



**Asia-Pacific
Economic Cooperation**

Workshop Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities

**Workshop Report
16 – 17 August 2016**

APEC Sub-Committee on Standards and Conformance

March 2017

Workshop Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities

APEC project: CTI 13 2015A (SCSC)

Produced by

Directorate of Standardization
National Institute of Quality – INACAL, Peru
Calle Las Camelias 817, San Isidro, Lima-Peru
Tel: (051) 6408820
Fax: (051) 6408820
Email: ruria@inacal.gob.pe
Website: www.inacal.gob.pe

For

Asia-Pacific Economic Cooperation Secretariat
35 Heng Mui Keng Terrace
Singapore 119616
Tel: (65) 68919 600
Fax: (65) 68919 690
Email: info@apec.org
Website: www.apec.org

© 2017 APEC Secretariat

APEC#217-CT-01.7

Table of Contents

Executive Summary 3

Introduction..... 4

Workshop results 5

 Session 1: Opening session 5

 Session 2: Regional Approach to support MSMEs through standardization activities 9

 Session 3, 4 and 5: Initiatives to strength capacities in MSMEs for APEC members..... 13

 Session 6: Discussion 32

Workshop conclusions..... 43

Workshop survey analysis 44

Conclusions 45

APPENDIX 1 – Survey.....47

APPENDIX 2 – Agenda 63

APPENDIX 3 – Participants 68

APPENDIX 4 – Speakers 71

Executive Summary

The Workshop on Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through standardization Activities was held on 16 and 17 August 2016 in Lima, Peru. Attendance at the Workshop included speakers, experts, officials, representatives from APEC member economies, namely: Australia; Chile; Indonesia; Japan; Republic of Korea; Malaysia; Papua New Guinea; Peru; Philippines; Russia; Singapore; Chinese Taipei; Thailand; United States; Viet Nam and international organizations in general, like IEC.

It was a 2-day workshop held in the confines of SOM 3 in Peru. The first day was for exchanging information among APEC economies about the initiatives, strategies and experiences of members about involving MSMEs in standardization, conformity assessment and metrology. Economies with successful experiences were invited to share their experiences as speakers, and this was identified in a survey. The first day was open to local participants according to APEC registration procedures. The second day was for selected participants to discuss survey results and draft recommendations about the best initiatives on how to implement these strategies, drawing from suggestions made by speakers on the first day. With the information exchanged, workshop recommendations for informing National Standards Bodies and MSMEs about best practices were discussed in greater depth the second day.

Moreover, developing economies will benefit from the experiences exchanged in the workshop and the best initiatives collected in the publication because, since these initiatives will be explained in a didactical way, these will be replicable for other APEC economies.

With these best initiatives National Standards Bodies could develop programs to engage MSMEs, which would help them to better understand the importance of the implementation of standards and use of services by accredited conformity assessment providers, as well as being more involved in the development of standards, conformity assessment and metrology businesses.

Introduction

SMEs have been recognised as a priority topic for APEC since the 1993 Leaders' meeting in Seattle. Although the definitions of SMEs differ among APEC members, they have one thing in common; the vast majority of SMEs are relatively small and over 95% of SMEs in the region employ less than 100 people. Despite the diversity, it is clear that small size characterizes SMEs, at least among APEC economies. Based on the data from Zhang (2013) for APEC economies, the mean share of micro enterprises to the total registered SMEs in APEC is 81%. Medium enterprises comprise only about 1% for most economies, with the highest observed at nearly 4% for Australia. Small enterprises take up the difference, which is 18%. With the number of small and micro enterprises at 99% of all registered SMEs, SMEs employ, on average, in the vicinity of 17 employees at the most. Only about 34% of global trade may be traced to SMEs among APEC economies.^{1,2}

From an APEC perspective, the main driving issue is the movement toward increasing economic interdependence, open regionalism and the liberalization of the flow of goods, services, resources and capital. The enormous potential for SMEs to contribute to the economic development of the region will be underutilized if SMEs are not able to take advantage of the opportunities created, or able to adapt to the competitive pressures that open regionalism brings. The potential contribution of SMEs to the sustainable growth of the APEC region is large. According to estimates by Van Biesebroeck and Sturgeon (2013), SMEs contributed to 52 percent of global private sector output and 67 percent of employment. SMEs play a significant role in the Asia-Pacific region. The latest figures show that SMEs account for over 97 percent of all enterprises in APEC economies. Due to their labor-intensive operations, SMEs in the APEC region employ more than half of the regional workforce. The growth of SME businesses could contribute to increased value creation, production and profits. They could nurture new business ideas, enhance productivity, improve economic structure, and lead economic development on a more resilient and sustainable path (APEC Policy Support Unit 2013e).

A number of trade barriers could impede SMEs' participation in the international trade in the APEC region including the problems of navigating various legal, regulatory and technical requirements. A study by the APEC Policy Support Unit in 2014 revealed that SMEs in both developed, newly industrialized, and developing economies indicated difficulty integrating into global value chains in terms of standards and certificates for agriculture and food processing.

¹ In Zhang (2013). The ITC and WTO (2014) showed estimates of SME shares to direct exports ranging from 60% (China); 38-40% (India); 46% (Thailand); 20% (Viet Nam), citing Tambunan (2009). The same reported that about 20% of SME direct exports covers their indirect exports.

² At the time the APEC SMEWG Strategic Plan of Action (SPAN) was adopted in 2002, the baseline estimate then of SME share in exports in the region was 35%.

Quality infrastructure (QI) includes standardization, accreditation, conformity assessment (such as certification and testing services), and metrology. It is a prerequisite for participation in international trade, product traceability, environmental and health protection and product compatibility, and it supports consumer and supplier confidence in products. Through the use of QI, SMEs can achieve the best levels of productivity and competitiveness. The implementation of technical standards, their associated conformity assessment and the use of metrology practices are relevant and necessary to improve the performance of SMEs.

Workshop results

The following section provides a summary of the presentations given during the workshop.

Session 1: Opening Session

- **Survey report among APEC Economies: Supporting MSMEs Trade facilitation through Standardization Activities- Mrs Rosario Uria, Project Overseer of CTI 13 2015A- Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities-**

Mrs Rosario Uria began her presentation by pointing out that in the framework of this project “standardization” is including conformity assessments and metrology issues. She continued her presentation mentioning that the project identified best practices on initiatives focused on micro, small and medium enterprises with the use of standards and conformity assessments to achieve quality products as part of the global network in the Asian Pacific region.

One of the project objectives was to conduct a survey, to exchange information and experience about best initiatives through this workshop, and to prepare a publication with APEC recommendations on best initiatives to support MSMEs. Twelve economies responded to the survey: Australia; Chile; Hong Kong, China; Japan; Republic of Korea; Mexico; Peru; Philippines; Singapore; Chinese Taipei; Thailand and the United States. In the presentation were shown the institutions or organizations that belong to the economies that responded to this survey.

The survey questionnaire had the following structure :

Part A: Contact details.

Part B: General information, which was referred to current information related to efforts and general outcomes obtained by organizations / entities in increasing MSMEs' competitiveness in each Economy.

Part C: Specific initiative information, regarding economies' initiatives in promoting competitiveness through the adoption of standards and services by accredited conformity assessment providers.

- As a result, sixteen surveys were received from twelve Economies. All data surveys were considered for analysis regarding parts A and B of the questionnaire. For part C of the questionnaire only one answer per Economy was taken for initiative analysis.

The criteria used to select the most representative surveys were those that described experiences in developing a permanent, replicable and sustainable initiative.

The results of the survey showed:

- Regarding the survey respondents, 94% were public institutions
- Among the organizations or institutions: 29% corresponded to NSB (National Standardizations Bodies), following by NABs (National Accreditation Bodies) and MSMEs with 19% each one.
- Among all APEC fora, 81% were represented by SCSC.
- With regard to gender, the question was: In your economy, how much active involvement do women have in the Quality Infrastructure organizations? 56% of NSBs responded that women's participation is high and 33% responded that it is medium, so 89% of NSBs had female participation between high and medium level. On the other hand, 55% of NABs responded that women's participation is high and 36% responded medium, so 91% of NABs had women's participation between high and medium level. With respect to the gender involvement in the National Metrology Institute, 29% responded that women's participation is high and 29% medium, so the 58% of National Metrology Institute (NMI) has female participation between high and medium level. Among Conformity Assessment Bodies (CAB), 20% answered that women's participation is high level and 70% responded that it is medium level.

- About the level of participation in supporting MSMEs, 80% of NSBs responded that they provide service in supporting MSMEs, but only 20% reported that they offer “a lot of services”. On the other hand, 92% of NABs said they provide services supporting SMEs and of these, 17% provide “a lot of services”. Regarding NMI’s, 73% responded that they provide services supporting SMEs and 9% said they provide “a lot of services”. Finally, 92% of CABs responded that they provide services in supporting MSMEs, and 8% of them reported providing a lot of services.
- In relation to the rate of outcomes obtained through your economy’s efforts to increase MSMEs competitiveness and promote their insertion in regional and global markets, 73% of NSB perceive that the rate of their outcomes are between medium and high level, while 61% of NABs perceive that the rate of their outcomes are between medium and high level. 67% of NMIs perceive that the rate of their outcomes are between medium and high level, while 57% of the CABs perceive that the rate of their outcomes are between medium and high level.
- About the participation in initiatives whose purpose is to support MSMEs in a standards, conformity assessment and metrology activities, 75% responded “yes”
- Among the initiatives taken, 39% were focused on the manufacturing or industrial sector, activities related to textile, leather, wood and food were represented. Meanwhile 10% were related to Testing and certification and 7% were on Software and Information Technology sector.
- Regarding permanent initiatives, 43% of economies reported that their activities were related to standardization. Other permanent initiatives involved were: metrology training activities, quality management systems, accreditation programs, promoting standards and innovation and dialogue session between CABs and regulators.
- Another important consideration was the level of commitment and participation of the different entities related to quality infrastructure. Based on the results, NSBs are involved in 60%, followed by NMIs (20%), NABs (10%) and CABs (10%).
- Economies that gave a brief description of their initiatives were: Australia; Chile; Japan, Peru; Singapore and Thailand. This is important because it shows how an initiative fostered by an organization can involve more actors that belong to quality infrastructure. We can see, for example, when an NSB developed an initiative, it involved an Accreditation Body in this activity about 60% of the time, and it sometimes involved an NMI or Conformity Assessment Body. This is important to consider if we want an initiative to be replicable and sustainable.
- All the economies that declared an initiative, responded that their initiatives are replicable and sustainable.
- 89% of the economies believed that their initiatives are relevant for APEC fora.

- Only 3 economies responded that they measured the impact of their initiatives, which were Japan; Philippines and Thailand.
- Seven economies considered participating in any project/program or initiative which links standards, conformity assessment and/or metrology to MSMEs. So, 64% are interested in working on these issues to support MSMEs.

The main conclusions and recommendations of the survey were:

- Nine (09) economies out of twelve (12) reported having developed or participated in projects, programs or initiatives that support MSMEs on standards, conformity assessment and/or metrology activities.
- National Standard Bodies reported having an active role in promoting SMEs' competitiveness through standardization activities.
- Six of the initiatives (60%) developed in Economies were promoted by National Standard Bodies (Australia; Chile; Japan; Peru; Singapore and Thailand);
- Six (06) economies out of nine (09) reported their initiatives were supported by public funding.
- Eight (08) economies out of nine (09) reported that their projects/programs or initiatives are replicable, sustainable and relevant for APEC economies: Australia; Chile; Hong Kong, China; Japan; Peru; Philippines; Chinese Taipei and Thailand.
- Based on the survey responses, only three Economies (33%) measured the impact of their initiatives: Japan; Philippines and Thailand.
- A predominant "high level of women's involvement" in National Standards Bodies (56%) and National Accreditation Boards (55%) was reported based on data survey, in contrast with the values for National Metrology Institutes (29%) and Conformity Assessment Bodies (20%).
- As a result of the analysis from the survey responses received, the following seven (07) economies agreed to share eight (08) successful experiences in the Workshop Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities held in Lima, Peru: 2 from Australia and 1 each from Japan; Peru; Philippines; Singapore; Chinese Taipei and Thailand.
- Besides those who replied to the survey, the following economies were invited to join the Workshop Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities because their experiences are aligned with the project objectives and will contribute to increasing awareness of the implementation of standards, conformity assessment and metrology: Republic of Korea; Malaysia and the United States.

Session 2: Regional Approach to support MSMEs through standardization activities

- **APEC Harmonization of Standards for Data and Information Flows Initiative: Next Steps --- Mr Adrian O' Connell- Deputy CEO- Standards Australia, Australia**

This presentation was focused on an initiative promoted by the Australian Government Department of Treasury and Standards.

In 2015, the APEC SME Working Group approved the APEC Harmonization of Standards for Data and Information Flows project. This was the first APEC sponsored project to look at the importance of international standards in facilitating Cross Border Data and Information Flows with a particular emphasis on supporting MSMEs.

Within the APEC region there is an increasing recognition that more needs to be done in order to support SME trade and promote opportunities for SMEs to access global value chains. SMEs face an array of barriers when trying to sell products or services internationally, including but not limited to lack of standards knowledge, low adoption rates for international standards market access requirements, localization requirements, security, data privacy and protection, intellectual property rights and cost of infringement.

The purpose of the project is to help identify and provide solutions to address the issues and challenges faced by SMEs in dealing with cross-border data and information flows. Cross-border data and information flow simply refers to the movement of electronic data and information across national borders.

The development of the Internet and emerging technologies such as cloud computing have great potential benefits for SMEs because they can lower the barriers to entry into new markets and global value chains, particularly as they allow business to be transacted without the necessity of having to establish physical operations in another country. However, they require the free flow of data and information for the economic benefits and potential of these technologies to be fully enabled.

Therefore, improving the capacity of cross-border data flows and removing a likely barrier will accelerate market growth opportunities for MSMEs. Unlocking these opportunities can be a catalyst for deepening an economic engagement, employment generation and fostering

innovation. It can also contribute to social cohesion and cultural understanding, all of which contributes to APEC's regional integration agenda.

Australia has led the APEC SME Working Group sponsored APEC harmonization of Standards for Data and Information Flows project in 2015 and 2016. 51 workshop participants from 5 APEC member economies attended the APEC Workshop in November 2015, which was held in Sydney, Australia. The participants identified and discussed the movement of data from a standardization perspective with a focus on SME.

They considered four key areas.

1. Issues and challenges facing SMEs in relation to the movement of cross-border data that could be addressed voluntarily through international standards.
2. Major barriers for SMEs in meeting national, domestic and international regulations on the movement of data between APEC member economies.
3. Impacts on data driven innovation that could be addressed through standards development participation, technical convergence and regulatory coherence, and
4. Key outcomes that APEC could aim for in the medium and long term to promote the seamless movement of data.

APEC member economies are significantly underrepresented in international standards development fora such as ISO/IEC JTC 1. This joint technical committee focuses on the development of information, communication and technology standards for business and consumer application. Not only are APEC economies under-represented in the development of these standards, but also many do not take the opportunity to adopt these international standards for data flows in their national economies or see them applied.

There is considerable opportunity for APEC member economies to:

- ✓ Reduce non-tariff barriers
- ✓ Improve market access opportunities for SMEs
- ✓ Increase trade efficiency, and

- ✓ Ease business transactions

It was strongly argued that many of the CBDF restrictions for SMEs could simply be avoided if APEC member economies adopted relevant international data flow standards to mitigate, security, privacy and technical issues.

APEC has an important and growing role to support standards harmonization, technical alignment and regulatory coherence in order to ensure future growth for MSMEs; further work is required to build on this moment.

The workshop considered the development of a standards Roadmap supported by a Voluntary Action Plan. The Roadmap will be a collaborative document through consultation with industry experts and stakeholders; especially MSMEs. The road map will also help increase the awareness of the importance of cross-border data transfer to international trade and how to harmonize key standards; and, maintains the role of APEC forums in exchanging views and best practices on the movement of data.

- **MSMEs Engagement in Standardization Activities in PASC Region- Ms. Aderina Uli Panggabean- PASC representative**

Ms Aderina Uli Panggabean presented a summary of a workshop conducted by Pacific Area Standards Congress (PASC) on the MSMEs Engagement Standards activities. The workshop was conducted in Bali, Indonesia. 19 countries came to this workshop, which included speakers from ISO, IEC, ITU-T, the international organization for standardization, and also from ASEAN and NSBs from PASC member countries such as Indonesia; Japan; Malaysia; Korea; Singapore; South Africa and the United States.

The objectives of the workshop were to share knowledge on MSMEs roles in standard setting and implementation, to share information on problems and challenges faced by MSMEs in standardization activities and to explore the way forward to support MSMEs participation in the development of standardization. There were 3 sessions with different topics: the first session was about global and regional perspective; the second session was about the national practices; the last session was about promoting the standardization to MSMEs.

At the end of the workshop it was concluded that the definition of MSMEs and SMEs differs across economies, and it was also agreed that the impact on the economy is significant, and, while there is tremendous growth in potential, economies face similar challenges such as a lack of finances, market information, innovation, government support and human resources.

There was a general consensus that MSMEs are lacking in knowledge of standardization. They are still not aware about how to use the standards as a “tool” to gain market access or expand business opportunities. Many SMEs continue to view standards as costly and face difficulties in implementing the standards.

As a follow up action, three important issues were noticed which include information sharing and communication, the importance of partnerships and capacity building. The importance of sharing information and building communication among PASC member countries was recognized, and to support this, a tool must be connected with others through the website.

Best practices across PASC members must be shared as well as the information externally contributing to the regional perspective for any publications or communications that ISO, IEC or ITU has developed for MSMEs. Regarding the partnerships, it was noticed that the engagement with partners is important, so it is necessary to explore the partnerships with organizations, such as working with ISO/IEC regional offices to promote development of NWIPs from MSMEs, and also partners like APEC SCSC, ASEAN and other NGOs to share more information of standards as a solution for MSMEs needs.

The needs in standards activities of MSMEs for PASC members countries varies, so a survey to understand their needs must be conducted and the use of technology or online platforms such as courses to develop training programs for MSMEs to understand on how to interpret and use standards is needed.

At the conclusion of the workshop, it was noticed that MSMEs in the region have an important role and face the same problems as MSMEs in the PASC member countries in the implementation of standards (as a lack of access to information, funds, government support and others). So there are needs for MSMEs in standardization activities such as improving communication and exchanging information among PASC member countries with related stakeholders, cooperation with international standards organizations to promote the development of the New Work Item Proposal (NWIP) for MSMEs, and cooperation with regional and international organizations to improve the capacity of MSMEs.

Session 3: Initiatives to strengthen capacities in MSMEs for APEC members – Part 1

- **Japan's Initiatives to support MSMEs activities in Standardization- Mr Mitsuo Matsumoto- Director- Office for Economic Partnership for Standards and Conformity Assessment- Ministry, of Economy, Trade and Industry (METI), Japan**

The presentation began with an overview of standardization activities in Japan and policy tools aiming at enhancing MSMEs involvement in the standardization activities.

The Japanese Industrial Standards Committee (JISC) has three Boards and 22 Technical Committees. Each technical committee has 20-30 members, which means 500 to 600 committee members in total. JISC itself is composed of well-balanced stakeholders, such as people from academia, industries, and government organizations, while JISC Secretariat belongs to Ministry of Economy, Trade and Industry of Japan (METI).

The number of Japanese Industrial Standards (JIS) is now 10,542. 5,759 standards have their corresponding international standards. 97% standards are harmonized.

In 2014, JISC established a new mechanism to pick up interests of MSMEs to materialize their interests as JIS standards. The Development Program to create New Market is a policy tool that enhance MSMEs involvement in the standardization activities.

In the mechanism, METI requested Japanese Standards Association, JSA, which is a public organization specialized in standardization, to hire several experts to provide supports to MSMEs. So, instead of asking an industrial association, MSMEs consult with the JSA to develop standards of their interest. This program is useful especially for MSMEs with scarce knowledge or experience in standardization. JSA has currently around 20 experts for the new program, and several MSMEs are using the program to create a new market of their products with standards.

Some examples of standards being developed within the program are:

- A container for liquid food with an anti-oxidization mechanism, developed by an SME in Niigata prefecture, called Yusin. Because of the design and material used for the container, air cannot flow into the container, thus food in the container will be kept

fresh for a much longer period than the normal container such as glass bottle with screw cap.

- A carbon nanotube composite coating. This new technology was developed by an SME in Osaka prefecture, called Takenaka Seisakusho. With the carbon nanotube composite coating, the surface of metal can have much higher durability and corrosion resistance.

For those two examples of product or technology, Japan is developing test method standards.

Another policy tool is a Partnership Framework to Facilitate Standardization. This initiative will try to establish a network of so called Partner Institutions. Different types of organizations in 47 prefectures in Japan, for example, banks, educational organizations, local government offices can become the Partner Institutions. Since they have much more closer relationships with local MSMEs, it is sometimes easier for such MSMEs to consult with them for standardization matters. With some technical support and advises from JSA, the Partner Institutions are providing standard related business solutions, such as seminars and workshops, for local MSMEs. There are currently around 100 Partner Institutions.

Human resource development is a key issue for MSMEs to participate in standardization activities, especially to involve young people. With this in mind, JISC started a curriculum of young professionals program in 2012. Part of the program is carried out in English so that participants will be able to take care of international standardization matters as well. So far, the number of graduates is 119 in four years.

Participants of the program are invited to participate in an actual TC, SC or WG meeting of either ISO or IEC held in Japan. The people graduated from the program will be the major players in standardization in the near future.

- **Efforts to help SME's manufacturers in the United States - Mr Kent Shigetomi-Director for Multilateral Non-Tariff Barriers – Office of the United States Trade Representative (USTR), USA**

The presentation showed different perspectives about how the United States approaches some of the same issues that have been faced by the other economies. One was a small business initiative that was developed in 2010 and the other was a program called Hollings

Manufacturing Extension Partnership which is devoted specifically to helping small business, so the first initiative was more about, guiding a policy framework to help agencies integrate the concerns of small business into their work, and the other is a more focused operational program to help with this.

The first initiative began in 2010 with the series of studies by the US International Trade Convention; all of these findings are available on the Internet at USITC.com. These are some of the key findings:

- difficulties with the language and cultural barriers and other markets.
- limited knowledge of foreign markets.
- foreign Government Regulations.

Some SMEs reported that they are able to achieve better results by working together with other SMEs and/or trade associations. They tend to be more successful because they can use these networks to collect information and distribute to their members (for instance, agricultural associations), and in many cases, small growers could share market research on foreign exports which also reduces the cost to individual companies who participate and distributes the risks among all the participants. They can work with larger identities to achieve the economy of scale to get referrals about new business opportunities and to work with agencies who can match barriers and sellers.

The APEC SMEs working group held a conference in Atlanta last summer. During the course of the workshop some problems that SMEs faced were identified. SMEs had a problem with understanding and applying the requirements to export and this can include things like technical regulations. The participants in this workshop identified some short and medium term steps that could be taken to address this problem. One of the other problems that participants in the workshop identified was the cost of compliance resources which are limited, and they face difficulties complying with export regulations and as result they give up. In a short term, economies can identify strategies that other SMEs have used to be successful SMEs when developing technical regulations.

Regarding the Hollings Manufacturing Extension Partnership, it is a program to try to increase the productivity and technological performance of US manufacturing with a strong emphasis on small and medium sized enterprises. It works through a network of individual centers at the sub central government level, approximately 300 centers that include official academic banks at the local level below the central government. In the United States, the regional centers facilitate the transfer of technology in partnership with industries, universities and other

educational institutions and the national institute of standards of technology. The goal of the partnership is to increase the competitiveness of U.S manufacturers with a focus on small and medium sized companies.

The three specific parts of the whole manufacturing extension partnership are the supply chains, export, and technology acceleration. The first part, supply chains works by bringing in experts to connect SMEs with large partners in the supply chain to identify and help them meet the technological manufacturing, related requirements that they need to be engaged to be part of a larger supply chain.

The second part of the program is the exporting. There was discussion of some of the difficulties that SMEs faced when they try to begin to export, such as language, knowledge of foreign markets, and complying with the technical regulations. The manufacturing extension partnership works with small and medium sized businesses to help them take the first steps to exporting by identifying new opportunities in 4 markets by connecting them with possible foreign buyers.

And finally, technology acceleration. The partnership was created in part to help disseminate and transfer the technology from federal institutions and federal laboratories to smaller manufacturers to allow them to use the technology, to improve the products and to begin to grow.

- **Standards for Community products - Ms. Roong- Buddhanond. Chief - Regional Organizations Group - Thai Industrial Standards Institute (TISI)**

Community products have been created for a long time from the knowledge and intelligence as well as the experience of one generation handed down to the next generation. The products have become a local heritage unique for each community, which are hard to be reproduce or copy. Being the pride of Thai people, these community products represent the Thai life and are an essential part of living for people in each community.

In recognizing the important role of communities as a mechanism for strengthening the grassroots economy with sustainable development, the “One Tambon, One Product (OTOP) Project” has been established by the Thai government. (Tambon is a Thai word which means a community). The objectives of the Project are to generate more work and increase incomes to communities, as well as to promote the use of products of local intelligence. At the present,

the Project has become larger and covers lots of products. For some products, it is necessary to upgrade them and, meanwhile, maintain the Thai uniqueness so as to preserve the local intelligence amidst the age of changes.

The “Standards for Community Products Project” has been established by the Ministry of Industry. The Thai Industrial Standards Institute or TISI, as the national standards body of Thailand, has been assigned by the Ministry of Industry to develop standards for community products and to certify the products in compliance with the standards. The objectives of this activity are to upgrade the quality of community products as well as to widen the market for such products, both locally and abroad.

The concept of the Standards for Community Product Project is:

1. To support producers in term of production capability and marketing by means of granting a certification mark. So, the Project is expected to bring about sustainable development.
2. To respond to the urgent policy of the government on “One Tambon One Product Project”.
3. To upgrade the quality of community products and promote their acceptance and reliability; and
4. To increase the competitiveness of community product producers in connection with the “One Tambon, On Product Project”

The objectives of Standards for Community Products Projects are:

1. To promote and develop the quality of community products to meet the relevant standards.
2. To promote the sale of community products by assuring the local and overseas consumers of product quality.
3. To enhance sustainable development by upgrading the quality of community products in compliance with standards and according to the government policy on “One Tambon, One Product”

Implementation of the Program:

1. Presently, 1360 community products standards have been developed and more than 68,731 producers have been certified.
2. Technical assistance has been provided to community producers, so as to develop the products to meet the standards. Guidelines have been given on packaging, food hygiene, etc.
3. Public Relations Information has been organized to promote good image, and exhibitions have also been organized to promote the good image and acceptance of the community products.

For certification, the applicants must:

1. Be real producers who have already registered with the Community Development Department, or
2. Be members of an agriculturist group, co-operative group or any other groups as specified in our Community Enterprise Law.

The benefits of standards for community products to Thai economy and society are:

1. Community product standards will enhance the development of quality of community products.
2. By means of the certification mark, the mark will be a guarantee of quality and will increase confidence of the local and overseas consumers in the products.
3. The quality of community products will develop consistently.
4. The competitiveness of the grassroots economy will be improved.
5. The development of community products standards is responsive to the government policy on "One Tambon One Product Project".

- **Sharing Singapore's Experience: Strengthening MSMEs' Capabilities through Standards & Conformance- Ms. Loh Soi Min- Director- Policy and Promotion- SPRING, Singapore**

MSMEs are actively engaged in standards development work in several ways:

At the broad base level:

MSMEs are actively engaged to provide feedback in the development of new standards. For example, industry consultations were organised to understand the challenges faced by the industry during the revision of the ISO 9001:2015 standard. After the standard was revised and launched, a dialogue session was also organised to gather industry feedback on the challenges faced while implementing the revised standard. Separately, inputs from conformity assessment bodies were also sought to determine gaps in the industry such as special testing services or accreditation programs to help meet the needs of enterprises.

At the industry level:

Standards are developed by the industry, for the industry. There are industry-led discussions to develop and review standards through regular and structured platforms such as Standards Committees' strategic planning sessions. Through these platforms, sector standards committees provided inputs on areas where more could be done to assist companies to meet the needs of the customers and better meet emerging global trends. Ad hoc focus groups, such as the Protem Services standards committee, were also organised to explore how standards could help some of the services industries improve their productivity and transform the industry, e.g. standards for hotels, retail, and food services.

At the enterprise level:

MSMEs are encouraged to participate in standards development work. For example, as medtech devices are highly regulated products in many parts of the world, an MSME may face difficulties in selling their innovative products to the global market because of the lack of international standards for the product. To overcome this, MSMEs can work with the NSB to participate in international technical committees, to explore the development of an international standard for its product category. With this, the MSME would have a higher chance of gaining market access and confidence globally.

With the government:

Government agencies also work closely with MSMEs to support national initiatives. Two examples are illustrated below:

(1) A new sensor network standard was launched in support of Singapore's efforts to become a smart nation. The government agency in charge of public housing partnered commercial firms to look into a Smart Elderly monitoring and Alert System, allowing family or caregivers to monitor elderly through sensors placed in the apartment, and a utilities management system.

(2) A collaboration between National Environment Agency and an MSME led to the development of a smart waste management bin. The bins were embedded with an RFID chip to notify the waste company when it has reached full capacity.

Lastly, SPRING also works closely with MSMEs to raise their awareness and adoption of standards. It uses various media tools and organizes outreach events to raise awareness and promote standards adoptions. Outreach events are in the form of SPRING-led events, workshops, seminars and regional workshops with international organisations. Case studies are also used as tools to reinforce the message that standards can help a company improve their bottom line, gain access to markets and expand their customer base.

SPRING encourages MSMEs' participation in standards development and adoption of standards so that they may upgrade and enhance their competitiveness.

- **The importance of sound measurement as a key component of an effective quality infrastructure to support MSMEs - Dr Victoria Coleman - Project Leader and Acting Section Manager, Nanometrology - National Measurement Institute - Australia**

Measurements are a critical component of a national quality infrastructure. Accurate, reliable and comparable measurements are important to micro, small and medium enterprises (MSMEs) across all aspects of the product value chain; including during the production and innovation phase, to meet trade and regulation requirements, to meet quality targets and to ensure safe and responsible use. There is an established global measurement infrastructure to give MSMEs access to accurate, precise, comparable and internationally recognized measurements. This infrastructure includes the Meter Treaty, the BIPM, the System International Units and the CIPM MRA.

In this presentation, two case studies are presented to highlight two ways in which the national measurement institute Australia (NMIA) has been able to support Australian MSMEs; the first is basically an example of translation of discovery from a university through translation and commercialization outcome pertaining to a product of one of the universities in Sydney who wanted to develop a method for detecting cyanobacteria in water. They needed reference materials of cyanobacteria measurements, and also the standard provided by NMI, so the commercial product would be able to be tested and produced, and the company would have a product which has an internationally recognized standard that can become the benchmark for toxin gene quantification, so that is a great outcome for that particular company. Another example is from a company called Rofin in Australia, the leading MSMEs manufacturer of LED or light emitting diode technologies; and in order to export to South Africa, they needed to demonstrate compliance with international photo biological safety standards so they could win a multimillion dollar contract to supply forensic light sources. The commercial testing capabilities were unavailable in Australia and other international providers were unable to meet the time frames required by the company, but the National Measurement Institute was able to work with Rofin to find a measurement method for them and get those tests done so that they were able to make that tender acquirement and so for 20 000 Australian Dollars that company then had access to about 20 million dollars of revenues, so that's a great outcome for that MSME.

Measurements and Measurement Standards are one component of the Quality Infrastructure. It is a resource that may be accessed through regional metrology organizations such as the Asia Pacific Metrology Program (APMP), and is a resource for APEC economies.

Session 4: Initiatives to strengthen capacities in MSMEs for APEC members – Part 2

- **Dr Maria Patricia V. Azanza – Director – Department of Science and Technology (DOST) – Industrial Technology Development Institute (ITDI) - Philippines**

Dr Azanza gave a presentation about Integrated Management System for DOST Centers of Food Innovation in Research and Development Institute and Regional Offices

The presentation was about the integrated management system for the Philippine department of Science and Technology Centers of Food Innovation in Research and Development Institute

& Regional Offices. The Department of Science and Technology (DOST) is the head central direction and leadership for science and technology activities in the economy.

The FIC is a program that offers food processing and testing which includes technical assistance for marketing business development and regulation.

At the moment there are ten operational FICs in the member economy; there are four government design processing equipment listed there but they have since received more and are expected to have 18 by the end of the year.

FIC is a program that offers facilities for food processing and testing and often includes technical assistance for marketing, business development, and regulation compliance.

For MSMEs to develop high-value food commodities, the DOST initiated the establishment of the Food Innovation Centers nationwide—with an oversight body at ITDI called the Central FIC. Regional FICs are located in academic institutions with food science and related courses.

Also, it was described general roles of stakeholders as follows:

- Governemnt: Developer of FIC concept; Provider of 1st generation Science, Technology and Innovation (STI) knowledge for FIC; Provider of STI regional infrastructure; Over-all steward of FIC growth

- Academia: Incubator of STI infrastructure; Developer of next generation STI knowledge; Link with STI knowledge adaptors

- Industry: Recipient and beneficiary of STI knowledge; Initiator of STI-based businesses; Engines of economic growth

- **CITEs supporting MSME's through the quality infrastructure -Mrs Adriana Ríos – Executive Director of Productive Innovation and Technological Transfer Center of footwear (CITECCAL)- Peru**

CITECCAL means the Productive Innovation and Technology Transfer Center for Leather, Footwear and Related Industries. It was created on July 1998 by Ministry of Industry, Tourism, Integration and International Trade (MITINCI). In 2002, it was transferred to Ministry of Production until 2013 when it was annexed to Technological Institute of Production.

CITECCAL offers several services, technological services and specialized information. Specific services are:

- design and product development which means scaling patterns by computer assisted design technology, footwear modelling and 3D design for components such as soles and heels.
- lab tests according to national and international standards and also to support research activities. CITECCAL Lab has implemented its quality management system with procedures based on ISO / IEC 17025 for testing and calibration laboratories
- technical assistance and training courses to improve knowledge and skills promoting and transferring technology to increase productivity and quality in companies.
- transfer information about fashion trends, innovative processes, clean technologies, new materials, papers, project funds, national and international fairs, and so on.
- certification of job skills process according to official standards given by the Labor Ministry.
- promotes the participation of enterprises in developing innovative projects with FIDECOM funds, and articulates with universities to promote research in projects.

CITECALL is the technical secretariat of Committee for standardization of Leather and footwear. It is a Mirror Committee in the ISO Technical Committee. 107 standards are available for footwear, leather and complements industries. CITECALL has several experiences in the use of standards and the support of the CITECCAL Lab; one of the most important is in social programs of the Government, to establish technical specifications for children and police shoes. In the first case, a social program called Compras a MYPERU of the Ministry of Production provided school shoes manufactured by Micro and Small enterprises to children from low-income

families. In the second case, it was the turn of the Police footwear in the same program. CITECCAL lab was responsible for evaluating the quality of the products manufactured by the micro and small enterprises.

Other important experiences that should be mentioned are the studies for the Peruvian Association of Consumers, in the evaluation of child footwear and safety footwear, where it was determined that most of the shoes tested did not comply with the respective standards. Quality with standards, technological services and innovation projects have proved to be important to Micro, Small and Medium Enterprises. They help to develop industry.

- **CITEs supporting MSME's through the quality infrastructure. Promoting MSMEs' competitiveness in the Woodwork sector - Mrs Jessica Moscoso - Executive Director of Productive Innovation and Technological Transfer Center of Woodwork (CITEMadera)- Peru**

The Center for Innovation and Technology of Timber and Furniture - CITEMadera is a specialized technical institution of the Ministry of Production created in 2000, and since 2013 it has been part of the Technological Institute of Production (ITP). Its function is to serve the timber and furniture sector.

CITEMadera's main objectives are:

- Promote innovation and competitiveness in MSMEs.
- Improve the quality in the different stages of transformation and industrialization of timber.
- Develop research programs in the timber and manufacture production chain.
- Provide technological support and training for the Wood manufacture industry.

In partnership with companies, institutions or directly, CITEMadera through R&D promotes innovative products and process, considering the use of lesser used timber species, materials, or improved technology and processing; focusing on demand and actively identifying new business opportunities.

As Technical Secretariat of the Committee for Standardization of Processed Timber Forest Products and SCTN of Furniture & SCTN of Wood and Carpentry, CITEMadera has been

recognized by INACAL during 2011 - 2015. Currently, there are seven draft standards for the sector, and 95% have been approved as national standards by INACAL.

CITEmadaera promotes competitiveness in MSMEs in the wooden furniture sector through its Quality Infrastructure. Specific actions are:

- Prototype Development and Validation Functionality under NTP ISO 7170 Furniture. Storages Units. Determination of resistance and durability.
- Increase value to non-commercial timber through the Validation of value-added products.
- Improvement in the Design of School Furniture in wood in sizes: kindergarten, primary, middle and high schools and teachers.
- Improvement of Quality in MSMEs and Startups & Buyers.

Session 5: Initiatives to strengthen capacities in MSME's for APEC members – Part 3

- **National Standards Compliance Program – Malaysian experience - Mr Feris Frederick – Senior Assistant Director –Standardization Division - Department of Standards Malaysia, Ministry of Science, Technology and Innovation**

Mr Feris Frederik gave an overview about how the Department of Standards Malaysia implemented the National Standards Compliance Program.

The Department of Standards Malaysia as the National Standard Body develops and promotes the Malaysian Standards and as the National Accreditation Body accredits Conformity Assessment. In order to increase the usage and the utilization of the standards The Department of Standards Malaysia has set up six strategies, and one of these is the establishment of the National Standards Compliance Program. This program is part of a study in the National Standards Compliance Program, and the objective is to develop the National Standards Compliance Program (NSCP) that will help companies (especially SMEs) to increase their market competitiveness, in order to further penetrate global and domestic markets successfully by meeting standards requirements of products and services.

Among key weaknesses identified across the existing programs in Malaysia are:

- lack of industry awareness about programs. Companies cannot participate if they are not aware, and with limited tracking of effectiveness of programmes and without monitoring mechanisms or feedback loops, there is no way to gauge effectiveness of programs. Even when parameters are tracked, there is no further analysis to determine effectiveness and assist with targeted measures.
- lack of programs that address funding issues. There are very few programs that provide financial assistance specific to standards.
- programs are fragmented across agencies. Companies must go through the various agencies for different programs.
- lack of coordination and collaboration among agencies.
- Some programs are very stringent in nature and only suited for companies that have the capabilities to comply to stipulated standards.

So the objective of NSCP actually is to provide a platform for collaboration among the agencies that offer assistance or technical assistance with regard to standards compliance as well as to establish an information hub for standards and compliance.

How does NSCP benefit the industries? First of all, they will benefit through the Capacity Building for Industry and through technical training in collaboration with implementing agencies as well as the business clinic, so they receive training on popular standards; this training is actually free, no fees, no registration fees. Secondly, promotion of success stories shared through promotional activities; and giving information on grants and financial assistance and collaboration activities with agencies providing grants. And the last, but not the least, consultancy on standards and conformity assessment to this program.

The NSCP implementation update consists of four elements: awareness, understanding, compliance and monitoring. In 2016, the Department of Standards Malaysia conducted the Capability Development which is quite different from capacity building; this activity holds the SMEs until they are ready for certification, so they are 5 mini stages in both in these activities: the gap analysis on standards, training on documentation, system development, management review as well as the project closure. In 2016 NSCP managed to handle 28 companies.

The program also conducted a study of the economic impact of the usage of standards on the Electrical & Electronic (E&E), Food & Beverage (F&B) and Agriculture Sectors. These 3 sectors are currently the main sectors and the national key economic areas in Malaysia. The study of the economic impact of the uses of standards were conducted by experts and economists. The objective of this study was to provide a baseline data which did not previously exist. This can be used as a basis by central agencies and implementing agencies to make an economic assessment on the use of standards for the electrical and electronics, food and beverage and agriculture sectors. This study also is to assess the economic impact among organizations that comply with standards to identify issues and challenges that arise with standards compliance and to provide recommendations towards improving the infrastructure. The expectation of this study was to determine whether standards have an impact on the Malaysian economy and whether companies benefit from the use of standards.

Two types of analysis were considered: Macroeconomic analysis which looked only at the Quantitative Impact, and the methodologies involved in this analysis were Input-Output approach and Econometrics approach; and the microeconomic analysis which looked at Perception & Quantitative Impact at the Organizational level. Three types of methodologies were used under this analysis: Survey, Interviews and ISO Methodology.

For the macroeconomic findings through the Input-Output methodology it showed that standards positively contributed to growth in TFP in all sectors; for example, standards contributed 0, 15 % to total factor productivity; and the Econometric GDP methodology standards showed that the contribution of standards to GDP over the period of 13 years (2001 to 2013) was positive and statistically significant. Each 1% increase in standards developed contributed 0,02% to GDP of E&E sector, 0.26 % to F&B and 0.06 % for Agriculture sectors. Next, was the finding of the microeconomic analysis; for the interviews of industries, 86% of the industries agreed that standards enhanced market access (for export) and increased sales and market volume, 83% of the industries agreed that they ensure safety of products & satisfaction and confidence of customers, and as a prerequisite for export market access, 76% of the industries agreed that standards enhanced quality, productivity and promoted the quality culture within their company, and standards assisted them in doing things systematically. And 69% of the industries agreed that standards are way to kept abreast with the ever-changing technology and also agreed that standards were a strategic tool to improve design and product research and promoted quality improvement initiatives.

The Survey & Interviews with the Government showed that 50% of the government agreed that Standards complement government's role in protection of health, safety of Malaysians and the environment. 90% of the government agreed that Standards were used as an enabler

to enhance public confidence and satisfaction and 75% of the government agreed that standards have helped government initiate more quality improvement activities. Also, 86% of the interviewees agreed that standards facilitated business expansion through penetration and access to new markets, and increased revenue.

Moreover, 77% of the industries agreed that Standards promoted and facilitated international trade, and 35% of the industries agreed that TT standards acted as a catalyst for innovation of products, process and technology, as well as disseminating knowledge and technical information, and supporting the efficient functioning of organizations. From the Survey & Interviews, the industries agreed that standards contributed to organizational growth. From the macroeconomic and microeconomic analysis carried out, the findings revealed that standards contributed positively to the Malaysian economy.

- **How Accreditation supports MSME by reducing TBT in Energy Efficiency Field- Successful Story: US EPA Energy Star Accreditation Program - Mr Roger Sheng - Chief of Electric and Optical Section - Laboratory Accreditation Department – Chinese Taipei Accreditation Foundation (TAF)- Chinese Taipei**

The Outlines of this presentation were the following points:

1. MSMEs in Chinese Taipei
2. Technological Barriers to Trade (TBT) to MSMEs
3. Relationship among CA, Accreditation and Trade
4. US EPA ENERGY STAR program
5. TAF's support to MSMEs for ENERGY STAR program
6. Benefits of Accreditation

The US EPA Energy Program constitutes a voluntary energy conservation movement to identify and promote energy efficient products. It is a process of controlling documents, product qualification labels, product listings and on-going verification with different stakeholders in the chain market.

ENERGY STAR qualified products are available in more than 60 categories. Each product has its own SPECIFICATION.

- The requirement and criteria of the product are detaileded in the specification.
- Some Specifications detail the testing procedures (methods); Some refer to other testing standards.
- One product specification may include several test methods to measure the performance, power consumption or other characteristics of the product.
- Review criteria and “raise the bar” as needed each year
- Fast developing ES product specification.

TAF’s support to MSME for ENERGY STAR program providing:

- Technical Assistance Facilities to support MSMEs
- Update the fast developing ES product specifications.
- Develop specific ES accreditation program for Labs.
- Turn ES’s requirements into an assessment checklist.
- Provide workshop/training to CABs and Industry.
- Support the emergence of new lighting technology (SSL).
 - Support identifying high energy efficient ICT products.
 - MSMEs benefited: tested in Chinese Taipei

The benefits of Accreditation are:

- ✓ Reduce fixed cost of new products.
- ✓ Reduce Risk/Protect Consumer.

- ✓ Shorten the time to the market.
 - ✓ Make product standards/technological requirements more transparent.
 - ✓ Facilitate trade.
 - ✓ An efficient enforcement and monitoring tool.
 - ✓ Greater acceptance of products and services.
 - ✓ Avoid costs associated with repeat conformity assessment.
 - ✓ Public confidence in goods and services.
 - ✓ Minimise product failures or recalls.
- **Case of Standardization of Korean MSMEs: Establishment of Support Platform for the Voluntary International Standardization of SMEs- Mr Mun Kyoo Woo - Principal Researcher - Korean Standards Association - Republic of Korea**

Mr Mun Kyoo Woo presented an experience related to a project titled “Establishment of support platform for the voluntary international standardization of SMEs”. It is a 3 year project, which started in July 2014 and will be finished in June 2017.

The project was financed by government funds (740,000 USD) and private companies (53,000 USD). The host for the project is KATS and KSA.

Considering Korea’s high dependence on trade, it is necessary to provide SMEs with opportunities to approach the global standard and globalization—the fundamental base for early exposure to advanced knowledge—in order to enhance their international competitiveness and profitability. SMEs are noticing the importance of standardization but show a passive attitude toward standardization activities.

Due to the lack of experience of companies and other relevant difficulties in using standards, it is hard to implement and expand standardization outcomes. Standardization Capacity-Building activities is very necessary.

This project try to enhance global competitiveness. The project:

- Discovered SMEs' technologies that can be suggested as an ISO/IEC international standard, and developed 22 draft international standards.
- Supported the procedure for the technologies suggested as an international standard to be adopted as an NWIP and the procedure to upgrade the currently ongoing SMEs' draft international standard to an upper stage (from NWIP to WD or from WD to CD) ; and 1 item is in progress from NWIP to WD.
- Provided a customized one-point consultation service with requests from companies on information and education related to international standards.
- Operated a Help Desk to solve difficulties and answer questions of SMEs in international standardization.
- Considered the use of international standard experts to support SMEs' technologies that can be suggested as international standards and to provide regular consultation.
- Shared information and strategy knowledge in international standards; for example, through workshops organized by a committee on international standards information exchange that is attended by SMEs and relevant experts.
- Gave support to business trips to overseas agencies/companies for strategic cooperation to acquire information and present or propose international standards (draft) or contribution.
- Prepared data to support their activities for international standards such as a step-by-step guideline.
- Operated a manpower pool composed of 116 experts to be able to provide relevant advices and secure resources for consultation and training.
- Established a manpower pool composed of experts in standard essential patents and international standards.
- Hold a CEOs' breakfast meeting 2 times to raise awareness of executives on international standards.

- Hold a public training 5 times to raise the awareness of SMEs on standardization.
- Established and operate a system for providing the current status of publications of ISO and IEC standards and other relevant information.
- Provided an analysis on information regarding the standards currently published by ISO and IEC and information on the current status of the patents declared by ISO and IEC.
- Developed and operated an international standards capacity diagnosis systems.

As a final conclusions of the presentation, the following statements were mentioned:

- In order to motivate companies to lead in the advancement of technologies and adoption of high technologies, it is not an option but a must to develop and implement international standards.
- For SMEs, interest and investment in international standardization are important to grow into a competitive company in the international market.
- In order to encourage and motivate SMEs to participate in international standardization, it is also important to promote education/promotion programs to lead the change in their attitude toward standardization.
- The success of SMEs in international standardization can raise the companies' awareness and active participation in international standardization and of the importance of standards to create the fundamental system for standardization, which is mostly led by industry.

Session 6: Discussion

- **Overview of SME work in APEC - Mr Kent Shigetomi - SMEWG Chair's representative**

The presentation gave an overview of some of the work done by SME working groups in the APEC Sub-Committee on Standards and Conformance. Issues related to SMEs date back over 20 years, back to 1994 at the first meeting of ministries responsible for SMEs.

The SME working group eventually developed and set up principles and a strategic plan that was updated for the period of 2013 to 2016, and this plan was recently updated yet again for 2017 to 2020. The vision statement for the SME working group is to promote competitive balance including sustainable, innovative and secure growth of SMEs and MEs in the APEC region.

The SMEs working groups has a number of priorities; one of the most important is to focus on modernizing the SMEs to promote innovation and connectivity. One of the elements is integrating Green MSMEs to global value chains and to internationalize SMEs and integrate them into the global value chains.

One of the constraints that SMEs face is capacity and human resources constraints. People do not realize the importance of the standardization activities when they are all busy doing something else. Financing is another one.

There is an elemental business environment to mark access to the internationalization and building capacity within SMEs to help to internationalize and expand the international market, to help them identify new business opportunities outside of their whole economy. One initiative was the development of the Iloilo initiative to grow global MSMEs for inclusive development. There is an increasing trend in this area for virtual networks among MSMEs. Another leading accomplishment in the last year was the Boracay agenda to globalize MSMEs to address the barriers to trade in investments that they face.

Technical barriers to trade have a disproportional effect on MSMEs because they do not have the staff, the capacity and knowledge to address them. SMEs because of their small size often do not know where to turn; they do not know where to begin, so to the extent we can provide centralized resources and information in easy to understand language, we have a greater ability to help them. SMEs would be disproportionately affected by clearance and customs procedures; they have to spend more time trying to clear their goods into other markets, so to that extent we can help with trade facilitating activities and that is so much better.

Some specific projects that the SMEs working group has undertaken recently to assist SMEs dealt with promoting MSMEs' integration into environmental goods and services in global and regional markets in a workshop that was held last month. SMEs are widely engaged in the food industry, both agricultural growth and processing food. There were a number of workshops held by the SME working group that specifically sought to address non-tariff barriers, sessions on standard certification of food safety, and the major focus was trying to integrate SMEs into global value chains and to identify the specific things that were effective.

There was also a forum on health care products where participants exchanged ideas on barriers to trade and tried to identify the specific barriers that SMEs in the health sector experienced; again a lack of uniformity across export markets makes things difficult for SMEs when product requirements are different for different countries.

The SMEs have faced challenges with respect to information; they do not understand what is not in plain language. One of the acts is to create greater information flows between the two working groups, to build in scale capability for CAC workshops and technical assistance to reach out to more SMEs, creating a multiplier effect; train the trainers, and look for additional opportunities for collaboration between the groups.

With the leadership from the Philippines a work plan to support collaboration and begin with initial projects to exchange information on packaging and labeling requirements as a voluntary survey connected by the Philippines was developed.

One of the additional capacity building activities might be areas where SCSC could act collaborating with the SMEs working group in the organization of training activities and other events where the two groups could work together to stage a single event. Additional work to identify more sectors of interest to SMEs in the APEC region, and then the SCSC could, perhaps, work on identifying relevant standards in that area; and finally the development of specific projects jointly, perhaps that could directly affect the competitiveness of SMEs.

There is already an existing mechanism to support the work of MSMEs particularly in the areas of standards, as well as a well-established process between the two working groups on a number of projects of interest to both groups. There is a common recognition of the challenges that SMEs face today. There is a desire to have more information about specific sectors of interest to SMEs in the APEC region. One of the things that was impressive in yesterday's discussion was again the extent to which economies develop programs in specific areas, food wares, textiles, electronics, food and beverages. All of these things represent work by economies to reach out to SMEs and identify the specific sectors of interest that can then be taken to the next step with APEC acting between the two working groups to develop work in the specific sectors.

- **Discussion on specific topics through working groups**



The invited participants were arranged into working groups (WGs) on the second day of the workshop. Four working groups were defined in order to discuss survey results and draft recommendations about the best initiatives presented the first day of the workshop and how to implement them.

The working groups covered the following topics:

WG 1: Strategies to promote interest and participation among MSMEs in using infrastructure quality services.

Moderators: Mr Augusto Mello (Peru) and Mr Adrian O'Connell (Australia)

WG 2: How to get sustainability to maintain successful initiatives

Moderators: Mr Roger Sheng (Chinese Taipei) and Mrs Soraya Lastra (Peru)

WG 3: How to measure the impact of the initiative in terms of improving competitiveness of MSMEs to access to global markets

Moderators: Mrs Feris Frederick (Malaysia) and Mr Kent Shigetomi (United States)

WG 4: Challenges and opportunities to consider in initiatives focused on promoting quality infrastructure services in MSMEs

Moderators: Mrs Aderina Uli Panggabean (PASC) and Mr Mitsuo Matsumoto (Japan)

In Appendix 3 a list of participants of each WG is shown.

The information gathered was relevant and useful to help to better understand the importance of adoption of standards and use the services by accredited conformity assessment providers, as well as being more involved in the development of standards, conformity assessment and metrology businesses.

Outcomes of Working Groups Discussion:

Working Group 1: Strategies to promote interest and participation among MSMEs in using infrastructure quality services

Means to get understanding of MSMEs in using infrastructure quality services

- Develop guides for MSME's on implementation of new standards.
- MSME's are only interested in practical things to help them do business. A portal of useful information/tools that solve a problem or help them get business done. One example of a useful format is <http://tfig.unece.org/>
- Segment or classify MSME's depending on their level of understanding or engagement with the quality infrastructure – and target accordingly.
- Provide relevant information that is sector specific
- Re-focus the quality infrastructure from just testing for 'compliance' to also helping them develop their products.

Means to encourage MSMEs to take quality infrastructure services

- In conjunction with export promotion campaigns and trade associations, provide 'extension' services to help MSME's meet the quality requirements to be part of global value chains.
- Help them to implement standards that relate to processes and productivity improvement in their production/service systems

- Develop user cases of MSME's that have overcome barriers or challenges and have become models – i.e. success stories
- Use feedback mechanisms to constantly adapt and update so elements of success are well identified and can be applied by all. E.g. – Internet based surveys
- Develop associations of similar MSME's that can support and learn from each other.

Strategies to promote MSME's interest among APEC economies in using infrastructure quality services.

- Reference standards in legislation.
- Working with relevant and viable associations.
- Market pulling vs product push approach - Analyse market needs first – before you develop product – Understand needs and technical regulations in target market first.
- Encourage participation of representatives of MSMEs in standards development and create mechanisms that support this. – *But warning* - need to be careful not to create anti-competitive advantage for one or two companies who get a seat at the table.
- MSMEs should not just be 'client' standard takers but also part of the system.
- Use online social networks.
- Create partnerships between MSME's and big business through publicly funded 'cooperation centres'.
- Cooperation through innovation/incubation centers, government research trade institutes.

Recommendations

- Support/encourage the development of viable MSME 'industry associations' in APEC economies where they don't exist.
- Develop strategies for industry associations to promote the awareness of and participation of MSMEs in the NQI and provide related services.
- Develop materials and web based information that can be easily accessed and used by MSME's and the NQI. Must be useful and relevant.
- Fund National Quality Infrastructure (NQI) organisations to engage with MSME's and develop and use best practice case studies.
- Develop of pool of market experts from APEC economies to provide input to APEC officials.

Working Group 2: How to get sustainability to maintain successful initiatives

Problems that MSMEs face to make these initiatives sustainable

- Economies must maintain a continuous quality infrastructure services.
- Why MSMEs do not want to use QIS?
 - Lack of financial issues.
 - Lack of understanding. MSMEs are not familiar with QIS.
 - Lack of appreciation.

Lack of financial issues

There are some actions that could be taken:

- Educational programs on planning (government financed), which focus on how to educate MSMEs on understanding the barriers of quality infrastructures.
- Provide some kind of financial support such as softer loans.

Some indicators to measure impact could be: No. of educational programs developed; No. of MSMEs graduated from educational programs; No. of MSMEs including the investment of Quality Infrastructure into their budgets /plans.

APEC can provide experts to help develop educational program for member economies.

Economies should assure a budget for soft loans. Then we can measure: No. of MSMEs that apply for the soft loans; No. of MSMEs that were approved for the soft loans; No. of MSMEs that received certification/accreditation for their quality programs.

Lack of understanding

Economies should simplify materials related to promoting understanding of QIS. Experts in this field, can understand each other, but-MSMEs may not understand technical language. Communication experts can help develop simplified materials. Some indicators to consider are: No. of materials developed; No. of MSMEs using the materials.

Lack of appreciation

Conduct studies on the money value of compliance with Quality Infrastructure. Results can be measured in terms of improvement of MSMEs' impact on Gross Domestic Product (GDP) and Competitiveness Index.

Economies sponsor studies; APEC should develop handbooks on how to conduct these case studies.

Government can implement recognition programs that can include a "premium mark" or other type of recognition like including MSMEs in the official government list of suppliers. Appropriate indicators should be: No. of MSMEs included in official government listed suppliers; No. of MSMEs with the government mark on quality (recognition programs); No. of MSMEs that are included in the value supply chain of exporters.

Economies that are now using recognition programs should share their experiences with other APEC members and APEC could fund them.

Working Group 3: How to measure the impact of the initiative in terms of improving competitiveness of MSMEs to access the global market

To promote involvement of MSMEs in the process of development of standards (development, implementation review), it is important to look at the whole standards development and implementation process and recognize the implications of standards reviewed through tracking mechanisms. Ways to measure impact could be: N°. of MSMEs involved in the development stage of standards; N°. of MSMEs involved in the implementation stage of standards; N°. of adoptions of international standards in an economy; No. of laboratories that might test to a particular standard; N°. of conformity assessment bodies in a particular economy; N° of MSMEs recertified with a standard that has been updated; N°. of MSMEs that certify a standard.

The initiatives can consider training activities and the economic result of that. Some indicators can be considered as follows: N°. of MSMEs have been trained or engaged on the specific geographic distributions; N°. of people/associations who have been trained; Follow up surveys; N°. of associations created; N°. of new products developed that are considered in the given international standard; N°. of new markets that the NSB have been able to access because of their participation; new sales or exports at the company level; changes in the government budget over a time or the number of projects.

As a recommendation it was mentioned that there is a recognition that work has to be appropriately tailored to the audience while the audience is a particular industry or particular language or culture; again there's a recognition that language cannot be too technical, otherwise it will not be effective for the people who are involved.

Economies must consider the use of appropriate statistics considering margin of error in data/statistics and companies' specific information rather than economy wide statistics. In some cases SNBs that have been fully integrated into a formal economy ~~it~~ might be engaged in formal activities so are we looking at the right statistics while we are examining a specific sector, and in those cases statistics should be approached at an associational or higher level instead of the company level, and again followup services to make sure that people who participated in initiatives continue to apply them.

Other indicators usually related to macroeconomic Statistics are: growth in exports; global employment; Gross Domestic Product (GDP); Productivity gains; increase in market access/new markets; etc.

Working Group 4: Challenges and opportunities to consider in initiatives of promoting qis in MSMEs

The main challenges identified were:

- a. Limited access of information on Quality Infrastructure Services (QIS).
- b. Lack of awareness on importance of QIS.
- c. Lack of financial and human resources to use QIS.
- d. Lack of QIS themselves (total number and scope). For example in the rural area where MSMEs have limited access or services.
- e. Lack of qualified experts of QIS.

Opportunities and recommendations for each challenge:

- a. Limited access of information on Quality Infrastructure Services (QIS).
 - Conducting seminars/workshops/capacity building (open to public and including associations). Inviting industrial associations to share experiences and needs.
 - More support of international organizations (ISO or others).
 - Prepare promotion materials for the MSMEs similar that ISO organization has prepared.
- b. Lack of awareness on importance of QIS.

- Identify and share case studies of success story on good practices.
 - Use of social media (youtube, facebook) and mass media (tv, radio).
 - Enhance collaboration between National Standardization Bodies (NSBs) and Conformity Assessment Bodies (CABs).
- c. Lack of financial and human resources to use QIS.
- Create database of standards experts.
 - Provide subsidies to MSMEs.
 - Hire retired experts at NSB's to support MSMEs.
 - Tax reduction for investment on QIS.
- d. Lack of QIS themselves (total number and scope).
- Collect information on QIS to be provided through APEC website. If some economy is lacking of some scorebook for commodity assessment bodies, then they might be in APEC countries who can provide support.
 - Capacity building in collaboration with Specialist Regional Bodies (SRBs).
- e. Lack of qualified experts of QIS.
- Capacity building of Human Resource Development (HRD) with APEC funding.
 - Collect and share information on capacity building of each economy.

Workshop conclusions

Based on the information received, the efforts of APEC economies to foster standards and conformance initiatives among MSMEs as a way to promote competitiveness in global markets are evident.

The most frequent strategies considered by the initiatives received were:

- Helping MSME's to implement standards that relate to processes and productivity improvement in their production/service systems.
- Working with relevant and viable associations.
- Developing materials and web based information that can be easily accessed and used by MSME's.
- Working more closely with industry associations in order to promote the awareness and participation of MSMEs in the NQI and provide related services.

These initiatives face challenges and opportunities. The usual barriers to taking action can be classified into the following categories: Limited access to information on QIS; Lack of awareness of the importance of QIS; Lack of financial and human resources to use QIS; Lack of QIS themselves (total number and scope) and Lack of qualified experts in QIS.

Not all the initiatives need to consider indicators to be successful. The achievements of objectives are the usual way to show conformance and effectiveness.

It is worthwhile to mention the efforts of some economies to measure improvement of MSMEs' impact on Gross Domestic Product (GDP) and Competitiveness Index through the implementation of standards. This kind of indicators, among others, could be considered to measure the impact of initiatives in improving the performance of MSMEs

It is open to discussion to explore other ways to measure the sustainability of initiatives. Various conditions can affect the definition of an initiative; it is not the same to measure the manufacturing and service sectors, and the objectives and scope of the initiative must also be taken into account.

Workshop survey analysis

The following APEC economies were represented in the 2-day workshop: Australia; Canada; Chile; Indonesia; Japan; Republic of Korea; Malaysia; Papua New Guinea; Peru; Philippines; Russia; Singapore; Chinese Taipei; Thailand; United States and Viet Nam.

126 participants were registered in the 2-day workshop. Of those, 47.6% were male participants and 52.4% female participants.

79 participants responded the workshop survey. Among the survey responses, 33 were anonymous.

Important comments and suggestions were received in the surveys. The results of the surveyed are shown in Appendix 1.

The analysis of the survey responses show the enormous interest in standardization activities as a means to improve MSMEs' competitiveness. Levels above 90% acceptance (considering the categories of "strongly agree" and "agree") for most of the questions of the survey was revealed.

- ✓ The objectives of the training were clearly defined? 46.8% (strongly agree) + 50.6% (agree)= 97.4 %.
- ✓ The workshop achieved its intended objectives? 32.9 % (strongly agree) + 65.8% (agree)= 98.7 %.
- ✓ The agenda items and topics covered were relevant? 52.6% (strongly agree) + 46.2% (agree)= 98.8 %.
- ✓ The content was well organized and easy to follow? 41.8% (strongly agree) + 55.7 % (agree)= 97.5%.
- ✓ Gender issues were sufficiently addressed during implementation? 32.9% (strongly agree) + 58.9 % (agree)= 91.8%.
- ✓ The trainers/experts or facilitators were well prepared and knowledgeable about the topic? 46.8% (strongly agree) + 51.9% (agree)= 98.7 %.

- ✓ The materials distributed were useful? 32.9% (strongly agree) + 55.3% (agree)= 88.2 %.
- ✓ The time allotted for the training was sufficient? 38.7% (strongly agree) + 52% (agree)= 90.7 %.
- ✓ How relevant was this workshop to you and your economy? 27.6% (very) + 60.5% (mostly) = 88.1%.

About the gain of knowledge and skills, the participants declared an increase between their prior knowledge and their final knowledge after their participation in the workshop. It is shown as follows:

1. Rate your level of knowledge of and skills in the topic prior to participating in the event: Very (6.5%) + Mostly (31.1%) = 37.6%.
2. Rate your level of knowledge of and skills in the topic after participating in the event: Very (16.9%) + Mostly (57.1%) = 74 %.

Conclusions

- The results of the APEC survey on supporting micro, small and medium enterprises through standardization activities made it possible to know important facts such as: most of the surveyed economies reported having developed or participated in projects, programs or initiatives that support MSMEs on standards, conformity assessment and/or metrology activities; among these, National Standard Bodies have an active role in promoting MSMEs' competitiveness through standardization activities; the initiatives are mainly supported by public funding; few economies measured impacts of their initiatives; most of the economies concluded that their initiatives are replicable, sustainable and relevant for APEC economies.
- Specific initiatives to support MSMEs competitiveness through quality infrastructure services were shared by the following economies in the workshop: Australia; Japan; Malaysia; Peru; Philippines; Singapore; Chinese Taipei and Thailand. General and specific policies and strategies to foster MSMEs to access to global markets, were presented by the United States.
- In conjunction with export promotion campaigns and trade associations, provide 'extension' services to help MSME's meet the quality requirements to be part of global value chains

- Promote Synergies between the academia, government and industry to help MSME.
- Capacity building in collaboration with Specialist Regional Bodies
- Strength connectivity, such as use of social media (youtube, twitter, facebook) and mass media (tv, radio). Including diffusion of materials such as guides or manuals.
- Assist MSMEs to implement standards related to processes and productivity.
- Create partnerships between MSME's and big companies through publicly funded 'cooperation centres'.
- Use indicators to measure the impact of the implementation of initiatives (e.g. related to training, market participation after having implement initiatives, etc.
- The working group discussion on the second day of the workshop gave valuable outcomes related to measures and strategies to take in account in any project or initiative that seeks to promote MSMES competitiveness in national and global markets. This information will be the basis for analysis to prepare a publication with APEC recommendations on best initiatives that NSB could apply to help MSMEs better understand the benefits of standards & conformance, and encourage adoption of standards and services by accredited conformity assessment providers and initiatives to get MSMEs more involved in the development of standards, conformity assessment and metrology business.

APPENDIX 1 – Survey

APEC Workshop Evaluation Survey: Workshop

APEC Workshop Name/Number: CTI 13 2015A – Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities

Date 16 – 17 August 2016

The following APEC economies were represented in the 2-day workshop: Australia; Canada, Chile; Indonesia; Japan; Republic of Korea; Malaysia; Papua New Guinea; Peru; Philippines; Russia; Singapore; Chinese Taipei; Thailand; United States and Viet Nam.

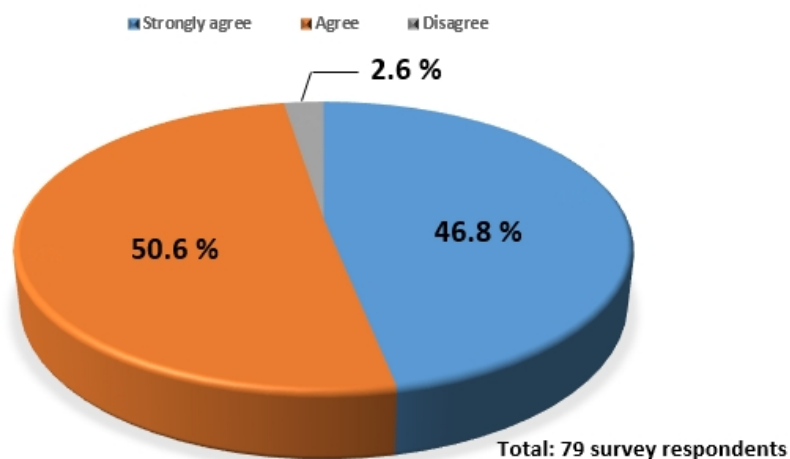
126 participants were registered in the 2-day workshop. Of those, 47.6% were male participants and 52.4% female participants.

79 participants responded the workshop survey. Among the survey responses, 33 were anonymous.

Instructions: Please indicate your level of agreement with the statements listed in the table below.

	Strongly agree	Agree	Disagree	Comments (continue on back if necessary)
The objectives of the training were clearly defined?	46.8%	50.6	2.6 %	

THE OBJECTIVES OF THE TRAINING WERE CLEARLY DEFINED?

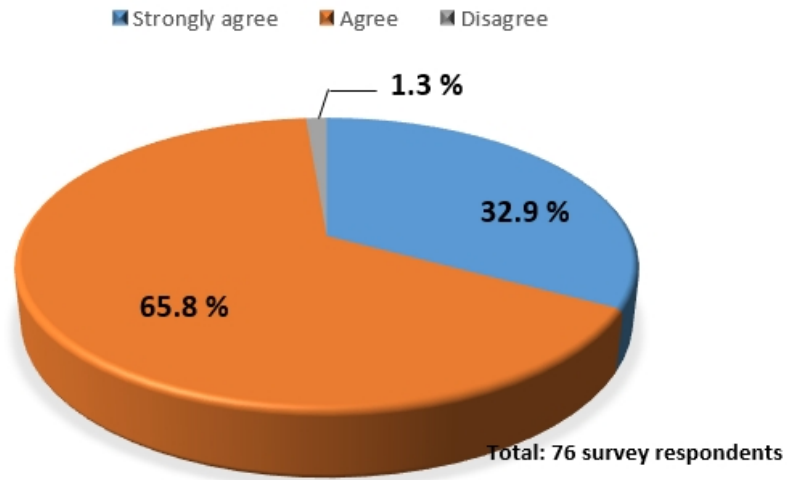


Comments:

- The objectives were not known at the beginning of the workshop. They were mentioned later.
- The objective could be highlighted. Maybe they were reminded several times during the workshop.

	Strongly agree	Agree	Disagree	Comments (continue on back if necessary)
The workshop achieved its intended objectives?	32.9%	65.8%	1,3%	

THE WORKSHOP ACHIEVED ITS INTENDED OBJECTIVES?

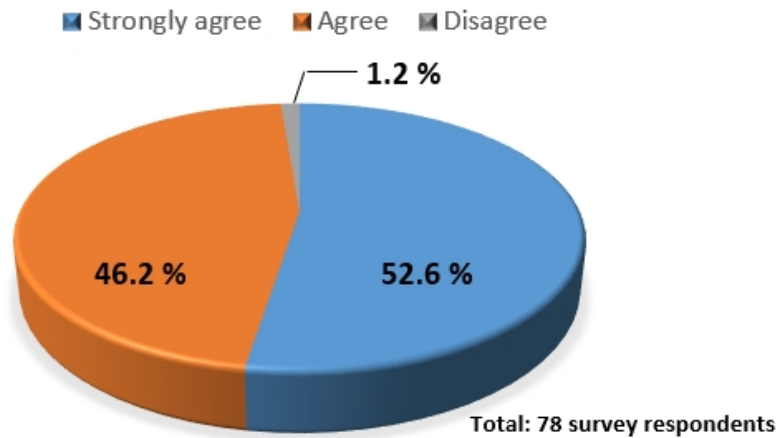


Comments:

None

	Strongly agree	Agree	Disagree	Comments (continue on back if necessary)
The agenda items and topics covered were relevant?	52.6%	46.2%	1.2%	

THE AGENDA ITEMS AND TOPICS COVERED WERE RELEVANT?

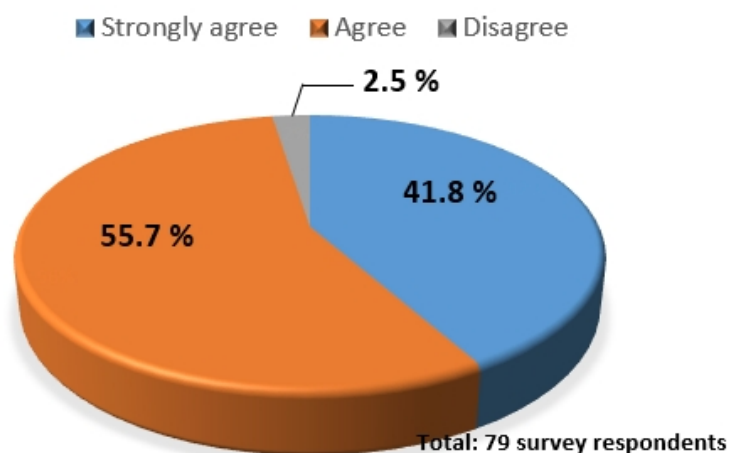


Comments:

- The workshop will focus more on successful experiences to eliminate Technical Barriers to Trade (TBT).

	Strongly agree	Agree	Disagree	Comments (continue on back if necessary)
The content was well organized and easy to follow?	41.8%	55.7%	2.5%	

THE CONTENT WAS WELL ORGANIZED AND EASY TO FOLLOW?

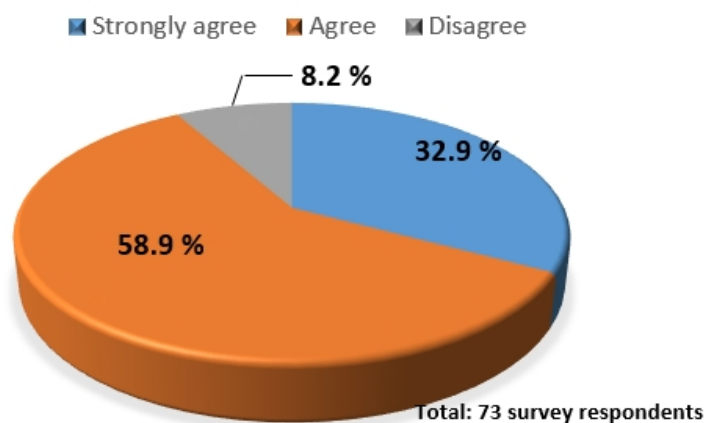


Comments:

- Some printed materials were illegible.
- There were several presentations not according to the handouts.

	Strongly agree	Agree	Disagree	Comments (continue on back if necessary)
Gender issues were sufficiently addressed during implementation?	32.9%	58.9%	8.2%	

GENDER ISSUES WERE SUFFICIENTLY ADDRESSED DURING IMPLEMENTATION?



Comments:

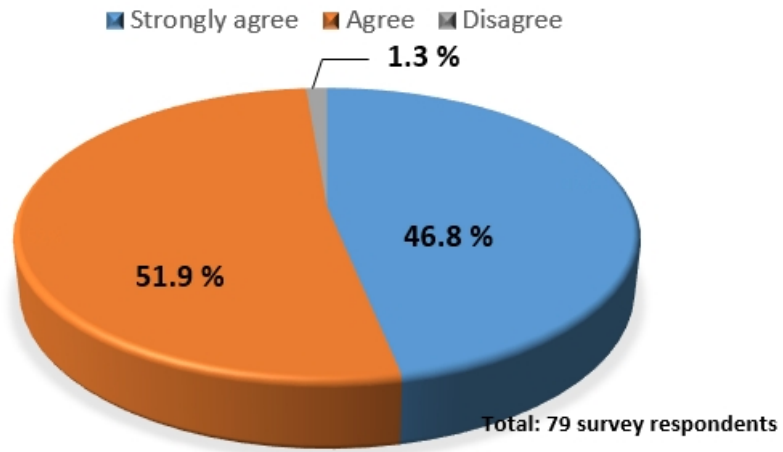
- Gender? It is not important.
- Can extend to a wider range of fields.
- We must improve.
- Only at the beginning with the initial presentation. Then gender issues disappeared from the presentations.
- It is not necessary. It does not apply.

	Strongly agree	Agree	Disagree	Comments (continue on back if necessary)
The trainers/experts or facilitators were well prepared and knowledgeable about the topic?	46.8%	51.9%	1.3%	

Comments:

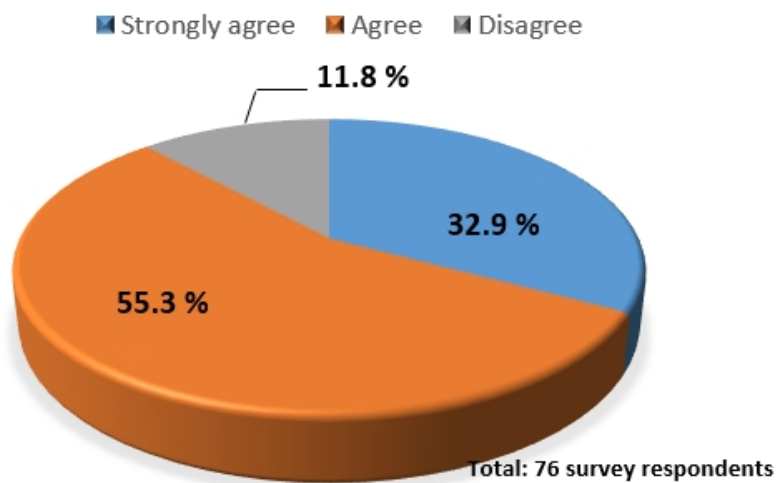
None.

THE TRAINERS/EXPERTS OR FACILITATORS WERE WELL PREPARED AND KNOWLEDGEABLE ABOUT THE TOPIC



	Strongly agree	Agree	Disagree	Comments (continue on back if necessary)
The materials distributed were useful?	32.9%	55.3%	11.8%	

THE MATERIALS DISTRIBUTED WERE USEFUL?

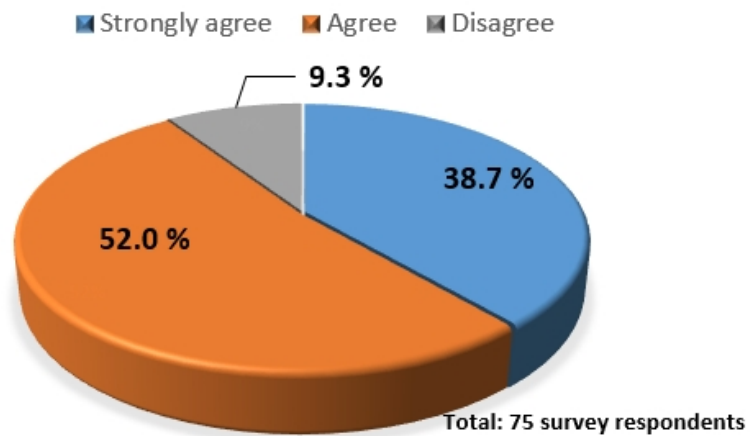


Comments:

- No material was given to me.
- It was not possible to receive material.
- Very small words in printed documents.
- Was insufficient.
- Lack of some presentations.
- Some presentations were too small and could not be read.
- Some pictures or pages were unclear to read.
- Some presentations were missing.
- Some printed copies were not clear, small graphs.

	Strongly agree	Agree	Disagree	Comments (continue on back if necessary)
The time allotted for the training was sufficient?	38.7%	52%	9.3%	

THE TIME ALLOTTED FOR THE TRAINING WAS SUFFICIENT?



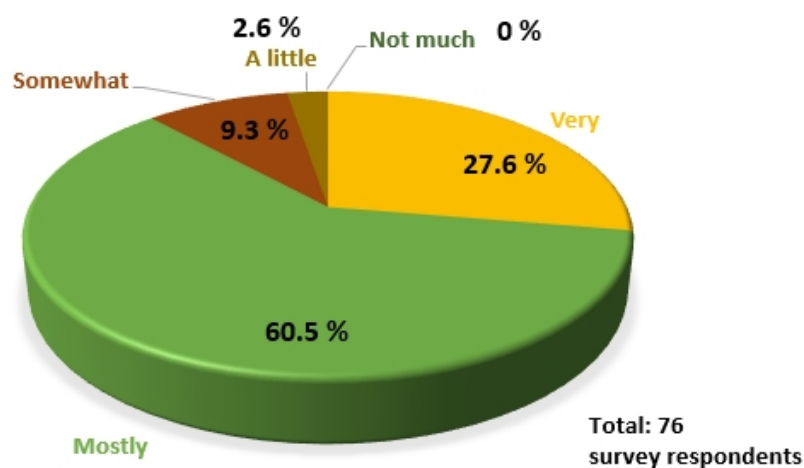
Comments:

- More time.
- A Little time.
- I consider that the time was short.

1. How relevant was this workshop to you and your economy?

5	4	3	2	1
Very	Mostly	somewhat	a Little	not much

HOW RELEVANT WAS THIS WORKSHOP TO YOU AND YOUR ECONOMY ?



Comments:

- Quality infrastructure is very important in Chinese Taipei and needs to be improved to involve more MSMEs continuously.
- Learned more about experiences from other countries.
- SMEs represent a large and important sector in nearly every APEC economy. By helping them understand issues related to standards we help them to grow and increase exports which creates prosperity at home.
- Exposure to new information on standardization activities to MSMEs would help in our effort at Philippines Department Science and Technology.
- Benchmarking activities are effective references in improving a country's programs particularly on standards and conformance.
- Because, it helps the policy makers.
- There were different types of useful cases applicable to our economy.
- Reinforce our commitment, show us we are going the right way.

- There are many experiences that could be replicated and/or learned to establish in social programs.
- An opportunity to appreciate firsthand how the world of MSMEs is going forward to a better future.

2. In your view what were the workshop's results/achievements?

Comments:

- Learned more about experiences from other countries.
- The workshop created some awareness for the participants to encourage MSME support through standardization to facilitate trade.
- Recommendations on best practices to assist MSMEs in standardization.
- The information can be applied by each economy.
- Exchange of information; collaboration among APEC member countries.
- Reach target.
- MSMEs can be activated in global markets. There is no barrier to conformity assessment.
- Demonstrate the role of standards & compliance to SMEs.
- Basically, the results obey the relationship between the workers, employees and the activities, they need to be comfortable to work and improve all the time.
- Member economies should be able to share information in the global market.
- Exchange of experiences. Identification of key elements and themes to be addressed in the working sessions.
- Synergy and connections and knowledge of APEC countries' activities for support toward SMEs' standardization.
- Compared international experiences, learning to establish networking between experts and offices.
- Workshop from Malaysia and Singapore because your reality is similar to Peru.
- The progress of each economy in influencing international standards compliance.
- Better understanding of the existence of SMEs and efforts that have been conducted to improve them.
- The importance of quality, innovation and market access.
- Experiences shared and possibilities of joint cooperation and venture in SMEs.

3. What new skills and knowledge did you gain from this event?

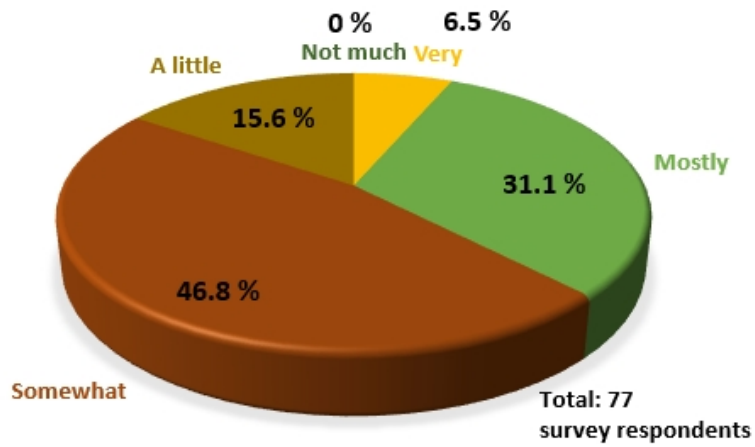
Comments:

- Risk management for different situations in different economies.
- Combining and using the resources from industries, educational institutes and governments.
- Internalization of SMEs' participation in product supply chains.
- Information on various efforts by member economies in assisting their MSMEs.
- Model of engagement.
- Significant role of Academia in completing the loops to assist MSMEs.
- Shared experiences of different cultures and economies.
- Global point of view to MSMEs' standardization.
- Metrological initiatives can also help MSMEs in standardization.
- Sharing knowledge about some best practices of SMEs supported by some countries and information update about APEC agenda in regard to this matter.
- Ideas to implement more projects that integrated more government and non-government organizations.
- Know about other member economies by their sharing of experiences in supporting MSMEs.
- Different contributions of the government sector to promote regulatory compliance.
- Open mind, new ways to do things.
- Standardization will be critical to the MSMEs. It is a needed tool.
- To recognize the importance of standards and the participation of interested parties.
- Information exchange, standards and new technology.
- Benchmarking, eight economies reported that their programs are replicable.
- How to refine our goals about capacitation making them better.
- To emphasize interinstitutional cooperation to help MSMEs to apply standards. To make the effort at the local level. It is important to work by sector with capacity building, assistance and market presentations.
- New innovations and technologies based on standardization, conformity assessment and metrology.
- Some economies are very similar to us. The conference is the evidence we need to learn more about ways to achieve success in a sustainable way.

4. Rate your level of knowledge of and skills in the topic prior to participating in the event:

5	4	3	2	1
Very	Mostly	somewhat	a Little	not much

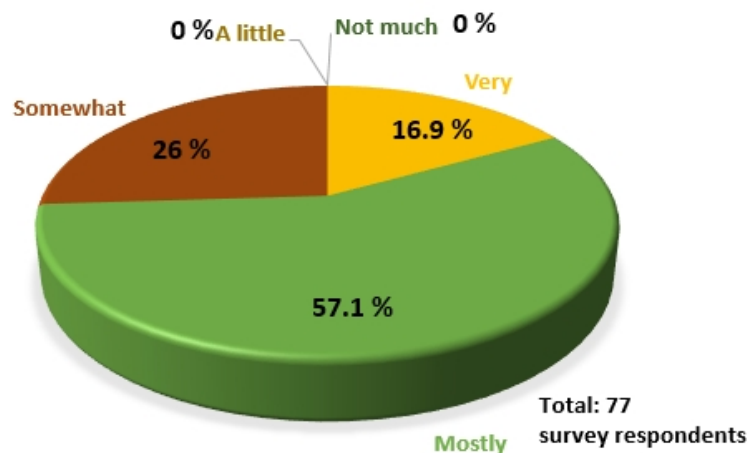
RATE YOUR LEVEL OF KNOWLEDGE OF AND SKILLS IN THE TOPIC PRIOR TO PARTICIPATING IN THE EVENT?



5. Rate your level of knowledge of and skills in the topic after participating in the event:

5	4	3	2	1
Very	Mostly	somewhat	a Little	not much

RATE YOUR LEVEL OF KNOWLEDGE OF AND SKILLS IN THE TOPIC AFTER PARTICIPATING IN THE EVENT?



Comments:

- Two day workshop can not improve too much.
- This workshop helped "fill in the gaps". I knew that economies shared the same problems but in the workshop I learned what economies were actually doing.
- There were mostly participants of previous APEC meetings.
- I learned a list of presentations; I will include these learnings in my section for references and possible adoption.
- Different quality infrastructure bodies can play different roles to help MSMEs.
- I obtained more perspectives and knowledge.
- The event's presentations have broadened my previous knowledge.
- Now I have a more integral vision of the relations between enterprises, market, government and universities.
- I gained a global picture about the potential growth of MSMEs in Peru and other APEC economies.
- New lessons, success stories and a new point of view from presentations.
- We the young people know what to do but agencies do not listen to young people or our ideas.
- I have new ideas for initiatives and research in the south region.
- All the world is very concerned about quality and standardization and looking for conformance.
- Now I have examples and experiences to refer to from for my work and to propose new initiatives for MSMEs.

- 6. How will you apply the workshop's content and knowledge gained at your workplace? Please provide examples (e.g. develop new policy initiatives, organize trainings, develop work plan/strategies, draft regulations, develop new procedures/tools, etc)**

Comments:

- Organize training, develop work plans.
- Have relevant internal meetings or training.
- In my work at DOST, industries helped by my institute in my economy will consider learnings from this workshop.
- Share findings with counterparts & stakeholders.
- Arrange the workshop for SMEs to introduce.
- Implement SMEs.
- Organise trainings, develop new policies.
- Think about policies.
- Study in more detail the MRAs.
- Develop work plans based on new information.
- Develop new strategies for MSMEs. Better planning of the standardization process.
- We will try to develop new policy tools in collaboration with different quality infrastructure bodies.
- New policy initiatives for national norms to avoid duplication of work.
- Make coordination and develop a work plan on supporting the MSMEs.
- Develop work plans and strategies, possibility of cooperation.
- More coordination with stakeholders and formulate activities together.
- Work together with stakeholders to identify needs for MSMEs.
- Include MSMEs' topics in trainings.
- New links for international projects on quality and innovation.
- Organize training and develop work plans for capacity development in MSMEs.
- Identify clusters, involve companies in the adoption of standards, use technologies, take advantage of government programs.
- Use ppts and new instructions for our teachers, trainers and instructors.
- Not very practical since no invitation for SMEs as they are main actors.
- Show to our personal staff the new topic about standardization.
- Developing new policies, strategies, action plan.
- To develop projects with SMEs in Peru combining quality and standardization

- Develop work plans and organize trainings with PRODUCE and INACAL.
- I belong to the standarization committee. I work in academia. Both cases need to implement strategies to standardize quailty and services
- Develop work plan /strategies.

7. What needs to be done next by APEC? Are there plans to link the workshop's outcomes to subsequent collective actions by fora or individual actions by economies?

Comments:

- Put plan into action. The conclusions of this workshop shall have a plan to implement outcomes.
- Gather experiences from other countries not in this APEC meeting.
- The results of the workshop should be shared with the SCSC and SMEWG. Perhaps additional work to identify specific secfors of interest would be helpful to see if there are ones that "stand out".
- Help MSMEs on: data from being more effective and easy to understand; addressing outlooking of development centers for MSMEs.
- Action plan to assist SMEs by SCSc & Croos fora colaboration with SMEWG.
- Include the learnings and realizations as part of APEC initiatives to assist MSMEs.
- APEC could map SMEs' characteristics in each member economy and classify it into several models and action plans for each model.
- More integrative work including goverment organizations, NGOS and other actors and implement monitoring for the projects.
- APEC might link the outcomes with other fora and other organizations like PASC.
- First step is overall strategy individual economies can drive from.
- Establish IT platforms to share more info and good examples.
- Maybe a workshop focused on critical sectors in Peru in order to define strategies to review/create standards.
- Future networking with APEC delegates.
- Yes, through research and innovation projects.
- To promote pilot projects in several economies and establish e-business models.
- We need to make plans and programs and evaluate the results; current plans are individual.
- We need more work to show to more Peruvian companies about standardization.

- To develop bilateral technical cooperation. Deepen the knowledge of the lessons learned and the failures. To integrate the Peruvian system to promote MSMEs' international trade.
- Gender issues, empowerment capability; community development about growth as a part of productive chain; native products, promotion and protection.
- I suggest forming work groups and- networking so that we can build a plan to implement the activities to get the standardizations.

8. How could this workshop have been improved? Please provide comments on how to improve the workshop, if relevant

Comments:

- The workshop is excellent.
- It is good enough.
- I thought the panels were well organized. There could have been more discipline to keep speakers within the time limits. More engagement by participants would have been helpful.
- Longer time and Q&A after each speaker.
- Improve in venue temperature. It is warm. It is not comfortable any more. The washroom is too far.
- More successful experiences
- More effective time management to keep the workshop on time.
- To ask speakers to concentrate their explanations with respect to more practical experiences in their countries.
- It would be better if the topics in the workshop can be grouped into different categories.
- Different topics covering different stakeholders in the efforts of MSMEs in APEC economies.
- Pre-readings in order to be more familiar with some issues and try to get them sent to conferences; Give contact mail of consultants/speakers; Give mail to contact Inacal authorities; To have meetings to share strategies which can help MSMEs' engagement in Peru not in standardization, but to build a quality culture as a competitiveness key. I think that regulatory alignment is a consequence of knowledge of benefits.
- Include all the presentations in the documentation and the evaluation in Spanish/English.
- More participation of SMEs, not only institutions.
- Incorporating MSME owners to tell us their needs.

Workshop Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities

- A standard template for ppt files could help facilitate the presentation delivery; some slides were impossible to read.
- Establish permanent means of communication to exchange success cases; delegates provide training on how to integrate the international standards in our economies.
- Better translators in some cases.
- Give us more details of standardization. For example, wood manufacture, food companies, fabric textiles, etc.
- Check presentations first. Some needed to have a general guidance to address the main topics.
- It is necessary to communicate benefits of standards & conformace to all MSMEs and integrate managenemt systems for industry.
- Some conferences of the workshop are very theoretical, and what is needed in my point of view is more emphasis on practical experencie. My suggestion is 75% or more analysis/show results; 30% theroretical basis or less, like conferences of Japan; Korea, Malaysia; Singapore and Chinese Taipei. All of them with excellent results and very good examples.
- The logistics failed, too much time to get registrations and then nobody knew what they were registered for because there were several APEC workshops at the same time.

APPENDIX 2 – Agenda

**Committee on Trade and Investment
Sub-Committee on Standards and Conformance
Agenda**

Workshop Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities

Day 1: 16 August 2016

8:00 h – 9:00 h	Registration
9:00 h – 9:10 h	Welcoming remarks Mrs Rocio Barrios, SCSC Chair, Executive President of INACAL, Peru
9:10 h – 9:20 h	Official photo
9:20 h – 9:30 h	Business arrangements

Session 1: Opening session

9:30 h – 9:50 h	Survey report among APEC Economies: “Supporting MSMEs Trade Facilitation through Standardization activities”. Mrs Rosario Uria – Project Overseer of CTI 13 2015A – Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities
-----------------	---

Session 2: Regional Approach to support MSMEs through standardization activities

9:50 h – 10:10 h	APEC Harmonisation of Standards for Data and Information Flows Initiative: Next Steps
------------------	---

Mr Adrian O Connell – Deputy CEO – Standards Australia
Australia

10:10 h- 10:30 h MSMEs Engagement in Standardization Activities in PASC Region

Ms Aderina Uli Panggabean- PASC representative
PASC

10:30 h – 10:40 h Q & A session

10:40 h – 11:10 h Coffee break

Session 3: Initiatives to strengthen capacities in MSME's for APEC members – Part 1

11:10 h – 11:30 h Japan's initiatives to support MSMEs' activities in standardization

Mr Mitsuo MATSUMOTO – Director - Office for Economic Partnership for Standards and Conformity Assessment - Ministry of Economy, Trade and Industry (METI)
Japan

11:30 h – 11:50 h Efforts to help SME's manufacturers in the USA

Mr Kent. Shigetomi – Director for Multilateral Non-Tariff Barriers - Office of the United States Trade Representative (USTR)
USA

11:50 h – 12:10 h Standards for Community products

Ms Roong-Aroon Buddhanond - Chief - Regional Organizations Group - Thai Industrial Standards Institute
Thailand

12:10 h – 12:30 h Sharing Singapore's Experience: Strengthening MSMEs' Capabilities through S&C

Ms Loh Soi Min – Director - Policy and Promotion – SPRING

Singapore

12:30 h – 12:50 h The importance of sound measurement as a key component of an effective quality infrastructure to support MSMEs

Dr Victoria Coleman - Project Leader and Acting Section Manager,
Nanometrology - National Measurement Institute

Australia

12:50 h – 13:00 h Q & A session

13:00 h– 14:30 h Lunch

Session 4: Initiatives to strengthen capacities in MSME´s for APEC members – Part 2

14:30 h – 14:50 h Integrated Management System for DOST Centers of Food Innovation in Research and Development Institute and Regional Offices

Dr Maria Patricia V. Azanza – Director – Department of Science and Technology (DOST) – Industrial Technology Development Institute (ITDI)

Philippines

14:50 h – 15:10 h CITEs supporting MSME´s through the quality infrastructure. Promoting MSMEs competitiveness in the Footwear sector –Productive Innovation and Technological Transfer Center of footwear (CITECCAL)

Eng Adriana Ríos – Executive Director of CITECCAL

Peru

15:10 h – 15:30 h CITEs supporting MSME´s through the quality infrastructure. Promoting MSMEs competitiveness in the Woodwork sector – Productive Innovation and Technological Transfer of Woodwork (CITEMadera)

Eng Jessica Moscoso - Executive Director of CITEMadera

Peru

15:30 h – 15:40 h Q & A session

15:40 h – 16:10 h Coffee break

Session 5: Initiatives to strengthen capacities in MSME's for APEC members – Part 3

16:10 h – 16:30 h National Standards Compliance Program – Malaysian experience
Mr Feris Frederick – Senior Assistant Director –Standardization Division -
Department of Standards Malaysia, Ministry of Science, Technology and
Innovation
Malaysia

16:30 h – 16:50 h How Accreditation support MSME by reducing TBT in Energy Efficiency
Field- Successful Story: US EPA Energy Star Accreditation Program

Mr Roger Sheng - Chief of Electric and Optical Section - Laboratory
Accreditation Department -Taiwan Accreditation Foundation
Chinese Taipei

16:50 h – 17:10 h Case of Standardization of Korean MSMEs: Establishment of Support
Platform for the Voluntary International Standardization of SMEs

Mr Mun Kyoo Woo - Principal Researcher - Korean Standards Association
Republic of Korea

17:10 h – 17:20 h Q & A session

17:20 h – 17:30 h Conclusions of Day 1

Day 2: 17 August 2016

8:00 h – 9:00 h Registration

9:00 h – 9:10 h Review of the first day. Instructions to follow for the working groups
(WG) and expected outcomes.

9:10 h – 9:40 h Overview of SME Work in APEC
Mr Kent. Shigetomi – SMEWG Chair's representative

Workshop Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities

9:40 h – 9:50 h Q & A session

Session 6: Discussion

9:50 h – 10:00 h Guidelines for working groups

10:00 h – 10:30 h Workshop groups on assigned topics

Group 1: Strategies to promote interest and participation among MSMEs in using infrastructure quality services.

Group 2: How to get sustainability to maintain successful initiatives

Group 3: How to measure the impact of the initiative in terms of improving competitiveness of MSMEs to access to global markets

Group 4: Challenges and opportunities to consider in initiatives focused on promoting quality infrastructure services in MSMEs

10:30 h – 11:00 Coffee Break

11:00 h – 12:30 h Preparation of Conclusions and Recommendations of WG

12:30 h – 14:00 Lunch

14:00 h – 15:30 h Presentation and discussion of results from WG 1, 2 3, and 4

15:30 h – 15:40 h Q & A session

15:40 h – 16:10 h Coffee Break

16:10 h – 16:20 h Conclusion

16:20 h – 16:30 h Closing of Workshop

APPENDIX 3 – Participants

Workshop Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities

16 - 17 August 2016

Lima, Peru

ROSTER OF PARTICIPANTS DAY 2 WORKSHOP

Group 1: *Strategies to promote interest and participation among MSMEs in using infrastructure quality services*

Name	Institution
Augusto Mello	National Institute of Quality (INACAL), Peru
Fredy Nuñez	National Institute of Quality (INACAL), Peru
Amaury Santos	International Electrotechnical Commission (IEC)
Dennis Chew	International Electrotechnical Commission (IEC)
Nguyen Van Khoi	The Directorate for Standards, Metrology and Quality of Viet Nam (STAMEQ), Viet Nam
Virginia Cram-Martos	Economic Commission for Europe (UNECE)
Adrian O'Connel	Standards Australia (SA), Australia
Byung Goo Kang	Korean Agency for Technology and Standards (KATS), Republic of Korea
Cho Long Kang	Korean Agency for Technology and Standards (KATS), Republic of Korea
Youngsun Bang	Korean Agency for Technology and Standards (KATS), Republic of Korea
Gretel Gutierrez Calderón	National Council of Science, Technology and Technological Innovation (CONCYTEC), Peru
Rosa Patricia Laros	University of Lima, Peru
Jacqueline Olaza Ch	Ministry of Production (PRODUCE), Peru
Nikita Utkin	Russian Venture Company (RVC), Russia
Danila Nikolae	GOSTR/TCOG, Russia

Group 2: *How to get sustainability to maintain successful initiatives?*

Name	Institution
Mercedes Inés Carazo	Chio Leca, Peru
Akhmad Bayhaqi	APEC Secretariat
Jaime Gonzalez Fuenzalida	Electricity and Fuel Superintendency (SEC), Chile
Carmela Morgan	National Institute of Quality (INACAL), Peru
Luis Limachi Huallpa	National Institute of Quality (INACAL), Peru.
Titis Wahyu Riyanto	National Standardization Agency of Indonesia (BSN), Indonesia.
Ika Rahayu	National Standardization Agency of Indonesia (BSN), Indonesia.
Stephen Head	Standards Council of Canada, Canada
Mun Kyoo Woo	Korean standards Association (KSA), Republic of Korea
Melisa Vargas	CITE Amazonic Fishery Pucallpa, Peru
Ivan Castillejo	Production Technological Institute (ITP), Peru
Karen Grunstra	Underwriters Laboratories, United States

Group 3: *How to measure the impact of the initiative in terms of improving competitiveness of MSMEs to access to global markets?*

Name	Institution
Carlos Conde Quispe	Quality Consultant, Peru
Marie Camille Castillo	Department of Trade and Industry - Bureau of Product Standards, Philippines
Maria Patricia Azanza	Department of Science and Technology (DOST), Philippines
Flor Cruzado	Ministry of Production (PRODUCE), Peru
Sitanum Poonpolsub	Food and Drug Administration, Ministry of Public Health, Thailand
Patrisa Pakornkanchai	Food and Drug Administration, Ministry of Public Health, Thailand.
Ana Lourdes Cornejo	Lima Commerce Chamber and AMEP, Peru.

Workshop Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation through Standardization Activities

Patricia Infante	Consultant, Peru
Antonio Carpio	Peru
Chieh-Chen Pai	Bureau of Standards, Metrology and Inspection, MOEA. Chinese Taipei
Cecilia Minaya	National Institute of Quality (INACAL), Peru
Roong-Aroon Buddhanond	Thai Industrial Standards Institute (TISI), Thailand
Narumol Vanitchareon	Thai Industrial Standards Institute (TISI), Thailand
Soraya Lastra Casapía	National Institute of Quality (INACAL), Peru
Roger Sheng	Taiwan Accreditation Foundation (TAF), Chinese Taipei

Group 4: Challenges and opportunities to consider in initiatives focused on promoting quality infrastructure services in MSMEs?

Name	Institution
Pham Le Cuong	The Directorate for Standards, Metrology and Quality of Viet Nam (STAMEQ), Viet Nam
Khoi Nguyen Van	Directorate for Standards, Metrology and Quality (STAMEQ), Viet Nam
Eric Haro Echevarría	Ministry of Exterior Trade and Tourism (MINCETUR), Peru
Diego Campos Diaz	National Institute of Quality (INACAL), Peru.
Victoria Coleman	National Measurement Institute (NMI), Australia
Aderina Uli Panggabean	National Standardization Agency of Indonesia (BSN), Indonesia.
Soi Min Loh	Standards, Productivity and Innovation Board (SPRING), Singapore
Shi wee, Cassandra Lee	Standards, Productivity and Innovation Board (SPRING), Singapore
Mitsuo Matsumoto	Ministry of Economy, Trade and Industry (METI), Japan
Patricia Castro Espinoza	National Quality Institute (INACAL), Peru.

APPENDIX 4 – SPEAKERS

Workshop Supporting Micro, Small and Medium Enterprises (MSMEs) Trade Facilitation
through Standardization Activities

16 - 17 August 2016

Lima, Peru

In order of appearance in the agenda.

SPEAKERS

Mrs Rosario Uría (Peru)

Mrs Uria has been the head of the Peruvian Standards Body since 2008. She is the Director of the Directorate of Standardization in the National Institute of Quality INACAL-PERU, and she is a microbiologist and has concluded a master in environmental engineering, with twenty-five years of experience and practical knowledge in the implementation of standards, especially in quality management standards in several sectors of industry. She is an expert in HACCP sanitary quality systems, and has experience in the application of models of excellence in total quality management based on the Malcolm Baldrige award. Has international registration as Lead Auditor ISO 9001 and ISO 22000. Mrs Uria is currently the leader of the IEC Affiliate Countries Program and represents Peru in the APEC forum and other regional and international forums.

Mr Adrian O' Connell (Australia)

Mr O' Connell is Deputy CEO at Standards Australia. Mr O' Connell has extensive career experience in leading and managing professional service and membership based organizations across a range of private and public sector industries. He has made a proactive and constructive contribution to the work of ISO TMB to support ISO and its members in effectively addressing current and future issues and challenges.

Ms Aderina Uli Panggabean (PASC)

Ms Aderina Uli Panggabean is the Head of Division on International Cooperation on Standardization with work experience in the National Standardization Agency of Indonesia (BSN), Indonesian Ministry of Agriculture. Ms. Aderina Uli Panggabean was Leader of Indonesian Delegates for ASEAN FTA Negotiations on STRACAP and Member of the Indonesian Task Force for WTO Negotiations on Agriculture.

Mr Mitsuo Matsumoto (Japan)

Mr Matsumoto is the Director of the Office for Economic Partnership for Standards and Conformity Assessment – Ministry of Economy, Trade and Industry in Japan. Deputy Secretary-General, International Cooperation, JISC Industrial Science and Technology Policy and Environment Bureau from Ministry of Economy, Trade and Industry (METI). Mr Matsumoto has made his career in METI in the field of industrial standardization, quality control and conformity assessment, Research & Development projects for industrial technologies, natural resources and energy policy, commerce and information policy as well as international cooperation activities in these fields. He has also been participating in international/regional meetings such as ISO/IEC, OECD, ASEAN-METI dialogue, ASEM and APEC as a head of Japanese delegates.

Mr Kent Shigetomi (USA)

Mr Kent Shigetomi serves as the Director for Multilateral Non-Tariff Barriers – Office of the United States Trade Representative (USTR) USA. He is the U.S. lead to the APEC Subcommittee on Standards and Conformance. He also works on issues related to rules of origin and development.

Ms Roong-Aroon Buddhan (Thailand)

Ms Roong-Aroon Buddhanond. She works as Chief of Regional Organizations in the Thai Industrial Standards Institute.

Ms Loh Soi Min (Singapore)

Director, Policy and Promotion Quality and Excellence Group SPRING Singapore. Ms Soi Min has been working in SPRING Singapore since in 1993. Her current portfolio involves promoting the benefits of using standards; encouraging small and medium sized enterprises (SMEs) to adopt standards; standards education; planning and policy as well as international fora including ASEAN and APEC. Ms Soi Min and her team works with associations, government agencies and institutes of higher learning to bring about enhanced awareness of the benefits of standards adoption and market access for SMEs. Ms Soi Min started her career in SPRING in Corporate Communications to raise public awareness SPRING's work including standards and conformance. She also managed a standards library and publication of the board's corporate magazine. Ms Soi Min graduated with a Bachelor of Business Administration from the National University of Singapore in 1993.

Dr Victoria Coleman (Australia)

Dr Victoria Coleman leads the Nanometrology Section at the National Measurement Institute, Australia (NMIA), and Australia's leading body for physical, chemical, biological and legal metrology (measurement science). Dr Coleman is Chair-Elect of the Asia Pacific Metrology Programme (APMP)'s Technical Committee for Material Metrology (TCMM) and holds a PhD in Materials Physics from the Australian National University in Canberra.

Dr Maria Patricia V. Azanza (Philippines)

Dr Maria Patricia V. Azanza Director IV, Industrial Technology Development Institute, Department of Science and Technology from Bicutan, Taguig City, Philippines. In addition. Dr Maria Patricia V. Azanza is a Professorial Lecturer 9 at the Department of Food Science and Nutrition College of Home Economics at University of the Philippines (UP). Ph.D. in Philosophy in Food Science University of New South Wales, Sydney, Australia with a Master of Science in Food Science in the University of the Philippines.

Eng Adriana Ríos (Peru)

Industrial Engineer, from San Marcos National University, Peru. Postgraduate Studies in Management and Policies of Technological Innovation, Pontifical Catholic University of Peru. Specialization studies in Productivity Improvement in Japan, Product Development in Footwear Companies in Mexico, Management of Centers of Innovation in Spain and Tanning Processes with Chromium using Clean Technologies in China. More than twenty years of experience working with companies from the Productive Chain of Leather and Footwear. Director of the Productive Innovation and Technological Transfer Center of Leather, Footwear and Related Industries of the Technological Institute of the Production. Also Member of the Permanent Technical Committee of Standardization for Leather.

Eng Jessica Moscoso (Peru)

Mrs Moscoso is the Executive Director of CITEmadera. Responsible for the management, organization, conduct and monitoring of activities and management services CITEmadera and its Technical Units of Lima and Pucallpa; CITEproductive of Madre de Dios - Cocoa Production Chains, Chestnut, Wood and Aquaculture. More than fourteen years of experience in the forest industry sector (with emphasis on Peru and Bolivia), promoting the development of wood forest management of small and medium-sized enterprises.

Mr Feris Frederick (Malaysia)

Mr Feris Frederick is a Senior Assistant Director at Standardization Division from Standards Malaysia. Bachelor of Science (Physics) and Masters of Science (Energy Technology).

Mr Roger Sheng (Chinese Taipei)

Mr Roger Nien-Po Sheng is currently the Chief of Electric and Optical Section in the Laboratory Accreditation Department in Taiwan Accreditation Foundation (TAF), the only accreditation body in Chinese Taipei that is a Signatory to the ILAC MRA, IAF MLA, APLAC MRA and PAC MLA. He has been with the TAF for more than 5 years after leaving the testing and certification industry. Mr Roger Sheng was the Chair of APEC TEL CA&MRA TF from 2013 to 2015 and is a provisional evaluator and a member of Sub-Committee on TEL in the APLAC. He often

contributes to the development of technical regulations in Chinese Taipei as a committee member or accreditation expert of regulators, such as the Bureau of Energy (BoE), National Fire Agency (NFA), National Communication Commission (NCC) and Bureau of Standards, Metrology and Inspection (BSMI).

Mr Mun Kyoo Woo (Republic of Korea)

Mr Mun Kyoo Woo is the Principal Researcher, Vice chairman of the Food Service Management Society of the Korean Standards Association with a Master's degree in Business Administration and Doctoral Course of Service Management in Sogang University in Korea

APEC project: CTI 13 2015A (SCSC)

Produced by

Directorate of Standardization
National Institute of Quality – INACAL, Peru
Calle Las Camelias 817, San Isidro, Lima-Peru
Tel: (051) 6408820
Fax: (051) 6408820
Email: ruria@inacal.gob.pe
Website: www.inacal.gob.pe

For

Asia-Pacific Economic Cooperation Secretariat
35 Heng Mui Keng Terrace
Singapore 119616
Tel: (65) 68919 600
Fax: (65) 68919 690
Email: info@apec.org
Website: www.apec.org

© 2017 APEC Secretariat

APEC#217-CT-01.6