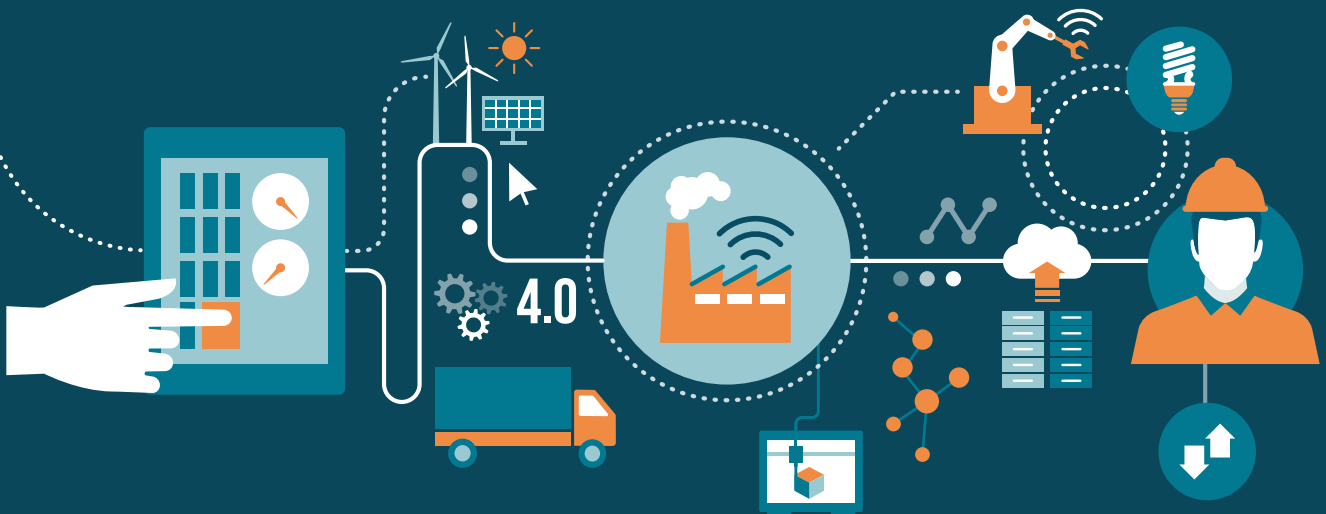




TRANSFORMING TOWARDS **INDUSTRY 4.0**



INSIGHTS
Manufacturing must
Change

**VIEWS FROM
THE INDUSTRY**
Transforming with the
Times

**INDUSTRY
FOCUS**
Singapore Packaging
Star Awards 2017

Hiring The Right Fit



“Mr Chia might not have had the necessary technical know-how when he first joined us, but the Career Support Programme (CSP) helped in defraying the cost of his first year of employment while he builds up the industry-specific skills he needs.”

Mr Tan Jit Khoon
CEO, Winson Press

For Winson Press, a local printing company, hiring Mr Joe Chia as their Head of Sales was an easy decision. Despite his lack of experience in the printing industry, Mr Chia impressed interviewers with his skills in development, customer service, team leadership and communications, which he honed over 16 years at his previous company.

According to Mr Tan Jit Khoon, CEO of Winson Press, the company often looks for people who share its values and have the personality required for the job. “Even if the new hire does not have the necessary technical knowledge, we trust that such skills and knowledge can be picked up on the job.”

Since joining Winson Press, Mr Chia has put in extra effort to learn every aspect of Winson Press’ printing processes, machines, materials and products. He also engages more experienced colleagues to seek their advice on production matters and industry news.

A Valuable Recruitment Resource

For SMEs such as Winson Press, recruiting good talent can be a challenge. Employers constantly worry that job applicants may lack the relevant skills or have high salary expectations. However, companies can tap on CSP to defray the cost of hiring suitable talent! After hiring eligible PMETs, companies can receive salary support of up to \$42,000 over 18 months.

CSP, which is open to companies who recruit either mature Singaporean PMETs, or unemployed PMETs who have been actively seeking jobs for at least six months, also enables talented PMETs like Mr Joe Chia to find fulfilling new jobs.

And with a fast-changing economy, workplace and skills demands are evolving rapidly. CSP is part of the Adapt and Grow initiative to help Singaporeans stay employable while

giving employers like Winson Press more incentives to hire PMETs. To date, more than 300 PMETs¹ have benefited from CSP.

And it is without doubt that Mr Joe Chia has flourished in his new company. His leadership skills have enabled him to foster a strong team spirit within the sales team and promote cross-department collaborations to rise above challenges.



Mr Joe Chia, Head of Sales,
hired under the Career Support
Programme

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*Eligibility Criteria:

- Unemployed and actively looking for jobs for 6 months or more (for Singapore Citizens of any age); OR
- Made redundant/retrained (for Singapore Citizens aged ≥ 40 years only)

For more information on CSP, please visit bit.ly/CSP-SMF or email enquiries to WSG_Programmes@wsg.gov.sg

¹Source : Ministry of Manpower (as of March 2017)

PRESIDENT'S FOREWORD

The Singapore Manufacturing Federation is deeply encouraged by recent reports of Singapore's manufacturing sector expanding for the 11th month consecutively. SMF, as the leading trade association for the manufacturing sector, is proud to be part of this journey in our efforts to transform the industry. We therefore take this growth indication with renewed perspective and confidence of the positive reception to our efforts and are spurred to do more for this industry. The Committee on the Future Economy has recommended that our manufacturing sector should sustain its 20% contribution to the GDP of Singapore.

With that said, Singapore must continue to constantly review the situation and look for initiatives to sustain the growth of manufacturing. For example, SMF has at its recent AGM amended its membership categorization and redefined "manufacturing" to include organisations that produce and support digital products. At the national level, from the many industry transformation maps that were announced by the government it is clear that the manufacturing sector has to be more digitally focused and productive. The manufacturing sector must gravitate towards advanced manufacturing and embrace technological and digital innovations to remain competitive and to reach global markets.

There are several programmes already available, and more will be added, for industry upgrading and digital transformation. Many basic digital solutions are now available in the market for businesses to start their digital transformation journey. I therefore urge our members to stay updated on the existing programmes and schemes and build up their business capabilities to stay ahead in the manufacturing sector. On this note, the upcoming Manufacturing Solutions Expo and Singapore Innovation & Productivity Conference happening later in October will see many digital solution offerings and sharing by digital transformation experts. More details may be found within the pages of this magazine.

In line with the theme of transforming towards Industry 4.0, this CONNECT issue features an article on the imperative changes of advanced manufacturing. Also, in a bid to engage related industry stakeholders and promote a future-ready Singapore, SMF's Building Products and Construction Materials Industry Group (BPCM IG) is in the talks to collaborate with the Singapore Institute of Architects (SIA) to build capabilities to train members in the areas of skills and technology to meet the evolving needs of the construction industry. We also held a seminar where Makino Asia shared its transformation journey towards Industry 4.0.

I hope the rest of the articles in this publication will inspire you and your organisation further towards manufacturing technologies!

Mr Douglas Foo
President
Singapore Manufacturing Federation



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Information is accurate as of May 2017



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SMF COUNCIL MEETS MINISTERS,

Mr Iswaran and Ms Sim Ann



SMF Council hosted Mr Iswaran, Minister for Trade & Industry (Industry) and Ms Sim Ann, Senior Minister of State for Ministry of Culture, Community and Youth, and MTI at a lunch dialogue session on 29 May 2017.

An exchange of updates and comments on economic topics such as trade non-tariffs; one belt one road; new markets expansion in Africa; and digitalisation in manufacturing ensued.

At his visit, Minister Iswaran reiterated SMF's role as an important TAC partner of the government in leading industry-level initiatives and supporting enterprises to scale up and make inroads into overseas markets.

The Minister also invited the Council to submit any new proposals and feedback that would support Singapore's growth and position in the global marketplace.

Mr Douglas Foo, SMF President also took the opportunity to report on the federation's position in redefining "manufacturing" in the industry. And that he was looking forward to working with the ministries and government agencies in formalising the redefinition. ■

AVA VISITS SMF

for dialogue with food manufacturers

SMF hosted the Agri-Food & Veterinary Authority of Singapore (AVA) over a dialogue session with member companies from the Food & Beverage Industry Group (F&B IG) at the SMF Building.

The dialogue, held on 9 June 2017, was chaired by Mr Sunny Koh, SMF Deputy President and the F&B IG Chairman. Representing AVA was Ms Tan Poh Hong, Chief Executive Officer with her team of group directors.

One of the key topics discussed at length was the new regulations on labelling and advertising of formula milk for infants up to 12 months, prohibiting the use of nutrition or health claims and idealised images on tin cans, and the parallel import of formula milk products.

Mr Eric Iew, Head of Regulatory Affairs of FrieslandCampina AMEA Pte Ltd said, "As a global manufacturer, this dialogue was very helpful in clarifying the new regulations for milk formula as a majority of

the products in Singapore are manufactured overseas and are based on overseas requirements. With clearer guidelines, it is our intent that vulnerable groups such as elderly and infants are protected against imported food products that are without recognised documentation for quality, safety and nutrition analysis." ■



Members companies from F&B IG with the team from AVA

SMF Commissions Song in Tribute to NS50 during **SAF DAY COMBINED REDEDICATION CEREMONY 2017**

For the fifth consecutive year, SMF organised the Singapore Armed Forces Combined Rededication Ceremony for the East Zone. This year saw a record of more than 500 participants including NSmen, staff and management from more than 100 organisations.

SMF facilitated the convergence of the public and private sector in taking the collective pledge to the nation. As a representative of the business community in the private sector, SMF believes that safeguarding Singapore's peace does not fall solely on the shoulders of NSmen. It is a shared responsibility with their employers.

Said Mr Douglas Foo, SMF President, "SMF, with 85 years of history, bears witness to the tribulations of Singapore from pre-war to post-independence. Today, we enjoy confidence from our investors in Singapore's business climate and it has borne much fruit in today's business environment. We must continue to uphold the peace, stability and security that Singapore now enjoys."

As Singapore celebrates its 50th year of national service, SMF, in conjunction with organising the rededication ceremony, commissioned a song to recognise the long-standing contribution of NSmen to the nation.

The song, titled 'Did You Ever Wonder Why', represents every NSman's guardianship of home and family, and resonates with all Singaporean men who have been through the shared experience. It was composed by Mr Eric Watson, composer-in-residence of the Singapore



108 organisations pledged their support to National Service.

Chinese Orchestra and delivered by the Singapore Pocket Opera Theatre during the ceremony.

Said Mr Watson, "After some conversations with SAF personnel, I understood that most NSmen were quietly rather proud of having served their country and accepted the necessity even though sometimes undergoing an uncomfortable and difficult experience. A sense of comradeship belonging and pride was forged which became a lasting and even a generational legacy. The commemorative song is about establishing bonds, building trust, dependence on comrades, developing self-confidence and ultimately, the protection of home."



The ceremony was held at SIT@Dover.

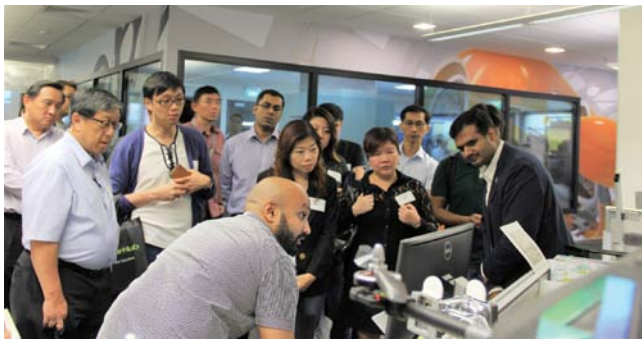


Minister for Manpower, Mr Lim Swee Say (middle) who officiated the ceremony, cut the NS50 cake sponsored by Prima Deli.

Visit to **AUTODESK SINGAPORE**

SMF's Electrical, Electronics & Allied Industries Industry Group (EEAI IG) organised a site visit to Autodesk Singapore R&D Centre on 28 July 2017. Centered on the theme of 'The future of making things', SMF members were brought on a tour of Autodesk's

newly-launched R&D Maker Space, featuring 3D Printers and CNC machines. With technology disrupting every industry in the way things are designed, made, and used, businesses must leverage on this in order to stay competitive. ■



Some 60 participants on the site tour.



Mr Tay Jih-Hsin, SMF Chairman EEAIG (right), presenting a token of appreciation to Mr Simon Ng, Autodesk's Head of Design & Manufacturing Industry, ASEAN.

Learning from **WONG FONG ENGINEERING**

Member companies from the Metal, Machinery & Engineering Industry Group made a visit to homegrown Wong Fong Engineering to learn about their corporate journey to innovate and scale up the value chain on 31 May 2017.

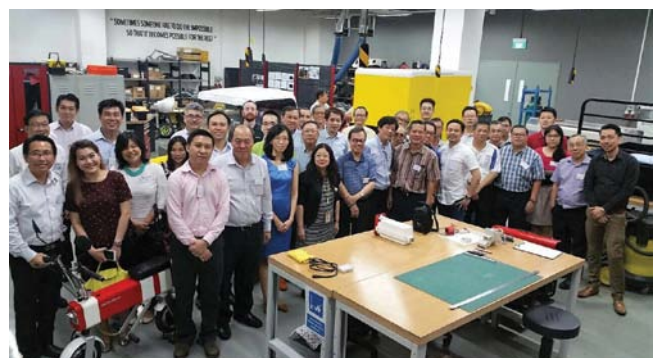
Mr Eric Lew, Executive Director of Wong Fong Industries Ltd and also the 2nd Gen leader of the family-run business hosted fellow members and presented candidly on not just the successes, but the challenges that emerged whilst transiting and transforming the business.

"Innovating and transiting from an integrated system service provider to a brand owner is not easy. It takes a lot of resources which most SMEs do not have. That is why Wong Fong decided to collaborate with others in order to make things happened," shared Mr Lew, "there are risks as the payoff takes time, but we have to try."

An initiative that kickstarted Wong Fong Engineering's innovation journey was the setting up of Wong Fong Research and Innovative Centre (WFRIC). Thus far, it

has teamed up with an F1 engineering giant to make an electric supercar called Dendrobium.

Mr Tan Ru-Ding, Director of Delphic Manufacturing Solution Pte Ltd said, "It was very heartening to hear what Eric shared about his struggles in stepping into the family business as I'm also going through the same transition in my family business. I learnt a lot of insights about what it takes and the practical know-hows to sustain a business from this visit. ■



SMF Visits NUS ADVANCED ROBOTICS CENTRE and NUS ENTERPRISE@ SINGAPORE SCIENCE PARK

With Industry 4.0 on the rise, powered by the future of robotics, autonomous technology and artificial intelligence, SMF and NUS came together to explore opportunities to create awareness on innovation in the deep technology space.

As a response to this interest, SMF organised a visit to the Advanced Robotics Centre (ARC), an interdisciplinary research centre at the National University of Singapore (NUS), for some 40 members. The research at ARC spans a wide spectrum of robotics with a focus on human-centered collaborative robots, robot perception, rehabilitation robotics and advanced factory “friendly” industrial robots. The trip also included a visit to NUS Enterprise @ Singapore Science Park where members got the chance to see the Minimal Viable Product (MVP) Lab, a partnership between NUS Enterprise and Ascendas-Singbridge to spearhead Singapore’s first Deep Technology Hub.

Mr Julian Neo, Head of Commercial of DHL Express (Singapore) Pte Ltd gave a positive feedback that through this visit he now better understands the startup incubation culture and processes, and will bring this knowledge back to his workplace.

“We are exploring how our company can apply the knowledge gathered to automate their business and can play a part in the testing of Advanced Robotics solutions,” said Mr Clement Teo, General Manager of Singapore Test Services Pte Ltd.

This visit paves the way for more innovative ideas to exploit robotics technology-to-market possible, with members expressing that they were pleased to witness the development of the industry. ■



Mr Sunny Koh, SMF Deputy President and Chairman of the F&B Industry Group addressing SMF members.



A demonstration was given to SMF members.



A group photo taken at the NUS Enterprise.

SMF BPCM IG COLLABORATES WITH SIA

To support the Building Products and Construction Materials Industry Group (BPCM IG) Committee's initiatives to engage related industry stakeholders and promote a future-ready Singapore, Mr Jason Kurek (BPCM IG Chairman), Mr John Kong (BPCM IG Advisor) as well as BPCM IG Committee Members welcomed the Singapore Institute of Architects' (SIA) Executive Director Mr Fong Hoo Cheong and Marketing Director Ms Nora Nordin to the BPCM's Committee meeting on Friday 16 June 2017.

The discussion centered on the introduction of SMF and SIA respective missions and on areas of mutual collaboration and initiatives.

An initiative to co-organise of a seminar was mooted, whereby SMF members can showcase their products

and discuss latest knowhow with SIA members. The joint seminar can be a good networking platform for SMF Members to meet and network with the SIA Members (Architects).

Additionally, it was agreed to collaborate on Building Information Modelling (BIM) training where members could be trained in the skills and technology necessary to implement BIM. Virtualisation and digitalisation of building and construction materials will be of increased importance to SMF Members as the adoption of BIM increases within the construction industry.

It was also established that SIA could be the service provider for advice and consultation to manufacturers faced with difficulty in promoting new technology and methodologies. ■



BPCM IG Committee Members with the team from Singapore Institute of Architects (SIA) at SMF.

A TOUGH WORKHORSE

The Epson Colorworks™ C830 is built to meet stringent label printing requirements at Whitford, a global maker of fluoropolymer coatings

PRINTING colour labels may seem like a simple task to most organisations, but not to Whitford, the world's largest manufacturer of fluoropolymer coatings found on most household wares and vehicles.

Besides meeting strict standards set by the Globally Harmonised System (GHS) of classifying and labelling chemicals, it also faced outages with its previous colour laser printer that it was using to print about 2,000 labels a week.

"Paper jams were very frequent issues," says Mr Don Leung, Whitford's Asia Pacific IT manager. "The high heat of the printer after prolonged usage also caused the label glue to melt and stick to the rollers."

As a result, he had to replace the printer's fuser, belt and other mechanical parts, as there was a lot of glue residue inside the printer. Whitford's operations were so affected that it had to purchase a few more units for redundancy purposes.

"It might not be the problem of the printer," Leung says. "But we concluded that it is unfit for printing labels".

The solution to his woes came in 2013, when he chanced upon the Epson ColorWorks™ C830, a business inkjet printer built to meet the toughest label printing requirements.

At Whitford, for example, label printers must be tough workhorses that can handle large print volumes in excess of 2,200 labels a week.

And in doing so, they should not break down despite running for long durations. The printers should also offer smooth feeding of labels without manual intervention, and print labels quickly while making efficient use of ink.

The C830 fulfils those requirements, Leung says. Thanks to the printer's speedy performance of 19.7ppm, Whitford now takes just 14 seconds – compared with 24 seconds previously – to print each label using a GHS application hosted in its UK data centre.

"Despite the high latency Internet connection between the UK and Singapore, we are happy



The Epson ColorWorks™ C830 label printer provides Mr Don Leung, Whitford's Asia Pacific IT manager, a speedy and more cost-effective way for its company's daily high-volume printing.

Paper jams are also a thing of the past, as the C830 is designed to minimise such issues that plague other competing printers.

with the printer's performance and speed," Leung says.

Paper jams are also a thing of the past, as the C830 is designed to minimise such issues that plague other competing printers.

And even if a paper jam happens, the printer will automatically release the paper guide, allowing for the rapid removal of media.

The C830 also uses high-capacity ink cartridges to enable affordable, large-volume printing while dramatically lowering downtime spent on changing cartridges, creating more uptime and less periodic maintenance.

In fact, with the C830, Whitford has slashed its monthly spending on black and colour cartridges by 70 per cent, from \$4,000 to \$1,200.

"Our production staff are quite happy now,"



Leung says. "They don't need to deal with paper jams or work overtime just to finish printing all the labels. They can focus more on their main duties, and do not need to pay much attention to the printer."

The good experience that Whitford has had with the C830 in Singapore led the company to buy two units of the printer for its plant in China. It is also looking to acquire another unit for its corporate office in the United States.

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Recognising WORKPLACE SAFETY AND HEALTH in Manufacturing

The Health, Safety, Security and Environment (HSSE) Function Committee, supported by Ministry of Manpower (MOM) and Workplace Safety and Health Council (WSHC), held its 9th edition of the annual Workplace Safety and Health (WSH) Awards for the manufacturing sector on 21 July 2017.

Two categories of awards were given out – WSH Innovation Awards, which recognises companies for developing good solutions to tackle WSH hazards from both the safety and productivity angles in their respective areas of work, and the WSH Awards for Supervisors to honour the efforts made by supervisors who demonstrated care for their workers under their charge by advancing health and safety in the workplace. This year, sixteen companies and individuals were awarded.

The WSH Awards is significant as it upholds the manufacturing community's emphasis to keep employees safe and healthy at their place of work. "SMF has been pushing its mission vigorously via SMF Health Safety Security Environment (HSSE) Function Committee to uphold the best practices and technologies to enhance environmental and occupational safety and health of workers across the manufacturing sector," said Mr Douglas Foo, SMF President. ■



Awardees for the WSH Awards for Supervisors (Manufacturing) 2017.

Awardees for WSH Innovation Awards (Manufacturing) 2017:

Gold:

Hazard Mitigators	Keppel Merlimau Cogen
Team Transformer	ST Aerospace Services Co. Pte Ltd
HERCULES	Keppel DHCS Pte Ltd

Silver:

LEAP	GE Aviation, Engine Services - Singapore Pte Ltd
TINCVD PM TEAM	United Microelectronics Corporations (Singapore Branch)
X-Hazard Team	Eastman Chemical Singapore Pte Ltd

Bronze:

M&SP-1	ST Kinetics
Dragonite	ST Aerospace Engineering Pte Ltd

Awardees for WSH Awards for Supervisors (Manufacturing) 2017:

Gold:

Florence Kueh Hui Na	Natsteel Holdings Pte Ltd
Mani Rajasekaran	Keppel Infrastructure Holdings Pte Ltd
Eliezer Montes Aquino	Eastman Chemical Singapore Pte Ltd

Silver:

Jayapal Sathyamoorthi	GE Aviation, Engine Services - Singapore Pte Ltd
Andre Tan Boon Leng	ST Aerospace Engineers Pte Ltd
Nick Wong Wai Long	ST Aerospace Services Co. Pte Ltd

Bronze:

Tey Ban Pheng	Natsteel Holdings Pte Ltd
Chang Sick Lam	ST Kinetics Integrated Engineering Pte Ltd

INNOVATIVE DESIGNS CLINCH AWARDS IN **SINGAPORE'S PACKAGING AWARDS**

32 entries for the Singapore Packaging Star Award 2016 were honoured during the Gala Dinner organised by the Packaging Council of Singapore (PCS) on 25 August 2017. Dr Amy Khor, Senior Minister of State, Ministry of the Environment and Water Resources & Ministry of Health, was the Guest-of-Honour for the occasion.

Among the 32 winners of the 2016 Singapore Packaging Award, 23 entries received the Asia Star Award while 5 entries clinched the World Star Award. The awards featured four categories – Sales & Display, Environmentally Sustainable Packaging, Transportation & Protection, and the Students category.

As part of the efforts of the packaging industry to promote local designs and increase the standards of packaging production, the Singapore Packaging Star Award has been an annual event for the past 19 years.

Said Ms Betty Tan, Chairman of the Packaging Council of Singapore, "This sector holds much business potential. With the changing lifestyles and needs of consumers, packaging industry is becoming increasingly sophisticated in meeting consumer needs. Consumers are always demanding more functional and aesthetic designs in packaging. At the same time, customers seek cost-effective, lightweight and robust materials. We



Mr Douglas Foo and Ms Betty Tan receiving Dr Amy Khor at the awards.



Dr Khor took a tour of the winning entries before the start of the ceremony.

must therefore harness on innovation and transform our products and services to stay ahead of the emerging trends."

Ms Lee Soo Cheng, Senior Lecturer from School of Design, Nanyang Polytechnic, shared: "Singapore-trained designers have gained recognition for their innovation and creativity, and have made an impact on the international design world. Local design standards have truly come of age. What I am particularly heartened by is how our local designers are constantly evolving and learning from the best in business – such as the Japanese – to create inspiring, unusual and yet useful packaging design." ■



The Singapore Packaging Star Awards was held at Parkroyal on Beach Road Hotel.

SMF's Testing, Inspection and Certification (TIC) Interest Group Holds **INAUGURAL NETWORKING SESSION**

The Testing, Inspection and Certification (TIC) Interest Group under Electrical, Electronics & Allied Industries Industry Group (EEAI IG) held its first networking session, with support from SPRING Singapore.

The session, which created a platform for SMF members to network with each other and meet with relevant government organisations, received a resounding response from participants and members of the Singapore Accreditation Council (SAC).

TIC Interest Group was formed in October 2016 with the mission to serve and advance the interests of the Testing, Inspection & Certification industry in Singapore, shared Mr Sze Thiam Siong, who chairs the group. In his opening address he also shared the Roles of TIC Interest Group:

- To champion the interests of the members via regular engagement with industry, accreditation bodies and policymakers – network and disseminate strategic information on new business opportunities, trends, etc.
- To develop and provide recommendations to industry/policymakers/ accreditation bodies on new or updated TIC services that can support national or industry initiatives (e.g. via white papers)
- To raise the profile and public awareness of TIC sector (e.g. through awareness talks, career fairs)
- To upgrade the capabilities of TIC sector (e.g. via training workshops)

The session also included speakers from government agencies such as SPRING Singapore, A*STAR National Metrology Centre and Workforce Singapore. ■



Companies who were interested join the TIC Interest Group can contact secretariat Ms Carrie Niang at 6826 3046 or email carrie.niang@smfederation.org.sg

VISITORS TO SMF

26 JULY 2017
Ambassador of Sweden to Singapore



Mr Douglas Foo His Excellency Sven Håkan Oskar Jevrell, Ambassador Extraordinary and Plenipotentiary of Sweden to Singapore.

8 AUGUST 2017
Ambassador of the Federation of Indian Chambers of Commerce and Industry (FICCI)



Dr A. Didar Singh, Principal Advisor to President, FICCI made a courtesy call to SMF. He was received by Mr Lam Joon Khoi, Secretary General of SMF (right).

17 AUGUST 2017
Central Vietnam Delegation Visit to SMF



Mr Douglas Foo received a delegation from Central Vietnam (Thanh Hoa, Quang Tri and Hue) led by Delegation Leader, Mr Nguyen Duc Quyen (sitting, second from left) and accompanied by H.E. Nguyen Tien Minh, Ambassador & Plenipotentiary of the Socialist Republic of Vietnam to Singapore (sitting, third from right).

31 AUGUST 2017
Ambassador of Spain to Singapore



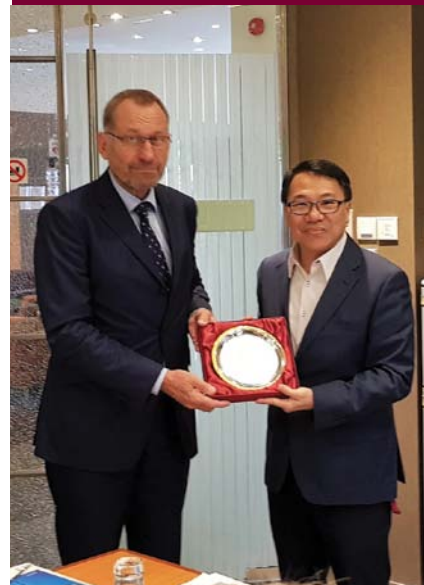
Mr Douglas Foo received His Excellency Miguel Angel Navarro Portera, Ambassador Extraordinary and Plenipotentiary of the Kingdom of Spain to Singapore.

18 AUGUST 2017
Ambassador of Saudi Arabia to Singapore



Mr Douglas Foo received His Excellency Saad Saleh I. Alsaleh, Ambassador Extraordinary and Plenipotentiary of The Kingdom of Saudi Arabia to Singapore.

5 SEPTEMBER 2017
Visit by German Trade and Invest (GTAI) delegation



Presentation of plaque from GS1 CEO, Mr Liew Wai Leong (right) to CEO of Germany Trade and Invest, Dr Jürgen Friedrich.



A Good Example of Building Partnerships for Growth and Innovation by SMF



The EEN Singapore Centre was jointly launched by Mr. S Iswaran, Minister for Trade and Industry (Industry) and Dr Michael Pulch, Ambassador of the Delegation of the European Union in Singapore on 21 April 2016. Some 300 participants including CEOs of local firms, representatives of Trade Associations and Chambers attended the launch event.

Since the launch, over 700 companies have registered to be on the Singapore database. 16 Partnership Agreements have been closed from various industries e.g. recruitment, F&B, IT and engineering. More than 200 Expression of Interest (EOI) have been created and made by EU and Singapore SMEs. Besides this, EEN Singapore has also arranged over 250 B2B meetings at various exhibitions held in Europe and in Singapore. (These services are provided free by EEN Singapore, registration information is at the bottom of this page)

TAPPING ON THE NETWORK TO EUROPE

One of the invitees at the launch was Mr. Joseph Foo, Chairman of Jason Marine Group Limited.

Seeing this as a good platform for his company to venture into Europe, after the event Mr. Foo immediately registered his company with EEN-Singapore. In the next couple of months, there were a few Expression of Interest that came in and after evaluating; the most interesting one was with S.A. SEDNI (Spain) - one of the leading marine ship machinery and systems in the world. After a few rounds of discussion, they finalised and signed the business agreement in May 2017.

Mr. Joseph Foo said "in his 40 years of working experience, there are plenty of network platforms for Singapore SMEs to venture abroad but I found EEN-Singapore has the best means to connect and widen my company's business network with Europe. With this platform, we are also able to create our own Expression of Interest with European companies."

I would encourage my fellow Singapore SMEs to join this network, it's easy, fast to register and the best of it - it is free! Thank you IE and EEN-Singapore for giving my company this business opportunity". ■



S.A. SEDNI and Jason Electronics in discussion in Singapore

About EEN Singapore

The Enterprise Europe Network (EEN) Singapore is a Consortium comprising Singapore Manufacturing Federation (SMF), International Enterprise (IE) Singapore and Intellectual Property Intermediary (IPI) Singapore formed in June 2015. It is a national initiative looking to promote business, technology and research collaborations between Singapore and European companies through business matchings.

For more information, please visit our website at www.een-singapore.sg

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tasc		27.10. – 28.10.	www.tasc-expo.de
METAV	2018	20.02. – 24.02.	www.metav.com
ENERGY STORAGE EUROPE		13.03. – 15.03.	www.energy-storage-online.com
Tube		16.04. – 20.04.	www.tube.de
wire		16.04. – 20.04.	www.wire.de

TRADE AND SERVICE

TRANSFOURMET**	2017	29.11. – 29.11.	www.rewe-gvs.de
ARCHITECT@WORK**		06.12. – 07.12.	www.architectatwork.de
PSI***	2018	09.01. – 11.01.	www.psonline.de
ElectronicPartner Frühjahr**		23.02. – 25.02.	www.electronicpartner.com
EuroCIS		27.02. – 01.03.	www.eurocis.com
Berufe live Düsseldorf		02.03. – 03.03.	www.einstieg.com
ProWein**		18.03. – 20.03.	www.prowein.de
Flotte! Der Branchentreff**		21.03. – 22.03.	www.derbranchentreff.de
Bio West**		29.04. – 29.04.	www.biowest.info
BEFA**		10.05. – 12.05.	www.befa-forum.de
Chefs Culinar		10.09. – 11.09.	www.ihre-messe.de

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COMPAMED®		13.11. – 16.11.	www.compamed.de
MEDICA®		13.11. – 16.11.	www.medica.de

FASHION AND LIFESTYLE

BEAUTY DÜSSELDORF***	2018	09.03. – 11.03.	www.beauty.de
make - up artist design show**		10.03. – 11.03.	www.make-up-artist-show.de
TOP HAIR DÜSSELDORF***		10.03. – 11.03.	www.top-hair-international.de
INTERBRIDE**		05.05. – 08.05.	www.interbride.eu

LEISURE

boot Düsseldorf	2018	20.01. – 28.01.	www.boot.de
CARAVAN SALON		24.08. – 02.09.	www.caravan-salon.de
TourNatur		31.08. – 02.09.	www.tournatur.com

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Establishing linkages to JAPANESE MARKETS



SMF hosted a delegation visit by the Osaka Chamber of Commerce & Industry (OCCL) and Japan External Trade Organization (JETRO), on 8 September 2017. Approximately 40 SMF members from Singapore companies met with 20 Japanese businesses to explore business opportunities between enterprises of both countries.

The networking session arose from the success of an earlier study trip to Tokyo, Takasaki and Osaka, where a 20-member Singapore delegation led by Mr Teo Ser Luck, who was then Minister of State (MTI).

“Positioned in the heart of Southeast Asia, Singapore is well-positioned as a gateway to the rest of ASEAN. Furthermore, Singapore is one of the countries in the ASEAN Economic Community (AEC). Supported by free flow of goods and services, our Japanese business partners can use Singapore as a point of entry to tap on this single market with a population of more than 600 million for varied business opportunities,” said Mr Douglas Foo, SMF President. ■



Each participant introduced themselves and their companies.



Mr Douglas Foo hosted the delegation of OCCL and Jetro.

MSE2017

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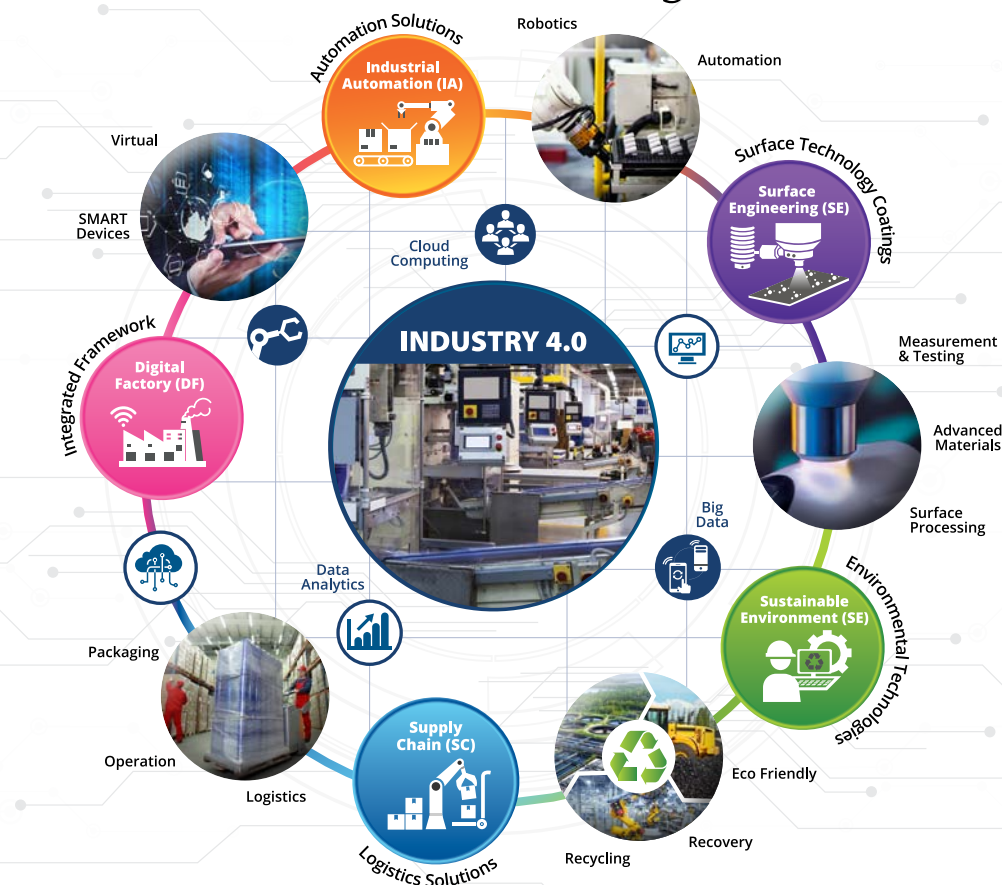
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MANUFACTURING MUST CHANGE

*By Arnoud de Meyer
President Singapore Management University*

Since I wrote, more than a year ago, passionately in the Straits Times about the importance of Manufacturing to Singapore's economy, I regularly get the question whether I am really convinced that we should keep the role of manufacturing activities at about 20% of our GDP? Would it not be logical that Singapore becomes more and more a service

economy, and that manufacturing moves out to our lower cost neighbours? I stand firm with my conviction and this for three reasons. First manufacturing provides good and well paid jobs. Second, a lot of the service jobs depend on manufacturing activities. Think of accountancy, engineering services, logistics, and even mundane activities like catering or specialised cleaning.

If manufacturing would move out of Singapore, these services would follow. Studies in Europe indicate that between 30 to 55% of service jobs are sourced in manufacturing and for every dollar of manufacturing output there is an additional service output of about 20 cents. Third manufacturers innovate more than service providers. More of them carry out R&D and invest in product and process innovation. And innovation is what a mature industrial economy like ours here in Singapore needs.

But I also will argue that the type of manufacturing we need must change. One of the subcommittees on the development of Industry Transformation Maps is looking at advanced manufacturing. I fully support the idea that we need to transform the manufacturing activities to adjust them to Singapore's environment. Manufacturing that requires masses of cheap labour or vast amounts of land will not be competitive if they stay put here in Singapore. But what does "advanced" mean?

In my opinion this entails four major evolutions. First we need to embrace the opportunities of data and analytics in order to merge services with manufacturing. Second, yes we need to automate and adopt new technologies like 3D printing, nano-technology, etc. in order to focus on economies of scope rather than economies of scale. Thirdly manufacturing in an urban environment needs to opt resolutely for sustainable operations. And finally we need to continue to integrate Singapore in global operations networks.

Manufactured products have always come with some services e.g. after sales service or systems integration. Services related to (big) data and analytics have increased exponentially the combinations of products with services. Just think of the vast amounts of data that are captured from an airplane engine during the flight as input for maintenance activities, or the delivery services and advice that comes with buying a book over internet. Clever analysis and use of data allows for example for further customisation of products, traceability of the origins of food, the use of smart materials, the installation of smart sensory devices to provide feedback on utilization, smart delivery systems for e-commerce, intelligent products that "know" where they are and where they want to go, up to some of the most complex products like autonomous vehicles. In short many products will also become bundles of data and information.

Automation, lower cost robots and 3D printing may improve customisation, and the reduced relevance of economies of scale. Nowadays you can have a baseline robot for around \$25,000. I know that a robot on its own is not that relevant. There is a lot of programming and systems integration needed. But it does mean that a robotised factory may well become competitive with a factory based on manual labour. Do I believe that we will see soon full robotisation? In the eighties of previous century we dreamt about the factory where "you could switch off the lights", because robots did

not need lights. Very few of such factories were built and ran successfully, because over-automation is in most of the cases ineffective. I still think that we will have more "co-botization" or the combination of gentle and intelligent robots with people. Therefore the man-machine interface will become all the more important.

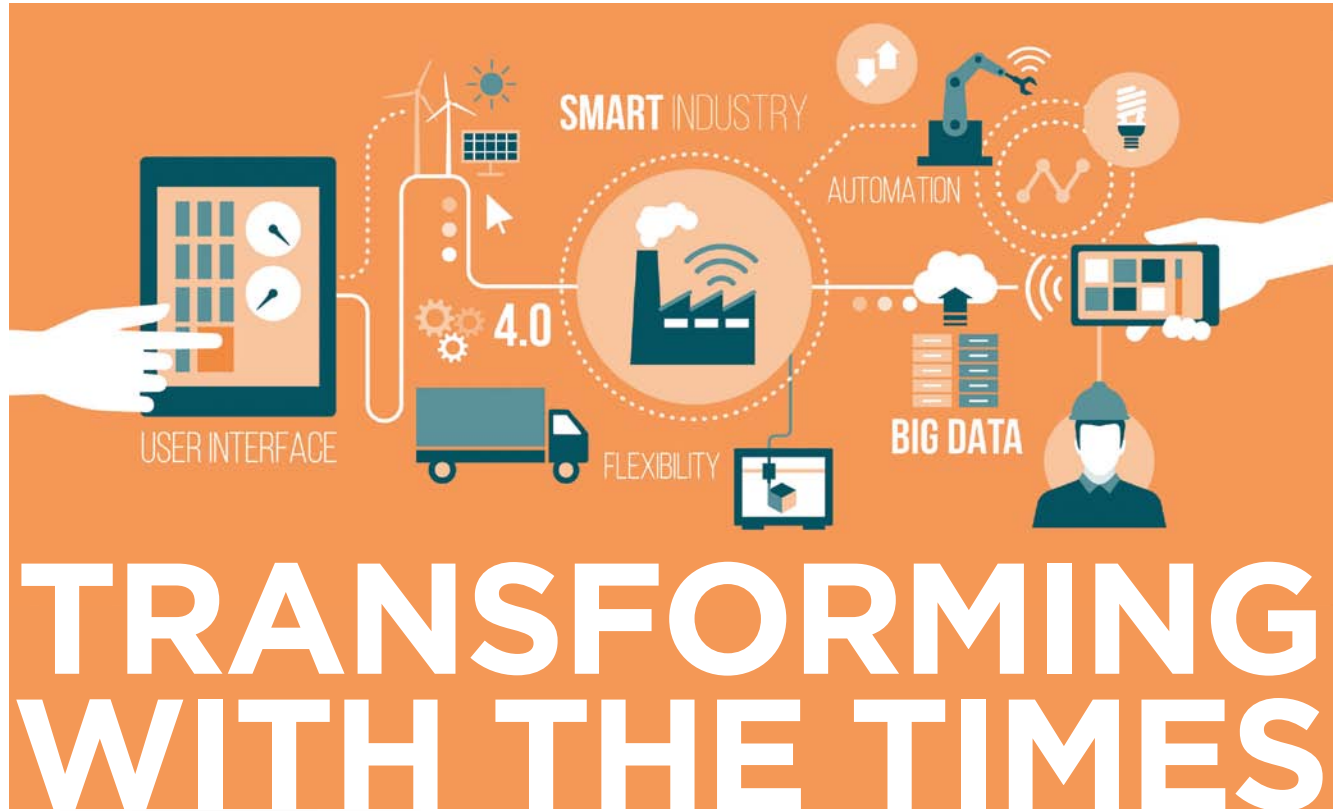
Setting up factories in an urban environment will be only acceptable if they do not deteriorate the environment. Recycling, closed loop logistics, low noise levels, zero emissions are all part of sustainable manufacturing. And let's not forget that there is money to be made in sustainability: lower use of natural resources, better adjustment to regulation, and developing business in selling sustainable solutions have all proved to be very effective for North European manufacturers. Can Singapore develop the solutions for the countries on the Equator?

Finally every manufacturer in Singapore needs to understand that we are always part of a global supply chain. Thinking in networks and finding our correct positions in logistics chains and manufacturing ecosystems will help us to take leadership and become more effective in the value chains.

When you reflect on these four evolutions you may actually also start wondering what the real scope of manufacturing is? Often we still associate it with the obsolete view of noisy assembly plants with lots of movements of physical parts and the smell of grease and metal. But if products become bundles of goods and data we also realize that manufacturing principles extend into the production of digital products. Is for example code production really that different from the production of physical goods? Isn't what a software production engineer does that different from what a process engineer in a chemical plant does? It is all about well managed process executed by skilled people and supported by technology. Perhaps we should start thinking about extending manufacturing into the digital world? But that may well be a topic for another day. ■



Arnoud de Meyer



When Cyclect first started out in 1943, its main business was in electrical works and repairs for vessels in the marine industry. It has since transformed from its marine services business to providing engineering services. Today and 74 years on, Cyclect Holdings has been involved in many leading projects including the Formula 1 Singapore Grand Prix night race, Marina Bay Sands, Singapore Sports Hub amongst others. And it is the ability to stay nimble and transform with the times while keeping their eye on the horizon that has led them to make positive impact on their business growth. SMF's editorial team spoke to Mr Melvin Tan, Managing Director of Cyclect Holdings Pte Ltd, to learn about the company's journey from its modest handyman repair services roots to where it is today.

Cyclelect Holdings have now moved into a more research-based solutions through constant innovation which has found them opportunities in power, water, robotics, automation and clean energy. Said Mr Tan who joined the company in 1997, "Over the years, there were many innovations. But the true focus on innovation, as we understand it today – i.e. having researchers to develop solutions, getting patents etc, happened only in the early 2000s."

So how did Cyclelect, which is now operating in nine countries, rise so quickly in the past couple of decades? "Opportunistic" is how Mr Tan explained it. It started when Cyclelect was working with the National University of Singapore (NUS) to develop an absorption chiller and while the project was underway they saw the opportunity in the clean energy industry while speaking to professors in the university.

"We discovered that there were many things not being covered in the field of research and development. We decided to spend some resources on R&D and over the years, discovered our strengths in this area," said Mr Tan. They ended up collaborating with NUS and starting hiring R&D teams with grants from EDB to develop tri-generation systems. Essentially such system optimises the use of energy, where instead of the traditional burning of fuel and the waste goes into the environment, they now put the waste through a machine called an absorption chiller and through heat exchanges to convert heat into cooling. It is an old technology that has been around for a century, explained Mr Tan.

"We saw the need for lower costs and sustainable energy. The world was spending too much on fossil fuels and there was too much carbon emissions. Essentially we are recovering all the waste from the huge power plants. These power plants saw a massive savings from this equipment. The payback for the equipment is only three or four years. We are talking about spending a few million dollars for this equipment and in three years you are take it back and the equipment will last for another 20 years. This fulfils the need to save money, save the environment and protect the planet," said Mr Tan.

Today, Cyclelect has developed products around this technology, including energy efficiency and renewable

energy solutions, and is a specialised developer of co-generation and tri-generation plants. And it has been recognised for its efforts. Its numerous awards include two-time winner of TEC Innovator Award and Singapore Sustainability Award for Green Technology which recognises the company's efforts in reducing carbon emissions.

The pursuit for innovation has served Cyclelect well. In this industry where there is constant competition for talent and technology, the foresight to innovate to cater to the demands of customers' shifting preferences has further led them to expand beyond the domestic market. Realising that the local market will become saturated and will no longer be able to depend simply on Singapore for its source of income, Cyclelect had to venture to places where they could be the pioneers in their field. Of course, such ventures involve risks. However, Mr Tan shared that because the company knew that these undertakings were essential to sustain their competitive edge, they had approached such overseas ventures with enthusiasm.

The enterprise continues to look for opportunities for growth and stays relevant in the high-tech manufacturing sector. For example, it is currently looking into automation and robotics for the aviation and logistics sector. It was one of the finalists in the Changi Aviation Challenge that developed an innovative automotive system for logistics and baggage handling to increase productivity with minimal human intervention. "By moving into automation solutions, we are solving the challenges posed by Singapore's ageing population and labour shortage" Mr Tan says.

Cyclelect Holdings has now further diversified their customer base and expanded beyond Singapore, operating in countries such as Brunei, China, Japan and Indonesia. The many collaborations and exchange of ideas and technologies in different countries have allowed the company to thrive and stay competitive. As a result of successful innovation and IP management, Cyclelect secured strategic partnerships with public and global organisations, with 5 – 10% of revenue attributed to the commercialisation of its IP. For these achievements, the company was awarded the IPOS Award for IP Champions and WIPO IP Enterprise Trophy.





Singapore Innovation & Productivity Conference 2017

25 October 2017 | Hall 4A, Singapore EXPO

Future of Manufacturing: Digital Transformation

The future of companies in the manufacturing sector will depend on how well they cope with the changes in the global manufacturing landscape and the disruptions brought about by new technologies and business models. Besides embracing innovation-led productivity, companies have to transform their business model and operations through leveraging on Industrial Internet-of-Things and Industry 4.0. Automation of manufacturing processes, reliance on sensors, higher level of internet connectivity and use of big data analytics will transform many operations into 'smart' factories, resulting in higher productivity, greater reliability and customisation, and higher level of customers' satisfaction. Companies failing to embrace the digital transformation may risk their businesses being disrupted or made redundant.

PROGRAMME OUTLINE

0815	Arrival of Guests & Registration
0855	Guests to be Seated
0900	<ul style="list-style-type: none"> • Welcome Speech by Mr Douglas Foo • Opening Address by Mrs Josephine Teo • Official Opening Ceremony of SIPC 2017 & MSE 2017 • Keynote Speech by Dr Armin Bruck
1015	Tea-Break
1045	Panel 1 – Developing the New Mindset & Perspective
1215	Lunch
1345	Panel 2 – Industrial IOT & Industrial Revolution 4.0
1515	Tea-Break
1530	Panel 3 – Digital Transformation: Plans & Solutions
1700	End

WELCOME SPEECH



Mr Douglas Foo
President of Singapore Manufacturing Federation

GUEST-OF-HONOUR



Mrs Josephine Teo
Minister, Prime Minister's Office & Second Minister for Manpower & Second Minister for Foreign Affairs

KEYNOTE SPEAKER



Dr Armin Bruck
Regional Chief Executive Officer, Siemens

PANEL SPEAKERS INCLUDE

Mr Ng Cher Pong
Chief Executive,
SkillsFuture Singapore
(SSG)

Prof Chong Tow Chong
Provost, Singapore
University of Technology
and Design (Singapore
University of Technology
& Design)

Mr Chee Teck Lee
Chief Executive Officer,
Moveon Technologies
Pte Ltd

Mr Russell Tham
President, Applied Materials
(South East Asia)

Prof Low Teck Seng
Chief Executive Officer,
National Research
Foundation

Dr Ho Chaw Sing
Managing Director,
National Additive
Manufacturing
Innovation Cluster

Mr Thomas Jakob
Regional President
Asia Pacific, Bosch
Software Innovations

Mr Raimund Klein
Executive Vice
President, Siemens

Dr Alpesh Patel
Director of Digital
Capability Centre,
McKinsey Innovation
Campus

Mr Saw Ken Wye
Chief Executive Officer,
CrimsonLogic

Mr Tan Kiat How
Chief Executive Officer,
Info-communications Media
Development Authority of
Singapore (IMDA)

Ms Fong Pin Fen
Director of Cities,
Infrastructure & Industrial
Solutions, Singapore Economic
Development Board (EDB)

Prof Tan Sze Wee
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Engineering Council
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3. Business Executives and Engineers
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5. Those who are in non-manufacturing sector, to understand how Industrial Revolution 4.0 will have an impact on their business.

Visit SIPC website to register:

www.SIPC.org.sg

CONFERENCE FEE

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*All registration fees are inclusive of the prevailing GST.

*Terms and conditions apply.

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The Practising Management Consultant-Certification Board (PMC-CB) functions independently and makes the final decision in every application. ■

To connect to a certified PMC, please visit <https://www.pmccertification.sg/>

LAUNCH OF TECHNICAL REFERENCE

for developing food products

SMF-SDO and SPRING Singapore launched a technical reference for developing food products that meet approved nutrient or health claims. It was developed in response to the increasing consumer demand for food products with health and nutritional benefits.

This technical reference, also known as TR 58, provides guidance for local food manufacturers to develop food products that qualify for approved nutrition or health claims, within the framework of Singapore's food regulations and in accordance with Codex Alimentarius recommendations.

With health and wellness at the forefront of consumer food trends in recent years, the technical reference will further enhance Singapore companies' competitiveness



The launch, held at Devan Nair Institute for Employment and Employability, brought some 250 participants across the food manufacturing supply chain.

in the region given Singapore's strong reputation for quality and safety. It is aligned with the vision of the Food Manufacturing Industry Transformation Map which seeks to position Singapore as a leading food and nutrition hub in Asia by 2025.

Said Mr Sunny Koh, Deputy President of SMF and Chairman of SMF's F&B Industry Group, "The food industry had worked with AVA's Advisory Committee on Evaluation of Health Claims to expand the list of approved health and nutritional claims over the last few years. The development of TR 58 together with AVA rides on those efforts, to encourage manufacturers to produce innovative food products with nutritional or health claims. This would help enhance their product competitiveness and give home-grown companies a competitive advantage when they internationalise." ■

Guidelines for VENDING INDUSTRY LAUNCHED

The Technical Reference (TR) 57 – Guidelines on Food Safety and Good Hygiene Practices for the Vending Industry was launched on 21 July 2017 by Senior Parliamentary Secretary for Ministry of Trade & Industry and Ministry of Education, Ms Low Yen Ling, at VendFest held in conjunction with AsiaMalls Foodie Festival YAS!

The guidelines cover areas such as design and structure, cleanliness and maintenance, food hygiene and temperature controls, food transportation and the location of the machines. It provides the vending industry with a set of good practices and guidelines when planning for and operating vending machines. TR 57 will also be useful for food vending machine operators



Mr Christopher Goh and Ms Jocelyn Chng, Co-convenors of the Technical Reference (TR) 57 Working Group, Senior Parliamentary Secretary for Ministry of Trade & Industry and Ministry of Education, Ms Low Yen Ling, and Mr Douglas Foo, President of Singapore Manufacturing Federation at the Launch of TR 57. (Photo: SPRING Singapore)

to help meet licensing requirements set by the National Environment Agency (NEA).

Said Ms Jocelyn Chng, Co-convenor of Working Group for TR 57, "The F&B industry is undergoing an exciting transformation with vending machines being one of the productive solutions to help local food companies reach out to a wider market. The launch of TR 57 is timely and necessary in setting the standards for the vending industry. This helps companies grow their business in a lean manpower environment without compromising on hygiene and food safety." ■

FINE BUBBLE TECHNOLOGY SYMPOSIUM

The 8th International Symposium for Fine Bubble Technology (FBT) was held at Temasek Polytechnic on 25th July 2017. It was jointly organised by Singapore Manufacturing Federation-Standards Development Organisation (SMF-SDO), SPRING Singapore, Temasek Polytechnic (TP) and Fine Bubble Industries Association (FBIA).

FBT is an innovative technology that finds applications in cleaning, sterilization, agriculture, plant cultivation, fisheries, food and beverage etc. This technology is expected to bring about revolutionary changes to specific industry sectors in the near future. International experts of FBT shared their related knowledge in applications, measurement and principles to FBT.

Participants were given an opportunity to visit the newly built facility at TP, i.e. the Centre for Aquaculture and Veterinary Science (CAVS), after the Symposium event. This Symposium generated great interest among various industry sectors in Singapore, attracting 124 participants from 87 different companies and organisations.

PLENARY MEETING

There was a two-day ISO TC 281 Fine Bubble Technology Committee meeting held after the symposium to lead the efforts on standardisation. Standardisation covers general principles including terminology, characterisation and applications of fine bubbles of gas in a typically but not exclusively liquid medium. Artificially manufactured fine bubbles are typically smaller than 100 micrometres in size are considered.

Singapore is one of the 8 participating countries that have contributed to the standardisation efforts. The other participating members are from Australia, China, Japan, Korea, Russia, United Kingdom, the United States and another 11 observer-members. The S'pore ISO/TC281 mirror committee membership is drawn from AVA, NEA and SIMTech, among others. During this two-day meeting, 48 international delegates and FBT experts actively participated and discussed the general principles for test measurement and usage of fine bubbles. ■



Speakers during the Symposium at Temasek Polytechnic.



SMF-SDO hosted the ISO TC 281 Plenary meeting.



Participants attending the Temasek Polytechnic tour.



ISO/TC 281 Plenary Meeting from 25 to 27 July 2017.

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P-Max	Broad-Based PCP	PCP Overseas
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SME TALENT PROGRAMME (STP)

The SME Talent Programme (STP) is a SPRING Singapore initiative to help local SMEs attract talent from the Institutes of Higher Learning (IHLs).

students. Through industry exposure, students receive a better understanding of working in SMEs. This is to assist SMEs in building a talent pool for future recruitment possibilities. ■

STP (Internship) supports SMEs' efforts in providing meaningful internship opportunities for full-time local

Eligibility Criteria for Participating Students

Must be Singapore Citizens or Singapore Permanent Residents.

Interns must be full-time students from ITE, NYP, NP, RP, SP, TP, NTU, NUS, SUSS, SIT, SMU or SUTD.

Full-time students from Singapore-based private institutions with the 4-year Edutrust certification and overseas institutions with internationally recognised AACSB/EQUIS accreditations are also eligible (valid until 30 June 2018).

SUCCESS STORIES

Company:

Wong Fong Engineering Works (1998) Pte Ltd

Industry/Sector:
Engineering Systems

Employer's Story
– by Ms. Tan Ai Huang

With a presence in Singapore, Malaysia, Myanmar and the People's Republic of China, we are one of the leading providers of land transport engineering solutions and systems for various industries. The Company's main business is in the sale and installation of load handling systems and waste management systems.

Our staff are one of our most valuable assets and are instrumental to the Group's success. Strong emphasis is placed on in-house and external training to equip our staff with the requisite skills and knowledge so that they will be able to perform their jobs efficiently and to upgrade themselves to keep abreast of new developments in the industry. Permanent staff and interns alike are involved in the Company's Health & Wellness as well as bonding activities, making their working environment a highly positive and conducive one.



Company:

Megafab Engineering Pte Ltd

Industry/Sector:
Engineering Solutions and Services

Employer's Story
– by Mr. Daniel Neo

MegaFab Engineering, a company incorporated in Singapore in 1993, is a specialist in land transport engineering solutions. Our focus is on sales and after sales services for vehicle mounted equipment.

3 core areas which MegaFab emphasizes are:

- Upgrading of skills with job rotation and automation;
- Providing a caring and understanding environment; and
- Attracting and developing young talent.

SPRING's STP is a useful and practical programme as it helps provides interns in our Company the opportunity to apply their knowledge and develop their skills sets in a guided environment. This experience is a good platform for interns to plan a promising career with us for the future.



Company:

xEdge Consultancy Pte Ltd

Industry/Sector:
IT Solutions and Services

Employer's Story
– by Ms. Judy Yeong

xEdge focuses on assisting organisations to harness the full potential of their content, by streamlining their documentation processes and allowing them to efficiently create, manage, localise and publish, and leveraging on open standards and XML (Extensible Markup Language) to maximize content reuse and multi-channel distribution. Our customers base include Legal publishing, Aerospace & Defence, Digital publishing, and Finance.

In carrying out their jobs, employees are given equal opportunity and regular performance evaluation and team meetings provide them feedback on employer's expectations and updates. Training is an integral part of enabling staff to better perform their current and future job roles.

SPRING's STP provides interns the opportunity to learn on the job through the structured HR processes we adopt. Interns are able to apply their knowledge and understanding in an interactive environment.



GROUP-BASED SOLUTIONS

for business success



SMEs in the same vicinity or trade often face similar business challenges. One of the places they turn to for help is SME Centre. Besides providing advisory services, one-to-one consultations and general outreach initiatives, SME Centres are now driving group-based upgrading projects.

MAKING SPACE FOR PRODUCTIVITY

Visitors and residents at the Bangkit estate in Bukit Panjang can now enjoy a new shopping experience. Some 47 retailers in the area have improved their product displays through new shelving solutions that optimise space and minimise clutter.

These solutions are part of North West Community Development Council's (NWCDC) and SME Centre@NorthWest's plans to help transform businesses in the area. "We discovered that heartland businesses at Bangkit face the common challenge of limited shop space, which affects their productivity and sales," says Ms Sharmaine Tay, Business Advisor, SME Centre@NorthWest.

The SME Centre@NorthWest found a solution in two new shelving systems, which help increase storage capacity by maximising height and floor space. The systems also provide easy access to products to ensure quicker picking rates and stock rotation.

"Instead of helping retailers adopt the solution individually, we worked with the Holland-Bukit Panjang Town Council and Zhenghua Merchant Association to roll out the solutions for over 40 retailers as a group-based upgrading project," Ms Tay explains.

"Providing a common solution for businesses facing similar challenges means cost savings through economies of scale. It also helps streamline and minimise SMEs' efforts in identifying the right solution."

Beyond identifying and implementing the solutions, SME Centre@NorthWest business advisors also organised a productivity workshop to equip the retailers with productivity improvement techniques, such as inventory management and stock keeping unit analysis.

The project is estimated to help participating retailers achieve a 30% increase in space optimisation, 25% decrease in man-hours required for stock management, and 10% increase in productivity.

Mr Tan Jue Tong, owner of Mong Lee Mini-Mart, says, "The new shelving system makes my shop look neater. We see more residents shopping here too, and this has helped improve our sales."

AUTOMATING OPERATIONS WITH TECHNOLOGY

The food & beverage (F&B) sector is one of the industries that the SME Centre@Singapore Chinese Chamber of Commerce & Industry (SCCCI) works with. Through

regular engagements, the SME Centre@SCCCI found that a common challenge faced by business in the sector is shortage of manpower.

Further research by SME Centre@SCCCI revealed that many F&B businesses still operate with manual, time-consuming processes like writing down orders by hand, which is prone to errors. Such manual processes also result in lost opportunities, such as capturing useful customer data that can help businesses develop strategies to grow.

The SME Centre@SCCCI decided to undertake a group-based upgrading project to help F&B businesses enhance their productivity through technology solutions that redesign and automate workflow at the front-of-house.

"Running a group-based upgrading project allows us to stay more focused in reaching out to our target group of SMEs and driving specific outcomes," says Ms Lee Lay See, SME Centre@SCCCI's Principal Business Adviser.

One of the participants of the project was Toasties Group – a micro F&B company which specialises in halal sandwiches. The company adopted cloud-based point-of-sale and wireless paging systems through the group-based upgrading project to address its manpower and productivity challenges.

Ms Atwell Lim, Director, Toasties Group, explains: "These solutions have helped improve our operational efficiency, which, in turn, have translated to shorter waiting times, happier customers and more revenue for the business."

After implementing the solutions, Toasties Group saw a 25% increase in productivity, 10% decrease in labour cost and 30% jump in customer satisfaction.

Other solutions introduced to F&B businesses through SME Centre@SCCCI's group-based upgrading project include the mobile ordering and payment system, queue management system, and self-service kiosk.

"Determining which solution suits each SME really depends on the challenges faced by the company, its business format, and its customers' profile," Ms Lee says. "During our engagement with these SMEs, we also assure them that they can always approach the SME Centre@SCCCI – whether it's to adopt other technology solutions or address specific business challenges." ■

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For assistance, please email query@smecentre-smf.sg or call SME Centre @ SMF +65 68263020

ECR SINGAPORE CEO FORUM 2017

- Connecting the Marketplace

The Efficient Consumer Response (ECR) Singapore Council presented the ECR Singapore CEO Forum 2017 - Future Value Chain for the Connected Marketplace on 6 July 2017. Organised by GS1 Singapore, a centre of the Singapore Manufacturing Federation, the forum saw a successful turnout of over 160 brand owners, manufacturers, suppliers and delegates from across the region.

With almost half the Singapore population of consumers acknowledging they were Omni-Channel shoppers - consumers who browse for information online before purchasing through online and offline retail channels - it is imperative that businesses innovate to engage the evolving buying patterns and expectations of consumers. Mr Douglas Foo, President of SMF, who delivered the keynote address, stressed that the crux of the matter is how to go about connecting with customers to seize the opportunities in this digital age.

In today's connected marketplace, businesses must understand, innovate and update their customer journey maps within the supply chain; use of online channels at the right time; and across a variety of touch points such as mobile applications and social media, to engage consumers as their expectations and buying patterns have evolved. We have now seen how this digitalisation process has transformed industries such as the hotel & hospitality, taxi transportation, airline services, manufacturing and retail. This is a global phenomenon that has cut across all sectors and the real crux of the

matter is how do we capture the opportunities in a connected marketplace and be at the cutting edge.

The forum also went into detail on new consumerism, the influence of the digital shopping landscape on brand owners and how to use technology to maximise inventory efficiency.

"I think it is very interesting to understand the impact on how consumers use technology for web roaming. This will help us make decisions like what are the items that can be browsed offline and bought online. Such information can be applied to our marketing strategies or further fine-tune our e-commerce platform," said Ms Pauline Liow, Senior HR & Administration Manager at Pokka International Pte Ltd.

Another company that already has its business on the e-commerce platform is Carlsberg Singapore Pte Ltd. Mr Daniel Chua, Head of Human Resources & Corporate Affairs from Carlsberg Singapore said, "This seminar provides a platform to get some ideas on leveraging on the methodologies and mindsets of the emerging e-commerce business. Coming from Human Resources, it gives me a better idea on what type of people to source for or even develop internally so that we can ride on this e-commerce wave as a business strategy. However, everyone is doing the same thing so our challenge now is how to differentiate ourselves from our competitors." ■



The panel of speakers at ECR Singapore CEO Forum posing with GS1 Singapore Chairman Mr Samson Wong (1st from left), ECR Singapore Co-Chairs Mr Tng Ah Yiam (5th from left) and Mr Alain Ong (6th from left) and GS1 Singapore CEO Mr Liew Wai Leong (7th from left).



The forum, held at NTUC Fairprice, saw GS1 Singapore members and non-members across the supply chain service providers interacting with one another.

AFRICA-ASEAN BUSINESS EXPO 2017

Sandton Convention Centre
Johannesburg, South Africa
6 - 8 November 2017



BUSINESS GATEWAY BETWEEN AFRICA & ASEAN

Invitation to Participate:

The Singapore Manufacturing Federation (SMF) will be organising a Singapore Pavilion at the inaugural Africa-ASEAN Business Expo (2017) in Johannesburg, South Africa.

Singapore-registered companies that join the SMF Singapore Pavilion are eligible to claim a guaranteed reimbursement rate of up to 60% of the booth space and construction cost under the Local Enterprise and Association Development (LEAD) Programme funding



ABOUT THE AFRICA-ASEAN BUSINESS EXPO (AABE) 2017

The Africa-ASEAN Business Expo (AABE) Series is designed to be the strategic platform linking businesses between the African Union (AU) and ASEAN, via their respective commercial hubs. Together, the Singapore Manufacturing Federation (SMF) and Conference & Exhibition Management Services (CEMS) Pte Ltd are embarking on this initiative to open the business gateway between Africa and ASEAN.

Leveraging on ideal and growing market conditions, the inaugural AABE 2017 will kick off in Johannesburg, South Africa, from 6 - 8 November 2017.

WHY EXHIBIT?

Located at the Sandton Convention Centre, South Africa's leading event venue situated in the vibrant business district of Johannesburg in South Africa.

AABE 2017 will showcase the latest products, technologies and services from the following sectors:

- Education
- Environment
- Financial & Business Services
- Food & Beverages
- Franchising
- Healthcare
- Building Construction
- Infrastructure
- IT & Telecommunications
- Transportation
- Water

HIGHLIGHTS

AABE 2017 will also include the following events with the trade expo:

- The Africa-ASEAN Business Forum (AABF)
- Networking Receptions
- Onsite Business Matching Services
- Hosted Buyers Programmes
- Industrial Conferences

For further assistance, please contact:
Mr Gabriel Tan | (65) 6826 3085

Event: Singapore-Mexico Joint Workshop
Date: 24 July 2017
Venue: Nanyang Technological University



During a joint workshop between NTU and ITESM, Mr Douglas Foo was invited to lead a discussion on the topic of 'Food'. A lively industry-led perspective on ensuring consumer confidence through food security, quality and safety in Singapore by Mr Foo ensued.

Event: ASEAN Economic Community Symposium
Date: 27 July 2017
Venue: Institute of Southeast Asian Studies – Yusof Ishak Institute



Mr Douglas Foo speaking at the ASEAN Economic Community (AEC) Symposium, where he provided an update on the private sector's perspective on the AEC and its potential.

Event: HR Exchange
Date: 4 August 2017
Venue: SMF



National Wage Council 2017-2018 Guidelines presented by Mr Jonathan Ng, Assistant Secretary, NWC, Secretariat, Ministry of Manpower (MOM), provided facts about the economy and manufacturing performance of Singapore. Apart from wage recommendations, they include recommendations on re-employment of older workers and responsible retrenchment.

Event: Visit by Madam Halimah
Date: 4 September 2017
Venue: SMF



Madam Halimah made a visit to SMF for a dialogue session with SMF Council Members to understand more about the federation.

Event: CEO Think Tank Series
Date: 31 August 2017
Venue: SMF



SMF-CCL organised a seminar on the adoption of Industry 4.0 in the manufacturing industry. Topics such as strategies to transform SMEs were discussed.



Mr Neo Eng Chong, President and CEO of Makino Asia Pte Ltd shared the transformation journey of his company.



Madam Halimah and SMF Council members after the dialogue.

OUR HEARTIEST CONGRATULATIONS

to Ms Betty Tan

*Chairman of the Packaging Council of Singapore Industry Group
On being conferred the Public Service Medal (PBM)*



SMF WELCOMES YOU!

SMF is pleased to welcome the following new members* as part as our family.

- | | | |
|--|---|--|
| 1. Power & Motion Control Pte Ltd | 32. MSE Pte Ltd | 63. Inventrik Pte Ltd |
| 2. Craft Print Holding Pte Ltd | 33. Shinyuu Cold Chain Solutions Pte Ltd | 64. Swees - Tech Global Pte Ltd |
| 3. Sunpower Energy Systems Singapore Pte Ltd | 34. Hock Seng Hoe Metal Company Pte Ltd | 65. Tong Garden Food (Singapore) Pte Ltd |
| 4. Teratech Solutions Pte Ltd | 35. ZMC International Pte Ltd | 66. Tai Sin Electric Limited |
| 5. ISO-Dynamique Microsystems Pte Ltd | 36. Cyclect Holdings Pte Ltd | 67. Cheng Moh Huat Trading Supplier Co. |
| 6. The Tabernacle (PCB) Products Pte Ltd | 37. Herbalife International Singapore Pte Ltd | 68. RFK Holding Pte Ltd |
| 7. Wilson Cables Pte Ltd | 38. Rui Ying Medical Technology Pte Ltd | 69. Meng Heng Glass Pte Ltd |
| 8. Pet Lovers Centre Pte Ltd | 39. Weebo Pte Ltd | 70. Alchemy Foodtech Pte Ltd |
| 9. Ho Printing Singapore Pte Ltd | 40. Nishen Tropical Fruits Pte Ltd | 71. Italco (Far East) Pte Ltd |
| 10. Assimilated Technologies (S) Pte Ltd | 41. Provenance Distributions Pte Ltd | 72. Malayan Daching Co Pte Ltd |
| 11. Equiprest Engineering Pte Ltd | 42. 3M Technologies (S) Pte Ltd | 73. Union Gas Pte Ltd |
| 12. Neuphonix Technology Pte Ltd | 43. Louisiana Seafood Manufacturing Pte Ltd | 74. Sembas (Asia) Trading Pte Ltd |
| 13. C&M Interactives Pte Ltd | 44. OnShape Technologies Pte Ltd | 75. Delta Intercontinental Pte Ltd |
| 14. Titan Engineering Pte Ltd | 45. ISA Technology Pte Ltd | 76. Hilco Appraisal Singapore Pte Ltd |
| 15. Foo Kon Tan LLP | 46. Calsius Solutions Pte Ltd | 77. Agape-Life Support System Pte Ltd |
| 16. Xdel Singapore Pte Ltd | 47. Abrasive Engineering Pte Ltd | 78. Onn Wah Tech Pte Ltd |
| 17. Bestell Solution Pte Ltd | 48. Toyo Adtec Pte Ltd | 79. DEF-TECH (S) Pte Ltd |
| 18. Fruit United Pte Ltd | 49. Hilltechs Packing Industry Pte Ltd | 80. 3D Printing Studios Asia Pte Ltd |
| 19. PS Food & Beverage (S) Pte Ltd | 50. LSH Industrial Solutions Pte Ltd | 81. One Click Solutions |
| 20. Excess Inventory Guru | 51. Supersteam Asia Pacific Pte Ltd | 82. Singapore Technologies Engineering Ltd |
| 21. I Switch Pte Ltd | 52. IIM Pte Ltd | 83. Heatex Industrial Technology Pte Ltd |
| 22. Deloitte Singapore & Touche LLP | 53. L'Earth (S) Pte Ltd | 84. Tantex Pte Ltd |
| 23. The Eco Trading Company Pte Ltd | 54. AEB Asia Pacific Pte Ltd | 85. Auk Industries Pte Ltd |
| 24. Seow KH Consultancy Pte Ltd | 55. System Automation Pte Ltd | 86. Bake Mission Pte Ltd |
| 25. C3S Pte Ltd | 56. Eye-2- Eye Communications Pte Ltd | 87. YNL 360 Pte Ltd |
| 26. Airverclean Pte Ltd | 57. 3 Kay's Pte Ltd | 88. Mitsubishi Overseas Headquarters Private Limited |
| 27. Hirata FA Engineering (S) Pte Ltd | 58. Angliss Singapore Pte Ltd | 89. Shanon Design (S) Pte Ltd |
| 28. Nature 2000 Pte Ltd | 59. Engis Asia Pacific Pte Ltd | 90. Lim Kee Food Manufacturing Pte Ltd |
| 29. I-Sprint Innovations Pte Ltd | 60. Magicforest.com.sg (Pte. Ltd.) | |
| 30. IDI Laser Services Pte Ltd | 61. Imagene Labs | |
| 31. MFS Technology (S) Pte Ltd | 62. Digimatic Solutions Pte Ltd | |

* Listed in alphabetical order and information is accurate as of 11 September 2017.





**Singapore
Manufacturing
Federation**
新加坡制造商总会