

The logo for COGNITWIN, featuring the word 'COGNITWIN' in a bold, green, sans-serif font. The letters 'I' and 'T' are slightly larger and more prominent than the others. The logo is centered within a white rounded rectangular box.

DT-SPIRE-06-2019

## **COGNITWIN**

**Full Title:** Cognitive Plants through proactive self-learning hybrid digital twins

**Aim:**

COGNITWIN aims to add the cognitive elements to the existing process control systems and thus enabling their capability to self-organise and offer solutions to unpredicted behaviours. The objective is to establish the fully digitalised concept of self-learning and proactive next generation of Digital Twins, which operate in the hybrid world and can i) recognize, forecast and communicate less optimal process behaviour well before these occur and ii) adjust itself in order to keep the process continuously close to or at optimum.

**Concept:** COGNITWIN will set a new standard for the design, development and operation of the European process industry by introducing a platform for virtual component-based architecture that integrates IoT, Big data, AI, smart sensors, machine learning and communication technologies, all connected to a novel paradigm of self-learning hybrid models with proactive cognitive capabilities.

**Start date:** 01/09/2019

**End date:** 31/08/2022

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