

SMART collaborates with IBM to future-proof its manufacturing operations with AI-driven automation

Petaling Jaya, 3 May 2021 — SMART Modular Technologies (SMART), a global leader of speciality memory and storage solutions manufacturing in Malaysia, today announces a collaboration with IBM to transform its operations into a cutting-edge manufacturing facility in anticipation of Industry 4.0. SMART will deploy [IBM Maximo Visual Inspection](#) integrated with AI-powered collaborative robots (COBOTS) to develop innovative manufacturing solutions while empowering its workforce with the latest technology skills.

SMART's memory components are embedded in systems that face some of the most demanding physical conditions from military and aviation to outer space applications where extreme quality is a truly critical performance benchmark. SMART's well-trained inspectors examine memory chips under a microscope for defects such as cracked solder joints, damaged components, or any other kinds of defects in a traditional manufacturing process environment. These manual inspections require specific expertise, often resulting in inspection delays.

IBM Maximo Visual Inspection helps to identify and isolate defective semi-conductor components before they ripple into the next stage of processing, bringing quality control automation to SMART's manufacturing process. Visual Inspection includes an intuitive toolset that empowers SMART's quality engineers to label, train, and deploy deep learning vision models. This is done without coding or deep learning expertise and is aligned with the global IPC610 standard for inspecting printed circuit boards, teaching the system to recognize potential faults in each product line. This clearly demonstrates how AI can be flexibly applied to make automation work in complex environments. When one of the AI-powered robots identifies a defective product, it automatically sets it aside into a "no good tray" so quality control specialists can carry out a more detailed inspection. The solution will help SMART reduce inspection times, provide extreme consistency in detecting defects, improve quality and reserve human expertise for value-added tasks.

Commenting on the collaboration, Vejay Kumar, General Manager of SMART said, "We are delighted to work with IBM to enable us to continue transforming and innovating our operations as we are gearing up the implementation of Industry 4.0 to future-proof our businesses. A highly digitized manufacturing operation is instrumental in enabling us to be highly productive, boost efficiency and product quality as well as collaborate with an upskilled workforce. We expect the automated inspection process will help increase our production yield by 10%, while increasing overall production throughput by 20%."

SMART's manufacturing operations in Penang, Malaysia is the key supply chain operations centre for the insatiable Asia electronics market as well as the centre of excellence for transformative product manufacturing

for their global business.

"IBM is proud to help SMART in their digital transformation journey to accelerate the pace of innovation across high value-added manufacturing," said Catherine Lian, Managing Director of IBM Malaysia. "With IBM Maximo Visual Inspection capabilities, we are bringing a new set of intelligent eyes and automation to the manufacturing floor to allow SMART to maximize production output while minimizing cost and defects."

SMART receives all the requisite tools and training from IBM to adopt and utilize the emerging technologies and excel in their industry through a series of enablement and design thinking workshops on Artificial Intelligence (AI), Hybrid Cloud and IoT. IBM believes in providing the resources and skills customers need to acquire unmatched expertise in their field to give them the competitive advantage to thrive in the digital era.

"Manufacturing is becoming increasingly more efficient, modular, and automated. To reach its full potential, it is imperative for the industry to continue to embark on futureproofing measures by incorporating Industry 4.0 technologies in their digital transformation. For many end users, autonomous operation is the destination to achieve their smart manufacturing goals. The collaboration between SMART Modular and IBM clearly supports the country's agenda to be the Digital Manufacturing Hub as manufacturing is a core driver of economic growth for Malaysia, contributing about 23.6%* to Malaysia's GDP in 2020," Lian said.

IBM is committed as a trusted technology partner in designing and deploying transformative technologies that can help Malaysian organisations leap frog on a global scale efficiently and sustainably.

Maximo Visual Inspection Mobile simplifies the process of training, deploying, running and managing computer vision models by leveraging the capabilities of compatible devices. This enables highly efficient and accurate visual inspection. You can read more about Maximo Visual Inspection Mobile [here](#).

**Source: Malaysia Economic Performance Fourth Quarter 2020, Department of Statistics Malaysia, <https://www.dosm.gov.my>*

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