IBM Brings Cognitive Manufacturing to the Factory Floor

Launches Cognitive Visual Inspection, a new IBM Watson IoT solution that can help manufacturers reduce inspection times by up to 80 percent

HANNOVER, GERMANY - 25 Apr 2017: At Hannover Messe 2017, IBM (NYSE: IBM) today launched a new IBM Watson Internet of Things (IoT) solution, Cognitive Visual Inspection, to provide manufacturers with a 'cognitive assistant' on the factory floor to minimize costly defects and increase product quality. In fact, based on early testing of a production cycle that typically takes 8 days with ½ day required for needed visual inspection, the new IBM solution reduced inspection time by 80 percent and cut manufacturing defects by 7-10 percent.

Using an ultra-high definition (UHD) camera and cognitive capabilities from IBM Watson, the solution captures images of products as they move through production and assembly, and together with human inspectors, can detect defects in products, including scratches or pinhole-size punctures. The solution, which continuously learns based on human assessment of the defect classifications in the images, is designed to help manufacturers improve for product excellence, achieve never seen before specialization levels, and deliver on the promise of Industry 4.0.

According to Business Insider Intelligence, the installed base of manufacturing IoT devices is expected to swell 3 times -- from 237 million in 2015 to 923 million in 2020. By that year, manufacturers will spend approximately \$267 billion on the IoT. Manufacturing of these devices require the highest level of inspection for quality during every stage of production. Over half of these quality checks involve visual confirmation, which helps ensure that all parts are in the correct location, have the right shape or color or texture, and are free from scratches, holes or foreign particles. Automating these visual quality checks is difficult due to volume and variety of products, as well as the fact that defects can be any size –from a tiny puncture to a cracked windshield on a vehicle.

"By bringing cognition to the factory floor, IBM is helping usher in the fourth industrial revolution where

entirely new levels of efficiency, flexibility and product excellence in manufacturing can become an everyday reality," said Harriet Green, General Manager, IBM Watson IoT, Customer Engagement and Education. "With our new Cognitive Visual Inspection capabilities, we are bringing a new set of intelligent eyes to the manufacturing floor that have the potential to help manufacturers not only virtually eliminate product defects, but can also help businesses maintain product excellence, build brand reputation and increase revenue."

The new solution helps inspectors accelerate the sometimes tedious and expertise-based visual inspection process to quickly identify and classify defects in the manufacturing process – helping to increase production yield.

IBM is at the heart of IoT transformation with its \$200 million investment in its state-of-the-art Watson IoT Center headquarters in Munich, Germany, IBM's largest investment in Europe in more than two decades and the industry's first-ever cognitive IoT collaboratory. With Watson IoT, IBM is not only helping clients to analyze and act on data from millions of connected devices, but also is helping clients across industries to navigate the path to explore new business models, create excellence in service and eliminate redundancies. The Watson IoT headquarters houses more than 1,000 IBM researches, designers and developers who are working side by side with clients and partnered co-located at the Center to help monetize the IoT and transform business.

About IBM Watson IoT:

- For more information about IBM Watson IoT, please visit www.ibm.com/iot.
- For more information about IBM Watson IoT for Manufacturing, please visit https://www.ibm.com/internetof-things/iot-solutions/iot-manufacturing/
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