



Singapore Manufacturing
Federation
新加坡制造商总会

MEDIA RELEASE

INSIGHTS ON FUTURE OF MANUFACTURING INDUSTRY

5th August 2014 – A new wave of manufacturing is emerging worldwide, with new technological and scientific breakthroughs strengthening capabilities in manufacturing solutions. In view of this, Singapore Manufacturing Federation Standards Development Organisation (SMF-SDO) and SPRING Singapore jointly organised the Quality and Standards Conference 2014 on 5th August 2014. To explore the synergies of standards adoption in different areas of manufacturing, especially in the emerging trends in the sector, such as Additive Manufacturing (AM), Automation and Robotics, a dialogue session in the afternoon was organized as an essential extension to the Q&S Conference 2014.

Titled “Future of Manufacturing Industry Dialogue”, the dialogue session featured a strong line-up of speakers and key stakeholders in the manufacturing industry, who shared their views on various emerging trends and the role of standards. There was also an interactive panel discussion which provided a good opportunity for participants to have a better understanding on the updates of standards in the manufacturing industry.

Highlights of Dialogue

One of the highlights of the dialogue session was the AM presentation by Assistant Professor Yeong Wai Yee from Nanyang Technological University Additive Manufacturing Centre, School of Mechanical and Aerospace Engineering. Recognised as the third industrial revolution, AM technology is forecasted to play a major role in a various sectors such as biomedical and automotive in the next two decades. In her presentation, Professor Yeong shared the opportunities and challenges of AM technology.

“Additive Manufacturing is a disruptive technology that will change the current mode of operation for most of the adopters. It should not be seen as a one-off replacement of a particular manufacturing machine on the production floor. AM has the potential to replace a

manufacturing line and even create a totally different value stream within a company,” she said.

In addition to AM, the dialogue also presented the popular trends of industrial robotics and the standards that apply to ensure the safe use and development of robots.

Standards for Emerging Manufacturing Trends

Manufacturing is an established and important pillar of Singapore’s economy. In 2013, the manufacturing sector contributed a significant 18.5% to the nation’s GDP of S\$370 billion. As such, SMF has been appointed by SPRING Singapore as the SDO for Manufacturing Standards Committee (MSC). The MSC oversees the standards development, promotion and adoption of standards in the manufacturing industries. During the dialogue, Mr. Tay Jih-Hsin, Chairman of SMF-SDO Steering Committee and MSC gave an overview of MSC and the importance of standards in helping companies to be ready for the future of manufacturing.

“Standards are important and they permeate throughout the entire value chain of manufacturing. Standards implementation is another pathway towards improving a company’s productivity, branding, and economic competitiveness. This will help local SMEs’ forays into the international markets,” he said.

For instance, Additive Manufacturing registered a phenomenal growth rate of 28% over the last decade. In the coming years, standards on materials and testing specifications will be required to maintain the quality of AM products. MSC will assist in industry-led research studies in applied additive manufacturing to develop a standards system for AM.

Robotics is also a growing global trend. With the tightening of foreign manpower policies in Singapore, manufacturers are shifting towards automation in order to overcome the manpower challenges and to increase the companies’ productivity.

“MSC will also set the technical direction for standardisation at industry sector level and guides and monitors the work of the technical committees under its purview such as the Logistics, Additive Manufacturing, Automation, Robotics, General Manufacturing and Marine and Offshore areas. These are made up of committed and dedicated industry experts who volunteer their time and energy into the development of standards,” shared Mr. Tay.

About Singapore Manufacturing Federation (SMF)

Established since 1932, SMF represents the interests of the Singapore manufacturing community, driving its competitiveness and sustainable growth through serving industry-specific needs. Supported by 10 industry groups and six Centres of Excellence, SMF enhances the competitiveness of the industry by encouraging capacity development and capability building, and innovation-led productivity. For more information, please visit www.smfederation.org.sg

About SMF-Standards Development Organisation (SMF-SDO)

SMF-SDO administers the development, promotion and implementation of standards in these areas to meet the needs of industry and regulators. SMF-SDO is guided by the industry-led Singapore Standards Council, which provides advice on the directions, policies, strategies and priorities for the Singapore Standardisation Programme, managed by SPRING Singapore, the national standards body. SMF-SDO has four Standards Committees: Biomedical Standards Committee (BMSC), Food Standards Committee (FSC), General Engineering & Safety Standards Committee (GESSC), and the newly appointed Manufacturing Standards Committee (MSC). For more information, please visit <http://www.smf-sdo.org.sg/>

About SPRING Singapore

SPRING Singapore is an agency under the Ministry of Trade and Industry responsible for helping Singapore enterprises grow and building trust in Singapore products and services. As the national standards and accreditation body, SPRING develops and promotes an internationally-recognised standards and quality assurance infrastructure. SPRING also oversees the safety of general consumer goods in Singapore. As the enterprise development agency, SPRING works with partners to help enterprises in financing, capability and management development, technology and innovation, and access to markets. Please visit www.spring.gov.sg for more information about SPRING Singapore.

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Appendix A:

- Mr. Tay Jih-Hsin - Overview of Manufacturing Standards Committee

The Manufacturing Standards Committee (MSC) was set-up in April 2014 to oversee the development, promotion and adoption of standards in the manufacturing industry as well as the logistics support for the industry. The presentation shed light on the role and future plans of MSC.

- Assistant Professor Yeong Wai Yee – Additive Manufacturing – Emerging Trends

The presentation shared on the rise of additive manufacturing and its role in the transformation of today's manufacturing sector.

- Mr Lee Kok Wah - Case study: Implementation of New Manufacturing Technology - Role of Standards and Lessons Learnt

The presentation highlighted the following areas:

- the difference between regulations and standards
- regulatory requirements and safety trends
- big data as one of the emerging trends and its security

- Dr Tamao Okamoto – Robots in co-existence with Humans in SMEs : Standards as a means to overcome challenges and reap opportunities

The presentation illustrated standards as a means to overcome challenges and reap benefits for companies, with Japan as an example to showcase the successful marketing of robotics using standards. The speaker will also share Panasonic's success story of how it used standards as a business strategy to overcome challenges and uncover opportunities.