



Welcome to the Singapore Actuarial Society

Health & Retirement Conference 2017

The diversity of retirement and healthcare needs, coupled with more information and increasing sophistication of technology, is pushing the industry to look for multi-disciplinary ideas and solutions. The conference intends to bring many interested parties into the same space to network, while sharing and creating solutions. The most recent World Bank 7th Global Pension and Saving Conference highlighted the need to focus more on issues at the intersection of pensions and health. Our two-day conference aims to take this debate forward.

On Day 1, Keynote Speaker Dr. Pieter Cullis will deliver his keynote address "The Personalized Medicine Revolution: How Diagnosing and Treating Disease Are About to Change Forever". Dr. Cullis will explain how personalized medicine is the biggest revolution of our time. By replacing the current one-size-fits-all approach to medicine with medical treatment based on each individual's unique molecular makeup, personalized medicine will dramatically improve diagnosis and treatment of disease and radically empower us to take control of our own health.

On Day 2, we have a keynote address on Retirement on "Rules of Thumb: Helping Retirees to Decumulate", published by the Retirement Income Interest Group (RIIG) of the New Zealand Society of Actuaries. Mr Daniel Musset will represent the NZSoA RIIG and provide useful insights into how retirees can consider the combined impact of their financial situations, risk preferences, family and lifestyle situations to determine the plausible ways of decumulation.

The biography of the two Keynote Speakers and 15 other distinguished speakers follows.



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Day 1 Keynote Speaker, Dr. Pieter R. Cullis



Dr. Peter Cullis, University of British Columbia (Canada)

Dr. Cullis is a Professor at the Department of Biochemistry and Molecular Biology at the University of British Columbia. He is an internationally recognized pioneer and leader in the field of lipids, biological membranes and liposomal drug delivery systems. He has been very active in the development of several biotechnology companies and is recognized as a remarkable researcher and innovator, with over 300 publications and 40 patents. He is a winner of the 2011 Prix Galien, and is member of the Royal Society of Canada.

The Personalized Medicine Revolution: How Diagnosing and Treating Disease are about to Change Forever

Dr. Cullis will explain how personalized medicine is the biggest revolution of our time. By replacing the current one-size-fits-all approach to medicine with medical treatment based on each individual's unique molecular makeup, personalized medicine will dramatically improve diagnosis and treatment of disease and radically empower us to take control of our own health.

Day 2 Keynote Speaker, Daniel Musset

Mr. Daniel Musset, New Zealand Society of Actuaries (NZSoA)

A specialist investment actuary, Daniel specialises in the theory and practice of asset-liability management for institutional investors. Daniel brings a strategic focus on investing not simply to meet arbitrary return targets, but rather to manage risk and to meet obligations. Daniel has extensive consulting experience, last holding key roles in a New Zealand investment consultancy and served several consulting functions for European companies when he was based in Switzerland and Germany. His investment and consulting experience spans across Asset Managers, KiwiSaver Providers, non-profit organisations, to Swiss pension schemes. Daniel is a Fellow of the Institute of Actuaries and a Fellow of the New Zealand Society of Actuaries.



Decumulation Options in the New Zealand Market: How Rules of Thumb can Help

An increasing number of retirees will have ever larger pools of retirement savings to draw on in the later years of their lives. At the same time, they have unique financial situations, risk preferences, family commitments and lifestyle choices. In a market where defined benefit pensions and retail annuities are increasingly scarce, and longevity and investment risks are not well-understood, how can we provide user-friendly guidance to retirees who need to 'DIY decumulate'? The Retirement Income Interest Group (RIIG) of the New Zealand Society of Actuaries has tackled exactly this question and published their research and solutions. Daniel shall represent the NZSOA RIIG to present the Group's recent work in this area and discuss how decumulation Rules of Thumb could form part of the solution.



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Further Speakers on Day 1



Ms. Irene Ng, Gen Re (Singapore)

Irene is Life/Health Branch Manager of Gen Re's Singapore office. She is also the Regional Chief Underwriter and Head of Claims for Gen Re Life/Health for ASEAN, China, Hong Kong and India. She is responsible for the business in the ASEAN region as well as providing support in underwriting and claims throughout Asia. She is a Fellow with the Academy of Life Underwriters, a conferred Fellow of the Institute of Banking and Finance and an Associate with the Chartered Insurance Institute.

Mr. Thomas Dijohn, dacadoo ag (Australia)

Thomas is Vice-President Asia-Pacific in dacadoo, which has developed a digital health and lifestyle platform. Thomas has a long history of successfully developing new businesses in Technology and Digital Media having lived and worked the last 20 years in Asia-Pacific. He built The Fantastic Corporation in Asia-Pacific, restructured Nomad technologies which was then sold via MBO, and grew an APAC business division in Fuji Xerox 250% over 5 years. In 2015 he was Intrapreneur-in-Residence at Sanofi developing healthcare technology of the future. He holds a MBA from Macquarie University in Australia.



Irene and Thomas will jointly speak on Disease Prevention and Detection - The Role of Wearables and Digital Health Engagement in Insurance

Many retirees today are living longer, but finding it difficult to sustain longer life span with unhealthy lifestyle. This presentation looks into how health insurance products have evolved with technology and health & wellness initiatives to incentive healthy lifestyle and to meet the changing demands of customers. The presentation also highlights the growing importance of continuous underwriting via wearable technology and its role from the insurers' and customers' perspectives. The presentation is followed by a case study on digital engagement and how it can help with early detection and prevention of disease and how the data collected can be used for product design and pricing to meet the customer needs.



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Dr. Amitabh Deka, Willis Towers Watson (Singapore)

Dr. Amitabh is a physician with experience in business management and public health practices. Across fifteen years of his career, he has successfully delivered assignments pertaining to healthcare delivery, financing and promotion. In the various roles he held in payer and provider healthcare organizations, his responsibilities included strategic management, business development and public health research. Amitabh holds a Master degree in Public Health from the University of Sheffield, United Kingdom.

Framing a Wellness Journey

Beyond the recognized discussion on ROI in wellness, an often stated challenge is the identification of a framework that enables the pursuit of effective wellness programs, both at organizational and individual levels. The opportunity to personalize a wellness program, in fact, exists right from the inception of the wellness journey i.e. the purpose. Other critical factors that influence the choice set, and therefore the progress and outcome of the program(s), include the health risk status and a range of intrinsic behaviours at play. Customizing a wellness journey by managing the aforementioned dynamics can dramatically improve the effectiveness of wellness programs.

Mr. Donald Low, Lee Kuan Yew School of Public Policy (Singapore)

Besides leading the School's executive education efforts, Donald also heads its case study unit. His research interests at the School include economics in public policy, inequality and social spending, behavioural economics, public finance, organizational change, and governance and politics in Singapore. Prior to his current appointment, Donald served fifteen years in the Singapore government. He held various senior positions, including the director of fiscal policy at the Ministry of Finance and the director of the Strategic Policy Office at the Public Service Division. He also established the Centre for Public Economics at the Civil Service College of Singapore to advance economics literacy in the Singapore government.



Financing a High-Performing Chronic Case System

The Singapore healthcare system is under strain from a rapidly aging population as well as rising expectations with respect to the coverage and quality of care. The current system was designed to deliver primary care and acute care at affordable cost, but not structured for a population with a much higher incidence of chronic illnesses. Donald will discuss the mismatch between the current healthcare structure and incentives system, and changing population needs. He will also share ideas on how this could be addressed in public policy and private sector practices.



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Ms. Pang Sze Yunn, Philips (Singapore)

Sze-Yunn leads Philips' Population Health Management business for ASEAN & Pacific. She is responsible for the roll out of technology-enabled clinical programs for Philips, such as chronic disease management and prevention, and falls detection and prevention. Sze-Yunn has a unique combination of commercial capabilities from healthcare and technology industries, and a successful track-record of government engagement. She started her career with the Singapore Ministry of Foreign Affairs, serving in Beijing and the United Nations in New York. She spent 10 years in the enterprise software industry in product management and marketing roles, with Siebel Systems in California and Microsoft at its Redmond HQ and China. Sze Yunn has also led NTUC Health Home Care, and has deep experience with continuity of care and the step-down sector.

Managing Healthcare Costs with Digital Health

Healthcare cost increases continue to outpace the rest of the economy by a considerable margin, and will continue to grow as the Singapore population ages. Globally, chronic disease and falls prevention programs powered by telehealth and predictive analytics have successfully reduced healthcare costs by lowering hospital admissions, enabling ageing at home and reducing health risks. Using case studies, Sze Yunn will show how digital health, big data and predictive analytics have been adopted effectively in US, Europe and Asia. She will discuss how insurers, corporations and healthcare providers in Singapore could come together to change the existing healthcare paradigm.

Dr. Joanne Yoong Su-Yin, Associate Professor of National University of Singapore

Dr. Yoong is an applied micro-economist conducting research on behavioural economics, health and financial decision making. She is a Senior Economist at the University of Southern California, where she directs the research program for the Center for Economic and Social Research (East). She is jointly appointed as Associate Professor of Health Systems and Behavioural Sciences at the Saw Swee Hock School of Public Health and the Director of the Center for Health Services and Policy Research at the National University Hospital System. Dr. Yoong's academic research has been published in leading journals and has been funded by the WHO, OECD, NIH, DFID, World Bank and USAID. Dr. Yoong received her Ph.D. in Economics at Stanford University as an FSI Starr Foundation Fellow and her AB summa cum laude in Economics and Applied and Computational Mathematics from Princeton University.



Behavioural Economics and Insights for Policymaking in an Aging World

This talk will introduce basic insights of behavioural economics relevant to health and retirement policy in a rapidly aging world, highlighting common biases and decision-making anomalies that produce predictably irrational, inefficient behaviour. Using these insights to optimize intervention design as well as the choice environment can potentially result in gains in physical, mental and social well-being for aging populations. However, at the same time, applications of such approaches can also have important limitations in practice. The talk will introduce key examples from the international setting and lead to a discussion of implications for the next-generation of aging policies.



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Mr. Christopher <u>Tan</u>, Providend (Singapore)

Christopher is the Chief Executive Officer and Co-founder of Providend Ltd and has close to two decades of experience in the wealth management and financial planning industry. Prior to setting up Providend, Christopher was the Managing Partner of a fee-based financial planning firm. Christopher spent nearly two years with healthcare giant, Johnson & Johnson Private Limited in a sales and marketing function. Christopher also spent nearly seven years with the Singapore Armed Forces (SAF) as an Army Officer in operations, instructional as well as staff functions.

Holistic Retirement Planning for Retirees in Retirement

As one of the fastest aging society in Asia and possibly in the world by 2050, there have been a lot of talks on retirement planning in Singapore. There are 2 phases in retirement planning - the accumulation phase and the withdrawal phase. Unfortunately, while the withdrawal phase is more difficult to plan for, there has been lesser emphasis on it. In addition, whenever this subject is broached, the focus has only been on the wealth aspect in retirement. However, planning for one's retirement goes beyond just the money aspect, it involves the health aspect as well as the legacy aspect. Making a balanced decision based on these three aspects requires the retiree to have a very clear sense of purpose for his life.

In this session, the speaker will share on the emotional journey of a near retiree/retiree and how by knowing this journey would be, he can better plan for his retirement to cope with the 5 risks retirees faced in retirement. The speaker will also share how a retiree should have a clear sense of purpose to drive his retirement planning.

Mr. Chye Pang Hsiang, Milliman (Hong Kong)

Pang is a principal and actuary with Milliman's Hong Kong office. He joined the firm in 2002, after spending more than two and a half years with Milliman in New York and six years with an actuarial and management consultancy in Southeast Asia.

Pang specializes in property and casualty insurance and healthcare insurance. He has consulted to more than 80 property and casualty insurance and reinsurance companies in Greater China and Southeast Asia. Pang has consulted to governments, insurance companies, health plans, hospitals, physician groups, and pharmaceutical companies in Asia, the United States, and South Africa.



Facing the Challenge of Sustainable Private Medical Insurance

The market has seen competition drive the evolution of products to increase benefit limits, scope of coverage, insured age. This has led to high medical trends in the form of both utilisation and provider charges, leading to significant premium rate increases. In this presentation we will examine how other markets have attempted to reign in high medical trends that are unsustainable in the long run examining the role of government, regulators, providers and insurers.



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Further Speakers on Day 2



Mr. Mark Whatley, Milliman (Singapore)

Mark is Consulting Actuary, Employee Benefits Asia with Milliman, where he provides independent and objective consulting advice on employee benefits to multinationals, local companies and government-linked organisations. Mark has over 23 years of employee benefits, retirement and financial services experience gained in Asia, Europe and Africa. He is an expert on benefits and retirement practice in South East Asia, gained from single and multi-country project experience of benefits review and optimisation, retirement plan design, retirement actuarial valuation, retirement and benefits administration, flexible benefits design and pricing, benefits communication, pre-M&A benefits due diligence and post-M&A benefits harmonisation.

Thinking outside of the One Pillar Box – Reflecting on Retirement in Singapore.

Against the context of an ageing population, increasing longevity and retirement savings that are largely underpinned by the Central Provident Fund, Mark will reflect on the Singapore retirement environment as it stands today and consider how things may need to change going forward.

Dr. Chia Ngee Choon, Associate Professor of National University of Singapore

Dr. Chia is an associate professor and deputy head in the Department of Economics at the National University of Singapore (NUS). She is the Co-director of the Next Age Institute at NUS and Co-editor of the Singapore Economic Review. Her current research interests include pension economics, health economics and the fiscal impacts of aging. Her works have appeared in internationally referred journals. She has consulted for major international agencies such as the ADB, IDRC and the World Bank. She has done commissioned research work on the retirement adequacy of social security in Singapore for the Singapore Central Provident Fund (CPF) Board and the Ministry of Manpower.



Housing, Retirement Saving and Innovative Policy Responses for Retirement Adequacy in Singapore

This paper takes a wider perspective on adequate living standards in old age. Assessment of retirement adequacy entails taking into consideration the unique housing finance mechanisms in Singapore, chiefly through the CPF and other innovative social measures in Singapore. Given the prevalence of house ownership, incorporating net imputed rent and measures to help unlock housing equity can substantially boost elderly's retirement incomes. Furthermore, social protection schemes such as subsidized health- and elder-care (e.g. through the Pioneer Generation Package) enhances retirement adequacy. This implies that Singapore has to maintain a strong fiscal position to continue funding social protection through special transfers and funds, amidst an ageing populace and economic challenges.



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Ms. Ju Jiaming, Singapore Management University

Jiaming is the Associate Director for Centre for Research on the Economics of Ageing (CREA). She is responsible for designing strategy, external engagement and policy programmes for CREA while managing SLP operations.

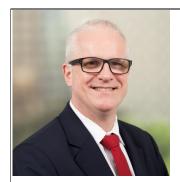
Jiaming has seven years of international work experience in economic policy analysis, economic development and higher education.

Prior to joining CREA, she ran Nobel Prize economist Joseph Stiglitz's think tank, the Initiative for Policy Dialogue, in New York, while serving as a freelance analyst on East Asia for The Economist Intelligence Unit.

Jiaming obtained her Bachelor's degree in Politics, Philosophy and Economics (PPE) from Durham University and her Master's in Public Administration (MPA) from the School of International and Public Affairs (SIPA) at Columbia University.

The Singapore Life Panel®

Jiaming will give a presentation on how health shocks plays a role in shaping elderly's consumption, wealth, and ability to work. She will also touch upon how men and women differ in chronic conditions and how this affects their financial behaviours in later life.



Mr. Stuart Rodger, Deloitte (Australia)

Stuart is Head of Deloitte's actuarial Health & Ageing Practice in Australia. He has worked as an actuary or business leader in Australia, Europe and Asia. He has extensive experience in health, superannuation, and life insurance actuarial work. Stuart was co-leader of the actuarial advisory team which supported the CPFB on the design and introduction of the CPF LIFE scheme; and is also experienced with MediShield and ElderShield scheme designs.

Towards a Comprehensive Retirement Income Product – the Australian Journey

Australian superannuation funds have for a long time held a "Lump Sum payout" mentality. This has persisted through the past three decades during which our retirement savings system has matured with now a very high level of coverage of the population.

However policymakers, product providers, the Murray Financial System Enquiry and consumer advisors all recognise that the task of efficiently spreading a lump sum over a retiree's remaining lifetime requires better products than are currently available.



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Ms. Bethany Boll, MyDoc (Singapore)

Bethany is the Head of Partnerships at MyDoc. Bethany joined Mydoc in 2016 to lead the Partnerships division, initiating and managing relationships with industry leading providers in health. Key partnerships include major insurance companies and TPAs, for which MyDoc provides online healthcare services which complete and enhance the services members receive via web and app-based technology.

Transferred to Singapore in 2013, prior to joining MyDoc Bethany managed multinational account contracts with large employers in Asia - overseeing health consulting and broking services provided to corporate HR clients. Her clients came from a spectrum of industries but with a concentration in the hi-tech sector. In this role she led her clients to adopt leading health management strategies and vendors across the region.

Bethany earned a Bachelor of Arts (BA) degree from Colgate University in the United States, and was previously a licensed insurance broker in the US (2009-2013) and Singapore (2013-2016).

Health Care Online: Make the System Work for You

Bethany will give a presentation about challenges with the state of peoples' health and health insurance in Asia. She will also discuss topics around: (1) technology enhancements throughout the medical industry, and challenges faced along the way; (2) technology in medicine today and how can we solve the challenges with technology; (3) how virtual health may bring health care to you, in a way that matters.

Prof. Joseph Cherian, Practice Professor of National University of Singapore

Prof. Cherian is Practice Professor of Finance and Director of the Centre for Asset Management Research & Investments (CAMRI) at NUS Business School, where he also serves on the School's Executive Education Board. He was previously the Managing Director, Global Head, and CIO of the Quantitative Strategies Group within Credit Suisse Alternative Investments in New York, where he had direct responsibility for over US\$67 billion in client assets managed to a quantitative discipline. He has authored numerous articles for financial journals and serves on the Scientific Advisory Board of Nipun Capital. He also has or had appointments at the Ministry of Manpower's CPF Advisory Panel and the Singapore International Mediation Centre's Panel of Technical Experts etc. Prof. Cherian holds a B.S. in



Electrical Engineering from MIT, and M.S. and Ph.D. degrees in Finance from Cornell University.

Avoiding Shock & Owe: How to Retire Well

Identifying logical, scientific and rational solutions to one's retirement savings and investment problems isn't an easy task. Yet, there are innovative and thoughtful ways in finance that can help. The speaker will lead the audience through some simple, implementable retirement finance solutions, and share his perspective with respect to prudent investment strategies during the accumulation and decumulation phase of retirement funding. The discussion of these practical ideas and concepts will be centered around how to ensure financial peace of mind in our golden years.



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Dr. Jeremy Lim, Oliver Wyman (Singapore)

Dr. Jeremy Lim (MD, MPH) is a Partner in Oliver Wyman's Singapore office, where he leads both our Health & Life Sciences and Public Sector practices across the Asia Pacific region.

He advises senior officials at public sector agencies and has extensive experience consulting and advising multinational private and NGO clients on national and regional strategies for go-to-market plans and implementation, government engagement and public-private partnerships.

Jeremy is also active in academia, holding appointments at several universities. He teaches at the National University of Singapore (Saw Swee Hock School of Public Health, and Duke-NUS medical school), and in 2013 authored Myth or Magic: The Singapore Healthcare System, a book that draws lessons from the Singapore health system for health reform efforts in other countries.



Dr. Cecilia Wang, Oliver Wyman (Singapore)

Cecilia is a management consultant at Oliver Wyman. She is part of the Health and Life Sciences practice team covering the Asia Pacific region. She came from an academic and entrepreneurial background. She has done research in tissue regenerative medicine and obtained PhD degree from Nanyang Technological University in Singapore and Technion in Israel. Cecilia co-founded a medical device start-up upon completion of the Singapore Stanford Biodesign Fellowship, and was the lead of the healthcare investment team in the Asia Pacific region at one of the largest private equity firms.

Health Risk Management and Funding in the 'Gig Economy'

As more and more Singaporeans, young and not-so-young, move away from formal employment, there are growing concerns over social protection and retirement adequacy, including funding of healthcare needs. The presentation will share research conducted by the Asia Pacific Risk Centre on CPF and more broadly retirement adequacy in the 'gig economy' and the challenges faced. We will also offer practical examples of how government and private sector healthcare providers are addressing the healthcare needs of 'gig economy' participants and explore funding options which will need to be sustainable for society and attractive for individuals.



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Event Details

Date: 12 - 13 October 2017

Venue: Virgo 1-4

Resorts World Convention Centre

Sentosa Island Singapore 098269

Registration Process

To register for this conference, please go to

www.actuaries.org.sg and complete the "Sign Up"

form.

For members, please login first to register for the

event.

Registration Fees

3		
	Early Bird Registration with payment (valid till 22 SEPTEMBER 2017)	Standard Registration (while places are available)
Non Member	SGD 650	SGD 750
SAS Member	SGD 550	SGD 650

Financial Training Scheme (FTS)

This programme's application for the Financial Training Scheme has been approved and may be eligible for FTS claims subject to all eligibility criteria being met.¹

Please note that in no way does this represent an endorsement of the quality of the training provider and programme. Participants are advised to assess the suitability of the programme and its relevance to participants' business activities or job roles. The FTS is available to eligible entities based on the prevalent funding eligibility, quantum and caps. FTS claims may only be made for recognised programmes with specified validity period. Please refer to www.ibf.org.sg for more information.

Cancellation Policy

For cancellation in writing made before 30 Sep 2017, 50% of the conference fee will be refunded (less all bank administrative and commission charges). No refund will be made for cancellations thereafter. However, cancellation due to mistake made during registration can be made by sending an email to patsy@actuaries.org.sg immediately. An acknowledgement of the cancellation will be emailed to you.

The Society reserves the right to cancel the conference if conditions warrant. In the event of such cancellation, registration fees will be refunded in full (bank charges will be borne by participants). We are not responsible for any airfares or hotel penalties that a delegate may incur due to such a cancellation.

¹ Such criteria include that applicants must submit his/her full name matching with their employers' & legal record.



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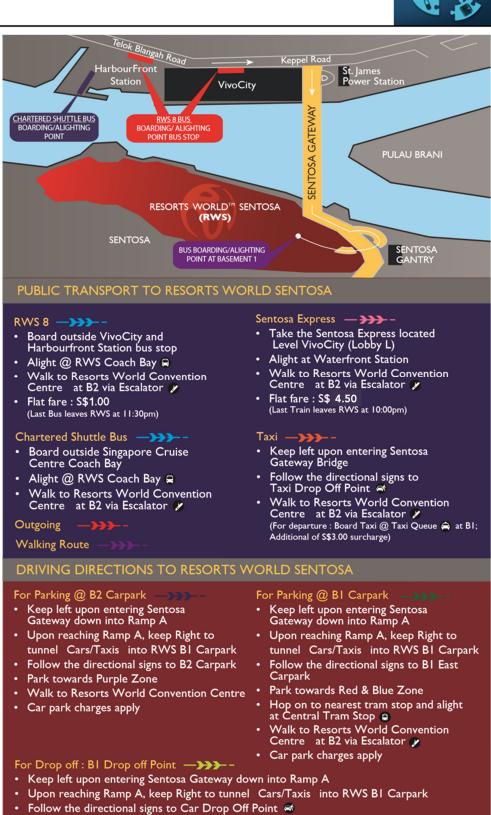
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How to Get to

Resorts World Convention Centre Sentosa Island Singapore 098269

(the bus leaves at 8.25am sharp on both days, please be there early)



 Walk to Resorts World Convention Centre at B2 via Escalator Walking Route

Please call 6577 8888 or visit www.rwsentosa.com for more information.

Outgoing



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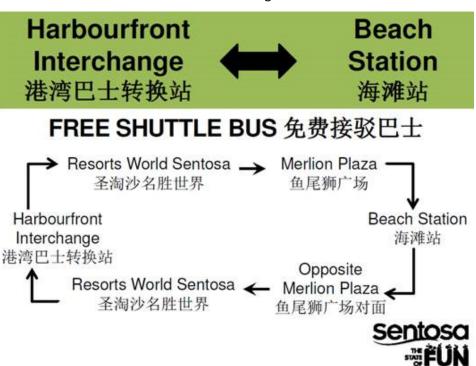


Transportation notice on 12 Oct 2017:

Please kindly note that Sentosa Express will only begin their operation at 10.00am on 12 October.

A free bus bridging service between the **HarbourFront Bus Interchange** and **Beach Station** will be available from 7.00am and 11.00am. The buses will come at regular intervals.

The shuttle bus can be identified from the sign at the front windscreen:



The bridging bus pick up point at **Harbourfront Bus interchange** will be at the first 2 bus lots as per circle in red below.

