

TORAY MALAYSIA SYSTEMS SOLUTION: A BEACON OF TRANSFORMATION IN MALAYSIA



TMS Spice Office.

- Toray Malaysia Systems Solutions (“TMS”) was set up to provide a full suite of Information Technology (IT) solutions and services in support of Toray companies in the region.
- TMS has digitally transformed Penfabric, Toray’s textile arm in Malaysia, to be at the forefront of Industry 4.0.
- Toray believes that Malaysia has a dynamic workforce and pipeline of talents with excellent qualities and multilingual skills
- TMS incorporates an open office concept to foster creativity and strong communications, while promoting safety and sustainability.
- TMS is on track to become a centre of excellence for IT services locally, with the vision of expanding to other South-East Asia countries and globally.

Toray is a behemoth in the manufacturing industry with headquarters in Japan and a global network spanning 26 countries and regions. The chemical conglomerate first invested in Malaysia in the early 1970s. Since then, the TORAY Group (Malaysia) (“TGM”) has grown to be one of Toray’s major investments outside Japan. Currently, the Group has about 2,500 employees and generates consolidated net sales exceeding USD1 billion annually.

To support Toray’s business expansion in the region, the IT Division of TGM was incorporated into the new IT-solutions company – Toray Malaysia Systems Solutions (“TMS”) in 2017. A wholly-owned subsidiary of Toray Industries, Inc. Japan, TMS’ key mission is to provide Global Business Services to Toray Group entities, both locally and abroad.

Major Player in the IT Solutions Sphere

TMS provides a full suite of Information Technology (IT) solutions and support services to TGM to digitalize its manufacturing operations spanning three business segments – Fibres & Textiles, Plastics and Films. These include customised software application solutions, information security, radio-frequency identification (RFID), IT infrastructure services, mobile applications, Internet of Things (IoT), Research and Development (R&D), and implementation of concepts into actual processes. A notable achievement is the enhanced Information Systems customized for Penfabric that is being deployed at other Toray companies.

As TMS accumulates more experience and technical knowledge, it is expected to replicate the successful IT solutions and applications across the Toray Group worldwide. This unique proposition known as “Common Application System” is currently a priority of manufacturers operating in multiple locations. TMS believes that its system could also be implemented for the retail business as well as managing customer bases - further extending the company’s strength into other sectors.

Digital Transformation in Leading Innovation

TMS’ efforts in intensive R&D coupled with investments in digital services utilising emerging technologies, have given Toray a leading edge in the manufacturing of textiles. For better coordination with other Toray subsidiaries, TMS built a state-of-the-art cloud system whereby access to big data as well as the running of operations could be done remotely. Combined with RFID tagging, all products and process flows could be traced and tracked in real time. By taking advantage of the advanced IT solutions, TGM companies have successfully increased productivity and efficiency while minimizing inventory and reducing cost.

TMS has also ventured into other smart factory initiatives with real-time location tracking as a key feature. Significant achievements include the innovative IT solutions integrated into the “Aquarium” and “Mine our Minds (MoM)” facilities at Penfabric. Aquarium is an advanced textile digital library which stores a vast amount of historical data and offers on-the-spot

retrieval of information. This digital library is renowned in the fashion industry as chief designers of internationally recognised brands travel from afar to use the facility. The MoM contains a cache of fabric samples where items needed are easily traced, displayed on a screen and retrieved with RFID technology.

Other smart factory initiatives also include Penfabric Digital Manufacturing System (DMS) which offers visualisation of production information in the shopfloor with real time KPI and alert notification. Immediate action can be taken in the event of machine trouble or quality issue. This is a pioneer in textile industry on digitizing production process. Penfabric Supply Chain Management (SCM) implementation with RFID has also enhanced system integration and collaboration with raw material suppliers. RFIDs updated with related details are tagged to raw material for delivery to Penfabric, and the same information can be retrieved in the entire supply chain that speeds up raw material purchase & inventory movement tracking process.

Keeping up with the cyber-physical industrial revolution, TMS is able to implement interoperability between devices through the use of RFID and IoT, thereby improving efficiency, reducing waste and allowing traceability throughout the supply chain. In addition, TMS is casting its gaze towards Wide Area RFID to revolutionise Toray's processes to prevent theft and misuse of assets, tracking and identification



of personnel, among other possibilities. The company has also invested in new machinery for Artificial Intelligence (“AI”) inspection as well as Machine Learning technologies, as it believes that there is a global demand in these areas. Ultimately, TMS aims to expand its range of IT solutions and digital services to best increase productivity and value proposition across the Toray operations.

Malaysia's Talent in the Vanguard

Toray believes that Malaysia has a dynamic workforce and a substantial pipeline of

graduates with excellent qualities in terms of knowledge, skills, discipline and commitment. In order to steer the IT transformation both within its organization as well as external linkages, they were in need of many business analysts, network engineers, information security personnel and software engineers – all of whom were found in Malaysia. Currently, TMS is home to a group of multilingual engineers and IT analysts, comprising 95% local talent. The Malaysian employees' multilingual ability has made it possible for TMS to serve Toray's subsidiaries in Indonesia, Thailand, and other Asia countries. This multilingual capacity has supported Toray's Common Application System and made it a tremendous success.

Fostering a Multidimensional Ecosystem

To attract talents and ensure their long-term retention, TMS goes all out to create a multidimensional workplace, supported by its aggressive talent management strategy. The company practises an open office concept in order to foster an innovative and collaborative working culture, with strong communication among management and staff. Its “Hot Desking” concept, where employees are not assigned a specific workspace but are required to book workstations available at the start of the day, encourages adaptability and is economically viable as many members rotate with those stationed at the factory sites.

To cater for the personal and professional development of its Malaysian talents, TMS provides excellent training opportunities, including training in Toray Japan - it has a world class IT facility - as well as the chance to travel to other Toray facilities worldwide for seminars, lectures and other engagements. The company cultivates valuable linkages with academia, mentoring interns from local and overseas institutions of higher learning such as Toyohashi University of Technology, Japan, and Universiti Sains Malaysia. With the hardware, software and human capital in place, TMS is on track to achieve its mission of becoming a major centre of excellence for IT services in the region, with the vision of expanding to other South-East Asia countries and globally thereafter.



Peter Chan, Managing Director of TMS.