

SWIM WORKSHOP

Bangkok, Thailand

16-18 May 2016

DAY 1 – MONDAY, 16 MAY 2016

Session 1: B1-SWIM objectives and definitions

09:00 – 10:00

Welcome to the ICAO SWIM workshop 2016!

The workshop will define the SWIM concept and provide early guidelines to different stakeholders for the implementation of a System Wide Information Management (SWIM) environment in compliance with ICAO provisions. It will also aim at introducing SWIM into the regional roadmaps, taking into account the transition from the current baseline.

The workshop will propose demonstrations of services and products and maximize opportunities of debates and questions/answers with SWIM international experts. As a participant, you will engage with some of the most advanced companies in SWIM services and solutions to prepare and undertake your transition to SWIM.

- Welcome remarks: **Mr. Arun Mishra**, Regional Director, *ICAO APAC Office*
- A perspective from the global solution providers on the future of SWIM: **Mr. Courtney Robinson**, Director CNS/ATM, Civil Aviation Infrastructure Aerospace Industries Association, *ICCAIA*

Mr. Courtney Robinson is the Director of CNS/ATM for ICCAIA and in that role has represented the organization at various ICAO forums including the Future of Aviation Technical Team, the General Assembly, and currently the RPAS Panel. Mr. Robinson started his aviation career at the U.S. Federal Aviation Administration ten years ago. He holds Bachelor of Science in Economics and Masters in Public Policy – International Affairs degrees, both from the University of Michigan.

- Administrative matters: **Mrs. Kiri Drollett**, Admin Officer, *ICAO APAC Office*

Ms. Kirimoke Drollett is the Administrative Officer for ICAO APAC Regional Office, and has newly joined the Office, since August 2015. Prior to joining ICAO, she spent over ten years at the United Nations for Educational, Scientific and Cultural Organization (UNESCO), in various administrative positions both in UNESCO Headquarters in Paris and also in the field. She holds a Bachelor of Commerce and Administration with a double major in Accounting and Commercial Law, from the Victoria University of Wellington, New Zealand. During the SWIM workshop, she will introduce the administrative and safety guidelines for the meeting, as well as a map of the event and the relevant facilities available.

- Introduction of participants

The ICAO SWIM workshop welcomes around 120 participants from different backgrounds and horizons. This makes this event an excellent stepping stone to pave the way forward regarding the planning and implementation of SWIM and of its prerequisites. Each participant is welcome to give a short summary of his background and expectations about the workshop.

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	<ul style="list-style-type: none">• Workshop overview: Mr. Frédéric Lecat, Regional Officer Communications, Navigation and Surveillance (CNS), <i>ICAO APAC Office</i> As a regional Officer CNS for the ICAO APAC Office since 2013, Mr. Frédéric Lecat facilitates APAC States' planning and implementation of the ICAO SARPs, policies, procedures and agreements with respect to CNS service for international air navigation. Previously he spent 15 years addressing change management, planning and program management mostly in the areas of Air Navigation Services (ANS), safety oversight, and Information Technology for the French ANSP and French DGCA. He also represented France in different working groups (ICAO, Eurocae, AEEC) and European programmes and initiatives (Eurocontrol and SESAR).• SWIM Programme Status: Mr. Saulo Da Silva, <i>Chief Implementation Planning and Support Section at ICAO Headquarters</i> Mr. Saulo José Da Silva is an Air Traffic Controller and Electronics/Telecommunication Engineer with a master degree in Air Transport Engineering. He has more than 30 years of experience in Air Traffic Management involving the provision of air traffic services, airspace and air traffic flow management, procedure design and flight inspection and the planning and implementation of automated systems in support to ATM. Former Secretary of the Air Traffic Management Requirements and Performance Panel which developed the ICAO SWIM concept he is currently Chief of the Air Navigation Implementation Section at ICAO HQ, responsible to provide support to the ICAO Regional Offices and States in the cost effective implementation of the Aviation System Block Upgrades.
10:00 – 10:30	<p style="text-align: center;">Coffee/Tea BREAK - First floor Visit the booths of our partners</p>

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10:30 – 12:00

- SWIM Manual Overview: **Mr. Saulo Da Silva**, Chief Implementation Planning and Support Section, *ICAO Headquarters*

- The Research and Development of SWIM in ENRI: **Mr. Xiaodong Lu**, Researcher, *Electronic Navigation Research Institute, Japan*

Dr. Xiaodong Lu received PhD degree in computer science from Tokyo Institute of Technology, in 2005. From 2005 to 2012, he was an assistant professor in the Department of Computer Science at Tokyo Institute of Technology. Now he is a principal researcher in Electronic Navigation Research Institute, Japan. His current research interests include System Wide Information Management (SWIM) for Global Air Traffic Management (ATM) and hybrid air traffic surveillance systems. He has published more than 80 research papers in international journals, international conference proceedings, and book chapters. He managed over 10 government research grants and joint research projects with companies, as well as servicing to many international conferences and societies.

- MET and SWIM: **Mr. Peter Dunda**, Regional Officer Aeronautical Meteorology (MET), *ICAO APAC Office*

Mr. Peter Dunda is the ICAO Regional Officer Aeronautical Meteorology (MET) in the ICAO APAC Office, where his main function is to facilitate APAC States' planning and implementation of the ICAO SARPs, policies, procedures and agreements with respect to MET service for international air navigation. Prior to joining ICAO in 2012, Peter worked as a professional meteorologist for 20+ years in the Australian Government Bureau of Meteorology, including senior management roles for the national MET services provided to aviation. Peter also represented Australia at ICAO and WMO forums concerned with the integration of MET into ATM.

- ATM and SWIM: **Mr. Shane Sumner**, Regional Officer, Air Traffic Management (ATM), *ICAO APAC Office*

Mr. Shane Sumner is an ICAO Regional Officer ATM in the ICAO APAC Office. He has over 30 years of experience gained with Airservices Australia, primarily in the fields of Air Traffic Control and ATM automation systems and ATS Surveillance systems management. Shane joined ICAO in January 2012, and among his various roles he is currently the Secretary of the Asia Pacific Region's Air Traffic Flow Management Steering Group (ATFM/SG) and AIS – AIM Implementation Task Force.

- Questions/responses

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12:00 – 13:00	<i>Lunch (cafeteria, first floor)</i>
Session 2: Where are we today?	
13:00 – 14:00	<i>Visit the booths of our partners</i>
14:00 – 15:00	<ul style="list-style-type: none"> • IATA SWIM perspectives: Mr. John Moore, IATA <p>John has 25 years experiences in Air Traffic Management (ATM) and related operational support and Management roles. He has worked in radar and non-radar en-route operations, radar Tower and co-located non-radar Tower/Approach positions during his ATC career.</p> <p>John also has extensive experience in roles of project and change management for airspace and air-route projects, as well as procedures, systems and operational software changes. This has included multiple Project and Program Management positions, including ATM Program Development & Delivery Manager, and Manager Operations for development of the operational concept for the OneSKY Australia Program which is replacing the ATM automation system for both civil and Defence operations in Australia. From 2013 to 2015 John was the Integrated Project Lead for Joint Transition Planning for Airservices and Defence within the OneSKY Program, as well as exercising the overall role of Deputy Program Director.</p> <p>John is an experienced public speaker having delivered a series of pilot safety forums around Australia on in-flight emergencies in collaboration with the Civil Aviation Safety Authority (CASA) and Australian Transportation Safety Bureau (ATSB), and has delivered presentations on Air Traffic Control in Australia to Engineers Australia and the Australian Institute of Project Management. John was part of the Senior Leadership Team for Airservices Australia from 2010 to 2015 also completing the Melbourne Business School Senior Leadership Program at Mt Eliza campus.</p> <p>John has a Commerce Degree from University of New England with majors in Accounting and Management Information Systems as well as qualifications in Project Management including recent completion of the Managing Successful Programmes Foundation course and Earned Value Management course.</p> <p>John has international experience having completed an airspace review in 2010 for the Indonesia Transport Safety Assistance Program (ITSAP) and was also the Australian member from 2011 to 2015 on the ICAO ATM Requirements & Performance Panel developing the concepts for international guidance for Air Traffic Management.</p> <p>In his current role of Assistant Director - Safety and Flight Operations (Infrastructure) in IATA's Asia Pacific regional office, John works in a broad field of Airline and ATM operations, safety related issues and in the monitoring and negotiation of aviation charges.</p>

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- Harris SWIM and operational examples: **Ms. Lisa Sullivan, Mr. Stuart Wilson, Harris**

Ms. Lisa Sullivan works in the area of GM & Strategy – SkyFusion – Critical Networks. She has a decade of experience in Aviation Communications and Information Management. Lisa has a MBA from Duke Fuqua School of Business with a concentration in strategy is now General Manager for SkyFusion project

Mr. Stuart Wilson, is an Advanced Programs Engineer for SkyFusion – Critical Networks. Being the Subject matter expert on aviation data integration, he has a M.S. in Applied Aviation Safety from Florida Institute of Technology with an emphasis on Flight Training Operations. Furthermore, he contributes to the ICAO Information Management Panel contributor on implementation of NextGen Information Services.

Coffee/Tea BREAK - Second floor
Visit the booths of our partners

15:00 – 15:30

- FAA SWIM Program: **Mrs. Jeri Groce, Federal Aviation Administration (FAA)**

Mrs. Jeri Groce has been with the FAA for 24 years. She has recently been selected as the new SWIM Program Manager. Jeri has been a key player in the SWIM Program as the Program Manager for the SWIM Terminal Data Distribution System (STDDS). Prior to joining the SWIM Program, Jeri was the Budget and Financial Management Lead in the Communications, Information & Network Programs (CINP), AJM-31. Jeri received the 2014 VP Outstanding Achievement Award for her leadership in deploying a new airport surface display capability at Southern California TRACON (SCT). Jeri Groce has a bachelor’s degree in Accounting, and a MBA from the University of Maryland University College, and holds the PMI PMP Certification.

15:30 – 16:30

- European SWIM State of Play: **Mr. Pedro Fernandez, senior information systems architect, EUROCONTROL**

Mr. Pedro Fernandez is project manager for the standardization of SESAR's SWIM Compliance that guides the deployment of SWIM in Europe.

As senior information systems architect at EUROCONTROL, he has been involved in SWIM from the very beginning of SESAR's development program, and contributed to a diversity of SWIM projects including: governance, registry, security, service design and infrastructure.

Graduated in computer engineering with studies in international economics, he has more than 15 years of experience in research, development and operation of distributed information systems in public and private international organizations operating global communication networks.

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- Frequentis' view on SWIM Development in SESAR, **Dr. Georg Trausmuth**, *Head of Corporate Research, Frequentis*

Mr. Georg Trausmuth is Head of the Corporate Research department of Frequentis based in Vienna, Austria. He leads and coordinates a number of applied research activities for different business areas within the Frequentis Group.

Major research undertakings of his group include work on the design of the future European ATM information platform within the EU Single European Sky ATM Research (SESAR) programme, including aspects such as data modelling, technical infrastructure design, security, and governance in a multi-stakeholder environment.

Mr. Trausmuth has been working for Frequentis for more than 15 years in various positions leading technology projects with a focus on architectural concepts and research. Before that he worked as a researcher at the Technical University in Vienna. He holds a Ph.D. in computer science.

DAY 2 – TUESDAY, 17 MAY 2016
Session 2: Where are we today? (cont'd)

09:00 – 10:00

- Enhancement to Operational AFS: **Mr. George Kerlin**, *Airservices Australia*

Mr. George Kerlin is currently the Team Leader, Aviation Information Services, Engineering IT; a role that he has held for four years. He has also been delegated Technical Authority accountabilities for 17 Airways Systems which used to provide aeronautical information services since 2008.

Before joining Engineering IT, he was a Senior Engineering Specialist discharging the broader Engineering (a combination of today's Technical and Maintenance) Authority accountabilities for a smaller number of systems within the AIS domain. He also provided software support for two internally developed and supported systems.

Prior to joining the then Civil Aviation Authority in 1994, he spent four years studying full - time for an Engineering degree. Before that, he worked as a Telecommunications Technician at Telstra where he had completed the four - year apprenticeship in 1988."

- Initial SWIM Project in China: **Mr. Xin Quan**, manager for Aero-Info Technologies, Co. Ltd, *Air Traffic Management Bureau of CAAC*

Mr. Xin Quan is the manager for Aero-Info Technologies, Co. Ltd, Air Traffic Management Bureau of CAAC. Since 2011, he worked on SWIM study and initial SWIM project in Beijing airport.

- Update on AEROTHAI's SWIM, **Mr. Chonlawit Banphawattharak**, *AEROTHAI*

Mr. Chonlawit Banphawattharak has been working in AEROTHAI with regards to the communication development for more than 10 years. He has background knowledge of communication and computer programming. Besides, he has been nominated to participate in various ICAO task forces / working groups both regional and panel level for example the ACSICG of

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	APANPIRG, the Aeronautical Communication Panel of ICAO, etc. At present, he is the chairman of the CRV (Common Regional VPN) Task Force of APANPIRG.
10:00 – 10:30	<i>Coffee/Tea BREAK - Visit the booths of our partners</i>
10:30 – 12:00	<ul style="list-style-type: none"> • Mini Global II – Asia/Pacific Presentation and Demonstration - <ul style="list-style-type: none"> Mr. Ngo, responsible for the research & development of NextGen, <i>FAA</i> Mr. David Leow, Senior Engineer in the Aeronautical Telecommunications Engineering Division, <i>CAA Singapore</i> Dr. Amornrat Jirattigalachote, Senior Strategy Planning Officer, <i>AEROTHAI</i> Dr. Xiaodong Lu, principal researcher at <i>ENRI (Electronic Navigation Research Institute), Japan</i> <p>Mr. Ngo is responsible for the research & development of NextGen concepts & capabilities. He conducts proof-of-concept demonstrations and operational trials to validate business case and benefits for potential capabilities to be implemented in the FAA National Airspace System. These projects focus on concepts which enhance safety, reduce delays, save fuel and reduce aviation’s environmental impacts. Mr. Ngo has served as Project Manager for the International Air Traffic Interoperability (IATI) initiative, Airborne Execution of Flow Strategies (fleet prioritization concept), and the Oceanic Tactical Trajectory Management (OTTM) program. Mr. Ngo has successfully led multiple international Flight Data Object demonstrations and the Mini Global I demonstration showing common flight information being exchanged between multiple Flight Information Regions. Building on the success of these demonstrations, he has been tasked with leading follow on demonstration projects such as the Mini-Global II Demonstration, International Interoperability Harmonization and Validation (IIH&V), and NextGen 4D Trajectory Demonstration with ATN Baseline 2. Mr. Ngo has earned bachelors and master’s degrees in electronics and computer engineering from George Mason University.</p> <p>Mr. David Leow is currently working for CAAS as a Senior Engineer in the Aeronautical Telecommunications Engineering Division. He was a member of the engineering team that was responsible the installation and operationalization of Singapore’s latest Air Traffic Management System. He is now in charge of the team responsible for implementing SWIM in Singapore and is also an advisor to Singapore’s member to the Information Management Panel.</p> <p>Dr. Amornrat Jirattigalachote is currently working for AEROTHAI in the position of Senior Strategic Planning Officer, especially in engineering systems. She obtained her Ph.D. in Optical Networking and has a background in surveillance engineering. For the past few years, she has been focusing on strategic planning for AEROTHAI, particularly around ASBU and APAC Seamless ATM Plan. She is also a key AEROTHAI personnel in SWIM development.</p> <p>Dr. Xiaodong Lu received PhD degree in computer science from Tokyo Institute of Technology, in 2005. From 2005 to 2012, he was an assistant professor in the Department of Computer Science at Tokyo Institute of Technology. Now he is a principal researcher in Electronic Navigation Research Institute, Japan. His current research interests include System Wide Information Management (SWIM) for Global Air Traffic Management (ATM) and hybrid air traffic surveillance systems. He has published more than 80 research papers in international journals, international conference</p>

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	<p>proceedings, and book chapters. He managed over 10 government research grants and joint research projects with companies, as well as servicing to many international conferences and societies.</p>
12:00 – 13:00	<i>Lunch (cafeteria, first floor)</i>
13:00 – 14:00	<i>Visit the booths of our partners</i>
14:00 – 15:00	<ul style="list-style-type: none"> The experience of GEMS provider in Mini - Global II Demonstration: Mr. Minoru Murakami, <i>Air Traffic Management Solutions</i>, Transportation and City Infrastructure Division, <i>NEC Corporation</i> <p>Mr. Minoru Murakami currently works for NEC corporation as a Senior Technical manager in Air Traffic management Solution <i>Division</i>. He has over 20 years of experience in software development and project management. He is now in charge of ATM system development for global market. In the past few years, he has been contributing to SWIM development, especially ASBU “Globally Interoperable Systems and Data” area (e.g. AIS/AIM). He is also a member of CARATS and an advisor of JCAB for ICAO Information Management Panel</p> <ul style="list-style-type: none"> Information Management at CARATS: Mr. Hiroyasu Shirasaki, secretariat of Information management at CARATS, <i>JCAB</i> <p>Mr. Hiroyasu Shirasaki is responsible for the secretariat of Information management at CARATS. In addition, he is in charge of the work related to International Aeronautical Communications in Japan. Besides he gained extensive knowledge from his experience as an Aeronautical Information Specialist in the Airport, and in Systems Development, Evaluation and Contingency management Center as a System engineer. He has been contributing to the introduction of Common Aeronautical VPN (CRV) in the APAC region. In addition, he is now in charge of ICAO Information Management Panel as Vice-Chairman from Jan 2015.</p>
15:00 – 15:30	<i>Coffee/Tea BREAK - Second floor</i> <i>Visit the booths of our partners</i>
15:30 – 16:30	<ul style="list-style-type: none"> Demo: SWIM Jumpstart – SWIM Registry: Mr. Pedro Fernandez, senior information systems architect, <i>EUROCONTROL</i> <p>The Registry is the inventory of reference for service related resources in SWIM. The SWIM concept aims at enabling direct ATM business benefits by assuring that the right information will be available with the right quality to the right person at the right time. Given its transversal nature, it covers all ATM information including aeronautical, flight, aerodrome, meteorological, air traffic flow, and surveillance. SWIM is an important driver for new and updated standards, infrastructure and governance, hence enabling the management of ATM information and its exchange between qualified parties via interoperable services.</p>

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- SESAR 4DWeather Cube: the one stop shop for MET in Europe: **Mr. Kamel Rebai**, *Météo France*

Mr. Kamel REBAÏ has an extensive background in CNS/ATM acquired during a 15 year career in French Technical Services for Air Navigation. Currently head of the IT Development in Météo-France (French Met Service provider), he has been leading since 2011 the development of the MET-GATE, access point to the European SESAR 4DWeatherCube.

- Updates and Issues from the participants

Participants are invited to share their plans and issues regarding SWIM.

DAY 3 – WEDNESDAY, 18 MAY 2016
Session 2: Where are we today? (cont'd)

- MID Initiative and Challenges on SWIM: **Mr. Abbas Niknejad**, ICAO Regional Officer AIM/ATM, serving AIS/AIM and SWIM matters in the *Middle East and Europe Regions*

Mr. Abbas Niknejad has previous experience as an Air Traffic Controller, AIS/AIM expert, Director of Iran AIM as well as an assistant Professor in the field of management and aviation instructor. He has 17 years of experience in civil aviation sector dealing with AIS, AIM and SWIM issues, plus PBN and ATM matters, at the national, regional and global level. He is graduated B.S. in ATS as well as Master and PhD. In management.

- SWIM, from pain to gain
Mr. Francois Delille, Director of Strategy, *Thales*
Mr. Yann Le Bars, System Architect, *Thales*

Mr. Francois Delille has over 30 years of experience in CNS/ATM domain. He is In charge of product and business strategy at Thales ATM ,and involved in the global ATM transformation initiatives (SESAR, GANP, NextGen).

Mr. Yann Le Bars has a master in Computer Science and Applied Mathematics and MBA. He has 20 years' experience in Systems Architecture including 6 years in the ATM business: 3 years as a SWIM architect and 3 years as an innovation specialist (SWIM and Big Data based application).

- Where are we today? – 7 year experience in SWIM development: **Mr. Tsvetan Penev**, SWIM Product Manager, *AVITECH GmbH*

Mr. Tsvetan Penev is the SWIM Product Manager in Avitech GmbH (an Indra Company), in Germany, and since recently also Team Lead for Product Management in Avitech. He is a graduate mathematician from the Technical University of Darmstadt, Germany, where he also worked as a research associate on a number of aviation research projects at the Institute of Flight Systems and

 09:00 –
 10:00

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	<p>Automatic Control (FSR). Mr. Tsvetan has been actively participating in different working groups, special committees with international organizations like RTCA, ARINC, OGC, setting up the new SWIM interoperability standards.</p>
10:00 – 10:30	<p style="text-align: center;"><i>Coffee/Tea BREAK - First floor</i> <i>Visit the booths of our partners</i></p>
10:30 – 10:50	<ul style="list-style-type: none"> Leonardo's SWIM status of play: Mr. Dario Di Crescenzo, <i>Leonardo (former Finmeccanica)</i> <p>Eng. Dario DI CRESCENZO is SESAR Deployment Business Development Manager and Project Engineering Manager at Leonardo (former Finmeccanica) with responsibility for Technical Coordination of Finmeccanica projects included in SESAR (Single European Sky ATM Research) Transversal and SWIM "domains". Since 2010 he is technical coordinator for SESAR WP14 projects involving Specification, Design and Implementation of SWIM Technical Infrastructure. Mr. Di Crescenzo has been appointed by SESARJU as Point of Contact (EU side) for EU/US coordination on SWIM among FAA and SESAR under CP (Coordination Plan) 2.2. In the past, Mr. Di Crescenzo worked at the Leonardo's ATM Research Centre (SESM) since 2001 with different responsibilities over time. He was responsible, in the frame of the European FP7 SWIM-SUIT project, for the development of an initial SWIM prototype which has been recognized as a baseline for SESAR activities on SWIM.</p>
<h3>Session 3: How to cope with the transition?</h3>	
10:50 – 12:00	<ul style="list-style-type: none"> Common IP – Based network CRV: Mr. Chonlawit Banphawatthanarak, Air Traffic Engineering Manager, <i>AEROTHAI</i> <p>Mr. Chonlawit Banphawatthanarak has been working in AEROTHAI with regards to the communication development for more than 10 years. He has background knowledge of communication and computer programming. Also, he has been nominated to participate in various ICAO task forces / working groups both regional and panel level for example the ACSICG of APANPIRG, the Aeronautical Communication Panel of ICAO, etc. At the present, he is the chairman of the CRV Task Force of APANPIRG.</p> <ul style="list-style-type: none"> Transition to Aviation XML (WXXM): Mr. George Kerlin, Senior Engineering Specialist, <i>Airservices Australia</i> Transition to Information Management: Mr. George Kerlin, Senior Engineering Specialist, <i>Airservices Australia</i>
12:00 – 13:00	<p style="text-align: center;"><i>Lunch (cafeteria, first floor)</i></p>
13:00 – 14:00	<p style="text-align: center;"><i>Visit the booths of our partners</i></p>
14:00 – 15:00	<ul style="list-style-type: none"> Communications: from the current environment to data management services and an integrated

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	<p>SWIM environment: Mr. Joe Knecht, FAA International Telecommunications Lead for the North American and European Regions, <i>FAA</i></p> <p>Mr. Joe Knecht is the FAA International Telecommunications Lead for the North American and European Regions, responsible for circuits and their use between domestic FAA locations and counterparts in Europe and Canada. He also has responsibility for AMHS (Air Traffic Services Message Handling System) for the FAA's International Program Office.</p> <ul style="list-style-type: none"> Seamless ATM plan and SWIM: Mr. Frédéric Lecat, Regional Officer Communications, Navigation and Surveillance (CNS), <i>ICAO APAC Office</i>
15:00 – 15:30	<p style="text-align: center;"><i>Coffee/Tea BREAK - Visit the booths of our partners</i></p>
15:30 – 16:30	<ul style="list-style-type: none"> Keynotes Closing