

Annex: Meiban's iSmart Factory

The Precision Engineering (PE) Industry Transformation Map (ITM) aims to drive adoption of digital manufacturing technologies within the PE industry to help companies create new competitive advantages and enable new products, processes, services and business models.

The MoU signing ceremony between Meiban and her technology partners marks the start of the company's transformative journey to create a smart factory of the future, and prepare Meiban for the next wave of growth enabled by digital manufacturing technologies. The project embodies many of the outcomes that the PE ITM aspires to achieve. These include increasing in productivity through automation, deepening technical capabilities of local companies to create new products and services, creation of good jobs for Singaporeans and continual upgrading of the local workforce.

About the MoU

Under the MoU, the companies will work with Meiban to:

- 1) To co-develop and co-build robotics/automation/smart factory software solutions together for industry 4.0 standards.
- 2) To test bed and implement the solutions in Meiban factories
- 3) Possible future commercialisation and sales of the robotics/automation/smart factory software solutions to other factories locally and globally

About the Partners

The four companies involved in the MoU signing are:

1) Arcstone

Arcstone seeks to revolutionize the way data is utilized in enterprises. Termed arc.ops™ (Arcstone Operations Platform), Arcstone's in-house IoT/SaaS platform integrates with IoT sensors, machines, ERPs, and workstation tablets for fully automated to fully manual processes in manufacturing, machine maintenance and warehousing.

2) PBA

PBA (Precision Bearings and Automation) started off as a bearings and mechanical components trading company which evolved into a contract manufacturing, aerospace components distributor, spindle repairs, IT services and a robotics & customized solutions company. PBA has a strong focus on industry education as well as the deployment of robotics and automation integrated with system solutions to meet industry demands.

3) Kuka

As a pioneer in robotics and automation technology, KUKA Robotics is one of the leading manufacturers of robotic systems worldwide. KUKA offers a unique and wide range of industrial robots and robot systems, covering all common payload categories and robot types.

4) RansNET

RansNet Singapore Pte Ltd is a Singapore-based company started in 2011. RansNet develops cloud management platform (mfusion) and Internet networking solutions (mbox) for enterprises, public venues and hospitalities.

Desired Outcomes

1) Higher level of productivity and efficiency through an Integrated 'smart' factory

The objective of iSmart Factory is to conceive, test and validate Industry 4.0 solutions within a real manufacturing environment. Focusing on intellectual property development, data analytics and monitoring control platforms, the overall aim is to increase productivity and efficiency in material control, line and equipment smart planning, better resources usage and logistics management. The success of Meiban's digitalization initiative will be replicated in its factories in Malaysia and China, culminating in a manufacturing network coordinated from the control tower in Singapore.

2) Growth opportunities for suppliers and solution providers

The local digital technology suppliers and solutions providers will also benefit. The four companies – Arcstone, PBA, Kuka and RansNET – will be the receptacles of the new knowledge and innovations that will be created. Partnering with a Digital Champion like Meiban gives them the opportunity to grow and internationalise as their solutions are scaled up and deployed overseas.

3) Creation, redeployment and redesigning of jobs

The iSmart Factory, will involve a multidisciplinary core team of software and UX/UI engineers to integrate different advanced technologies across shop floor operations. Instead of production planners, there may be robot coordinators overseeing multiple robotized units to optimize production, and professional systems integrators.