How is SAP covering the demand for IIoT - Part I

The Internet of Things (IoT) connects all types of devices using the internet, as its name suggests. It is a network of intelligent computers, devices, and objects, which connected, share big amounts of data. The data is further collected into a Cloud-based service, from where it generates insightful analytics to end-users. Therefore, IoT increases automation processes in institutions and homes, as well as in companies of all sizes. The application of IoT in the manufacturing industry is called IIoT (Industrial Internet of Things), and it has revolutionized the industry by enabling the acquisition of great amounts of data and supplies in an efficient way.

For high-efficiency standards, companies activating in the IIoT industry need to enable the machines from multiple locations to communicate and connect to each other. The increased number of entry points might be a risk for their overall cybersecurity. SAP's goal is to mitigate the risk of potential attacks and comes with a handy solution for the manufacturing industry. Continue reading to learn more about this topic.

The Demand for IIoT

Many SAP customers used the provided software throughout the industrial sector. During the past several years, however, the Industry 4.0 era has outperformed many of the customers' activities with the innovations brought in the industry for data collection, integration and analyzing. SAP kept up with these innovations and build new platforms to help industrial automation equipment connect with other SAP devices and SAP Cloud Platform. In this way, SAP made sure the latest transformative technologies are brought to IIoT and can leverage the industry capabilities.

Industrial businesses know how beneficial is the IIoT data for business development. Many elements and applications in this area maintain the business benefits flow and, therefore, demand high competences for the IIoT area.

Some of their high expectations include aspects like:

- **Enhanced aaS (as-a-Service) Business models**

IoT platforms need to empower these business models by implementing alerts for when the machines need maintenance or additional settings

- **Continuous improvement systems**

Companies need to implement performance improvement systems based on real-time data and save the time spent by engineers on data analysis. If more products connect and share data, there is a higher chance for software to generate improved flows based on the IoT data stored in the System.

- **Predictive maintenance and automated quality checks**

Companies need to minimize downtime while increasing productivity. In the manufacturing industry, predictive maintenance contributes to this aspect. Also, production processes might face quality issues that affect productivity and customer satisfaction. Combining IIoT with the collected data contributes to reduced quality issues and equipment malfunctions.

- **Cloud Computing and Machine Learning**

Cloud environments bring the advantage of remote working and accessing for a similar user interface available across all departments. Systems offer the possibility to assign different roles to the employees, so they only use and interact with their processes, and allow engineers to work for different parts of the same system. Implementing ML leads to smart manufacturing (reduce and automate repetitive tasks, and improve predictability and overall performance) while enabling big amounts of data analysis.

SAP Digital Manufacturing Cloud

Nowadays, IIoT data can be used not only by one department in the company - the engineering team for example. The information on product usage could also be valuable for the sales team to adjust their strategy. This trend is fully supported by SAP's Digital Manufacturing Cloud, a solution for manufacturing companies that need enhanced performance while keeping their data and processes safe.

The manufacturing companies in the 4.0 Industry era need intelligent solutions, able to connect and offer highly predictive insights. SAP Cloud covers this demand by allowing connections between people, equipment and operations together with the integration of manufacturing processes with business operations. To allow the constant connection, 4.0 technologies are developed in the Cloud, and the upgrades or changes in the system are automatically integrated into each component of the network. The interconnected machines and operations also include safety standards created and implemented for the workers' well being.

One of SAP Digital Manufacturing Cloud's roles is helping companies in the manufacturing industry optimize performance through its IIoT systems. The tool can be either used for execution, where SAP provides all the solutions in the manufacturing sector, or for insight solutions, which focus on performance.

Final Thoughts

IIoT is taking a step forward on every chance it gets, creating new opportunities for enhanced business benefits for manufacturing companies. SAP Digital Manufacturing Cloud enables a few capabilities that make the difference for these companies.

Those capabilities include:

- Predictive quality to comply with standard specifications, allowing the engineering team to implement predictive algorithms to reduce damage and recommend fixes.

- A manufacturing network, integrated with SAP Ariba, which connects the systems to the customers in the supply chain industry and with technical certification companies

- A Cloud providing execution capabilities and insights based on the data collected and analyzed, which integrates business systems with other components.

How is your manufacturing company keeping up with the latest technology developments?

Get in touch with SE16N and let's explore the benefits your company will leverage by implementing SAP Digital Manufacturing Cloud.