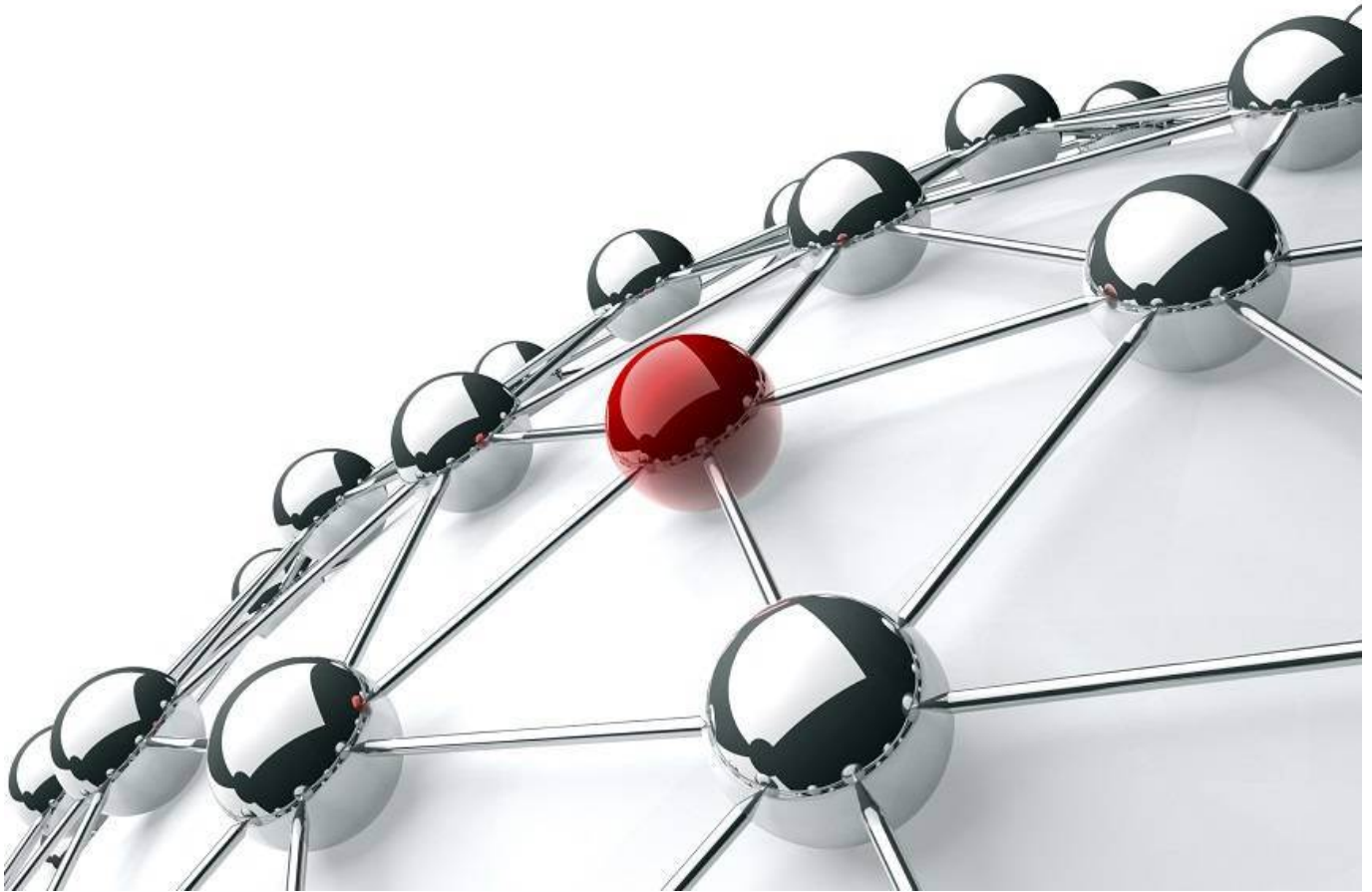




Smart Manufacturing and Its Effect on System Integration

BY LUIGI DE BERNARDINI | TUE OCT 20 2015

There are many different points of view when it comes to explaining what the term “smart manufacturing” means. The concept is complex because the term has very different meanings depending on who is using it. As such, it has a range of meanings and includes many topics—such as the Internet of Things, cloud computing, analytics, and Big Data—that are, as yet, still not defined to everyone’s satisfaction.

Given that every company will use some mix of the Internet of Things, cloud computing, analytics, and Big Data in its own smart manufacturing formula, it’s worth considering how the integral role of the system integrator relationship with manufacturers will be affected in the process.

The first thing to consider is the clear trend across industries that involves moving away from the concept of value associated with possession to the value of use. You can see this happening in the aerospace market, for example, where more aircraft are being rented and paid for on a usage basis rather than being sold—just like we’ve been seeing with the software industry as it’s moved to various “as-a-service” offerings. Though this trend is most clear in the consumer market, with products such as Office365 and Adobe Creative Suite, it is being adopted—albeit more slowly—in manufacturing.

This move to industrial software-as-a-service will impact manufacturing software—such as manufacturing execution systems, laboratory information management systems, and quality applications—more than traditional automation technologies such as programmable logic controllers and supervisory control and data acquisition systems. As a result, system integrators will have to be ready to change their business model, at least in part, by offering subscription services or by focusing on other aspects of the business that may be less impacted by this transformation.

Another important aspect of smart manufacturing initiatives that will impact the manufacturer/system integrator relationship is the way in which manufacturers tend to view these initiatives as being transformational to their business. One area of thought on this is that professional system integrators may no longer be required as they once were, since the complexity of these initiatives is being reduced due to easier to deploy “as-a-service” technologies. And though it’s true that the complexity of adopting a single technology is shrinking, it is also true that integrating a set of significantly different technologies is required to create a complete solution. In this sense, the role of system integrator retains its importance, precisely because of the ability to provide a broad set of skills—from IT and hardware knowledge to industrial communication and network security expertise. Plus, most companies today operate much leaner than in the past and no longer have the same level of interest in developing skills that aren’t core to their business.

The market is changing fast and predictions are that an exponential acceleration is coming, which is likely to put any system integrator who is not prepared for it in serious difficulty.

As a result, I think the role of system integrator will, in some ways, become more like it was years ago, before the rise of the specialized system integrator firm targeted toward a specific market. To play an active role, however, a system integrator will still have to develop the skills required for the industries they serve in order to be a credible and reliable partner.

System integration companies are thus in a complex phase—but one that offers interesting opportunities. They need to support the traditional business model, but at the same time be ready to support customers who ask for their new skills. The time available for system integrators to make this adjustment is short. The market is changing fast and predictions are that an exponential acceleration is coming, which is likely to put any system integrator who is not prepared for it in serious difficulty.

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Published on [Automation World](#) – Oct. 19th 2015