



Asia-Pacific
Economic Cooperation

The Role of Standards and Innovation for Driving APEC's Silver Economy

Workshop and Recommendations Report

June 2017



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Abbreviations

AAL	Active and Assisted Living
AAI	Active Ageing Index
AARP	American Association of Retired Persons
ABAC	APEC Business Advisory Council
APEC	Asia-Pacific Economic Cooperation
APEC SCSC	APEC's Sub-Committee on Standards and Conformance
APEC SMEWG	APEC's Small and Medium Enterprises Working Group
DIIS	Department of Industry, Innovation and Science (Australian Government)
GRPs	Good Regulatory Practices
GVCs	Global Value Chains
ICT	Information and Communications Technology
IEC	International Electrotechnical Commission
IAL	Independent Assisted Living
ISO	International Organization for Standardization
IT	Information Technology
IoT	Internet of Things
IWA	International Workshop Agreement
JTC 1	Joint Technical Committee 1 (ISO/IEC)
MAW	Middle Age Workers
METI	Ministry of Economy, Trade and Industry (Japanese Government)
MHLW	Ministry of Health, Labour and Welfare (Japanese Government)
NQI	National Quality Infrastructure
NSB	National Standards Body
NSBs	National Standards Bodies
NTM	Non-Tariff Measures
NWIP	New Work Item Proposal
OECD	The Organization for Economic Co-operation and Development
PSG	Project Steering Group
SA	Standards Australia
SAG	ISO Strategic Advisory Group on Ageing Societies
SMEs	Small to Medium sized Enterprises or Small and Medium Enterprises
SyC AAL	System Committee on Active Assisted Living (IEC)
TBT	Technical Barriers to Trade
WHO	World Health Organization
WEF	World Economic Forum

Acknowledgements

This Silver Economy Workshop and Recommendations Report is the result of a collaborative effort between Standards Australia and National Standards Bodies in the APEC region, workshop speakers and participants. It was drafted and compiled by a team comprising Mr Damian Fisher, Project Team Leader and Senior International Engagement Manager; Ms Claire Gunning, Research Manager; and Ms Lucy Chalmers, Team Assistant and Policy Officer from Standards Australia.

The team worked under overall guidance of Ms Nicole Henry, Project Overseer and Manager, Trade and International Branch, Department of Industry, Innovation and Science (DIIS), Australian Government. Standards Australia also acknowledges Ms Melissa Harte, Policy Officer, DIIS for her input and support.

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We want to express our gratitude to the workshop speakers, presenters, breakout group facilitators and participants, without your support, insights and recommendations the workshop would not have been the success that it was.

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Australian Government

The contents of this report do not reflect the position or views of the Australian Government, APEC, Standards Australia or PASC. Neither Standards Australia nor any person acting on its behalf is responsible for any errors, omissions in, or the correctness of the information contained in this document.

Explanatory Notes

Details and percentages in tables do not necessarily add to totals because of rounding.

Reference to “dollars” (\$) indicates United States dollars, unless otherwise stated.

The term “billion” signifies a thousand million.

Foreword



The silver economy is emerging as an increasingly important source of economic growth for the Asia Pacific region. Yet many businesses and governments are not fully aware of, or prepared for the challenges of the demographic change taking place. We are at point of inflection with our population ageing at a faster rate than ever before in history. To address the enormous societal challenges ahead, APEC collectively needs to respond to the growing needs of ageing societies, especially in developing member economies. This is the first APEC project where there has been a special focus on the emerging silver

economy from a standards and innovation perspective. The growing impact of ageing societies calls for a new approach based on a strong public and private partnership between member economies comprising Government (at all levels), Regulators, National Standards Bodies, Research and Technical Organisations and Civil Society. Together, we can further develop market driven standardisation and innovation solutions to address and promote active and healthy ageing, and contribute to new employment and business opportunities.

One of the key observations from the APEC workshop is the need for all stakeholders to adopt a coordinated approach at both a regional and member economy level. Workshop participants recognised that member economies have varying needs and market requirements but there was broad consensus on the important role standards and innovation can play. A greater focus by APEC on age-friendly initiatives would create a supportive environment to meet the increasing demands of the region's ageing populations and directly lead to a new stream of business opportunities, investment, jobs and market growth.

We thank all those who participated in the APEC Silver Economy Workshop for their valuable support, involvement and suggestions.

The purpose of this Workshop and Recommendations Report is to provide a summary of the project and a synthesis of the main conclusions. It provides a high level assessment of developments taking place in member economies and offers suggestions for advancing APEC's silver economy.

Dr Bronwyn Evans
Chief Executive Officer, Standards Australia
ISO Vice-President (Finance)

Workshop Recommendations

The following key recommendations emerged from our discussions during the APEC workshop:

- Recommendation 1: APEC should **accelerate** and **mainstream efforts** in supporting ageing societies and the emerging silver economy;
 - This is critical for APEC's long-term economic future and societal wellbeing.
- Recommendation 2: APEC SCSC should develop a 3 to 5 year **Standardisation and Innovation Roadmap** to identify gaps, priorities and actions (at the member economy and regional levels) to chart the way forward;
 - Explore further work that NSBs, ISO and IEC could undertake to develop market-based solutions and where possible ensure that APEC priorities are identified and reflected in ISO and IEC's work programs.
- Recommendation 3: APEC should commit **more funding** and **resources** to support silver economy initiatives that **harmonize standards** (covering products, services, and processes) and **conformity assessment procedures, foster innovation, disseminate knowledge** and **promote Good Regulatory Practices**.
- Recommendation 4: Develop a **Standards Information Portal** within APEC's website to promote standardisation activities, exchanges of information, research and sharing of resources to support the silver economy growth opportunity.

Executive Summary

This **Silver Economy Workshop and Recommendations** report is a summary of proceedings of an APEC Subcommittee on Standards and Conformance (SCSC) sponsored workshop on the **Role of Standards and Innovation for Driving APEC's Silver Economy**, which was held in Sydney, Australia on April 4 – 5, 2017.

The workshop was a response to the key findings of the [APEC Silver Economy Issues Paper](#) (PDF) and the significant demographic challenges associated with ageing societies across the Asia Pacific region.

Therefore, the workshop's main aim was to foster a greater understanding of the complex and multifaceted issues, challenges and business opportunities to advance the development of market based standardisation and innovation solutions. In addition, the workshop was designed to identify and formulate specific recommendations for helping APEC realise the benefits of the emerging silver economy to enhance intra-regional and international trade in goods and services and contribute towards addressing the pressing needs of ageing communities.

The two day workshop was attended by 51 key stakeholders from government, regulators, national standards bodies (NSBs), trade promotion organisations, industry, consumers and academia representing 15 APEC member economies. A regional representative from ISO also attended. Workshop materials were provided by ISO, IEC and AARP.

The workshop was primarily designed to be output and outcomes oriented and included a broad range of 15 targeted presentations followed by 14 member economy High Level Market Updates. During the breakout sessions, participants discussed specific questions from a sectoral perspective covering six priority sectors. The group's work and findings reports were then discussed with all the workshop participants.



The aim of the workshop was to identify specific recommendations that APEC could consider to foster the growth and benefits of the Silver Economy.

Introduction

The workshop on the “*Role of Standards and Innovation for Driving APEC's Silver Economy*” was organised by Standards Australia with support from the Department of Industry, Innovation and Science, Australian Government (DIIS). The workshop brought together 51 stakeholders from across 15 APEC member economies¹; comprising government and regulatory officials, trade promotion organisations, industry and consumer stakeholders, academic, technical experts, NSBs and an international standards development organisation.

For the purpose of this APEC project, the silver economy entails a broad range of different but interrelated elements that cover:

“...existing and emerging economic opportunities associated with the growing public and consumer expenditure related to population ageing and the specific needs of the population over 50.”²

Objectives and Deliverables

As indicated earlier, the main aim of the workshop was to facilitate and foster a better understanding of the issues and challenges associated with APEC's ageing societies and business opportunities arising from the emerging silver economy.

The specific objectives of the workshop were to:

- promote a greater awareness concerning the ageing phenomenon and its impacts across APECs member economies;
- identify and prioritise key actions at the member economy and regional levels;
- enhance dialogue and cooperation between NSBs and their stakeholders to help address the enormous societal challenges and business benefits of the emerging silver economy; and
- contribute towards broader member economy efforts in stimulating the growth and development of the silver economy; thereby fostering innovation, generating employment and creating new business and growth opportunities in the Asia Pacific region.

The workshop participants were encouraged to come up with a list of priorities on which specific silver economy matters should be identified and make recommendations to APEC SCSC on the way forward.

1 The APEC member economies who participated in the workshop included; Australia, Canada, Chile, China, Indonesia, Japan, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Singapore, Thailand, United States and Viet Nam.

2 European Commission, Growing the European Silver Economy February 2015. The EU is one of the global leaders in researching and promoting silver economy opportunities. APEC should actively monitor the EU's work in supporting its ageing societies and consider areas where they could be joint research and development related to standardisation and innovation.

Workshop Agenda, Approach and Process

The workshop was designed and constructed to be output and outcomes driven and included targeted keynote presentations covering: the project rationale and background, findings from the APEC Silver Economy Survey and Issues Paper, demographics, smart technologies, information communications and technologies, workforce planning, and consumer and advocacy perspectives. This was supplemented by presentations on specific standards and related initiatives to support ageing in place through case studies presented by Canada, Singapore and the United States. The case studies were followed by APEC Member Economy Market Updates and breakout group work (see the *APEC Silver Economy Workshop Program*, beginning page 31). Mr Damian Fisher, Senior International Engagement Manager, Standards Australia and APEC Silver Economy Workshop Convenor, directed the proceedings of the workshop.

Workshop Outputs

The workshop delivered on the intended objectives and deliverables, which were to enable participants to:

- 1) review the key results and findings of the **APEC Silver Economy Survey** and **Issues Paper** to better understand the issues, challenges and opportunities related to ageing societies across APEC member economies;
- 2) increase an awareness, understanding and knowledge of the role that standards and innovation can play in supporting ageing societies and strengthening the silver economy;
- 3) advocate the use of standards and innovation as market based tools and solutions to help mainstream the longevity agenda into APEC's key priorities and future work plans; and
- 4) discuss and gain broad agreement on actionable recommendations for consideration by APEC SCSC, PASC and other fora to stimulate the development of an emerging silver economy in the Asia Pacific region.



Summary of Workshop Proceedings

Day 1

OPENING REMARKS

On behalf of Standards Australia, **Dr Bronwyn Evans**, Chief Executive Officer and Vice President (Finance), International Organization for Standardization, provided the opening remarks and started the APEC workshop by welcoming participants. Dr Evans stated this was the first time that APEC SCSC was examining the silver economy from a standards and innovation perspective. The Asia Pacific region is ageing fast and this has brought with it a number of policy challenges, but also business and employment opportunities. Furthermore, it was important that APEC looks at mainstreaming the concerns of ageing societies into APEC's agenda and priorities. Dr Evans also acknowledged the role and support of Ms Nicole Henry, Manager Trade Facilitation Section, Trade and International Branch, DIIS and APEC Silver Economy Project Overseer and Ms Melissa Harte, Policy Officer, DIIS. Dr Evans also thanked the Department of Foreign Affairs and Trade for funding this project under its APEC Economic Diplomacy Fund.



WELCOME MESSAGE

The workshop participants were officially welcomed via a video message by the **Hon Craig Laundry MP**, Assistant Minister for Industry, Innovation and Science, Commonwealth of Australia. Minister Laundry outlined some key demographic developments and spoke about the Australian Government's focus on fostering innovation to help address the ageing megatrend. The key messages were:



- Ageing populations represent new opportunities for the economy, business and the community.
- In 2015, the United Nations predicted that the number of people in the world aged 60 years or older would grow by 56 per cent from 901 million to 1.4 billion by 2030.³
- This means that while one in eight people was aged 60 or more in 2015, this is expected to rise to one in six by 2030.
- The fastest growth is expected to be in Latin America and the Caribbean, followed by Asia.
- For example, by 2020 the population over the age of 65 years will grow by 60 % in Japan, 11.4 % in Mexico and 80% in China.
- In Australia, one in four will be older than 65 by mid-century and about 1 in 14 will be over 85, up from 1 in 50 now.⁴
- Ageing populations present significant policy and societal challenges, but also present opportunities for businesses and market growth; benefits include new employment and careers, enhanced productivity, social redesign and generation of new consumer markets for age friendly products, services and assistive technologies.

³ http://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015_Report.pdf

⁴ <http://www.smh.com.au/comment/australia-at-24-million-high-points-and-hazards-in-the-demographic-data-20160212-gmszk2.html>

- The reality is that dominant market opportunity for future years will be for the 50-75 year group rather than the 20-35 year old population demographic; ageing societies need access to existing and new products, services and technologies.
- Spending on wellness, health care facilities, housing, education and employment, entertainment, tourism, hospitality, financial products and hobbies will increase dramatically.
- It is clear that governments throughout APEC, and indeed globally, need to consider alternative and cost effective solutions.
- In Australia, the Australian Government and Standards Australia are working together to consider how standards and innovation can support these changes.
- The resulting APEC Silver Economy Issues paper is based on a region-wide survey and is the first undertaken in APEC:
 - One of the paper's major recommendations supports mainstreaming of silver economy issues, reflecting the growing economic impact of this demographic group.
 - The paper also suggests an action plan for international standards fostering innovative solutions to the challenges.
 - Finally it recommends that we consider pilot projects that link standards and innovation on new products, services and technologies to fill market gaps.
- The Australian Government's wider agenda is to place innovation at the centre of industry and economic policy; strengthening our innovation system to support a strong innovation culture is critical to Australia's competitiveness and economic prosperity.
- This will create new sources of growth, maintain high-wage jobs and secure the next wave of economic prosperity.
- Advances in technology are transforming just about every part of our lives, from the way we work to the way we communicate and access services.
- Disruption is the new constant, making some previously accepted ways of doing things uncompetitive and obsolete.
- Either we acknowledge the changes driven by disruption or we risk being overwhelmed and disadvantaged by it.
- Innovation is about new and existing businesses creating new products, processes and business models, and that means adapting to new economic paradigms.
- At the same time, the Australian Government is working with its state counterparts to improve regulation; part of this is adopting international standards where possible.
- The reality of the new silver economy is that we have an opportunity to build effective and simple regulation from the ground up.
- Like the Standards Australia paper on Standards and Innovation for the silver economy, this APEC workshop is a first.
- Just as technology is disrupting accepted industry norms, the emergence of a new dominant age group represents disruption and innovation will help us work through the issues this presents.

INTRODUCTION – PURPOSE AND OBJECTIVES

Mr Damian Fisher, Senior International Engagement Manager and APEC Silver Economy Project Workshop Convenor, highlighted the purpose and objectives of the APEC workshop – to identify priority standardisation and innovation actions that can stimulate the growth of the silver economy in the Asia Pacific region.



SESSION 1: SETTING THE SCENE FOR THE SILVER ECONOMY

The Role of Standards and Innovation for Driving APEC's Silver Economy

Ms Nicole Henry, Manager Trade Facilitation Section, Department of Industry and Science, Australian Government & APEC Silver Economy Project Overseer presented the background rationale for this Australian led APEC initiative. Key messages from the presentation were:



- We are here today because we are aware that the world's population is changing at a pace faster than any time in recorded history. We are also here because we recognise that standards and innovation play an important role in allowing governments and industry to fully capture the opportunities associated with supporting the growth of the silver economy.
- The Australian Government recognises the APEC project's co-sponsors - China, Japan Mexico, Peru, Singapore, Thailand and the 2017 APEC hosts, Viet Nam.
- The challenge for governments is in determining the best policies and programs for supporting our ageing populations to ensure they can contribute socially and economically, while remaining secure and healthy for our societies. Adapting to an ageing society requires increased collaboration and social inclusion.
- Globally, this demographic megatrend has become a widely researched and very much discussed policy topic. The 2014 CEN-CENELEC's summit on standards supporting the silver economy noted that standardisation in support of the 'silver economy' will foster the development of new technologies to accommodate the ageing community, strengthen international collaboration and identify key business opportunities in fields covering the needs of elderly people.
- This workshop and the issues paper continue to build momentum on the importance of supporting the silver economy and brings together governments, industry and consumers to examine ways we can work together to foster innovative standards development opportunities to support productivity growth and increase standards of living.
- A Silver Economy Standards and Innovation Framework will serve to assist economies in coordinating efforts to identify and capitalise on the increasing demand for innovative products and services to support our ageing populations.
- It is not enough for individual member economies to progress issues on their own. Drawing on our collective examples is key. We need to collaborate on this very important global issue. Australia supports the recommendations of the Silver Economy Issues Paper and looks forward to working with APEC.
- We have a real and meaningful opportunity for SCSC to be on the forefront in APEC in outlining the policy settings required to support our aging populations.

The APEC Silver Economy Project and Issues Paper

Mr Damian Fisher, Senior Manager - International Engagement, Standards Australia and APEC Silver Economy Project Manager provided a brief background of the APEC Silver Economy project. He then focused on the main findings of the Survey (page 3 of the [Workshop Presentation slide pack](#), PDF). Key messages from this presentation were:

- The survey was open for 8 weeks from September to November 2016, and received 230 survey responses.
- 19 member economies participated in the survey.
- The survey was predominately answered by people aged between 40-60 years old (56%).
- 67% of survey answers were from an individual, 33% of surveys were completed on behalf of an organisation.
- A summary of current international and member economy standards related to the silver economy.



Three of the important findings from the survey:

1. A majority of respondents (59%) agree or strongly agree that the growth of the silver economy presents an opportunity for your industry/business society;

2. Two thirds of respondents are not aware of silver economy initiatives that either their member economy's government or NSB is undertaking to prepare for this new opportunity; and

3. Only a small number of respondents (16%) are aware of any member economy or international standards being successfully utilized.

The Issues Paper (published in March 2017, see page 7) provided the following key insights:

- There is strong support for mainstreaming silver economy issues in APEC's broader agenda. Ageing societies can be seen as a driver of future business opportunities and economic growth.
- There is an identified need for developing a Voluntary Action Plan which includes adopting and using international standards to foster innovation solutions.
- APEC should consider developing a five-year silver economy standardisation roadmap with a focus on leveraging a range of sectoral standards and innovation supported by NSBs.
- APEC members have a window of opportunity before the baby-boom generation retires to tackle the many challenges associated with ageing populations. However, the APEC survey highlights that the community is largely unaware of their governments' and NSB's work to prepare for the silver economy.
- APEC should consider funding pilot projects that link standards and innovation to create new products, services and technologies to address market gaps

ISO TMB Strategic Advisory Group on Ageing Societies

Dr Sabrina Pit, Workforce Research Stream Leader, Sydney University and **Ms Cynthia Payne**, Chief Executive Officer, SummitCare and Australian experts on the ISO Technical Management Board (TMB) Strategic Advisory Group on Ageing Societies briefed the workshop participants on this ISO initiative and progress to date (page 16 of the Workshop Presentation slide pack):



- Some 11 countries⁵ as well as a number of international organisations; including ISO, IEC and WHO have been actively involved in the ISO TMB SAG on Ageing Societies.
- In terms of defining “Ageing Society” it is important to cover ageing society, aged society and super-aged.
 - “Ageing society, where more than 7% of the population are 65 years or older and
 - “Aged society”, where more than 14% of the population are 65 years old or older (derived from past UN populations reports)
 - “Super-aged”, where more than 21% of the population are 65 years or older.
- The definition of Ageing Societies still needs debate and clarification.
- The ISO SAG Mandate was outlined and included identifying the challenges/opportunities, gaps in knowledge, priorities for ageing societies and next steps for ISO action.
- Some 15 different scenarios were considered and gap analysis was undertaken covering; regulations, standards, guidelines, industry best practice and other elements.
- Priority areas identified include:
 - Priority Area 1 – Universal design standards
 - Priority Area 2 – Ageing workforce
 - Priority Area 3 – Dementia
 - Priority Area 4 – Health promotion and preventative care in older age
 - Priority Area 5 – Technologies and systems for an ageing society
 - Priority Area 6 – Social connectedness (Communities multi-generational)
 - Priority Area 7 – Informal carers
- Key findings include: the need for standardized nomenclature; standards should consider all the needs not just care needs e.g. housing, safety, security, employment and social interaction; focus on person centered care and prevention; and there is a need for general principles not just processes.
- A final report will be submitted to the June 2017 ISO TMB meeting.

SESSION 2: THE EMERGING SILVER ECONOMY OPPORTUNITY

Smart Technologies for the Silver Economy

Professor Gregory Tegart AM FTSE, scientist, technology advocate and an octogenarian gave an inspiring and motivational keynote presentation on Smart Technologies for the Silver Economy (page 37 of the Workshop Presentation slide pack). During his lively presentation Professor Tegart outlined world demographic changes noting that globally there has been an epidemiological transition from infections



⁵ The following APEC member economies are involved in the ISO SAG on Ageing Societies; Australia, Canada, Japan, Singapore and the United States.

to chronic diseases as the primary cause of death. He then went on to discuss the importance of the silver economy, the challenges of an ageing population and the role of smart technologies in healthcare.

Professor Tegart highlighted the following key points:

- Opportunity areas for improving the quality of life for the aged population include:
 - Security and safety;
 - Diagnosis and treatment;
 - Mobility;
 - Telehealth (is a leading example of the interaction of innovation and standards); and
 - Health; including mobile phones and apps.

He made the important point that underlying all of these opportunities is the need for communication and social interaction.

- Converging technologies such as nanotechnology, biotechnology, ICT and cognitive science offer a wide range of possibilities for innovation but the big challenge is creating appropriate and effective new standards.
- In his concluding remarks, Professor Tegart challenged the audience to bring fresh thinking and to encourage non-traditional innovators and new business models.
- NSBs need to be cognisant of the potential of innovations based on converging technologies and also support consumers with standards based on flexible and customer- focused perspectives.
- APEC should consider using foresight techniques as a systematic means of technological assessment to promote greater linkages between innovation and standards to support the growth of the silver economy.

The Important Role of Digital Technologies and Innovation in Active Ageing

Mr Mathew Varghese, Chief Technology Officer, Software, Asia Pacific & Japan, CISCO Systems (USA) Pte Ltd prepared a detailed and informative presentation on digital technologies which was presented by **Ms Claire Gunning** from Standards Australia on his behalf. The main objectives of the presentation was to introduce and understand the role of digital technologies in the context of active ageing. The comprehensive presentation provided examples of digital technologies being used in the United States of America (e.g. illness monitoring, health assessments, telemedicine In home care), EU (e.g. self or event activated sensors, robotics, virtual reality, imaging, video conferencing), Japan (e.g. robotics, sensors and video conferencing) and China (e.g. GPS, sensors, Personal Learning and Thinking Skills, smart watches, smart toilets and smart communities). The presentation then looked at the factors influencing technology adoption by the silver generation. Some observations from the presentation are:



- Areas for potential further standardisation include; security, data transfer and communication.
- Japan has a stated preference for silver generation technologies that meet standards.
- Interoperability is another key challenge; patients navigate their healthcare journey - their data does not!

- Some of the main hurdles for the adoption of technology for the silver generation include; no or limited internet access; lack of awareness; inadequate marketing, inadequate design and anxieties associated with technologies that have complex interfaces and extensive functionalities.

Potential Areas of Standardisation Responding to the Ageing Society in Japan

Mr Yu Terada, Senior Consultant, InterRisk Research Institute & Consulting Inc and a member of the ISO SAG on Ageing Societies, outlined the issues surrounding Japan's population ageing and the Japanese Government's response. His presentation also covered a very interesting research project underway by JISC/METI, (page 86 of the Workshop Presentation slide pack). Key messages from the presentation are summarised below:



- Japan is a “graying” nation, with the member economy's population estimated to reduce from 128.6m (2010) to 86.74m by 2060!
- Working age population (aged 15-64) is expected to reduce from 81.73m to 44.18m during the same period.
- Social security costs (e.g. pensions, medical care, nursing care) will increase and the Japanese government is implementing a wide range of measures to address this challenge including the restructuring of the health system.
- METI and MHLW have identified the following priority areas for development support;
 - Transfer aids, mobility aids, toileting aids, bathing aids and monitoring systems.
- Japan has undertaken a very innovative research project on standardisation that is instructive for APEC.

Overview of Current Standards Initiatives to Support Ageing in Place in Canada

Ms Nicki Islic, Standards Manager, Health and Safety, CSA Group, gave a presentation (page 102 of the Workshop Presentation slide pack) describing some exciting standards work that CSA is leading to support Canada's ageing population. Nicki initially touched on the need to take a holistic approach to addressing needs and gave some examples of 'age friendly' standards in action including; CSA-B659 Inclusive Design for an Ageing Population and CSA EXPO8 – Hip Protectors which is currently under development and a number of other standards covering requirements for hemodialysis and peritoneal dialysis performed in home settings and Point-of-Care-Testing and Recloseable “senior friendly” packaging.



The presentation then focused on CSA's work at the provincial level which has seen the development of accessibility standards across a number of sectors, and also at the Federal Government level, in areas such as National Building Code and Wayfinding in Health Care Facilities.

Key messages from the presentation are summarised below:

- It is important for SDOs to develop key principles and apply the ageing society 'lens' on standards development work.
- It is vital to engage with seniors and include them on technical committees to gain insights and better understanding.

- There is a clear need to engage all stakeholder groups – seniors, caregivers, employers, health care providers, service providers and product designers in the standards development process.

Chief Michael Nolan, on behalf of the Paramedic Association of Canada, County of Renfrew, then followed on the second part of the joint session with an inspiring and thought provoking overview of the Community Paramedicine Standards Project. He spoke on the changing role of licensed paramedics who are now providing immediate or scheduled primary and/or specialized healthcare to vulnerable patient populations including older persons. He then outlined Community Paramedic models of care and discussed the current development of a National Standard CSA Z1630 Community Paramedicine Support. The presentation included a video of the project in action, and covered the purpose, scope and key elements of the proposed standard. In terms of next steps, it is anticipated that the standard will be published in the second half of 2017 and will be submitted to ISO as a New Work Item Proposal (NWIP) in the medium-term.



Developing a Silver Economy Roadmap

Dr Calvin Chan, member, Singapore Silver Industry Standards Committee and Chairman of the Technical Committee on Technology for Older Adults, gave a presentation on Singapore's journey in developing a silver economy roadmap (page 137 of the Workshop Presentation slide pack). He described Singapore's challenge of dealing with a rapidly ageing population and how SPRING Singapore and the Singapore Standards Council jointly developed and launched the Silver Industry Standards Roadmap. The roadmap charts Singapore's current and future direction of standards development and implementation over the next five years to support the needs of older persons at the individual, community and national levels. To achieve this outcome, SPRING Singapore with its stakeholders, have undertaken a four phased approach:



1. Strategic Planning Session
2. Formation of Co-ordinating Taskforce
3. Study Trip, and
4. Framework & alignment with Action Plan for Successful Ageing.

Dr Chan explained that the Silver Industry Standards Roadmap is a framework based on four key elements of live, work, play and infrastructure development to support older persons needs. It was developed in consultation with multiple stakeholders comprising government agencies, industry associations, civil society organisations, higher education and industry. The framework comprises the following elements:

- a) Live – to enable the elderly to live a quality life and age-in-place in their home independently and safely;
- b) Work – to foster an age friendly and inclusive inter-generational working environment;
- c) Play – to encourage the elderly to lead an active ageing lifestyle; and
- d) Infrastructure – to enhance accessibility through suitable infrastructural design within the community and home, and enable pervasive use of digital solutions among the elderly.

SESSION 3: HIGH LEVEL MARKET UPDATES

This session involved presentations from each of the APEC member economies. Presenters outlined the ageing demographic in their respective markets, the value or benefits of supporting the silver economy as well as issues/challenges and opportunities each economy faces, (page 157 of the Workshop Presentation slide pack). The first three presentations were delivered by:

- Australia (**Ms Nicole Henry**), Canada (**Ms Nicki Islic**) and Chile (**Mr Alex Chaparro**)

Following afternoon tea the following economies presented:

- China (**Dr Jianbing Liu**), Indonesia (**Dr Zakiyah**), Japan (**Ms Atsuko Saruhashi**), Malaysia (**Mr Mohd Hamzaini Hashim**), Mexico (**Ms Diana Alvarez Carreno**) and New Zealand (**Ms Patricia Cunniffe MNZM**)

Day 1 of the workshop finished with a short wrap up by Mr Damian Fisher followed by a reception hosted by Dr Bronwyn Evans, Chief Executive Officer, Standards Australia for workshop participants.

Day 2

Day 2 of the workshop opened with a short summary and review of the previous day by Damian Fisher.

SESSION 4: REALISING THE POTENTIAL

Age of Opportunity

Mr Bradley Schurman, Director for Global Partnerships and Strategic Engagements at AARP gave a very insightful and thought provoking presentation on the topic 'Age of Opportunity'. He challenged the workshop participants and their respective organisations to reconsider the question of what is old. Mr Schurman provided background on the AARP (American Association of Retired Persons) which is the largest non-profit membership organisation in the world. AARP has a large and significant international outreach with globally focused programs and research. They are also responsible for publishing the Aging Readiness and Competitiveness Report and providing financial support to the Global Age Watch Index. Mr Schurman highlighted some key findings from the abovementioned report and the focused attention on the emerging opportunity and some key innovation lead initiatives by AARP. Detailed below are some of the salient points, (page 216 of the Workshop Presentation slide pack):



- China's % of persons aged 60+ is projected to grow 21% and reach 36.5% by 2050, exceeding the average level of high-income economies.
- Today, in the USA, there is a 50% chance that a 10 year old child will live to be 104.
- By 2015, there were more than 1.6 billion people in the world, who were part of the 50- plus cohort. By 2050, this number is projected to double to nearly 3.2 billion people.
- AARP is heavily involved in investing for the future through funding Ageing in Place, Convenience and Access to Healthcare and Preventative health programs.

The presentation also provided insights into the diverse range of services and support that advocacy organisations can provide.

Navigating An Ageing Workforce – Case Studies And Solutions

Ms Alison Monroe, National Director, Australia & New Zealand, Sageco - a leading expert on workforce planning and transitioning Mature Age Workers (MAW) presented on the topic “Navigating An Ageing Workforce,” (page 246 of the Workshop Presentation slide pack). The presentation explored the risks of losing the talent pool and contributions of MAW in companies and organisations. Loss of human capital, waste of corporate knowledge, reduced or lost productivity and brand reputations are all significant risks that businesses need to manage. Through the Sageco approach and methodology there is an opportunity to maximise the contribution of MAW to businesses. Namely, increase return on investment, intentional knowledge transfer, enhanced employee value proposition while also protecting an organisation’s brand in the market-place. Ms Monroe spoke on a very successful Australian Government’s Department of Employment 3 year project (2013-2016) Corporate Champions which was targeted to improve MAW planning and retention. This was followed by another case study in the banking and finance sector.

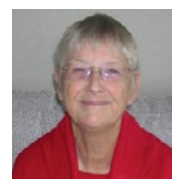


Ms Monroe highlighted some key opportunities for action:

- Attraction and recruitment
- Engagement and retention
- Health and wellbeing
- Knowledge transfer
- Knowledge loss is a high risk; you have employees i.e. SMEs with critical knowledge – how can you capture their knowledge, and how can you transfer this knowledge to other workforce generations?

Pure Gold in the Silver Economy

Ms Patricia Cunniffe MNZM, Director of Joll Cunniffe Developments Ltd, in her presentation discussed the work of the International Electrotechnical Commission (IEC) in supporting ageing societies, (page 266 of the Workshop Presentation slide pack). Ms Cunniffe highlighted the focus by the IEC to address the growing complexity of the electrotechnical area through the development of its systems approach to standardisation. This approach has been employed in Active and Assisted Living (AAL) and Smart Cities.



Key messages were:

- Standards users are increasingly engaged in their health
- Greater focus on lifestyle and wellness, and prolonging independent living
- Care is shifting to decentralised lower cost settings, optimised for the individuals needs
- Internet of Things (IoT) can create additional value when consumer IoT systems (e.g. wearable smart devices and AAL housing are connected to B2B systems i.e. service provided by assistive persons.

From a consumer centric position, the presentation explained the importance and context of AAL and the establishment of the IEC Systems Committee IEC (SyC) to deal with standardisation issues relating to AAL. A number of AAL use cases were also discussed. The presentation concluded with a summary of challenges in 2017 and

beyond and the role that a systems approach can play to improve outcomes for older persons.

Chile's Experience in Design and Construction of Seniors' Housing

Mr Ignacio Santa Maria Mujica, member of the Chilean Chamber of Constuction presented exciting developments taking place in the built environment and housing sector in Chile. The presentation initially focused on Chile's demographic and socio-economic context and then moved into the role of standards and regulation, including a discussion of the main modifications of the construction law to support older persons and people with disabilities. The presentation described a number of leading examples of innovative housing projects for low and middle income groups which is being funded by the Chilean Chamber of Construction. Towards the end of the presentation the Garden Suites project for residential housing for older persons in Santiago which is being managed by Ignacio to promote active and healthy living was highlighted. Key messages:



- The Chilean building and construction industry is ready and well positioned for the challenge of its ageing society.
- There is a growing need and market requirement for additional investment in public and private senior housing stock for low income groups, this opportunity is not only in Santiago but across Chile.
- The Chilean construction sector is keen to share its experiences and insights of developing seniors' housing with other APEC economies, and
- Chile is a land of growing silver economy opportunities, particularly in the building and construction sector.

SESSION 5: HIGH LEVEL MARKET UPDATES (CONTINUED)

This session involved further presentations from APEC member economies. Presenters outlined the ageing demographic in their respective markets, the value or benefits of supporting the silver economy as well as issues/challenges and opportunities each economy faces, (page 325 of the Workshop Presentation slide pack).

- Papua New Guinea (**Mr Jack Simbou**), Peru (**Mr Walter Raul Ramirez Eslava**), The Philippines (**Ms Myra Magabilin**⁶) & Singapore (**Ms Joy Tan**).

Following lunch the remain APEC economies presented.

- Thailand (**Ms Wantanee Phantachat**) and Viet Nam (**Ms Vu Thi Phuong**).

⁶ The Philippines were unable to attend the workshop but their presentation was made available to all participants and other interested stakeholders.

Key Themes and Insights from Workshop Participants

Throughout the course of the workshop a number of recurrent themes and insights became apparent during open discussions and questions from participants. One of these observations was that to provide innovative solutions, businesses require a stable regulatory and standardisation framework that is market oriented and strengthens competition among technologies. Importantly, it was also recognised that the views and contributions of our silver economy should be considered to a greater extent within these innovations. An ageing population that feels empowered and engaged will positively contribute to their future and to our societies. Workshop discussion focused on big picture thinking and the desire to exchange best practises between the APEC member economies to unlock the potential of the silver economy.

Some of these high level themes are noted below;

Standardisation and Information Sharing

- APEC member economies need to optimise information sharing by performing a gap analysis to identify key resources, policies, standards and best practices. By doing this, we can ensure that each member economy can access examples of solutions and adopt or tailor them to their own market if necessary.
- Participants supported the development of an APEC five-year silver economy roadmap, supported by a NSB led Voluntary Action Plan for the adoption and use of international standards, to support innovation solutions and facilitate cross border products and services. Further consideration is needed to clarify how we can harmonise efforts and increase market awareness across APEC.
- The importance of avoiding duplication and sharing information between our APEC economics was highlighted.
- The belief that Standards can help provide credibility and value in the silver sector.
- Standards need to be inclusive of the 'entire' population. Can there be a mechanism for the standard development process to specifically consider the older generation?
- There needs to be regulation/standards for Minimum Access Features in all new housing.
- Standards need to focus more on 'services' and not just products.

Technology

- Useability of technology for older people is a challenge and more consideration is needed when developing technology to bridge the gap.
- Can standards keep up with the pace of technology? The time for the development of standards is too slow in relation to technology. How can we minimise the development time of standards?
- There needs to be greater acknowledgement of the importance of digital technology combined with the human touch.
- Member economies need to focus on the importance of social inclusion and ensure that older people feel connected to society. Social isolation is identified as one of the key issues affecting older people.

Changing How We Do Things Currently

- Member economy policies need to work towards an increase in independent living for the silver economy.
- We need to identify key areas that can be implemented and rolled out across the economies.
- There is a need for more focus on housing, public space accessibility and design rules.
- There is understanding that we need to shift funds into preventative care although many APEC economies are polarised in how best to do this.
- Increasing public transport costs and the accessibility design of public transport need to be addressed as these factors affect social isolation.
- All member economies need greater government leadership and issue management in this sector.
- House designs should be adapted to “whole of life”. All new houses built should be designed to allow wheelchairs and design consideration aimed at older generations or disabled. This would decrease the costs of retrospectively adapting housing stock in the coming years.

Ageism

- There needs to be acknowledgement of the diversity within the ageing population – not all aged people require a wheelchair, or vision impairment devices, or cannot use technology. These generalisations are affecting the ability to reaching potential.
- Bias and ageism is a big issue within all our member economy communities.
- There is a compelling case of the economic power, productivity and spending capacity of people of 50 – although this message is often lost.

Inclusive Workplaces

- We need to work towards an inclusive economy with all able people working and having access to work.
- Age discrimination exists within the workforces of the member economies. Older people are often overlooked for training, development and promotion and often the first to be made redundant.
- Knowledge loss and costs of replacement is a high risk for businesses that is often not considered.
- There is a lack of understanding of the risks to our economies and companies if we do not adapt to diverse workforces. Can standards help address this through recruitment standards, workplace flexibility standards, skill mobility standards?

Conclusion: What Will We Take Away From This APEC Workshop?

Workshop participants stated that they highly valued the opportunity over two days to debate, discuss, and share insights and experiences from a diverse range of perspectives. The workshop presentations, discussions and recommendations all point to the important contribution standards and innovation makes to support APEC's economic future and social wellbeing.

Ageing societies are an important growth market and employment generation opportunity which APEC needs to collectively harness and support at the regional and member economy levels. Coordination and collaboration is of utmost importance in mainstreaming the silver economy agenda in APEC. Workshop participants and presenters hope the outputs and four recommendations will contribute towards the advancement of APEC's consideration of a standards and innovation roadmap. Our future is determined by our actions today!

About Standards Australia

Founded in 1922, Standards Australia is an independent, not-for-profit organisation, recognised by the Commonwealth Government as the peak non-government Standards development body in Australia. It is charged by the Commonwealth Government to meet Australia's need for contemporary, internationally aligned Standards and related services. The work of Standards Australia enhances the nation's economic efficiency, international competitiveness and contributes to community demand for a safe and sustainable environment.

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Appendix A

Session 6: Breakout Sessions

Six breakout sessions along industry sectors were organised to consider the following four questions:

1. *What could APEC do to advance the adoption and use of international standards to support the silver economy in your sector of interest?*
2. *What are the three main hurdles or obstacles in your sector that are hindering the silver economy?*
3. *Are there any existing ISO, IEC or APEC member economy initiatives, standards or practises related to your sector that should be highlighted and promoted by this APEC forum?*
4. *What is an achievable short term goal(s) (standards development or other) that APEC can aim towards in your sector?*

Group 1 – Building and Housing

Group 2 – Mobility and Transport

Group 3 – Health

Group 4 – Information and Communications Technology

Group 5 – Travel, Leisure, Social and Community Engagement

Group 6 – Workforce Planning, Training and Employment for Older People



Breakout Group 1 – Building and Housing

Participants:

1. Ignacio Santa Maria – Chile
2. Walter Ramirez – Peru
3. Melissa Harte – Australia
4. Ron Pulido – Australia
5. Joy Tan – Singapore
6. Mohd Hamzaini Bin Hashim – Malaysia
7. Atsuko Saruhashi – Japan

Question 1. *What could APEC do to advance the adoption and use of international standards to support the silver economy in your sector of interest?*

- Sharing of experiences
- Transition from voluntary to mandatory standards
- Domestic to international
- Separation of specific key elements out of the broader standards
- Separation of key construction standards for easier adoption
- Functionality and usability of international standards across all APEC economies
- Gap analysis – sector specific
- Accessibility broader than just ageing
- Dependent versus independent living

Question 2. *What are the three main hurdles or obstacles in your sector that are hindering the silver economy?*

- How do you standardise something so broad?
 - Difficult to map
- Lack of political understanding and awareness:
 - Not articulated well in policy
 - There is still a strong social awareness
- High costs involved:
 - Incentives are required

Question 3. *Are there any existing ISO, IEC or APEC member economy initiatives, standards or practises related to your sector that should be highlighted and promoted by this APEC forum?*

- ISO Assisted design e.g. ISO/TC 59 SC 16 Accessibility and Useability of the Built Environment
- DS50 – Universal Accessibility (Chile)
- MS114 – Universal design and accessibility in build environment (Malaysia)
- SS605 – Guide for age friendly homes (Singapore)
- External amenities:
 - SS485 – specification for slip resistance classification of pedestrian materials
 - SS534 – specifications for outdoor equipment for public use

Question 4. *What is an achievable short term goal(s) (standards development or other) that APEC can aim towards in your sector?*

- Sector specific gap analysis:
 - APEC
 - ISO
 - IEC

- APEC SCSC workshops
- Good Regulatory Practice conference – Silver Economy specific
- Promote ISO and IEC TCs and membership in APEC economies

Group 2 – Mobility and Transport

Participants:

1. Karen Batt – Australia
2. Anne Livingstone – Australia
3. Yu Terada – Japan
4. John Furbank – Australia

Question 1. What could APEC do to advance the adoption and use of international standards to support the silver economy in your sector of interest?

- Gap analysis of what is available internationally and nationally to support mobility and transport for the silver economy. And to identify standards required to support new means of transport (e.g. safe driverless vehicles, safe use of scooters and new ways to get around for vision impaired people, modified vehicle standards)
- Review work of ISO/TC 173 Assistive products for persons with disability, ISO/TC 204 Intelligent transport systems, ISO/TC 299 Robotics, ISO/TC 22 Road vehicles, ISO/TC 20/SC 16 on unmanned aircraft systems and others
- Monitoring recommendations from ISO's Strategic Advisory Group Aging Societies (ISO/SAG A) and IEC AAL as well as IWA 18:2016 Framework for integrated community-based life-long health and care services in aged societies

Question 2. What are the three main hurdles or obstacles in your sector that are hindering the silver economy?

- Some standards already existing conflict with goals for the silver economy (e.g. AS 1428.1 tactile ground surface indicators (dots on the ground for vision impaired persons) can be a problem for scooters and wheel chairs)
- Time to develop standards particularly international standards is lengthy, particularly in controversial areas. (3 year average for International Standards)
- Low level of consumer engagement in standards development can be a challenge to ensure the standard is fit for the audience
- Standardising at the right time in the innovation cycle
- Challenges of competitors sharing ideas/technology in the interests of making products interoperable. And identifying all the players in the sector that need to be involved

Question 3. Are there any existing ISO, IEC or APEC member economy initiatives, standards or practises related to your sector that should be highlighted and promoted by this APEC forum?

- Work underway on ISO Technical committees:
 - ISO/TC 173 Assistive products for persons with disability;
 - ISO/TC 204 Intelligent transport systems;
 - ISO/TC 299 Robotics;
 - ISO/TC 22 Road vehicles; and
 - ISO/TC 20/SC 16 on unmanned aircraft systems.
- The work of IEC Active Assisted Living (AAL) and ISO Strategic Advisory Group on Ageing (SAG A)

Question 4. What is an achievable short term goal(s) (standards development or other) that APEC can aim towards in your sector?

- Gap analysis or review/update of existing gap analysis on international standards (ISO/IEC) supporting mobility and transport for the silver economy

Group 3 – Health

Participants:

1. Brett Lovett – Australia
2. Chris Westacott – Australia
3. Nataya Seetubtim – Thailand
4. Diana Alvarez – Mexico
5. Dugald Anthony – Australia
6. Nicki Islic – Canada
7. Regina Robertson – Australia
8. Sheleaswani – Malaysia
9. Titah Sihdjati Riadhie – Indonesia
10. Greg Tegart – Australia

Question 1. What could APEC do to advance the adoption and use of international standards to support the silver economy in your sector of interest?

- Define “Health” in this context: Aligned to WHO definition, 1948
- Have a clear vision around the objectives of new Standards; i.e. limiting the need of the elderly to visit hospitals, and the importance of keeping people in their familiar environment
- Develop a Standards “Roadmap” (develop list & identify gaps/develop strategy to address gaps)
- Develop a single set of Standards for use by all APEC member economies
- Considerations:
 - Defining a common set of units for nutrition, potentially scaling; and
 - Keep in mind quality of life for recipients

Question 2. What are the three main hurdles or obstacles in your sector that are hindering the silver economy?

- Not all APEC economies are equal; some are unable to test and verify with as much precision as others
- Some ISO standards are not fit for purpose for some member economies due to geography, funding, infrastructure, the political environment or otherwise
- Increasing costs of healthcare means we have to be rapidly innovative and have a focus on prevention

Question 3. Are there any existing ISO, IEC or APEC member economy initiatives, standards or practises related to your sector that should be highlighted and promoted by this APEC forum?

- Community Paramedicine (Canada)
- Caregiver – Friendly Workplace Programs (Canada)
- Wheelchair and Walking Aids (Thailand)
- Prosthetics and orthotics (Thailand)
- Hospital Acquired Infection (Canada – Research)
- Aged Care Standards (Australia)
- Food Safety Standards (Australia)

- Building Standards (Australia, Canada, Mexico)
- Medical Devices (Indonesia, Mexico, Canada, Australia)
- Guideline for Elderly Assist (Thailand)

Question 4. *What is an achievable short term goal(s) (standards development or other) that APEC can aim towards in your sector?*

- Provide transparency and access among members to applicable standards
- Facilitate harmonisation of standards
- Having silver economy on our minds/Awareness raising (Positive workshop outcome)
- APEC member economy acceptance
- APEC support for ISO/IEC NWIPS that support this direction

Group 4 – Information and Communications Technology

Participants

1. Damian Fisher – Australia
2. Wantanee Phantachart - Thailand
3. Calvin Chan - Singapore
4. Zakiyah - Indonesia
5. Jianbing Liu - China

Answers combined:

- Most ICT standards are technically oriented. This is fine as regardless of users (seniors or otherwise) the standards remain valid
- In the space of ICT standards that concern the silver economy, the focus can be on interface of ICT with elderly, e.g. User interface design for older persons
- There is currently gap in this area as existing standards focus on usability. But there is also a need to include the user experience
- There should also be consideration for design of ICT services/products that are used for emergency situation
- ISO/IEC JTC 1-SC35, accessibility and user interface design, icons design, cultural and linguistic abilities
- Opportunity to increase representation of APEC members in JTC 1-SC35 as there's under representation of APEC economies
- The standards are also published a number of years ago, when the ageing issue is still not prevalent. It is thus timely for APEC to instigate a review of the work of the ISO/IEC JTC 1-SC 35 User interfaces
- In view of societal ageing bring in more APEC economies to participate
- Another area is to have more 'use cases' that consider the needs and context of seniors and thus factor the needs of senior's into the design of solutions/devices for seniors
- It would be good for innovation companies to talk to standard bodies on the needs of older adults in designing products and services, based on the use cases
- Interestingly, Thailand has a standard on e-book that is based on e-pub standard
- Singapore has a standard on user interface design for older adults, Canada has a standard on accessibility design
- Follow-up:
 - poll all APEC economies for standards related ICT products and services accessibility and usability for elderly

- identify gaps among these standards vis-a-vis ISO/IEC JTC 1/SC 35 User interfaces
- and these gaps can serve as proposal for NWIP; especially, noting that there is an under representation of APEC economies in the ISO/IEC JTC 1 SC 35

Group 5 - Travel, Leisure, Social and Community Engagement

Participants:

1. Lucy Chalmers – Australia
2. Patricia Cunniffe – New Zealand
3. Kolin Low – Singapore (ISO)
4. Alex Chappare – Chile
5. Vuthi Thu Phuong – Vietnam
6. Pham Minh Chi – Vietnam
7. Suhaimi Kasman – Indonesia
8. Jack Simbou – Papua New Guinea

Question 1. *What could APEC do to advance the adoption and use of international standards to support the silver economy in your sector of interest?*

- Consider at a more macro level and make this issue a priority at future APEC meetings
- Introduce a quality mark for the Silver Economy on
 - Transport
 - Accommodation
 - Travel Agents
- Develop APEC wide guidelines
- Develop a roadmap for engagement

Question 2. *What are the three main hurdles or obstacles in your sector that are hindering the silver economy?*

- Institutional ageism
- Not a national or an international priority
- Insufficient awareness for this aspect of the silver economy market
 - Community engagement not considered as primary concern
- Standardisation is not necessarily the answer for this sector – how can standards offer an appropriate solution?

Question 3. *Are there any existing ISO, IEC or APEC member economy initiatives, standards or practises related to your sector that should be highlighted and promoted by this APEC forum?*

- ISO SAG A
- ISO Focus: Active Ageing
- IEC AAL
- Codex: Food related

Question 4. *What is an achievable short term goal(s) (standards development or other) that APEC can aim towards in your sector?*

- Raise Awareness
 - Publicly
 - Policy makers
 - Not sure how to measure progress

- Develop guidelines and recommendations for all members to implement
- Leverage APEC workshop to provide recommendations to standards developers

Group 6 – Workforce Planning, Training and Planning for Older People

Participants:

- Jacob Manase – Papua New Guinea
- Kamolpun Punpuing – Thailand
- Ryan Fletcher – Australia
- Fiona Hitchiner – Australia
- Alison Munroe – Australia
- Sabrina Pit – Australia
- Claire Gunning – Australia

Question 1. What could APEC do to advance the adoption and use of international standards to support the silver economy in your sector of interest?

- Survey and desktop analysis to complete a gap analysis
- All economies to supply their top 3-5 initiatives in the area, including policies, legislation or standards for information sharing/ to avoid duplication/ reinventing the wheel.
- Three case studies from each APEC economy – from private or public organisations, SME, and NGOs, small businesses, on how they are preparing for the silver economy
- Create standards for workplace quotas for aged people
- Enhance Age positive employers through accreditation and certifications schemes
- Grow awareness of the unconscious bias and stigma regarding older people with regards to promotions, training and redundancies
- Create Age friendly best practise guides for workplaces
- APEC should help create the business case the each Government to invest more in this area
- Changes in Legislation – compulsory retirement ages in APEC economies, higher insurance rates for companies with older staff, etc.
- Workplace Adaptation Standards – for example hearing and vision impairment in the workplace
- Recognition for volunteers
 - Standards for volunteers
 - Unpaid carers
 - Incentives
 - Skills and competencies formally recognised

Question 2. What are the three main hurdles or obstacles in your sector that are hindering the silver economy?

- Bias, stigma
- Youth driven culture
- Health and wellbeing, physical capability, physical nature of some roles make it impossible
- Older people lack of engagement, culture of early retirement, changing mindsets, resistance to change, lack of goals, visions and training exposure
- Digital technology pace of change

- Changes required in Legislation – compulsory retirement ages in APEC economies (In both Thailand and PNG), higher insurance rates for companies with older staff, flexible workplace regulations.
- Public transport – accessibility, safety, costs

Question 3. Are there any existing ISO, IEC or APEC member economy initiatives, standards or practises related to your sector that should be highlighted and promoted by this APEC forum?

- Singapore has tax concessions as incentives
- ISO sustainable workplace guidelines
- CSA standards – Best Practise Caregivers
- Australian Government initiatives
- Corporate Champions Programme
- AARP best employer awards (US centric)
- Australian Discrimination act - Right to request flexibility as part of discrimination act
- IEC systems approach standards
- Training quality accreditation – to help skilled migration
- Encouraging corporate diversity policies to include age related policy
- Australian Best Practise Guidelines for Workplace Health

Question 4. What is an achievable short term goal(s) (standards development or other) that APEC can aim towards in your sector?

- For APEC to host or fund an online, dynamic information sharing portal for all APEC economies to share information and best practises. All economies to list their top 3-5 initiatives in the space, including policies, legislation or standards for information sharing/ to avoid duplication/ reinventing the wheel
- Adopt ISO TR 30406:2014 Sustainable workplaces
- Each APEC economy should have a Sub-Committee that reports to their Age and Disability Commissioner so there is greater transparency of all the work being done nationally
- Sharing cost benefit models so that all economies can make the case for change- National Seniors White Paper and the Retaining Older Workers cost benefit model

Appendix B – Workshop Program & Speakers



The *APEC Silver Economy Workshop Program & Speakers* document, shown at left and in the following pages, contains the full agenda, speaker profiles and workshop participants.



Australian Government

Tuesday, 4 April – Day 1



08.30	Workshop Registration & Arrival (tea/coffee)
09.00	Opening Remarks - Dr Bronwyn Evans, Chief Executive Officer, Standards Australia and Vice President (Finance), International Organization for Standardization
09.10	Welcome Video Message - The Hon. Craig Laundry MP, Assistant Minister for Industry, Innovation and Science, Commonwealth of Australia
09.20	Introduction - Mr Damian Fisher, Senior International Development Manager, Standards Australia and APEC Silver Economy Workshop Convenor Introduction, Purpose, Objectives, Ground Rules and Emergency Evacuation Procedures
	Session 1: Setting the Scene for the Silver Economy
09.30	The Role of Standards and Innovation for Driving APEC's Silver Economy - Ms Nicole Henry, Manager Trade Facilitation Section, Trade and International Branch, Department of Industry and Science, Australian Government and APEC Silver Economy Project Overseer
09.45	The APEC Silver Economy Project Survey and Issues Paper - Mr Damian Fisher, Senior International Development Manager, Standards Australia and APEC Silver Economy Workshop Convenor
10.00	ISO TMB Strategic Advisory Group on Ageing Societies - Ms Cynthia Payne and Dr Sabrina Pit, Australia's experts on ISO SAG on Ageing Societies
10.15	Morning Tea/Coffee & Networking Break
10.45	Session 2: The Emerging Silver Economy Opportunity Smart Technologies for the Silver Economy - Professor Greg Tegart AM FTSE, Scientist and technology advocate
11.30	The Important Role of Digital Technologies & Innovation in Active Ageing - Mr Mathew Varghese, Chief Technology Officer, Software, Asia-Pacific & Japan, Cisco Systems (USA) Pte Ltd.
12.10	Potential Areas of Standardization Responding to the Ageing Society in Japan - Mr Yu Terada, Senior Consultant, InterRisk Research Institute & Consulting, Inc.
12.40	Lunch Hosted by Standards Australia
13.40	Overview of Current Standards Initiatives to Support Aging in Place in Canada - Ms Nicki Islic, Standards Manager, Health and Safety, CSA Group and Mr Mike Nolan, Chief of Paramedics, Renfrew County, Ontario, Canada
14.30	Developing a Silver Economy Roadmap - Dr Calvin Chan, Director - Office of Graduate Studies, Singapore University of Social Sciences and Chairman of the Technical Committee for Technology in the Silver Industry Standards Committee under the Singapore Standards Council
15.00	Session 3: High Level Market Updates Facilitated by Damian Fisher Australia, Canada, Chile.
15.30	Afternoon Tea/Coffee & Networking Break
16.00	Session 3: High Level Market Updates (continued) China, Indonesia, Japan, Malaysia, Mexico and New Zealand.
17.30	Workshop Day 1 Close
17.45– 19.00	Workshop Welcome Reception - Hosted by Dr Bronwyn Evans, Chief Executive Officer, Standards Australia

Note: Financial support from the Australian Department of Foreign Affairs and Trade under the APEC Economic Diplomacy Fund is gratefully acknowledged.



Australian Government

Wednesday, 5 April – Day 2



08.00	Workshop Registration & Arrival (tea/coffee)
08.30	Summary of Day 1 - Mr Damian Fisher, Senior International Development Manager, Standards Australia and APEC Silver Economy Workshop Convenor
	Session 4: Realising the Potential
08.40	Age of Opportunity - Mr Bradley Schurman, Director for Global Partnerships and Strategic Engagements at AARP
09.20	Navigating an Ageing Workforce – Case Studies and Solutions - Ms Alison Monroe, National Director, Australia & New Zealand, Sageco – A RiseSmart Company
10.00	Morning Tea/Coffee & Networking Break
	Session 4: Realising the Potential (continued)
10.30	Pure Gold in the Silver Economy - Ms Patricia Cunniffe MNZM MA, Director, Joll Cunniffe Developments Ltd
11.10	Chile's Experience in Design and Construction of Seniors' Housing - Mr Ignacio Santa Maria Mujica, Member of the Chilean Chamber of Construction
11.50	Session 5: High Level Market Updates (continued) Facilitated by Damian Fisher Papua New Guinea, Peru, The Philippines & Singapore
12.40	Lunch Hosted by Standards Australia
13.40	Session 5: High Level Market Updates (continued) Facilitated by Damian Fisher Thailand, United States and Viet Nam
14.10	Session 6: Breakout Sessions
	Group 1 - Building and Housing Facilitated by Mr Ignacio Santa Maria Mujica.
	Group 2 - Mobility and Transport Facilitated by Ms Anne Livingstone
	Group 3 - Health Facilitated by Ms Cynthia Payne
	Group 4 - Information and Communications Technology Facilitated by Mr Mathew Varghese
	Group 5 - Travel, Leisure, Social and Community Engagement Facilitated by Ms Patricia Cunniffe
	Group 6 - Workforce Planning, Training and Employment for Older People Facilitated by Ms Alison Monroe
15.15	Afternoon Tea/Coffee & Networking Break
15.30	Session 7: Reporting Back on Key Issues & Recommendations by Group Leaders/Rapporteurs
	Group 1 - Building and Housing
	Group 2 - Mobility and Transport
	Group 3 - Health
	Group 4 - Information and Communications Technology
	Group 5 - Travel, Leisure, Social and Community Engagement
	Group 6 - Workforce Planning, Training and Employment for Older People
17.00	Conclusion – What Will We Take Away from this APEC Workshop?
17.15	Workshop Concludes

Speaker Profiles



DR BRONWYN EVANS

In October 2013 Dr Bronwyn Evans took on the role as CEO Standards Australia. She has over 30 years' experience as an engineering executive in the areas of power generation, engineering education, Standards creation and medical devices. In 2017, Bronwyn took on a governance role at ISO as the Vice President (Finance) for a 2 year term.

She is the Chair of MTPConnect, the Industry Growth Centre for Medical Technologies and Pharmaceuticals and a member of the Australia-Japan Foundation.

Dr Evans has previously held Board positions including as an independent non-executive director of John Holland Limited, Chair of the Medical Technology Association of Australia Board and Chair, Robogals Advisory Board.

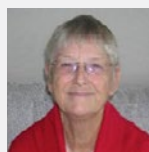
Bronwyn is an Honorary Fellow of The Institution of Engineers Australia, a Fellow of the Australian Academy of Technological Sciences and Engineering and an Honorary Fellow of University of Wollongong. In 2014 and 2015 she was included as one of Australia's 100 most influential engineers and in 2016 was recognised as one of Australia's 100 Women of Influence.

Dr Evans has a BE (Elec) and PhD in Electrical Engineering from University of Wollongong in the field of industrial automation, and is a graduate of the Australian Institute of Company Directors.



DR CALVIN CHAN

Dr Calvin Chan is the Director in the Office of Graduate Studies at the Singapore University of Social Sciences. He is also a Board Member of the Council for Third Age, Chairman of the Technical Committee for Technology in the Silver Industry Standards Committee under the Singapore Standards Council, and a Member of the Silver Infocomm Curriculum Taskforce of the Infocomm Media Development Authority (IMDA). He was a Visiting Professor in the e-Government Innovation Centre at the Universiti of Brunei Darussalam. Prior to joining UniSIM, Calvin was with Singapore's Infocomm Development Authority (now known as IMDA) working on Master Planning, Strategic Planning, as well as Programme and Project Management. His research interest includes e-Government, Technology and Ageing, and IT Management. He received his PhD in Information Systems from the National University of Singapore, and BSc (Hon) Computer & Management Science from the University of Warwick in the UK.



MS PATRICIA CUNIFFE

Ms Patricia Cuniffe is Managing Director, Joll Cuniffe Developments Ltd, an ergonomics consultancy.

After several years as a teacher of modern languages, Patricia moved into the disability sector, first via specialised teacher training, then as a research associate at the Institute for Consumer Ergonomics at Loughborough University, testing consumer products for use by people with disabilities, and doing some fundamental research.

Moving to New Zealand in 1974, Patricia set up the New Zealand Disabilities Information Bureau and the national network of Disability Information Centres and completed a Master's degree on Health Information Ethics.

More recently Patricia have been involved in the area of Standards, as consumer representative in New Zealand, in joint Australia/New Zealand projects and in international committees, specifically the IEC's Active Assisted Living System Committee. This work was acknowledged in 2002 with the presentation of a Meritorious Service Award by Standards New Zealand and in 2009 with the inaugural award for Outstanding Achievement in Standards and Standardisation.

Patricia has also significant involvement in the health sector, formerly as lay representative on Physiotherapy New Zealand's Ethics Committee, membership of the Central Region's Consumer Health Forum and as a Board member of the Whanganui Regional Health Network and currently as a member of the Consumer Panel of the National Health IT Board and the Telehealth Forum's Telemonitoring Leadership Group. For some years Patricia has been secretary of Wanganui Opera Week committee, and a former Trustee of the New Zealand Opera School.



MS NICOLE HENRY

Nicole Henry is Manager of the Trade Facilitation team for the Department of Industry, Innovation and Science.

Nicole has responsibility for policy oversight of Australia's standards and conformance infrastructure on behalf of the Australian Government. This includes maintaining relationships with Australia's key infrastructure bodies – Standards Australia, the National Association of Testing Authorities (NATA), and the Joint Accreditation System of Australia and New Zealand (JAS-ANZ).

Nicole is also the Australian Government delegate at the Asia Pacific Economic Cooperation Sub Committee on Standards and Conformance and provides advice to the Department of Foreign Affairs and Trade on technical barriers to trade issues.

With over 10 years' experience in the public service working across a range of industry and research

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programs, and a private sector background in the legal services industry, Nicole has a reputation for leadership in facilitation and stakeholder engagement.

In 2012, Nicole received an Australia Day Achievement Medallion from the Australian Government recognising her dedication and resilience in implementing the R&D Tax Incentive programme, a key innovation policy agenda item for the Government. Nicole has a Bachelor of Commerce degree and a Graduate Diploma in Public Policy and Economics.



MS NICKI ISLIC

Nicki Islic has a background in gerontology, public health, and health systems management. She has been

working in various areas of National and International Standards Development for almost 15 years at the Canadian Standards Association (CSA) and the Canadian Institute for Health Information. Some key standards areas she has focused on include accessibility, home and community care, health informatics, health care, aging-in-place, occupational health and safety, and public safety. In her current role, Nicki is the standards health care sector lead responsible for research, strategic initiatives, and partnerships at CSA.



MS ALISON MONROE

Alison is National Director of Sageco for Australia & New Zealand and is a passionate, insightful thought leader on all aspects of transition

and inclusion, with deep expertise in career transition, ageing workforce strategy and gender equality. Alison is highly sought after as a conference chair, presenter and facilitator and known for her energy, humour and incisiveness.

Having begun her career in hospitality and quality management, Alison started working in the Human Resources sector in the mid-nineties, finding a natural place for her skills and strengths in the career transition (outplacement) industry. A highlight of this time was developing and leading the Sydney 2000 Olympic Games career transition program. In 2004, Alison co-founded Sageco, then a niche consultancy in ageing workforce and mature-age transition. She directed a number of industry leading ageing workforce projects including the \$3 M Federal Government Corporate Champions program.

Having led Sageco for 12 years, achieving year-on-year growth and expanding the Sageco services to include career and executive transition, Alison was instrumental in Sageco being acquired by Randstad Australia in early 2017. She is now the National Director (Australia & NZ) for Sageco – a RiseSmart company, wholly owned by Randstad, reporting to the CEO, Frank Ribuo.



MR IGNACIO SANTA MARIA MUJICA

Ignacio Santa Maria Mujica is a Civil engineer of the Pontifical

University Catholic, with 38 years of experience in the major Chilean national companies. His vast professional experience includes public works, construction and real estate management, and also as a manager of a Charity Foundation. Ignacio is also an associate of the Chilean Chamber of Construction since 1998, with special participation in the chamber's Social Foundation. Since 2002, Ignacio has held various positions of responsibility what has allowed him to gain a thorough knowledge of the chamber's national structure and regularly consults with governmental agencies.

Ignacio is known for his capacity for leadership, adaptation and management of teams of people. In the area of seniors housing, he has participated a number of key projects including; in the design and direction of the first senior housing in Chile: SENIOR SUITES APARTMENTS, also in the Project of Senior Housing for the Chilean Chamber of Construction, and finally as partner of the company GARDEN SUITES, who is the owner and manager of two residence for elderly in Santiago of Chile.

Ignacio also participates in the promotion and discussion of the new Standards of "accesibilidad universal": Universal Achievability (March 2016), that sets rules on equal opportunities and social inclusion of peoples with disabilities covering both public and private constructions.



MR MICHAEL NOLAN

Michael Nolan is Chief, Paramedic Service & Director, Emergency Services, County of Renfrew and has served Canadians through many facets of

Paramedic Services. Beginning his career in 1990, as a Paramedic in Ottawa, Chief Nolan continued his studies in Toronto to become an Advanced Care and later, Critical Care Paramedic and worked in Northern Canada as a Critical Care Flight Paramedic.

Chief Nolan has served as a Paramedic, Flight Paramedic, Professor, Deputy Chief of the Ottawa Paramedic Service, President of the Paramedic Chiefs of Canada, Director of Emergency Management for the City of Ottawa and is currently the Director and Chief of the Paramedic Service for the County of Renfrew. Since working as a front line clinician, Chief Nolan has worked tirelessly to advance and align emergency services leadership locally, nationally and internationally through research, government relations, policy development and the creation of standards for all emergency services.

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MS CYNTHIA PAYNE

Cynthia has committed over 22 years of leadership to the aged care industry in Australia. She started out as a personal carer whilst studying to complete her Bachelor of Nursing at Sydney Uni. She is a grass roots CEO who has risen through the ranks across all spans of programs that operate in aged care. Her qualifications include an MBA from UNE and she has lead and managed both for profit and not for profit entities.

At 33 she took up her position as CEO of SummitCare and for the past ten years she has been working diligently with her team transforming the organisation to a leader in the residential aged care sector. SummitCare is the only Aged Care business to have been awarded Silver in 2009 and Gold in 2012 through the prestigious SAI Global – Australian Business Excellence Awards. The organisation, under her stewardship, has grown from eight (8) to nine (9) care centres and all have undergone a significant level of Building upgrades. A Development Application was approved in March for new service which will cater for over 200 people in the Hills District, Sydney. This tenth (10) service centre will take the organisation to a revenue stream of over AUD\$70 Million and staff numbers of over 1000.



DR SABRINA PIT

Sabrina has a PhD in Health Behaviour (University of Newcastle), a Master of Science Degree in Household & Consumer Sciences (The Netherlands) and a Diploma in Occupational Health and Safety (RMIT University). Sabrina Pit has over 20 years experience in public health research to improve the quality of life of older people. She has experience in complex data analysis, large datasets, longitudinal data analysis, randomized controlled trials, qualitative research and mixed methods. During her Ph.D. work, she conducted an NHMRC-funded cluster-randomized controlled trial which improved the use of medicines and reduced falls among older people through changing GPs behavior. In 2008, she was awarded a 4-year postdoctoral NHMRC part-time research training fellowship to continue her research in ageing well and productively by exploring pathways to healthy workforce participation. She is now the Workforce Research Stream Leader at the University Center for Rural Health, University of Sydney, Lismore.

Currently, she is investigating how to prolong general practitioners and health care workers working life in a healthy and happy manner. Among her research areas are work ability, productivity, sustainable employability, absenteeism, medicines use, healthy ageing, quality of life, rural health, preventative health, and health promotion. She believes in improving intergenerational communication. Her world vision is to create thousands of happy and healthy workplaces to prolong working lives

and learn from the wisdom of our elders and migrants to make our world a better place and encouraging others to do the same.



MR BRADLEY SCHURMAN

Bradley Schurman is Director for Global Partnerships and Strategic Engagements at AARP. Among other major accomplishments and roles, Schurman was instrumental in securing the topics of population aging and demographic change as central focus areas at both the Organization for Economic Cooperation and Development (OECD) and World Economic Forum (WEF). He has developed original research with the OECD and Foreign Policy Group, led AARP's global efforts on workplace design and age management, and directed AARP Best Employers International. He is a vocal champion for extending working lives to help drive national economic success and social inclusion, and as a way to extend healthy living and healthy years.

Schurman has been quoted in the New York Times, HuffingtonPost, and USA Today, as well as in local and national media outlets in Brazil, Asia, and Europe. He speaks regularly to thought leaders at forums in Brazil, France, Germany, Korea, Japan, and Taiwan.

Schurman also works with corporations as they look to better understand population shifts and opportunities of the Longevity Economy. He has advised Aegon, MetLife, Cigna, and IBM on their businesses impacted by the aging population.

Schurman has also been involved in multiple AARP-wide initiatives, including Disrupt Aging and the AARP Global Network. Widely regarded as an AARP innovation champion, he is part of a select group leading change internally.

Prior to joining AARP, Schurman worked for LeadingAge – a national association of non-profit long-term care providers – and at the United States Department of State.

Schurman sits on the board of TSTMKRS, a start-up guiding savvy travelers and curious locals to insider experiences and hidden gems in select African countries. He also serves as an informal advisor to SAGE – the aging LGBTQI organization. He holds an MA and BA from American University's School of Public Affairs. He lives in Washington, DC with his husband, Arthur.



PROF GREG TEGART AM FTSE

At 86 years of age, Professor Greg Tegart is a leading advocate for smart assistive technologies that give aged and disabled people independence and a better quality of life. Greg's distinguished career spans research in metallurgy and materials, and high level executive and policy positions in industry, the CSIRO and the federal government.

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The extent of Greg's contribution to Australian science and technology policy over four decades is substantial. He led Australia's initial participation in climate change assessment through the Intergovernmental Panel on Climate Change (IPCC) and was recognised for his contribution to the awarding of the 2007 Nobel Peace Prize to the IPCC. He has been a leader in studies linking technology to the future of society. In recent years, Greg's world-leading work to promote smart assistive technologies for aged and disability care has enabled many Australians to lead more empowered and independent lives. Greg provides a real-world example of the contribution that older people can make to the Australian community.



MR YU TERADA

As CSR strategy consultant, Mr Yu Terada provides advisory service to businesses and also supports research works of Japanese government on topics related to sustainable society, including those by the Ministry of Economy, Trade and Industry regarding potential areas of standardization in Japanese ageing society.

He also joined the ISO/SAG-A as an expert member of Japanese Advisory Committee for Ageing Society in 2016.



MR MATHEW VARGHESE

Mathew Varghese is the Chief Technology Officer for Network Transformation, Software & Analytics at Cisco Systems, Asia Pacific & Japan.

In that role, he is responsible for leading consulting engagements around technology transformation for businesses that are embarking on the journey to digitalization.

Mathew and his team of technology architects collaborate with the broader, global Cisco organization to innovate, develop, deliver the next generation of Open API, Programmable and Secure Software Platforms that provides customers with the technology capabilities for digitalization.

Mathew is a regular speaker at industry, analyst, Cisco Customer events and customer executive briefings. His contribution to the community extends as a guest lecturer in a few universities around Asia Pacific. He is also an industry advisor to one of the leading Business Schools in the region. Mathew is also an active member of the Forbes Technology Council.

Prior to joining Cisco, Mathew has held a variety of roles in the Information Technology industry with IBM & HP across different geographies.

He is a recent alumnus of the Harvard Business School's - Digital & Social Strategy Executive Program. Aside of his engineering background, Mathew has an MBA from the Rutgers Business School, USA.



MR DAMIAN FISHER

Damian Fisher is a senior member of Australia's National Standards Body, Standards Australia. He is

responsible for coordinating and managing international standards work and leads the organisation's capacity building and institutional strengthening program. Mr Fisher has also led a number of projects sponsored by APEC's Sub-Committee on Standards and Conformance (SCSC) and AANZFTA Sub-Committee on Standards, Technical Regulations and Conformity Assessment Procedures. He is a member of ISO's Developing Countries (DEVCO) Chairs Advisory Group. He has more than 28 years' experience in international business and is a former senior Australian trade diplomat. His postings included appointment as Consul General and Senior Trade Commissioner based in Turkey. Mr Fisher also served with the Australian Embassy in Riyadh, Kingdom of Saudi Arabia where he was accredited as Counsellor (Commercial) and Senior Trade Commissioner for Saudi Arabia, Kuwait and Bahrain. He is also a co-author of a number of publications including a book, *Export Best Practice: Commercial and Legal Aspects*, The Federation Press, Sydney. Mr Fisher is based in Sydney.

Workshop Participants

Name	Organisation	Member Economy
Anne Livingstone	Global Community Resourcing	Australia
Sabrina Pit	Sydney University & Western Sydney University	Australia
Fiona Hitchiner	Sageco	Australia
Alison Monroe	Sageco	Australia
Damian Fisher	Standards Australia	Australia
Lucy Chalmers	Standards Australia	Australia
Christina Bolger	Australian Aged Care Quality Agency	Australia
Chris Westacott	Realise Performance	Australia
Cynthia Payne	SummitCare	Australia
Claire Gunning	Standards Australia	Australia
Dugald Anthony	Austrade	Australia
Nicole Henry	Department of Industry, Innovation and Science	Australia
Melissa Harte	Department of Industry, Innovation and Science	Australia
John McCallum	National Seniors Australia	Australia
Brett Lovett	Standards Australia	Australia
Karen Batt	Standards Australia	Australia
John Furbank	Consumers federation of Australia	Australia
Susan McGrath	COTA Australia	Australia
Michael Nolan	Paramedic Association of Canada	Canada
Nicki Islic	CSA Group	Canada
Alex Chaparro	Ministry of Foreign Affairs	Chile
Ignacio Santa Maria Mujica	Chilean Chamber of Construction	Chile
Jianbing Liu	Urban Operation and Management Key Lab, Beijing Academy of Science and Technology	China
Suhaimi Kasman	BSN	Indonesia
Titah Sihdjati Riadhie	PT. Tesena Inovindo	Indonesia
Zakiah Zakiah	National Standardization Agency of Indonesia (BSN)	Indonesia
Atsuko Saruhashi	JISC/METI	Japan
Yu Terada	InterRisk Research Institute & Consulting, Inc.	Japan
Sheleaswani Binti Inche Zainal Abidin	Ministry of Health Malaysia	Malaysia
Mohd Hamzaini Hashim	Department of Standards Malaysia	Malaysia
Diana Alvarez	Ministry of Economy	Mexico
Patricia Cunniffe	Joll Cunniffe Developments Ltd	New Zealand
Jack Madab Simbou	Department for Community Development and Religion	Papua New Guinea
Jacob Manase	Department for Community Development and Religion	Papua New Guinea
Walter Raul Ramirez Eslava	National Quality Institute	Peru
Calvin Chan	SIM University	Singapore
Joy Tan Yui Lin	SPRING Singproe	Singapore
Kolin Low	International Organization for Standardization	Singapore
David Lai	National University of Singapore	Singapore
Nataya Seetubtim	Thai Industrial Standards Institute	Thailand
Wantanee Phantachart	National Electronics and Computer Technology Center	Thailand
Kamolpun Punpuing	National Electronics and Computer Technology Center	Thailand
Myra Magabilin	Bureau of Philippine Standards	The Philippines
Bradley Schurman	AARP	USA
Mathew Varghese	Cisco Systems (USA) Pte Ltd	US/Singapore
Phuong Thi Thu Vu	STAMEQ - MOST	Viet Nam
Pham Minh Chi	SMEDEC	Viet Nam
Homer Bunyi	Consumer Protection Advocacy Bureau	The Philippines
Susan McGrath	COTA Australia	Australia
Regina Robertson	NATA	Australia
Greg Tegart	Victoria University	Australia