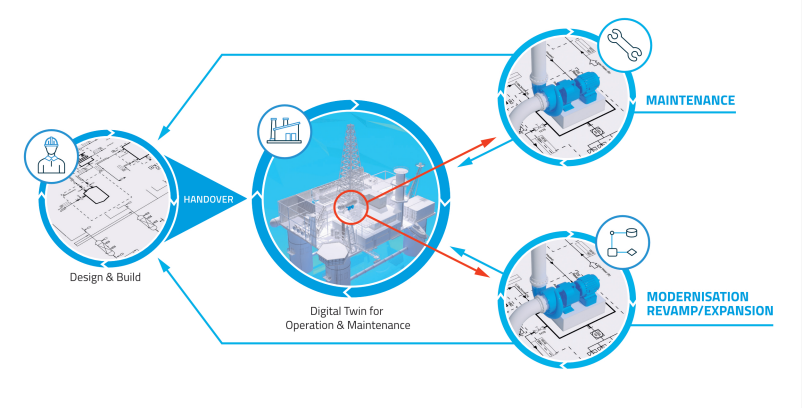
Digital Twin: more knowledge for more efficient use

Data-centered engineering makes work of operators and contractors easier



With EB Alliance through the life of the plant: from the digital original to the always up-to-date digital twin with simple data transfers and consistent data integration after maintenance and retrofitting

TROY, MI, USA, June 16, 2022 /EINPresswire.com/ -- Aucotec AG, a developer of engineering software since 1985, is presenting two new concepts at the world forum for the process industries, ACHEMA 22: one will make it much easier for plant operators and their contractors to communicate and transfer data and documents in the future. The second creates a new level of provision and use of data on all relevant assets. Both solutions are based on the cooperative platform Engineering Base (EB).

Operators thus achieve greater efficiency in building the digital twin while gaining more intelligence for its use. For example, the digital twin in EB, which is exceptionally comprehensive due to cross-discipline data centring, speeds up maintenance and rebuilds. ACHEMA visitors can already take a look at this future at the Aucotec stand.

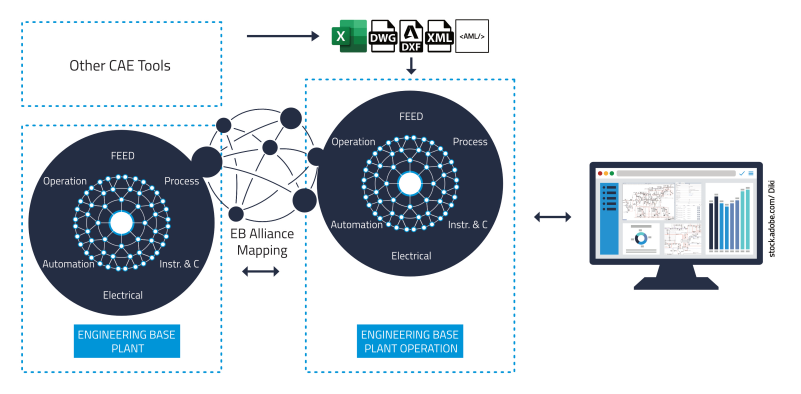
> The solution will make it possible in a unique way to have an overview of all interrelationships across all engineering disciplines in the shortest possible time during operation.”
>
> *Dr. Pouria Bigvand, VP and COO AUCOTEC North America*

ET supports IT and OT

The new "EB Alliance" for more efficient communication will include two topics: seamless data exchange between operators and suppliers who have each set up their own environments for "their" EB, and the outsourcing and consistent reintegration of the digital twin of rebuild projects of a running plant, no matter how complex.

"Sharing data from different parties using the same system is usually complicated by the fact

that they use different versions and configurations. All that will change in the future," explains Aucotec's senior product manager, Dr. Pouria Bigvand. When importing data from a supplier using EB, EB Alliance will allow all data to be mapped to the configuration state of the recipient, so that errors or misunderstandings do not occur in the first place. And handing over the digital twin of a plant section to be rebuilt or extended, as well as integrating it consistently into the new as-built state once the work is done, will also significantly speed up rebuild projects. "The "Alliance" is intended to further strengthen EB's role in the user companies being, as the authoring system and data repository, THE hub for Engineering Technology (ET) and thus optimally supporting IT and OT," says Bigvand and emphasizes: "Our customers include large operators with over 100 contractors; the new approach also makes the exchange across a whole cascade of suppliers very efficient and clear."



Data flow with EB Alliance: consistent exchange of operators and contractors from engineering to the digital twin in operation


Dr Pouria Bigvand, Vice President and COO of AUCOTEC Inc.

Cross-discipline plant knowledge speeds up maintenance

The second concept includes a comprehensive navigation solution that shows operators all the interrelationships of an asset in an instant. The digital twin in EB is much more detailed and intelligent than any information that document-based systems can provide for plant maintenance. Where previously only the main assets with their properties were known, EB's digital plant model also knows all the subordinate objects down to every nozzle in the process area, every terminal connection in the electrical system and every signal in the automation system. Even more important, however, according to the product manager, is that the complete object dependencies for these objects are also modelled.

"The solution that Aucotec is currently developing on this comprehensive basis will make it possible in a unique way to have an overview of all interrelationships across all engineering disciplines in the shortest possible time during operation," he explains. For example, from an

alarm signal via the automation system to the field to the sensor, from there via the pipeline to the affected valve, back to its control and so on. For the plant, this means that maintenance preparation can be significantly optimized and downtimes can be minimized or even completely avoided in the event of a malfunction. "This means that any investment in the digital twin pays off many times over," says Pouria Bigvand.

Aucotec at ACHEMA 2022 (August 22-26) in Frankfurt, Germany: Hall 9.1, Stand No. B 4 and Hall 11.0, Stand C 51

Dr. Pouria Bigvand
AUCOTEC Inc.
+1 669-300-8042
pouria.bigvand@aucotec.com
