On the Edge of…Industry 4.0

The term Industry 4.0 was first introduced in 2011 in Germany and a working group was developed to present this concept to the German government. In 2013, the final report was issued and presented at the Hanover Fair. The first industrial revolution was when steam and water power were introduced into mechanized manufacturing. The second industrial revolution came when electrical power was introduced into the manufacturing process, with the third revolution coming with the integration of computers into the industrial mechanization. The 4th revolution has been identified as the use of full computerization of the manufacturing process. This means not just having computerized equipment for manufacturing, but having the entire manufacturing process computerized, integrated, and online in real-time. One such way this would be implemented is to have manufacturing sites fed through a central system that can make manufacturing adjustments in real time (ex.- An earthquake at one manufacturing site would not hinder overall output as the other sites would adjust output in real-time to compensate for the loss of production). Additionally, individual plants could self-optimize their production process based on the real-time data collected on site. While none of this sounds new, the use of computerization and real-time capability for production optimization are the new, stream-lined production that Industry 4.0 is trying to implement.

Along with new materials and equipment, manufacturing in the future will also evolve. Part of pushing this revolution is recognizing what these improvements may be and coming up with a clear plan to implement the changes. *Part of what Taiyo does is recognizing how the industry will change and developing materials that can and will take advantage of the newest production methods. Our new materials such as inkjet solder mask, flexible conductive silver pastes, and fast-curing roll-to-roll applicable materials are just part of the way that we strive to remain **Your Ultimate Solution**.*