

APEC Project DARE (Data Analytics Raising Employment) 2018 Workshop

October 7-8, 2018 | Hong Kong, China

Updated 2 October 2018

Welcome Reception- Saturday 6 October, 2018	
Liberty Exchange Kitchen & Bar G/F, 2 Exchange Square, 8 Connaught Road, Central	
18:00	Pre-Session Reception for Speakers
Day 1- Sunday 7 October, 2018	
Hong Kong University Science and Technology (HKUST), Business School Central	
Room 1501-02, 15/F Hong Kong Club Building, 3A Chater Rd, Central, Hong Kong (Central MTR Station, Exit J3); 香港中環遮打道3A香港會所大廈15樓1501-02室 (Chinese Address). Please note this is on Hong Kong Island in a separate location from HKUST main campus.	
8:30 – 9:00	Registration and Arrival
9:00-9:10	<p>Welcome Remarks</p> <ul style="list-style-type: none"> • Mr. Christopher Watson, Senior Advisor for APEC Affairs, International Labor Affairs Bureau, U.S. Department of Labor (Project DARE Advisory Group Project Overseer) • Dr. Kar Yan Tam, Dean and Chair Professor of the School of Business and Management, Hong Kong University of Science and Technology • Ms. Marjorie Yang, Chairman, Esquel Group, APEC Business Advisory Council HKC Member
9:10-9:20	Participant Introductions
9:20 – 10:20	<p>Panel 1: Setting the Scene, <i>why are we here?</i> Urgency and Call for Action</p> <p><i>Moderator:</i></p> <ul style="list-style-type: none"> • Mr. Philip Le Feuvre, Head of Engagement, PwC's Skills for Australia <p><i>Speakers:</i></p> <ul style="list-style-type: none"> • Dr. Kar Yan Tam, Dean and Chair Professor of the School of Business and Management, Hong Kong University of Science and Technology • Mr. Clay Stobaugh, Member of Wiley Executive Leadership Team, Executive Vice President of Government Affairs, John Wiley and Sons, United States • Ms. Debbie Hughes, Vice President of Higher Education & Workforce, The Business-Higher Education Forum (BHEF), United States <p><i>Speakers have 5 minutes each followed by a 20 minute moderated discussion</i></p>
10:20-10:30	Group Photo

10:30 – 10:45	Coffee/Tea Break
10:45 – 12:00	<p>Case Study – Enabler 1: How do employers tell the marketplace what its AI talent needs are?</p> <p><i>Case Study Speaker:</i></p> <ul style="list-style-type: none"> • Dr. Ma Leju, Senior Expert for Global Policy, DiDi Chu Xing <p><i>Discussant Panel:</i></p> <ul style="list-style-type: none"> • Mr. Davor Miskulin, Director of Global Partnerships, Burning Glass Technologies • Ms. Pei Ying Chua, Lead for Economic Graph Analytics, LinkedIn APAC • Mr. Raju Chellam, Vice President, New Technologies, Fusionex <p><i>Session moderated by Mr. Jeff Wasden, President, Colorado Business Roundtable</i></p>
12:00 – 13:30	Lunch
13:30 – 14:45	<p>Case Study—Enabler 2: How are employers, academia, and governments working together to connect work and learning from high school to the workplace?</p> <p><i>Case Study Speaker:</i></p> <ul style="list-style-type: none"> • Mr. Francis Ngai, General Manager, IBM China/Hong Kong Limited <p><i>Discussant Panel:</i></p> <ul style="list-style-type: none"> • Professor Boh Wai Fong, Director, Information Management Research Centre, Nanyang Technical University (NTU) Singapore • Mr. Philip Le Feuvre, Head of Engagement, PwC’s Skills for Australia • Dr. José Manuel Páez Borrallo, Vice Rector for International Affairs, Tecnológico de Monterrey • Ms. Patcharavalai Somnate, Educator, Bureau of Vocational Education Research, Thailand <p><i>Session moderated by Mr. Jeffrey Riedinger, Vice Provost for Global Affairs, University of Washington</i></p>
14:45 – 16:00	<p>Case Study—Enabler 4: How is academia fostering educational quality and meeting employer needs?</p> <p><i>Case Study Speaker:</i></p> <ul style="list-style-type: none"> • Mr. Jeffrey Goss, Associate Vice Provost, Vietnam, Arizona State University <p><i>Discussant Panel</i></p> <ul style="list-style-type: none"> • Dr. Sarah Roberts, Assistant Professor of Information Studies, University of California, Los Angeles (UCLA) • Dr. Brenda Quismorio, Program Director, Master in Applied Business Analytics, University of Asia and the Pacific, Philippines • Dr. Soo-Young Lee, Professor, Korea Advanced Institute of Science and Technology (KAIST) <p><i>Session moderated by Dr. Christopher Tremewan, Secretary General, APRU</i></p>

16:00 – 16:15	Coffee Break
16:15 – 17:00	Day 1 Conclusion <ul style="list-style-type: none"> Presented by: Mr. Clay Stobaugh and Ms. Debbie Hughes
18:00	Welcome Dinner/Reception Location: The American Club, 8 Connaught Place 48-49 Floors, Two Exchange Square Central, Hong Kong <ul style="list-style-type: none"> Keynote: The Honorable Kurt Tong, Consul General representing the United States to Hong Kong, China and Macau

Day 2- Monday 8 October, 2018 Hong Kong University Science and Technology (HKUST), Business School Central Room 1501-02, 15/F Hong Kong Club Building, 3A Chater Rd, Central, Hong Kong (Central MTR Station, Exit J3); 香港中環遮打道3A香港會所大廈15樓1501-02室 (Chinese Address). Please note this is on Hong Kong Island in a separate location from HKUST main campus.	
8:30 – 9:00	Networking coffee/Tea
9:00 – 9:15	Summary and Day 2 Welcome <i>A brief summary of Day 1 and overview of the Day 2 agenda will be provided.</i> <ul style="list-style-type: none"> Mr. Christopher Watson, Project Overseer, Senior Advisor for APEC Affairs, International Labor Affairs Bureau, U.S. Department of Labor
9:15 – 10:00	Panel 2: Setting the Scene <i>How can higher education move at the speed of business?</i> <i>Discussant Panel</i> <ul style="list-style-type: none"> Dr. Peter Jackson, Head of Pillar and Professor, Singapore University of Technology and Design (SUTD) Mr. Masaya Mori, Executive Officer, Global Head of Rakuten Institute of Technology World Wide, Rakuten, Inc. Dr. Gog Soon Joo, Chief Futurist and Chief Research Officer, SkillsFuture Singapore <i>Session moderated by Dr. Murali Chandrashekar, Vice Provost, International, University of British Columbia</i>
10:00 – 11:10	Case Study—Enabler 5: How to train faculty and administrators with skills to teach DSA? <i>Case Study Speaker:</i> <ul style="list-style-type: none"> Professor Koh Hian Chye, Professor and Director, Business Intelligence & Analytics, Singapore University of Social Sciences <i>Discussant Panel</i> <ul style="list-style-type: none"> Ms. Anti Rismayanti, Programme Officer, Secretariat, Southeast Asian Ministers of

	<p>Education Organization</p> <ul style="list-style-type: none"> • Dr. John Paul C. Vergara, Professor, Department of Information Systems and Computer Science and Director, Strategy and Quality Management Office, Ateneo de Manila University, Philippines <p><i>Session moderated by Professor Haipeng Shen, Associate Dean (Executive Education), Innovation and Information Management, Faculty of Business and Economics of the University of Hong Kong</i></p>
11:10-11:25	Coffee Break
11:25 – 12:25	<p>Case Study—Enabler 6: How do you create a DSA mindset at an early age?</p> <p><i>Case Study Speaker:</i></p> <ul style="list-style-type: none"> • Vincent Quah, Regional Head, Education, Research, Healthcare, and Non-for-Profit Organizations, APAC Global Public Sector, Amazon Web Services <p><i>Discussant Panel</i></p> <ul style="list-style-type: none"> • Ms. Debbie Hughes, Vice President of Higher Education & Workforce, The Business-Higher Education Forum (BHEF) • Ms. Sarah Moran, Girl Geek Academy <p><i>Session moderated by Mr. Daniel Lai, Programme Director, CoolThink@JC Programme and Former Government Chief Information Officer, Hong Kong SAR</i></p>
12:25 – 13:25	Lunch
13:25 – 14:00	<p>Panel 3: What has been done for online delivery?</p> <p><i>Discussant Panel:</i></p> <ul style="list-style-type: none"> • Dr. Eugene Rex Jalao, Associate Professor, Department of Industrial Engineering and Operations Research College of Engineering, University of the Philippines Dillman • Ms. Lucile Baratier, Partnerships Manager, Laboratoria • Dr. Gatot Fatwanto Hernoto, Head of Center for Learning Resources (CLR), Universitas Indonesia <p><i>Session moderated and presented by Mr. Andrew Tein, Vice President, Global Government Affairs; Chief of Staff, Office of the CEO, Wiley</i></p>
14:00 – 14:30	<p>Concluding Session: Where do we go from here?</p> <p><i>This session will provide a summary of the two day convening.</i></p> <ul style="list-style-type: none"> • Session moderated by Ms. Patricia Wu, Managing Director, C&M International <p><i>Closing Observations:</i></p> <ul style="list-style-type: none"> • Mr. Clay Stobaugh, Member of Wiley Executive Leadership Team, Executive Vice President of Government Affairs, John Wiley and Sons • Ms. Debbie Hughes, Vice President of Higher Education & Workforce The

	<p style="text-align: center;">Business-Higher Education Forum (BHEF)</p> <p><i>Additional Areas of Collaboration for 2019 with APRU:</i></p> <ul style="list-style-type: none"> • Dr. Christopher Tremewan, Secretary General, APRU <p><i>Participant Inputs: Participants Invited to Provide Inputs</i></p> <p><i>Project DARE Recommendations to HRDWG:</i></p> <ul style="list-style-type: none"> • Mr. Christopher Watson, Senior Advisor for APEC Affairs, International Labor Affairs Bureau, U.S. Department of Labor
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Appendix

Recommendations for Action (from Recommended APEC Data Science & Analytics (DSA) Competencies)

	Enabler	Employer	Academia	Government
1	Employer leadership and signaling	Increase leadership –level awareness of DSA value to business competitiveness		
		Accurately signal employer needs (e.g. better job profiles) with a focus on DSA-enabled workers		
2	Aligned Incentives and Action with Support from Government	Undertake joint workforce planning initiatives across all stakeholders to map employer/economic needs and define educational pathways, including apprenticeships, vocational education and other industry engagement opportunities (e.g. competitions, capstone projects, data sharing projects) supported by government policies to incentivize employer-academia partnerships (e.g. funding, convening, open data, broadband infrastructure, etc.)		
		Develop domestic standards and accrediting schemes for DSA-enabled graduates and workers		
Panel 2	Accurate Data on Supply and Demand Pipeline to Understand DSA Gap	Conduct audit of existing workforce DSA skills	Conduct audit of existing courses/curriculum	
4	Quality Content to Ensure Mastery of DSA-Aligned Learning Outcomes	Work with faculty and providers to develop curricular content mapped to employer needs		
5	Faculty and Administrators with Skills Aligned to DSA-Enabled Mindset		Provide training and opportunities for professional networking, including focus on interdisciplinary and cross-border collaboration	
6	DSA-Awareness in K-12		Promote the value of DSA concepts and encourage their integration in K-12 education	

10 RECOMMENDED APEC DATA SCIENCE & ANALYTICS (DSA) COMPETENCIES

Jobs requiring a familiarity with DSA are rising dramatically, resulting in a shortage of qualified employees. DSA-related jobs were at the top of those that employers in the Asia Pacific region are having the most difficulty filling.

1 OPERATIONAL ANALYTICS
Use data analytics and specialized Business Analytics (Business Intelligence) techniques for the investigation of all relevant data to derive insight for decision making.



2 DATA VISUALIZATION & PRESENTATION
Create and communicate compelling and actionable insights from data using visualization and presentation tools and technologies.



3 DATA MANAGEMENT & GOVERNANCE
Develop and implement data management strategies and governance, incorporating privacy and data security, policies and regulations, and ethical considerations.



4 DOMAIN KNOWLEDGE & APPLICATION
Apply domain-related knowledge and insights to effectively contextualize data, achieved by practical experience and exposure to emerging innovations.



5 STATISTICAL TECHNIQUES
Apply statistical concepts and methodologies to data analysis.



6 COMPUTING
Apply information technology, computational thinking, and utilize programming languages and software and hardware solutions for data analysis.



7 DATA ANALYTICS METHODS & ALGORITHMS
Capture, clean and inspect data. Implement and evaluate data analytics and machine learning methods and algorithms on the data to derive insights for decision making.



8 RESEARCH METHODS
Utilize the scientific and engineering methods to discover and create new knowledge and insights.



9 DATA SCIENCE ENGINEERING PRINCIPLES
Use software and system engineering principles & modern computer technologies, incorporating a data feedback loop, to research, design & prototype data analytics applications. Develop structures, instruments, machines, experiments, processes, systems to support the data lifecycle.



10 21ST CENTURY SKILLS
Exhibit crosscutting skills essential for DSA at all levels: collaboration, communication & storytelling, ethical mindset, organizational awareness, critical thinking, planning & organizing, problem solving, decision making, customer focus, flexibility, business fundamentals, cross cultural awareness, social & societal awareness, dynamic (self) re-skilling, professional networking & entrepreneurship.