



IEC, ISO, ITU

World Standards Cooperation Conformity Assessment Workshop

wscaworkshop.com

Results

Summary

The International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO) and the International Telecommunication Union (ITU) co-organized a workshop on “Conformity Assessment” under the banner of the World Standards Cooperation (WSC) on 1 December and the morning of 2 December 2015. This event was held at the United Nations Geneva headquarters, in conjunction with the annual meeting of the Working Party 6 on “Regulatory cooperation and Standardization Policies” of the United Nations Economic Commission for Europe (UNECE WP 6).

The event organizers would like to express their thanks and appreciation for the valuable cooperation and support from the UNECE staff.

The event was tailored to the needs of the participants, as expressed through an online survey that had been made available on the event website starting nine months before the event. The survey had allowed narrowing the topics for discussion to four, as follows:

- Energy efficiency and sustainability issues
- Global conformity assessment schemes
- Counterfeit products and certificates
- Regulatory options and risk management

The presentations given under these four broad topics each brought practical experience from the perspectives of:

- regulatory agencies;
- national/regional organizations;
- manufacturers and industry representatives;
- conformity assessment service providers.

In total, the event benefitted from the expertise of 27 speakers, moderators and conformity assessment tool presenters from all over the world.

All presentations can be downloaded from the event website: wscaworkshop.com

Organization representatives:

Frans Vreeswijk	IEC General Secretary & CEO – event lead organization
Lane Hallenbeck	ISO CASCO Chairman
Reinhard Scholl	ITU-TSB Deputy to the Director
Christian Friis Bach	UNECE Executive Secretary – event host

Moderators:

Toshiyuki Kajiya	Japan	Senor Counselor of Panasonic
Chris Agius	Australia	Executive Secretary of IECEX and IECQ
Alexander Ntoko	Cameroon	Chief of the Operations and Planning Department in ITU
Lane Hallenbeck	USA	ISO CASCO Chairman and Vice President for Accreditation Services at the American National Standards Institute

Speakers:

Essam Khalil	Egypt	Professor of Mechanical Engineering, Cairo University
Andy Evans	UK	Technical Director for Gambica
Francisco Boshell	Brazil	Analyst in markets and standards for renewable energy technologies at the International Renewable Energy Agency (IRENA)
David Hanlon		IEC Secretary of the Conformity Assessment Board (CAB)
Sheronda Jeffries	USA	QuEST Forum Fellow and Chair of their Integrated Global Quality Working Group
Michael Berger		Head of Technical Unit, PEFC Council
Lorenza Jachia		Secretary of the UNECE Working Party on “Regulatory Cooperation and Standardization Policies”
Xiaoya Yang		Head of the WTSA Programmes Division in ITU-TSB
Pierre Selva	France	Director for Conformity Assessment and Market Surveillance, Schneider Electric
Ivan Savov		Chairman, East European Risk Policy Institute
Isaac Boateng	Ghana	Manager at the National Communications Authority (NCA) of Ghana
Joao Alexandre Zanon	Brazil	Coordinator for the Regulatory Team of ANATEL (Brazilian telecommunication regulatory body)
Erik Wijkstrom	Sweden	Counsellor in the WTO Division on Trade and Environment
Trond Sollie	Norway	Senior Corporate Advisor at Nemko
Merih Malmqvist Nilsson	Sweden	Deputy Director General of Swedac and Vice Chair of ILAC
Katia Modric Skabalo		European Commission, DG Growth

Tool presenters:

Gabi Kimura	Germany	Senior Marketing Manager International Marketing at TÜV Rheinland Service GmbH
Marcus Long	UK	IIOC Chief Executive
Jon Murthy	UK	UKAS



Opening

The event was opened by the host representative, Christian Friis Bach, UNECE Executive Secretary. He explained that the event was taking place back to back with the annual meeting of UNECE WP 6 and said that it was the only intergovernmental body within the United Nations (UN) system that had conformity assessment (CA) as part of its mandate. It fosters the implementation of good practices and standards, and works towards mutual recognition of certification, tests and marks, by developing recommendations and best practices specifically targeting national authorities and governments. He continued by saying that reliable conformity assessment helps build trust in the audits and certification carried out by trade partners and facilitates international trade and is therefore key to realizing the 2030 Agenda for Sustainable Development and its 17 goals.

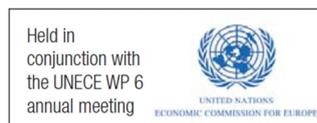
On behalf of the event lead organization, Frans Vreeswijk, IEC Secretary General, thanked the host and welcomed all participants to this first conformity assessment workshop under the banner of the WSC.

He said that WSC was established in 2001 and is a high-level cooperation between IEC, ISO and ITU. It aims to strengthen and advance the voluntary consensus-based international standards system and to promote and increase the worldwide visibility of international standardization and related conformity assessment matters.

Standards provide the measurement and rating methods that allow meaningful verification and testing to take place. Conformity assessment brings the written word in standards to the real world. It helps demonstrate proof of conformity to a standard. In this sense, standards and conformity assessment are like two sides of a coin and only together are they able to create real value. This one and half day's event, will address that most essential second side of the coin.

On behalf of ISO, the CASCO Chair, Lane Hallenbeck, explained that CASCO is the ISO committee that works on issues relating to conformity assessment. CASCO develops policy and standards related to conformity assessment. These ISO/IEC standards are compiled in what we commonly call the *CASCO Toolbox*. Conformity assessment is concerned with how one determines if a product or service meets specified requirements. If this is not done consistently and competently, then standards just remain as creative writing. The CASCO Toolbox is the basis upon which a globally harmonized approach to conformity assessment can be achieved.

For the ITU, Reinhard Scholl, ITU-TSB Deputy to the Director, said that ITU was the UN specialized agency for information and communication technologies and that it was celebrating its 150-year anniversary this year. He highlighted that ITU has three mandates, which included the allocation of global frequencies for services, the development of International Standards that ensure networks and technologies interconnect seamlessly (calls/Internet) and finally to help improve access to information and communication technologies (ICTs) and infrastructure for developing countries worldwide. Based on a unique public-private partnership since its inception, ITU has a membership of 193 countries and almost 800 private-sector entities (manufacturers, telecoms carriers) and academic institutions. He also introduced the ITU Conformity and Interoperability Programme and its progress last year includes the creation of an ITU product CA database for products which conform to ITU Standards, and the ongoing discussion for ITU to collaborate with a dedicated IEC CA Scheme.



Topic 1

Energy efficiency and sustainability issues

On this topic, four presentations were given with the following titles:

- Energy efficiency (EE) & Sustainability in the Built Environment
- Why a system based approach to energy efficiency is the world's largest energy goldmine
- Nurturing sustainable energy markets: building up quality infrastructure for renewables
- Grid scale renewable energy projects – accelerating the process

Reducing energy consumption and the dependency on fossil fuels is a major challenge. Governments, organizations and corporations around the world need to work together in order to move towards a more sustainable future. During this panel, energy efficiency and sustainability have been addressed from different angles and industries.

In the building sector, particular attention was paid to the new holistic approach being developed by the ISO joint working group for the energy performance of buildings (EPB) – an approach which strives to reconcile climate and energy needs. In the past, energy performance requirements were set at component level – minimum thermal insulation levels and minimum efficiencies of products, what led to sub-optimal solutions and created barriers to technology transfer. The holistic approach and the newly-developed ISO 52000 series of standards assess the overall energy performance of a building and represent interesting tools to help overcome existing barriers and attain energy efficiency improvements with the best available technology and practice.

One of the presentations showed that a full 46% of the world's electricity generation is consumed by electrical motors. What's more, 2/3s of those electrical motors are used in industry and are typically the traditional asynchronous alternating-current induction motors commonly known as cage-motors. It was shown that there are new variable speed motor technologies combining frequency convertor drivers and motors that are much more efficient. The IEC 60034-30 International Standard classifies three classes, IE1 (standard), IE2 (high) and IE3 (premium) of energy-efficiency for the various versions of these types of motors. In the European Community the IE3 class became mandatory for all new motors on 1 January 2015, superseding the IE2 class which had been mandatory since 16 June 2011. So, an important outcome from this topic was the real possibility to reduce the world's current electricity consumption by an estimated 10% simply by changing to this new technology and employing the related simple and effective user practices.

Changing from older less efficient motors to new more efficient motors and drivers makes complete economic sense when full lifetime costs are considered. The energy cost to run those motors and drivers is more than 96% of the lifetime cost. So a 10% saving gained by a new motor and driver will pay for the new motor and driver more than three times over.

The key is then to develop ways to encourage the national industry to voluntarily move toward new motor technologies. This can be done through incentive packages (such as tax breaks or other mechanisms) and by facilitating the access to such technology through simplified trade procedures, import and regulatory formalities (for example regulating to the IE3 motor class). And, on the other side, discourage the use, or continued use, of inefficient motors through stronger regulatory formalities, penalties and whatever other mechanisms are available. Both a carrot and stick approach.



Topic 2

Global conformity assessment schemes

On this topic, five presentations were given with the following titles:

- Call You...Maybe? – The role of conformity assessment for telecommunications
- PEFC: Global certification of sustainable forest management – technical infrastructure and market relevance
- Regional and global conformity assessment schemes
- ITU C&I Programme and Collaboration with IEC
- Invest in and use of conformity assessment scheme – Which added value for manufacturers

Under this topic, the importance of the CASCO Toolbox was highlighted. The CASCO Toolbox consists of the ISO/IEC 17000 series of documents and covers requirements for testing and calibration laboratories, inspection bodies, certification bodies, accreditation bodies, conformity assessment of suppliers, management system certification, certification of persons, product certification, peer assessment, mutual recognition, and so on. The CASCO Toolbox provides the basis for consistent conformity assessment.

National accreditation is also another important piece of the puzzle. For test results and certification to be recognized in a country, the bodies doing the testing and certifying must be recognized in the country. Those testing laboratories and certification bodies (collectively referred to as CABs or conformity assessment bodies) need to be accredited. National Accreditation Bodies (NABs) are bodies nationally authorized to conduct accreditation audits and thus to accredit the CABs within their country. The NABs operate according to the ISO/IEC 17011 Standard for accreditation bodies, and create a layer of value for the consistency of conformity assessment results within the country.

But the accreditation requirements in one country often differ with those in other countries. This means that, in many cases, the conformity assessment results from an accredited CAB in one country are not equivalent to or accepted by those from an accredited CAB in another country even though those conformity assessment results are for the same subject and against the same standard. This can reduce cross-boarder confidence in the conformity assessment results and reduce the effectiveness of some multilateral recognition agreements (MLA).

For this reason there are international organizations such as ILAC and IAF. Their goal is to standardize the accreditation auditing process across all NABs. In this process member NABs establish common auditing practices and then check each other, through peer assessment, to ensure that those practices are being applied. The NABs then accredit their national CABs according to the common methodology. This should create more consistent conformity assessment results and is a long term ILAC/IAF goal. Certainly, these activities add another layer of value towards the consistency of conformity assessment results internationally. This encourages confidence in those results and assists in the goal of facilitating world trade.

It was also shown that the operational model used by the IEC global CA Systems is a world's best practice that builds on the base created by the CASCO Toolbox and accreditation, and creates an additional layer of value through truly repeatable consistent and comparable conformity assessment results from anywhere, all over the world. The IEC CA Systems do this by ensuring that the commercial testing laboratories and certification bodies that are members of the IEC CA Systems are all qualified (to identical requirements) and approved (through identical methods), using peer assessment, and additionally that this



peer assessment also checks that those testing laboratories and certification bodies are interpreting the Standards in the same way, and doing the testing and certifying, in exactly the same way. This creates consistency and confidence in the conformity assessment result, no matter where it comes from in the world, and is what makes the IEC Global CA Systems' MLAs work in practice.

Indeed, international trade in industrial products is burdened by excessive regulatory fragmentation, which translates into significant costs for the industry without corresponding benefits in terms of increased safety. In recent years, the challenge of dangerous, non-compliant and counterfeit products and equipment has become a growing concern for consumers, for the staff working in dangerous facilities and for the communities living alongside them.

International cooperation among regulatory authorities in conformity assessment – including through the use of international schemes for assessing conformity to standards – is a cost-effective way of dealing with this challenge. It affords society key benefits in the pre-market phase – where it can contribute to shorter time and costs to market – and in the post-market phase – where it helps control for probability of non-compliance. In spite of these obvious benefits, there are very few examples of use of international conformity assessment schemes in international agreements. It is then important to continue to raise the awareness of authorities on the advantages that these tools can afford.

Summarizing the discussion under this topic, a key outcome was that the CASCO Toolbox is the principle foundation for establishing reliable and consistent conformity assessment infrastructure and services. Building on this solid foundation, national accreditation bodies use the Toolbox to qualify their national CABs, while international organizations such as ILAC and IAF work towards achieving internationally-harmonized accreditation auditing. The operational model used by the IEC global CA Systems builds another layer of quality, consistency and reproducibility to international conformity assessment results. Regulatory authorities should seek more information on each of these different value-adding layers then apply those layers in appropriate ways within their regulatory policy and practice, and reap the value that they create.

Topic 3

Counterfeit products and certificates

On this topic, five presentations were given with the following titles:

- The new global fraud and counterfeiting risk policy network – a paradigm shift in the global strategy to fight counterfeiting
- Counterfeit ICT products and certification process in Ghana
- A collaborative approach to improving global product compliance
- Combat of Counterfeit ICT – Conformity as a tool
- Conformity Marks market surveillance

This session highlighted counterfeit products and fraudulent certificates which are consequences of "big business" at both national and international levels. Part of the success of counterfeiting is due to the lack of an internationally centralized and coordinated approach. Instead, there are many separate anti-counterfeiting activities conducted on both an individual national basis and within individual certification service organizations.

Counterfeit products are often dangerous, cheaper, sub-standard look-alikes to the authentic products. Some startling statistics were given on the injury and infrastructure damage that counterfeit products cause. It was demonstrated that safety issues alone posed by counterfeit products was sufficient justification for national authorities to take action.

Counterfeit products can enter national markets in three ways. Either by being manufactured within the country itself; or by illegal importing channels such as black-market smuggling; or by using corrupted legal importing channels (e.g.: bribery, threats, etc.) or by fraudulent documentations (e.g.: counterfeit or fraudulent certificates, etc.).

Conformity assessment cannot offer the entire solution, but can offer a few “weapons” in the fight against counterfeit goods. The four main conformity assessment “weapons” are document authentication, retailer/dealer certification, market surveillance and testing. Conformity assessment cannot tackle the fight against corrupt customs officials nor against black-market smuggling networks, but can be effectively used for detection of fraudulent documents during importation and for detection of counterfeit goods on the market. This can be achieved firstly by document authentication and secondly by testing (if necessary). Retailers can also be approved through a qualification, verification or certification process.

Many certification bodies have their own certificate databases where certificates can be authenticated. Document authentication can be done as the goods enter the country, or can be done for goods already found on the market through the process of market surveillance and certificate verification. One best practice would be that national requirements should stipulate that all goods being sold on the national market should have proof of compliance to the national regulations through readily available documents that can be authenticated. In the absence of such documents, or if they cannot be authenticated, then the goods can be removed from the market.

It was stated that the problem of substandard counterfeit products was a significant issue for developing countries. It was recognized, however, that deploying market surveillance activities was costly and often beyond the limited resources of many countries.

An outcome was therefore suggested that to make market surveillance more effective, a centralized international information exchange should be established to network information about counterfeit goods found in other countries. This outcome is built on the notion that the same counterfeit goods usually appear in several markets. Therefore having a better idea of what to look for during market surveillance activities should make these activities more effective.

Topic 4 Regulatory options and risk management

On this topic, four presentations were given with the following titles:

- WTO TBT Committee work on good regulatory practice – what is next?
- Global market access conditions for electrical and electronic products
- Regulators in an effective and efficient quality infrastructure
- The EU conformity assessment system

This year the World Trade Organization (WTO) celebrated its 20th anniversary since the establishment of the Technical Barriers to Trade (TBT) Agreement. During those 20 years, one of the major efforts by the WTO has been to get member states to harmonize the use of international standards as the basis for the technical requirements in national regulations or requirements. The WTO has been largely successful in this pursuit, although it remains an ongoing activity.

Looking forward to the next twenty years, however, it was recognized that greater focus would need to be applied to the pursuit of harmonizing the conformity assessment requirements across the world. The principles of the TBT agreement say that conformity assessment should be appropriate, transparent and not cause unnecessary technical barriers. But what this exactly means in practice is not yet fully clear.

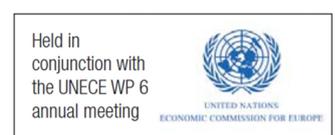
Trade concerns and costs, and notions of quality infrastructure as related to aid for trade are becoming key issues. Members bringing very tricky issues to the TBT related to conformity assessment and the recognition of results needs further work. The tri-annual TBT report will try to address these issues by showing different conformity assessment approaches, approaches to risks, and by determining what the factors are that members use when deciding on a conformity assessment approach.

The great variation in conformity assessment requirements and regulations across nations is certainly a key business issue for international conformity assessment service providers. A survey conducted by NEMKO, concerning global market access by region shows great variation in terms of requirements, but also in terms of stability. Although there is great variation, if it is at least stable, then business processes can be devised and activated. However, access to markets is hindered in regions where the conformity assessment requirements are in great flux.

From a global conformity assessment service provider's perspective there is a need for global solutions that will reduce inconsistencies from one region to another. For this reason the IECEE CB Scheme was cited as a service that already achieves the desired level of consistency. The concern for this issue of course goes well beyond the conformity assessment service providers and impacts the product manufacturers and suppliers and ultimately the consumers themselves.

The quality infrastructure arena today is very complex at the national and international levels. There are at least two different scenarios, one is where protection (health and safety) of citizens, environment, sustainability, efficient use of resources and local factors determine the choice and the effectiveness of conformity assessment tools to use, which often require proof of compliance. And there is the scenario where only economic and business considerations dictate that claims of conformity are only demonstrated if absolutely necessary.

Risk should be a criterion for determining the appropriate level of conformity assessment requirements. The European Union's risk-based system was given as a working example. This system has 8 modules classifying risk and responsibility. Regulators determine which modules are appropriate, for which level of risk and for which products, in which environments. The burden is on manufacturers and suppliers to do their own risk assessment, to create the appropriate supporting documentation, and make that documentation available when necessary. Market surveillance is also an important component of this approach, but is not uniform in its application across countries and sectors.



An outcome from this topic is that a risk-based regulatory system would be aligned with the WTO TBT principles and that the level of CA requirements would be appropriate, transparent and not cause unnecessary technical barriers to trade. Risk factors can be determined and applied to different domains such as health and safety, infrastructure protection, protection of the environment and the efficient use of resources. Modules (of how to demonstrate conformity) with different conformity assessment requirements can be developed to reflect the corresponding level of risk and could be tuned to specific national needs, if appropriate.

The establishment of an internationally-harmonized risk-based regulatory system remains a long term objective. In the shorter term the international business and regulatory community should focus on existing solutions that are fully operational and have proven their worth. In the electrotechnical sphere the IECEE CB Scheme was cited as the prime example. And there are the other IEC CA Systems that are built on the same operational model; IECEx for explosive environments, IECQ for quality systems in electronic components, and the new renewable energies global CA system, IECRE, for the wind energy, the marine energy and the PV solar energy sectors. These and other CA solutions should be effectively integrated into international regulatory frameworks as the experience of the UNECE “Explosive environments” initiative shows.

Closing

The closing session was an open discussion between the session moderators, in which the event attendees were invited to participate.

It was generally agreed that conformity assessment was all about building trust amongst consumers, regulators and industry.

Brand value is based on trust in the brand. For most consumers, purchasing decisions are based on brand recognition or retailer/supplier recognition. In both cases trust is key. In the case of the retailer/supplier, we may not recognize some of the product brands, but we trust that the retailer/supplier will fix any problems we may have with the product either by repair, exchange or money-back options. But what about consumer choice? If known brands were the only choice, then higher prices and monopolies could be a consequence. Unknown brands compete on price and performance. But, being unknown, the burden is on them to build trust by proof of performance through appropriate conformity assessment. With such proof, the retailers/suppliers develop trust in the unknown-brand products, and then offer them and a wider choice to the consumers.

The same is true for regulators. Regulators develop regulatory systems based on numerous factors amongst which risk is a major one. Those regulatory systems allow products to enter their markets based on proof of compliance using the appropriate conformity assessment tools. Regulators trust the regulatory system in the same way that consumers trust the retailer/supplier. It is the regulatory filtering system that should be the guarantor for products and services of appropriate quality and safety in the respective environments. This guarantor role cannot work without effective CA.

Another theme raised was the issue of the quality of standards and the trend towards overlap between standards development organizations (SDOs) and the potential proliferation and duplication of standards. It was recognized that the WSC itself was a practical mechanism to minimize this issue, at least between the IEC, ISO and ITU.



It was recognized that good CA relies on good standards. It was suggested that better processes should be developed to allow and encourage wider stakeholder participation in standards development, including academic, regulators, end users, consumers and so on. It was explained that under the ISO and IEC models, it was, respectively, the National Member Body's and National Committee's responsibility to create national mirror committees (NMCs) to the standards development committees and feed in appropriate information from the appropriate national stakeholders. The NMCs should involve all the relevant stakeholders at the national level thus ensuring a double level of consensus at the national and international levels. IEC has also recently introduced a public commenting platform, where anyone can input comments on IEC standards. Those comments are then directed to the respective National Committee, of the country of origin of the comments, to be brought into the standards development process.

General outcomes

Outcomes resulting from the presentations and discussions of the specific topics are given in each of the topic summaries above.

According to the feedback received, the event as a whole was a great success with an overall satisfaction rating of 80%. See the Statistics section of this document.

Support was expressed for a similar event to take place approximately every 3 years.

It was suggested that such an event should be held in different locations around the world preferably favoring developing country regions. It should also be held in conjunction with another (or other) event(s) in order to create higher value, synergies and easier travel justification.

Support was also expressed for a smaller event each year, of possibly a half day's duration, in conjunction with the UNECE WP 6 annual meeting, and on single focused topics each year.

Lastly, the experts attending the UNECE WP 6 annual meeting expressed their support for work to start under the auspices of the UNECE on the revision of the recommendations on "Conformity Assessment" and invited experts that had attended the Workshop to support and contribute to that revision.



Statistics

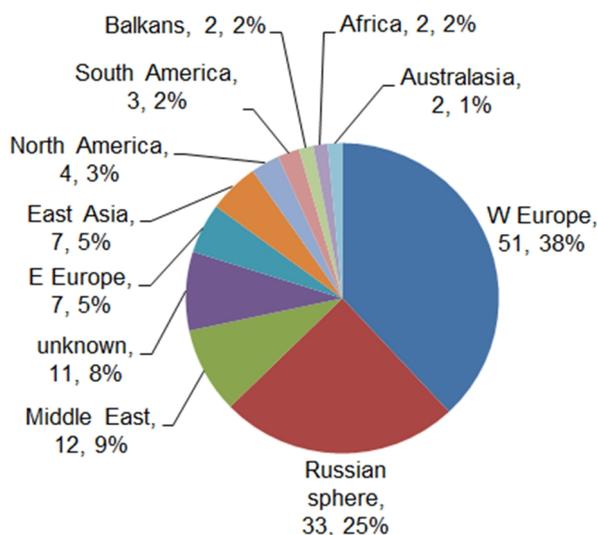
Breakdown of the event attendance

Number of participants 134
 Number of countries 33

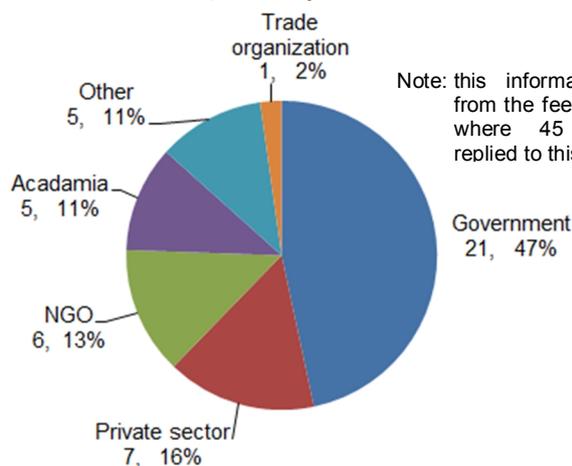
Participants by Country

Russian Federation	21
Switzerland	21
Germany	8
Belarus	7
UK	6
Turkey	5
Ukraine	5
Korea	4
Slovakia	4
Sweden	4
USA	4
Belgium	3
France	3
Japan	3
UAE	3
Albania	2
Australia	2
Bulgaria	2
Norway	2
Austria	1
Brazil	1
DR Congo	1
Egypt	1
Ethiopia	1
Ghana	1
Ireland	1
Israel	1
Italy	1
Kenya	1
Mexico	1
Netherlands	1
Poland	1
Saudi Arabia	1
Trinidad and Tobago	1
Uganda	1

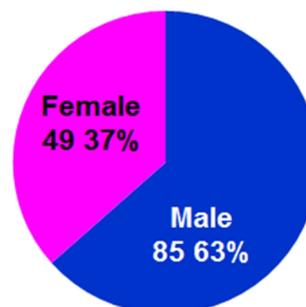
Participants by Region



Participants by Sector

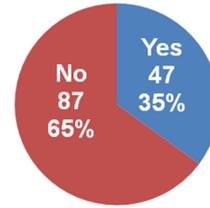


Male / Female Participants

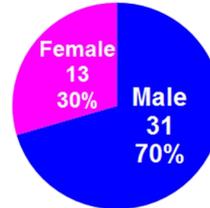


Breakdown of the feedback

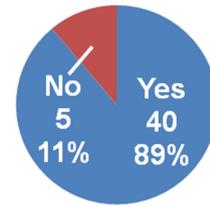
Of the 134 participants, 47 provided feedback.



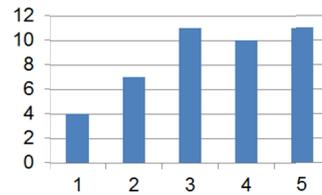
Of the 47 participants who provided feedback, 13 indicated that they were female and 31 that they were male.



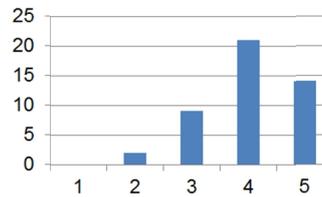
Of the 47 participants who provided feedback, 40 indicated this was their first time to a WSC event, while 5 indicates it was not their first time.



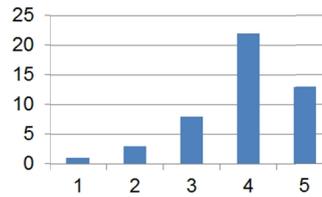
You were able to contribute during the event.
 → Satisfaction rating 70%



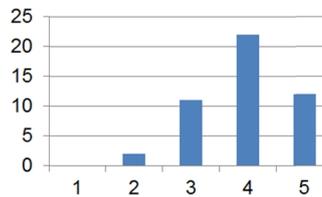
You achieved your objectives for this event.
 → Satisfaction rating 80%



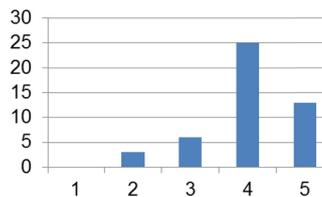
You can use what you learned.
 → Satisfaction rating 80%



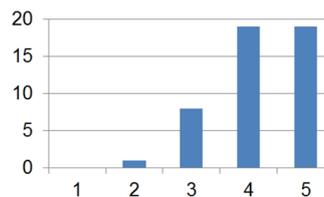
Your organization can use what you learned.
 → Satisfaction rating 80%



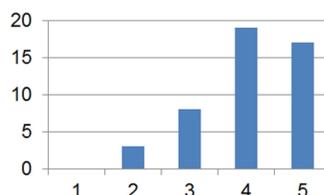
The event objectives were clearly defined.
 → Satisfaction rating 80%



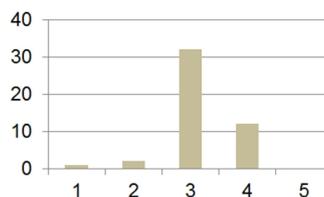
The sign-posted networking worked well.
 → Satisfaction rating 80%



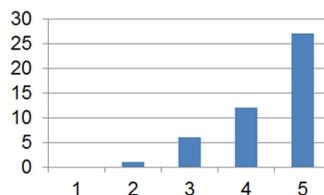
The structure of the workshop was good.
 → Satisfaction rating 80%



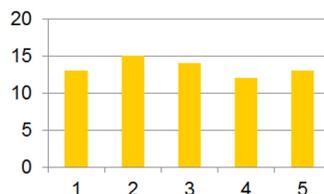
The duration of the event was too short (1) or too long (5).
 → Satisfaction rating 90%



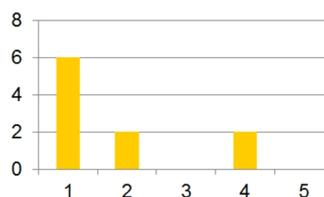
The event was run according to the programmed schedule.
 → Satisfaction rating 90%



Which session(s) were most useful to you ?



Which session(s) were not useful to you ?



Your overall satisfaction with the workshop was ?
 → Overall satisfaction rating of 80%

