

INCASE MISSION

Within the world of Industry 4.0, we develop test set-ups and demonstrators for sustainable technologies to prove the viability and applications of this technology. We introduce the technology to the industry by means of workshops and lectures based on own research and experience.

www.incase2seas.eu

Project Proficloud

Cross-border communication between remote sites via the cloud

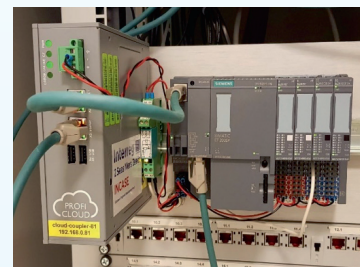
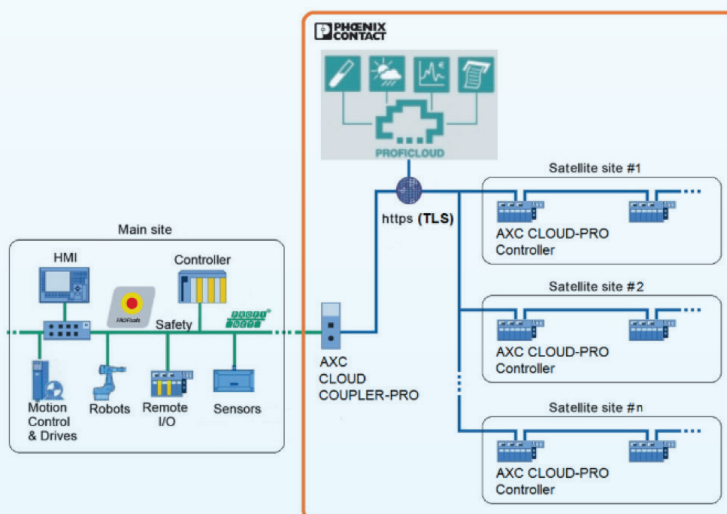


What

Both end users and suppliers of industrial automation products are currently examining both the technology for and applications that can profit from cloud applications. This varies from simply storing machine and production data, via dashboarding KPIs (Key Performance Indicators), through to advanced analysis by means of Artificial Intelligence, machine learning, etc.

In this regard, an easy to use direct connection of (a part of) the available data in the local industrial networks with the cloud is important. In this way, (big) data from production sites or machines installed at customers' sites all over the world are readily available.

PROFICLOUD – a professional cloud solution by Phoenix Contact – makes it possible to simply connect data from PROFINET networks using the standard engineering tools that the automation engineers are already familiar with. This allows for example to easily gather KPIs of a worldwide fleet of machines in quasi real time, to schedule maintenance service in a targeted manner, to optimise energy consumption, to implement calculations and analyses in the cloud, to do condition monitoring, etc.



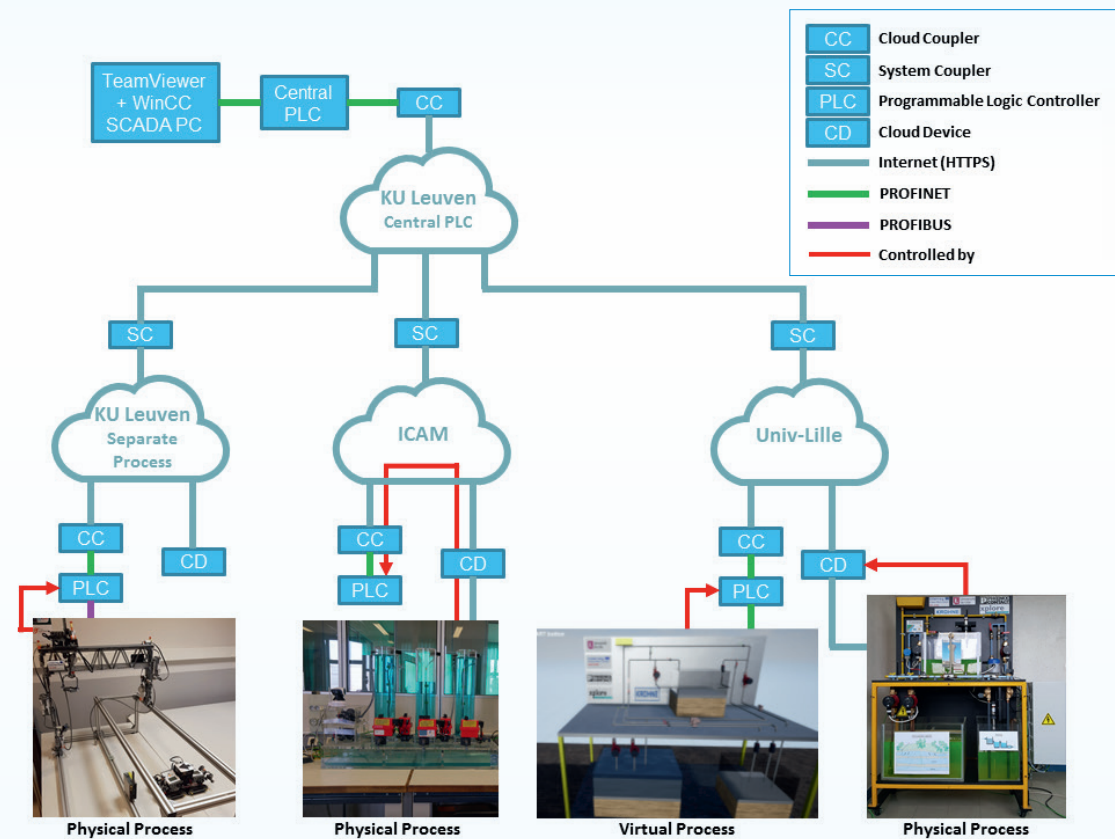
Local PROFINET network (left, short deterministic cycle time) and connection to remote sites and the cloud (orange frame, Internet communication).

Right: the central PLC and central cloud-coupler of the INCASE inter-regional pilot.



Pilots

INCASE – in this case, ICAM, Univ-Lille and KU Leuven – made an early product analysis of small cloud applications in collaboration with observer partner Phoenix Contact. A larger inter-regional demonstrator (figure) was developed in a second phase, where 3 “regional” clouds were centrally connected. A small central PLC manages the entire system and allows for central visualisation, data processing and operation.



Results/Conclusions

PROFICLOUD is one of the many cloud solutions currently available. It makes it possible to simply and transparently connect local industrial networks (PROFINET) to remote sites and machines via the cloud.

This can be done by using the standard tools that automation technicians have readily available, and it provides the necessary security.



Number of companies reached through workshops and lectures

A vast range of demonstration actions such as the following were realised: specialised lectures, study days in collaboration with the industry, etc. INCASE reached 137 companies and 278 people.

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