



Focus on Technology In Manufacturing

Tech is Powering the Factory of the Future—But Also Hindering It

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As long ago as 2016, Information Week talked about the “Factory of the Future” in an article that explored how technology in general and the Internet of Things (IoT) specifically could drive the digitization of manufacturing. This technological revolution promised a lot: increased efficiencies, fewer product defects, and an increase in customer satisfaction. As we close in on a new decade, almost 4 years out from that article, what, if anything, has changed in manufacturing, and are we closing in on the “Factory of the Future” yet?

Tech to the Left, Tech to the Right

The 2016 article explored a wide range of potential areas where the future could be made. It looked at the impact of the cloud, social and mobile networks, of IoT, and of Big Data. It is fair to say that all of these are indeed having an impact on manufacturing in 2019, that technology is indeed starting to power the factory of the future. But, perhaps, what’s more surprising, and ultimately more damaging, is the technology that is actively hindering the move to the future: so-called legacy technology.

A Legacy is Not Always a Good Thing

The software used in manufacturing hasn’t always had the best reputation. It has gained notoriety, whether fair or not, for having limited features, being hard-to-use, and costing a lot of money. This enterprise software is now starting to look seriously dated, which isn’t surprising given that many of the applications people continue to use were designed and built in an era before mobile phones and cloud technology even existed. Consequently, the tools still in use deliver confusing interfaces that make storing and searching for files a nightmare, where maintenance is more and more complicated every year and the likelihood of a critical system failure is now more of a certainty than risk.

These legacy systems *did* do a good job when they were implemented but are now patently not fit for purpose. So what is the alternative?

Bridging the Divide

While it is clear that the incumbent legacy solution is no longer up to the task, organizations still need to find a secure, easy-to-use, compliant alternative. There are two approaches to this replacement conversation:

One approach is to look for a direct replacement, something that performs in the same way as the old system but is more modern, perhaps mobile and cloud-based, with a flexible pricing model. This approach misses the point for me, however, as it “repaves the cowpath,” or simply modernizes the existing way of working.

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The second approach engages with the opportunity to rethink the way in which the factory operates, the way in which technology can fundamentally redesign processes, supply chains, and every part of the organization. In doing this we quickly realize that the only way to power that agile, dynamic, modern manufacturing environment is via the cloud.

The Future is Now

Let’s focus on one specific part of the factory of the future: the need for quality management. As we all know, quality is much more than just the quality of the finished product. It is also about the processes put in place to manage overall quality and the quality management of those processes themselves. In the distant past this was a manual paper process, and many took a massive step forward with the digitization of that process

using document management systems. That was a step forward but, as mentioned above, was really a case of simply digitizing what was there before, good or bad.

One example is around the management of policy or procedure documentation. In the paper process only one person could make changes to these documents, because they were paper. In the document management version this changed, right? Well, no, in most cases it did not. The legacy document management systems in place simply replaced the old paper process with exactly the same digital process and made no enhancements.

We are now at an inflection point where modern, cloud-based systems can radically change the way in which we look at quality management. From enabling something as simple but massively important as collaborative editing of documents to remote mobile approval of workflows and acceptance of new policies, to AI-powered automated validation against GxP compliance, the factory of the future, or at least the quality management system of the future, is already here.

Are You With Us?

Everyone knows that change is difficult. Moving to a new cloud-based system from your legacy application is no different. But to counter that change I want to make two simple arguments:

1. Are you really happy with your current systems, and do they make your job as easy as possible?
2. Do you really think your competitors are not exploring the exact changes I am proposing?

If you answered “yes” to either of those questions, then good luck. I would argue that you are either delusional or simply lying to yourself. If, hopefully, you answered “no,” then come with me and let’s start exploring what the system of today looks like and, more importantly, how you can drive the future success of your organization by breaking the chains of legacy today. ■