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Kari Terho,
Vice President

eLisa

'DIGITIZING FACTORIES' WITH SMART IoT SOLUTION

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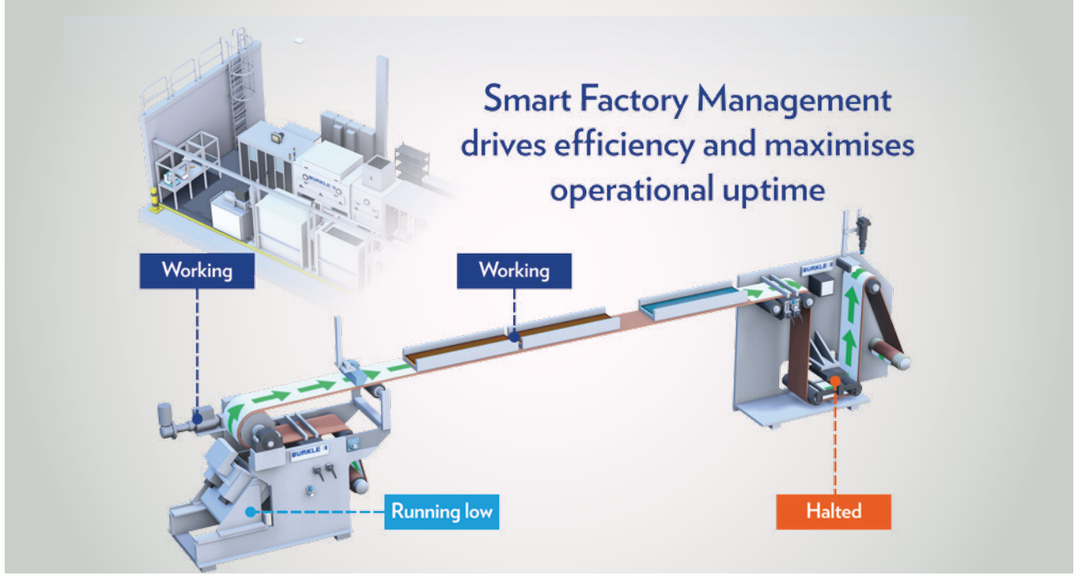
CIO Applications Europe TOP 25
IoT SOLUTION
Provider Companies - 2018

By Shivali Sharma

According to a Capgemini report, 76 percent of manufacturers are either working on a smart factory or formulating it. However, only 14 percent of companies are satisfied with their level of success. This essentially means the industry needs to be guided through the way to digitizing their factories. In Kari Terho, Elisa's VP's words, "The industry lacks in terms of connecting and collecting the data from various data sources in a factory and creating a single data lake, and further utilizing that data to optimize the factory to avoid unnecessary problems." He goes on to talk about the hurdles that businesses address with regards to siloed processes, which also result in prolonged production cycles and quality concerns.

By adopting technologies like IoT, factories are moving towards a future that would be free of all the above-stated concerns, and will assure a streamlined and smart production process. With a similar vision, Finland-based Elisa—a telecommunication company—brings a Smart Factory Management solution. The company also offers its clientele with a range of communication and IoT services. Elisa works with the vision of 'digitizing factories', an idea the company has consistently focused its efforts on. A manufacturing unit commonly has machinery from different brands such as Fuji, Siemens, and so on, and also has different production lines. With a lot happening in the production cycle that employs various technologies, machinery, and equipment, it becomes challenging for the plant managers to recognize the loopholes affecting the production. As every machine works separately producing independent data that has to be analyzed separately, it turns out to be a lengthy and time-consuming process. Elisa's smart factory management solution simplifies this process by obtaining data from various machines, analyzing it, and optimizing it to find a problem. It even performs the predictive maintenance and predictive failure detection. The company also creates a single user interface so the factory will not need to have a separate monitor room in the future to scrutinize the devices used in the plant.

Kari Terho,
Vice President



Elisa adopts a 3D model, which allows the user to access data through a virtual factory web user interface through any device. It enables the managers to get full control and access to all the data in the factory as and when required. Elisa's smart factory solution is built on PTC Thingworx Enterprise Innovation platform, which empowers it to monitor and manage the production process. "We have been delivering these solutions for four years now, as a PTC Thingworx partner. We have been developing productized solutions for effectively connecting and analyzing data from various data sources using different tools like Kepware," elaborates Terho. The company has developed a three-step process for factories to digitize their operations. The first step is to connect and understand the data, the next step is to visualize it to create all the definitions of KPIs, user stories, 3D models, 3D views, and the last step is to act on the data. This lean process then delivers the outcome, providing the test results in nine weeks. This process takes normally months to complete, however, Elisa does it in weeks with an assurance of improved quality.

Elisa's IoT smart factory solution has also been selected to participate in the European 4.0 Transformation Center project in Germany. As a part of the plan, the company is assisting three factories, one of which is e.GO Mobile AG with focus on production of their electric cars. Elisa has been selected to provide tools for production optimization and visualization with their IoT smart factory solution.

e.GO Mobile's electric cars factory has a multi-stage production process which is carried out in discrete steps, and the end product has significant quality variations. "What we do in there is we have set the analytics goals, so the subject matter expert sees the first stages as critical in setting the highest possible product quality and all stages mainly need the quality level that is reached in practice," Terho adds. The company does it by creating a virtual datalake so data sources of all process stages are connected to a virtual factory model, and traceability is established for connecting process measurement data to individual products and data APIs are created for descriptive analytics. Elisa then learns the patterns to verify expert views related to the first stage being critical for the highest possible quality level. In the third step, the company forecasts quality outcomes and optimizes the system, in the fourth stage. Elisa, based on this process then establishes the best operational practices for the factory. This process ensures significant improvement in actual quality metrics and allows the user to be connected to all available data sources to analyze product quality metrics.

AN ECOSYSTEM THAT HAS EVERYTHING CONTROLLED AND MONITORED IN A SINGLE SYSTEM IS WHAT THE COMPANY SEEKS TO OFFER

"The whole concept of being creative is virtual factory smart 3D smart factory management, which is really on edge at the moment and that added to AI and AR will lead us ahead," says Terho. The company is serving already customers like Procter & Gamble, Danfoss, and aims to serve other large players like Nestle, Unilever, and of the likes that have hundreds of factories to manage and not just one. Elisa aims to help such companies create a service operation center, which provides real-time access to data and understandability of the performance of each factory. An ecosystem that has everything controlled and monitored in a single system is what the company seeks to offer. CA

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Top 25 IoT Solution Providers - 2018

The world was in awe as Jesse W. Reno patented the first working escalator in 1892, calling it, "endless conveyor or elevator," one of the first steps taken towards automating daily tasks for greater convenience. Although the genesis of the concept dates back to the industrial revolution, they served as the building blocks for the research and development in automation. In the 21st century, automation is seen across a broad spectrum of applications and use cases, Internet of Things (IoT) being one of the most prevalent and widely pursued genres of automation. Today, IoT has made escalators smarter and more power efficient with motion and proximity sensors, a thought-worthy example of how the technology has evolved over the years since its conceptualization.

Prepped as a technology of the future, IoT has witnessed a stable growth, in Europe and global markets, maintaining a consistent 3 percent growth annually. The premise of optimized workflows has leapfrogged industrial efficiencies and time-to-market intervals by a considerable amount, prompting technology connoisseurs to pursue research and development in the field of IoT. Right so, IoT technology is seen as a Skunkworks initiative or as a part of the flagship offering in most organizations; a stride aligns them in line with the growing trends in the technology space.

On the same note, CIO Applications Europe's current edition lists "Top 25 IoT Solution Provider Companies - 2018" that hold expertise in helping businesses implement the best technologies. The list presents to you some of the most prominent organizations in the IoT landscape, capable of leading their clients towards excellence by supporting them extensively. By getting direct support from these eminent solution providers, companies can ramp up their operations for greater success.

Company:
Elisa

Key Person:
Kari Terho
VP

Website:
elisa.com

Description:
Offers smart factory solution built on PTC Thingworx Enterprise Innovation platform to help digitize factories