

Keppel Technology Advisory Panel

The Keppel Technology Advisory Panel (KTAP) was established in 2004 as a key platform to advance the Group's technology leadership. Its members include eminent business leaders and industry experts from across the world.

Over the years, KTAP members have contributed to a broad range of ideas and technology foresight in Keppel. Besides offshore and marine topics like drilling and subsea technologies, KTAP has broadened its agenda to cover more of Keppel's diversified businesses, with themes like sustainable urbanisation, wastewater technologies, solid waste management, alternative energy and more. This has helped Keppel to enhance business value and to harness synergies across the Group.

KTAP convenes once a year with key members of Keppel Corporation's board and senior management. Throughout the year, KTAP members support and provide advice on projects that are driven by cross-functional teams across various business units.

Professor Ng Wun Jern

KTAP Chairman
BSc (Civil Engineering), QMC, University of London; MSc (Water Resources) and PhD, University of Birmingham, PE(S), FIES, FSEng.

Professor Ng is the Executive Director at the Nanyang Environment & Water Research Institute, and Professor of Environmental Engineering in the School of Civil & Environmental Engineering at Nanyang Technological University. He has some 400 publications on water and wastewater management, has founded spin-off companies based on his IPs, and serves as technical advisor to various environmental companies across ASEAN, China and India. He also operates his own spin-off companies which are active in China, Indonesia and Vietnam.

Professor Chan Eng Soon

B.Eng (First Class Honours) & M.Eng, National University of Singapore (NUS); PhD, Massachusetts Institute of Technology.

Professor Chan, Provost's Chair Professor in the Faculty of Engineering at the National University of Singapore, is a Fellow of the Singapore Academy of Engineering, Institute of Marine Engineering, Science & Technology, and the Institution of Engineers Singapore. He is the CEO of the Technology Centre for Offshore & Marine, Singapore and Programme Director for Offshore & Marine in the Science & Engineering Research Council of A*STAR. Professor Chan was Vice Provost (Special Duties) of the National University of Singapore and Keppel Chair Professor in the Faculty of Engineering. Prior to his Vice Provost position, he was the Dean of the Faculty of Engineering and Head of the Civil Engineering Department. He was also the Executive Director of the Centre for Offshore Research and Engineering, National University of Singapore, and Director of Tropical Marine Science Institute.

Professor Chan has served on the Management Board and Board of Governors of various institutions and research centres. He now contributes as a member of the Singapore Workplace Safety and Health Council and the Board of Directors of PUB and DSO National Laboratories. Professor Chan's research interests include marine hydrodynamics, wave-structure interactions, sediment transport and coastal processes.

Mr Peter Noble

Fellow, Land Medalist and Past-President, Society of Naval Architects & Marine Engineering, USA; Fellow and Vice President, The Institute of Marine Engineering, Science and Technology, UK; Fellow, Canadian Academy of Engineering; Offshore Technology Distinguished Achievement Award for Individuals, B.Sc. Naval Architecture, University of Glasgow.

Mr Noble is a naval architect and ocean engineer with a wide range of expertise and experience in the marine and offshore industries. His career has included positions with shipyards, ship and offshore design

consultants, offshore and marine research and development companies, major classification societies and as chief naval architect with an international oil company. He currently undertakes consulting and advisory assignments across a broad range of topics relating to ocean engineering.

Mr Noble holds a number of patents and is active on the advisory boards of a number of universities and institutions.

Dr Liu Thai-Ker

B. Architecture (First Class Honours and University Medal) and Doctor of Science honoris causa, University of New South Wales; Master in City planning with Parson's Memorial Medal, Yale University.

Dr Liu is Founder and Head of Morrow Architects & Planners. He is also the Founding Chairman of Centre of Liveable Cities since 2008. Dr Liu has served as the Adjunct Professor of School of Design and Environment and the Lee Kuan Yew School of Public Policy, National University of Singapore. He is also the Adjunct Professor in the College of Humanities, Arts & Social Sciences, Nanyang Technological University. He is a member of several governmental bodies in Singapore and planning advisor to around 30 cities in China.

Dr Liu was Director of RSP Architects Planners & Engineers Pte Ltd, from 1991 to 2017. He was the Architect-Planner and CEO of the Housing & Development Board from 1969 to 1989 and CEO and Chief Planner of Urban Redevelopment Authority from 1989 to 1992. Dr Liu served as the Chairman of the National Arts Council from 1996 to June 2005, and Singapore Tyler Print Institute from 2000 to 2009. He served as the chairperson of the External Review Panel, Arts Quality Framework appointed by the Ministry of Education in 2009 and a founding member of the Board of Trustees, Arts & Culture Development Fund, Ministry of Information, Communications and the Arts in 2010.

Professor Jim Swithenbank

BSc, PhD, DSc, DEng, FREng, FInstE, FIChemE, Energy and Environmental Engineering Group.

Professor Swithenbank is a Fellow of the Royal Academy of Engineering, Chairman of the Sheffield University Waste Incineration Research Centre, and a member of numerous international combustion and energy committees. He was the President of the Institute of Energy from 1986 to 1987, and served on many UK government/DTI/EPSC Committees. He is a prolific researcher with over 400 refereed papers to his credit and the holder of more than 30 patents. Professor Swithenbank's current work is largely focused on energy and environmental issues of CHP, fossil fuels, biomass, wastes and hydrogen.



Seated, from left: Loh Chin Hua (CEO of Keppel Corporation), Professor Ng Wun Jern and Dr Lee Boon Yang (Chairman of Keppel Corporation).
Standing, from left: Professor Chan Eng Soon, Professor Jim Swithenbank, Professor Stefan Thomke, Peter Noble, Chua Kee Lock, Dr Liu Thai-Ker, and Professor Foong Sew Bun.

Professor Stefan Thomke

BSc (Electrical Engineering), University of Oklahoma; MSc (Electrical & Computer Engineering), Arizona State University; SM (Operations Research), SM (Mgmt.), PhD (Electrical Engineering & Mgmt.), Massachusetts Institute of Technology; Dr. rer. oec. (Honorary), HHL Leipzig Graduate School of Management, AM (Honorary), Harvard University.

Professor Thomke has published widely and is an authority on innovation management. He is the William Barclay Harding Professor of Business Administration at Harvard Business School and has chaired several of the university's executive education programmes. Prior to joining Harvard, he was with McKinsey & Company in Germany.

Mr Chua Kee Lock

BSc. (Mechanical Engineering), University of Wisconsin at Madison; M.Eng., Stanford University.

Mr Chua is the Group President & CEO of Vertex Venture Holdings Ltd. Prior to joining Vertex Group, he was the President and Executive Director of Biosensors International Group, Ltd. From 2003 to 2006, Mr Chua was a managing director of Walden International. Between 1987 to 1997 and 2001 to 2003, he served in various senior roles within the NatSteel Group. Positions he held include Vice President of Transpac Capital, CEO of Intraco Ltd

and Deputy President of NatSteel Ltd. Between 1998 to 2000, Mr Chua was the Co-founder and President of MediaRing.com Ltd, a voice-over-Internet services company which was successfully listed in Singapore in late-1999.

Mr Chua also serves as an independent board member of Yongmao Holdings Ltd, an SGX-listed company.

Professor Foong Sew Bun

Fellow, Singapore Computer Society; Dip (Electronics and Communications Eng.) Singapore Polytechnic; MSc. and BSc. (Computer Science) University of Texas at Austin.

Professor Foong is the Global Head of Digital Transformation (Retail, Private Banking, Wealth) for Standard Chartered Bank, responsible for agile digital transformation, disruptive innovation and solution architects in global Retail, Private Banking and Wealth Management. Prior to Standard Chartered, Professor Foong was with IBM from 2000 to September 2016, where he started as the first Software Architect for IBM India and South Asia, and eventually became the first in IBM Asia Pacific and first Singaporean to be recognised as an IBM Distinguished Engineer in 2007/2008 for his sustained track record of technical leadership and innovations. As a former IBM executive, Professor Foong led top clients of IBM and IBM technical community as the

Chief Technology Officer for ASEAN and Singapore, global IBM Cloud Advisor leadership team, and Chairman of the IBM Growth Market Unit Distinguished Engineers Board. He served on top global IBM technical councils including the corporate Technology Team Advisory Council, IBM Academy of Technology Leadership Team and the S&D Technical Leadership Team.

Prior to IBM, Professor Foong spent 10 years in the IT industry with healthcare, banks, university, and led design and implementation of top secret fighter craft simulators for defence. He was also an Adjunct Associate Professor with the National University of Singapore from 2008 to 2013 and an Adjunct Professor since 2014.

Professor Foong serves in several major government and industry committees, including the Services and Digital Economy R&D Executive Committee with National Research Foundation (NRF); Technical Advisor under the Central Innovation and Enterprise Office Central Gap Fund of NRF; former member of the Institute of Singapore Chartered Accountants CFO Committee; Singapore Polytechnic Department of Electrical and Electronics Advisory Committee; committees by the Singapore Computer Society, and also served as the former Chairman and Senior Advisor of the National Infocomm Competency Framework Steering Committee.