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EDITOR'S NOTE

With digitalisation becoming increasingly prevalent in today's workplace, industries are primed for change in the years to come. Through innovation and automation, the workplace of the future is poised to be more streamlined and effective.

Amidst the buzz on digitalisation, Mr Sam Chee Wah, General Manager, Feinmetall Singapore, shares insights on how he has adopted digital processes for his company. Find out about the challenges faced by Small Medium Enterprises on going digital and hear from Mr Sam on how Feinmetall managed to overcome them on pages 16 and 17.

With the increasing demand to streamline workflow processes, companies are looking for ways to do away with mundane tasks and reduce workloads. We delve into Robotic Process Automation and explore how it can be leveraged to aid your organisation in optimising work processes on pages 18 and 19.

At RP, we thrive on innovation. Through our tech-driven partnerships, we seek to create industry-relevant digital solutions (pages 8 to 15). In this issue, we focus on the different technologies that are impacting today's workplaces and how they will continue to shape industries in the future.

As we embrace change today, we must also understand that continual learning is essential. With the opening of RP ACE @ Paya Lebar, we are making lifelong learning of critical future skills more accessible than before. Visit page 4 to discover how we are empowering today's workforce for tomorrow's workplace.

From the incoRPorate editorial team

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Hospitality Evolves at SOH Industry Day

The hospitality industry of today faces rapid innovative developments and a shortage of manpower. This leads to an increased need to adopt new technologies in order to stay relevant.

Themed “Future DNA for the New Hospitality”, the latest Republic Polytechnic (RP) School of Hospitality (SOH) Industry Day was held on 17 August 2018. The event featured an exciting showcase of different technologies and a list of distinguished speakers. RP SOH students also had the chance to showcase their Final Year Projects at the Industry Day.

The event was a great success, with over 100 industry experts in attendance. Participants were regaled with engaging talks, beginning with lessons on industry trends by Ms Yeoh Siew Hoon, Founder and Managing Director, WIT, Editorial Director, Northstar Travel Group, who gave a talk on industry trends. This was followed by Mr Bidyut Dumra, Head of Innovations-Ecosystems, DBS Bank, who acquainted the participants with DBS's transformation through the years; and rounded up with a talk by Ms Isabel Choo, Insights Analyst, LinkedIn Talent Solutions, on how to prepare the hospitality workforce for the future.

Several panellists gave their insights on the challenges, trends, and future of hospitality — namely Mr Poh Chi Chuan, Director, Digital Transformation, Singapore Tourism Board; Ms Jean Wee, General Manager, Chope;

Ms Sulbi Lee, General Manager, M Social Singapore; Ms Yeap Mei Yi, General Manager, Peatix; and Ms Tascha Maria Khosroo, Regional Acquisition Manager, BeMyGuest (Tours & Activities).

Participants were then treated to a guided tour of hospitality technology such as the SOH Guest Service Platform, developed by Intelity, which allows guests access to services at their fingertips; personalised latte art by Ripples; and an immersive Virtual Reality (VR) and Augmented Reality (AR) experience hosted by Immersively Design.

The event also saw the signing of a Memorandum of Understanding (MOU) between RP and Singapore Tourism Board (STB). With the aim to work collectively towards enhancing the hospitality industry, our staff and students will be collaborating with STB on VR and AR projects and more.



A participant immersing in a VR experience

Welcoming the Future at RP Technology Day 2018



Showcasing RP's very own robot emcee, Nao, at the RP Technology Day 2018

“Every business is a digital business.”

Mr Kok Ping Soon, Chief Executive, GovTech, on how digitalisation plays a large part in every industry

The RP Technology Day 2018 presented some of the key technologies driving innovation and productivity in today's workplace. Through the sharing of industry trends and technological advancements, the event aims to foster deeper collaborations between RP and the various organisations involved. Our industry partners and staff members' efforts culminated in a full day of learning and insight — from talks by keynote speakers to featured exhibition booths by RP's many industry collaborators.

RP's very own robot emcee, Nao, greeted guests and introduced keynote speakers to the delight

of event participants. RP Principal/CEO Mr Yeo Li Pheow's welcome address was followed by an insightful talk by Guest-of-Honour and keynote speaker Mr Kok Ping Soon, Chief Executive, Government Technology Agency of Singapore (GovTech), on the kind of future that technology can enable.

During the event, industry professionals shared insights on four tracks: Robotic Process Automation (RPA), Internet of Things (IoT) and Data Analytics, Digital Business, and Artificial Intelligence (AI). These are the areas where RP will be partnering with the industry to focus on joint projects and internships. At the same time, exhibition booths and workshops were set up to showcase emerging technologies that are transforming the workplace, such as AI and robotics.

Partnering Technology

The RP Technology Day also set the stage for the signing of two MOUs, the first being with Hewlett Packard. Mr David Tan, Managing Director,

Hewlett Packard Enterprise, and Ms Wong Wai Ling, Director, School of Infocomm, RP, inked the collaboration that covers areas such as AI, Data Analytics, and IoT.

RP is also honoured to be the first Institute of Higher Learning (IHL) in Singapore and Southeast Asia to use LiFi technology in collaboration with Signify, formerly known as Philips Lighting. Mr Jitender Khurana, General Manager (Singapore and Exports), Signify, and Dr Wang Jianguo, former Director, School of Engineering, RP, represented Signify and RP respectively in signing the MOU. This partnership is set to establish and further develop LiFi technology, Visible Light Communication (VLC), and other smart lighting technologies through joint projects, internships, and attachments.

Exhibitions and Projects: The Practical Implementations of Technology

Imagine driving with an AR screen, with GPS instructions on your windscreen; green arrows to show you where to turn next and red markers to highlight danger — a scene straight out of a sci-fi movie. This is just one of the scenarios that could come out of VR and AR technology. From training to execution, VR and AR can potentially be applied in nearly every aspect of work, across different industries and fields.

EON Reality — a developer of VR and AR software, and a solution provider for industry and education — aims to provide a “hands-on” experience for students and trainees, and facilitate experiential training. As one of the exhibitors at RP Technology Day, they showcased the many advantages of VR and AR technology, such as vastly-improved learning engagement. Apart from improving traditional learning methods, the technology can also be implemented in various aspects of work.

Additional technology solutions were also exhibited through a showcase of staff and student projects that have been implemented in real-life situations, such as a smart gardening system which utilises IoT for automation and remote monitoring at the Tampines Starlight Harmony Garden. Other projects include the Multilingual Speech-to-Text Transcriber and Translator, designed with local speech patterns in mind; the GoRPA Transformation programme, which automates repetitive administrative work through RPA¹ for better manpower and time

allocation; and the Smart Inventory Management System (SIMS) to track inventories remotely and provide live feedback on packing processes via IoT.



Mr Yeo Li Pheow, Principal/CEO, RP, (second from right) with our distinguished guest speakers, who presented insights on digitalisation and its impact on workplace transformation

Changing the Workplace Starts with You and AI

AI is primed as one of the four frontier technologies for growth and employment in Singapore's Industry Transformation Map (ITM), with a noted increase to the use of AI in daily work.

Recognising this growing trend, RP has launched a first-of-its-kind Specialist Diploma aimed at training professionals in Applied AI during RP Technology Day.



Areas of Application:

- Recommender Systems
- Virtual Assistants
- Pattern Recognition
- Anomaly Detection

Adult learners will be well equipped with the relevant concepts and skills to develop AI technology solutions. They can also look forward to participating in projects to apply the knowledge that they have gained through the course.



Scan this QR code to find out details about the Specialist Diploma in AI!



¹ Find out how RPA is useful in today's workplaces on Pages 18 & 19!

RP ACE @ Paya Lebar: Lifelong Learning Made Easier



Mr Chee Hong Tat, Senior Minister of State, Ministry of Trade and Industry and Ministry of Education, (second from left) and our distinguished guests participating in a workshop held at RP ACE @ Paya Lebar

“In light of changing business models, evolving industry trends, and technological disruptions, the pursuit of lifelong learning has become an integral part of one’s career progression to excel in the workforce.”

Mr Yeo Li Pheow, Principal/CEO, RP

Adult learners can now attend RP courses at a more central location with the launch of the RP Academy for Continuing Education (ACE) at the Lifelong Learning Institute (LLI) in Paya Lebar. Named RP ACE @ Paya Lebar, this new satellite campus offers full qualification academic courses as well as short courses.

Graced by Mr Chee Hong Tat, Senior Minister of State, Ministry of Trade and Industry and Ministry of Education, RP ACE @ Paya Lebar was officially opened on 26 November 2018. During the launch event, agreements were also signed with representatives from Eu Yan Sang Academy Limited, Raffles Medical Group, Singapore Telecommunications Limited, and Schenker Singapore (Pte) Ltd. With this agreement, employers from these organisations will send their staff for Continuing Education and Training (CET) courses at RP.

New programmes such as the SkillsFuture Earn and Learn Programme and SkillsFuture Work-Learn Bootcamp will be offered to recent graduates and mid-career individuals. With a focus on applied learning opportunities, these programmes will help organisations’ efforts in CET and upskilling.



One of our trainers with a participant at our new facility, RP ACE @ Paya Lebar



To learn more about RP’s lifelong learning courses, scan this QR code or visit www.rp.edu.sg/ACE



SkillsFuture Fiesta 2018 – Embracing Change, Transforming the Future



A first-hand VR experience for our Year 1 students

The transition from school to the world of work can sometimes be overwhelming for students, especially with the constant introduction and adoption of new technology. Aptly themed “Embrace Change, Transform Your Future”, the SkillsFuture Fiesta 2018 was organised to give RP students a glimpse of the future workplace.

About 5,000 Year 1 students taking the Organisational Behaviour module had a chance to learn more about future-ready skills and gain a first-hand experience of emerging trends at the interactive event.

Students were treated to a showcase of two collaborative robots, Sawyer and Universal Robot, which illustrated how technologies, automation, and robotics are changing the workplace. They also had the opportunity to immerse in VR to experience how VR can affect the future workplace.

In addition to gaining awareness of the competencies required in the future workplace and how they can prepare for their future careers, students also learned the importance of taking ownership of their careers and lifelong learning.

Taking Aircraft Repair and Maintenance to New Heights

Air travel has long been an integral mode of transport in modern life. Naturally, passengers expect top quality aircraft maintenance, but this process is often time-consuming and repetitive.

To improve the process, three RP students have come up with an innovative method to repair aircraft structural damages for their Final Year Project. This won them the Tan Kah Kee Young Inventors’ Merit Award.

Structural cracks are traditionally fixed through resin injections and not always fully effective for fine damages. The students’ method utilises a vacuum to allow resin to penetrate finer cracks and effectively fix aircraft composite structures. Aircrafts can then be repaired more

thoroughly, potentially revolutionising the efficiency and cost of aircraft maintenance.

Another team of RP students also won the Tan Kah Kee Young Inventors’ Commendation Award for their Air Leakage Detection System project, which uses ultrasound, coloured fumes, smoke, and infrared thermography to test for cabin air leaks.

Both projects were partly sponsored by airplane maintenance enterprise CW Aero Services, which is currently reviewing the solutions for implementation in aircraft maintenance, repair, and overhaul (MRO) centres.



Dr Hamid Saeedipour, Principal Lecturer (Industry), Diploma in Aerospace Engineering, School of Engineering, RP, with the students and their innovative airplane repair method

The Future Beckons: Digitalisation Seminar & Exhibition 2018

Digitalisation is increasingly adopted in workplaces. With the acquisition of digital skills becoming a norm, it is important to understand the impacts of digitalisation and how digitalisation is being used in our work processes.

Jointly organised by the five polytechnics, Institute of Technical Education, and SkillsFuture Singapore, the Digitalisation Seminar & Exhibition 2018 showcases some of the digitalisation initiatives that were created by the organisers, in support of the Government's Public Sector Transformation and Smart Nation vision.

With over **300** people in attendance, the event focused on four key areas of digitalisation initiatives:

- Customer-Centric Services
- Process Automation
- Data Analytics
- Culture and Capability Building



Following an opening address by Guest-of-Honour, Mr Lai Chung Han, Second Permanent Secretary (Education), the seven agencies¹ gave presentations on their digitalisation projects.

As an educational institution, RP is also working towards developing initiatives in these areas, with staff projects being one of the ways of doing so. Five of our staff projects were showcased during the seminar including



Congratulations to our award-winning team for their innovative take on automation

"Graduation Name Reading", the project which won the Public Sector Transformation (PST) Star Service Awards. These projects aim to facilitate innovation and digitalisation in the four key areas, paving a way for smoother and more effective work processes.

RP's award-winning project is a cross-departmental in-house developed system that automates the reading of names during graduation ceremonies. With the use of this new system, ceremonies become more professional and cohesive, while the manpower originally required for the manual reading of names can now be deployed elsewhere.



*Participants interacting with **Shoot-Store-Share**, a project undertaken by RP staff*

¹ Nanyang Polytechnic, Ngee Ann Polytechnic, Republic Polytechnic, Singapore Polytechnic, Temasek Polytechnic, Institute of Technical Education, and SkillsFuture SG

Going Cashless with Team PolyGen

More people are opting to go cashless given its convenience. Now, hawkers can be part of this digital future too.

Currently, the merchant digital payment method relies on QR codes, which may be a hassle for hawkers to implement. Furthermore, it is not as user-friendly — an issue exacerbated whenever there are too many customers in line.

A team of Diploma in Business Applications students from RP School of Infocomm (SOI), named Team PolyGen, has thus developed a one-step scan and pay process to revolutionise the current cashless payment methods. The solution won the NETS Most Innovative Payment award at the PolyFinTech100 API Hackathon in July 2018.

The Hawker Centre Cashless Payment Solution uses image recognition to identify

“RP’s solution is entirely in line with NETS’ ethos of simple, secure and stress-free payments for everyone.”

Mr Alvin Seck
Head, Merchant Services & Solutions, NETS



PolyGen team member, Charlie Angriawan Oei, presenting their project at the Singapore FinTech Festival

the product and predict the payment price. Users can then confirm or adjust the price accordingly. The process is as simple as pointing the phone camera at menu images or food items, whereby the name and price of the product will appear on the screen.

Industry experts at the PolyFinTech100 API Hackathon complimented the event as a good collaborative platform for students and banks to learn from each other. The students were recognised for being able to come up with fresh ideas and solutions to address real-world problems. The event was viewed as a good platform for young talents to be groomed to meet the evolving needs of the financial services sector.

The students had the opportunity to present their award-winning solution and gain experience from key industry players at the Singapore FinTech Festival in November 2018. This experience allowed Team PolyGen members Charlie Angriawan Oei and Ong Li Zhen to participate in internships offered by FinTech companies M-DAQ and JEDTrade respectively.



Smiles all around for the winning team and their supervisor, Dr Tan Lee Kiat, Senior Lecturer, SOI, RP

01



FURTHERING GAMIFICATION & UX DESIGN WITH NCS GROUP & THINKPLACE SINGAPORE

Gamification is gradually being used to make non-game applications more interesting for users, and as the industry for serious games continues to evolve, the demand for skilled User Interface (UI)/ User Experience (UX) designers is also increasing over the years. There is also an emerging need for skills such as rapid prototyping, front-end development, and methodologies like scrum and A/B testing.

To better prepare students for their future careers in these industries, the RP Experience Design and Gamification Centre (XDG Centre) was launched on 7 September 2018 to great excitement from students and staff alike. The Centre acts as a

platform to facilitate collaboration between students and industry partners, to achieve a more cohesive application of gamification and UX in the workplace.

Alongside the Centre's opening, two Memorandums of Understanding (MOUs) were also signed on the same day. The partnerships with NCS Group, an information and communications technology (ICT) and communications engineering services provider, and ThinkPlace Singapore, a strategic design consultancy, will lead to more learning and collaborative opportunities for students.

Through partnering up with industry experts on real-life industry projects, students can pick up new skills in the areas of UX design and Gamification and apply these skills across different industries when they enter the workforce. Our industry partners, staff, and students can look forward to more learning and collaboration opportunities in the future.



To learn more about
the XDG Centre, scan
the QR code



BUILDING SUPPORT FOR SPORTS & GAMING WITH SCOGA & SG

Esports, or electronic sports, is competitive video gaming played for spectators. It has been rapidly gaining popularity worldwide and also steadily gaining recognition in the world of mainstream sports.

Recognising the growing demand of skillsets and talents in the Singapore esports sector, RP and the Singapore Cybersports and Online Gaming Association (SCOGA), a non-profit organisation supported by the National Youth Council, have signed an MOU which will lead to supplementary learning opportunities for students from RP's Diploma in Sport Management and Diploma in Sport Coaching.

Students can expect a line-up of projects and immersion into esportsing events through this partnership.

Through hands-on experience and collaborations with industry players, RP grooms fresh talents and produces skilled professionals who are ready for the burgeoning sector – further encouraging the growth of esports as a fast-emerging industry in Singapore.

Despite the rise of esports, RP has not forgotten about traditional sports. On the same day, we also signed an MOU with Singapore



Gymnastics (SG). This partnership aims to benefit both the RP sport coaching students and the gymnastics coaching community.

Through this collaboration, students will be empowered with skills and knowledge to prepare them for the traditional sports sector. Both students and staff will have myriad opportunities to participate in internships, attachments, and joint projects.

Athletes and coaches will also benefit from the raised coaching standards and can pick up tips through the joint projects and evolving curriculum.




01. More opportunities abound with our NCS Group and ThinkPlace Singapore partners
02. Our collaborative partners getting to know one another
03. Establishing our partnership with SCOGA
04. Representatives from Singapore Gymnastics and RP signing the MOU for a positive partnership



LEVELLING UP HEALTH WITH NHG

Games play a large part in our lives, from simple playground “tag” to more complex digital consoles. Now, games are even helping us to live healthier.


As one of the polytechnics involved in the Memorandum of Agreement (MOA) for the ALIVE-POLY-ITE Student Internship Programme, RP aims to work with our partners to create serious games for the healthcare industry.

 **Serious games** are games used for purposes beyond entertainment, especially in sectors such as aeronautics, education, defence, healthcare, and science.

Signed on 25 October 2018 during the Singapore Health and Biomedical Congress, the partners involved in the MOA are National Healthcare Group (NHG), Republic Polytechnic (RP), Nanyang Technological

University (NTU), Institute of Technical Education (ITE), Ngee Ann Polytechnic (NP), Nanyang Polytechnic (NYP), Singapore Polytechnic (SP), and Temasek Polytechnic (TP).

Students undertaking this internship will be teaming up with healthcare experts to develop games for healthcare purposes, that can be utilised by the healthcare industry with future real-world implementations. Healthcare personnel will be able to work with students in order to create serious game prototypes.

 Students working on these prototypes should have a background in:

- Games design
- Storytelling
- Graphics design
- IT

“Participants can look forward to a vibrant multi-campus learning experience as well as the industry-benchmarked learning facilities across the institutions.”

Dr Lim Boon Whatt,
Director, RP School of
Applied Science

ADVANCING HEALTHCARE THROUGH HOLISTIC LEARNING

Healthcare demands are growing in Singapore, creating a need for a higher-skilled workforce in the biomedical science industry, including medical laboratory science. As such, Singapore's five polytechnics have jointly designed a 30-month part-time Diploma in Applied Science (Medical Laboratory Science).

Initiated by the Biomedical Science Sector Coordination Team (BMSSCT), consisting of the five polytechnics and the Institute of Technical Education (ITE), and chaired by RP, this CET programme commenced in October 2018. The first-of-its-kind, this joint diploma leverages the curricula of each polytechnic to create a comprehensive programme for a holistic learning experience.

The course aims to strengthen the healthcare industry capabilities and advance careers in clinical diagnostics or other fields related to biomedical research and technology. Programme participants are given the opportunity to take part in learning experiences hosted at the polytechnics.

The diploma consists of five Modular Certificates (MCs), with each of the five polytechnics specialising in one area. Course participants will receive certifications in the following areas – Haematology and Immuno-haematology, Diagnostic Clinical Chemistry, Medical Microbiology, Molecular Diagnostics, and Histotechnology and Cytotechnology.

Participants can expect a learning experience that is designed in consultation with industry partners and conforms with the latest scientific medical laboratory standards. Industry partners looking to upskill their workforce can enrol their employees in this part-time diploma to further equip them with the knowledge and skills in medical laboratory science to support the biomedical science sector.



To learn more
about this part-
time Diploma,
scan the QR code



01. Students participating in microscopy investigation



01



FORGING A DIGITAL WORKFORCE WITH SICCI

Signed during the Official Opening of the SME Centre@Little India, the MOU with Singapore Indian Chamber of Commerce and Industry (SICCI) marks the start of a collaboration with SICCI members. This includes Continuing Education and Training (CET) courses, industry collaborations, and internship opportunities for students.

SICCI will arrange for staff of small-medium enterprises (SME) to attend CET courses hosted by RP in the areas of digitalisation and analytics.

Our students and staff will be working closely with the SMEs related to SICCI, in order to explore and identify business needs and gaps in business

models. Students will also work on projects to help the SMEs mitigate these needs and gaps. Some of the areas to be focused on are research, technology, analytics, and social media.

RP and SICCI will also work on identifying internship needs for SMEs and match students to the respective SMEs based on availability and learning scope. Furthermore, there will be scholarship and sponsorship opportunities for students through SICCI's member companies.

We would also like to take the opportunity to congratulate SICCI on the opening of their SME Centre in Little India which supports more than 1,000 businesses.

CET Short Courses

Staff of SMEs under the SICCI can tap on these CET short courses to prepare for the workplace of tomorrow.



Digitalisation

- Making Sense of Digital Business Platforms
- Digital Branding
- SkillsFuture for Digital Workplace
- Staying Relevant in the Digital Economy



Analytics

- Service Analytics
- Certificate in Data Processing for Consumer Insights
- Business Analytics courses





NEXT GEN IDEAS AT THE YOUTH INSIGHTS SUMMIT

As educators, we are constantly imparting knowledge to our students, but we also know that there is much we can learn from youth. Through them, we hope to gain fresh insights on hot-button topics that are at the top of their minds.

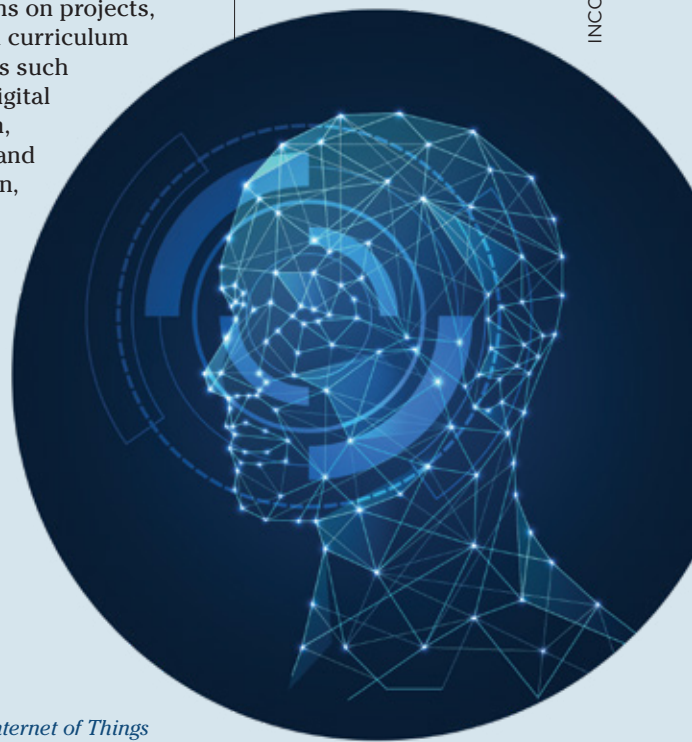
To do so, the RP School of Management and Communication organised the Youth Insights Summit on 15 November 2018. The event was graced by Ms Angeline Poh, Chief Corporate Development Officer, Mediacorp Pte Ltd, and keynote speaker on the topic “Understanding & Engaging Millennials”.

The Summit’s participants had the chance to hear from a panel of well-known consumer brand leaders on “Youth and Their Digital World”. They gained valuable information on digital marketing, data analytics, and business technologies, and how these sectors can impact businesses in today’s digital world.

A showcase of industry use cases in VR and AR, AI, IoT¹, and Immersive Media supplemented the talks. This was followed by a group sharing session with youth consumers where student leaders took to the stage and provided their youthful insights to industry partners on three key topics, “Career and Career Planning”, “Youth and Healthy Living”, and “Youth Consumption”.

Additionally, five MOUs were signed for collaborations on projects, internships, and curriculum research in areas such as VR and AR, digital content creation, video analytics and facial recognition, AI, and HR analytics. The signatories and RP’s senior management were delighted to be joined on stage by Sanbot, RP’s very own robot friend.

01. A happy start to a new partnership at the SME Centre@Little India
02. RP’s robot friend, Sanbot, joins our industry partners and RP’s senior management on stage



¹ Virtual Reality and Augmented Reality, Artificial Intelligence, Internet of Things

GROOMING CULINARY CHAMPIONS

The new MOUs signed with Employment and Employability Institute, e2i, and Institut Culinaire Disciples Escoffier will pave the way for collaborations between all partners through joint projects, courses, internship placements, and industry attachments.

Students can look forward to gaining new skills and knowledge, while culinary professionals can train and groom talents for future employment in their establishments through the partnerships.



The MOU signing ceremony with Employment and Employability Institute, e2i, and Institut Culinaire Disciples Escoffier

The areas of collaboration are:



Culinary Symposium

The annual Culinary Symposium acts as a platform for culinary experts to impart knowledge to students and others in the culinary trade. This also helps to increase awareness on local farmers and their produce.



Food and Beverage Masterclasses/Courses

A series of masterclasses and courses co-created with e2i and Escoffier for the upskilling and re-skilling of the current workforce, along with mitigating skills gaps.



Industry Collaboration

A SkillsFuture Initiative for project and curriculum enhancement opportunities for students. Staff attachment opportunities are also available through RP's Industrial Attachment Scheme (IAS).



Internship Opportunities

Industry placement with Escoffier and e2i identified partners, for students to pick up insights and skills from industry experts and gain industry experience at reputable establishments.



STRENGTHENING BONDS WITH DBS BANK

Our successful partnership with DBS, beginning in 2011, continues with a third MOU signed on 9 November 2018 by Ms Geeta Sreeraman, Head of Customer Centre, Singapore, DBS, and Mr Ashley Chua, Senior Director, Industry Services and SkillsFuture, RP.

The renewal of this long-standing relationship will lead to further joint projects to benefit both RP students and DBS. Students can look forward to attachment programmes such as the Industry Immersion Programme, and industrial visits for the those taking the module H350 Customer Experience in Banking and Finance. Furthermore, DBS Bank will provide RP with funding for scholarships, book prizes, and sponsorships.



Our renewed partnership with DBS Bank opens up more opportunities in the finance and banking sector

Our industry partners at DBS can also take the chance to groom fresh talents through the enhanced internship programme, and convert these interns to permanent staff or offer part-time employment to students furthering their studies, at the

end of their internship stints. We hope to deepen our relationship in the years to come and create more opportunities for collaborations on projects, attachments, and employment in the future.

SOARING HIGH WITH ST AEROSPACE ENGINEERING

RP has strengthened our partnership with ST Aerospace Engineering Ltd (STEA) with an MOU signed on 17 October 2018.

RP students and our industry partners can jointly participate in industry-related Final Year Projects while staff can look forward to industry attachments.



DIGITAL TRANSFORMATION

Should SMEs 'Go Digital'?

Industry 4.0, digital transformation, robotic and automated technologies – these are just a few industry developments confronting small and medium enterprises (SMEs) today. Mr Sam Chee Wah, General Manager of Feinmetall Singapore, shares his company's experience and provides practical ideas on how SMEs can overcome challenges and 'go digital' to improve business agility, competitiveness, and growth.

German-Singapore precision engineering joint venture Feinmetall Singapore (Feinmetall) is a leading one-stop turnkey design, manufacturing, testing, and service centre for semiconductor wafer probe cards. With 60 employees today, the company has grown from its humble roots in 2007 when it was five-man repair centre.

Mr Sam attributes this steady growth to the company's decision to embark on digital transformation. He elaborated, "Global trends affect all businesses, including SMEs. In 2016, we started to see rapid adoption of digitalisation globally, along with increasing customer expectations and demand.

Digital transformation was not so much as a choice but something we knew we had to invest in, to stay competitive and to survive."

Feinmetall was amongst the first in Singapore's manufacturing industry to embrace digital transformation. "From the start, we recognised that digital transformation is a journey," shared Mr Sam. "We learnt that the way to make progress was to actively implement, observe, analyse, change, and fine-tune our systems and processes, working collaboratively with our partners and customers."



“Those who put off digital transformation will struggle to keep pace with more technologically-advanced players – there’s no time like the present to act!”

Mr Sam Chee Wah

OVERCOMING CHALLENGES

As an early adopter, Feinmetall encountered many challenges, including identifying suitable solutions and securing funding for its transformation goals. With limited knowledge on technology and no precedents in the field, they turned to a public-private partnership with A*STAR.

To facilitate transition, employees received extensive skills training in the new systems and experienced staff were trained to take on supervisory roles. Part of Feinmetall’s success is attributed to its employees’ receptiveness to balancing skills training, new digital processes, and existing workloads. “When managed carefully, this transition would

ultimately enable us to create higher value products and services, jobs, and returns,” remarked Mr Sam.

The company also invested in new ergonomic office equipment to enhance worker performance, health, and safety. Mr Sam shared, “Employees could see the benefits and how their experience and knowledge would add value to the company. We also encouraged knowledge transfer to fully engage our employees in the change process.”

REAPING BENEFITS & NEW OPPORTUNITIES

Over the last 10 years, Feinmetall has invested over S\$1.5 million in R&D, with its revenue growing six-fold. Mr Sam believes that being an early technology adopter in the manufacturing industry is advantageous. Many opportunities abound to develop new business processes as well as strengthen customer loyalty and employee satisfaction.

Automation has improved operational efficiencies and productivity, such as for its Manufacturing Control Tower. Designed by SIMTech, a research institute under A*STAR, the automated planning system boosts efficiency through live status updates of orders via a visual and intuitive interface,

empowering employees to prioritise pressing orders.

At its digital manufacturing facility, a host of technology solutions which analyse machine data, develop measures to minimise stoppage, and plan machine-maintenance schedules, is raising productivity by 10 to 15%. Customer communications and collaboration have also improved through mobile apps, such as Feinmetall Application and Maintenance E-portal (FAME), which offer video help services.

Mr Sam believes that SMEs can benefit greatly from the switch to digital. Feinmetall’s reputation as an advanced precision engineering company has been enhanced through automation and streamlining of internal processes. “Automating routine tasks has boosted staff productivity, satisfaction, and morale,” shared Mr Sam. “Employee development is keeping pace with technology advancements today. Jobs are more meaningful as employees are performing more skilled tasks that add value to our business.”

Feinmetall has received five consecutive E50 Awards and is the first wafer probe care company to receive Singapore Quality Class (SQC) certification. Mr Sam believes that innovative digital projects and strategic collaborations with industry partners will drive long-term plans and success for the company. He added, “Any SME that wants to stay ahead in this fast-changing global digital economy needs to be constantly thinking about its goals and how it can improve.”



Feinmetall’s S\$6 Million Digital Manufacturing Facility

Tapping on

- A*STAR’s Technology for Enterprise Capability Upgrading (T-UP) programme
- A*STAR Model Factory Initiative technologies

To Drive



R&D processes



Operation and Technology Road (OTR) mapping initiative



Competitiveness



Increasing productivity and improving work processes at Feinmetall through digitalisation

HOW DOES RPA BOOST WORKPLACE PRODUCTIVITY?

Talk about operating costs and everyone agrees — lower is better. With Robotic Process Automation (RPA), an emerging technology, you can optimise your company's work processes and in turn, reduce operating cost and raise productivity and customer service standards.

Through the automation of mundane and repetitive tasks, manpower can be deployed elsewhere to take on more value-added work and improve customer service. As such, there is a strong demand from both the industry and government agencies to incorporate RPA in their work processes.

How Does RPA Work?

Automation is achieved through **bots**, which are essentially software with AI and machine learning capabilities



Works by

Replicating and automating actions like opening files, inputting data, and copying and pasting fields

Best used for

High-volume, repetitive tasks like queries, calculations, and record and transaction maintenance



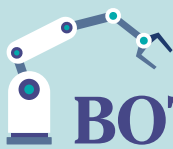
Can be run from

Desktops and cloud

Requires

Programming interfaces that can be integrated with Applications (Legacy, Web, Desktop) and Major Enterprise Software (SAP, Citrix, Java, Mainframe)





BOT TIP!

Management consoles such as UiPath Orchestrator allow you to schedule and analyse bot activity. They also highlight any issues encountered and provide a dashboard for processes managed by RPA.

HOW RP IS PREPARING ORGANISATIONS FOR RPA IMPLEMENTATION

Companies and individuals can attend RP's goRPA programme which is a two-day hands-on training course, with three facilitation sessions, aimed at immersing participants in the theories and practical aspects of automation.

In order to better meet the needs of companies from different industry sectors, RP also offers customised RPA workshops and training programmes to cater to the various needs of organisations in different industries. With over 20 trainers well-versed in RPA, companies can leverage their

knowledge in various fields for their customised workshops and training programmes.

RPA IN THE WORKPLACE

RPA and IT enhancements have optimised processes at DB Schenker, a company specialising in supply chain management and logistics solutions. The implementation of RPA has integrated digital information into the process, upping productivity and enhancing data reporting accuracy. This has freed up the administration's time and enabled them to do more value-added work.

Closer to home, RPA was also adopted by RP's Office of Human Resources (HR). HR staff upskilled themselves and developed RPA bots to automate pain points such

as contract renewal, uploading of staff photos into HR system, and uploading of training attendance records. What normally would have required several staff and many hours to manually process is now achievable with a single click.

THE FUTURE OF RPA AT RP

Starting from the year 2020, all Engineering students at RP will be trained in RPA as part of their full-time Pre-employment Training curriculum. Plans are in the pipeline to provide professional RPA software certification for full-time students and adult learners.

Moving forward, RP will continue to partner with the industry to facilitate deeper research into automation and provide more training opportunities.



Meet some of our RPA trainers at RP Academy for Continuing Education @ Paya Lebar

Keen on leveraging RPA to reduce repetitive administrative work? Scan these QR codes to find out more!



Experience how Robotic Process Automation (RPA) makes your work easier



goRPA

We would like to thank our RPA trainers, Dr Liu Shubin, Mr Kong Ting How, and Mr Vincent Lim for their kind contributions to this article.

IMPROVING LIVES THROUGH DIGITAL DEVICES

At the RP Special Awards Presentation Ceremony held on 17 August 2018, RP students were lauded for developing devices that can improve the lives of the intellectually disabled and their caregivers. The ceremony saw a total of 188 students from 82 educational institutions awarded for their achievements.

A team of six students from RP's Diploma in Design for User Experience (DDUX) and Diploma in Electrical and Electronic Engineering (DEEE) was one of five teams to be presented with the Lee Hsien Loong Interactive Digital Media Smart Nation Award. They were recognised for their contribution in the area of interactive digital media, as part of a collaboration with the Movement for the Intellectually Disabled of Singapore (MINDS).

Titled CHIKIT, the project comprises Pachi, a wearable tracking device and calming companion for the beneficiaries, and Hochi, a home-monitoring device controlled via a mobile application, for their caregivers to track and monitor their loved ones or charges. Additionally, Pachi is able to detect any falls and alert the caregiver. Caregivers can also play back video, music, and voice recordings through the Hochi application.

Group member Subramaniam Selvanaiyagam, 21, said that the team was able to better design the devices after spending time with individuals with intellectual disabilities and their caregivers during a picnic event organised by MINDS.



(From left to right) Project supervisor, Mr Aaron Yong, Lecturer, Diploma in Design for User Experience, School of Technology for the Arts, RP, with CHIKIT team members, Dayna Wong Ying Fei and Subramaniam S

A SUPERMARKET SATURDAY WITH STUDENTS AND SENIORS



A fruitful Saturday spent forging new friendships and learning about maintaining a healthy lifestyle

It was a heart-warming and fulfilling Saturday as approximately 150 elderly residents and their student befrienders participated in a Supermarket Run.

Held at RP on 22 September 2018, the event was organised to promote healthier eating lifestyles to the senior citizens living in the rental blocks at Marsiling. The elderly participants were educated on how to make healthier food choices and played games to test their knowledge of the benefits of healthy food choices, before participating in a fun grocery shopping event at a pop-up supermarket with

vouchers sponsored by the People's Association (PA).

President Halimah Yacob graced the event, along with members of the Parliament of the area, in conjunction with the PA President's Challenge 2018. A cheque of \$250,000 was pledged by PA to the President's Challenge fund.

Together, the students and senior citizens enjoyed themselves while learning about healthy lifestyle habits and choices. RP hopes to organise similar service-learning programmes in the future for our students and the local community.

INCREASING EFFICIENCY WITH MEDIBAND



The job of a nurse can be challenging given the multiple duties. With the aim to aid nurses in their jobs, a team of final year students from RP's Diploma in User Experience (UX) have designed and developed a wearable device, named MEDIBAND. MEDIBAND aims to

increase work efficiency through patient identification and alerts.

The design concept and prototype have been presented to a local hospital in the hope that the medical industry can further develop the project for real-world usage.

“ This project has given us exposure in many ways, from working in a team to liaising with clients in a real-world situation.”

Nur Izzah Atira Bte Mahmood, Team Leader

WHERE ART AND ENGINEERING GO HAND-IN-HAND



The beautiful result of our students' hard work

Engineers may not typically be the first people who come to mind when art is mentioned. As part of the PAssionArts Festival 2018, students from the RP School of Engineering (SEG) are bucking the trend, having designed the art installation, Animal Plank Art.

Across a span of five months, the students put in hard work and effort to create an art installation comprising 16 animal plank art pieces. They were joined by

students with special needs who painted the animal plank art pieces.

Their efforts were rewarded during the Animal Plank Art Light-Up ceremony, held on 5 August 2018, where the ceremonial light-up was executed using an Internet-of-Things (IoT) switch on a tablet. The ceremony was graced by Senior Minister of State, Dr Lam Pin Min; and the students involved were proud to have taken part in such a meaningful and interesting project.

FRIEND OF SINGAPORE RED CROSS AWARD



RP School of Management and Communication (SMC) has been awarded the Friend of Singapore Red Cross Award, presented by President Halimah Yacob at the annual Singapore Red Cross (SRC) Awards ceremony. The award was received by Mr Sim Choon Hou, Director, SMC, RP, on behalf of RP SMC on 11 October 2018.

The SRC Awards are presented to volunteers and partners who have

dedicated their time, resources, and expertise to further SRC's mission. Focusing on raising awareness through content creation, SMC students' contributions include a documentary production, publicity campaigns, exhibitions, photo essays, and articles.

Kudos to all the students and staff at SMC who have been continually contributing their efforts to a good cause.



Mr Sim Choon Hou, Director, SMC, RP receiving the award from President Halimah Yacob



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- Engineering (Vehicular Technology and Operations)



Visit www.rp.edu.sg/ACE or scan the QR code to find out more!