



STANDARDISATION: AN ESSENTIAL PILLAR OF THE QUALITY INFRASTRUCTURE

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A standard is a document that sets out requirements for a specific item, material, component, system or service, or describes in detail a particular method or procedure. Standards are established by consensus and approved by recognized standardisation bodies. The role of a standard is to maximize quality, compatibility, interoperability and safety. Standards are developed by qualified and experienced individuals brought together by the standardisation bodies. These organizations ensure that all interested and affected parties (industry, SMEs, consumers, NGOs, etc.) get involved in the development of standards. Eventually, standards are designed for voluntary use, although public authorities sometimes decide to make their use mandatory.

Standards are everywhere in our life: have you ever wondered why you could use a bank card anywhere in the world? This is possible because those producing bank cards adhere to a certain number of international standards.

In Europe, standardisation is one of the pillars of the regional quality infrastructure, together with Technical regulations, metrology, accreditation, conformity assessment and market surveillance. At regional level, there are three standardisation organizations recognized by the European Institutions (as per the EU Regulation 1025/2012) and entitled to develop European standards in support of EU legislation and policies: ETSI (responsible for telecommunications standards), CENELEC (responsible for electrotechnical standards) and CEN (covering all other fields). CEN and CENELEC each have one member per country in the 28 EU Member States, 3 EFTA countries as well as in Turkey and FYROM. When European standards are approved, they are then implemented identically in all these countries, and conflicting standards are withdrawn. Such a mechanism has no equivalent in the world. It is a key contribution to the regional integration process and to the EU Single Market, enabling the free circulation of goods and services at regional level in a non-fragmented market. In a series of sectors, the so-called “New Approach” (resulting from a decision made in 1985 by the EU Council of Ministers) allows manufacturers to use European Standards referenced by the Commission as a means to comply with a series of ‘essential requirements’ listed in relevant EU Directives. Standards therefore become an entry door to a market of above 600 million consumers. At the same time, European citizens can rely on the quality and safety of products respecting European standards.

Originally, standards were developed as a concrete response to simple market needs, for instance to make sure that screws and bolts would fit together. They progressively evolved (similarly to society), embracing and adapting increasingly complex realities. More and more, standards are used as strategic tools, proposing broadly accepted solutions to address societal challenges: scarce resources and climate change, the ageing of the population, the diffusion of technology in all areas of life (smart phones, smart homes, smart cities)...

CEN and CENELEC support the idea that it is always better to have a single global solution. Both organizations and

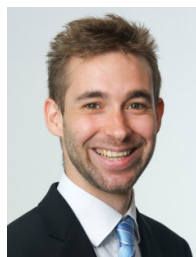


each of their 33 respective national members have accepted the WTO TBT Code of Good Practice for the Preparation, Adoption and Application of Standards. They work to promote the international harmonization of standards in the framework of technical cooperation agreements with ISO (International Organization for Standardisation) and IEC (International Electrotechnical Commission). As a result, over 30% of CEN standards are identical to ISO standards, while over 70% of CENELEC standards are identical to IEC standards.

Europe is the most integrated regional market in the world, but it heavily relies on trade flows with other countries and regions. Its ties with Africa are very strong, for historical and economic reasons. CEN and CENELEC are very much aware of this and are committed to deepening the links they have developed with their African counterparts (ARSO, the African Organisation for Standardisation and AFSEC, the African Electrotechnical Standardisation Commission). Two Memoranda of Understanding were respectively concluded in 2005 between CEN and ARSO, and in 2011 between CENELEC and AFSEC. Roadmaps have been developed in support of these two agreements to vehicle concrete cooperation activities.

European standardisation players do support the efforts of their neighbours to develop a Pan African Quality Infrastructure. Joining forces at regional level is a powerful means to enhance the competitiveness of African companies, remove intra-regional barriers to trade and strengthen the position of Africa in global trade.

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THE CHALLENGES OF STANDARDISATION IN AFRICA AND THE ROLE OF ARSO BY MR. HERMOGENE NSENGIMANA, SECRETARY GENERAL, AFRICAN ORGANISATION FOR STANDARDISATION (ARSO)



The current state of globalised world trade requires the standardisation of products and services in line with the requirements of the WTO and its attendant regulations on technical barriers to trade and sanitary and phytosanitary measures. Formerly, only tariffs were, in principle, recognised as restrictions to export/import and international trading. However, with the globalization of economies, the days when nations could afford to indulge in bilateral tariff-cutting negotiations have largely gone. Attention has shifted to technical, or non-tariff, barriers to trade and relatively more important for developing country market access.

This situation puts pressure on African producers on the need for the adoption of standards not only to improve products and services to meet increasingly demanding customer expectations but also to enhance their opportunities for expansion into new export markets. Participation in world trade in a variety of sectors requires that suppliers comply with standards within the global value chains. But non-compliance with international standards deprives African producers access to key international markets and has led to a further reduction in global market share (3% in 2010 and projected to 4% in 2030).

The changing global trade flows have enhanced the role of standards in sustainable development by encouraging integration of national economies and trading systems into a fairer global trade regime as well as establishing institutions and influencing the enabling environment at the regional and national levels.

Quality and standards are inherently linked. Standards define how products, processes, and people interact with each other and their environments. They enhance competitiveness by offering proof that products and services adhere to requirements of governments or the marketplace. When used effectively, they facilitate international trade and contribute to technology upgrading and absorption. (World Bank 2013).

Standards and technical regulations are documents that clearly list the commonly accepted guidelines, rules and criteria that help to determine if a product, process or service is suitable for its intended purpose, they set out specific characteristics of a product, such as its size, shape, design, functions and performance, or the way it is labeled or packaged before it is put on sale. Standards are the result of a consensus and are approved by a recognized body. Standards aim at achieving the optimum degree of order in a given context. The process of formulating, issuing and implementing standards is called standardisation. The primary aims of standardisation is to realize the fitness for purpose, Interchangeability, Variety reduction, Compatibility, Guarding against factors that affect the health and safety of consumers, Environmental protection, Better utilization of resources, Better communication and understanding, Transfer of technology, Removal of trade barriers. Protecting human safety



and health and the environment are important ends of standards. Minimum quality and safety standards allow consumers to assess the quality or safety of a product before purchasing it and enable regulators to exclude unsafe products from the market.

Standards provide a vital link to global trade, market access and export competitiveness. Standards (voluntary) and technical regulations (mandatory) define what goods and services can and cannot be exchanged, and outline procedures under which such exchanges are and are not permissible. Without standards we could not implement the TBT Agreement, there might not even be a TBT Agreement.

Standards are also credited with fostering the diffusion of technological best practices thus improving quality of products and services. When knowledge is exchanged in private transactions, it does not spill over to third parties. However, because information embodied in standards is nonproprietary, it creates a pool of technical information that can be transferred across companies and countries, freely accessed by entrepreneurs, scientists, and engineers and used to generate new ideas and technologies. Standards are often used to codify technological requirements expected by customers or governments, making them an essential element in the effort to upgrade quality in a country. If they are clearly defined and easily obtained, standards and technical regulations enable companies to communicate quality requirements with their suppliers and customers precisely, consistently and efficiently. When used effectively, standards play an important role in contributing to technology upgrading and absorption.

Standards do not stifle innovation or competition. Rather, they are the foundation for both. Standards are used to codify the technical characteristics and market preferences for products and processes, facilitating knowledge absorption and technological change. Standards ensure safer, healthier, more environmentally sound products, improved quality and reliability, better operational compatibility between products, greater consistency in the delivery of services, easier access to and greater choice in goods and services, better product information, suitable products for vulnerable populations, lower costs and greater competition hence lower prices for consumers.

Standards provide a reference framework or a common technical language between suppliers and their customers – that facilitates trade and the transfer of technology. In this sense, standards serve, for example, to describe the state of the art, point technical developments in the right direction at an early stage, define the requirements to be met by products and procedures, facilitate the interchangeability of technical components and set technical specifications for product testing. This gives market participants a uniform basis for assessing product quality and for goods to be labeled accordingly. Standardisation promotes the rapid spread of technical knowledge and thus helps to make enterprises, particularly small and medium-sized, more competitive and innovative.

As a part of the mandatory technical regulations, standards are an integral component of the economic and legislative system and a basic element in such important areas as environmental protection and health and safety at work. Standards, technical codes and directives are needed to make the reproducibility and comparability of measurements, test results and quality parameters independent of the performing organization.

Many of the African countries have now realized that value added export growth based on a country 's comparative advantage in a global market which encourages free trade is the preferred way to achieve robust and stable economies, but with many challenges abound:



Not all African countries have fully appreciated the role of standards, metrology and conformity assessment in value addition, industrialisation, market creation and access and the overall augmentation of their economies on continental and global scales. Insufficient knowledge and lack of awareness on the need and importance of standardisation especially amongst government policy makers, industry/SMEs, consumers, and other general public is a major impediment. Insufficient knowledge and skills to implement standards requirements especially amongst small and medium enterprises (SMEs) is a serious issue since the SMEs are supposed to be the engines of growth in Africa countries.

Strong nationalistic tendencies which tend to interfere with the achieving of consensus, unity of purpose and contribution to the African integration agenda is yet another challenge. This slows down integration and harmonization processes. The situation is made worse by the inadequate or almost total absence of Quality infrastructure in some countries rendering collaboration amongst the countries ineffectual and resulting in little harmonisation of standards in the continent.

In the African countries with mixed economies, in some countries the implementation of standards is generally voluntary, which shall be the case, by nature standards are voluntary; in order countries they are made compulsory. By lack of mobilization and awareness on the benefit of standards, and low participation of standards users (industry, consumers...), there is very low implementation of standards that pushes government to make them mandatory. In a long run the NSBs start playing a policing role, thus all standards are taken as law. As all or most of standards in a country are introduced on a mandatory basis, this raises costs of products and put products out of the reach of common consumers. The result is that intra continental trade is minimal and exports to international markets are non-existent for many sectors.

Enforcement of mandatory standards largely relies on mandatory certification, a cumbersome and expensive procedure for many products for which self-declaration and market surveillance would be adequate. Mandatory certification can affect a significant number of businesses in developing countries, with substantial cost implications.

Standards and their enforcement can mean new entry barriers. While most products and services in OECD countries need only comply with voluntary standards, this concept remains foreign to many developing (African) countries, where thousands of products must comply with mandatory technical regulations with no clear impact on social welfare. Often technical regulations are imposed from the top down, with little involvement of industry and other stakeholders. By decreasing variety, excessive technical regulations also reduce diversity in the pool of products that can be used as the basis for future innovation.

There is the challenge of disparate legal frameworks of the various National Bureau of Standards, which have hampered the continent to come up with a common regulatory framework to promote harmonisation of procedures and economic integration through trade. In order to create regional markets, standardized regulations are required. National regulations and standards need to be harmonized or replaced by regional regulations and standards. This means insufficient number of harmonized standards on the continent and the low level of awareness of existing standards, which has led to low application of standards and reduced the competitiveness of African businesses. Having different standards can make life difficult for producers and exporters. If standards are set arbitrarily, they could be used as an excuse for protectionism.



The TBT Agreement has an explicit bias towards international standards. It requires members to base all national standards and technical regulations on existing international standards however there is low and sometimes lack of involvement in international standardisation processes by the African countries to influence the requirement of standards mainly due to lack of financial resources, technical expertise and experience in negotiation process during consensus building. Without considerable technical and financial assistance, awareness creation for the benefits of standards; the difficulties that developing countries have with involvement in international standards bodies can be expected to become more serious in the future limiting African countries as standards takers. This presents a situation where the kinds of international standards developed are most often those that respond to developed country priorities, not to developing country priorities. Even where international standards respond to developing country needs, their specifications are more likely to be suited to large, capital-rich, multinational companies rather than to labour-intensive SMEs. This means the adoption of International standards which don't reflect the priorities and situations of African countries.

Unlike in the developed countries where standardisation is industry driven (bottom up) affair, standardisation processes in Africa are government led with a top-down approach. This means the private sectors are not active and standards are poorly implemented.

Transparency, access to information and participation in the development process is one of the principles of standardisation process. Unlike the developed country WTO members, many African country members have neither the effective capacity to disseminate the notifications to relevant national parties, nor to assess the technical regulation's potential impacts on trade and to convene a national process to document relevant comments. At a more refined level many countries do not have a ready-built network of stakeholders to solicit comments on draft standards within the required time limits, and so often even wherever they exist there is no plan for sustainability, thus a system functioning one year and dies off the subsequent years. Without a well-resourced national standards body, including a network of contact points in national industry associations and companies, it is very difficult to raise awareness or to solicit comments on technical regulations or standards regardless of one's rights under the TBT Agreement. Because developing countries often do not have the resources to either demonstrate that international standards are inappropriate to local circumstances or to develop their own standards, many countries effectively become international standards-takers.

Standardisation is driven by Research and Development. With lack of the participation by the Academia and Experts in standardisation and lack of research initiatives and with no mainstreaming of standardisation in the education systems, standardisation education and research in Africa is left for the standards organisation which at most only carry professional induction courses for their staff. Although sales of standards generate income, it is unlikely to be sufficient to cover operating costs in most small African economies where demand for voluntary standards remains low.

From this point of view, the main tasks of standardisation organisations should be the support of the standardisation process, harmonisation and coordination using the three closely linked strategies of adopting international standards, influencing international standardisation activities, and coordinating with trade partners to adopt regional standards appropriate to the region's needs, to harmonise their standards.



Under the international architecture, there are a growing number of regional initiatives to upgrade the quality assurance institutions. The African Organisation for Standardisation (ARSO) is such an organisation in Africa. ARSO is an intergovernmental body established by Organization of African Unity (OAU, currently African Union (AU)) and United Nations Economic Commission for Africa (UNECA) in 1977, with 21 African Governments as founding members, and mandated to promote standardisation and related activities in Africa with the aim of facilitating intra-African trade and international trade of goods and services and thus:

- (a) Harmonise national and/or sub-regional standards as African Standards and issue necessary recommendations to member bodies for this purpose;
- (b) Initiate and co-ordinate the development of African Standards (ARS) with references to products which are of peculiar interest to Africa;
- (c) Encourage and facilitate adoption of international standards by member bodies;
- (d) Promote and facilitate exchange of experts, information and co-operation in training of personnel in standardisation activities;
- (e) Co-ordinate the views of its members at the ISO, IEC, OIML, Codex and other international organisations concerned with standardisation activities;
- (f) Create appropriate bodies in addition to the organs of the organisation for the purposes of fulfilling its objectives.

With Strategic Objectives to Establish a standards harmonization system that supports a sound regulatory framework, Disseminate harmonized standards and guidelines to support intra, inter African and international trade and industrialization, Strengthening ARSO work-management capabilities for the sustainability of the Organisation and Promoting maximum and effective participation of Members and other stakeholders, ARSO Strategic Plan 2012 – 2017 provides the strategies which ARSO has put in place in order to respond to the challenges facing standardisation in Africa.

For Standardisation Awareness Creation, ARSO launched the Yearly African Standards Day in Yaoundé Cameroon in 2013. The day offers the Standardisation Stakeholders the opportunity to focus more and more on a comprehensive African approach (with recommendations) to standardisation as a strategic resource to Africa's economic integration and an asset for improving Africa's trade volume.

On Standardisation Awareness, among the African Youth, ARSO launched the Yearly Continental standardisation Essay Competition in 2013 with an intention to enlighten the youth on the benefits of standardisation and to take advantage of the Demographic potentials of African continent to spur and sustain the African economic growth through youth empowerment. To enhance the Consumers' participation in standardisation ARSO established the ARSO Consumer's Committee (www.arso-coco.org) to act as the African consumer voice in Standardisation. ARSO COCO is responsible for promoting and protecting African consumer interest in national, regional and continental standardisation.

To promote unified conformity assessment activities in Africa, ARSO has initiated a Conformity Assessment Committee (ARSO CACO - www.arso-caco.org) programme to harmonise Conformity Assessment in Africa. ARSO is cooperating with academia, trade associations, consumer representatives as well as NSBs on rolling out standards Education programmes in the African Education systems to emphasise and create greater awareness on the role of standards, metrology and conformity assessment in value addition, industrialisation, market creation



and access. A policy guideline and curricula and training modules are being developed. ARSO has also established 13 Technical Harmonisation Committees for the harmonization of African standards (by the African Experts), using the African Standards Harmonisation Model (ASHAM) based on the basic principles of standardisation. The harmonised African standards (currently over 800) are made available to all the ARSO members and Regional Economic Communities (RECs) for adoption. ARSO also advises African countries on the adoption of the ISO standards.

For Capacity Building and Training, ARSO in collaboration with Stakeholders has been running yearly standardisation Training to African countries through workshops and seminars, based on country needs (from various needs assessment feedbacks). The ARSO-NSBs training strategies based on MoUs between ARSO and leading African NSBs also offers convenient and cheaper technical training to Experts in Africa on standardisation. A database of Experts is maintained.

Dissemination of standardisation is done through the ARSO Documentation and Information Management System (ARSO-DISNET - www.arso-disnet.org), a “one-stop-shop” source of information Networks for the dissemination of standards, conformity assessment, technical regulations and the related activities information in Africa. With components such the ARSO ITC, Library, ARSO DISNET African Trade Help Desk Web Portal, ARSO Publishing House and the ARSO Quarterly Newsletter the ARSO DISNET Programme is ensuring the dissemination of sector – specific based outreach information materials to targeted Audience. Through the African Trade Help Web Portal data on the product requirements are captured to promote the trade among Africa countries.

Based on the understanding of the importance of SMEs and the informal sector (shadow economy) in sustainable development, ARSO initiated a programme on streamlining the SMEs in National Economies and Global Trade through standardisation. The programme targets to create awareness among SMEs on the benefits of standardisation and promote their participation in standards setting processes and implementation. ARSO has developed various outreach materials to simplify the technical language of standards to facilitate their implementation. On policy, ARSO develops guides on programmes as well as Policy documents for guiding African countries in standardisation work. This include: Criteria for Classification and Identification of Non-Tariff Barriers in Africa, General National Quality Policy for African Countries, General Technical Regulations Framework for African Countries, African Standards Harmonisation Model (ASHAM) and African Standards Education Policy. In summary, for Africa to play its deserved role in global trade looking at its natural resources, the main focus shall be put on mobilization and awareness, harmonization of standards with interest to African countries to increase intra-Africa trade, and high participation in international standardisation work.

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