Information Systems research group – expertise and priority calls for Horizon Europe (2026)

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Horizon Europe 2026 – Target Calls

Cluster 1 – Health

- HORIZON-HLTH-2026-01-STAYHLTH-02: Behavioural interventions as primary prevention for Non-Communicable Diseases (NCDs) among young people
- HORIZON-HLTH-2026-01-DISEASE-09: Multisectoral approach to tackle chronic non-communicable diseases: implementation research maximising collaboration and coordination with sectors and in settings beyond the healthcare system (GACD)
- HORIZON-HLTH-2026-01-CARE-03: Identifying and addressing low-value care in health and care systems

Cluster 4 – Digital, Industry & Space

- HORIZON-CL4-2026-01-MAT-PROD-11: Innovative technologies and tools for exploration and data modelling of raw materials
- HORIZON-CL4-2026-01-MAT-PROD-41: Enhancing industry-academia knowledge exchange in Social Sciences and Humanities (SSH)
- HORIZON-CL4-2026-04-DATA-02: Open Internet Stack Sovereign Solutions
- HORIZON-CL4-2026-04-DATA-06: Efficient and compliant access to and use of data (AI, Data and Robotics partnership)
- HORIZON-CL4-2026-02-DIGITAL-EMERGING-53: Innovative AI methods and technologies for the process industries

Cluster 6 - food-bioeconomy-natural-resources-agriculture-and-environment

- HORIZON-CL6-2026-02-FARM2FORK-09: Sustainable and healthy diets for cardiovascular diseases prevention with the support of digital applications

Horizontal Activities

- HORIZON-RAISE-2026-01-01: Thematic Networks of Excellence for AI in Science
- HORIZON-RAISE-2026-01-02: Thematic Networks of Excellence for AI in Science – Agriculture and Environmental Pollution

Digital Europe

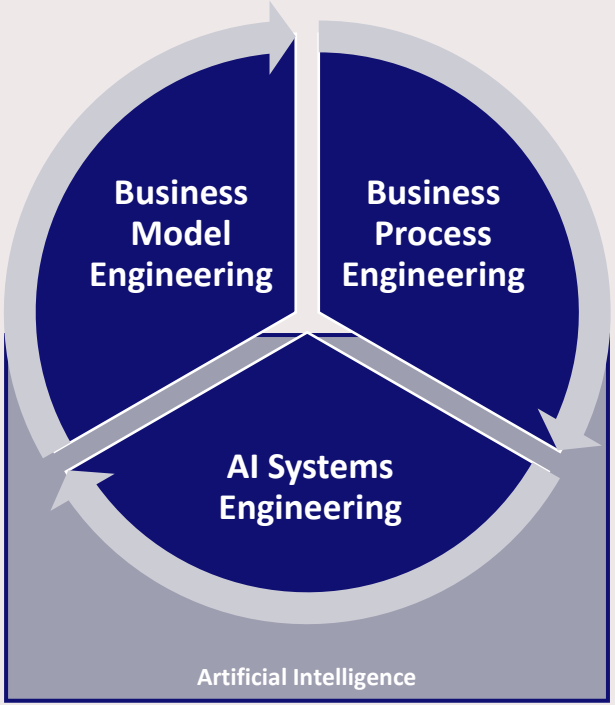
- Digital Europe 2.2 Data for AI factories - 2.2.2.4 - Digital solutions for regulatory compliance through data

Digital Transformation @ IE&IS

Our Digital Transformation programme within the Information Systems group covers the following key topics;

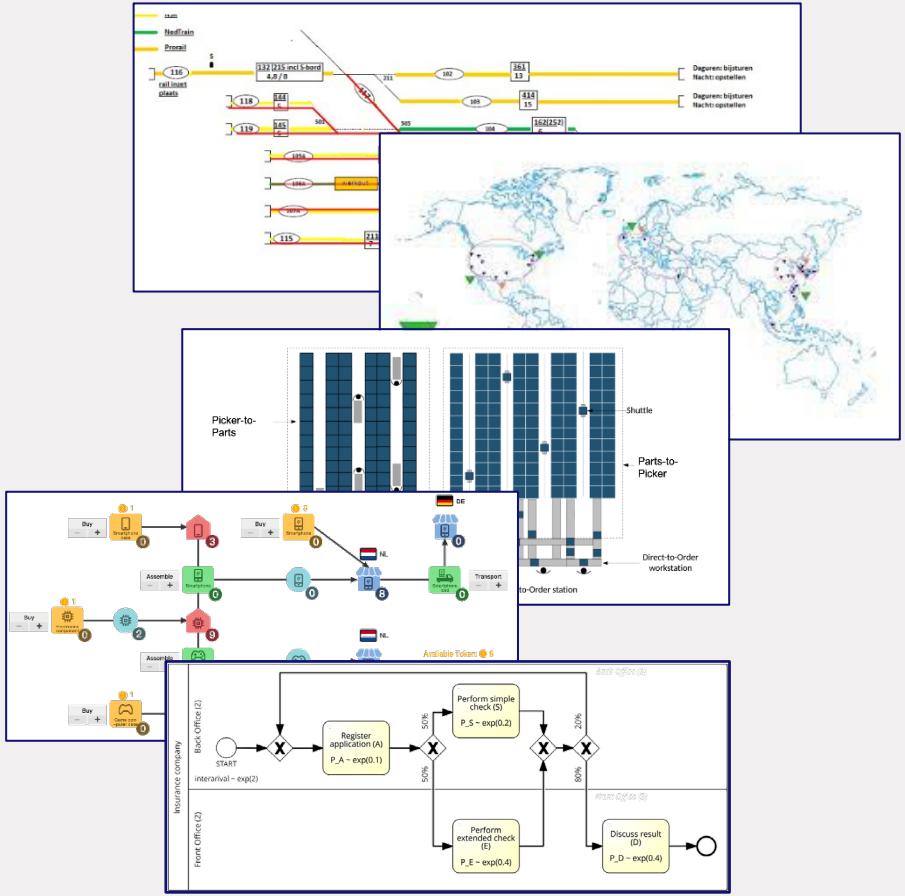
- **Business Process Engineering**
- **AI Systems Engineering**
- **Business Model Engineering**

In all three topics areas, our research is informed and shaped by AI

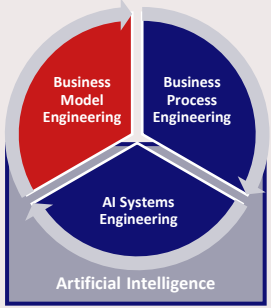


Application Domains

- Transportation and Mobility
- Supply Chain and Logistics
- (High-Tech) Manufacturing
- Healthcare
- Energy
- Services



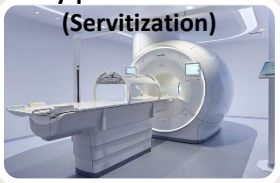
Business Model Engineering (BME)



- Develop novel methods and techniques to support organizations to implement innovative and sustainable digital solutions within service ecosystems.
- These solutions, such as platforms, leverage digital technologies (like mobile apps, IoT, blockchain) as core enablers.
- They involve collaborations between multiple stakeholders for value co-creation.
- They are designed not only for economic viability but also for environmental and social sustainability.

Micromobility Solution

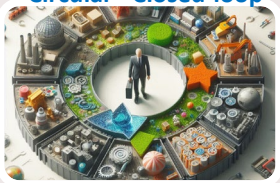
Pay-per-use Service (Servitization)



Green Energy-as-a-Service

Healthcare Service

Circular - Closed-loop



Reverse Logistics

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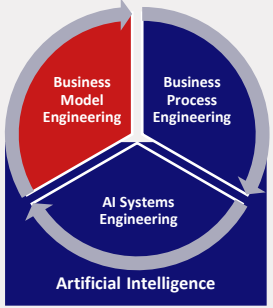
Business Model Engineering (BME)- Research Focus



- Collaborative Business Model Design and Management for Sustainable Digital Solutions
- Evaluation and Impact Assessment of Collaborative Business Models
- KPIs and Performance Management of Business and Operating Models
- Capability and Maturity Models to support Organizations in Digital/Sustainability/Twin Transformation
- **Responsible Digital Solution Design (considering their human, social, and ethical concerns)**

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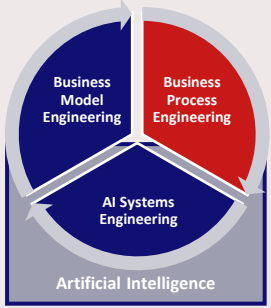
Business Process Engineering (BPE) Research Focus



Business Process Optimization and Improvement [goal focused, rule compliant, personalized, efficient]

(re-)design	analysis	enactment	monitoring
• case-based modeling • process repair	• rule matching • rule mining • simulation • process pattern mining • unstructured process data mining	• resource allocation • process guidance	• predictive process monitoring • explainable process monitoring

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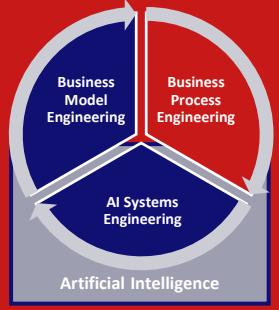
Business Process Engineering (BPE) Domain Focus



Healthcare

Healthcare network support

- Inter-organizational process mining
- Health data spaces (on a 'consultancy level')

Personalized healthcare, personal care pathways

- Evidence-based operational goal setting
- Operational treatment plan derivation and improvement
- Learning healthcare system (protocols)

Supply Chain and Manufacturing

Collaborative production and supply processes

- Inter-organizational process mining
- Process monitoring
- Simulation model mining (digital twinning)
- Event knowledge graph design

Adaptive production and supply processes (mass customization)

- Traceability of data and activities to goals, rules, quality, and sustainability
- Explainable operational decisions
- Process adaptiveness and resilience

Circular supply processes

- Traceability
- Network design

Govtech

Citizen-focused governmental processes [future goal]

- Explainable and traceable decisions

Cross-cutting: Data spaces; Interoperability; Data integration

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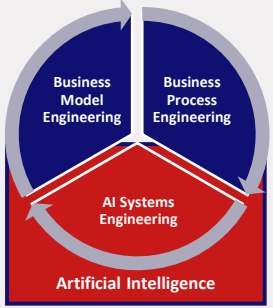
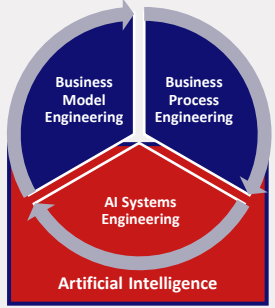
AI Systems Engineering - Research Focus



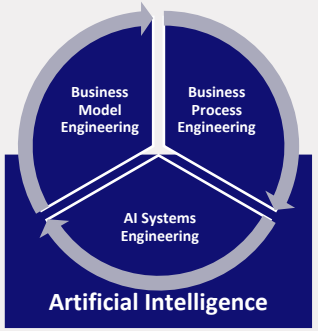
- Empower decision-makers/citizens with explainable and transparant AI methods;
- Modular and adaptable AI decision-making methods and tools, that cater to different trustworthiness dimensions and trade-offs;
- Sustainable AI techniques for green transformation;
- AI (foundation) models for industrial and soceital optimization problems.

AI Systems Engineering - Expertise



- ML, DL, RL, optimization, planning & search;
- Generative Artificial Intelligence (GAI)
- Prediction modelling & Sequential Decision Making (using XAI)
- Parameter tuning;
- Data-centric predictive maintenance
- Data-driven optimizaiton methods and algorithms
- Transparency, Explainability & Fairness in Machine Learning & Optimization

Information Systems Group – relevant projects



Healthcare

- IpSPINE – development of novel technologies and Advanced Therapy Medicinal Products (ATMPs) for the advanced therapy research and development community;
- DM Coach – improvement of patients and citizens' lifestyle by increasing the awareness on the risks related to having a not-healthy lifestyle;
- GOAL - development of a multi-dimensional theoretical framework that supports evidence-based overweight prevention via gamified health technologies.
- HealthyW8 - advanced data analysis techniques to derive multi-dimensional models from various data sources including personal health and social-environmental data, and development of health gamification tools.
- Well-Data - making health-promoting technologies and the associated personal data on lifestyle, well-being, health(care) and daily functioning interchangeable

Production & Manufacturing

- CERTIF-AI – facilitates the certification that a production process leads to quality products and, when this is not the case, diagnose the problems in the production process;

Supply Chain/Logistics

- AI Planner of the Future – development of supply chain and logistics planning based on a hybrid form of decision-making in which both human and artificial intelligence are combined to be able to properly handle the complexity.

Explainable AI

- TEPAIV – this project aims to empower citizens to understand the basis of all AI-driven predictive analysis that is directed at them;

Civil Engineering

- Stability – development of new planning methods using artificial intelligence to prioritize and schedule lifespan-extension measures for civic and cultural structures in inner-city settings;

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Thank you