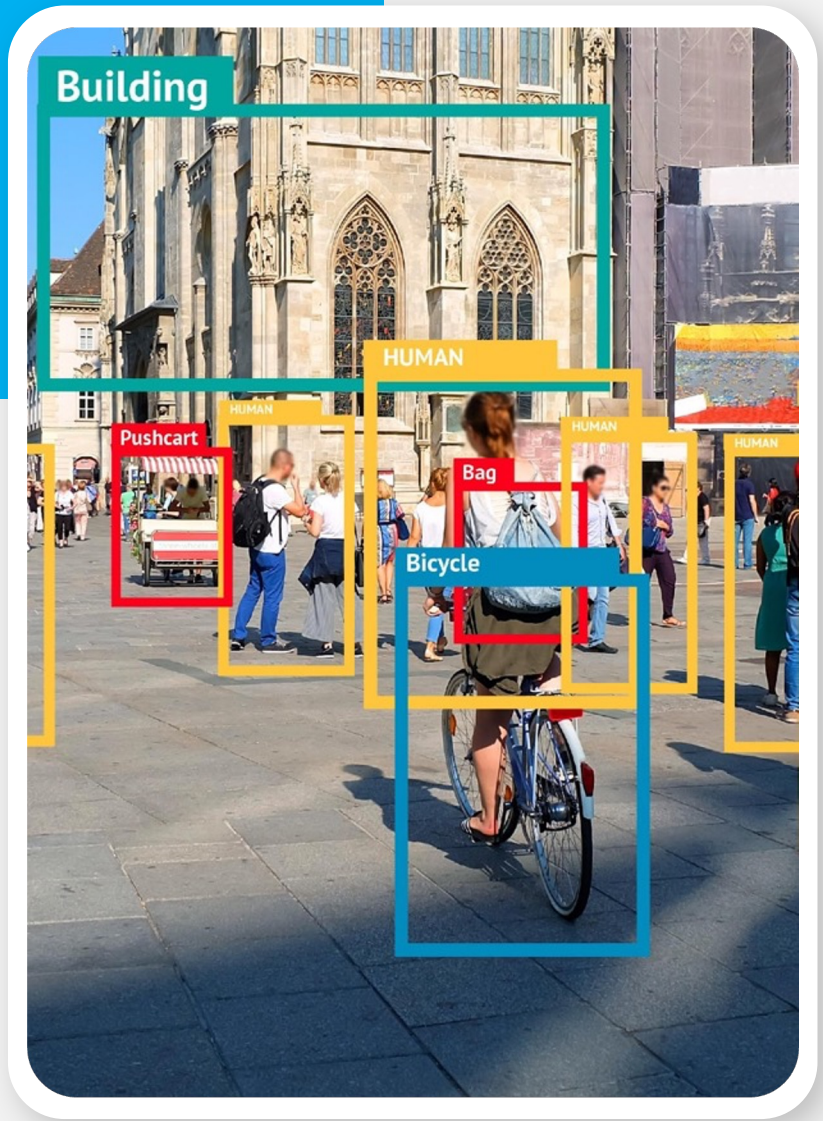
Remote control systems

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

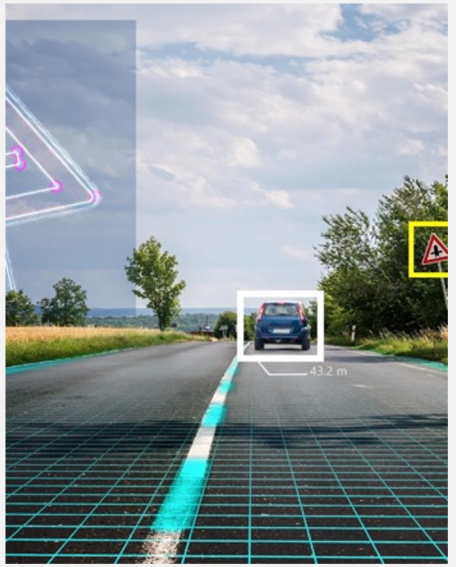
We develop and test algorithms and solutions for image analysis with automatic detection and classification.



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.

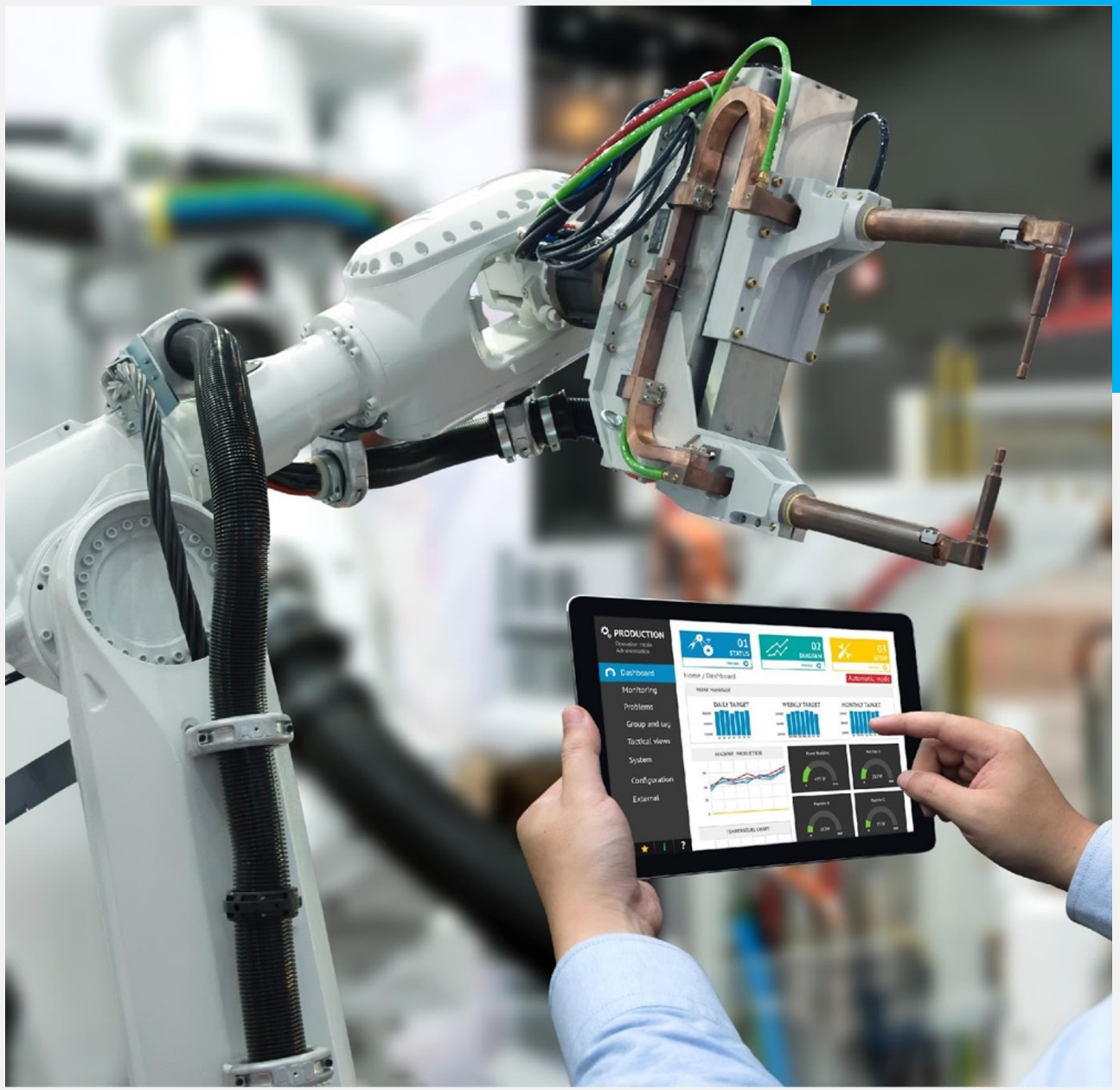
Situational awareness and decision-making support.

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**



REMOTE CONTROL SYSTEMS

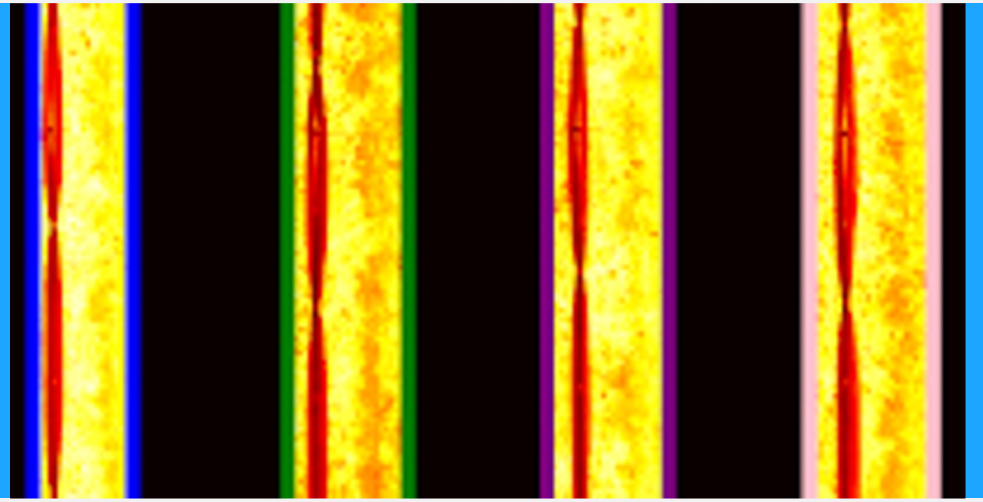
Design **custom hardware** solutions together with **custom control software**, incl. **remote control**

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



(NON-EXCLUSIVE) HORIZON EUROPE INTEREST

Cluster 1 - Health

- HORIZON-HLTH-2023-STAYHLTH-01-01: The Silver Deal - Person-centred health and care in European regions
- HORIZON-HLTH-2023-DISEASE-03-01: Novel approaches for palliative and end-of-life care for non-cancer patients
- HORIZON-HLTH-2023-DISEASE-03-07: Relationship between infections and non-communicable diseases
- HORIZON-HLTH-2023-CARE-04-02: Resilience and mental wellbeing of the health and care workforce
- HORIZON-HLTH-2023-CARE-04-03: Environmentally sustainable and climate neutral health and care systems
- HORIZON-HLTH-2023-TOOL-05-05: Harnessing the potential of real-time data analysis and secure Point-of-Care computing for the benefit of person-centred health and care delivery
- HORIZON-HLTH-2023-ENVHLTH-02-02: Evidence-based interventions for promotion of mental and physical health in changing working environments (post-pandemic workplaces)

(NON-EXCLUSIVE) HORIZON EUROPE INTEREST

Cluster 3 – Civil Security for Society

- HORIZON-CL3-2023-FCT-01-01: Processing of large, complex and unstructured datasets resulting from criminal investigations, while reconciling big data analysis and data protection
- HORIZON-CL3-2023-FCT-01-03: New methods and technologies in service of community policing and transferable best practices
- HORIZON-CL3-2023-BM-01-01: Capabilities for border surveillance and situational awareness
- HORIZON-CL3-2023-BM-01-02: Identify, inspect, neutralise Unexploded Ordnance (UXO) at sea
- HORIZON-CL3-2023-BM-01-03: Beyond the state-of-the-art “biometrics on the move” for border checks
- HORIZON-CL3-2023-CS-01-02: Privacy-preserving and identity management technologies
- HORIZON-CL3-2023-CS-01-03: Security of robust AI systems
- HORIZON-CL3-2023-DRS-01-01: Improving social and societal preparedness for disaster response and health emergencies
- HORIZON-CL3-2024-INFRA-01-01: Resilient and secure urban planning and new tools for EU territorial entities
- HORIZON-CL3-2023-SSRI-01-01: Open grounds for pre-commercial procurement of innovative security technologies

(NON-EXCLUSIVE) HORIZON EUROPE INTEREST

Cluster 4 – Industry and Digitalization

- HORIZON-CL4-2023-TWIN-TRANSITION-01-02 High-precision OR complex product manufacturing – potentially including the use of photonics (IA)
- HORIZON-CL4-2023-DIGITAL-EMERGING-01-57: Advanced imaging and sensing technologies (IA)(Photonics Partnership)
- HORIZON-CL4-2023-HUMAN-01-01: Efficient trustworthy AI - making the best of data (RIA)
- HORIZON-CL4-2023-DIGITAL-EMERGING-01-53: Versatile light sources and systems as tools for manufacturing and medical application (Photonics Partnership) (RIA)
- HORIZON-CL4-2023-HUMAN-01-02: Large Scale pilots on trustworthy AI data and robotics addressing key societal challenges (AI Data and Robotics Partnership) (IA)
- HORIZON-CL4-2023-DIGITAL-EMERGING-01-02: Industrial leadership in AI, Data and Robotics – advanced human robot interaction (AI Data and Robotics Partnership) (IA)
- HORIZON-CL4-2023-DIGITAL-EMERGING-01-01: Industrial leadership in AI, Data and Robotics – advanced human robot interaction (AI Data and Robotics Partnership) (RIA)
- HORIZON-CL4-2023-DATA-01-04: Cognitive Computing Continuum: Intelligence and automation for more efficient data processing (AI, data and robotics partnership) (RIA)
- HORIZON-CL4-2023-DATA-01-02: Integration of data life cycle, architectures and standards for complex data cycles and/or human factors, language (RIA)
- HORIZON-CL4-2023-RESILIENCE-01-33: Smart sensors for the home and personal products market (RIA)

(NON-EXCLUSIVE) HORIZON EUROPE INTEREST

Cluster 5 – Climate, Energy and Mobility

- HORIZON-CL5-2023-D1-01-01: Further climate knowledge through advanced science and technologies for analysing Earth observation and Earth system model data
- HORIZON-CL5-2023-D3-02-14: Digital twin for forecasting of power production to wind energy demand
- HORIZON-CL5-2023-D3-02-13: Operation, Performance and Maintenance of PV Systems
- HORIZON-CL5-2023-D3-03-05: Creation of a standardised and open-source peer-to-peer energy sharing platform architecture for the energy sector
- HORIZON-CL5-2023-D5-01-01: User-centric design and operation of EV for optimized energy efficiency (2ZERO Partnership)
- HORIZON-CL5-2023-D5-01-02: Innovative battery management systems for next generation vehicles (2ZERO & Batt4EU Partnership)
- HORIZON-CL5-2023-D5-01-09: Competitiveness and digital transformation in aviation – advancing further capabilities, digital approach to design
- HORIZON-CL5-2023-D6-01-07: Operational automation to support multimodal freight transport

(NON-EXCLUSIVE) HORIZON EUROPE INTEREST

Cluster 6 – Food, Bioeconomy, Environment

- HORIZON-CL6-2023-FARM2FORK-01-7: Innovations in plant protection: alternatives to reduce the use of pesticides focusing on candidates for substitution
- HORIZON-CL6-2023-FARM2FORK-01-8: Using automatic species recognition and artificial intelligence to fight illegal fish discards and revolutionise fisheries control
- HORIZON-CL6-2023-FARM2FORK-01-10: Eradicate micronutrient deficiencies in the EU
- HORIZON-CL6-2023-FARM2FORK-01-13: Cultured meat and cultured seafood – state of play and future prospects in the EU
- HORIZON-CL6-2023-ZEROPOLLUTION-01-1: Knowledge and innovative solutions in agriculture for water availability and quality
- HORIZON-CL6-2023-ZEROPOLLUTION-01-5: Industrial biotechnology approaches for improved sustainability and output of industrial bio-based processes
- HORIZON-CL6-2023-CircBio-01-4: Land-based bioprospecting and production of bioactive compounds and functional materials for multiple bio-based value chains
- HORIZON-CL6-2023-GOVERNANCE: Digital technologies supporting plant health early detection, territory surveillance and phytosanitary measures

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