Smart Cities Roundtable

What is holding back the Smart City Revolution?

Smart Cities Network (SCN) Singapore

Singapore
27th July 2017

Our Motivation

- A recent Government Technology white paper "Evolution of Smart Cities and Connected Communities", reported that the market value of **smart city projects** worldwide would jump from **USD14.85B in 2015** to a predicted value of **_USD34.35B by 2020_**.

- The number of Smart Cities projects would rise 38% to more than 235 initiatives in 2016 from 170 at the end of 2013. A key driver of this growth was the ongoing trend of **_global urbanisation (66% of world population in 2050)_**

- This Smart Cities Roundtable allows the participants to discuss the **_Critical_ _Success Factors of Smart Cities projects_**.

Outcome: _Summary and Recommendations Report for Smart Cities in Asia_

Moderator: Tay Kok Chin

United Kingdom (UK) – E-Govt and Smart City

Andrew Cockburn and John Griffiths

Singapore – Smart Nation and Smart Cities

Govt Effort - Smart Nation (10 min)

- **Chiu Wen Tung**, Urban Redevelopment Authority (URA), Ag Group Director (R&D)
- **Tan Jack Thian**, SingHealth, Chief Operating Officer

Smart Cities - Strategy (6 min)

- **Richard Skinner**, PwC, Partner, Strategy
- **Annie Ng**, Singapore Management University, Adjunct (Digital Strategy)
- **Jack Wang**, Smart Cities (China)

Smart Cities - Planning and Design (8 min)

- **Ed Baker**, Broadway Malyan, Head of Master Planning Asia Pacific
- **Tony Chan**, CPG Consultants, Integrated Strategies & Sustainable Planning
- **Charles Barguirdjian**, ATKINS
- **Howard Roberts**, Mott MacDonald, Regional Leader for Cities

Smart Cities - Innovations and Technology (4 min)

- **Jason Tan**, HP Enterprise, Managing Director, Innovations
- **Eric Loh**, G Element, Vice President - Smart City Platform

Observers

Organisation	Organisation
AVP INTERNATIONAL	SG100 Foundation
AVPN	SIM Global Education
Benoy	SIM/ INTERNATIONAL AFFAIRS SOCIETY
BNI Singapore	Singapore Luxury Investment Group
BonusPoint e-Commerce	Singapore Polytechinic
British Chamber of Commerce Singapore	Smart Cities Network (SCN) Singapore
BRITISH HIGH COMMISSION	SmartMegh Solutions
Cambridge Consultants (Singapore) Pte Ltd	STARHUB LTD
DBS Ltd	Temasek Polytechnic
EM Services Pte Ltd	The Straits Times
Enactus	TNB Ventures
Law Society	Tyk
Ngee Ann Polytechnic	Web Synergies (S) Pte Ltd
Scottish Development International	Z-Power Automation

Moderator – Smart Cities Roundtable

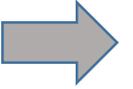## Tay Kok Chin – Smart Cities Network (Singapore)

- Chairman – Pro-tem Committee for the Smart Cities Network (Singapore)

- Chairman of SG100 Foundation, a ground-up nation building and leadership development movement.

- Regional Director for US-based EcoDomus, a global leader for Lifecycle Building Information Model (BIM) and Asset Information Model.

- Corporate roles at IBM, HP, Oracle, Savi Technology, Commerce One, Schlumberger, Western Geophysical and Research, Stratech Systems for over three decades in Saudi Arabia, UK and Singapore.

- Led the IBM ASEAN Oracle, Smarter Planet and Smart Buildings Global Alliances from 2008-2013. Had facilitated several Roundtables for Smarter Cities and Smarter Buildings, and project managed the Smarter Cities Challenge in 2012.

Participant – Smart Cities Roundtable

Andrew Cockburn – Department for International Trade

- Head of Trade – Technology and Smart Cities

- Leads the Department for International Trade's Technology and Smart Cities export team that helps UK companies access markets around the world.

- Works mainly with UK SMEs in the areas of data analytics, data centres, IOT and smart cities

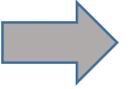- Previous government roles in international relations and also housing investment

Participant – Smart Cities Roundtable

John Griffiths – Department for International Trade

- Technology Specialist – Technology and Smart Cities

- Specialties: Telecare, Telehealth, eHealth, Assisted Living, Social Care Integration, Energy Efficient Buildings, Smart Cities, IOT, Communications, Datacenters, Data Analytics and Cloud Technologies.

- Government specialist in academic department commercialisation. NHS specialist on use of mobile technology eHealth / mHealth to assist NHS Trusts to reduce admissions to primary and secondary care facilities by 20%. Particular interest in the use of this technology which can be scaled rapidly in the real World IOT environment.

- Worked in the IT Market for 34 years and combining this with experience in EU technology transfer / projects giving a unique insight into what is required to get a successful project "off the ground".   Assisted SME's using mobile technology and Low Energy Radio in Smart Cities retrofit applications. Guest lecturer Msc Health Infomatics Swansea University and advisor to Centre of Innovative Ageing, Swansea University
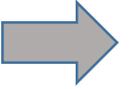
Participant – Smart Cities Roundtable

[Chiu Wen Tung – URA]

- Acting Group Director (Research & Development)

- Leads research for solutions to meet Singapore future planning needs.

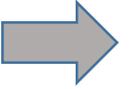- Previously Executive Director (Resource Development) in EDB.

Participant – Smart Cities Roundtable

Tan Jack Thian – Singapore Health Services Pte Ltd (SingHealth)

- <u>Group Chief Operating Officer</u>, oversees the Group's operations and oversight of SingHealth institutions' Chief Operating Officers. Manages and coordinates all aspects of operations between SingHealth HQ and the SingHealth institutions. Oversees Support Operations Shared Services in SingHealth, such as Facilities & Infrastructure Development, Environmental Services, Call Centres, Security etc.

- <u>Group Chief Procurement Officer</u>, oversees the procurement of non-pharmaceutical and pharmaceutical products for all SingHealth institutions. Enhances its supply chain management to achieve great values for the Group as well as contribute to patient safety.

Participant – Smart Cities Roundtable

Richard Skinner—Partner, Strategy, PwC Singapore

Richard leads PwC's Strategy practice in Singapore also covering SE Asia

Richard has spent the last 4 years working across Asia, helping the Government address technology related issues; local and international businesses plan for the future and internationalise (often through the use of new technologies); and investors in the space (helping them make investment decisions based on forward looking trends)

Prior to that Richard is originally from the UK and has spent most of his career working across Europe and the US. In 2008 he spent 2 years in the Middle East (UAE) helping PwC set up their strategy team there
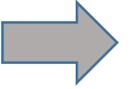
Example 'technology' related experience

Led multiple engagements for Singapore Government and corporates in the areas of technology and digital economy: Currently advising IDMA Singapore on the formulation of Singapore's Digital Economy Strategy

Evaluated and prioritised opportunities associated with different technologies in connection with the Infocomm and Media Masterplan 2025 (covering areas such as AI, IOT, cyber security, robotics, cloud etc); Assessed the cyber security market and proposed strategies for boosting the cyber security ecosystem in Singapore, supported by international market comparisons; Worked with the Singapore Government on the 'future of Orchard Road', which included looking at future innovation and technologies

Helped formulate Singapore's (as well as the UAE's) food security strategy which included the use of advanced technologies and city based food production
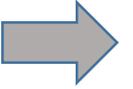
Participant – Smart Cities Roundtable

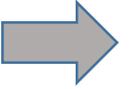## [Annie Ng– Singapore Management University (SMU) Adjunct]

- SMU Instructor for Advanced IS management course
  - *Focus: IT management principles and best practices, which include IT Strategy for Digitisation to deliver business value; IT Governance; IT enabled innovations; IT Capabilities management; Change management; etc.*

- Independent Consultant and Senior Advisor
  - *Specialties: Information Technology, IS Management & Organization Development, IT Strategy, Project Management, Risk Management, Change Management, Outsourcing & Vendor Management, Business Relations Management, IT Governance and Portfolio Management.*

- (ex)Regional CIO,
  - *Responsibilities: direct/manage the IT organization and partner the AsiaPac business leaders to drive growth in the region; envision and strategize IT solutions in alignment with the business strategy; lead deployment to achieve business goals and objectives; act as catalyst to implement leading edge IT solutions to gain competitive advantage for the company*

- Education: BSc in Computer Science and MBA in Strategic Business Management

Participant – Smart Cities Roundtable

Jack Wang – Smart Cities Network (Singapore)

- Jack was the Chairman of the Young Accountants Group of the Institute of Certified Public Accountants of Singapore (ICPAS).

- He served in the Singapore board and Global Corporate Disclosure board of CFA USA .

- He is currently a member of Pro-Tem committee for the Smart Cities Ecosystem, with expertise in Smart Cities Ecosystem infrastructure planning, on specific areas such as Smart Capital, Smart Digital Banking, Smart Fintech, Smart Edutech & Smart Public Admin & Finance.

- Jack was with PricewaterhouseCoopers (PwC) and an ex-Citibanker (covering Greater China Region)

- He had served as Advisor to various Chinese cities for their Public Private Partnership initiatives.

Participant – Smart Cities Roundtable
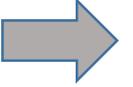
Ed Baker – Broadway Malyan

- Main Board Director and Head of Masterplanning in APAC

- Qualified masterplanner, urban designer and landscape architect

- International experience, with projects delivered across Europe, Asia Pacific, Africa, the Middle East and North America

- Areas of expertise include transit orientated development, SMART Cities, mixed-use development and place-making

- Current projects include major masterplans in Australia, Indonesia, Malaysia, Thailand Philippines, Singapore and Vietnam.

Participant – Smart Cities Roundtable

Tony Chan – Integrated Solutions, CPG Consultants

- Tony helped founded the Integrated Strategies and Sustainable Planning team for CPG in Singapore to better integrate the various specialised disciplines in the firm and provide better value add to clients. He was the founding member and leader of Arup's multi-disciplinary Planning, Development & Design team based in Shanghai for 10 years.

- His expertise lies in integrating master planning and urban design with associated strategies (Energy, Carbon, Water, Transportation, Waste, Environmental, Social etc.) to address natural resource consumption.

- Tony has also acted as a technical advisor for WEF's Future of Urbanization program and has presented at various conferences with a focus on sustainability and low carbon planning including with the UN.

- Tony has a Bachelor's degree in Town Planning (Honours) and a Master's degree in Built Environment (Sustainable Development) from the University of New South Wales in Sydney, Australia. He also has additional post-graduate studies in Business Economics and Project Management from the Imperial College, London and the University of Technology, Sydney.
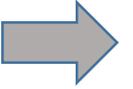
Participant – Smart Cities Roundtable

Charles Barguirdjian– Smart Cities Design, Atkins

- Studio head for Architecture, Urban design and Landscape design in Singapore

- Specialist in Transport related design such as TOD, transportation hubs, High speed rail, Mass rapid transit and Airports

- Industry specialist in TOD planning and advice. Regular lecturer at industry events

- Charles has lived and worked in London, Hong Kong, Madrid, Taipei, Dubai and Singapore

- Charrette leader at "designing Hong Kong"

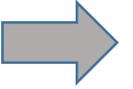- Visiting lecturer at NUS, Singapore

Participant – Smart Cities Roundtable

Howard Roberts: Regional Head of Cities

- Board Member: Global Cities Strategic Initiative

- Board Member: Urbanization

- Board Sponsor of **MᴏᴛᴛOᴘᴏʟɪꜱ: "200,000 ʜᴏᴍᴇꜱ ɪɴ 200 ᴅᴀʏꜱ"**

- Regional Director for business development in Asia with a focus on infrastructure and large scale urban developments

- Country Manager (Kazakhstan) Dubai World Limitless Developments

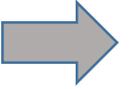- Construction & Development Director Amstar Europe PE Fund

Participant – Smart Cities Roundtable

Jason Tan – HPE Innovation Center

- Managing Director, HPE Innovation Center

- Responsible for APJ Innovation Agenda

- Leads the COE for Future City Globally

Participant – Smart Cities Roundtable

Eric Loh – Smart Cities Network (Singapore)

- Member – Pro-tem Committee for the Smart Cities Network (Singapore)

- Vice President South Asia Business G Element, 3D Smart Cities and Buildings Platform.

- Engineering, Corporate and management roles at Kenwood Communication and Singapore Technologies Engineering.
- Sales Director roles in local listed company Arti-Vision, IMDA accredited SME company, Kai Square in Asia Pacific region

- Led in the Frontier of IOT, Building Automations with regional sales experiences for emerging technologies like video analytics, data analytics, 3D smart cities, buildings automation and C3 systems since 2000, and also involved in implementing mega projects for Safe Cities in Singapore, Smart Airports, Police C3 systems and Mobile Command Vehicles in ASEAN region

Roundtable Discussion and Q&A

United Kingdom (UK) – E-Govt and Smart City **Andrew Cockburn and John Griffiths**

Singapore – Smart Nation and Smart Cities

<u>**Govt Effort - Smart Nation**</u>

- **Chiu Wen Tung**, Urban Redevelopment Authority (URA), Ag Group Director (R&D)

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<u>**Smart Cities - Strategy**</u>

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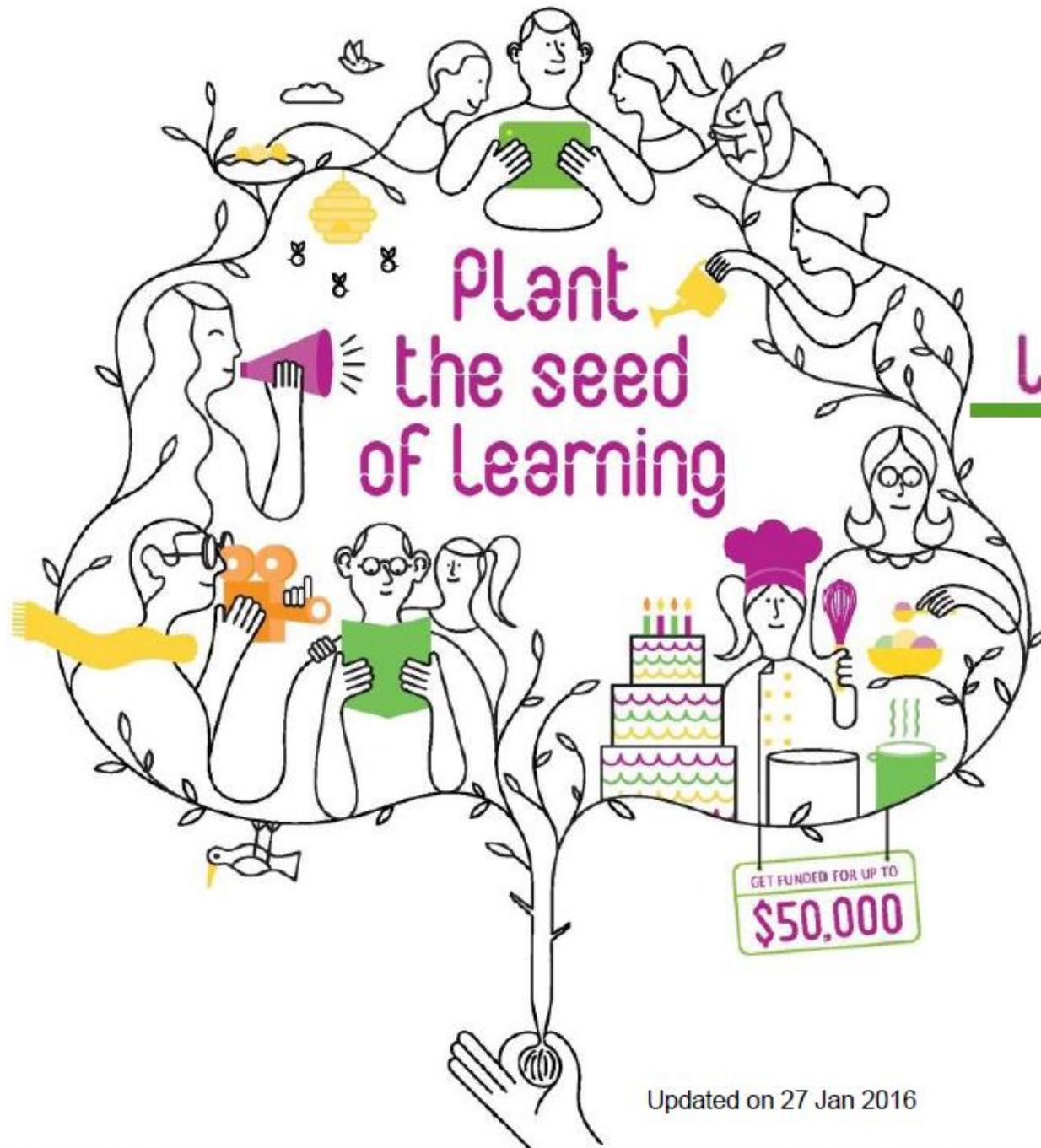<u>**Smart Cities - Planning and Design**</u>

- **Ed Baker**, Broadway Malyan, Head of Master Planning Asia Pacific

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<u>**Smart Cities - Innovations and Technology**</u>

- **Jason Tan**, HP Enterprise, Managing Director, Innovations

- **Eric Loh**, G Element, Vice President - Smart City Platform

Next Steps for Smart Cities

1) Smart Cities Network (SCN) – SG & CH ➡
2) Support "Smart Cities for All" ➡
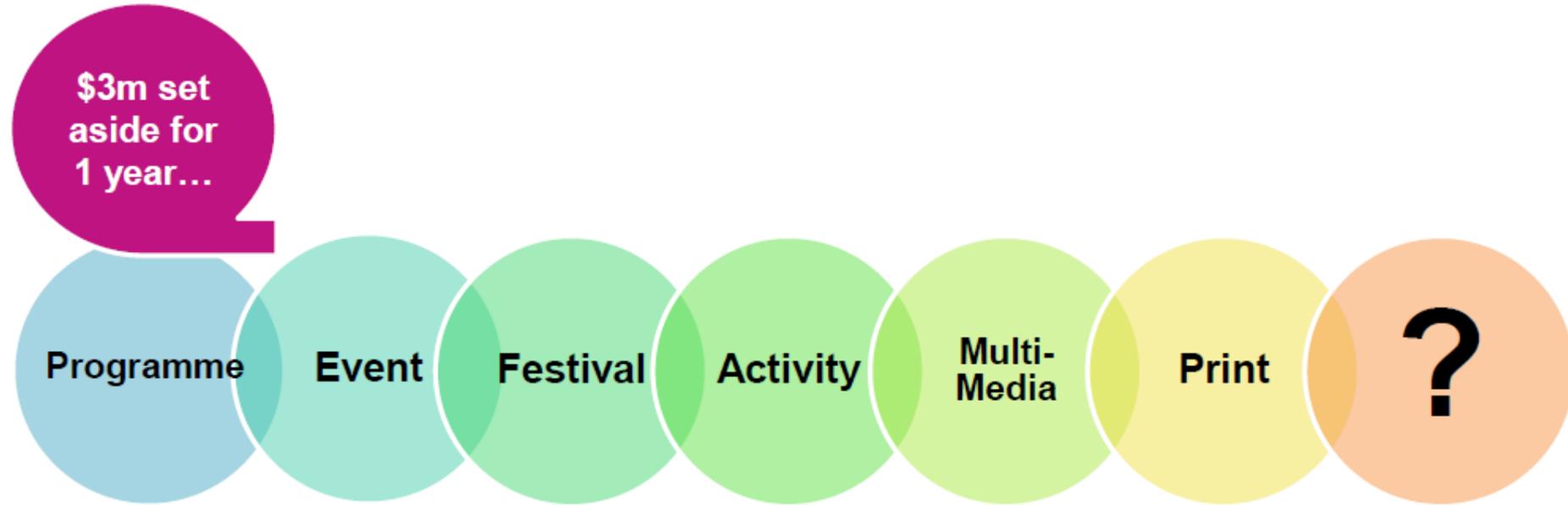3) Apply for LearnSG SEED Fund

LearnSG Seed fund
INFO-GUIDE

www.LearnNow.sg

GET FUNDED FOR UP TO
$50,000

Updated on 27 Jan 2016

1. What is LearnSG Seed Fund?

$3m set aside for 1 year…

Programme — Event — Festival — Activity — Multi-Media — Print — **?**

Your project is eligible for funding if it…

| PROMOTES & BUILDS LIFELONG LEARNING CULTURE | SHARES AND IMPARTS WORK / LIFE SKILLS | INVOLVES / BENEFITS THE COMMUNITY |

1. What is LearnSG Seed Fund?

Funding Eligibility

Up to $50,000

or 90 % of Qualifying Cost
(whichever is lower)

Supported cost items:
- Professional Services
- Fees & Materials
- Marketing & Publicity

Disbursement timeline:
- 50 % of project costs upon approval
- Balance 50 % of project costs upon project completion

Who can apply?

Individuals

At least a team of 2 individuals 18 years and above, one being a Singaporean. Individuals below 18 years old may apply through their schools.

Schools

MOE Primary, Secondary, Junior Colleges, ITEs, Polytechnic, Universities, Private Educational Institutions

Organisations

Registered under Registrar of Society (ROS) or Accounting & Corporate Regulatory Authority (ACRA).

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* Terms and Conditions Apply

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Thank You