

## Transforming Energy Infrastructure with Aucotec's Innovative 'One Tool One Data Model'

In an exclusive interview, **Uwe Vogt, Executive Board, AUCOTEC AG.**, shares insights into "One Tool One Data Model" Engineering Base that is helping the energy infrastructure industry by aiding the rapid modernization of grids and improving flexibility. Its innovative data model addresses the challenge of creating a common data repository for plant operators' engineering analysis and operations by serving as a comprehensive data platform.



**UWE VOGT**  
Executive Board  
AUCOTEC AG

### **How does Aucotec's Engineering Base address the challenge of creating a common data pool for plant operators' engineering analysis and operations?**

Plant operators typically have extensive existing assets and various tools, along with vast amounts of data stored in diverse formats. Our software serves as the data platform for these operators, facilitating the importation of data sets from various sources into a unified data repository, which forms the foundation for engineering analysis. It's important to note that engineering and operations are distinct aspects. The primary challenge lies in achieving scalability in this process. When discussing data, it's crucial to acknowledge its scattered nature, existing in different formats such as paper, PDF files, and numerous links, often containing valuable, intelligent data. The key is to selectively identify and scale up this data intelligently, making it more accessible and efficient in a scalable manner to expedite processing.

### **How does this data help at the FEED or the detailed engineering level?**

The Front-End Engineering Design (FEED) phase marks the initial stage of engineering, where we provide support for the fundamental concepts and aspects of plant projects.

In case of designing substations for the electrical grid, these preliminary examinations are done on the level of single-line diagrams and the according objects and data. The big assets of primary switchgear are selected and calculated in regards of energy flow and the basic concepts of interlock and automation are defined.

Our approach encompasses the entire scope of the project. Starting from the FEED phase and progressing through the design of functions, every step is consolidated within the same centralized data model. This comprehensive data repository proves invaluable

## INTERVIEW

for later cause-and-effect analyses. In the event of any discrepancies or issues, retrieving information becomes a straightforward process, resulting in streamlined project management and significant time savings.

### **Tell us about Aucotec's Engineering Base and how is this helping the energy infrastructure industry.**

Due to the rising demand for energy and the emergence of new energy sources, transmission and distribution companies are under pressure to rapidly modernize their infrastructure. This transformation requires the extension of numerous grids that are not only more extensive but also smarter and more flexible. This challenge is not unique to any particular region; it applies equally to countries like India and Germany.

The current challenge facing these companies is the need to perform a significantly increased amount of work while simultaneously improving efficiency and optimizing their processes compared to the past. This imperative for efficiency becomes crucial as they manage a greater number of assets. Intelligent systems are essential for maintenance and issue analysis, and data plays a pivotal role in supporting these systems. In recent years, power distribution technology has taken precedence as the primary technology for electrical design and automation, with other technologies serving as secondary. Aucotec's "One Tool One Data Model" approach streamlines both the Front-End Engineering Design (FEED) and detailed engineering processes, allowing for more efficient and timely completion.

### **How do you enable the project owners to optimise integration of Brownfield facilities with the new capacities & optimize plant performance?**

Aucotec provides project owners with tools and offers support for certain engineering operations, although we do not directly engage in day-to-day operations. Nonetheless, our role extends to assisting project owners in consolidating data from their existing assets into intelligent systems, which serve as the foundation for engineering activities. Simultaneously, we contribute to optimizing engineering processes in Greenfield projects.

When it comes to expediting the renovation of substations using Engineering Base, we can generate

intelligent data that significantly increases the potential for faster modernization of plants. Based on standard modules this approach marks a notable departure from the past, where each substation had to be individually designed. With our innovative tools and configuration options, we are transforming the client experience in this regard.

### **Is it a kind of a plugin play module?**

Yes, in essence, it operates on a plug-and-play basis. We offer a wide range of functionalities for configuring these modules, allowing for the generation and customization of configurations. This can be fine-tuned to align with the specific requirements of our customers to a certain extent.

### **What kind of changes do you anticipate in the market dynamics & what is your strategy at Aucotec's plan to be a global leader?**

The market is experiencing intense competition, and consolidation appears to be on the horizon. On one side, you have numerous small software vendors specializing in various engineering disciplines, while on the other, there are major players like us who consolidate these diverse tools into a single integrated platform. Many vendors find themselves having to string together different tools for various disciplines and then attempt to synchronize the data, often involving translations or other complex processes, especially when dealing with underlying systems like PLS.

At Aucotec, we have developed the platform Engineering Base that works as a unified system with a single data model for all relevant disciplines. This sets us apart from other solution providers and places us in a unique position in the market. We are the sole vendor offering this kind of architecture.

The journey of Engineering Base began roughly 20 years ago, and since the launch of the first version of Engineering Base, we have experienced significant growth. We have rapidly adapted to market dynamics, establishing new subsidiaries along the way. Our mission is to showcase this unique architecture and platform that distinguishes us in the industry. ■