

The logo for WIS@key, featuring the text 'WIS@key' in a stylized, bold, black font.

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Special Side-Event at the *World Economic Forum*

Davos, January 21, 2015

Digital Identities and Cyber Security in the New Global Context

The Rise of Borderless Electronic Identities: Addressing Privacy, Security and Trust in the Post- Password Era

Executive Summary

Following an initiative by WIS@Key, OISTE, IKED and the Fraunhofer FOKUS Innovation Cluster next generation ID, this special side-event of the World Economic Forum 2015 brought together decision makers from policy, industry, research, international organisations and civil society around the world. Participants were in broad agreement on the need to push forward with a new platform and set of activities aimed to pave the way for a coherent system for digital identities, spanning geographical as well as sectoral boundaries.

Background

Electronic communication keeps expanding. With big data, convergence and the Internet of things we are on the move into yet uncharted territory. A wealth of new services, meeting our outstanding needs in health, education, commerce, and public services, could be developed and scaled in ways never seen before. Conversely, however, the disorderly access and diffusion of personal information without our knowledge harbours unknown risks.

Following developments ranging from the Snowden revelations to major hacks by criminal gangs, trust in the privacy and security of digital communication has come to

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a new low. Much is at stake, given the share of the global economy that is already based upon digital communication and its growing reach into new domains. Not only has the number of Internet users passed 2 billion. Another 5 are set to join in a few years down the road. Meanwhile, trillions of electronically communicating devices will emerge as well, each one of which will have to be embedded in trusted frameworks of authentication and authorisation framed to manage a myriad of constant borderless exchanges and transactions.

The situation calls for immediate action to increase security, interoperability, and privacy in order to regain trust. Capturing the opportunities and countering the threats requires new responses. More sophisticated passwords and heavier PKI will not do the trick. A seamless and systemic response is required.

Towards a Common Framework for Identity Management

It is in this context that the development and usability of trustworthy eServices need to be shaped. Multi-factor authentications and hardware based credentials, a sound approach to privacy protection of biometric credentials, and for interoperability of different authentication methods, along with a common understanding of their respective credentials, are in demand. So is the rise of support actions including better harmonized and more compatible regulation, legislation and data protection schemes.

Establishing a common framework for identity management represents a necessary building block in the discourse of achieving reliable borderless communication and transactions in an increasingly fast-moving digitalised global economy.

But how are different technological solutions to be reconciled? At what level are common protocols required? What cross-border legal interoperability is required for orderly authentication and authorisation in the world of tomorrow?

Is the introduction of a coherent system for electronic identities, including the tools to draw upon and integrate derived identities, the response that we need? Is a common European ID, in our part of the world, a step along the way? How can collaboration towards that end be devised so as to generate a platform on which we can build trusted e-services, with the user control, certification and support mechanisms that are required?

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Preparing Follow-up Work

Following extensive discussion on the issues, the solutions at hand and what it will take to overcome the barriers and allow for implementation of required solutions, the Davos event laid the basis for developing a "Charter" - *Towards a Coherent System for Trusted Identities in a Secure Internet*.

The objective is for such a charter to direct and operationalise follow-up work to the Davos 2015 event. It aims to establish a neutral platform for all the stakeholders working on Cyber security, Trust Models and Digital Identification to work together and collaborate on a common electronic identity system.

For Europe this task responds directly to the proposed Single European Digital Identity Community as envisaged by the Digital Agenda (DAE) in its Key Action 16. Other regions, the ITU and other multilateral bodies are likewise increasingly engaged with these issues. The agenda is further planned to align closely with the directions and Roadmap provided by the GINI project, comprising user control in sharing personal information, a new generation of service delivery, public data provision and user-driven operator services ensuring the integrity of data, reputational protection, intellectual property rights protection and trust.

Bringing Together Diverse Substantive Angles

The Davos Roundtable further explored the direct significance of such a common identity system for realising trusted e-services in diverse markets. This included a financial track bringing experts from M&A to discuss trends Global Cyber Security as the spending on this market is expected to reach \$100 billion in 2015 and is forecast to grow at an annual rate of 22 percent in the next five years to reach 160 million in 2018. The United States, China, Brazil and Europe account for 90% of all deals globally triggered by growing cyber threats and increasing awareness among both organisations and consumers of accelerating breaches and attacks.

In most regions, the private sector accounts for the majority of Cyber Security spending, with the U.S. the notable exception where government spending is almost equal to that of the private sector. The strong U.S. technology industry combined with the fact that the U.S. defence and intelligence budgets are significantly larger than in any other country are key market drivers.

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Other important drivers underpinning growth in Cyber Security spending include:

- Increasing cyber threats, both from new actors and new threat vectors (the paths that attacks can take).
- Greater vulnerabilities due to the more pervasive use of technology, particularly mobile devices and cloud computing.
- Increasing awareness of actual and potential threats.
- Changes in technology driving product and service innovation of security solutions.
- Increasing regulation, particularly those enforcing the requirement to secure personal data.
- Changes in outsourcing; some organisations are increasingly relying on partners for security, whilst others are growing internal security spending to maintain greater levels of control.

These various aspects were highlighted at the 2015 Davos event by the M&A Advisor, organiser of the well-known financial forums at Bloomberg in New York and London, and will form part of the background information for the next phase.



THE M&A ADVISOR JANUARY 2015

THE M&A ADVISOR SYMPOSIUM REPORT

Featuring

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Managing Director

Carlos Morais
Founder and CEO

Gregory J. Suhajda
Senior Managing Director

Gregory Androsian
CEO

Jeffrey Wells
Member, Committee of
Experts, Department of Justice
& Homeland Security

**> STALWARTS ROUNDTABLE:
CYBERSECURITY – PROTECTING FINANCIAL
PERFORMANCE**

At the M&A Advisor's 2014 Summit, Nov. 18, 2014 at the New York Athletic Club, Carlos Morais, Founder and CEO, WIS@key chaired a Stalwarts Roundtable discussion on Cybersecurity.

Noting multiple recent high-profile cases of corporate and government data breaches, Morais raised questions for the panel on whether cybersecurity should be elevated to the C-level of management and how CEOs and Boards of Directors should address cybersecurity concerns and requirements. More than 50 percent growth in M&A transactions in the cybersecurity industry in first half of 2014 is directly tied to the risk of cyberattacks on financial performance while spending on cybersecurity is expected to top \$100 billion in 2015 with a forecasted annual growth rate of over 20 percent over the next five years.

The principle issues covered included:

- Whether the US government will take action on cybersecurity threats in the private sector
- The need for "trusted identity" policies and technology to replace obsolete password technology
- Opportunities for startups in cybersecurity.

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Europe, meanwhile, has a stronger tradition and more diverse research and industrial experimentation how to strengthen privacy and build orderly data governance, including search mechanisms, that allow users to have a say how their identities and private information are being use.

Other important considerations highlighted at the event have to do with the need of ensuring trusted search mechanisms, and also ensuring trust interoperability between Cryptographic Root keys

Building on precursor event, Davos 2014

The 2015 event followed the great success of the Davos 2014 Roundtable "[Addressing Identity of People and Things, Privacy, Security and Trust on the Cloud](#)", sponsored by WIS@Key and with engagement by the GINI consortium.

The speakers, including Neelie Kroes, European Commissioner; Humberto Ribeiro, SCS – Ministry of Development, Brazil; Prof. Thomas Andersson, IKED; Prof. Alex “Sandy” Pentland, MIT and Marina Grigorian, Fraunhofer FOKUS, discussed the future of identity management and data governance under the moderation of Carlos Moreira. <https://www.wisekey.com/press/wisekey-exclusive-panel-identity-security-big-success-world-economic-forum-annual-meeting-davos/>

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Brief on Moderator and Panellists:



Carlos Moreira (Moderator)

From 1983 to 1998 United Nations expert on IT, eSecurity and Trust Models, working for ILO, UN, UNCTAD, ITC/WTO, World Bank, UNDP, ESCAP. Internet Web Pioneer; Founder, Chairman and CEO of WIS@Key SA. Founder and Secretary-General International Organization for Secure Electronic Transactions OISTE.org. Founding Member of the "Comité de Pilotage Project E-Voting" of the Geneva Government, Member of the UN Global Compact, Member of the World Economic Forum's Global Agenda Council. Founding Member World Economic Forum Global Growth Companies 2007. World Economic Forum New Champion 2007 to 2014, Vice Chair World Economic Forum Global Agenda Council on Illicit Trade 2012/14, Member of the 2014 Selection Committee for Europe for the World Economic Forum Global Growth Companies. Founder of the Geneva Security Forum SA, Member Global Clinton Initiative, Ambassador Malaga Valley, CoFounder Association International Mobility AIM. Member the World Economic Forum Global Agenda Council on the Future of IT Software & Services 2014 . Member of the New York Forum. Entrepreneur and investor in technology companies WIS@Trust SA.

Adjunct Professor of the Graduate School of Engineering Royal Melbourne Institute of Technology from 1995 to 1999. Head of the Trade Efficiency Lab at the Graduate School of Engineering at RMIT, eCommerce research project leader at the University of Minnesota, among other assignments.

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Radu Popescu-Zeletin

Prof. Radu Popescu-Zeletin has been Director of the Fraunhofer Institute for Open Communication Systems (FOKUS), a leading ICT applied research institution in Berlin, for almost 30 years. His former chair for "Open Communication Systems" at the TU Berlin is highly involved in the development of technologies for "I-centric communication" and "Autonomic Communication" as main constituents of the Future Internet.

Radu Popescu-Zeletin is founder of several telecommunication companies and member of the Microsoft Interoperability Executive Customer Council. Founder of the Interdisciplinary Studies on Policy, Law, Administration and Technology and of the Wireless World Research Forum.

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Thomas Andersson

Prof., Dr., Thomas Andersson is Chairman of the GINI (Global Identity Networking for Individuals) Consortium, a support action with the European Commission in recent years that is currently in a follow-up stage of Roadmap implementation. He is the Chairman of the International Organisation of Knowledge Economy and Enterprise Development (IKED), Chairman of the International Entrepreneurship Academy, and Chairman of the International Council of the Global Trust Center.

Among other assignments, Thomas Andersson is Senior Advisor in the Sultanate of Oman on issues of Research, Innovation, Higher Education and new initiatives in Smart City developments, on which he also engages in other such activities across the Middle East. Previously he was Vice-Chancellor of Jönköping University, Sweden, Deputy Director of Science, Technology and Industry at the OECD, Paris, and Assistant Under-Secretary of the Ministry of Industry and Commerce, Sweden. Further, he has been a visiting fellow at Harvard University, Sao Paulo University, Bank of Japan, and Hitotsubashi University, and has published widely.

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David Fergusson

Mr. Fergusson is the Co-Chief Executive Officer and President of The M&A Advisor, leading the firm's global services operations of research, publishing, media, summits and consulting for the world's premier constituency of over 350,000 mergers and acquisitions, financing and restructuring professionals from their offices in New York and London.

As editor of the "Best Practices of the Best Dealmakers"• book series and host of the M&A Advisor's exclusive thought leadership assemblies, Mr. Fergusson engages regularly with leading stalwarts in the finance industry, media, and government.

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Jean-Manuel Rozan

Mr. Jean-Manuel Rozan is a professional investor and financial markets generalist that is deeply engaged in the development of new search engines, among other subjects.

In the course of his professional career, he has lived eleven years in New-York and travelled extensively for missions across most of the United States, the major European countries, China, Brazil and other emerging and developing countries across Asia, Latin America, Africa and the Middle East.

As a writer of novels, essays, and articles, Jean-Manuel Rozan has displayed a wide range of interests. He is also a passionate horseman that has accomplished significant performances for an amateur rider in high level international Show Jumping Events.