

Project- ResiFlow – Hazardous Warehouse Management Platform AKTEK BILISIM

Smart advanced manufacturing

Smart ORGANISATION PROFILE

Who is Aktek Bilisim?

AKTEK Bilisim is a subsidiary of AKKÖK Holding, a conglomerate with 20 active trading and industrial companies, including one overseas, and 19 production facilities. AKKÖK Group is focused on sectors such as chemistry, energy, and real estate, retail.

For more than 15 years, we continue to provide technology consultancy to organizations with our experienced t earns and end-to-end solution range.

- •----**130+** Employee
- Tech Team 95+ employee
- Enterprise Resource Planning 35+ employee
- BI– Software Dev. 20+ employee
- System Management Services and IT Infrastructure
 42+ employee

Location;

Headquarter:

Turkey, Istanbul, Yıldız Teknik Üniversitesi Davutpaşa Teknopark Campus



smart PROPOSAL INTRODUCTION (I)

Project- ResiFlow – Warehouse Management Platform for Hazardous Industries and Emergency Situations

exponential development of technology The and its disruptiveness has vast impact in manufacturing, and the world is standing before another industrial revolution leading to economic and societal transitions. The continuous efforts in the creation of advanced smart manufacturing systems emphasizes the sustainable, resilient and human centric approach in the global transition. In today's landscape, Industries faces heightened security demands to manage warehouses that host hazardous products. Such warehouses add much value to businesses but bear huge risks in cyber security, physical and perimeter security, critical infrastructure security and the other dimensions of security on multiple layers directly having vast impact on human lives. ResiFlow aims to provide a holistic advanced safety and security solution that focuses on reducing emissions, achieving efficient energy consumptions, enhancing safety and security measures against human errors, physical attacks, fire, explosions, compromise acts and force majeure.

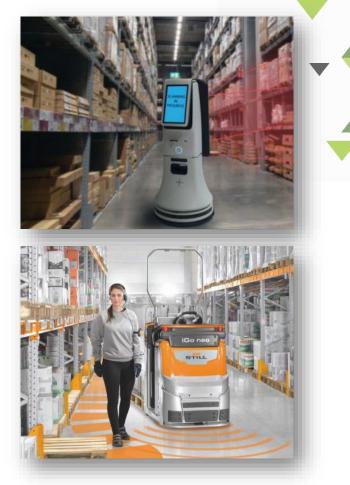




Smart PROPOSAL INTRODUCTION (II)

ResiFlow project is an end-to-end Industry 4.0 solution that aims to innovate and optimize warehouse management processes for all businesses operating in hazardous sectors. The project will leverage cutting-edge technologies listed below

- Al and Big Data Analytics,
- Industrial Internet of Things (IIoT),
- Simulation and Digital Twin,
- Enhanced communication infrastructures (LoRa, LoraWAN, Bluetooth 5.0, 5G, 6G, Non-terrestrial networks (NTN), NB-IoT, Wi-Fi)
- Autonomous robots and Vehicles (AGV/AMR),
- Augmented Reality,
- Cybersecurity
- Computer vision and video Analytics
- Specific Sensors and Wearable technologies



Smart PROPOSAL INTRODUCTION (II)

Eventually **ResiFlow** shall be a holistic platform that seamlessly integrates software solutions and connected end devices for efficient optimization, efficiency prediction, risk simulation, risk prediction, next best action and execution monitoring. It will combine Machine Learning and GPT algorithms to achieve best results.

Turkey being in a seismic region it's crucial to account for emergency scenarios such as prolonged power outages, explosion risks, personnel's safe evacuation, company rescue team members location and telecommunication network failures. Emergency scenarios are often overlooked or are predominantly considered in siloed regions within factories.



"ResiFlow" will incorporate a specialized seismic mode that will operate using minimum and uninterrupted energy supply e.g UPS devices and battery powered LoRa antennas thus improving resilience against power and telecommunication network outages during earthquakes. In this case the digital twin feature shall be used to pre-calculate potential disaster scenario and dynamically generate evacuation plans based on real-time factors like gas levels hence ensuring safest evacuation of personnel and deployment of company's rescue team during emergencies.



PARTNERS

Current Consortium:

Aktek (International & Turkish national coordinator. A Turkish consortium is set and the national eligibility criteria are manitained.)

Partner search:

- Universities
- Research organizations
- _ Use-case providers
- Large Industries
- SMEs
- Start-ups





CONTACT INFO

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