



Towards safe and secure distributed cyber-physical systems

The overarching goal of the TRANSACT project is to develop a universal, distributed solution architecture for the transformation of safety-critical cyber-physical systems, from localised standalone systems into safe and secure distributed solutions leveraging edge and cloud computing.

Duration

36 months: 06/2021 – 05/2024

Overall Budget

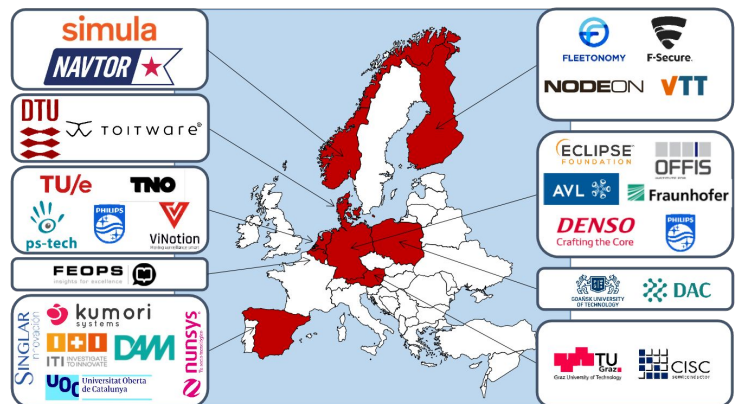
26.544.588,75 EUR

EU contribution

6.904.533,33 EUR

Coordinator

PHILIPS MEDICAL SYSTEMS NEDERLAND



www.transact-ecsel.eu | twitter.com/TransactProject | linkedin.com/company/transact-project/

Five reasons why

Transforming safety-critical Cyber-Physical Systems (CPS) into distributed solutions for end-users and partners

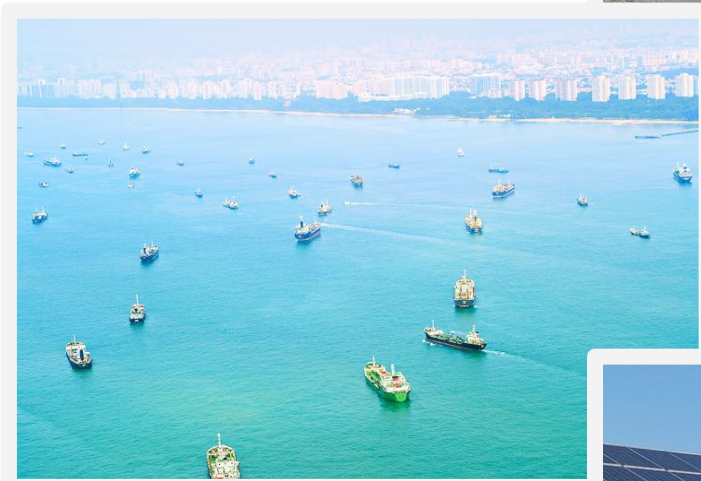
- ✓ NEW BUSINESS FOR SOLUTION PROVIDERS
- ✓ DISRUPTED URBAN PUBLIC TRANSPORT
- ✓ NAVIGATIONAL SAFETY AT SEA
- ✓ ENERGY EFFICIENT ELECTRIC VEHICLES
- ✓ CLINICAL APP STORE AND SURGICAL PLANNING ANYWHERE

Technical Challenges

- ✓ TRANSFORMING CPS' ARCHITECTURE FROM MONOLITHS TO DISTRIBUTED SOLUTIONS BASED ON THE DEVICE-EDGE-CLOUD CONTINUUM
- ✓ ENSURING CPS' PERFORMANCE IN THE DEVICE-EDGE-CLOUD CONTINUUM
- ✓ ENSURING CPS' SECURITY AND PRIVACY IN THE DEVICE-EDGE-CLOUD CONTINUUM
- ✓ DEVISING BUSINESS MODELS FOR MONETIZING CPS WHEN DEPLOYED IN THE DEVICE-EDGE-CLOUD CONTINUUM

Use Cases

UC1 - Remote operation of **autonomous vehicles** for navigating in **urban environments**



UC2 - **Critical maritime decision** support enhanced by distributed, AI enhanced edge and cloud solutions

UC3 - Cloud-featured **battery management** systems



UC4 - Edge-cloud-based **clinical applications platform** for **Image Guided Therapy** and diagnostic imaging systems

UC5 - Critical **wastewater treatment** decision support enhanced by distributed, AI enhanced edge and cloud solutions

