

CASE STUDY

Industry 4.0 - The Digital Transformation of industrial brownfields

BACKGROUND

Phoenix Contact, a global market leader in the electrical engineering, electronics and automation domains, introduces novel solutions for the digital transformation of industrial environments. As part of its vision, Phoenix Contact launched an Industry 4.0 POC in its manufacturing line, integrating into its PLCnext solution an innovative technology by SIGA OT Solutions, a dynamic and innovative start-up that developed unique technology that monitors and analyzes operational processes, detecting process inefficiencies, cyber attacks and operational failures.

CHALLENGE & SOLUTION

PLCnext Technology is an open ecosystem for limitless automation. It offers PLC-typical real-time performance and data consistency with limitless adaptability, which can be achieved using high-level languages and model-based code as well as standard PLC coding. It offers its users quick and simple integration of software in forms of apps available in the PLCnext Store. It is a leading platform for intelligent networking, thanks to its cloud connection and the integration of current and future communication standards, allowing quick application development by different developers working independently. The PLCnext Automation with the innovative Smart Elements modules are used to run the platform and make this a complete solution ready to tackle any automation task.

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Despite the COVID-19 outbreak, the two companies managed to accomplish a pioneer integration of the **Sigalnsight** product into one of Phoenix Contact's major manufacturing line of electrical components (BadPyrmont, Germany). **Sigalnsight**, integrated into **PLCnext** advanced platform, offers unique process visualization and machine learning capabilities, and monitors the deepest layer of the machines functionality and to provide actionable insights for the operators. Detecting the evolvement of unknown anomalies in these mission critical processes aims to minimize unplanned downtime and maximize operational optimization and productivity.



The key focal point of interfacing **Sigalnsight** into the process is Phoenix Contact's **PLCNext** advanced platform with **Smart Elements**, fully controlling the complete data acquisition and delivery process, while SIGA's technology uses this data to deliver analytics and anomaly detection engines for incipient anomaly detection directly from the electrical signals at level 0. The integration of **Sigalnsight** into the **PLCnext** framework equip OT environments with a new world of enhancement tools, seamlessly integrated into their existing operations. These tools integrate SIGA's analytics and AI capabilities, enabling deep analysis and data processing of any critical process.



Phoenix Contact and SIGA see huge potential in transforming industrial brownfields into Industry 4.0 through novel technologies and are working together to explore future technological and commercial opportunities.



SIGA's Team site visit in the production plant in Bad Pyrmon, Germany

TESTIMONIALS

**Ulrich Leidecker, Phoenix Contact President
Business Area Industry Management & Automation:**

"We have been widely impressed with SIGA's novel approach to operational process monitoring and Cybersecurity in OT environments. SIGA has a dynamic, enthusiastic and highly motivated team, with a great vision, hence, we are excited to fuel this collaboration and aim for fruitful results"

**Dr. Till Potente, Phoenix Contact Senior Director
Production Engineering and Automation:**

"ICS and operational processes are at the core of Phoenix Contact. The fact that SIGA has developed solutions that generate actionable insights directly from the source, could become an enabler for Phoenix Contact to introduce a variety of new industry 4.0 solutions to our global markets"

**Einat Ditze, Phoenix Contact Coordination of Cooperation
with Israeli Start-Ups:**

"We quickly realized the potential fit between SIGA's unique topology and offering and Phoenix Contact core activities, products and solutions. This collaboration brings out the best of all involved parties, making us move faster and think deeper, and the mutual experience and set of expertise is reciprocally beneficial."

**Amir Samoiloff, SIGA OT Solutions CEO and Co-Founder:**

"This unprecedented opportunity to collaborate with Phoenix Contact, one of the world leading players in our space, is an incredible strategic event for SIGA. The ongoing commitment, enthusiasm and support by the senior leadership of Phoenix Contact, enables us to better understand the insights of industrial domains, and to explore thrilling opportunities for our continuous growth. This is an exciting win-win collaboration, and we thank the Phoenix Contact management for their confidence in our technology and in our vision"



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