

## **ZORRO – Zero downtime in cyber-physical systems**

ZORRO is a research project funded by NWO and carried out by a multidisciplinary consortium consisting of University of Twente, Vrije Universiteit, Saxion, TNO-ESI and industrial partners ASML, Canon Production Printers, ITEC, Philips, and ThermoFisher Scientific

Diagnostics is a key technique to reduce downtime in complex systems: by **identifying the root causes** of (potential or actual) syst em failures, appropriate **corrective and preventive measures** can be taken. Recent technological advances in sensor technology, data analytics and the Internet-of-things have put forward **Intelligent Diagnostics**, replacing the traditional human-based diagnos is: by equipping systems with appropriate sensors, Al algorithms can detect anomalies and relate these to potential root causes more precisely and faster.

WP1 - Reliable and resource-efficient monitoring systems

WP2 - Incorporating formalized knowledge in the diagnostic workflow.

WP3 - Accurate system-level diagnostic algorithms.

WP4 - Tight integration in the system's engineering life cycle.

WP5 - TRL5-6 Public and industrial demonstration

**WP4** Model-based systems engineering

WP1
Monitoring
systems

WP2
Knowledge
representation

WP3: Diagnostic algorithms

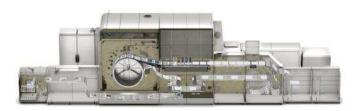
**WP5**: Demonstrators

**WP6:** Dissemination & technology adoption

WP7: Management

## Five industrial use-cases











Partners:

UNIVERSITY OF TWENTE.













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https://zorro-project.nl/

https://www.linkedin.com/showcase/zorro-project









