ANNUAL REPORT

2015

DRIVING DIGITAL TRANSFORMATION

VISION

Providing thought leadership in organisational innovation and business transformation

MISSION

Developing infocomm and digital business leaders through education, applied research and consulting services

PHILOSOPHY

Through our vision, we aspire to deliver impact to key sectors across industry, helping organisations to innovate and businesses to transform, by imparting our thought leadership to industry decision makers, strategists, innovators and change agents.

Through our mission, we seek to develop and inspire the next generation of leaders of infocomm and digital businesses. Our core business remains as education, applied research and consulting, yet we recognise that we must remain relevant in a world where increasingly every business is digital.

CORE BUSINESS PHILOSOPHY

Education – Differentiate through a practice-based education system to stay market-relevant in a world where increasingly, every business is digital

Applied Research – Conduct outside-in applied research to deliver impact to key sectors across industry, helping organisations innovate and businesses transform

Consulting – Impart thought leadership to industry decision-makers, strategists, innovators and change agents through an amalgamation of disciplines focused on developing capabilities and enhancing productivity

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CHAIRMAN'S MESSAGE

There has been a massive digital transformation in recent years, with the rapid adoption of technologies like the Internet of Things, mobile devices, cloud computing, big data and business analytics. This has resulted in a greater focus on IT governance, enterprise architecture and other forms of IT control to manage risk of technology investment and increase the rate of project success. It has also generated fresh momentum for training and corporate IT consultancy.

To capture these opportunities and align with national agendas, NUS-ISS has been expanding its presence in IT leadership development, paying particular attention to deepening sector-specific expertise and equipping startups and SMEs.

In 2015, over 15 new programmes were added to the curricula. These ranged from IT executive development courses such as software engineering design, analytics and cyber security to StackUp – a hands-on programme tailored to enhance the technical calibre of startups and SMEs – and a Master of Technology in IT Leadership to develop the next-generation IT leaders.

To promote industry integration and engagement, NUS-ISS has held over 15 topical seminars and Community of Practice sessions and participated in more than 10 industry events and conferences. Over 200 students, business partners and IT professionals attended our first NUS-ISS Learning Day in August 2015. This was a key initiative to foster networking and showcase our range of courses.

In 2015 alone, our programmes have benefitted 5,150 executives and professionals, 298 postgraduate students, 825 corporate customers, and more than 500 foreign government representatives. We were encouraged by the feedback from our students, which affirmed the value and practicality of our programmes. Of the professionals trained, 99% found their new skills relevant to their work. 92% cited improved job performance and more than half indicated better prospects through new and added job responsibilities. Since 1981 to date, we have trained more than 100,000 students.

As a leading IT educator, NUS-ISS is committed to developing IT professionals into business leaders, transforming business operations through technology leadership and innovation, and instilling a vibrant learning culture within the IT community. We will continue to harness our strengths through partnerships with industry leaders such as Google, CrimsonLogic and Shibaura Institute of Technology in strategic areas including IT leadership and governance, data analytics, intelligent systems, cyber security, digital innovation and design, and IT service delivery.

Internally, we will have to change too in response to the new external conditions and learning expectations. We will achieve this by continually improving our curricula, processes and the calibre of our teaching staff so as to deliver distinctive value to our customers. More staff engagement activities such as outings, festive celebrations and teambuilding programmes will be organised to enhance esprit de corps, integration and inclusiveness within NUS-ISS.

This year, there will be leadership change in the Management Board. I would have completed four consecutive terms as Chairman of NUS-ISS since 2004. I take this opportunity to congratulate Ms Janet Ang on her appointment as the new Chairperson. Janet is no stranger to us, having served as a member of the NUS-ISS board since 2012. With her knowledge, industry insights and track record in the private sector, Janet is the right person to lead NUS-ISS to greater heights.

I would also like to acknowledge all my colleagues at NUS-ISS for their overwhelming support – it has been an honour and privilege working with each one of you over the last 12 years.

Dr Christopher Chia
Chairman, NUS-ISS Management Board

CEO'S MESSAGE

When I assumed leadership of NUS-ISS in 2015, my first challenge was to develop and implement a strategy that will transform NUS-ISS for its next phase of growth. NUS-ISS staff rallied together to co-create our ISS2020 strategy that is focused on delivering impact to the industry and aligned to the national agendas of SkillsFuture, the Smart Nation and the Future Economy. In an era where every business is fast becoming a digital business, NUS-ISS launched exciting new programmes in leadership development, sectoral business transformation, and capability building for startups and SMEs.

With a key priority in expanding NUS-ISS' presence in leadership development, we launched five new leadership development programmes, as well as a new Master of Technology degree in IT Leadership. We continued to enrich our Executive Education suite to support holistic development of professionals, and rolled out new programmes in disciplines much sought after by the industry, such as agile, cloud security, software architecture, business analytics, mobile user experience and change management.

NUS-ISS made a bold entry into the startup ecosystem by launching StackUp, a series of hands-on courses, clinics and community activities designed to develop tech talent for startups. Likewise in the SME space, we provided advisory and education services to SMEs such as Y3 and Trinax to transform their business models and processes.

We also deepened our sector-specific expertise by launching the Smart Health Leadership Centre and the Smart Health Community of Practice. Our e-Government Leadership Centre (eGL) delivered a series of digital government capacity building programmes for the Bangladeshi government, with support from Temasek Foundation and the World Bank. eGL also delivered experiential learning programmes in Singapore and the Middle East, commissioned by our Ministry of Foreign Affairs.

Our Graduate Programme students' achievements did us proud. Last year, over 150 student projects were done with companies such as Accenture, IBM, Rolls Royce, OCBC Bank, HP, Yokogawa, Infineon and BigTapp. These were part of their curriculum to gain practical experience while solving organisational challenges. Our students participated and won in hackathons including LTA Transport & You(th), MIT Hacking Medicine@SG, Smart Port, Ministry of Defence Data Analytics Challenge and the Singapore Airlines App Challenge. The Monetary Authority of Singapore co-organised a Data Visualisation Hackathon with NUS-ISS to harness ideas from our teaching and student community.

I will like to express our deepest appreciation to our Chairman, Professor Christopher Chia, for steering NUS-ISS through the past 12 years. Under his guidance, we have significantly expanded our portfolio of offered programmes and doubled our cumulative intake of students. Chris has constantly spurred NUS-ISS to innovate, collaborate, and to grow from strength to strength. We wish Chris the very best in his future endeavours when he steps down from our NUS-ISS Management Board on 15th April 2016.

Our next Chairperson is Ms Janet Ang, currently the Vice President (VP), Industry Solutions, Systems of Engagement & Smarter Cities at IBM Asia Pacific. Janet has been a member of our NUS-ISS Management Board since 2012, and she has been a great friend and supporter since our Institute's early days. Janet is well respected in the industry as a visionary with sharp business acumen. My team and I are very much looking forward to working with her to take NUS-ISS to greater heights.

It has been an honour and privilege for me to lead our NUS-ISS team over the past year. Working as one team, we have transformed our organisation and pushed full steam ahead to implement our ISS2020 strategy despite all odds. I also thank our NUS management, NUS-ISS Management Board and industry stakeholders for your support and collaboration. NUS-ISS is firmly on course for its next phase of growth and to play a central role in Singapore's digital future.

Khoong Chan Meng
Director & CEO, NUS-ISS

NUS-ISS MANAGEMENT BOARD

DR CHRISTOPHER CHIA

Chairman, NUS-ISS Management Board and Professor of Transformation Practice, NUS Business School

PROF TAN ENG CHYE

(Ex-Officio Member), Deputy President (Academic Affairs) and Provost, National University of Singapore

PROF MOHAN KANKANHALLI

(Ex-Officio Member), Vice Provost (Graduate Education), National University of Singapore

JANET ANG

Vice President, Industry Solutions, Systems of Engagement & Smarter Cities, IBM Asia Pacific

CHAN HON CHEW

Chief Financial Officer, Keppel Corporation Limited

CHAK KONG SOON

Managing Partner, Stream Global Pte Ltd

CHEW KWEE TIANG

Chief Executive Officer, Khoo Teck Puat Hospital, Alexandra Health Pte Ltd

CHIA WEE BOON

Chief Executive Officer, NCS

DR CHONG YOKE SIN

Chief Executive Officer, Integrated Health Information Systems Pte Ltd

Joanna Flint

Country Manager, Google Singapore

KHOONG CHAN MENG

Director & CEO, NUS-ISS

HOWIE LAU

Chief Marketing Officer, StarHub

STEVE LEONARD

Executive Deputy Chairman, Infocomm Development Authority of Singapore

LYNN NG

Group Director, Workforce Services Group, Singapore Workforce Development Agency

NG WEE WEI
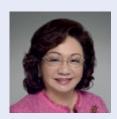
Managing Director, Health & Public Service, ASEAN, Accenture Pte Ltd

ALPHONSUS PANG

Vice President, Business Transformation, StarHub

PROF DAVID S. ROSENBLUM

Dean, NUS School of Computing, National University of Singapore

ROSINA HOWE-TEO

Group Director, Innovation & InfoComm Technology, Land Transport Authority

PROF LAWRENCE WONG

Professor, Department of Electrical & Computer Engineering, National University of Singapore (NUS), Deputy Director, Interactive and Digital Media Institute, NUS

NUS-ISS SNAPSHOT
MILESTONES

MAR 2015

LEADERSHIP

NUS-ISS welcomed its new Director & CEO, Mr Khoong Chan Meng

"NUS-ISS is poised to play a central role in Singapore's roadmap to becoming a Smart Nation."

MAY 2015

GRADUATE

38th Intake of the NUS-ISS Graduate Diploma in Systems Analysis

57
Graduates

JUN 2015

LAUNCH: MASTER OF TECHNOLOGY IN IT LEADERSHIP

NUS-ISS and NUS' School of Computing launched a new hybrid graduate degree to equip next generation IT leaders with technical skills and professional business knowledge.

LAUNCH: 5 NEW DIGITAL LEADERSHIP PROGRAMMES

Nurturing IT-savvy business leaders by creating an industry-oriented, practice-based learning environment.

JUL 2015

GRADUATE: MASTER OF TECHNOLOGY CLASS OF 2015

168
Graduates

AUG
2015

OCT
2015

NOV
2015

DEC
2015

REUNITE: ALUMNI REUNION (1984 TO 2015)

Over 140 MTech and GDipSA alumni gathered at a reunion themed, 'Old Friends, New Ideas'.

LEARN: INAUGURAL LEARNING DAY

Over 30 presentations, workshops and discussions in a single day to showcase NUS-ISS' offerings, build brand awareness and ignite participants' curiosity in areas outside their job domains.

UNITE: NUS-ISS TEAM BUILDING DAY

Building staff bonds, appreciating mutual strengths and internalising our core values on a day filled with fun and mind-stimulating activities.

LAUNCH: UNPLUG @ OASISS

Launched our new courtyard, named 'oasISS', for students, staff and visitors to unplug and chill.

GRADUATE: 39TH INTAKE OF THE NUS-ISS GRADUATE DIPLOMA IN SYSTEMS ANALYSIS

73
Graduates

LAUNCH: NUS-ISS SMART HEALTH LEADERSHIP CENTRE

Provide thought leadership for future-ready health and well-being systems.
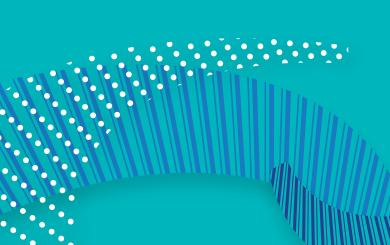
LAUNCH: STACKUP

A new curriculum designed to equip aspiring technologists with the foundational skills required to drive the development of market-relevant tech products. Conceived in support of new startups and SMEs that rely on open stack technologies.
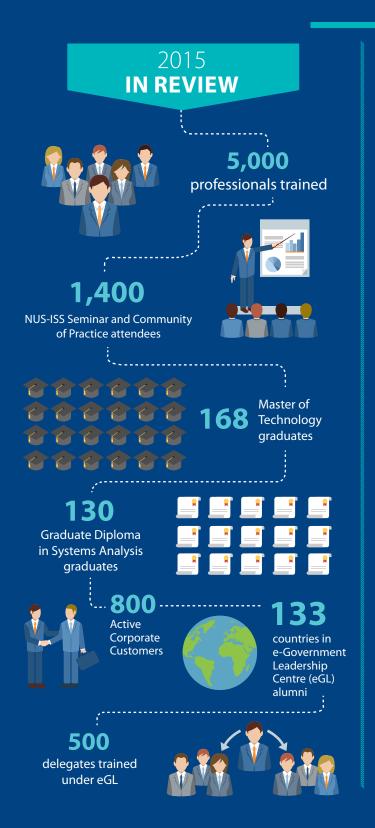
MILESTONE OF THE YEAR:

34-year cumulative student enrolment crosses

100,000

NUS-ISS SNAPSHOT
REPORT CARD

2015
IN REVIEW

5,000
professionals trained

1,400
NUS-ISS Seminar and Community
of Practice attendees

168 Master of
Technology
graduates

130
Graduate Diploma
in Systems Analysis
graduates

800
Active
Corporate
Customers

133
countries in
e-Government
Leadership
Centre (eGL)
alumni

500
delegates trained
under eGL

2015
IN ACTION

14 Executive Education
Programmes and **1** MTech
Programme launched

ORGANISED
**INAUGURAL
LEARNING DAY**

INDUSTRY ENGAGEMENTS

ORGANISED
7 ISS
Seminars

ORGANISED
8 Community of
Practice Forums

PARTICIPATED IN
12 Industry
Events

PARTICIPATED IN
40 Speaking
Engagements

PARTICIPATED IN
6 Hackathons

GRADUATE PROGRAMMES

NUS-ISS offers five graduate programmes that comprise four Master of Technology (MTech) degrees and a Graduate Diploma in Systems Analysis.

The MTech in IT Leadership was launched in 2015, with the first intake to start in June 2016. This is the fourth MTech programme, coming after the MTech in Enterprise Business Analytics (EBAC) which had its first intake in January 2014. After 1.5 years, the first cohort of full-time MTech EBAC students graduated in July 2015 and 100% secured jobs within three months of graduation.

The MTech programmes in Software Engineering and Knowledge Engineering were initiated in 1996 to emphasise state-of-the-practice techniques, technology and internationally recognised methodologies. It was preceded by the Graduate Diploma in Systems Analysis (GDipSA) in 1981, which pioneered continuing education for university graduates by providing the opportunity to convert into the rapidly advancing field of IT.

2015 REPORT CARD

168 GRADUATES MTECH CLASS OF 2015

130 38TH & 39TH INTAKES GDIPSA GRADUATES

11% INCREASE IN COMBINED MTECH & GDIPSA GRADUATES FROM 2014

69% OF MTECH GRADUATES SECURED JOBS WITHIN A MONTH OF RECEIVING THE RESULTS OF THEIR FINAL EXAMS

59% OF GDIPSA GRADUATES SECURED JOBS WITHIN TWO MONTHS OF RECEIVING THE RESULTS OF THEIR FINAL EXAMS

HIGHEST COMBINED MTECH & GDIPSA GRADUATES RECORDED IN

5 YEARS

NEW LAUNCH IN 2015

MTECH IN IT LEADERSHIP

HACKATHON HONOURS

BEST APP FOR ACTIVE MOBILITY

HACKATHON HONOURS

IBM BLUEMIX AWARD

AT SINGAPORE AIRLINES CHALLENGE

OVERVIEW

97 Graduates in 2015

MTech in Software Engineering (SE)

Curriculum Emphasis>>
MTech SE emphasises the understanding and exploitation of software technologies, methodologies and management techniques. It focuses on the practical and systematic architecture and construction of innovative software solutions.

39 Graduates in 2015

MTech in Enterprise Business Analytics (EBAC)

Curriculum Emphasis>>
MTech EBAC prepares students for specialist and expert roles in enterprise business analytics to create business value through strategic use of data, analytics, models and frontline tools.

130 Graduates in 2015

GradDip in Systems Analysis (GDipSA)

Curriculum Emphasis>>
GDipSA equips students with the capability to understand existing systems and provide sustainable solutions for expansion or upgrading. It focuses on practical areas such as gathering user requirements, systematically analysing and designing feasible solutions, coding, testing and implementing proposed solutions, as well as trouble-shooting problems.

32 Graduates in 2015

MTech in Knowledge Engineering (KE)

Curriculum Emphasis>>
MTech KE emphasises the concepts, techniques and methods of Intelligent Systems, and their application to the development of data analytics applications.
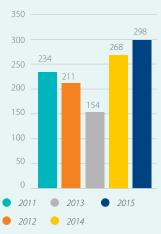
NEWLY LAUNCHED IN 2015

NEW! MTech in IT Leadership (ITL)

Curriculum Emphasis>>
MTech ITL equips students with the critical knowledge, hard and soft skills to be a strong IT leader. It will accelerate their career and enhance their ability to take on complex and greater levels of responsibility in IT leadership roles. Students will be equipped with the right thinking and capabilities to ride the digital wave and lead technology value realisation in the organisation. It will also help organisations to build the next generation of IT leaders.

5-Year Graduation Data

Year	Graduates
2011	234
2012	211
2013	154
2014	268
2015	298

The highest number of graduates over the past five years was in 2015, with an 11% increase over 2014 from 268 to 298 graduates.

INTERNSHIPS

NUS-ISS has a strong emphasis on practice-based education. Hence all NUS-ISS students are required to undertake an internship or industrial attachment at a sponsoring organisation.

Here, students are given the opportunity to garner real-world insights to complement and provide focus for the academic curriculum learnt in class. Soft skills are also enhanced, such as how to work in teams, collaborate productively, and fit into real work environments. These help students make the transition to future work roles easily and ensure they are strong contributors from the first day they join the organisation.

FEATURED PROJECTS

MTech SE

Company	Project
ST Electronics	Development of an inventory management system for managing stores and items, customised to ST Electronics' business operations.
CrimsonLogic	Enhancement of a Dynamic Form Generator with an added module that reduces the effort of writing traditional jsp/html pages when encountering a high volume of front-end forms.
NTT	Development of a Business Support System for more efficient customer engagement.
A*STAR Institute of High Performance Computing	Development of a Crowd and Mobility Management App to reduce congestion at venues through behavioural influencing and dynamic matching of transportation supply and demand.
The Logistics Institute – Asia Pacific	Development of a web application tool for Retail Precinct Management to help city planners holistically improve urban logistics in any retail cluster.

MTech KE

Company	Project
SAP	Data mining for indoor location intelligence to analyse pedestrian traffic in a shopping mall.
IBM	Monitoring of supply chain disruption risk using social media.
CrimsonLogic	Implementation of an enterprise wide knowledge management system.
Liberty Insurance	Development of a knowledge-based system for tracking and resolving help desk cases.
Sennheiser	Development of a regulatory knowledge-based system for headphones manufacturing conformance.

MTech EBAC

Company	Project
ReeBonz	Operational/Business data analysis; basic customer behaviour clustering and predictive analysis.
BigTapp Analytics	Legal research analytics.
Shopback	Marketing data analytics.
Vault Dragon	Optimisation of sales, marketing activities and operations through performance metrics.
Shop and Box	General business analytics.

GDipSA

Company	Project
Accenture	Phase 1 of myTaxPortal revamp.
Land Transport Authority	Enhancement of Sherlock – AFC monitoring and statistics tool.
NEC Asia Pacific	Mobility solution for end user and on-site engineers.
OCBC	Phone banking IT and CRM systems transformation.
Rolls-Royce Singapore	Web framework development.

GRADUATE EMPLOYABILITY

FULL-TIME MTECH GRADUATES

An employment survey for full-time MTech graduates was conducted in mid-July 2015, approximately a month after receiving their examination results. Of the 54 full-time MTech graduates surveyed, 69% secured full-time employment, of which 94% earned a monthly salary above $3,500, including 17% of which reported a monthly salary above $5,000.

The hiring companies included Accenture, A*STAR, Coursepad, DDB Worldwide, Expion, FIS, Gnosis Technology, IBM, iSentia, J Walter Thompson, Jurong Port, Liberty Insurance, Lynx Analytics, MSD International, Redmart, Sparkline, PWC, Visa and V-KEY.

GDIPSA GRADUATES

An employment survey was conducted for GDipSA graduates of the 39th Intake in mid-November 2015, approximately two months after receiving their examination results. Of the 73 graduates of the GDipSA 39th Intake surveyed (from a graduating cohort of 130), 59% secured full-time employment, of which 93% earned a monthly salary above $3,000.

The hiring companies included Activants, A*STAR SIMTech, Avanade, BEARS Singapore, CalendarOne, Hewlett Packard, Hi-Tech Freight Solutions, KAPPS Consulting, LinkUPCRM, Nova Citynets, Paywhere, Rolls Royce, Seacare, SinBerBest, STMicroelectronics, StreetSine and ThatGreenSpace.

Pioneer Success: 2015 also saw the pioneer batch of MTech EBAC students graduate. Within the first three months, the cohort recorded an impressive 100% employment.

Their job roles include Analytics Consultants, Business Analysts, Business Consultants Data Analysts and Data Scientists, in companies like Google, Scoot, Marina Bay Sands, IBM, DBS Bank, Inland Revenue Authority of Singapore and Singapore General Hospital.

"The programme gave me applicable, current and practical skills to advance my career as a software developer. In addition, it equipped me with complementary skills sets in software design and requirement analysis, project management, solution architecting and quality management, to be an innovative leader in my field of expertise."

Tomy Jaya, *MTech SE, Class of 2015, Agile Software Developer, Bank of America Merrill Lynch Singapore*

"The MTech KE programme is exactly what I was looking for – industry-oriented curriculum, experienced lecturers and hands-on projects that allow us to put our knowledge into practice. The classes are taught in an interactive manner, allowing me to build on my experience by learning from fellow classmates as well as lecturers."

David Low Jia Wei, *MTech KE, Current Student, Data Scientist, Infocomm Development Authority*

"The course content was superbly well thought out with many industry examples. The lecturers were extremely knowledgeable and they brought with them a wealth of industry experience and academia experience. This really helped me put what I learnt into perspective."

Maximillan Jackson Yap, *MTech EBAC, Class of 2015, Business Analytics Consultant, Azendian Solutions*

"The experience and knowledge gained from the GDipSA programme has helped me to bridge the gap between business and technical requirements, enabling me to transform business ideas into system language and build better systems which are more efficient and user-friendly. This programme is perfect for people who do not have any technical background but are interested in venturing into the IT industry."

Goh Siow Chuen, *GDipSA 38th Intake, Winner of the IBM Gold Medal and Book Prize, Quality Analyst, OCBC Bank*

INDUSTRY RECOGNISED PROJECTS

TOP MTECH PROJECTS – CLASS OF 2015

Programme/ Student(s)	Award	Project Name	Company	Description
MTech SE Chan Jian Wee, Janarthan Sivasubramaniam, Karthikeyan Duraisamy, Pyae Pyae Min, Soh Meiyan, Tomy Jaya, Yeo Guangwei	Development of an inventory management system for managing stores and items, highly customised to ST Electronics' business operations	Event Space Management System	CholoroCode Pte Ltd	This system allows companies to organise, book, charge and rent their unused space to interested parties.
MTech KE Li Wenfeng, Pham Thanh Tung	Best KE Project	Multi-Agent based Simulation System	Department of Building, National University of Singapore	A value-adding technology used to investigate the effect of decision-making among human participants and computer agents within the context of project and facility management.
MTech EBAC Vishnu Raj, Mathew George, Aswin Sreenivas	Best EBAC Project Award by SAS	Cargo Yield Analysis	Jurong Port	A robust and flexible framework was built for Jurong Port to help attribute revenue and costs to respective commodities, thereby enabling commodity-based profit computation. Predictive analytics was employed to predict commodity throughput, serving as a useful tool for management to make foresighted decisions.

AWARD WINNERS: ACCENTURE BEST INDUSTRIAL ATTACHMENT PROJECT

Programme/ Student(s)	Award	Project Name	Company	Description
GDipSA Yue Cheng & Lu Jing	38th	Mobile App for Business Alert	SESAMi Singapore Pte Ltd	The mobile application allows SESAMi to improve the efficiency of its online business sourcing by providing value-added functionalities to its supplier community. The functionalities include Google push notifications for suppliers to match RFQ (Request for Quotation)/Tenders raised, viewing and filtering the RFQ/Tender list, as well as setting personal preferences for RFQ/ Tender searches and the viewing of details.
GDipSA Chen Mushi Luke	39th	mDirectory (Doctor-On-Call & Enhancements)	Integrated Health Information Systems	The mDirectory is a mobile application that allows healthcare professionals within the SingHealth cluster to search for contact information of on-call duty personnel. Following an enhancement to the existing Doctor-On-Call web application, users can now retrieve information from their mobile phones instead of calling the SingHealth Call Centre. This has resulted in a 45% reduction in internal calls, saving an estimated 35 man-hours per week.
GDipSA Thiruvalluvan Murugesan	39th	Test Automation Using Test Shell for On-board Bus Equipment	Land Transport Authority	The project's objective was to reduce the time taken to test new software upgrades on bus equipment. Using an open source robot framework, the new systems (C#.NET) reduced testing time by 50%, which subsequently reduced user testing from seven days to one. Users could also set up the testing environment automatically simply by pressing a button.

COMMENCEMENT

MTech Class of 2015 Commencement Ceremony
Date: 11 July 2015

GDipSA 38th Intake Commencement Ceremony
Date: 25 May 2015

GDipSA 39th Intake Commencement Ceremony
Date: 12 November 2015

HACKATHONS

DATA VISUALISATION HACKATHON WITH MAS

NUS-ISS teamed up with the Monetary Authority of Singapore (MAS) to organise our second hackathon event for MTech students. Our first event was co-organised with Knowesis last year, where students were given the opportunity to solve key business problems using massive amounts of real data from the telecommunications industry. This time, students delved into the sphere of financial data with the objective of making complex financial data more accessible, understandable and usable for the general public.

MAS kicked off the session by providing students with different scenarios where data visualisation could be applied and used for better decision-making and planning. The students then grouped themselves into teams and selected a scenario for their projects.

Bey Mui Leng, Director of Corporate Communications, MAS, said, "This partnership with NUS-ISS is a first for MAS but definitely not our last. We were impressed with the quality and innovation displayed in the presentations, and we look forward to implementing some of the solutions in the near future."

Hackathon Winning Team: (from left to right) Desale Devendra Ramchandra, Jasmine Ng and Tran Duy Canh from Team Lannisters

Solution – An interactive infographic that allows the general public to understand credit card debts better.

"We were impressed with the quality and innovation displayed in the presentations, and we look forward to implementing some of the solutions in the near future."

Bey Mui Leng, *Director of Corporate Communications, MAS*

EXTERNAL HACKATHONS – OUR STUDENTS SCORED GOALS

Date(s)	Hackathon	Award	Team Members
16-19 April 2015	LTA Transport & You(th) Hackathon	Best App for Active Mobility	**MTech KE:** Nicholas Lim, Cai Bowen, Tran Duy Canh, Desale Devendra Ramchandra, XiangTao Wang, Jasmine Ng
25-26 April 2015	MIT Hacking Medicine@SG 2015	2nd Runner-up	**MTech KE:** Francisco Liwa
14-16 August 2015	Smart Port Hackathon	Honourable Mention Prize	**MTech SE & EBAC:** Bala Manikandan Sivagnanam, Jeyabalaji Thuda Madhavan, Sathish Kumar, Arun Raja
29-30 April 2015	Ministry of Defence Data Analytics	1st Runner-up	**MTech KE:** David Low, Zane Lim
10 October 2015	Singapore Airlines App Challenge	IBM Bluemix Award	**MTech SE & EBAC:** Ankesh Khandelwal, Pragyan, Rohan Shinde

EXECUTIVE EDUCATION PROGRAMMES

NUS-ISS's Executive Education Programmes (EEPs) were designed for the busy professional who needs to keep abreast of the latest technological developments and stay relevant in a competitive business landscape.

Delivered by a team of industry professionals possessing an average of more than 20 years' experience, students are provided with the necessary skills and knowledge to manage, plan and implement infocomm and digital business solutions.

99% of the respondents in our post-course survey of participants from January to June 2015 said that they were able to apply skills to their work after attending our training. Another 93% said they were able to perform better at their jobs while 71% were given greater job responsibility. This is a testament to our courses being relevant for immediate skills usage and application.

2015 REPORT CARD

TRAINED

5,150

PROFESSIONALS

99%
SATISFIED WITH OVERALL LEARNING EXPERIENCE

99%
ABLE TO APPLY SKILLS AT WORK

94%
RECOMMENDED COURSES TO OTHERS

93%
ABLE TO PERFORM BETTER IN JOB

88%
CONTINUED TO TAKE UP MORE COURSES

69%
GIVEN MORE/NEW JOB RESPONSIBILITIES

33%
RECEIVED SALARY INCREMENT

16%
GIVEN PROMOTION

Source: Post Course Survey (Jan-Jun 2015)

CORPORATE COURSES

NUS-ISS works with organisations to provide contextualised workplace training for their employees. Some of our key customers include DBS Bank Ltd, Defence Science & Technology Agency, Google Asia Pacific Pte Ltd, HP Malaysia Manufacturing Sdn Bhd, Infocomm Development Authority of Singapore, Integrated Health Information Systems and Singapore Telecommunications Pte Ltd.

The training conducted ranged across various practices including Agile, Analytics & Intelligent Systems, Business Analysis, Cyber Security, Digital Innovation & Design, IT Service Management, Project Management and Software Engineering Design.

CUSTOMISED LEARNING: HEWLETT PACKARD CASE STUDY

Many organisations including Hewlett Packard (HP) are already recognising the value of 'Big Data', and beginning to step up on analytics training to equip process engineers with the ability to interpret data effectively, as well as to apply powerful statistical analysis to derive factual insights for enhanced business decisions.

To support the high-precision work at a new facility in Penang, HP's consumer ink supplies business entity in Malaysia, HP Malaysia Manufacturing Sdn Bhd (HPMM), approached NUS-ISS to develop a customised suite of training programmes for its engineers.

NUS-ISS put together a training package covering three courses:
1. NICF – Statistics for Business
2. NICF – Statistics Bootcamp Using R and Tableau
3. NICF – Predictive Analysis

Students were encouraged to bring along actual operational scenarios for classroom discussions. To ensure relevance, lessons were taught on the JMP software used by all engineers at HP instead of the usual SPSS software used in public courses.

NEW LAUNCHES IN 2015

NUS-ISS launched 14 new courses in 2015, with five of them focusing on leadership. The courses are taught by experienced NUS-ISS professional staff and industry practitioners, many of whom have run their own companies or previously held industry-based C-Suite and IT leadership roles.

LIST OF 2015 EEP LAUNCHES

1. NICF* - Certified Cloud Security Professional (CCSP) CBK® Training Seminar

2. Certified Scrum Product Owner

3. Evaluating Software Architectures

4. NICF* – Facilitation and Negotiation for Business Analysis

5. NICF* - Lean IT Foundation Certification Preparatory Course

6. NICF* - Mobile User Experience Design

7. Coder in You

8. Full Stack Foundation

9. Connect using APIs

DIGITAL LEADERSHIP PROGRAMMES

10. e-Government Leadership

11. WSQ** Leading Service Innovation

12. Creating Business Value from IT Investment

13. Strategic Futures & Foresight

14. NICF* - Transformational Leadership

*National Infocomm Competency Framework
** Singapore Workforce Skills Qualifications System

NEW DIGITAL LEADERSHIP PROGRAMMES

From generating customer insights, to transforming operations and driving innovation, to multiple-channel customer engagement, and revenue generation, the modern-day business leader is increasingly being asked to address these challenges with robust IT strategy.

The core objective of these leadership programmes is to develop a new breed of leaders – strategic, forward-thinking, holistic leaders with the capabilities, capacity, mindset and desire to help their organisations thrive in a fast-changing business and technology ecosystem.
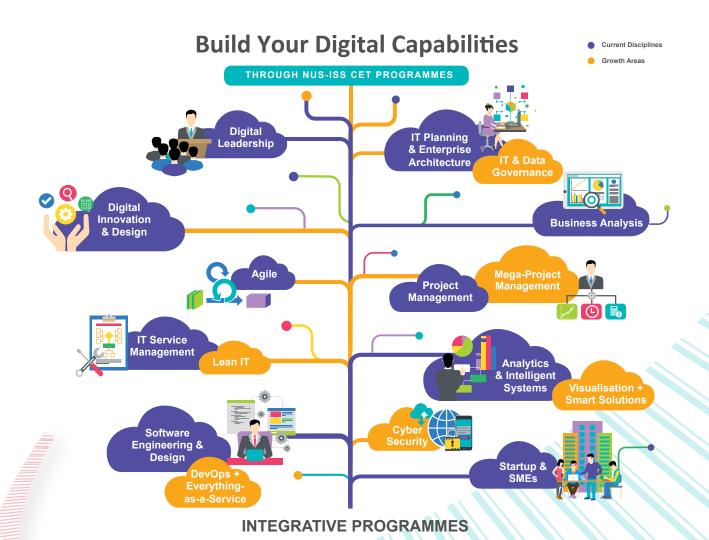
DISCIPLINES

Appointed by the Singapore Workforce Development Agency (WDA) as a National Continuing Education and Training Institute (NCI), NUS-ISS' EEPs are offered across multiple disciplines to build relevant digital capabilities within Singapore's workforce and accelerate the digital transformation of the country's economy.

Disciplines:
1. Agile
2. Analytics & Intelligent Systems
3. Business Analysis
4. Cyber Security
5. Digital Innovation & Design
6. Digital Leadership (New)
7. IT Planning, Governance & Enterprise Architecture
8. IT Service Management
9. Project Management
10. Software Engineering & Design
11. Startup & SMEs (New)

The integrative programmes have been developed to support different industry functions within a single fluid ecosystem for the enablement of collaboration and connectivity. This ecosystem includes Service, Sales, Operations, Marketing, Finance, IT and Human Resources.

Build Your Digital Capabilities

THROUGH NUS-ISS CET PROGRAMMES

- Current Disciplines
- Growth Areas

Digital Leadership

IT Planning & Enterprise Architecture

IT & Data Governance

Digital Innovation & Design

Business Analysis

Agile

Project Management

Mega-Project Management

IT Service Management

Lean IT

Analytics & Intelligent Systems

Visualisation + Smart Solutions

Software Engineering & Design

Cyber Security

Startup & SMEs

DevOps + Everything-as-a-Service

INTEGRATIVE PROGRAMMES

NEW STARTUP & SMES LAUNCH: STACKUP

Participants at our first StackUp Open House in December 2015.

STACKUP'S VISION

We believe that everyone who is anticipating the future, will seize the opportunities to innovate and guard from being disrupted by technologies. Already many imaginable aspects of our lives are already carried digitally – it is our future and within our direct control to define it.

STACKUP'S MISSION

We develop stellar tech interns, tech recruits and tech talents to become technologists at startups with aspirations to advance the digital fabric of a smart world.

STACKUP, EXPLAINED
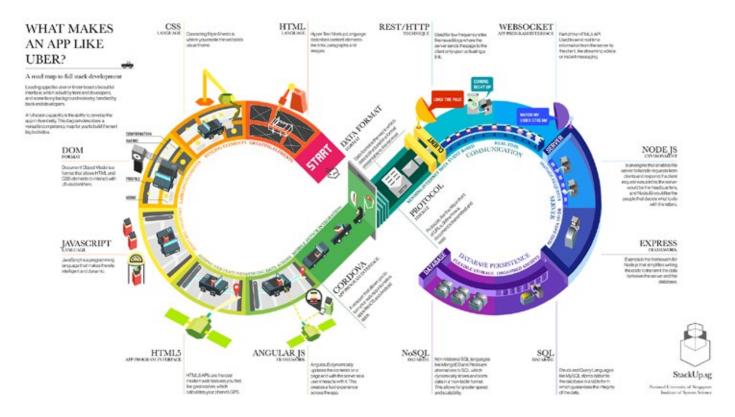
StackUp is a new curriculum conceived to transform individuals into aspiring technologists. It will equip students with the foundational skills required – from attitude and aptitude to technical competencies – to drive the development of market-relevant tech products from idea through to implementation.

Designed to help new startups and SMEs that rely on open stack technologies, this programme offers the chance to participate in class, immerse in apprenticeships and apply newly-acquired principles and concepts to real-life projects.

STACKUP'S TARGET AUDIENCE

- **Aspiring CTO –** Someone who has business experience and needs to take his or her tech to the next level whether in full web or API development.
- **Budding Coder –** Someone who has little experience in tech, but desires to learn coding and web development skills.
- **Related Discipline Background –** Someone who has a background related to tech, for example, electrical engineering or computer science.
- **Enterprise Background –** Someone who has been working in enterprise software but is looking to switch to startup and SME tech.

The adjuncts shared about the curriculum at the StackUp Open House.

WHAT MAKES AN APP LIKE UBER?

A road map to full stack development

StackUp.sg
National University of Singapore
Institute of Systems Science

CODER IN YOU

A 5-day course to induct those new to coding in an immersive learning environment using a "Think with your Hands" approach. Students will learn not only what coding is and how one should code, but more critically what it can do and how it can tackle interesting problems.

FULL STACK FOUNDATION

A 40-day course to help those with basic coding skills to acquire the interdisciplinary skills needed to build an app in its entirety. It covers beautiful interfaces built by front-end designers/developers and the background resources crafted by backend developers.

CONNECT USING APIS

A course that stacks the critical skills to connect client-side apps to extract value from the backend, as well as other clients and backend systems. Students will learn to architect, design and build interfaces that transcend apps, work with data, and interoperate with other open systems to co-create product value

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STACKUP'S CURRICULUM

FIRST CURRICULUM ROLLOUT

Grounds students in full-stack technologies and equips them to pursue other more advanced competencies

Stay Tuned: Upcoming Programmes

- Cloud DevOps Engineering
- Security Engineering
- Productisation spanning both Tech Management and Product Architecture
- Data Analytics and Data Science
- Big Data Engineering

NEW DIGITAL LEADERSHIP LAUNCH: SMART HEALTH LEADERSHIP CENTRE

The NUS-ISS Smart Health Leadership Centre was launched on 20 November 2015 to play a role in transforming the future experience of health and wellbeing in Singapore.

Our Director & CEO, Khoong Chan Meng (third from left) and Catherine Khaw, Chief, Intelligent Systems (second from left) with guests at the Smart Health Leadership Centre launch.

Our Director & CEO, Khoong Chan Meng (left) with Mr Rajesh Sukumaran, CEO of Pellucid, one of the speakers at the Smart Health Leadership Centre launch.

Our Digital Innovation & Design lecturer, Choo Zhi Min (facing the camera) showcased the application designed by our Service Innovation elective students.

SMART HEALTH LEADERSHIP CENTRE'S VISION

To provide thought leadership for future-ready health and wellbeing systems.

SMART HEALTH LEADERSHIP CENTRE'S MISSION

To help the diverse health ecosystem leverage emerging opportunities through data, digital technology, and innovation to transform the way citizens and industry professionals experience care.

SMART HEALTH LEADERSHIP CENTRE, EXPLAINED

Blending the disciplines, skills and technologies required to make health systems smarter and future-ready, the Smart Health Leadership Centre builds capabilities through integrated training & mentorship, stimulates cross-industry collaboration & co-creation, and generates applied research-driven insights to advance opportunities for a smarter health future.

"Making sense of emerging opportunities, and ideating for greater impact, often benefits from expert inputs and fresh external perspectives. Through tailored training programmes, applied research and mentorship-based consultancy, we aim to provide this expert support. We are excited to be working with partners from public and private sector organisations to explore new opportunities and pilot new ways of working."

Tamsin Greulich-Smith, *Member of IT Strategy & Management, NUS-ISS*

Tamsin Greulich-Smith (left), with guests at the launch of Smart Health Leadership Centre

SMART HEALTH LEADERSHIP CENTRE'S CORE PILLARS

DISCOVER

We are committed to continual learning. Applied health sector research allows students to tackle real industry problems, and lecturers to drive thought leadership.

Applied Research Projects

Staff and students undertake health-related research to hone skills and develop insights. 2015 software engineering research projects included a Clinic Locator App; an Augmented Reality Wellbeing App and a Pharmacy ATM concept.

Toolkits

Our 'Design Thinking in Healthcare' toolkit is a practical guide to support health sector professionals in applying the concepts and techniques taught in our classrooms.

LEARN

Through practice-based education, the Smart Health Leadership Centre develops the critical capabilities and knowledge our students need for real industry impact.

Training Programmes

Our Smart Health Leadership training programmes, ranging from analytics to design thinking in healthcare, draw upon experiential learning practices, contextualised for health sector professionals. We also customise our programmes for organisations, such as SG Enable, to create more sustainable organisational learning impacts.

Seminars & Events

As part of a vibrant programme of thought leadership & engagement, 2015 saw us host a health-track Digital Leadership & Innovation Conference, plus a seminar addressing "Leading Healthcare Through Empathic Design Technology".

COLLABORATE

The Smart Health Leadership Centre encourages stakeholders from across the healthcare ecosystem to come together to create a diverse problem-solving lens to tackle the health sector's entrenched challenges.

Smart Health Community of Practice (CoP)

Our Smart Health CoP forum meets regularly to promote peer-to-peer learning, and to foster new collaborations, with the aim of transforming future health experiences.

Consultancy Services

Our consultancy services are tailored to suit the unique pressures facing health sector professionals. 2015 consultancy highlights included a business transformation programme for Alexandra Health System, and an Enterprise Architecture Framework for Integrated Health Information Systems (IHiS).

Student Placements

Students from our Master of Technology and Graduate Diploma courses have taken up placements in health sector organisations, such as IHiS, allowing them to apply their skills to genuine healthcare delivery challenges.

DISCOVER
Applied Research
Toolkits
Blogs & News

LEARN
Executive Courses & Master of Technology
Customised Training Programmes
Experiential Learning
Seminars & Events

SMART HEALTH LEADERSHIP CENTRE

COLLABORATE
Community of Practice
Consultancy
Collaborative Projects & Partners
Student Placements

TESTIMONIALS

Agile

"Pete is a very experienced trainer who knows the stuff well, uses variety of teaching techniques - through games, hands-on model building and tools - to make sure participants maximise their learning experience."

Ho Kok Hing, *Deputy Director, Infocomm Development Authority of Singapore, Certified ScrumMaster, Class of Jun 2015*

Digital Innovation & Design

"The course has provided very informative and useful insights from both theoretical and real life examples. I have learned to use industry standard tools and processes that will greatly help in my field of work."

Charmaine Wu, *Online Engagement Strategist, Ministry of Defence, MINDEF, Social Media Analytics, Class of Jun 2015*

"NUS-ISS Digital Innovation & Design practice leads in Asia by providing practical skills and methodologies that the region's customer experience pros can immediately apply in the context of local challenges."

Ryan Hart, *Forrester Research on "Case Study: Unlock Design Thinking Skill With A Practical Training Program."*

IT Planning, Governance & Enterprise Architecture

"It is great understanding the scope of data governance and how improvements should be made."

Oh Ee Hwee, *Senior Manager, Land Transport Authority, Data Governance & Protection, Class of Jul 2015*

CyberSecurity

"The in-depth knowledge on information and systems security that I picked up from this course can be applied to my organisation and is very useful for my area of work, which includes consultancies to companies."

Mardi Sutanto, *Network Application Engineer, Westermo Data Communications Pte Ltd, (ISC)² Certified Information Systems Security Professional (CISSP)®, Class of Sep 2015*

Analytics & Intelligent Systems

"What I've learnt in terms of visualising text analytics results and application of categorisation will help greatly in my projects."

Alvin Chin, *System Analyst, Centre for Strategic Infocomm Technology, Text Analytics, Class of Jan 2015*

Project Management

"Well conducted workshops, informative and interesting sharing of experience."

Long Xiangning, *Deputy Manager, Port of Singapore Authority, Project Management for IT, Class of Sep 2015*

"Both instructors have strong domain experience and are able to explain the principles and processes clearly with examples."

Yang Yabin, *Project Manager, Singtel, Certification in Outsourcing Management for IT (Associate) Course, Class of May 2015*

Software Engineering & Design

"From the course, I understood the latest technologies and how they are applicable to my company's software system through hands-on exercises."

Irving Lee, *Software Development Engineer, DNR Process Solutions Pte Ltd, Design and Develop Mobile Enterprise Application with HTML5, Class of Mar 2015*

"The knowledge and skills learnt from the course made it easy to create applications, especially for someone who only uses C++!"

Ong Wilson, *Software Engineer, Gemalto Pte Ltd, Building Enterprise Applications Using Java EE, Class of Apr 2015*

IT Service Management

"This course gives a very good end-to-end view of IT Service Management instead of just touching on project management. Every IT professional should take up ITIL courses."

Poon Chun Hong, *Self-employed, ITIL® Release, Control and Validation Certificate, Class of Oct 2015*

CONSULTING

As an institution with a strong tradition in education, NUS-ISS utilises a unique train-and-mentor model in its consulting services with the aim of enabling customers to successfully operate and run on their own.

IN 2015, NUS-ISS SUPPORTED

17

PRIVATE AND PUBLIC ORGANISATIONS WITH OUR CONSULTING SERVICES

THE FIVE-POINT ADVANTAGE IN NUS-ISS' STRATEGIC IT PLANNING CONSULTING SERVICE:

1 Provide consultancy in the implementation of Strategic IT Plans

2 Conduct training to build competency within the organisation

3 Provide mentorship on Strategic IT Planning

4 Translate knowledge, skills and best practices into impactful business results

5 Equip organisations to operate independently upon project completion

Case Study: Energy Market Authority (EMA)

The EMA is a statutory board under the Ministry of Trade and Industry which serves as a regulator, power systems and industry developer. It plays a pivotal role in shaping Singapore's energy sector, promoting market competitiveness, and ensuring a reliable and secure energy supply.

Challenge: *Recognising the power of IT to forge a progressive energy landscape, EMA initiated a review of its IT priorities and investments with the aim of addressing recent advances in technology, changing expectations on the use of IT, as well as the strengthening of its IT leadership, governance and management capabilities.*

Solution: *EMA worked with NUS-ISS under a joint collaborative model to leverage on each party's respective capabilities, resources and market access in the development of EMA's Strategic IT Plan. The review exercise was conducted in five stages over a nine-month period, focusing on five key thrusts:*

1. *System Refresh and Infrastructure Resiliency*
2. *IT Resourcing & Governance Structure*
3. *Portfolio Management*
4. *Data Sharing, Analytics and Harmonisation*
5. *New Capabilities*

NUS-ISS consultants successfully articulated EMA's business potential, identified the operational gaps in the IT environment and put together a clear and achievable Strategic IT Plan aligned to EMA's business requirements. On the back of this success, a follow-on project on Data Harmonisation was initiated.

"The NUS-ISS team comprised experienced consultants who had worked as CIOs or equivalent in both the government and private sectors. They are knowledgeable and appreciative of the challenges and issues we faced."

Mr Don Wee, *Deputy Director (Business IT) Energy Market Authority*

Dr Yap Chih Nam, Assistant Vice President, Y3 Technologies (third from left) with the NUS-ISS and Y3 team.

> "The NUS-ISS team understood our challenges well and contributed both theoretic and practical expertise that helped frame the relevant issues and leapfrog the productisation process. We shifted from thinking about custom-built solutions to market-driven products to serve many customers. By cloudifying our systems, we can also transition to a highly scalable solution."
>
> **Dr Yap Chih Nam,**
> *Assistant Vice President*
> *Y3 Technologies*

Case Study: Y3 Technologies

Y3 Technologies is a home-grown company specialising in IT solutions for supply-chain management and third-party logistics providers.

Challenge: Y3 identified a growing wave of local SMEs and retailers that lack the expertise and resources to develop made-to-order system platforms for their logistics, warehousing and transport management needs. To capture this market opportunity, the company wanted to productise their domain knowledge and experience in the logistics and supply chain industry.

Solution: By tapping into the Infocomm Productivity and Capabilities Services (iPCS) programme by the Infocomm Development Authority of Singapore (IDA), Y3 engaged NUS-ISS for the following services:

1. *Product Management Roadmap*
2. *Software Architecture*
3. *Platform/System Architecture*

Over a period of 10 months, NUS-ISS consultants worked closely with Y3 to review existing applications, identify an area where productisation could occur, and define the problem statements to modularise the complex systems. As a result, a new multi-tenancy model in software architecture was developed, capturing not just the customers' supply chain, but also that of their whole organisation, as well as their customers.

Case Study: EZ-Link

EZ-Link, a contactless smart card operator, has issued more than 17 million EZ-Link cards for passenger transit, Electronic Road Pricing, car parks fitted with EZ-Link's Electronic Payment System, and more than 30,000 points of sales across Singapore.

Millions of transactions are created every day, each adding its own unique footprint to the terabytes-worth of data already stored on EZ-Link servers.

Challenge: NUS-ISS was approached by EZ-Link's CEO, Mr Nicholas Lee, to explore ways the company's senior leadership could tap on its data repository to produce timely insights to guide business decision-making.

Information collected and analysed in the past took a long time. This, plus their tactical presentation, rendered these reports of little use for setting strategic directions. There was also the challenge of assimilating and combining incoherent data from both internal and external sources.

Solution: NUS-ISS business analytics team studied the way EZ-Link collected and deployed existing data, documenting the data network and proposing a data structure and report to make quality data more easily accessible.

Within four months, NUS-ISS helped EZ-Link streamline the process and produced a clear mapping of information, soliciting insights in the following areas:

1. *Commuter patterns*
2. *Peak period loading*
3. *Journey profiles*
4. *Transport security*

These insights would eventually be shared with business partners as well as government authorities and transport operators to improve their operations.

> "NUS-ISS has helped us align the data with our business objectives. The research that Catherine and her team has conducted has allowed us to learn about hidden commuter patterns that were neither easy to spot nor intuitive, even to planning professionals."
>
> **Mr Nicholas Lee,**
> *Chief Executive Officer*
> *EZ-Link*

SINGAPORE E-GOVERNMENT LEADERSHIP CENTRE

NUS-ISS team with the Ministry of Foreign Affairs "CIO Programme on the Strategic Management of IT" participants

The Singapore e-Government Leadership Centre (eGL) was set up in 2006 to contribute to e-Government developments in other countries by providing leadership education programmes.

Today, eGL has capabilities to deliver capacity building and advisory services, and undertake applied research in the following areas:

1. Public Service Innovation
2. Digital Government Transformation
3. Citizen Engagement
4. Smart Nation

2015 HIGHLIGHTS

500

GOVERNMENT OFFICIALS FROM SINGAPORE, BANGLADESH, BRUNEI, CAMBODIA, LAO DPR, MYANMAR, SRI LANKA, THAILAND AND VIETNAM

IN 2015, EGL COMMENCED WORK WITH BANGLADESH ON

2

KEY PROGRAMMES

1 JULY

MOU SIGNED WITH CRIMSONLOGIC

PARTICIPATED IN

5

OVERSEAS SPEAKING ENGAGEMENTS IN ABU DHABI UAE, BANGLADESH, BRAZIL, RWANDA AND SOUTH KOREA RESPECTIVELY

Our Director & CEO, Khoong Chan Meng (right) met with the High Commissioner of the Republic of Rwanda in Singapore, His Excellency Guillaume Kavaruganda in December 2015.

Saw Ken Wye, CEO of CrimsonLogic (right) and Khoong Chan Meng, Director & CEO of NUS-ISS, at a MOU signing ceremony in July 2015.

The delegation from Denmark visited NUS-ISS in September 2015.

Key 2015 Update – Collaboration with Bangladesh Computer Council

In 2015, eGL commenced work with Bangladesh on two key programmes.

The first was with Access to Information (a2i), an initiative under the Prime Minister's Office to drive the Digital Bangladesh vision. A comprehensive Service Design and Digital Delivery programme was developed and successfully delivered in 2015. This initiative was co-funded by Singapore's Temasek Foundation.

The second programme was aimed at supporting a capacity development initiative for Bangladesh Computer Council. Several leadership programmes were delivered to help develop capabilities in the domain of Digital Government Transformation, Citizen Engagement and Service Delivery and Design.

Other eGL Training Programmes Conducted in 2015:
- Bangladesh – Customised Enterprise Architecture
- Bangladesh – Public Administration ICT Leaders and Specialists Programme
- Bangladesh – Public Service Transformation
- Brunei – ITIL® Foundation Certificate in ITSM
- Cambodia – ICT Skills for the Public Sector
- Lao DPR – ICT Skills for the Public Sector
- Myanmar – ICT Skills for the Public Sector
- Singapore (Ministry of Foreign Affairs) – CIO Programme on the Strategic Management of IT

The Andhra Pradesh State Government delegation visited NUS-ISS in September 2015.

- Sri Lanka – eGovernance and Change Management
- Thailand – 3-Day Implement Design Thinking
- Vietnam – ICT Skills for the Public Sector

Countries Hosted
eGL hosted foreign Senior Government Officials and guests from countries including Abu Dhabi, Bangladesh, Denmark, India, Kazakhstan, Mongolia, Pakistan, Peru, Rwanda, Saudi Arabia, United States and Zambia.

Other 2015 Updates
- MOU signed with CrimsonLogic for collaboration in areas of applied research activities, development of case studies, research papers, delivering of overseas training programmes, and business development in overseas markets
- Conducted Ministry of Foreign Affairs e-Government Leader courses under Singapore Cooperation Programme
- Completed four case studies, documenting the accomplishments of Singapore agencies in the area of digital transformation and service delivery
  - CrimsonLogic – Taking TradeNet Abroad: TTBizLink & Mozambique Single Window
  - Housing and Development Board – A Branch Like No Other: Personalising Government Services Through Innovation
  - Integrated Health Information Systems – Enterprise Architecture in Integrated Healthcare Systems
  - National Library Board – Reinventing Singapore Public Libraries in the Digital Era
- Awarded the contract to deliver eGovernance and Change Management training programmes for Sri Lanka's Ministry of Finance

APPLIED RESEARCH

NUS-ISS strives to be a thought leader on the use of ICT through applied research. Our teaching staff are actively involved in research across multiple disciplines.

Staff	Research Paper
Dr Ding Liya	**Liya Ding** and Xiaogan Liu, "Human and Machine Intelligence – Between Fuzzy Logic and Daoist Thought", *in Fifty Years of Fuzzy Logic and its Applications* (Eds. Dan E. Tamir, Naphtali D. Rishe, Abraham Kandel), Springer, ISBN 978-3-319-19682-4, 2015, pp.65-77.
Dr Ding Liya, Fan Zhenzhen	**Liya Ding, Zhenzhen Fan**, and Dongliang Chen, "Auto-Categorisation of HS Code Using Background Net Approach", *19th International Conference in Knowledge Based and Intelligent Information and Engineering Systems – KES2015,* Singapore, Sep 2015, Procedia Computer Science, PROCS_6477.
Fan Zhenzhen	**Fan, Zhenzhen**, Sanghoun Song, and Francis Bond, "Building Zhong, a Chinese HPSG Shared-Grammar." *Head-Driven Phrase Structure Grammar* (2015): 96.
Fan Zhenzhen	**Fan, Zhenzhen**, Sanghoun Song, and Francis Bond, "An HPSG-based Shared Grammar for the Chinese Languages: Zhong [[]]." *Proceedings of the Grammar Engineering Across Frameworks (GEAF) 2015 ACL workshop. 2015.*
Fan Zhenzhen	**Fan, Zhenzhen** and Kumar, Nitin Pradeep, "Hybrid User-Item Based Collaborative Filtering." *Procedia Computer Science 60* (2015): 1453-1461.
Dr Guo Lei	**Guo Lei**, "Using Big Data Analytics in Transforming Public Transport Commuters' Travel Behaviour." *The 14th International Conference on Travel Behaviour Research, Windsor, UK*, Jul 2015.
Dr Guo Lei	**Guo Lei**, "A Branch like No Other: Personalising Government Services through Innovation", Housing and Development Board
Dr Guo Lei	**Guo Lei**, "Taking TradeNet Abroad: TTBizLink & Mozambique Single Window", CrimsonLogic
Dr Guo Lei, Nicholas Tan, Tan Eng Tsze	**Guo Lei, Nicholas Tan** and **Tan Eng Tsze**, "Enterprise Architecture in Integrated Healthcare Systems", Integrated Health Information Systems
Ouh Eng Lieh	**Eng Lieh Ouh**, Le Minh Khue, and Stan Jarzabek, "Mood self-assessment on smartphones," Wireless Health 2015: 19:1-19:8.
Ouh Eng Lieh	**Eng Lieh Ouh**, and Stan Jarzabek, "A Conceptual Model to Evaluate Decisions for Service Profitability", Service Computation 2015, ISBN: 978-1-61208-387-2, Pg 61- 66.
Ouh Eng Lieh	**Eng Lieh Ouh**, "An Adaptability-driven Economic Model for Service Profitability." NUS (Computer Science) PhD Thesis.
Dr Suriya Priya R. Asaithambi	**Asaithambi, Suriya Priya R.**, and Stan Jarzabek. "Pragmatic Approach to Test Case Reuse-A Case Study in Android OS BiDiTests Library." Software Reuse for Dynamic Systems in the Cloud and Beyond. Springer International Publishing, 2014. 122-138.
Dr Zhu Fangming	**Fangming Zhu**, Jahan Balasubramaniam, and, Gokul Krishnaa.C.B, "Enhancement of Classifiers in HTM-CLA Using Similarity Evaluation Methods", Proceedings of 19th International Conference on Knowledge Based and Intelligent Information and Engineering Systems, Sept 7-9 2015, pg1516-1523.

NUS-ISS also completed projects with the following companies:

- *Cai Yuhao, Guo Lei, Samuel John Cammiss and Virginia Cha, "Experiments in the Management of Travel Decisions".*
- *Saisudha Rajagopal and Samuel John Cammiss, with support from Achyut Suresh Rao, "Production and Trial of a Mobile User Experience Research Tool", Learning Innovation Fund – Technology (LIFT).*

EVENTS IN 2015

An overview of key NUS-ISS events that helped shape 2015.

Key Highlights
28 AUG

NUS-ISS Learning Day 2015

Targeted at business and IT professionals across various industry sectors, this inaugural annual full-day event features NUS-ISS teaching staff sharing insights across a plethora of topics through presentations, discussions and workshops.

SIGNATURE EVENTS

Key Highlights
4 AUG

NUS-ISS Alumni Reunion

More than 200 alumni from the MTech and GDipSA programmes gathered at NUS Kent Ridge Guild House to rekindle old memories and network.

Key Highlights
20 NOV

NUS-ISS Digital Leadership & Innovation Conference 2015

An annual conference bringing together experts from their respective industries to share their experiences in innovation.

COMMENCEMENT

Date	Ceremony
25 May	GDipSA 38th Intake Commencement
11 Jul	MTech Class of 2015 Commencement
12 Nov	GDipSA 39th Intake Commencement

COMMUNITIES OF PRACTICE (COP)

AGILE

Key Highlights

20 APR

1st Agile CoP Forum: Agile Adoption in Your Organisation – 10 Secrets of Success, 3 Top Mistakes

Formed with the objective of promoting the awareness and practice of Agile adoption, world-renowned Agile consultant, Pete Deemer, touched on key adoption lessons and mistakes in this inaugural forum.

Date	CoP
20 Apr	1st Agile CoP Forum: Agile Adoption in Your Organisation - 10 Secrets of Success, 3 Top Mistakes
22 May	2nd Agile CoP Forum: Growth, Management and Renewal in Long-Lived Codebases
5 Aug	3rd Agile CoP Forum: Exploring Approaches and Challenges in Enterprise Agile Scaling

ARCHITECTURE

Date	CoP
31 Mar	10th ACoP Forum: Enterprise Architecture Fireside Chat
28 Jul	11th ACoP Forum: Evolution of an Accidental Enterprise Architect
12 Nov	12th ACoP Forum: Architecting Innovation

IT SERVICE MANAGEMENT

Date	CoP
23 Jul	IT Process Transformation Roadmap – Experience Sharing
7 Oct	Managing a multi-cultural ITSM environment

SEMINARS

Key Highlights

21 AUG

ISS Seminar: Leading Healthcare Transformation Through Empathic Design and Technology

As a first step towards launching the Smart Health Leadership Centre in 2015, this seminar brought together different players in the healthcare landscape to explore how smart technology could be combined with empathic, patient-centric design to create breakthrough solutions for health and care management.

Date	Seminar
10 Apr	ISS Seminar: Digital Analytics - The Game Changer for the Hospitality Industry
21 May	ISS-IIBA SG Seminar: The Business Analyst as a Problem Solver
24 Jun	ISS Seminar: Online Collaboration - Fact or Fiction?
27 Jul	ISS Seminar: The Practice of IT Governance & Risk Management
21 Aug	ISS Seminar: Leading Healthcare Transformation Through Empathic Design and Technology
4 Nov	ISS Seminar: Achieving Agility with Large-Scale Scrum (LeSS) and Project Management

OUR PARTNERS

To ensure we deliver a comprehensive range of programmes with recognised certifications and qualifications, NUS-ISS works with leading industry partners and official accreditation bodies, both locally and internationally.

APM Group

Recognises NUS-ISS as an Affiliate for COBIT® 5 Foundation course and examination

Association for Information and Image Management (AIIM)

Licensed NUS-ISS to deliver the AIIM Business Process Management Master course

Association of Information Security Professionals (AISP)

Appointed NUS-ISS to develop and deliver the AISP Qualified Information Security Professional course and examination

AXELOS

Accredited NUS-ISS as an Affiliate for ITIL®, Managing Successful Programmes (MSP®), PRINCE2® (Projects IN Controlled Environments) Portfolio, Programme and Project Offices (P3O®) Foundation & Practitioner courses and examinations

Blackblot®

Appointed NUS-ISS to deliver the Strategic Product Manager™ course

CMMI® Institute of the Carnegie Mellon University

Licensed NUS-ISS to deliver Capability Maturity Model Integration (CMMI®) training, consulting and appraisal services

CrimsonLogic

Delivers consulting and capacity building programmes in Middle East and Africa through NUS-ISS

EXIN

Appointed NUS-ISS to conduct Lean IT Foundation Certification course, and administer the certification examination

GoodAgile

Delivers the Certified ScrumMaster and Certified Scrum Product Owner courses in Singapore through NUS-ISS

Havas Media

Co-delivers the Social Media for B2B, Social Media Marketing and Social Media Analytics courses with NUS-ISS

IE Singapore

Partners eGL to deliver service offerings in the area of consulting, research and capacity building in the Digital Leadership domain

Infocomm Development Authority of Singapore (IDA)

Endorsed international and Singapore certification examinations organised and/or administered by NUS-ISS to enable eligible organisations and individuals to apply for CITREP funding support

International Information Systems Security Certification Consortium [(ISC)2®]

Appointed NUS-ISS as the exclusive training provider in Singapore to deliver the (ISC)² CCSP CBK Training Seminar, (ISC)² CISSP CBK Training Seminar and (ISC)² CSSLP CBK Training Seminar programmes

International Institute of Business Analysis (IIBA®)

Appointed NUS-ISS as the exclusive training provider in Singapore to deliver the (ISC)² CCSP CBK Training Seminar, (ISC)² CISSP CBK Training Seminar and (ISC)² CSSLP CBK Training Seminar programmes

NUS Lee Kuan Yew School of Public Policy

Jointly set up the e-Government Leadership Centre (eGL) located at NUS-ISS

Project Management Institute (PMI®)

Appointed NUS-ISS as the Global Registered Education Provider to deliver the PMP® for Project Managers

Revolution Analytics

Partnered NUS-ISS to deliver courses on CloudR technology

Scrum Alliance

Endorsed NUS-ISS' Essential Practices for Agile Teams course as the technical track of the Certified Scrum Developer certification

Singapore Computer Society (SCS)

Appointed NUS-ISS to conduct – the Certification in IT Project Management (CITPM) (Associate) Course, Certification in Outsourcing Management for IT (COMIT) (Associate) Course and Certification in IT Business Continuity Management (CITBCM), as well as administer the certification examinations

Singapore Workforce Development Agency (WDA)

Appointed NUS-ISS to develop and deliver courses for the National Infocomm Competency Framework (NICF), Design Thinking under Creative Industries Framework (CIF), and Service Excellence Competency Framework (SVCF)

Tableau

Partnered NUS-ISS to deliver courses on analytics

Temasek Foundation

Co-funded the Bangladesh a2i Capacity Development Programme, which was delivered by NUS-ISS

The Open Group

Licensed NUS-ISS to provide consulting services on The Open Group for The Open Group Architecture Framework (TOGAF®)

UNDP Global Centre for Public Service Excellence

Partnered NUS-ISS to host and engage dignitaries and leaders from emerging economies to develop collaboration opportunities

UXC Consulting

Delivers the COBIT® 5 Foundation, ITIL®, Managing Successful Programmes (MSP®), PRINCE2® (PRojects IN Controlled Environments) and Portfolio, Programme and Project Offices (P3O®), certification courses and examinations in Singapore through NUS-ISS

CAREER SERVICES

The Career Fair held on 21 March was attended by 235 job seekers including NICF participants, graduating students and members of the public, with 16 participating companies, including Infineon Technologies, PayPal, Singapore Airlines and Keppel T&T.

The Recruitment Talk on 22 August was attended by 82 job seekers including NICF participants and graduating students, with five participating companies, including Visa Worldwide and Accenture.

Testimonial – Participant

"The one-on-one personalised coaching session was different from those I attended previously. I learnt how to plan my career and identify motivations and passion which are subsequently mapped onto my resume clearly and concisely. I also learnt how to tailor my resume when applying for different jobs."

Mr Joseph Koh, *NICF-displaced participant*

Testimonial – Employer

"Excellent opportunity to network and recruit students with a variety of skills. Talent spotting and evaluation made easy."

Mr Murphy Choy, *Principal Data Scientist, BigTapp Analytics Pte Ltd*

WHAT WE DO

NUS-ISS Career Services Office

Offer career advice, coaching and placement opportunities in the Infocomm industry to graduating students from MTech and GDipSA

Offer assistance to unemployed WDA-funded National Infocomm Competency Framework (NICF) short courses participants

Organise bi-annual Career Fairs and Recruitment Talks to allow graduating students, NICF participants and employers to network

ORGANISATIONAL TRANSFORMATION

An overview of NUS-ISS' internal activities organised in 2015 to reinforce our core values and promote the well-being of staff and students.

NUS-ISS TEAM BUILDING DAY

9 October 2015
NUS-ISS staff gathered together for a day of outdoor fun and mind-stimulating activities, where they appreciated one another's strengths, internalised NUS-ISS' core values and committed to work even closer as a team.

Juniors Meet Seniors – GDipSA & MTech

NUS-ISS organises special get-together sessions for new student intakes to network with existing cohorts. In doing so, junior batches have the chance to ask questions and glean insights from experiences shared by their seniors.

24 January 2015
MTech EBAC seniors went beyond the call of duty and organised a campus based Amazing Race to help their juniors familiarise themselves with the school grounds. The day concluded with a dinner, where lecturers and seniors joined in for a time of mingling and mutual sharing.

16 February & 3 September 2015
Three intakes of GDipSA gathered on these two occasions for a time of icebreaker games, light refreshments and fruitful interactions.

(Above) The MTech EBAC and GDipSA seniors got together with their respective juniors for a day of food and fun.

MTECH HACKATHONS

MTech Hackathons present an opportunity for MTech students from different academic routes to collaborate and learn from industry experts. Here, they form teams and work together to solve hackathon problems for various industries utilising their specialised skillsets.

30 March 2015
ISS-MAS Data Visualisation Hackathon (Finance)

16-19 April 2015
LTA Transport & You(th) Hackathon (Transportation)

25-26 July 2015
MIT Hacking Medicine@SG 2015 (Healthcare)

14-16 August 2015
Smart Port Hackathon (Maritime)

29-30 August 2015
Ministry of Defence Data Analytics Challenge (Defence)

10 October 2015
Singapore Airlines App Challenge (Aviation)

RECREATIONAL ACTIVITIES

NUS-ISS' Recreational Committee (RC) organises regular activities to foster closer ties among staff members. Many of these activities are done to commemorate festive or special occasions, with an occasional focus on self-improvement.

National Day – 6 August 2015
NUS-ISS staff organised its own National Day celebrations to commemorate Singapore's jubilee.

Mid-autumn Festival – 21 September 2015
Mid-autumn festivities helped brighten the mood at NUS-ISS as staff members gathered to savour mooncakes and light snacks.

Mindfulness Talk – 30 October 2015
A talk on mindfulness, by Dr Gregor Lange, was organised for NUS-ISS staff where they learned useful exercises to keep their minds focused.

Deepavali – 10 November 2015
NUS-ISS staff celebrated Deepavali with their Hindu colleagues, complete with games, snacks and henna.

Christmas Celebration - 17 December 2015
The season to be jolly came early for NUS-ISS staff as they enjoyed a time of treasure hunt, gift exchange and festive food at a mid-month Christmas party.

SPRUCING UP NUS-ISS

2015 saw the launch of multiple initiatives to beautify NUS-ISS' premises and create a more conducive learning environment.

'Our Milestones' & 'Our Leadership' Talking Walls
One of these initiatives was the unveiling of the 'Our Milestones' and 'Our Leadership' Talking Walls found on Level 1 and Level 4 of the NUS-ISS building. The 'Our Milestones' Talking Wall chronicles NUS-ISS' journey and achievements from our humble beginnings in 1981 till today, while the 'Our Leadership' Talking Wall pays tribute to both past and present chairpersons, as well as our management board.

Unplug @oasISS
A new courtyard called oasISS was created for staff, students, participants and visitors to rest and relax. Its launch on 6 November 2015 saw staff gather with the L2 Transformation Committee for a mini celebration cum room naming competition.

Carpark
Attention was paid even to the NUS-ISS building's periphery, where the carpark was given a fresh coat of paint with new directional signs to enhance the overall look and feel of our premises.

Sketch-Posts
Sketches that serve as a pictorial overview of selected Learning Day sessions are framed along the walls of the NUS-ISS building. They showcase thought leadership in an array of topics covered during this one-day event organised by NUS-ISS on 28 August 2015.

ANNEX A
NUS-ISS TEAM

MANAGEMENT TEAM

Senior Management

Khoong Chan Meng
Director & CEO

Yum Hui Yuen
Deputy Director

Dr Leong Mun Kew
Deputy Director

Singapore e-Government Leadership Centre

Ashok Kumar
Centre Director

Practice Chiefs

Catherine Khaw
Analytics & Intelligent Systems

Goh Boon Nam
IT Service Management

Tan Peng Wei
IT Strategy & Management

Daniel Boey
Project Management

Stuart Smith
Digital Innovation & Design

Dr Leong Mun Kew
Software Engineering & Design

Gloria Ng
Startups & SMEs

Graduate Programme Chiefs

Dr Barry Shepherd
MTech Enterprise Business Analytics

Lim Hooi Ling
MTech IT Leadership

Charles Pang
MTech Knowledge Engineering

Swarnalatha Ashok
MTech Software Engineering

Dr Esther Tan
GDip Systems Analysis

Administration

Theresa Chan
Associate Director, Business Development

Eddie Tan
Associate Director, Business Development

Tan Bee Leng
Associate Director, Finance

Mona Chee
Associate Director, Human Resource, Administration & Facility Management

Shirley Sing
Senior Associate Director, Professional Studies Programme Operations

NUS-ISS has 50 full-time teaching staff members who are multi-disciplinary practitioners with cumulatively more than 1,200 years of working experience. 20% of them possess PhDs, 58% with Masters, and the remaining with Bachelor qualifications. NUS-ISS also has a network of about 40 adjuncts from academia, industry and government organisations, to share their practical experience through courses, workshops and seminars. Another 43 administrative staff make up the NUS-ISS family of 93.

CERTIFICATION AWARDED TO NUS-ISS STAFF IN 2015:

Swarnalatha Ashok, *Chief of the Master of Technology in Software Engineering Programme*

CERTIFICATION

Certified Scaled Agile Framework Agilist and Certified Scaled Agile Framework Programme Consultant (SPC)

Nicholas Tan, *Member, IT Strategy & Management*

CERTIFICATION

TOGAF 9.1

Tan Liong Choon, *Associate, Project Management*

CERTIFICATION
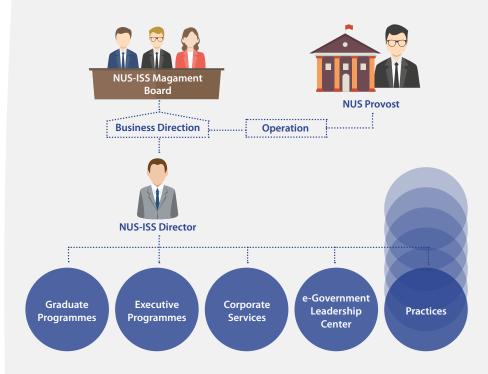
PMI Agile Certified Practitioner (PMI-ACP)®

NEW STAFF IN 2015

1. Cai Yuhao
2. Lee Shek Ling
3. Aditya Shankar
4. Eling Wong Yee Ling
5. Sharanabaswanna Mangalore
6. Ng Kok Leong
7. Tan Wei Kang Eddie
8. Teo Kok Eng
9. Wong Pui Chui
10. Neo Manlin, Maybelline
11. Dr Hoe Siu Loon
12. Chan Kit Lam
13. Jessie Hoo Yeat Meng
14. Chin Yung Shian May

ANNEX B
GOVERNANCE

NUS-ISS operates within the NUS corporate governance framework, while functioning as an integral part of the NUS. The following diagram depicts the NUS-ISS Organisational Structure:

NUS-ISS Magament Board

NUS Provost

Business Direction ···· **Operation**

NUS-ISS Director

Graduate Programmes **Executive Programmes** **Corporate Services** **e-Government Leadership Center** **Practices**

The NUS-ISS Management Board provides strategic guidance to NUS-ISS senior management. The terms of reference are:

*   To advise NUS-ISS on strategic business direction;
*   To review NUS-ISS programmes and products to ensure they meet the changing needs of the industry and help NUS-ISS establish strategies to remain innovative with a leading edge;
*   To advise NUS-ISS on appropriate organisational and personnel policies to support its mission and strategy;
*   To assist in establishing links with industry and leading institutions.
*   To approve NUS-ISS operating budget and utilisation of NUS-ISS financial reserves.

ANNEX C
SPEAKING ENGAGEMENTS & INDUSTRY EVENTS

SPEAKING ENGAGEMENTS

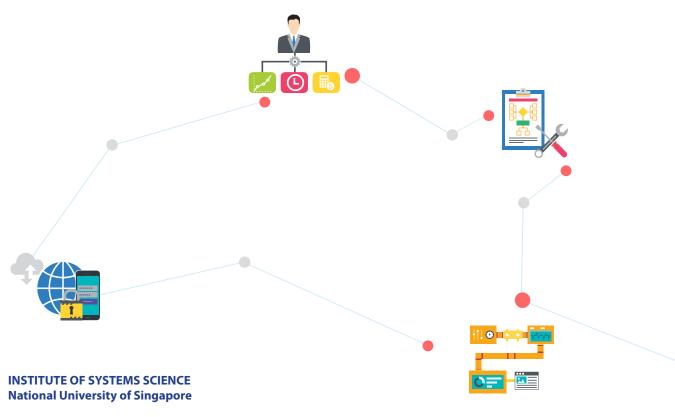| Date	Event/Topic	Role	Staff
9-12 Feb	**Digital World 2015 Conference**	Keynote Speaker	Ashok Kumar
13 Mar	**itSMF Leadership Congress 2015**, *"Service Integration & Management"*	Speaker	Goh Boon Nam
19 Mar	**The Excellence in Retail Financial Services Innovation Convention 2015**	Moderator	Tamsin Greulich-Smith
26 Mar	**2015 Adobe Education Leadership Forum**, *"Creativity Spans Across the Campus @ National University of Singapore"*	Keynote Speaker	Dr. Leong Mun Kew
7 Apr	**Singapore International Chamber of Commerce's Hospitality Services Committee Meeting**	Speaker	Stuart Smith
9 Apr	**SCCI iExperience Series: Monetising Big Data Workshop**, *"Explore Benefits and New Business Opportunities brought about by Big Data"*	Speaker	Dr. Carol Anne Hargreaves
14 Apr	**Big Data & Talent Analytics Congress & Workshop 2015**, *"How HR can Better Plan with CIOs to Use 'People Data' to Create Business Value?"*	Panelist	Dr. Leong Mun Kew
15 Apr	**INTERPOL World 2015**, *"Executive Conversations session on Security Solutions for Urbanised Cities"*	Moderator	Khoong Chan Meng
23 Apr	**Brasil 100% Digital Conference**, *"Multichannel Strategies for Delivery of Digital Services"*	Speaker	Khoong Chan Meng
28 Apr	**Smart Government Summit 2015**, *"Smart Government Development: The Leader's Agenda"*	Speaker	Khoong Chan Meng
4 May	**Singapore International Chamber of Commerce (Hospitality Committee)**, *"Service Innovation & Productivity in Singapore Hospitality"*	Speaker	Stuart Smith
19 May	**Smart Traffic Middle East Conference 2015**, *"Addressing Grand Challenges in Smart City Development"*	Speaker	Khoong Chan Meng
21 May	**SME Capabilities Forum 2015**, *"Making Innovation Part of Your Business' DNA"*	Speaker	Stuart Smith
21 May	**Singapore OpenGov Leadership Forum 2015**, *"Leading The Smart Nation"*	Speaker	Dr. Leong Mun Kew
27-28 May	**Next Bank Asia**, *"How Start-ups can work with Banks - Or against them"*	Speaker	Stuart Smith
24 Jun	**IDG Korea's 5th UX World 2015 Conference**, *"Design Thinking for Digital Solutions in Organisations*	Speaker	Dr Jan Michel Kurt Auernhammer
28 Jun	**Orange Hive	Design Thinking Gym**	Speaker	Ng Foong Wai
23 Jul	**IDC's Asia-Pacific Software Defined Technology Conference 2015**, *"Fireside Chat: What Would You Expect From Software Defined?"*	Speaker	Dr. Leong Mun Kew
30 Jul	**5th Annual Cyber Security for Government Conference**, *"The Promise of Analytics in Cybersecurity "*	Speaker	Dr. Leong Mun Kew
19 Aug	**CIO Breakfast Roundtable by eGov Innovation**, *"The Invulnerable Government: Identity, Access & Security in the Cloud Era"*	Panelist	Dr. Leong Mun Kew
27 Aug	**Chief Digital & Innovation Leaders Roundtable**, *"Becoming a Truly "Digital Enterprise"*	Panelist	Dr. Leong Mun Kew
2-3 Sep	**Customer Experience Management Asia Summit 2015**, *"Building a Great Brand Experience and getting your employees to deliver"*	Stream Chairperson	Stuart Smith
3-4 Sep	**11th Annual Data Center Summit**, *"IoT is coming. Is your data center ready?"*	Panelist	Dr. Leong Mun Kew

Date	Event/Topic	Role	Staff
7-9 Sep	**19th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems**, *"How Big Data & Analytics is Transforming Healthcare"*	Chair	Dr. Carol Anne Hargreaves
7-9 Sep	**19th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems**, *"Data-driven Intelligent Systems"*	Chair / Co-Chair	Dr. Zhu Fangming / Fan Zhenzhen
7-9 Sep	**19th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems**, *"Artificial Neural Networks, Fuzzy Methods and Machine Learning"*	Chair	Dr. Ding Liya
10 Sep	CIO Summit 2015, "Why IT will be vital to Digital Transformation"	Chair	Dr. Leong Mun Kew
23 Sep	**An Overview of the Shipping Industry and the Challenges they face in reducing their Greenhouse Gases and Contributing to a Green Ship and Green Port Environment**	Speaker	Dr. Carol Anne Hargreaves
30 Sep	**NUS Temasek Foundation Programme for Leadership in University Management India,** *"Development of a National Education Centre of Excellence – Challenges & Opportunities"*	Speaker	Khoong Chan Meng
15 Oct	**SCS Project Management Clinic on Managing IT Project Risks**	Key Facilitator	Daniel Boey
19 Oct	**Healthcare Supplier Awards 2015**, *"Design Thinking on Healthcare Delivery"*	Speaker	Stuart Smith
20 Oct	**Connected Cities Forum**, *"One-on-One Interview"*	Speaker	Khoong Chan Meng
29 Oct	**CloudAsia 2015**, *"Soft Enablers for a Data Economy Panel"*	Moderator	Khoong Chan Meng
2-4 Nov	**84th INTERPOL General Assembly**, *"Roundtable on Future Landscape of International Policing"*	Speaker	Khoong Chan Meng
4 Nov	**21st IT Best Practices Seminar**, *"Leadership Panel - Staying Smart and Taking Risks in Today's IT World"*	Panel Chair	Dr. Leong Mun Kew
4 Nov	**21st IT Best Practices Seminar**, *"What does the Smart Nation Leader Need to Know"*	Panel Chair	Stuart Smith
17 Nov	**Bett Asia Leadership Summit 2015**, *"Interactive Keynote Polling Panel: Student outcomes: The impact of technology in the past, present and future"*	Panelist	Dr. Leong Mun Kew
18 Nov	**Bett Asia Leadership Summit 2015**, *Stream B Higher Education and Further Education*	Chairman	Dr. Leong Mun Kew
26-27 Nov	**KEY TO SUCCEED: Annual APAC Women's Leadership Forum**, *"Embracing Empathic Leadership"*	Speaker	Tamsin Greulich-Smith
2-3 Dec	**Digital Disruption Asia Summit 2015**, *"Digital innovation and design in a landscape where the autonomous customer is key"*	Speaker	Stuart Smith
15 Dec	**INTERPOL Lunchtime Talk on Future Trends in Innovation & Technology**	Speaker	Khoong Chan Meng

INDUSTRY EVENTS

13 Mar	ITSM Leadership Congress 2015	**7-9 Sep**	19th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES2015)
24-27 Mar	Black Hat Asia 2015		
25-27 Mar	PMI Singapore Regional Symposium 2015		
16 Apr	Certified Cyber Forensics Professional (CCFP®) Clinic @INTERPOL World 2015	**6 - 8 Oct**	Governmentware 2015 - Building a Secure Smart Nation
8 Jul	Singapore Computer Society Infocomm Professional Development Forum & Best Tech Company to Work For Award 2015	**8 -9 Oct**	SecureSingapore @GovWare 2015
		28 - 29 Oct	Cloud Expo Asia 2015
		4 Nov	ITMA 21st IT Best Practices Seminar
16 Jul	Workforce Advancement Summit 2015	**26 - 27 Nov**	Agile Tour Singapore 2015

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