

Kalpen's Konnection – July 2020

It's been over 3.5 months that I have been confined to my office due to Covid-19 Pandemic. We at Provincial Controls are ceaselessly toiling from our home & office by maintaining social distance, wearing mask, sanitizing and washing hands frequently, for our customers. But now, I am getting cabin fever, seriously, it's like, time to get out and do some real work. Hope this pandemic is over soon and I can again go out and meet some customers!

In the future, when we will look back on 2020, I am sure that we will consider it one of the more interesting periods of our lives. In the meantime, let's focus on staying safe & well and talk about something that touches our daily work life as Automation professionals – Digital Transformation & Big Data.

Digital Transformation – Is the use of digital technology to solve problems. It is about transforming processes that were non digital or manual to digital processes. A mobile phone with few sensors combined with smart applications have turned our lives around. Development of smart sensors, open communication protocols, open source programming languages, Internet of Things, Artificial Intelligence and many such technological advances has brought 4th Industrial Revolution, known as “Industry 4.0”.

Industry 4.0 is an information driven revolution and BIG DATA is at the core of it. For an automation professional, process and data automation is nothing new, Industrial Control & Safety Systems have been used for decades to monitor, control, and report on the operation of processes. Operation of these processes produced data but in the absence of communication standards & software tools these data were used to the limited extent for monitoring & controls only and then discarded, making the process optimization efforts relatively useless.

Traditional Control & Safety Systems had limitations in terms of the brand of sensors, PLCs and higher level systems (e.g MES, ERP systems) they can communicate with. Collecting Big Data for true Digitization of the plant floor requires interoperable systems which will help bring data to “Single Pane of Glass” for visibility and further use. Once you have captured Big Data you can use off-the shelf tools to dissect, slice & analyze it to predict equipment failures, learn plant safety performance, forecast production & profit/loss and much more.

Although there are tools readily available to help plants/factories in digital transformation, care must be exercised in selecting tools, systems & field sensors for your processes. End-user should select products from manufacturers that are designing Smart, Secure & Interoperable Solutions from ground up. You can buy devices & systems with required software already installed, configured & much easier to deploy which can save time & money. Consideration should be given to the Cyber Security challenges that “Connected Plant Floor” will bring. The digitization age demands quick reaction to changes with greater flexibility so consider using modular systems that are scalable and can be extended/adapted to changing requirements (e.g. statutory requirements).

With careful planning, consideration and selection of right vendor/technologies, digitization of the plant floor can be efficient & faster than ever. There will always be challenges, but with modern tools & technologies we are prepared to meet them more than ever.

Konnnect with me and let me know your feedback, Happy Digitization everyone!!

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