COGNITWIN

COGNIFY THE PROCESS INDUSTRY

VISION AND MISSION

CONSORTIUM

Digital Twin

Hybrid Twin

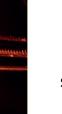**Cognitive Twin**

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COGNITWIN will enhance the potential of the process industry in Europe by creating and validating a new approach for cognitive digital twins affordable for all process industries.

The COGNITWIN toolbox will be validated in the following SPIRE process industry sectors:

- Non-Ferrous (Aluminium and Silicon)
- Steel
- Engineering

SINTEF · Elkem A Bluestar Company · SCORTEX · Hydro · sidenor · NOKSEL Steel Pipe Co. Inc. · saarstahl · Nissatech innovation centre · DFKI · CYBERNETICA · Fraunhofer IOSB · teknopar Industrial Automation · UNIVERSITY OF OULU · Sumitomo SHI FW

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| **1** From the detection of anomalies... | **2** ...over the integrative prediction of unusual behavior... | **3** ...toward the solution for unknown situations. |

DIGITAL TWIN

A **digital twin** is a formal digital representation of an asset that captures attributes and behaviors of that asset.
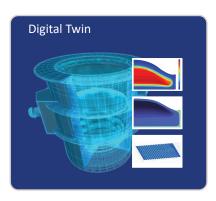
HYBRID TWIN

COGNITWIN will revolutionize digital twins to **hybrid twins** by intertwining different models to achieve higher predictive capabilities and greater potential for industrial applications.
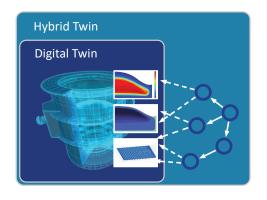
COGNITIVE TWIN

COGNITWIN will empower the process industry with **cognitive twins** to find new answers to emerging questions by marrying the expert knowledge with the power of hybrid analytics.

MULTIPLE ISOLATED MODELS

SYMBIOSIS AMONG THE MODELS

SYNERGY WITH EXPERT AND PROBLEM-SOLVING KNOWLEDGE

Digital Twin

Hybrid Twin
Digital Twin

Cognitive Twin
Hybrid Twin
Digital Twin

Experience, problem-solving, knowledge, etc...