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Singapore International Technical and Vocational Education and Training Conference (TVET 2018)

INDUSTRY TRANSFORMATION: IMPERATIVES FOR FUTURE SKILLS AND LEARNING

The Singapore International Technical and Vocational Education and Training Conference (TVET 2018) will take place from **3 to 4 October 2018 at Raffles City Convention Centre, Singapore**. The fifth edition of this triennial international Conference is organised by the Institute of Technical Education, Singapore's key provider of Vocational & Technical Education. In light of technology and industry disruptions impacting economies around the globe, TVET 2018 is themed **Industry Transformation: Imperatives for future skills and learning**. TVET2018 will continue to throw its spotlight on Singapore's TVET expertise while sharing strategic thinking and developments in TVET with an international fraternity.

2 The **Opening Ceremony for TVET 2018** will be held on Wednesday 3 October 2018 at 10 am, and officiated by **Guest-of-Honour, Mr Ong Ye Kung, Minister for Education**. Some 400 participants, comprising strategists, thought leaders, policy makers, administrators, educationists, and specialists in TVET, from a total of 21 countries/regions will participate in this conference.

3 A total of 15 eminent international and local speakers will present during the Conference, including Keynote Speakers **Mr Andreas Schleicher, Director for Education and Skills, and Special Advisor on Education Policy to the Secretary-General at the Organisation for Economic Co-operation and Development** - on the topic *Educating Students for the Future, Not our Past*, drawing on his experience as a policy maker and champion of TVET – and **Mr Volker Schebesta, Deputy Minister & State Secretary, Ministry of Education, Youth and Sport (KM), Baden-Württemberg, Germany** – who will share his perspectives and expert knowledge from Germany's experience and expertise in policy and country reviews of transformation and digitalisation of industry.

Preparing the Future Workforce for the Changing Global Skills Landscape

4 The evolving global business environment, driven by rapid technological advancements, demands TVET institutions to be more responsive, adaptive and instrumental in training both the current and future workforces to be relevant and resilient. Our impressive panel of renowned speakers from around the world (at **Annex A**) will share their unique expertise and experiences for delegates to learn from. Over two sub-themes, namely *Riding the Wave of Industry Transformation for TVET Future* and *Innovating Teaching and Learning for TVET in the Future Workplace*, the Conference will look at developments in education and manpower policies, and in industry needs, as well as insights into how renowned TVET systems around the world respond to such developments.

5 Ms Low Khah Gek, CEO, ITE, said: "We live in a world driven by rapid technological advancements. New technologies, like Artificial Intelligence, and changing economic needs bring both challenges and opportunities for TVET. They change how work is done in industry, creating new jobs and replacing others, and necessitating change in what and how TVET institutions teach. We hope that this Conference will enable TVET leaders to learn from both Singapore's and other leading nations' experiences in responding to industry transformation."

Invitation to Media

6 Members of the media are invited to the Opening Ceremony of TVET 2018 and report on the Conference. The 2 day Conference programme is at **Annex B**. For confirmation on attendance and interview/photography arrangements, please contact the following:

Ms Josephine Lefort
Head/Corporate Events
Tel: 6590 2030
Mobile: 90607515
Email: josephine_lefort@ite.edu.sg

About Institute of Technical Education, Singapore

The Institute of Technical Education (ITE) is a post-secondary education institution established in **1992** under the Ministry of Education. As a principal provider of career and technical education, and a key developer of national occupational skills certification and standards, ITE's **Mission** is to create **opportunities** for students and adult learners to acquire skills, knowledge and values for employability and lifelong learning. ITE's **Vision** is to be A **Trailblazer** in Career and Technical Education. Our **Values** are **Integrity, Teamwork, Excellence** and **Care**. ITE comprises the ITE Headquarters and three ITE Colleges - College Central, College East and College West.



Mr Andreas Schleicher

Director for Education and Skills, and Special Advisor on Education Policy to the Secretary-General, Organisation for Economic Co-operation and Development (OECD)

EDUCATING STUDENTS FOR THEIR FUTURE, NOT OUR PAST

In the 21st century, the kinds of things that are easy to teach have become easy to digitise and automate. The future is about pairing the artificial intelligence of computers with the cognitive, social and emotional skills and values of human beings. And it is about constantly learning, unlearning and relearning in a world where education and work are closely integrated, and where lifelong skills-based learning supersedes stacking up qualifications upfront. The presentation will examine where countries stand against these challenges.

Professional Biography

Andreas Schleicher initiated and oversees the Programme for International Student Assessment (PISA) and other international instruments, which create a global platform for policy-makers, researchers and educators to innovate and transform educational policies and practices. He has worked for over 20 years with Ministers and educational leaders around the world to improve quality and equity in education. U.S. Education Secretary Arne Duncan said about Andreas in *The Atlantic* (7/2011) that "He understands the global issues and challenges, as well as or better than anyone I've met, and he tells me the truth". Secretary of State Michael Gove in the United Kingdom called Andreas "the most important man in English education", never mind that he is German and lives in France. Andreas is the recipient of numerous honours and awards, including the "Theodor Heuss" prize, awarded for "exemplary democratic engagement" in the name of the first President of the Federal Republic of Germany. He holds an honorary professorship at the University of Heidelberg.



Dr Carl Benedikt Frey

Co-Director,
Oxford Martin Programme
on Technology &
Employment,
Oxford Martin School,
University of Oxford,
United Kingdom

THE FUTURE OF WORK: IS THIS TIME DIFFERENT?

Is technology becoming more labour-saving and less job creating? Which jobs are still likely to be around in 20 years, and which are the new jobs and industries we can expect will emerge? Over the course of two centuries, technological progress has gradually shifted the bulk of the workforce in advanced economies, from agriculture, to manufacturing, to services. As the pace of innovation is speeding up, businesses and governments need to prepare for a much faster transition. In particular, advances in Machine Learning and Robotics are making a substantially broader share of the workforce prone to automation, including jobs in finance, transportation, logistics, sales and services.

Professional Biography

Carl Benedikt is Oxford Martin Citi Fellow at Oxford University where he directs the programme on Technology and Employment at the Oxford Martin School – regarded the world’s leading programme on the future of work. He is one of the most widely cited scholars in the field of workforce automation and industrial renewal, researching the transition of industrial nations to digital economies, and associated challenges for corporations and governments.

Over the course of his career, he has served as an advisor and consultant to international organisations, think tanks, government and business, including the OECD, the European Commission, the United Nations, and several Fortune 500 companies. In partnership with Citigroup, he also works to help global leaders navigate the rapidly-changing world economy.

Carl Benedikt is also Economics Associate of Nuffield College, and Senior Fellow of the Programme on Employment, Equity and Growth at the Institute for New Economic Thinking, both at University of Oxford. He is also a Senior Fellow of the Department of Economic History at Lund University, and a board member of Futurion AB.



Mr Lam Yi Young

Deputy Secretary
(Industry),
Ministry of Trade & Industry,
Singapore

FUTURE ECONOMY, FUTURE JOBS, FUTURE SKILLS: SINGAPORE'S APPROACH

Singapore's economy is undergoing significant structural shifts. In addition to subdued global growth and ageing demographics, new technologies have supplanted industries and changed the nature of jobs, even as they create new opportunities for businesses and individuals. Through the recommendations by the Committee on the Future Economy (CFE) and the development of Industry Transformation Maps (ITMs), Singapore is transforming itself to ride on the opportunities of the future economy. This presentation outlines Singapore's recent economic transformation efforts, and its approach towards jobs and skills in the future economy.

Professional Biography

As Deputy Secretary (Industry) in Singapore's Ministry of Trade and Industry, Mr Lam Yi Young is tasked with developing and shaping Singapore's industrial and economic policies and landscape, and with driving the national tripartite efforts to develop and implement Industry Transformation Maps for more than 20 sectors covering more than 80% of Singapore's economy. Yi Young also supports and coordinates the work of the Future Economy Council in charting the future of Singapore's economy and in enhancing skills development, productivity, innovation, digitalisation and internationalisation.

Yi Young previously served as Deputy Secretary (Policy) in the Ministry of Education (from Jan 2014 to Dec 2016), as Chief Executive of the Maritime and Port Authority of Singapore (from May 2009 to Dec 2013), and as Director Manpower in the Ministry of Defence (from Jun 2005 to Apr 2009).

Yi Young has a Master of Arts in Engineering from the University of Cambridge and a Master in Public Administration from Harvard University.



Mr Enrico Rühle

Board Member,
Festo Didactic SE,
Germany

PROFESSIONAL QUALIFICATION FOR INDUSTRY 4.0

Mr Rühle will speak about Industry 4.0 and how TVET institutions can professionally qualify prospective employees for future manufacturing.

Professional Biography

After completing his studies in Computer Engineering, Electrical Engineering and Business Administration in Germany, USA, and Asia, Mr Rühle started his career in 1998 as Management Trainee at TÜV Rheinland in Taiwan. Over the next 16 years, he held various top management positions within TÜV Rheinland in Japan and India.

In 2011, he was the acting founder and director of TÜV Rheinland in Bangladesh, during which he completed his extra-occupational Master in Business Administration in the fields of General Management, Finance, Technology and Innovation Management.

At the end of 2014, Mr Rühle returned to Germany as Group Executive Manager of Academy and Life Care. In May 2016, he joined as member of the management board at Festo Didactic SE in Denkendorf. In this function, he is responsible for operations in the Asia region and other mega projects.

He was also a member of the management board of the Indo-German Chamber of Commerce, co-founder of the European Business Group India, and a contributor of Project Management Institute.



Mr Ong Kim Pong

Regional CEO,
Southeast Asia,
PSA International Pte Ltd,
Singapore

BUILDING A FUTURE-READY HUMAN CAPITAL THROUGH INDUSTRY PARTNERSHIP

The increasing pace of technological change is changing the way we work. To prepare graduates for the workforce, it is essential for industries to collaborate with institutions to develop industry relevant future-ready capabilities. The speaker will share his experiences on the importance of industry partnership with TVET institutions and how this has helped PSA to build a pipeline of future ready human capital.

Professional Biography

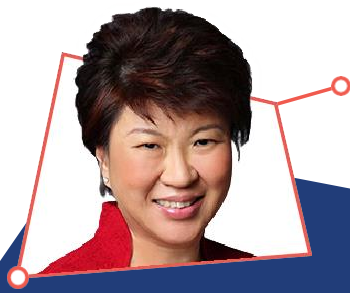
As the Regional CEO of Southeast Asia in PSA International, Mr Ong Kim Pong has overall responsibility and accountability for PSA Group's portfolio of operating terminals, investments and expansion in Southeast Asia including PSA Singapore, which has seen major productivity improvements and deployment of technology. He sits on the Senior Management Council of PSA International. In addition, he is an active member of Next Generation Port 2030 Steering Committee (NGP 2030), International Maritime Centre 2030 Advisory Committee (IMC 2030), Management Board of the Centre for Maritime Studies (CMS), and the Urban Redevelopment Authority (URA) Board.

Prior to his current position, Kim Pong was the Regional CEO of Northeast Asia (NEA) over a span of five years since 2010 where he successfully led the NEA team in the strategic management of PSA's portfolio in China, Hong Kong and Korea while prospecting new possibilities. This included the consolidation of China's Fuzhou Terminals to the establishment of Lianyungang-PSA Container Terminal (LPCT) and Guangxi Beibuwan-PSA International Container Terminal Co., Ltd (BPCT), PSA's latest joint venture in China aligning to China's One-Belt One-Road initiative towards South East Asia.

In 2009, Kim Pong was appointed as the Managing Director of PSA's flagship project in Antwerp, Belgium, responsible for its business activities and day-to-day operations. Concurrently, he was also the Executive Director of PSA Zeebrugge, Belgium. In his previous capacity, Kim Pong consecutively held the position of Senior Vice President, PSA Mediterranean & Middle East South Asia Region, then Managing Director / CEO of Mersin International Port (MIP) in Turkey. During his tenure with MIP, he distinguished himself by ensuring a smooth transition of ownership of the Mersin Port from the local government to PSA and helped establish MIP as a key gateway port in the eastern Mediterranean. MIP was conferred the Lloyd's List Turkey Port of the Year Award in 2008. Since the acquisition, MIP has received numerous accolades from the port industry. During that tenure, Kim Pong was, in parallel, called to lend support to the commercial and operational issues that were occurring in PSA terminals in Italy and India.

As the pioneer for PSA in Belgium, Kim Pong served as Chief Operating Officer for Hesse Noord Naatie N.V. (HNN) in Belgium from 2001 to 2004. He played an instrumental role in guiding the merger of two of the biggest port operators in Belgium to form HNN and effectively doubling its port capacity during the period. He successfully led the negotiation and formation of MSC Home Terminal JV between MSC and PSA. HNN was subsequently re-named as PSA Antwerp and PSA Zeebrugge in 2009.

Kim Pong holds a Masters of Business Administration from National University of Singapore. He is married with three children.



Ms Janet Ang

Vice-President,
Industry Solutions
& Business
Development,
IBM Asia Pacific,
IBM Innovation
Services Pte Ltd,
Singapore

RIDING THE WAVE OF INDUSTRY TRANSFORMATION FOR TVET FUTURE - NEW PATHWAYS

Technology is disrupting our industries, presenting new challenges and business opportunities to the business of education. Along with personalised learning, preparing our students for lifelong vocational relevance is an ambitious goal. In this presentation, IBM will discuss the potential for AI to be harnessed to deliver a personalised learning experience, from content curation to student profiling to education delivery and beyond. IBM is also taking steps as technology leader to help students quickly acquire industry aligned competencies. We will share some new programmes that are changing the way the industry contributes to developing vocational relevant skills.

Professional Biography

As Vice-President, Industry Solutions & Business Development, IBM Asia Pacific, Janet Ang's portfolio covers Australia & New Zealand, India, ASEAN and Korea. Janet is also a Member of the IBM Industry Academy. In her current role, Janet is responsible for leading IBM's industry value creation for Asia Pacific clients across key industries - Financial Services, Government & Healthcare, Industrial, Telco & Media, and Distribution - with Industry Solutions that bring together IBM's portfolio of Cognitive Solutions, Cloud Platform Infra-structure and Systems of Engagement solutions, as well as eco-system partner offerings. She also leads the charge for helping cities in Asia become smarter, cognitive cities.

Janet was previously the Managing Director of IBM Singapore from Jul 2011 to May 2015, and earlier from May 2001 to Dec 2003. As MD, IBM Singapore, Janet was responsible for all of IBM's business and operations in Singapore and was the chief IBM representative for all client and government relationships in Singapore. On two international assignments, she has lived and worked overseas for more than ten years. Most recently, Janet was based in Beijing for over eight years. She first moved to Beijing as Vice President, IBM Personal Computing (PC) Division, IBM Greater China in 2004 and then moved to Lenovo in 2005 as Global Head of Operations, Desktop Business Unit when Lenovo acquired IBM's PC business. In 2009, Janet returned to IBM Greater China as Vice-President, IT Services and, subsequently, took on the role of Vice President, Strategic Services, before returning home in 2011. Her earlier international assignment was to Tokyo, Japan, first as Director, Marketing, Small & Medium Business, IBM Asia Pacific (1997-1999) and subsequently, as Director, Sales Operations, IBM Asia Pacific (1999-2001). She started her career with IBM Singapore in 1982 as a Systems Engineer.

Janet serves on various committees in the community. She is board member of the Public Utilities Board (PUB), the InfoComm Media Development Authority (iMDA), and the Singapore Press Holdings. She is Chair of Caritas Singapore, Chair of the NUS Institute of Systems Science (ISS) and Immediate Past President of the International Women's Forum (Singapore). Janet also serves on the National University of Singapore Alumni Advisory Board, is a Council Member of the Singapore Business Federation chairing its Digitalisation Committee. She is a Fellow of the Singapore Computer Society, a member of Business China and also serves on Singapore's Diversity Action Committee. Janet previously served on the Medishield Life Review Committee and was Vice-Chair, SingCham China, from 2006-2011. In 2014, Janet was awarded the NUS Business School Eminent Alumni Award and in 2015, she received the NUS Distinguished Alumni Service Award. On 9 Mar 2018, Janet was conferred the Singapore Computer Society IT Leaders Award 2018 - Hall of Fame award. Janet graduated with a Business Administration (Honors) degree from the National University of Singapore and is married with four daughters.



Mr Gilbert Tan

Chief Executive Officer,
Employment and
Employability Institute (e2i),
and Assistant Director-
General of the National
Trades Union Congress
(NTUC), Singapore

WHY SINGAPORE'S TRIPARTITE SYNERGY IS KEY TO OUR FUTURE SKILLS AND LEARNING

Technological disruptions have caused businesses to compete differently – as such, business models are evolving. To adapt to a rapidly changing world, Singapore's unique formula of tripartism amongst the unions, employers and the government will be key to identifying the future skills needed, as well as implementing and supporting learning initiatives to prepare our future workforce. Mr Gilbert Tan will explore how this tripartite synergy will continue to help those in the manpower and training ecosystem, such as our Institutes of Higher Learning (IHLs), employers, students, workers, and government bodies, ride the waves of transformation together in the same direction to build the Future Economy.

Professional Biography

Mr Gilbert Tan joined NTUC's e2i in 2009 to create solutions for better employment and employability through providing better jobs, developing better skills, and improving companies' productivity and gain sharing for workers. Since then, e2i has launched the Inclusive Growth Programme to drive productivity-led wage increases for low-wage workers, and led the way with professional development programmes to enhance the capabilities of PMETs (Professionals, Managers, Executives and Technicians). In addition to deepening skills, e2i also equips PMETs with employability and horizontal skills, enabling them to stay relevant and progress within or across sectors.

Under Mr Gilbert Tan's leadership, e2i pioneered partnerships with Institutes of Higher Learning (IHLs), Trade Associations and Chambers, and community groups to bring career coaching, training advisory services and industry transformation solutions to more Singaporeans. With its expanding role, e2i provides touchpoints at the HDB Hub in Toa Payoh, Central Business District and localised Social Service Offices to effectively reach out to more job seekers, working people, employers and partners in these regions. New initiatives his team developed include the U Career Network and ULeap future of learning.



Mr Volker Schebesta

Deputy Minister for Education & State Secretary,
Ministry of Education, Youth and Sports (KM),
Baden-Württemberg,
Germany

VOCATIONAL EDUCATION 4.0 — CHALLENGES AND APPROACHES OF PREPARING THE WORKFORCE FOR THE SKILLS NEEDED IN A DIGITALISED WORLD OF WORK

The ongoing digital revolution is changing all fields of our lives drastically. It has changed ways of private communication, but even more the production and working processes in industry and commerce. Routine operations are taken over by machines and the operation of digitalised systems calls for more complex skills at the operator level. This development forces education policy makers worldwide to rethink concepts of qualification for the future workforce. Based on an analysis of the current situation of the dual system of vocational training in Germany, the presentation will reflect approaches to meet these new digital challenges. This includes questions like revision and modernisation of curricula, training structures and equipment, as well as requalification of teaching and training staff.

Professional Biography

- Married with four daughters
- Member of the Landtag of Baden-Württemberg
- (Member of Parliament of the federal State of Baden-Württemberg)

Careers

- 1991 – 1996, Studied Law
- 1996 – 1998, Legal Traineeship
- 1998 – 2001, Government Assistant Lawyer, State Ministry of the State of Baden-Württemberg, Personal Advisor to Minister Dr. Palmer
- Since 2001, Member of the Landtag of Baden-Württemberg
- 2006 – 2011, Educational policy spokesman of the CDU parliamentary group
- 2011 – 2016, Deputy Chairman and Parliamentary Director of the CDU parliamentary fraction
- Since May 2016, Deputy Minister and State Secretary in the Ministry of Education, Youth and Sports Baden-Württemberg
- Self-employed lawyer (activity resting)

Honorary posts

- Chairman of the CDU Ortenau since 2001
- Member of the Board of Directors of CDU Südbaden
- Member of the Diocesan Council of the Archdiocese of Freiburg



Mr Ng Cher Pong

Deputy Secretary
(SkillsFuture),
Ministry of Education
and Chief Executive,
SkillsFuture Singapore

STRENGTHENING PARTNERSHIPS IN THE SKILLS-ECO-SYSTEM

The presentation will look at how industries can forge effective partnerships with our Institutes of Higher Learning (IHLs) and other training providers to develop Singapore's future workforce and lifelong learning ecosystem.

Professional Biography

Mr Ng Cher Pong is the Chief Executive of the newly-created SkillsFuture Singapore since 3 Oct 2016 and also concurrently holds the appointment as Deputy Secretary (SkillsFuture) in the Ministry of Education. He is responsible for driving the implementation of the national skills strategy known as SkillsFuture, in order to enhance the employability and competitiveness of Singapore's workforce.

Mr Ng joined the Administrative Service of the Singapore Civil Service in 1996. He had served in various capacities across many Ministries and government agencies, such as the Ministry of Manpower, Ministry of Defence, Ministry of Education and the Singapore Workforce Development Agency. He also serves on various Boards, such as the Singapore Technologies Kinetics Ltd, SkillsFuture Singapore, Learning Gateway Ltd, Workforce Singapore, the Employment and Employability Institute.

Mr Ng graduated from the University of Cambridge, UK, with a First Class Honours Degree in Electrical Engineering. He obtained his Master in Business Administration (Distinction) from INSEAD, France, in 2003 and subsequently participated in the Advanced Management Programme at Harvard Business School in 2015.



Mrs Carrie Yau

Executive Director,
Vocational Training Council,
Hong Kong SAR

SKILLING FOR A CHANGING WORLD: HONG KONG'S VISION FOR A SMART CITY

A paradigm shift driven by globalisation and technological innovations is underway. To stay relevant and competitive amidst the fast-changing global landscape, it is imperative for us to innovate and build a workforce equipped with future work skills. What can TVET providers do to empower smart talent for the new economy? How can innovative partnerships enrich TVET provisions and add value to teaching and learning? The presentation will share the latest development of TVET in Hong Kong towards the mission of grooming all-round globalised workforce for a knowledge-based smart city.

Professional Biography

Mrs Carrie Yau is the Executive Director of the Vocational Training Council (VTC), the leading vocational and professional education and training group in Hong Kong, which offers a quarter of million learners every year the opportunity to upgrade themselves with the acquisition of valuable vocational credentials.

Mrs Yau is committed to promoting skills excellence, with VTC taking technology enhanced training and establishing new STEM and BIM centres, as well as expanding the Earn & Learn Scheme to meet manpower demands in major industries.

Prior to joining VTC, Mrs Yau was the Secretary for Information Technology and Broadcasting, Permanent Secretary for Health, Welfare and Food, as well as Home Affairs from 2000 to 2010, with over 30 years' civil service experience in various government bureaux and departments. Mrs Yau has a wealth of experience working in major policy areas, including education and manpower, building and lands, transport, security, health, food and safety.



Mr Lim Peng Hun

Deputy Principal (Academic),
Singapore Polytechnic,
Singapore

A POLY FOR ALL AGES — AN EDUCATIONAL NARRATIVE FOR SKILLS FUTURE

In this presentation, Mr Lim will share Singapore Polytechnic's new educational narrative in supporting the national SkillsFuture initiative. From an institution primarily focus on training young people before they enter the workforce, Singapore Polytechnic is rapidly transforming itself into an institution that provides training for both young people and working adults. The speaker will share the transformation strategy and the various staff development programmes to support the strategy.

Professional Biography

Lim Peng Hun is currently the Deputy Principal (Academic) at the Singapore Polytechnic. He oversees the academic programmes in the Polytechnic. He is active in promoting innovation in teaching and learning, student entrepreneurship activities, consultancy and R&D. He has many years of academic, administration and consultancy experience.

Peng Hun is an early adopter and champion of technology in education & green initiatives. He was Team Leader of SunSpeed solar car team, which participated in the 5th World Solar Car Competition. He was Workshop Director of the World Bank Institute-Singapore Polytechnic International Workshop in Interactive Learning Technologies. He recommended the adoption of the CDIO (Conceive, Design, Implement and Operate) training framework for all Engineering Schools in Singapore Polytechnic.

His current interests are in promoting innovation in education, entrepreneurship development and business innovation.



Dr David Ross

President and
Chief Executive Officer,
Southern Alberta Institute
of Technology,
Canada

ACCELERATING CHANGE: APPLIED EDUCATION GRADUATES AND THE EVOLVING NEEDS OF INDUSTRY

As change accelerates, the career opportunities for our students are evolving from the start of their programme to the end. This requires institutions to adjust and adapt to best support our learners, at a pace that is new to many. This also means that industry partners are even more critical to the equation. It has become critically important to work with industry partners to understand their talent requirements and build trust so that our graduates immediately add value to the opportunities they are involved in. This presentation will examine some of the priorities and changes required from a Canadian perspective as governments, institutions and industry work to support the economic imperative of getting this right.

Professional Biography

Dr. David Ross joined SAIT in 2013, becoming its 16th President and Chief Executive Officer (CEO). A passionate leader in post-secondary education dedicated to promoting student success, Dr. Ross has a reputation for innovation in applied education.

Under Dr. Ross' leadership, SAIT has become Alberta's third largest post-secondary institution, well known for its action-based learning, solution-focused research and enterprising collaborations with people and partners from around the globe.

Prior to joining SAIT, Dr. Ross was President and CEO of Langara College where he transformed the institution through extensive growth and strategic market development. A life-long educator, Dr. Ross has held academic appointments in Business at the University of New Brunswick and Kwantlen Polytechnic University.

Active in his community and on the national and international levels in post-secondary education, Dr. Ross is a Member of the Board of several foundations and associations, including the Calgary Homeless Foundation and the Business Research Advisory Council for the National Sciences and Engineering Research Council. He is also Chair of the Canadian Bureau of International Education and a member of the Business Council of Canada's Higher Education – Business Roundtable.

Dr. Ross holds a PhD from the University of Nebraska, Master of Aquaculture (MAq) from Simon Fraser University, a Master of Business Administration (MBA) from Dalhousie University and a Bachelor of Science (BSc) from Dalhousie University.

Dr. Ross lives in Calgary, Canada, with his wife Ewa and son, Aleksander.



Mr Patrice Choong

Director, Innovation & Entrepreneurship,
Ngee Ann Polytechnic,
Singapore

GROOMING ENTREPRENEURS

This presentation will illustrate Ngee Ann Polytechnic's (NP's) approach to building a sustainable entrepreneurial ecosystem on campus and share NP's journey of entrepreneurship development, and its response to a pertinent question as to how entrepreneurship can be enabled on campus.

Professional Biography

Patrice is the founding director of The Sandbox, the Innovation and Entrepreneurship office of Ngee Ann Polytechnic. At The Sandbox, Patrice kickstarted several initiatives to promote innovation and entrepreneurship among students and alumni. Some of these initiatives include:

- Global Entrepreneurial Internship Programme which sends students to intern in startups located in 10 key entrepreneurial cities of the world (www.geip.sg)
- Pollinate, a Joint Polytechnic Incubator, co-funded by National Research Foundation, with over 15 startup incubatees
- MakersAcademy which aims to raise the level of rapid prototyping skills in students from any discipline
- Campus Ecosystem which aims to transform the polytechnic into an innovative institute of higher learning by partnering with startups to tackle existing issues on campus (www.campusecosystem.sg)
- A spectrum of innovation projects ranging from Chatbots to Blockchains

Prior to The Sandbox, Patrice was helping the Polytechnic at the Planning and Projects Office in areas such as Strategic Planning, Management Workplans and Institutional Knowledge. Patrice also taught in the School of InfoComm Technology as a Senior Lecturer in the field of Information Security for nine years.

Patrice graduated with a B.Eng (Computer Engineering), a Masters in Computing from the National University of Singapore, and a Masters in Education from the University of Adelaide.



Mr Tan Seng Hua

Dean, ITE Academy and Senior Consultant, ITE Education Services, Institute of Technical Education, Singapore

DISCIPLINE-SPECIFIC PEDAGOGY (DSP) FOR TVET – LEARNING TO DO, LEARNING TO BE

Economic diversification and technology transformation have significantly impacted the training of skilled manpower in many countries in recent years. Employers, faced with a business environment where volatility and ambiguity reign, are reviewing the profile of their workforce to focus on skills competency instead of academic qualifications to maintain the relevance and competitiveness of their businesses. Given this trend, TVET institutions globally are now relooking at their curriculum structure and pedagogic and assessment strategies to ensure that their graduates possess the requisite skills to remain relevant at the workplace. The presenter will share how ITE Singapore has reinvented its TVET pedagogic model to embrace the new realities of change, from skills acquisition ('Learning to Do') to the development of holistic profession-specific competency encompassing skills, knowledge and values ('Learning to Be') under its Discipline-Specific Pedagogy.

Professional Biography

A passionate educator with a strong interest in helping youths to develop their technical skills, Mr Tan has devoted more than four decades of his career in the planning and transformation of Technical and Vocational Education and Training (TVET) in Singapore.

Most notably, he led a team of academic and technical specialists in conceptualising and developing two award-winning world-class TVET Campuses in Singapore. Distinguished by numerous pedagogic innovations supported by authentic learning environment, the ITE training infrastructure has been regarded by many local and international visitors and media as a hallmark of high quality technical education and the "Ultimate TVET Campus".

In anticipation of the global economic and technology transformation, Mr Tan also spearheaded the development of a Career-Cluster Curriculum Framework and the Discipline-Specific Pedagogy Model, two strategic initiatives to enhance and maintain the relevance of TVET graduates in the fast-changing work environment.

Prior to his current appointments, Mr Tan has held several other key appointments in ITE, including Deputy CEO of Corporate Services, Deputy CEO of Academic Development, and Principal of two ITE Colleges. He is now actively engaged in providing TVET consultancy globally.



Ms Mary Faraone

Chair, TAFE Directors
Australia (TDA), and
Chief Executive,
Holmesglen Institute,
Australia

ECOSYSTEMS- THE WAY OF THE FUTURE

TVET institutions are the core of the ecosystem to connect with industry and the community. They play an integral role in the community supporting social inclusion and social cohesion. The session will explore examples of how TVET institutions can build an ecosystem where education, technology, community and industry come together in an innovation network.

Professional Biography

Ms Faraone commenced as Chief Executive of Holmesglen Institute in Oct 2013. Mary has had extensive experience in the Vocational Education and Training (VET) sector, working with industry, Registered Training Organisations (RTOs) and Technical and Further Education (TAFE) in various roles prior to joining Holmesglen Institute in 2003. Mary has been particularly instrumental in leading the Institute's teaching and learning, securing a number of significant national and international projects and the introduction of higher education.

As Chief Executive, Mary is keen to further develop the innovation and entrepreneurial culture at the Institute and build on the Institute's history and reputation as a leading tertiary education provider. Mary is committed to the role public tertiary education plays in supporting social inclusion and social cohesion in the community, and its underlying values of equity and access. Mary is optimistic for the future of TAFE and VET and looks forward to leading the organisation, to ensure it remains at the forefront of tertiary education with pathways and programmes at the senior secondary, technical and vocational and higher education sectors.

Mary currently is a member of the Victorian Roundtable for International Education with the Minister for Industry and was appointed as the Chair of the TAFE Directors Australia (TDA) Board in October 2016 for a three-year period. In 2017, Holmesglen won the International Training Provider of the Year and Industry Collaboration Award at the Australian Training Awards. Holmesglen at Eildon also won gold at the RACV Victorian Tourism Awards for best Business Event Venue.



INDUSTRY TRANSFORMATION:
IMPERATIVES FOR FUTURE SKILLS AND LEARNING
**SINGAPORE INTERNATIONAL
TVET CONFERENCE 2018**

3–4 OCTOBER 2018
RAFFLES CITY CONVENTION CENTRE,

CONFERENCE PROGRAMME

TIME	PROGRAMME	VENUE
WED 03 OCT 2018	CONFERENCE DAY 1: Riding the Wave of Industry Transformation for TVET Future [Raffles City Convention Centre]	
9.00 am	Registration & Welcome Reception (Participants to be seated by 9.50 am)	Stamford Ballroom Foyer, Level 4
10.00 am	Welcome Performance by Students from Institute of Technical Education Welcome Remarks by Ms Low Khah Gek Chief Executive Officer, Institute of Technical Education, Singapore Opening Address by Guest-of-Honour Mr Ong Ye Kung Minister for Education, Singapore	Stamford Ballroom, Level 4
10.40 am	Educating Students for their Future, not our Past Keynote Speaker 1: Mr Andreas Schleicher Director for Education and Skills, and Special Advisor on Education Policy to the Secretary-General, Organisation for Economic Co-operation and Development (OECD)	

TIME	PROGRAMME	VENUE
11.20 am	<p>The Future of Work: Is This Time Different?</p> <p>Speaker: Dr Carl Frey Co-Director, Oxford Martin Programme on Technology & Employment, Oxford Martin School, University of Oxford, United Kingdom</p>	
11.50 am	<p>Panel Discussion with Speakers</p> <ul style="list-style-type: none"> • Mr Andreas Schleicher • Dr Carl Frey <p>Facilitator: Mr Heng Chiang Gnee Chairman, ITE Education Services Pte Ltd, Singapore</p>	
12.30 pm	Lunch	
	End of Opening Ceremony	
2.00 pm	<p>Future Economy, Future Jobs, Future Skills: Singapore's Approach</p> <p>Speaker: Mr Lam Yi Young Deputy Secretary (Industry), Ministry of Trade & Industry, Singapore</p>	Stamford Ballroom, Level 4
2.30 pm	<p>Professional Qualification for Industry 4.0</p> <p>Speaker: Mr Enrico Rühle Board Member, Festo Didactic SE, Germany</p>	Stamford Ballroom, Level 4
3.00 pm	<p>Building a Future-Ready Human Capital Through Industry Partnership</p> <p>Speaker: Mr Ong Kim Pong Regional CEO, South East Asia, PSA International Pte Ltd, Singapore</p>	
3.30 pm	Coffee Break	

TIME	PROGRAMME	VENUE
4.00 pm	<p>Riding the Wave of Industry Transformation for TVET Future – New Pathways</p> <p>Speaker: Ms Janet Ang Vice-President, Industry Solutions & Business Development, IBM Asia Pacific, IBM Innovation Services Pte Ltd, Singapore</p>	Stamford Ballroom, Level 4
4.30 pm	<p>Why Singapore’s Tripartite Synergy is Key to Our Future Skills and Learning</p> <p>Speaker: Mr Gilbert Tan Chief Executive Officer, Employment & Employability Institute (e2i) and Assistant Director-General of the National Trades Union Congress (NTUC), Singapore, and Member, ITE Board of Governors</p>	
5.00 pm	<p>Panel Discussion with Speakers</p> <ul style="list-style-type: none"> • Mr Lam Yi Young • Mr Enrico Rühle • Mr Ong Kim Pong • Ms Janet Ang • Mr Gilbert Tan <p>Facilitator: Mr Phua Han Tian Programme Director, Industrial IoT Programme, A*STAR, Singapore, and Member, ITE Board of Governors</p>	
5.45 pm	End of Day 1	

THU 04 OCT 2018		
CONFERENCE DAY 2: Innovating Teaching and Learning for TVET in the Future [Raffles City Convention Centre]		
TIME	PROGRAMME	VENUE
8.15 am	Registration (Participants to be seated by 8.45 am)	Stamford Ballroom, Level 4
9.00 am	Vocational Education 4.0 – Challenges and Approaches of Preparing the Workforce for the Skills Needed in a Digitalised World of Work Keynote Speaker 2: Mr Volker Schebesta Deputy Minister for Education & State Secretary, Ministry of Education, Youth and Sports (KM), Baden-Württemberg, Germany	
9.40 am	Strengthening Partnerships in the Skills Eco-System Speaker: Mr Ng Cher Pong Deputy Secretary (SkillsFuture), Ministry of Education and Chief Executive, SkillsFuture Singapore	
10.10 am	Coffee Break	
10.30 am	Skilling for a Changing World: Hong Kong's Vision for a Smart City Speaker: Mrs Carrie Yau Executive Director, Vocational Training Council, Hong Kong	Stamford Ballroom, Level 4
11.00 am	A Poly for All Ages – An Educational Narrative for Skills Future Speaker: Mr Lim Peng Hun Deputy Principal (Academic), Singapore Polytechnic, Singapore	
11.30 am	Panel Discussion with Speakers <ul style="list-style-type: none"> • Mr Volker Schebesta • Mrs Carrie Yau • Mr Ng Cher Pong • Mr Lim Peng Hun Facilitator: Ms Jeanne Liew Principal, Nanyang Polytechnic, Singapore	
12.10 pm	Lunch	

TIME	PROGRAMME	VENUE
1.30 pm	<p>Accelerating Change: Applied Education Graduates and the Evolving Needs of Industry</p> <p>Speaker: Dr David Ross President and Chief Executive Officer, Southern Alberta Institute of Technology, Canada</p>	Stamford Ballroom, Level 4
2.00 pm	<p>Grooming Entrepreneurs</p> <p>Speaker: Mr Patrice Choong Director, Innovation & Entrepreneurship, Ngee Ann Polytechnic, Singapore</p>	
2.30 pm	<p>Discipline-Specific Pedagogy for TVET – Learning to Do, Learning to Be</p> <p>Speaker: Mr Tan Seng Hua Dean, ITE Academy and Senior Consultant, ITE Education Services, Institute of Technical Education, Singapore</p>	
3.00 pm	Coffee Break	
3.30 pm	<p>Ecosystems – The Way of the Future</p> <p>Speaker: Ms Mary Faraone Chair, TAFE Directors Australia (TDA) and Chief Executive, Holmesglen Institute, Australia</p>	Stamford Ballroom, Level 4
4.00 pm	<p>Panel Discussion with Speakers</p> <ul style="list-style-type: none"> • Dr David Ross • Mr Patrice Choong • Mr Tan Seng Hua • Ms Mary Faraone <p>Facilitator: Associate Professor Foo Yong Lim Assistant Provost (Applied Learning), Singapore Institute of Technology, Singapore, and Member, ITE Board of Governors</p>	
4.30 pm	<p>TVET 2018 Round-Up by Ms Low Khah Gek Chief Executive Officer, Institute of Technical Education, Singapore</p>	
5.00 pm	End of Conference	