# 附錄1

大會手冊及會議議程(節本)



9 - 11 July 2018

Sands Expo and Convention Centre, Singapore www.sitce.org

CONGRESS PROGRAMME

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NGIEN Hoon Ping Chief Executive Land Transport Authority (LTA) Singapore



Pere CALVET
President
International
Association of Public
Transport (UITP)
Director General FGC
Barcelona, Spain

Welcome to the third edition of LTA-UITP Singapore International Transport Congress and Exhibition (SITCE), jointly organised by the Land Transport Authority (LTA) of Singapore, the International Association of Public Transport (UITP) and LTA's subsidiary, MSI Global Pte Ltd. This year, the third edition of UITP's International Rail Conference, will be integrated within SITCE, for the first time in Asia.

Themed "People at the Heart of Digital Railways", SITCE 2018 will focus on how digital technologies will transform the passenger rail transport landscape and the need to bring innovative solutions to improve commuter experience in a people-centric transportation system. For greater synergy, this year's SITCE is co-located with the World Cities Summit (WCS) with a 3-day congress and exhibition filled with panels, presentations and networking events.

SITCE 2018 Congress features a panel of **more than 65** international speakers across 20 sessions with thought-provoking discussions on the benefits of digitalisation for rail security and cyber challenges, full automatic and autonomous train operation, innovative infrastructure construction, and energy efficiency among others. As part of the programme, the technical visits will provide opportunities for participants to view and gain first-hand experience of the latest ground-breaking technologies deployed at transport-related projects and developments in Singapore.

We are sincerely grateful for the strong support of various government agencies, supporting organisations and publications, as well as our exhibitors, partners, members of our organising committee, and all who have contributed to the successful staging of SITCE 2018. Thanks to the overwhelming response by our peers, SITCE's exhibition space was sold out more than two months before the event and will feature over **96** international and local exhibitors from **17** countries and regions. Leading solution providers will showcase the best and latest in urban rail transport technologies, planning, systems and solutions.

With Singapore being recently named as the leader in future mobility (by Arthur D. Little's Urban Mobility Index 3.0), we are excited to gather our international colleagues and peers here in Singapore to continue the conquest in advancing sustainable railways in the public transport industry.

May you have a rewarding participation at SITCE 2018.



#### ADMISSION

Congress: Accessible to registered delegates, speakers and accredited media only.

Exhibition: Open to delegates, speakers, trade visitors, exhibitors, partners and media.



#### VENUE

#### SITCE Congress Venue:

Level 4, Sands Expo and Convention Centre, Roselle Junior and Peony Junior Ballrooms

#### SITCE Exhibition Venue:

Level 1, Hall C, Sands Expo and Convention Centre, co-located with the City Solutions Singapore (CSS) Expo



#### **OPERATING HOURS**

#### Congress Registration Hours:

9 July 2018 - 8:00 am - 5:00 pm 10 July 2018 - 8:00 am - 5:00 pm 11 July 2018 - 8:00 am - 11:00am

#### **Exhibition Registration Hours:**

9 July 2018 - 9:00 am - 5:00 pm 10 July 2018 - 9:00 am - 5:00 pm 11 July 2018 - 9:00 am - 5:00 pm

#### **Exhibition Hours:**

9 July 2018 - 9:30 am - 5:30 pm 10 July 2018 - 9:30 am - 8:00 pm 11 July 2018 - 9:30 am - 5:30 pm



#### FACILITIES WITHIN THE HALL

#### Press Office

Sands Expo® and Convention Centre, Level 3

#### SITCE Secretariat Office

Sands Expo® and Convention Centre, Level 4 In front of Peony Junior Ballroom

#### SITCE Speaker Lounge

Sands Expo® and Convention Centre, Level 4 In front of Peony Junior Ballroom

#### MICE Business Centre

Sands Expo® and Convention Centre, Level 3 Operating Hours: 8am - 8pm daily



#### FACILITIES WITHIN SANDS EXPO AND CONVENTION CENTRE

#### Food and Beverage

Choose from over 80 restaurants, offering the best of local and international cuisines in one convenient dining destination. For local fare, visit Rasapura Masters, a food court offering a wide range of food and operating 24 hours.

#### Shopping

Over 270 designer boutiques, world-class brands and new concept stores at the Marina Bay Sands Shoppes.

#### World-class entertainment

Take the opportunity to catch live concert series featuring some of the world's biggest artistes performing in intimate yet astounding entertainment venues at Marina Bay Sands.



#### MOBIE APP

# Tailor your experience with the mobile app!



# Step 1: How to get the app?

Get started by downloading the SITCE 2018 gap on:





# Step 2:

After downloading SITCE 2018 app, scan the barcode using the app or search for SITCE18 (case sensitive)



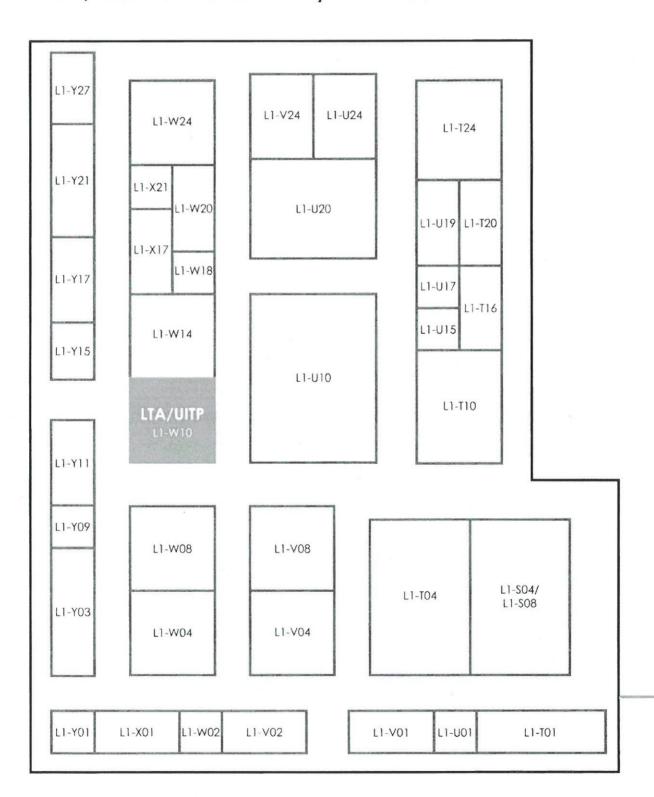
Mobile app brought to you by THALES

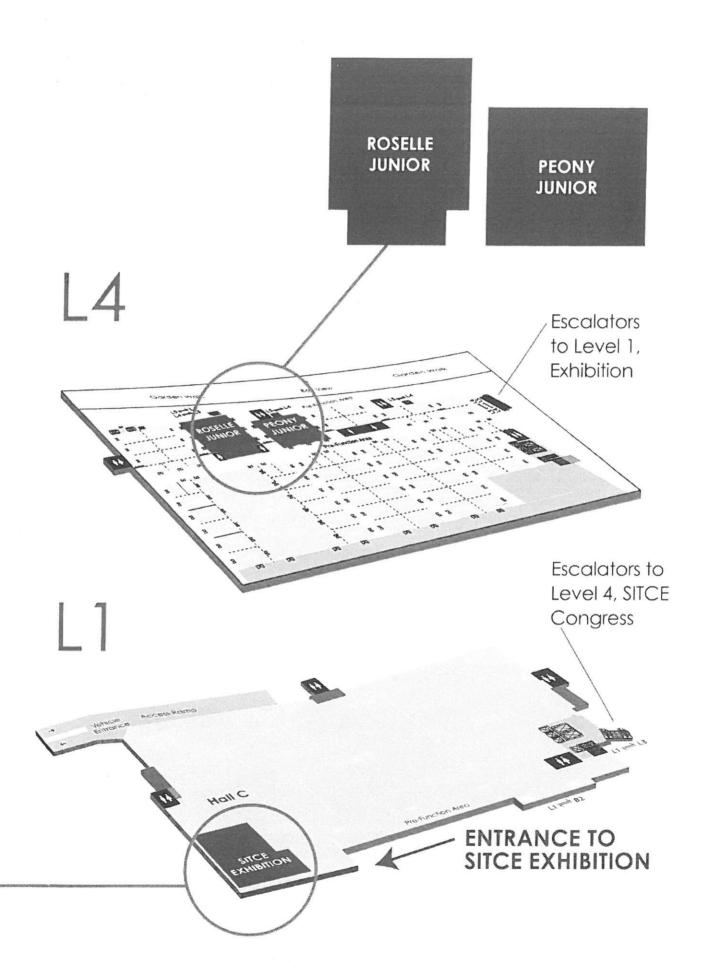
### SITCE Exhibition:

Level 1, Hall C (co-located with City Solutions Singapore (CSS) Expo)

# **SITCE Congress:**

Level 4, Roselle Junior and Peony Junior Ballrooms





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SIZE EXECUTE	M	ONDAY, 9 JULY 2018	
9:30 - 17:30	Visit SITCE Exhibition • L1, Hall C (c	o-located with City Solutions Singa	pore Expo)
9:30 - 12:00			
2:00 - 14:00	SITCE Lunch   Sponsored by Samsung C&T Corporation • L4, Roselle/Peony Junior Bayview Foyer		
4:00 - 15:30	SITCE 2018 Opening Ceremony   Sponsored by Siemens Mobility and Woh Hup • L4, Roselle Junior Ballroom		
5:30 - 16:30	The section is a second of the second		ngapore Expo)
9:00 - 21:00	Welcome Reception   Sponsored • Chijmes ■ Sands Expo and Cor	by China Railway Tunnel Group nvention Centre (porte-cochère), 1	8:15 - 18:45 (15-min interval)
	TUI	ESDAY, 10 JULY 2018	
9:30 - 20:00	Visit SITCE Exhibition • L1, Hall C (c	o-located with City Solutions Singa	pore Expo)
2:00 - 10:30	Plenary session: Setting the scene	. <b>What is at stake? •</b> L4, Roselle Juni	or Ballroom
):30 - 11:00	Coffee Break • L4, Roselle/Peony	Junior Bayview Foyer	/
1:00 - 12:30	Parallel session 1  • L4, Roselle Junior Ballroom  Full automatic operation today, autonomous trains tomorrow?	Parallel session 2  • L4, Peony Junior 1 Ballroom  Condition-based infrastructure maintenance	<ul> <li>Parallel session 3</li> <li>L4, Peony Junior 2 Ballroom</li> <li>Mobility as a service/MaaS: Ne grail? Fad? Paradigm shift?</li> </ul>
2:30 - 14:00	SITCE Lunch   Sponsored by GS E&C Corporation • L4, Roselle/Peony Junior Bayview Foyer		
4:00 - 15:30	Parallel session 4  • L4, Roselle Junior Ballroom  LRT, when rail meets the city	Parallel session 5 • L4, Peony Junior 1 Ballroom Safety remains priority #1 in digital era	Parallel session 6 • L4, Peony Junior 2 Ballroom Customer service 2.0, 3.0 or 4.0 what matters is excellence!
5:30 - 16:00	Coffee Break • L4, Roselle/Peony	Junior Bayview Foyer	
6:00 - 17:30	Parallel session 7  • L4, Roselle Junior Ballroom  Looking into the most precious asset: Human resources, talent, skills and generation challenges	Parallel session 8  • L4, Peony Junior 1 Ballroom  Condition-based rolling stock maintenance	Parallel session 9 • L4, Peony Junior 2 Ballroom Innovative infrastructure construction
7:30 - 20:00	Industry Night at City Solutions Sine • L1, Hall C	gapore Expo (SITCE congress delegat	es are entitled to participate)
		nesday, 11 July 2018	
09:30 - 17:30	WED	NESDAY, 11 JULY 2018 co-located with City Solutions Singo	pore Expa)
***************************************	WED		Parallel session 12 £4, Peony Junior 2 Ballroom
9:00 - 10:30	Visit SITCE Exhibition • L1, Hall C (a Parallel session 10 • L4, Peony Junior 1 Ballroom The benefits of digitalisation for rail security - and its (cyber)-	co-located with City Solutions Singo Parallel session 11 • L4, Roselle Junior Ballroom Singapore rail expertise	Parallel session 12 L4, Peony Junior 2 Baliroom Making rail even more energy-
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9:30 - 17:30 9:00 - 10:30 0:30 - 11:00 1:00 - 12:30 2:30 - 14:00	Visit SITCE Exhibition • L1, Hall C (c) Parallel session 10 • L4, Peony Junior 1 Ballroom The benefits of digitalisation for rail security - and its (cyber)-challenges Coffee Break • L4, Roselle/Peony Parallel session 13 • L4, Peony Junior 1 Ballroom Operators' experience in digital transformation SITCE Lunch   Sponsored by Huey 1 • L4, Roselle/Peony Junior Bayview	Parallel session 11  L4, Roselle Junior Ballroom Singapore rail expertise  Junior Bayview Foyer  Parallel session 14  L4, Peony Junior 2 Ballroom Obsolescence management and rolling stock life extension  Fian, K-INC Konstruct and L&M Four	Parallel session 12 L4, Peony Junior 2 Ballroom Making rail even more energy- efficient  Parallel session 15 L4, Roselle Junior Ballroom Artificial intelligence in railway, and beyond
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CONGRESS: LEVEL 4, ROSELLE JUNIOR AND PEONY JUNIOR BALLROOMS

	MONDAY, 9 JULY 2018	
09:30 - 17:30		
09:30 - 12:00	World Cities Summit Opening Plenary, In-conversation and Opening Ceremony • L5 (by invitation only)	
12:00 - 14:00	SITCE lunch   Sponsored by Samsung C&T Corporation • L4, Roselle/Peony Junior Bayview Foyer	
	SITCE Opening Ceremony   Sponsored by Siemens Mobility and Woh Hup • L4, Roselle Junior Ballroom	
14:00 - 14:10	Welcome Addresses Alan CHAN Heng Loon, Chairman, Land Transport Authority (LTA) Singapore, Singapore Pere CALVET, President, International Association of Public Transport (UITP); Director General, Ferrocarrils de la Generalitat de Catalunya, Spain	
14:10 - 14:20	Keynote Speech 1: The digital transformation of Deutsche Bahn Stefan STROH, Chief Digital Officer, Deutsche Bahn, Germany	
14:20 - 14:30	Keynote Speech 2: The many facets of digital passenger rail  Prof. Graham CURRIE, Professor of Public Transport, Public Transport Research Group, Monash University, Australia	
14:30 - 15:30	Panel Discussion: People at the heart of digital railways Moderator: Prof. Graham CURRIE, Professor of Public Transport, Public Transport Research Group, Monash University, Australia Panelists: NGIEN Hoon Ping, Chief Executive, Land Transport Authority, Singapore Stefan STROH, Chief Digital Officer, Deutsche Bahn, Germany Masaki OGATA, Chairperson UITP Asia-Pacific, Vice Chairman East Japan Railway Company, Japan	
15:30 - 16:30	SITCE VIP Exhibition Tour • E1. Half C (co-located with City Solutions Singapore Expo)	
19:00 - 21:00	Welcome Reception   Sponsored by China Railway Tunnel Group  Chijmes Sands Expo and Convention Centre (parte-cochère), 18:15 - 18:45 (15-min interval)	



CONGRESS: LEVEL 4, ROSELLE JUNIOR AND PEONY JUNIOR BALLROOMS

### TUESDAY, 10 JULY 2018

09:30 - 20:00

Visit SITCE Exhibition • L1, Hall C (co-located with City Solutions Singapore Expo)

Plenary session 1: Setting the scene. What is at stake? • L4, Roselle Junior Ballroom

09:00 - 10:30

Digital technologies are already there and have the potential to deliver a revolutionary impact on rail transportation. However there is more than just technologies: a new eco-system needs inventing whilst not forgetting lessons from the past.

- How to solve individual mobility needs and steer a sustainable mobility market? Rather than selling railway tickets?

  Dr Michael LICHTENEGGER, Senior Strategist, Upstream Next Level Mobility, Austria
- Governance and regulatory framework for urban rail In search of effectiveness Morris CHEUNG, President, MTR Academy, Hong Kong S.A.R
- Future rail-based transit in an AV age Learnings from the past and governance challenges for a civil society Arnd BÄTZNER, Member of the Board of Directors, Mobility CarSharing Cooperative, Switzerland

#### Q&A

10:30 - 11:00

Coffee Break • L4, Roselle/Peony Junior Bayview Foyer

11:00 - 12:30

Parallel session 1

• 14. Roselle Junior Ballroom

Full automatic operation today, autonomous trains tomorrow?

Fully Automated Operation offers a glimpse into the future of metros, as the current state-of-the art. However how can the concept of digital metros be further exploited beyond train movements?

SESSION CHAIR

Ramon MALLA, Director of Metro Strategic Projects, Transports Metropolitans de Barcelona (TMB). Spain

#### KEYNOTE SPEECH

- Beyond Automation: benefits and challenges of autonomous metro **Dr Ahmed Miske EL HADRAMI**. Program Design Authority. Thales Solutions Asia Pte. Ltd., Singapore

#### PANEL DISCUSSION

#### Moderator:

Ramon MALLA. Director of Metro Strategic Projects, Transports Metropolitans de Barcelona (TMB), Spain

#### Panelists:

Olivier BADARD, Senior Vice President - Asia, Middle East and North Africa Business Unit, RATP Development, United Arab Emirates

**BO Jiang**, Vice President, Traffic Control Technology, China

Marc BADOUX, Deputy Director, Transports Lausannois, Switzerland

Philippe LEGUAY, International Director, Urban Railway Systems, Keolis, France

Q&A

#### Parallel session 2

L4, Peony Junior 1 Ballroom

# Condition-based infrastructure maintenance

The impact of digitalistion, big data, loT etc will be a massive game-change on all asset maintenance activities: real health status of fixed asset classes will be better understood and monitored to optimize availability and costs.

#### SESSION CHAIR Vincent Peng Hock TAN, Fellow, MTR Academy, Hong Kong S.A.R

- SCADA, drones and new maintenance techniques: What & metros are doing? How do they prepare?
- Ignasi OLIVER, Director of Superstructures Maintenance, TMB, Fc Metropolità de Barcelona, Spain
- How BIM will revolutionise fixed asset maintenance

**Francisco SÉCIO**, Consultant and Ex Infrastructure Director, ex. Metropolitano de Lisboa, Portugal

- Big data and IoT for smarter fixed asset maintenance and optimised ROI

Pierre GOSSET, CTO, SYSTRA, France

ASD

#### Parallel session 3

• L4. Peony Junior 2 Ballroom

Mobility as a service/MaaS: New grail? Fad? Paradigm shift?

MaaS or integrated mobility platforms provide registration, information, booking, payment, and ficketing/billing for the use of all available urban mobility services, but how can traditional urban rail mesh in this web of intertwined relations and continue guarantee freedom of mobility?

# SESSION CHAIR Roger VAHNBERG, Senior VP,

Alexandre SAVARD, Senior

- Västtrafik AB, Gothenburg, Sweden

   The role of rail in a MaaS
  ecosystem
- Manager, Rail, GIRO Inc.. Canada Boosting travel experience and operation excellence with big

data
Geert VANBEVEREN, Sales Director,
Siemens AG, Germany

- A model to rate "Mobility as a service" apps
- Andy TAYLOR. Strategy Director, Cubic Transportation Systems, United States of America
- European new electric scooter sharing model

Bertrand FLEUROSE, Founder & CEO, cityScoot, France

Q&A

CONGRESS: LEVEL 4, ROSELLE JUNIOR AND PEONY JUNIOR BALLROOMS

#### TUESDAY, 10 JULY 2018

12:30 - 14:00

SITCE Lunch | Sponsored by GS E&C Corporation • L4, Roselle/Peony Junior Bayview Foyer

14:00 - 15:30

#### Parallel session 4

▲ L4. Roselle Junior Ballroom

LRT, when rail meets the city

Street-level Light Rail Transit has been tremendously successful in Europe and North America in the last 30 years. It is now starting to find its role in Asian cities. The session will review the next evolution stages of this unitvalled "city-shaper".

#### SESSION CHAIR

**Dipl.-Ing, Stephan LEWISCH**, General Operations Manager, Wiener Linien, Austria

- What digitalisation brings to light rail passengers and operators Christoph KLAES, Vice President for Light Rail and VAL, Siemens Light Rail Vehicles, Siemens AG, Germany
- Digitalisation, a way to improve urban rail and ensure sustainable quality of life in Cologne Christian BURK, Division Manager
   Urban Railway Infrastructure, Kölner Verkehrs-Betriebe AG (KVB), Germany
- Innovation and practice on LRT accident analysis and preventive technical measures

**Dipl.-Ing, Stephan LEWISCH.** General Operations Manager. Wiener Linien, Austria

Q&A

15:30 - 16:00

#### Parallel session 5

· L4. Peony Junior 1 Ballroom

#### Safety remains priority #1 in digital era

Digitalisation offer many benefits. especially for safety-critical railway functions. But rail systems, however automated they get, will never do without human intervention and it is important to keep staff competence and work practice abreast of technologies.

#### SESSION CHAIR

Jacob KAM, Managing Director, Operation and Mainline Business, MTR, and UITP Vice President for Regional and Suburban Railways, Hong Kong S.A.R

- 50 years of safety-related human factors with increased automation in Paris
- Gautier BRODEO, Senior Advisor in Railway Safety, RATP, France
- Turning abandoned underground assets for training purposes

Dr Carles CASAS ESPLUGAS, Head of Strategic Planning & Prospective, Ferrocarrils de la Generalitat de Catalunya, FGC, Spain

- Fast detection and intervention with advanced security solution Alexis CHAVELAS, VP Digital Mobility Platform, Alstom, France
- Applying innovation in railway safety

CF CHAN, Assistant Director/ Railways, Electrical and Mechanical Services Department of Hong Kong Government, Hong Kong S.A.R

ASO

#### Parallel session 6

. L4. Peony Junior 2 Bailroom

Customer service 2.0, 3.0 or 4.0... what matters is excellence!

If there is a visible area of digitalisation in rail, it is the customer service practice: web, mobile app, social media... But tools only serve a properly thought new customer relation strategy. What does it take to enter the digital age?

#### SESSION CHAIR

Patrique CAMPAL-LINDAHL, Internal Culture & International Coordination Manager, Commercial Department, Transdev Group, France

- Rail Gen 2.0: a new customer experience
- Annie LEUNG, General Manager - Customer Experience Development, MTR Corporation Limited, Hong Kong S.A.R
- Driving customer service quality and employee empowerment in the digital-age
- Yukiko KIMISHIMA, Manager, East Japan Railway Company, Japan
- SMRT commuter engagement making commuting more joyful and inclusive

Elaine KOH. Chief Commuter Engagement Officer, SMRT Corporation, Singapore

Q&A

Coffee Break • L4, Roselle/Peany Junior Bayview Fayer

CONGRESS: LEVEL 4, ROSELLE JUNIOR AND PEONY JUNIOR BALLROOMS

### TUESDAY, 10 JULY 2018

16:00 - 17:30

#### Parallel session 7

L4. Roselle Junior Ballroom

Looking into the most precious asset: Human resources, talent, skills and generation challenges

The success of any public transport company depends on its ability to meet its human resources challenges. Attracting and keeping talents, managing a diverse and multi-generation workforce, investing in digitalisation to enhance the employee experience are the drivers of today's performance and customers' satisfaction.

#### SESSION CHAIR

Anne-Laure NOAT, Partner, Eurogroup Consulting, France

#### KEYNOTE SPEECH

- Digitalisation and employee experience

Mireia CLUA, HR Director, Ferrocarril Metropolita De Barcelona SA (Metro Barcelona). Spain

#### PANEL DISCUSSION

#### Moderator:

Anne-Laure NOAT, Partner, Eurogroup Consulting, Paris, France

#### Panelists:

Natasha ZULKIFLI, Founder Director, Women in Rail Malaysia, Malaysia Mireia CLUA, HR Director. Ferrocarril Metropolita De Barcelona SA (Metro Barcelona). Spain

Dr Janene PIIP, Director, JP Research & Consulting, Australia Anna FRASZCZYK, Visiting Professor, Mahidol University, Thailand Bruno DANET, Group Executive Director, Human Resources and Organisation, Keolis, France

#### Parallel session 8

· L4. Peony Junior I Ballroom

#### Condition-based rolling stock maintenance

The impact of digitalistion will be a massive game-change on rolling stock maintenance: New generation of trains can constantly self-check their health status and assign maintenance duties. How can the tremendous productivity gains of big data be aligned with a new working organisation?

#### SESSION CHAIR

Masnizam HISHAM, President and Group Chief Executive Officer of Prasarana Malaysia Berhad, Malaysia

- **Automatic Vehicle Inspection** System (AVIS) at rail depot Damien NG Chee Wei, Deputy Project Manager, Depot System/ Equipment Projects, Land Transport Authority, Singapore
- Singapore Journey to 1 Million MKBF: Better rail reliability through strategy formulation, automation and technology adoption Dr TAN Tong Tat, Engineering Manager, SBS Transit, Singapore
- Maximising value through integrated asset condition data Jack WIELAND, Service Lead Southeast Asia, Bombardier Transportation, Thailand
- Application of Prognastic Health Management (PHM) technology in subway train YANG Ying. Deputy Chief Engineer. CRRC Zhuzhou Electric Locomotive

Co. Ltd. (CRRC ZELC), China

ORA

# arallel session 9

• L4, Peony Junior 2 Ballroom

#### Innovative infrastructure construction

Urban rail infrastructure are complex and capital intensive projects. How can novel construction techniques. supported by digitalisation, help controlling or even cutting capex?

SESSION CHAIR Ian DOBBS, Chairman, UITP, Australia-New Zealand

- Development of TEMS Tunnelling and excavation monitoring system Dr GOH Kok Hun, Deputy Director, Geotechnical and Tunnels Division, Land Transport Authority, Singapore
- Use of trenchless technologies and methods in Singapore's Thomson-East Coast line MRT construction FOO Yung Thye, Deputy Group Director, Thomson-East Coast & Cross Island Lines (Civil), Land Transport Authority, Singapore
- Construction, machine manufacture and project cases of large-diameter shield machine Wang KUN, Deputy General Manager, Department of International Business. China Railway Group Limited, China

Q&A

O&A

17:30 - 20:00

Industry Night at City Solutions Singapore Expo (SITCE congress delegates are entitled to participate) • L1, Hall C

CONGRESS: LEVEL 4, ROSELLE JUNIOR AND PEONY JUNIOR BALLROOMS

#### WEDNESDAY, 11 JULY 2018

09:30 - 17:30

Visit SITCE Exhibition • L1, Hall C (co-located with City Solutions Singapore Expo)

09:00 - 10:30

#### Parallel session 10

· L4, Peony Junior 1 Ballroom

The benefits of digitalisation for rail security - and its (cyber)-challenges

(Cyber)-security is among the top challenges of digitalisation. With IoT, software and/or data exchange are found in virtually any piece of equipment, be it fixed or mobile. Rail systems have thousands of "access gates" for intruders that need to be properly recognised and protected.

#### SESSION CHAIR

Patrik ANDERSON, Director Business Development Transportation, Axis Communications, Sweden

- Smart video for railways: the advent of Artificial Intelligence
   Stéphanie JOUDRIER, Product Line Manager, Thales, France
- Railway Systems How to deal with cyber threats?
   Lovan PUSHPARATNAM, Director, Iramway Systems and Telecoms Department, SYSTRA, France
- Keeping railway system one step ahead of potential cyber attacks CHAN Ho Wing, Communications & Control Engineering Manager, MTR Corporation Limited, Hong Kong S.A.R
- Fostering a cybersecurity mindset LIM Thian Chin. Deputy Director, Head of CII Protection, Critical Information Infrastructure Division, Cyber Security Agency of Singapore, Singapore

Parallel session 11

• L4. Roselle Junior Ballroom

#### Singapore rail expertise

With unparalleled rail development in rail system design, construction, operations, maintenance, and more recently an emphasis on digitalisation and total asset management, Singapore rail community acquired extensive expertise.

#### SESSION CHAIR

Prof PHANG Sock Yong, Vice-Provost of Singapore Management University (SMU), former LTA Board member, Singapore

- Innovative construction
   OW Chun Nam, Director Tunnelling,
   Land Transport Authority,
   Singapore
- Holistic approach to asset replacement
   Melvyn THONG, Director, Land Transport Authority, Singapore
- Implementation of an Automatic Track Inspection (ATI) system in an operational environment LIM Zheng Ping, Executive Engineer, Land Transport Authority, Singapore
- Improving rail asset performance leveraging on asset management, technology and information
   LEOW Meng Fai, Deputy Group Director, Land Transport Authority

Q&A

#### Parallel session 12

L4. Peony Junior 2 Ballroom

Making rail even more energyefficient

Energy is often grasped from the climate change perspective, but it is also a major cost driver, representing 15 to 20% of railways operation expenditures. Therefore, all options for smart energy use or savings have to be explored and exploited.

#### SESSION CHAIR

**Sue CHAN**, Head of UITP Asia-Pacific Regional Office, Hong Kong S.A.R

- Exploring all possibilities for energy savings at Metro São Paulo Glauco FERNANDES LOPES, Engineer Head of Maintenance Department, Company of Metro São Paulo, Brazil
- New battery solutions for railway systems
   Nobuhiko SATAKE, Group Monager, Toshiba Infrastructure Systems & Solutions Corporation, Japan
- Energy recovery at Wiener Linien a valuable contribution to climate protection
   Günther STEINBAUER, CEO, Wiener Linien GmbH & Co KG, Austria
- The energy saving technology study based on flexible train formation for urban rail transit HAN Baoming, Professor of Beijing Jiaotong University, Secretary General of the Expert & Academic Committee, China Association of Metros, China

Q&A

Q&A

10:30 - 11:00

Coffee Break • L4, Roselle/Peony Junior Bayview Foyer

#### CONGRESS: LEVEL 4, ROSELLE JUNIOR AND PEONY JUNIOR BALLROOMS

#### WEDNESDAY, 11 JULY 2018

#### 11:00 - 12:30

#### Parallel session 13

. L4. Peony Junior 1 Ballroom

# Operators' experience in digital transformation

Digital transformation of customer care, operation and business processes will not be implemented overnight. Much has already been done, but much more needs inventing, and available solutions and approaches are still piecemeal. This session will take stock of available operators' return of experience.

#### SESSION CHAIR

Caroline HASEKE, Business Development Manager, RATPDev Transdev Asia, Hong Kong S.A.R

- Digital transformation of Seoul Metro
- CHUNG Hang Jae, General Manager, Seoul Metro, South Korea
- Customer-centric challenges of digital technologies for railways Satoru KITAMURA, Chief Researcher, East Japan Railway Company, Japan
- OPERACENTER\* A performance and satisfaction monitoring tool
   Mehmet Burak TELCIOGLU, Director of Technical Operations, Kayseri Ulasim, Turkey

Q&A

#### Parallel session 14

· L4. Peony Junior 2 Ballroom

# Obsolescence management and rolling stock life extension

Rail equipment and rolling stock are in principle designed for long life cycles exceeding 10-15 years. With increased features and complexity, many parts and components need replacing/repairing beyond their specific "expiry dates". How to ensure a proper management of obsolescence and the operability of equipment for the planned use life?

#### SESSION CHAIR

Andrew BATA, Head of UITP North America Regional Office, United States of America

- Capitalising on special ruggerdised platform maintenance capability for rolling stock eCard obsolescence management Andrew DE SILVA, Dy GM/VP Business Development, SDDA Pte Ltd, Singapore
- How to extend the lifecycle of rolling stock?
   Ying-Chen CHUANG, Director, Taipei Rapid Transit Corporation, Taiwan
- Challenges and solutions for re-signalling a CBTC WLAN radio system

Calvin CHUKO, Product Manager, Moxa Inc., Taiwan

ASD

#### Parallel session 15

· L4, Roselle Junior Ballroom

# Artificial intelligence in railways and beyond

Change keeps accelerating. Today, we are entering into Fourth Industrial Revolution, which is also considered to be the Artificial Intelligence (AI) Era. The combination of digitalisation, Internet of Thirps (IoT) and big data are causing 'data explosion', and subsequently the use of AI is becoming increasingly essential in public transport sector, especially in railways, to effectively and efficiently cultivate the billions of data points generated each year.

This session will present the latest findings of UITP Asia-Pacific Centre for Transport Excellence's (AP CTE) study on 'Artificial Intelligence in Mass Public Transport' with a tocus on state of artificial intelligence in railways, and a diverse panel of experts to discuss how is artificial intelligence shaping the railway industry and the overall public transport systems.

#### SESSION CHAIR

LOOI Telk-Soon, Director, Research & Technology and Dean of LTA Academy of Land Transport Authority (LTA); Executive Director for Singapore Rail Academy (SGRA) in Land Transport Authority (LTA), Singapore

Artificial intelligence in mass public transport

Gayang HO, Senior Manager UITP Asia-Pacific, Research & Policy Development Lead, UITP AP CTE, Hong Kong S A R

#### PANEL DISCUSSION

#### Moderator:

LOOI Teik-Soon, Director, Research & Technology and Dean of LTA Academy of Land Transport Authority (LTA); Executive Director for Singapore Rail Academy (SGRA) in Land Transport Authority (LTA), Singapore

#### Panelists:

Masaki OGATA, Chairperson UITP Asia-Pacific, Vice Chairman East Japan Railway Company, Japan Alok JAIN, Managing Director of Trans-consult Asia and Consultant on UITP AI in Mass PT Study, Hong Kong S.A.R

Andrew HODGSON, Director, Transport Advisory, Asia Pacific, Atkins Acuity, Singapore Laura WYNTER, Director, IBM Research, Singapore Yu-XI LIM, Senior Technical Manager, Teralytics Pte. Ltd., Singapore

12:30 - 14:00

SITCE Lunch | Sponsored by Huey Tian, K-INC Konstruct and L&M Foundation Specialist • L4, Roselle/Peony Junior Bayview Foyer

CONGRESS: LEVEL 4, ROSELLE JUNIOR AND PEONY JUNIOR BALLROOMS

#### WEDNESDAY, 11 JULY 2018

14:00 - 15:30

#### Parallel session 16

· L4, Peony Junior 1 Ballroom

#### Impact of railway on regional connectivity and economy

Railways serving a region and inter-city have been successfully developed over decades. They allow for better regional connectivity and economic development and low-carbon mobility over long distances. Regional and inter-city rail services have also an impact on urban hubs.

#### KEYNOTE SPEECHES

SESSION CHAIR SIM Wee Meng, Senior Group Director Rail, Land Transport Authority, Singapore

- Railways and its intertaces to the city and the local mobility system

  Jean-Pierre LOUBINOUX, Director General, UIC (International Union of Railways), France
- Urbanisation and its challenges on local and regional rail connectivity and economy TC CHEW, Director Global Rail Business Leader, ARUP, United Kingdom
- Presentation CHEN He, Vice Director, Engineering Design Center, TCT Co. Ltd., China
- Presentation Datuk Seri Azmi Aziz, CEO, YTL THP JV Sdn Bhd, Malaysia

Q&A

#### Parallel session 17

₩ L4, Peony Junior 2 Ballroom

#### Life-cycle asset management for better availability at optimised cost

The full deployment of digitalisation and Internet of Things to the public transport system, sub-systems, and components pave the way for a zero failure (rail) system.

### SESSION CHAIR

KK SABERWAL, Director Finance. Dehli Metro Railway, India

- Leveraging the digital transformation for risk-based maintenance and asset managemen
- Prof Pierre DERSIN, Digital Mobility RAM Director, Alstom, France
- Denver Transit Operators' integrated transit operations planning system

Michael SCOLLO, Industry Solutions Manager, Trapeze Group, Australia

- Enterprise Asset Management System (EAMS) for modern integrated metro
- NG Liang Chin, MMS Division Manager, Singapore Technologies Electronics Limited, Singapore

Q&A

#### Parallel session 18

· L4, Roselle Junior Ballroom

#### When data adds value to your service delivery

Digitalisation is made possible through the high speed processing of big data analytics. Data is the new gold dust, however it takes more intelligence to turn data into relevant added value information.

#### SESSION CHAIR

LOOI Teik-Soon, Director, Research & Technology and Dean of LTA Academy of Land Transport Authority (LTA): Executive Director for Singapore Rail Academy (SGRA) in Land Transport Authority (LTA), Singapore

- ICT help raise passenger convenience in railways Sei SAKAIRI, Senior Chief Researcher, East Japan Railway Company, Japan
- Total system capability through digitisation - organisation, assets & pennle
- Kuldeep GHARATYA; Head of Engineering Technology & Data, Commercial Development, City Planning, Transport for London. United Kingdom
- Better service through smart use of data across project design. implementation and operation

Christina HOLTMANNSPÖTTER Head of Digitalisation and Innovation - Rail Automation Siemens AG Mobility, Germany

- Better rush-hour operation with effective auidance of passenger flows Suvi SCHWAB, Regional Manager, INIT. Singapore

Q&A

15:30 - 16:00 Coffee Break • L4, Roselle/Peony Junior Bayview Foyer

#### 16:00 - 16:15 Congress conclusions on lessons learnt and key take-aways • L4, Roselle Junior Ballroom

Mohamed MEZGHANI, Secretary General, International Association of Public Transport (UITP), Belgium

#### 16:15 - 17:05 Plenary CEO discussion: Making digital urban rail a success story • L4, Roselle Junior Ballroom

Moderato

Laurent DAUBY, Director Rail Transport, International Association of Public Transport (UITP), Belgium

Lincoln LEONG Kwok-Kuen, Chief Executive Officer, MTR Corporation, Hong Kong S.A.R

Laurence BATLLE. Chief Executive Officer, RATP-Dev. France

Leanne REDDEN. Executive Director, RTA, United States of America Mohamed MEZGHANI, Secretary General, International Association of Public Transport (UITP). Belgium KK SABERWAL, Director Finance, Dehli Metro Railway, India

#### 17:05 - 17:15 Launch of book: Integrated land use and transport planning • L4, Roseile Junior Ballroom

KHOO Teng Chye, Executive Director of Centre for Liveable Cities. Ministry for National Development (MND) NGIEN Hoon Ping. Chief Executive, Land Transport Authority, Singapore

#### 17:15 - 17:30 ITS World Congress 2019 • L4, Roselle Junior Ballroom

Dr CHIN Kian Keong, Chief Engineer, Land Transport Authority, Singapore

Gala Dinner | Sponsored by CSCEC - Nishimatsu JV, Koh Brothers and Meiden Singapore • PARKROYAL on Pickering. 19:00 - 21:00 William Pickering Ballroom (a) Sands Expo and Convention Centre (porte-cochère), 18:00 - 18:45 (15-min interval)

#### THURSDAY, 12 JULY 2018

09:00 - 12:00

Technical Visits (registration has closed)

Digitalisation at Tuas West Depot • Mining works at TEL Orchard Station • Ground freezing works at TEL Marina Bay Station (a) Sands Expo and Convention Centre (porte-cochère), 08:30



Programme is updated as at 25 June 2018 and is subject to change. Please refer to the website www.sitce.org for the latest information

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