DREAM

Digital Resilient Europe for Advanced Manufacturing

COMPILATION OF THE
35 FUNDED PROJECTS

Co-funded by the European Union

TRANSFORMING EUROPEAN MANUFACTURING: THE DREAM INITIATIVE

Project overview

The **DREAM project**, standing for Digital Resilient Europe for Advanced Manufacturing, aims to **accelerate the digital transformation and innovation uptake within the European manufacturing sector**. As Europe prioritizes growth through digital advancements, clusters play a crucial role in supporting this strategy by boosting jobs, SME growth, and investments tailored to geographical and thematic contexts.

Why?

The COVID-19 crisis highlighted the essential need for **robust European digital ecosystems** to prevent disruptions in value chains and adapt to new business conditions. The **benefits of digitalization** from both business and sustainability perspectives have become clear. However, effective digitalization requires a **strong connection between digital ecosystems and their applied market sectors**,.

The DREAM project has established a network of four European clusters specializing in digital and smart manufacturing, along with one supporting organization, aiming at speeding up the adaptation of digital technologies and processes to transform manufacturing companies into greener and more digital enterprises.

Objectives

The main goals of the DREAM project are to:

- Build **resilience** and speed up the **transition** to a green and digital economy
- Create and maintain long-term **partnerships** at the EU level between SMEs in digital and manufacturing sectors
- Encourage **innovation** to achieve independence and strengthen digital capabilities
- Promote the use of **digital technologies** in the manufacturing sector for a **greener and more digital economy**
- Support the **training and skill development** of the workforce in this ecosystem
- Enhance access to **global supply and value chains**

«to transform manufacturing SMEs into greener and more digital enterprises»

FOCUS ON INNOVATION: THE 35 FUNDED PROJECTS

One of the key activities of the DREAM project was providing financial support for **35 innovative projects** that aimed to integrate **digital technologies into the manufacturing sector** with the final goal to better use resources (energy, water, supplies, materials) in an industrial context.. This initiative was designed to help small and medium-sized enterprises (SMEs) in Europe adopt advanced digital tools and processes, making them more efficient, sustainable, and competitive.

How It Worked

The DREAM project implemented a cascade funding mechanism. This system allowed selected SMEs to receive funding directly, which they used to develop and implement their digital transformation projects. Here's how it worked:

1. **Call for Proposals**: SMEs were invited to submit their collaborative project proposals, outlining how they planned to use digital technologies to improve their manufacturing processes.
2. **Selection Process**: the proposals have been evaluated based on criteria such as innovation potential, feasibility, and expected impact on sustainability and efficiency.
3. **Funding Allocation**: The top 35 projects were awarded, providing them with the necessary financial support to bring their ideas to life.

The Impact of Digital Technologies

Digital technologies are central to the projects, showcasing the transformative power of **AI, IoT, big data, cloud computing, and automation** across various industrial domains. These technologies drive innovation and efficiency, from enhancing leak detection in environmental protection to optimizing energy management in metallurgy. The frequent use of **AI, IoT, digital twin technology, robotics, and data analytics** highlights their critical role in **modernizing** industries such as automotive, food production, and medtech.

By fostering the digital transformation of SMEs, the DREAM project enhance the competitiveness of European manufacturing, contributing to a **smarter, more sustainable, and resilient industrial ecosystem**.

DISCOVER MORE ABOUT THE PROJECT AND GET IN CONTACT

@DREAM Eurocluster

clustercollaboration.eu

DREAM FUNDED PROJECTS

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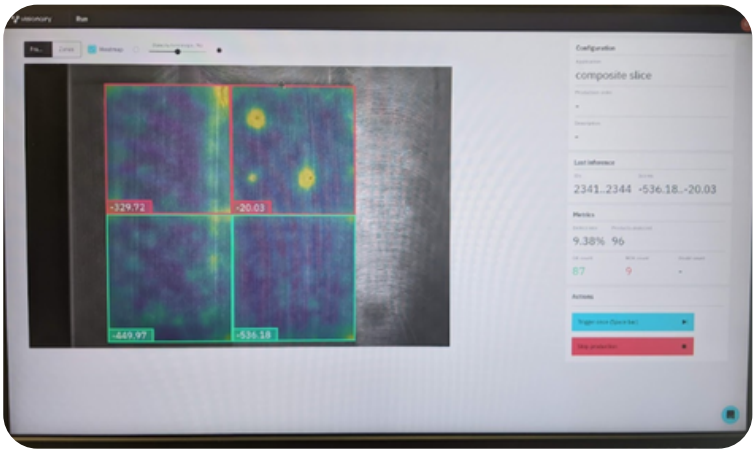
AVIA

Artificial Intelligence for Visual Inspection Automation

Automate visual inspection with AI for microelectronics industry : Plug an industrial vision system to an AI-based computer vision software to automate defect detection for microelectronics heatsinks.

VISIONAIRY
France

RHP Technology GmbH
Austria



AI, Unsupervised Anomaly Detection

- Design and Deployment: A machine vision camera was mounted on a motorized XY axis to capture images of composite slices. An extensive optical study ensured the desired resolution under industrial conditions.
- AI-Based Quality Learning: Visionairy developed a conformity model for composite slices using its GLAD unsupervised anomaly detection AI. This model was embedded on a PC connected to the camera for real-time anomaly detection.
- Operational Implementation: After testing the system on both acceptable and defective slices, Visionairy supported RHP Technologies in implementing the solution for daily quality control. This included initial and ongoing training, as well as improvements to help RHP become autonomous in using the solution and identifying defects.

CONTENT

CONnected Testbench for the Electronic iNdusTry

CONTENT aims to set-up a bidirectional and automated communication channel between ERP of customers and EMS partner directly integrated in a traditionnal electronic testbench in order to efficiently and adaptatively optimise the quality control and customization of electronic products

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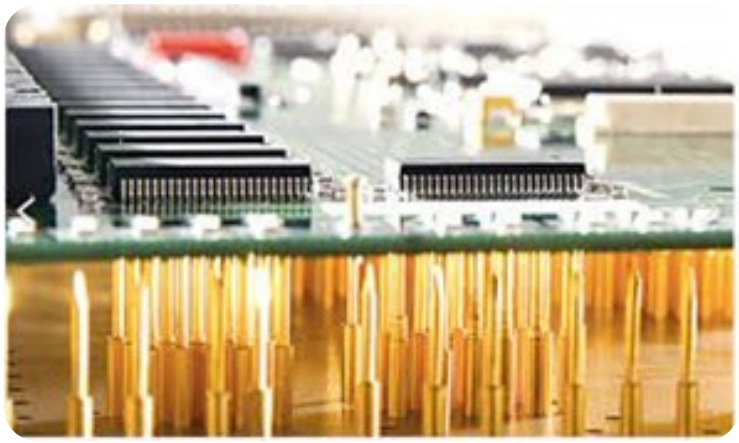
Altéris Technologies
Belgium

Tiskana vezja LUZNAR
Slovenia

Electronic test bench (bed of needles), Mobile App (Android), Cloud-based database



CONTENT sets up a complete solution dedicated to the test of electronic boards. The innovation is focused on the way the information is shared all along the manufacturing, calibration and testing stages. Many different configuration of a same hardware can be managed simultaneously with a very high level of quality. Even more, as each individual electronic board is identified using a UID, it is possible to set up a full traceability of any single board with its configuration identification, calibration data and test report.

In CONTENT, a common cloud database is shared between the end user and its EMS partner in order to efficiently manage (API, simple REST communication) order integrating different configurations. In realtime, all the test and calibration values / results are available to the user in order to check that there is no technical issue like bad component tolerances, drift of some parameters, ...

DoWa

DosiWatch

DoWa project focuses on developing an innovative dosimeter watch to enhance radiation monitoring and safety.
This device combined advanced sensors with real-time data collection and wireless connectivity, providing immediate insights into radiation exposure.

COMmeto
Belgium

RadiÖko Műszaki Szolgáltató Korlátolt Felelősségű Társaság
Hungary

System integration: Sensors, Wearable Device Architecture, Data Processing and Analytics, User Interface Design

Key achievements included designing, fabricating, and testing the prototype, integrating electronic components, and creating a durable watch case through 3D printing. We rigorously tested the software to ensure seamless hardware integration. Extensive laboratory testing validated the watch's core functionalities through simulated radiation scenarios. Field testing in industry settings, such as manufacturing facilities using web gauges and X-ray instruments, provided valuable performance data.
The dosimeter watch enhanced worker safety and safety of the environment by providing real-time radiation monitoring and alerts. A flyer was created to present our prototype, highlighting its key features and benefits to showcase the impact and potential of our dosimeter watch in protecting both workers an the environment.

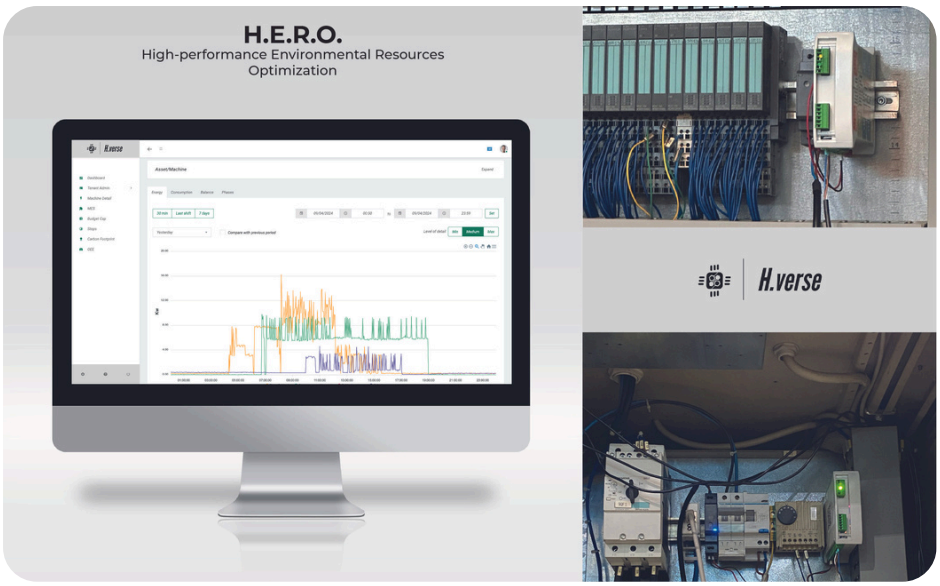
HERO

High-performance Environmental Resources Optimization

HERO applies innovative digitizing technologies to industry, associating in real time to production batches: measured resources consumption, calculated Co2 footprint, weighted scraps, workfloor environmental variables, enabling an improved and more efficient use of resources.

OVERLAB SRL
Italy

Elmeg Iberica S.L.
Spain



Artificial intelligence, Internet of Things (IoT)

Main Results Achieved:

- Reduced Resource Consumption: IIoT devices and sensors enabled real-time monitoring of electricity and raw materials, reducing energy and polyethylene use, improving margins, and promoting sustainability. We also combined production and consumption data to calculate the carbon footprint for each batch
- Monitoring Environmental Variables: monitoring temperature, humidity, noise, and lighting in production facilities improved production variables and working conditions, enhancing employee well-being and productivity.

Technology: The HERO project's success was driven by the H.Verse platform, integrating cloud components and Edge devices with AI algorithms.

NEVER

Next-gEn Vision guidEd Robot

NEVER project aims at creating an innovative low-cost vision-guided robot to minimize the complexity of the system and enable innovative automation tasks in new production processes. Robot guidance, in industrial automation, means the procedure by which a vision system can locate an object in space by providing position coordinates to the robot and correcting its path, programmed during its installation and calibration.

NOVASIS INNOVAZIONE SRL
Italy

COMAU FRANCE SAS
France

Autonomous Robotics, Simulation, System Integration

This system adapts to variations in object or robot positions on production lines, enabling efficient picking and placing. The NEVER project addresses industrial challenges in robot guidance for dismantling and disassembling battery modules, automotive parts, and more, where current technologies fall short.

Novasis and Comau developed a prototype to demonstrate this technology in a relevant environment. In summary, the NEVER project's flexible robot-guidance solutions improve process efficiency, reduce scraps and reworks, optimise cycle time and raw material use, cut CO2 emissions, and enhance production resilience and sustainability.

SmartBumper

Expert System Based On Digital Technologies For Optimization Of The Quality Control Of The Manufacturing Of Bumper Containers

Robotiques cyborg and Metalurgicas RTB, from the auxiliary automotive industry, have joined efforts in SmartBumper, for the development of a proof-of-concept system based in AI, for the design and quality control of bumper containers, for improved efficiency and sustainability. The main benefit is the optimization of the production of containers for car bumpers

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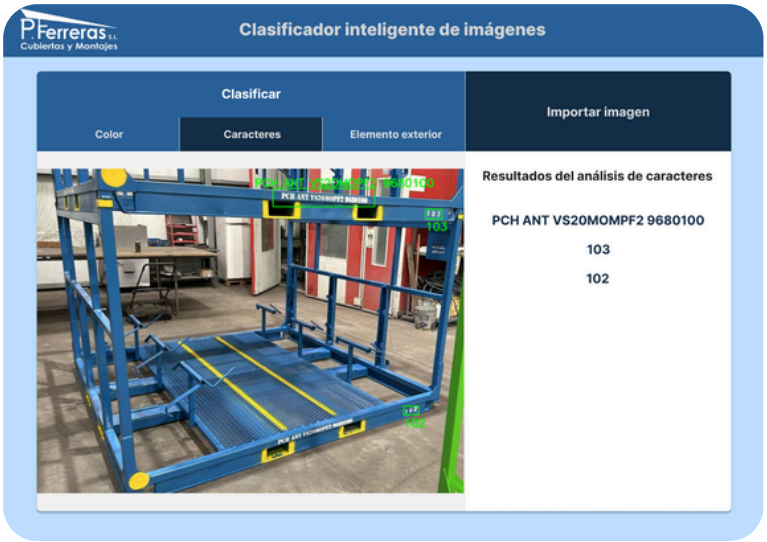
Metalúrgicas y RTB
France

Robotiques Cyborg
Spain

Artificial intelligence,
Big Data and analytics,
Immersive technologies (AR/VR),
System Integration



Design of containers is tailor-made by MyRTB technical engineering department; this is a time-consuming and meticulous process made every time the company receive blueprints of containers. The proposed system is conceived as a tool for pre-design, to facilitate engineers work, and also a tool to automatize the quality control of the finished containers. So far, the first proof-of-concept is able to detect three relevant features related to the containers. The three companies plan to extend their collaboration to scale up and improve the system, in order to adapt to the most exigent markets and comply with client's expectations, in the framework of the current and rapid development of AI technologies.

ATRACMO

Automated TRAcking of cable Manufacturing Operations

ATRACMO uses a modular and innovative Industrial IoT (IIoT) solution to track on-demand custom cable manufacturing operation in order to reduce raw material, paper and energy consumption by optimising raw material utilisation, improve of operation efficiency, and go paperless.

EDITAG
Empowering processes and assets.

EDITAG
France

IC AUTOMATION

IC AUTOMATION PRODUCTION LOGISTIQUE
France

Industrial IoT, RTLS, UWB, Edge, 3D Printing; RFID

ATRACMO demonstrates how a full digital and innovative solution focused on material flow real-time tracking can address at the same time financial and environmental objectives (ROI), and be accessible to SME, not only to large manufacturing companies.

Once an initial setup and site survey done, the solution provides real-time information directly on WIP material thanks to dynamic electronic labels and real-time WIP location. This helps field workers on their day-to-day tasks reducing search time and printed paper and improve decision process to optmise material consumption and plant supervisors as well to take optimised decision.

DIGIWAT

Digital Solutions for Advanced Water Treatment: taking the next step towards intelligent use of data in advanced water treatment system

Enhancing the efficiency of innovative small-scale water treatment, in terms of use of energy, water, chemicals needed for water treatment, through intelligent data-driven solutions

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GridMetrics ltd.
Bulgaria

IRIS SRL
Italy

IoT, real-time sensor monitoring, Digital Twin and Reinforcement learning based AI optimization for water treatment

During the development, the team focused on creating a robust Water Treatment System (WTS) with integrated sensors monitoring parameters like pressure, temperature, and energy consumption. An IoT platform connected the WTS to the cloud, enabling real-time data transmission and remote monitoring. A Digital Twin simulated the system's behavior accurately using real-world data, facilitating optimization through a reinforcement learning (RL) agent. This AI-driven approach dynamically optimised energy usage of the high-pressure pump, achieving up to a 47% reduction in energy consumption during live testing.

DWC

Digital Workshop Connector

DWC project aims to elevate the current Mobinome mobile app, designed for workshop technicians, by introducing innovative features that facilitate smart interactions between information technology systems and workshop automation. The project harnesses cutting-edge technologies such as Internet of Things (IoT) and Autonomous Robotics System Integration.

Bside SA

Belgium

Dufour IDF

France

System integration, mobile app, ERP

Mobinome mobile app now allows mechanics, welders and painters to digitally manage their planning, their attendance, their services and their intervention sheets.

No more paper forms, lost documents and administrative delays. With Mobinome, each task is digitized and synchronized in real time with their ERP.

Bside team worked hand in hand with the Dufour Group to custom configure Mobinome and thus deliver a 100% effective solution also for their workshops!

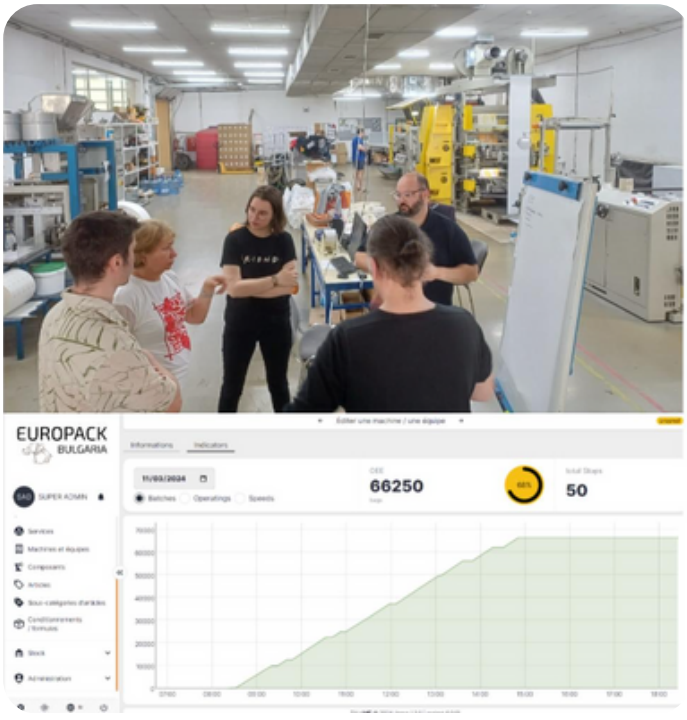
EUROPACKTALKME

TM Factory ! Collection and use of datas from heliogravure machine to improve your Overall Equipment Effectiveness

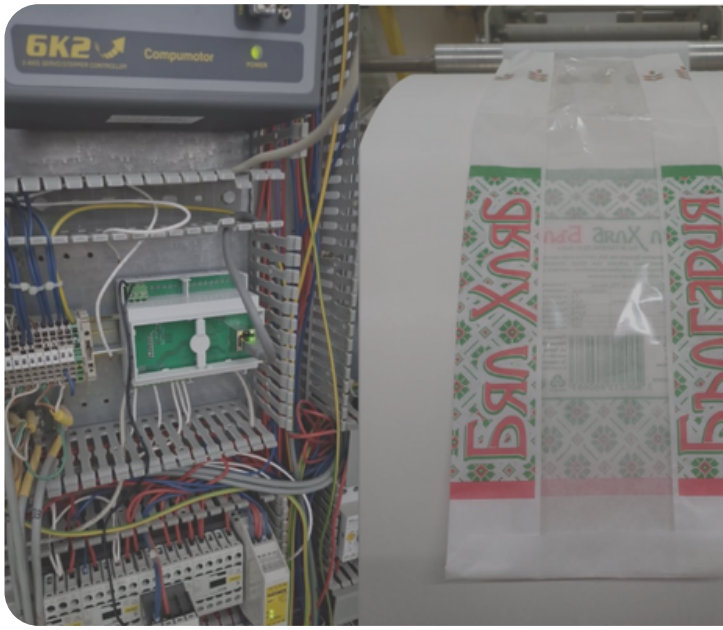
How monitoring machines parameters with TM Factory will lead to better competitivity, resilience, environmental impact by decreasing the down time? How knowing the pareto of the root causes, will improve the machine lifetime, decrease the loss, and avoid wastes? Concretely, the aim of the project is to connect the parameters of the machine directly to a software to manage the production.

SAS TALKME
France

Europack
Bulgaria



Big Data and analytics, Internet of Things (IoT), System Integration



Implementation of a printed bag production management dashboard with real-time machine data

IoTNOW

IoT for the NOn-Woven industry

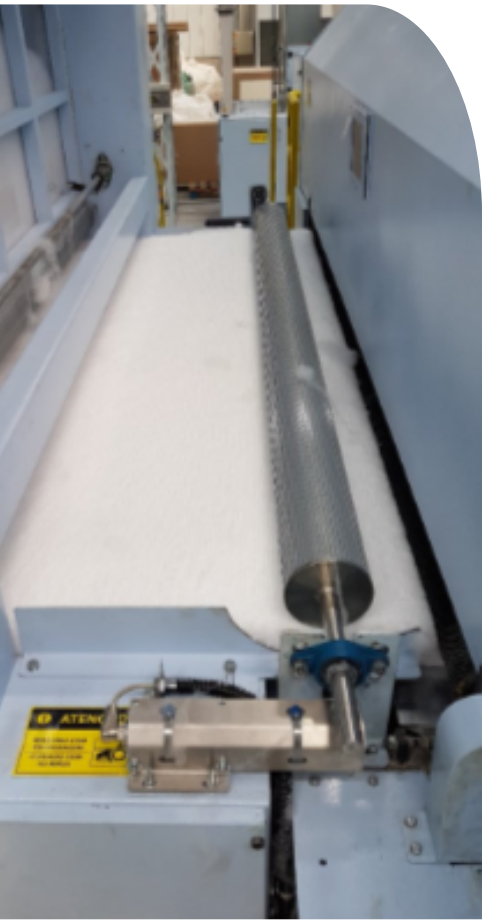
IoTNOW aims to improve the production process of nonwoven textile (often called, technical textile) by integrating a realtime connectivity to traditional (often poorly automated) nonwoven production lines.
The retrofit of traditional non-woven production lines by adding a cloud connectivity will allow a deep improvement of the global production efficiency (final product stability (<1% in weight variation), less scrap (-50%), ...) thanks to a much faster reaction time (-75%).

SEREL
REGULATION & CONTROL OF NONWOVEN

Serel Industrie SA
Belgium

Danspin A/S
your reliable partner

Danspin UAB
Lithuania



Serel Industries adds a new capability to its product range (regulation and quality control of nonwoven textiles) : thanks to its IoT module, customer may now collect, see and analyze in real time every data collected by our system (production, line speed, line status, ...).

Evenmore, interfaces boards can be added to read additional data like motor torque, woven temperature, power consumption, ...
This system opens the door to machine learning in order to improve the process or to set up predictive maintenance tools.

Internet of Things (IoT), Data Analytics

MAIN

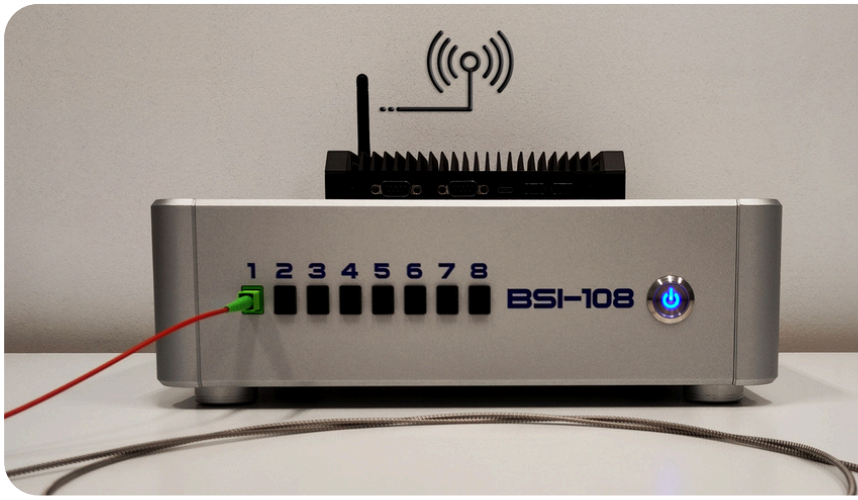
Mapping of industrial glass furnaces using optical fiber temperature sensors and cloud computing

Innovating in heavy industry using fiber optic sensor solutions, data communication and cloud computing to improve its overall environmental impact.

B-SENS SPRL
Belgium

SAINT-GOBAIN CREE
France

Cloud Computing,
Optical Fiber, Sensors,
Data Communication



The MAIN project brings together Saint-Gobain, a global industrial leader, and B-Sens, an SME offering innovative fiber optic temperature measurement solutions. It aims to interface these solutions with the communication and data processing standards developed by Saint-Gobain, so that fiber optic detection technology can be massively adopted by the group to instrument its furnaces and other equipment or processes.

Thanks to MAIN, an arch furnace is equipped with 42 fiber optic temperature sensors, allowing monitoring over 20m on both sides. This precise industrial process monitoring is enabled by high-density measurement points in two optical fibers, making it easier for operators to control the production. The data acquisition system is connected to a smart device, computing and transmitting data to the Saint-Gobain cloud for remote access.

ManuTwin

Demonstration of a Digital Twin for manufacturing to reduce product costs and resource consumption

ManuTwin aims to deploy Digital Twin Technology in metalworking industry to cut manufacturing costs and resource usage. The Digital Twin creates an exact representation of components using machine data during production, allowing real-time quality assessment without physical measurements. The goal is to enhance process and component quality, pinpoint quality issues, and ultimately reduce costs and resource consumption.

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gemineers

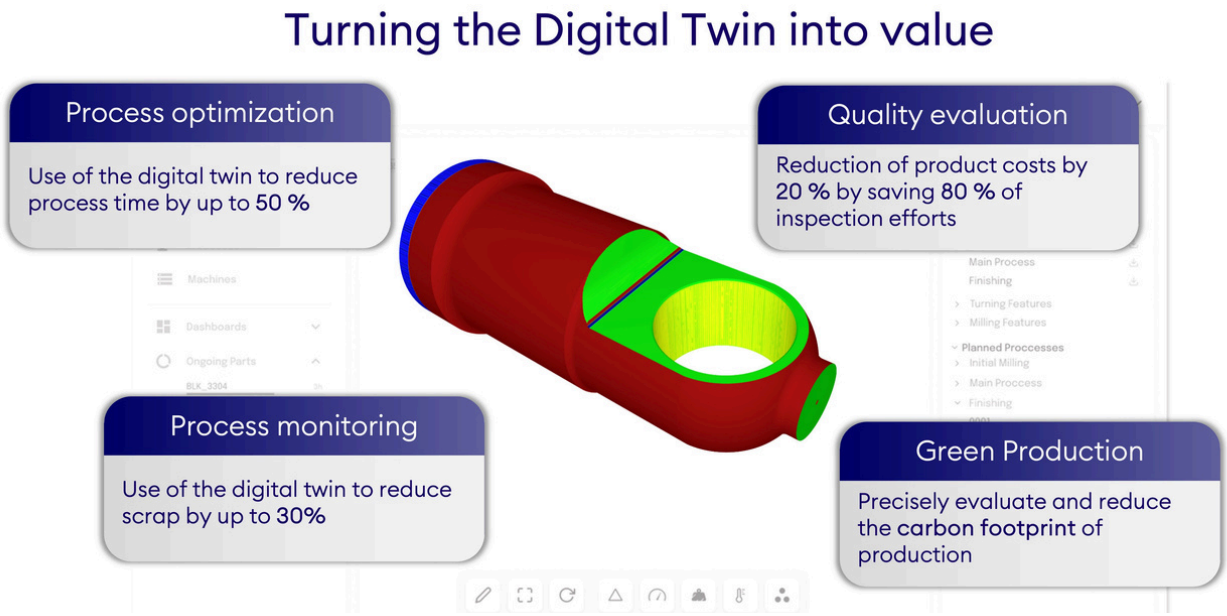
gemineers GmbH

Germany

CAPAUL PRECISION MECHANICS

CAPAUL S.A.

Belgium



Digital Twin Technology

After completion, the Digital Twin Technology will operate automatically, digitally representing every produced component. The technology will primarily benefit manufacturers producing complex three-dimensional components by increasing overall productivity. In addition to its claim to economic impact, the digital twin also makes a significant contribution to a holistic consideration of sustainability in terms of the production cycle.

Safe-Pro

Real-Time Muscle Fatigue Monitoring for Safety and Productivity Optimization in Manufacturing

The aim of the SAFE-PRO project is to develop an EMG sensor-based muscle fatigue monitoring system for manufacturing employees. By providing real-time data on fatigue levels and movement, it enables managers to optimise work processes, introduce, and validate robotic assistance where needed, thereby enhancing employee well-being and avoiding fatigue-related incidents.

MindRove Kft.
Hungary

Naval Group SA
France

Wearable biosensing,
Artificial intelligence,
Machine Learning

The process began with establishing user requirement specifications in collaboration with an industry partner. Development followed, and an initial version of the system was tested at the partner's facilities. Improvements and further development were based on data collected during these tests. The result is a functional, scalable prototype that enhances employee safety and contributes to the sustainability of manufacturing operations.

SURE

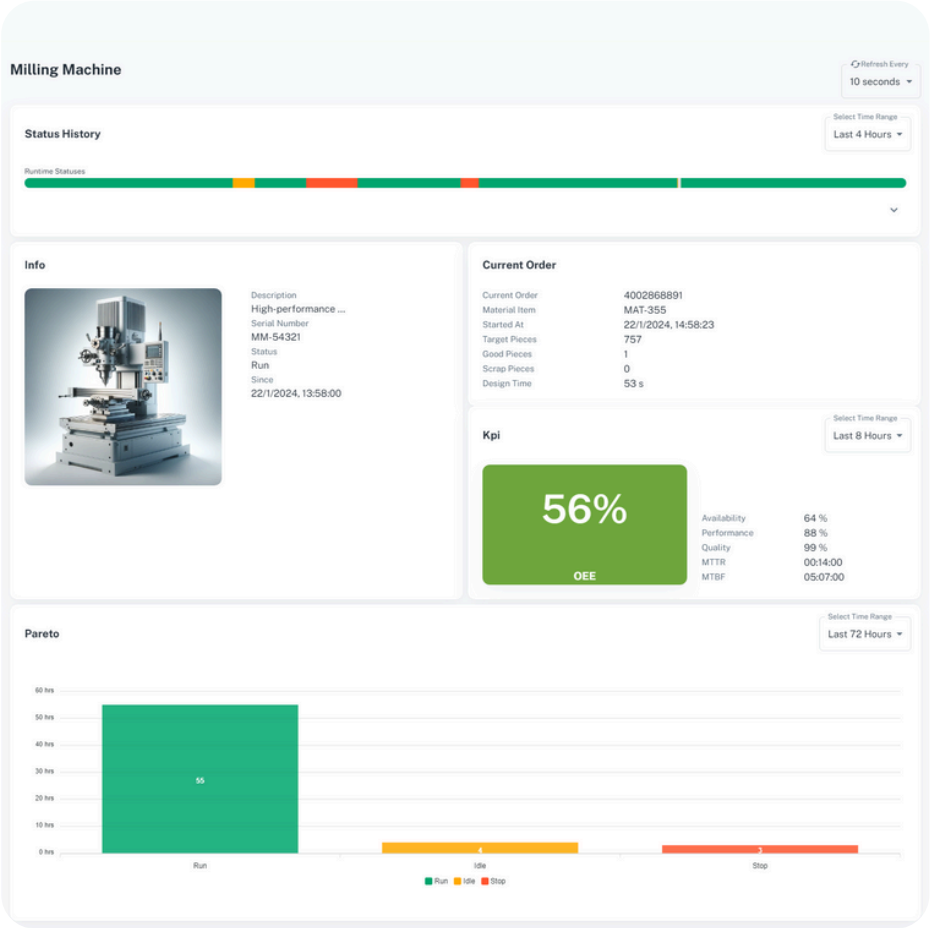
Smart Utility for Real-time Efficiency

SURE, short for Smart Utility for Real-time Efficiency, is designed to enhance industrial operations by providing real-time KPI analysis like OEE, aiming for peak efficiency and reduced waste. Its wide integration capabilities, with broad support of the commonly-used industrial protocols, allows SURE to integrate seamlessly with shop-floor equipment and start monitoring efficiency in hours.

Noveo S.r.l.
Italy

Mannesmann Stainless Tubes GmbH
Germany

Software,
System Integration



By enabling seamless industrial machines connection, continuous monitoring, analysis, SURE helps you calculate real-time KPIs and increase OEE.

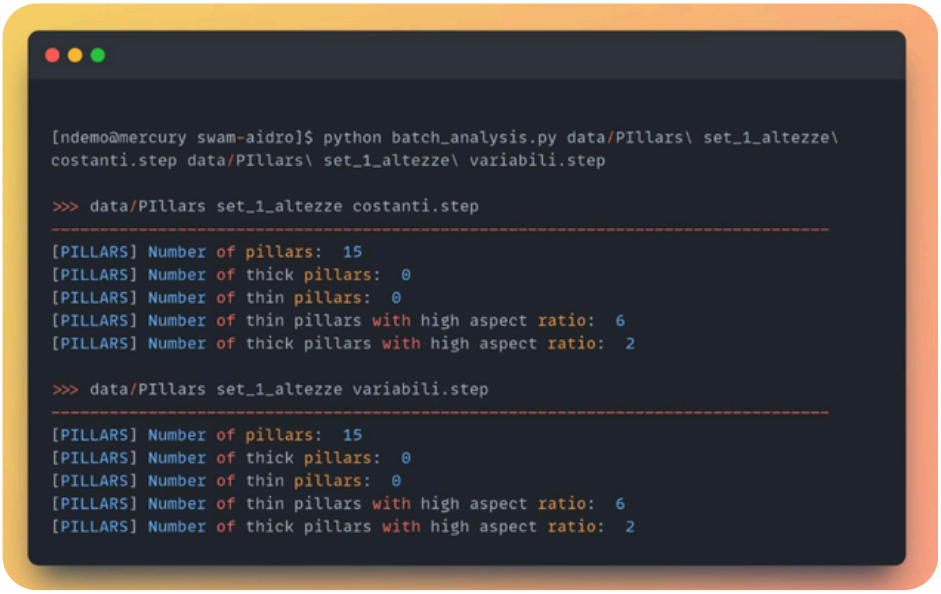
SWAM

Smart Warning for Additive Manufacturing

SWAM aims at implementing an efficient, reliable and agile tool that, taking as input the file where the geometry to analyze is stored, performs an analysis of the surface, by raising warnings for any of the checks that have failed.

Fast Computing srl società benefit
Italy

AIDRO srl
Italy



Artificial intelligence,
Big Data and analytics,
Simulation,
System Integration

Key Achievements:

- Algorithmic Core Development: Over the project period, an algorithmic core capable of detecting critical features within input geometries is been successfully developed. This includes the identification of pillars and walls, essential structures for manufacturing technology
- Optimization Efforts: significant efforts were dedicated in optimizing algorithms to handle the complexity of original geometries efficiently. Through iterative refinement, the speed and accuracy of detection methods have been improved
- Integration for Production Environments: the software has been designed for seamless integration into production environments. End-users can process multiple geometries simultaneously and receive comprehensive reports on all checks performed

AUTOChem

Automation of chemical transformations and process intensification through a thin film reactor

AUTOChem is a project focused on fully automating chemical transformations and enhancing process efficiency through a thin film reactor. The main goal is to develop a greener and more flexible approach to manufacturing high-value chemicals.

Synlock SRL
Belgium

ABX advanced biochemical compounds GmbH
Germany

Automation

Key Achievements of the Automated Synthesizer:

- Reduced Operator Exposure: Achieved a 66% reduction in exposure to harmful radiation during a model reaction.
- Enhanced Energy Efficiency: Delivered an 87% decrease in energy consumption for high-temperature reactions.
- Minimized Waste: Reduced solvent use and waste generation by 67% in another model reaction.

DigiBone

Development of automated digital integration of new generation of lattice structure for large bone reconstruction

DigiBone project aims to develop an automated digital integration system for the design and fabrication of a new generation of lattice structures for efficient large bone defect reconstructions. These lattice structures are intended to provide stability, support tissue ingrowth, and enable vascularization.

Janus Engineering
France

Cerhum
Belgium

Additive Manufacturing (3D Printing)

Simulation and System Integration

eWalkMOD

efficient Walker Multibody mODeling: an efficient digital model using multibody dynamics of a human walker that automatically handles human variability

eWalkMOD is a digital simulator of a human walker that manages morphological variations between individuals.

Quandyga Engineering SPRL
Bellgium

Össur Iceland ehf
Iceland

Digital twin, numerical simulation, system analysis

By automatically evaluating the gait quality, for example with or without a prosthesis, eWalkMOD contributes to manufacture more efficient, resilient and personalized biomedical devices for a sustainable mobility.

Reliable simulation via digital twins such as eWalkMOD extends the design of an active controller beyond current limits. Taking extreme cases into account, testing a whole range of parameters is not only faster and cheaper, it also significantly reduces the environmental impact of prototyping (less energy, fewer materials).

TRACKY

Production of orthopaedic corset based on marked recycled material

TRACKY aims to track the recycling stage of materials form orthopaedics corset. 3D printed corsets will be recycled in new filament for Fuse deposition modelling.

CREATE IT REAL
Denmark

FADDTORY
Belgium

3D printing,
Cloud Technology,
Data management

Recycled materials will incorporate information on the number of times a specific material has been recycled to permit an adaptation of the material's parameters on the 3D printer. The aim is to create a closed loop, as the corsets are only used for a specific time period.

A key achievement is mapping the material lifecycles to ensure everything is traceable. This practice helps in creating high-quality recycled orthopedic products and supports a circular economy in 3D printing. By using these practices, the goal is to protect the environment and make the industry more sustainable in the long term.

HERIFIX3D

Reinforced lime-based mortars with natural fibre combined with a 3D additive process for Heritage repairing applications

HERIFIX3D project aims to enhance advanced materials, specifically natural hydraulic lime mortar blended with natural fibers, using cost-effective 3D printed templates for replicating heritage artifacts. Natural fibers like cotton will replace sand and cementitious materials in the mortar mix. Additive manufacturing will create molds as templates for placing mortars, offering a solution for artifact replication.

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ngi.systems

NGI SYSTEMS SRL

Romania

TESELA materiales | innovación | patrimonio

TESELA, Materiales Innovación y Parimonio S.L.

Spain

3D modelling, Simulation

Main outputs obtained in the project.

- 4 optimised main new material sustainable prototypes based on natural lime materials which integrate cotton and hemp fibre waste as byproducts
- A new methodology for generating corrections over a 3D model of a real artefact and 3D printing of the model as a mould
- Replication of real heritage artefacts using 3D printed moulds

IA FMBCE

AI file manager for building and civil engineering

IA FMBCE is a software solution that optimises interventions in the civil engineering sector (building and construction) by centralizing and effectively managing after-sales service requests. The final product, as a comprehensive after-sales service tracking, encourages sustainability by integrating features that promote the use of sustainable materials and compliance with ecological standards.

KLETEL Multimedia

France

DEMATHIEU & BARD BAT ILE DE FRANCE

France

Artificial intelligence

IA FMBCE aims is to develop an AI system for analyzing various types of documents to facilitate dossier review for after-sales service (SAV) in the construction sector (BTP). This AI will save time for clients while providing clear information and analysis of defects in construction. It will also suggest best construction practices and recommend top partners. The goal is to enhance efficiency, clarity, and problem-solving in the construction industry.

CEMS

Cloud-based Energy Monitoring System

CEMS project aims at setting up a cloud-based system to monitor the energy consumption of an industrial process by combining information coming from wired (OT) and wireless sensors (IoT).

Ewattch (specializing in IoT sensors) and WideTech (developing its WiDE data integration platform) have partnered to collaborate with Vinventions (specializing in closure solutions) in determining energy-based KPIs.

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ewattch®

Ewattch SAS

France

VINVENTIONS

Vinventions

Belgium

WideTech

WideTech

Belgium

Internet of Things (IoT),
Cloud Computing,
System Integration

Ewattch and WideTech deliver key performance indicators (KPIs) to help plant managers track energy performance. Ewattch sensors are installed in key locations, while WideTech's WiDE data integration platform gathers real-time data from various sources into a centralized database. This data is used to calculate KPIs, detect events, and generate automated reports with clear dashboard displays. The goal for Vinventions is to create a "Factory of the Future," with straightforward KPIs that facilitate easy monitoring and decision-making for plant managers.

DF4SF

Digital Filtering for a Sustainable Food industry

DF4SF project focuses on implementing an advanced filtration solution for the food industry. The goal is to achieve zero waste and reduce water consumption, promoting resource conservation and sustainable production. The solution aims to replace inefficient processes with responsible innovation, enhancing overall efficiency in the industry.

INOXTEK SRL
Italy

Pastificio Rana S.p.A.
Italy

Key Achievements:

- Technological Assessment: The hydraulic scheme was thoroughly evaluated, and optimal components were identified using advanced 3D modeling to refine designs.
- Prototype Development: A prototype was developed to test feasibility and performance, enabling us to validate our system's operational blueprint.
- Rigorous Testing: Mechanical performance of the filtration system was rigorously tested, confirming the quality of filtered water met reuse standards. Collaborative efforts also explored chemical solutions to enhance production efficiency.

IoT, Data analytics for water filtration technology

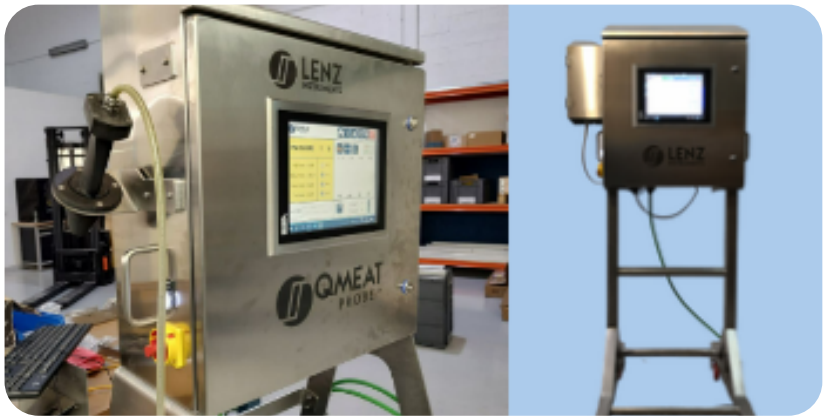
DREAMHAM

Adopting advanced quality inspection tools and Artificial Intelligence models in the meat industry to reduce food waste

The main objective of DREAMHAM is to optimise processed meat resource use and enhance transformation efficiency by employing digital inspection tools and Artificial Intelligence models to detect defective meats before processing, ensuring high-quality products.

Lenz Instruments, S.L.
Spain

Rovagnati S.p.A.
Italy



Optical spectroscopy technologies, Artificial Intelligence

Each year in the EU, 75,000 tons of processed meat is wasted due to quality issues, including 'Pale Soft Exudative' (PSE) meat, which accounts for 5% to 12% of production. PSE meat's low Water Holding Capacity causes shredding during slicing, leading to waste and lower product quality.
QMEAT Probe™ tool uses Fiber Optic-coupled Near-Infrared Spectroscopy to detect PSE meat through patented optical analysis and an intelligent algorithm. Capable of sorting up to 1,200 pieces per hour, the QMEAT Probe™ integrates seamlessly with databases or ERP systems, providing real-time processing data and batch statistics, enhancing quality control, supplier management, and product consistency. The probe optimises curing processes, reduces slicing defects, and improves production efficiency, significantly reducing waste and enhancing overall product quality in the meat industry.

DROID-IT

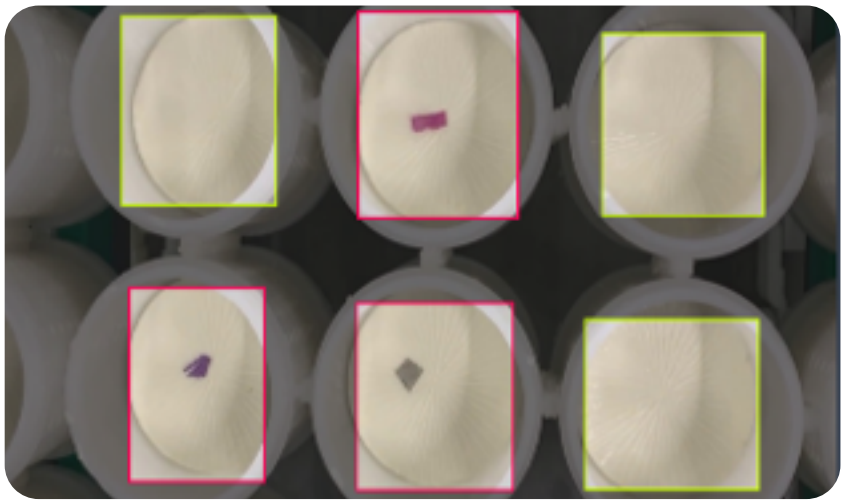
Digital Resource Optimization for Dairy Innovation and Transformation

DROID-IT fuses AI and Robotics to revolutionize dairy production, boosting market competitiveness enhancing efficiency and sustainability.
Dairy production faces significant challenges in optimizing resource use, minimizing waste, and improving overall efficiency. DROID-IT offers a comprehensive solution to these challenges faced by dairy production.

TR2 srl
Italy

Arkus 99
Bulgaria

Artificial intelligence, Robotics, Automation



The system leverages AI to adapt in real time, ensuring precise, efficient operations and minimizing waste.
By digitizing and automating critical processes, DROID-IT not only reduces resource use and environmental impact, but also lowers operational costs, enhances product quality, and improves competitiveness.
Simultaneously, by training the workforce on the new system, DROID-IT also reduces workload and provides employees with valuable skills in the increasingly digital manufacturing industry.

Therefore DROID-IT represents a significant step towards more sustainable, efficient and competitive dairy production.

Honey.AI

Automated digital microscopy, powered by image processing and AI, to revolutionize the Honey industry with enhanced and autonomous product's quality control

HoneyAI is an IoT automated microscope that performs honey quality analysis on-site, in 1hour, very easy-to-use, and at an affordable price.
The device is built from:

- a custom robotized microscope, coupled with a digital camera
- a control desktop APP
- an AI-module in the cloud.

MICROFY SYSTEMS SL
Spain

APISROM SRL
Romania

Artificial intelligence,
Internet of Things (IoT),
Computer Vision,
Autonomous Robotics

HONEY.AI
AI-POWERED HONEY ANALYSIS

honey-ai.com

HoneyAI uses neural networks and image processing to analyze and classify images of honey, sending results to users. Currently in Beta, our team has made critical improvements in pollen analysis and crystallization measurement.
Technologies used:

- AI and big data: Trained with over 200,000 images for pollen analysis of over 300 species.
- IoT: Microscope uploads images to the cloud for processing and results distribution.
- Cloud computing: Uses AWS GPU processing for analysis.
- Robotics: Automates sample scanning without human intervention.

DRI-COR-VS

Intelligent Player Detection and Athletic Statistics Generation using Vision System for Connected Training Equipment in Football

DRI-COR-VS project creates an accessible AI vision system for sports player detection and athletic statistic generation from video, eliminating the overall ecological cost of GPS chips (similar current technology), emphasizing its eco-friendly nature while providing enhanced services.

Corematic Europe SRL
Belgium

DRILLLIGHT SAS
France

Computer Vision, Deep Learning, Object Detection, Tracking, Signal Processing

The project delivered an AI-driven vision system that accurately detects and tracks athletes, and then calculates their positions, distances, and speeds. It provides an eco-conscious alternative to GPS tracking, significantly reducing electronic waste and energy consumption while enhancing analytical capabilities for sports strategy and performance assessment.

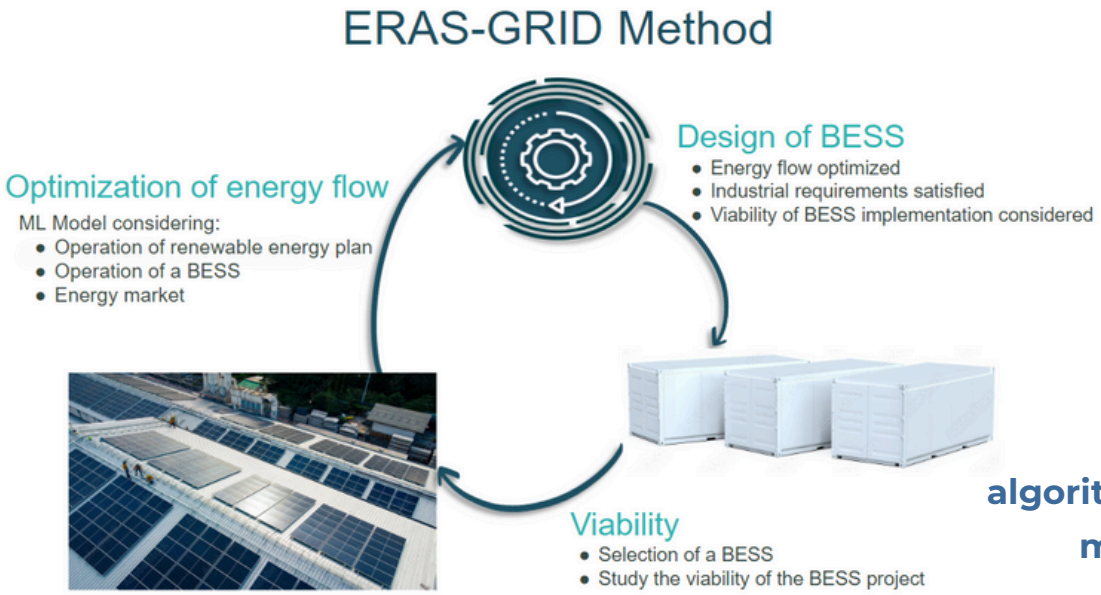
ERAS-GRID

Efficient, Resilient and Sustainable Self Micro-Grid for Industrial Applications based on a Demand on Demand Concept

ERAS-GRID aims to develop a smart grid optimisation tool to digitally optimise the consumption-generation duo. The tool is based on the system and battery optimisation model, the study of surplus storage and energy arbitrage. This will enable smart storage and maximise the use of renewable energies.

R2M Solution SAS
France

Cosentino industrial S.A.U
Spain



Optimization algorithms, data-based models, statistical models

ERAS-GRID has carried out the design of a smart grid optimization tool to digitally optimise the energy consumption-generation duo, based on statistical models.

On one hand, an optimal battery sizing model adapted to the needs of the industrial plant has been developed, and on the other hand, a model considering the study of surplus storage and energy arbitrage has been developed to facilitate the storage and use of renewable energies.

The main objectives of the developed tool is the reduction of waste and the maximization of the benefits derived from the available energy resources.

H.E.R.M.E.S.

HEatpumps and Refregirator Monitoring Energy System

The HERMES project is a solution for measuring the performance of heat pumps and refregirator control systems by calculating the COP and monitoring energy consumption in real time. With a discreet and autonomous sensors installed directly on the heat pumps, it gathers energy consumption data on the Nivodesk dashboard.

Protect concept Innovation
France

Industriel de Chauffage Entreprises
France

Internet of Things (IoT), Machine Learning

The data enable HERMES to understand the system's operation, detect anomalies in the form of malfunction alerts, and effectively assist in optimizing energy consumption.
The technology is based on a dual innovation:

- A non-intrusive, energy-autonomous measurement sensor installed directly on the heat pump, acting as a data collector
- An advanced technology capable of designing a virtuous model of optimal heat pump consumption through AI. Specifically, the digital twin guides on the best use of the system based on various factors such as atmospheric conditions. Moreover, whenever a corrective action is taken, it is incorporated by the digital twin to measure its effects.

HGSCS

Heat Generation and Storage Control System

HGSCS project aims to create a smart system to control the heat generation and accumulation. It's able to adapt to a dynamic environment influenced by changing weather conditions, energy prices, current and estimated heat consumption. SPR is the decision and control SW subsystem, a highly scalable tool, able of interfacing with any electronic or software peripheral and any work process, using a graphical or textual interface, without requiring programming skills.

AKRONOS Technologies Srl

Italy

LLC MAITEK PLUS

Ukraine

Internet of Things (IoT)

The Heat Generation and Storage Control System (HGSCS) is based on the symbiosis of a solid fuel boiler with agro-pellets (SFBA), an air-to-water heat pump (HP) and a heat accumulator (HA) as a single balanced system. This allows for more efficient heat production, while saving energy costs.

The project provides thermal energy storage under the most favorable conditions and absorption of peak loads. The project focuses on the application of digital technologies in the production environment and demonstrates how digital technologies can support the green transition of production processes. The digitalization of HGSCS will be implemented using the SPR (Scriptable Procedure Runner) tool.

IntelliMove

A Semantic-Enabled AGV with Vision and High Precision Navigation

Empowering Dynamic Automation with Precision, Vision, and Endless Possibilities

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SAS euroDAO
France

Fives Conveying
France

Artificial intelligence,
Vision,
Precision Navigation

IntelliMove aims at redefining manufacturing with an adaptable AGV system blending semantic understanding, vision, and precise navigation. This revolutionary solution offers dynamic material handling, boosts productivity, and integrates seamlessly into various production processes, all without fixed installations. Our goal: Equip manufacturers with advanced AGV tech for greater flexibility and efficiency.

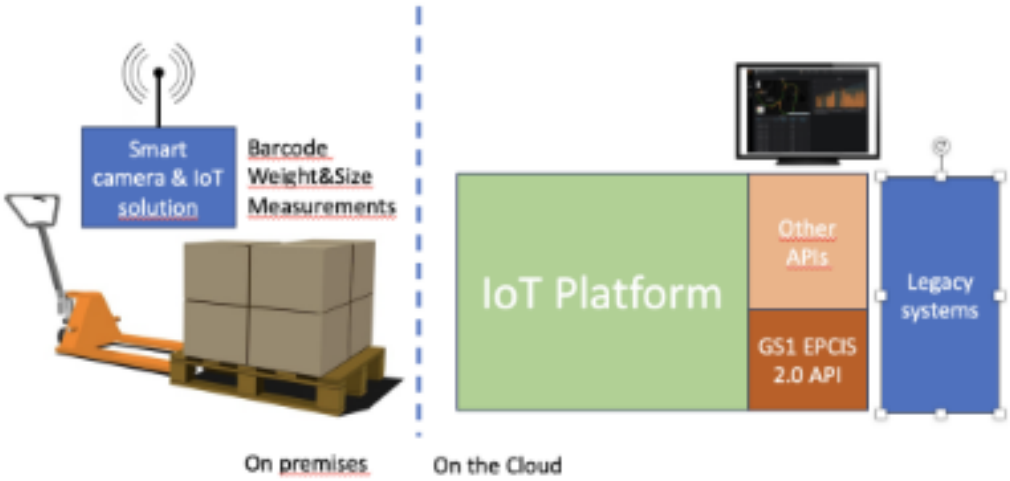
PalletGuardAI

An Advanced AI-Driven Pallet Monitoring Solution Using Computer Vision and Deep Learning Technologies

PalletGuardAI revolutionizes warehouse management by automating pallet monitoring, leveraging AI, computer vision, and deep learning to measure dimensions, weight, and track unique labels.

New Generation Sensors srl
Italy

STEF ITALIA S.P.A.
Italy



Artificial intelligence, Cloud Computing, Internet of Things (IoT)

Key technologies:

- Smart Camera: an onboard camera on a forklift employs real-time computer vision to capture key logistical parameters of pallets, optimizing warehouse efficiency. The real-time processing will be based on the AI and innovative hardware acceleration components.
- Smart Weighing: a non-invasive commercial hydraulic scale, placed on the pallet jack's suspension, delivers precise weight data for the load.
- Report & Analytics: a data analysis unit receives the information and synthesises it into statistics for monitoring. The module can communicate with legacy software, through standardised APIs, based on GS1 EPCIS 2.0 protocol

SSMARTINVENTORY

Smart Small Inventory

SSmartinventory offers a digital twin of the stock, and a link with ERP for automatic real time inventory in the industry. Real time data will solve management of stock and quality, reduce waste and sur-stock, improve the employee organization and allocation to save time, and optimie restocking or anticipate stockouts.

CENTILOC
France

komugi
France

Internet of Things (IoT), Digital Twin

The pilot is made of boards divided into 3 parts:

1. parts are waiting for assembly
2. processing area
3. assembly completed

When the parts are transferred to the assembly waiting area. an operator will process them and will place the bin on the second area representation to alert the system the production is running.
After production is completed, the operator will place the bin on the “assembly completed” area and the system will be informed the manufacturing process has been followed and that all milestones have been achieved.

This is the manufacturing tool developed by the integrator: a connector that links the database with the follow-up platform, tracking movements and “events” of objects (such as bins) on connected shelves.

ALDS

Acoustic Leaks Detection Sensor

ALDS project aims to address the challenges associated with detecting biogas leaks in anaerobic digestion plants, which can lead to economic losses and have a negative environmental impact. Biogas leaks, primarily composed of methane, contribute to climate change. The SENSAiO acoustic sensor is capable of detecting and characterizing fugitive gas emissions signatures in various industrial equipment, even in challenging environments, thanks to powerful embedded AI.

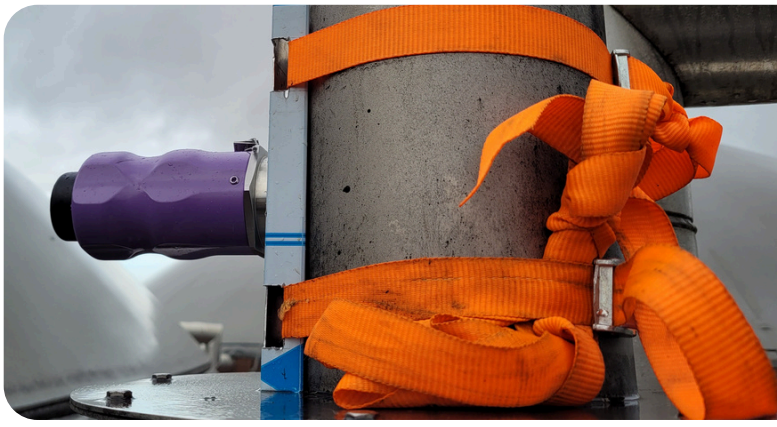
EDGE TECHNOLOGIES
France

Membrane Systems Europe B.V.
Netherlands

Artificial intelligence,
Big Data and analytics,
Internet of Things (IoT)

SENSA.iO
INTELLIGENT SENSORS DRIVING CONNECTIVITY

sensa.io



- Improve efficiency by reducing biogas leaks, leading to increased production and utilization of biogas.
- Significantly reduce methane emissions, thereby mitigating climate change and promoting environmental sustainability.
- Increase revenue generation through optimal use of biogas, maximizing the economic benefits of biogas projects.
- Enhance safety by preventing hazardous situations and ensuring the well-being of workers and surrounding communities.
- Comply with environmental regulations, avoiding penalties and maintaining a positive reputation

THE PARTNERS

Pole SCS

Pôle SCS, as French competitiveness cluster dedicated to sustainable digital transition (micro/electronics, AI / data analytics, IoT, cyber / digital security, photonics / imagery), brings together an ecosystem of more than 300 industrial players, large groups, SMEs and startups, research laboratories and leading universities in their fields. As a catalyst for innovation, SCS supports the deeptech ecosystem in the development, financing and sales of innovative products and services.

France

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Cluj IT

ClujIT, Romanian innovation hub focused on information technology and digital transformation. Based in Cluj-Napoca, ClujIT serves as a catalyst for technological innovation, bringing together businesses, academic institutions, and research centers to collaborate on IT solutions and digital technologies.

Romania

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GAC Group

G.A.C. Group is an international innovation consulting group headquartered in France. It regularly supports clusters and their SME members implement their innovation and internationalisation strategies, often via EU funding programmes. The company works closely with the following sectors: manufacturing, digital, environment/green and healthcare companies. G.A.C. also advises public sector organisations develop and evaluate their innovation support strategies.

France

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MESAP

MESAP, Italian innovation cluster specializing in manufacturing and advanced production technologies. Based in the Piedmont region, MESAP focuses on enhancing industrial processes and promoting the adoption of new technologies. The cluster connects businesses, research institutions, and academic partners to facilitate collaboration and drive technological advancements in areas such as automation, robotics, and smart manufacturing.

Italy

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Pole MecaTech

Pôle MecaTech, Belgian competitiveness cluster dedicated to mechanical engineering and related technologies. Located in Wallonia, Pôle MecaTech serves as a hub for innovation in mechanical engineering, providing support to companies and research organizations involved in the design, development, and application of mechanical systems. The cluster promotes collaboration between industry and academia to advance technologies in fields such as industrial machinery, robotics, and manufacturing processes.

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DREAM

Digital Resilient Europe for Advanced Manufacturing

DISCOVER MORE ABOUT THE PROJECT AND GET IN CONTACT

@DREAM Eurocluster

clustercollaboration.eu

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