

## HOW STANDARDIZATION WORKS – The Standardization Map

### The Standardization Map

Standardization is about much more than developing standards. 'Standardization' is establishing and applying a set of agreed solutions intended for repeated application, directed at benefits for stakeholders and balancing their diverse interests. Standardization is a simple, powerful tool, which influences everything we do; however, the proliferation of standards development processes, organisations and standards themselves has made this concept difficult to comprehend.

The Standardization Map illustrates the concepts, organisations and activities involved in standardization, guiding us from the starting point (stakeholder needs) to our eventual destination (socio-economic outcomes). We have called it a 'map' because it depicts the different routes on the standardization journey. Just as a traditional map provides information on roads, cities and geography, the standardization map tells us about the processes, organisations and relationships involved in standardization. The latest draft of the Standardization Map can be downloaded in pdf. format:

The map takes us on a journey from left to right. Our starting point is stakeholders with different needs.

**'Stakeholders have a range of needs that vary with the nature and aims of each organization'.**

Standardization is most effective when the needs of the stakeholders are clearly defined and articulated. The stakeholders fall into three basic categories: business, government and societal. Their needs vary depending on the type of organisation, the nature of their business and what they are trying to achieve. Furthermore, the needs of individuals within organisations will also vary depending on their role.

For example, a business manager at the strategic level within a corporation is focussed on revenue growth and will look to develop new markets. A logistics manager in the same corporation will be focused on reducing costs and maximising flexibility in the supply chain. Both these needs may be addressed through standardization. Similarly, government is constantly searching for more effective ways to regulate and more efficient ways to operate. Societal needs include protection, guarantees of quality, freedom of choice and information on the products and services available to consumers. Standardization is a means to address all of these diverse needs.

As the molecular shapes on the map illustrate, there are different types of organisations and entities within the three basic stakeholder groupings, each with a unique set of requirements. The business category, for example, includes small and medium size enterprises whose needs will vary considerably from those of a multinational corporation. Within the public sector, the requirements and objectives of central government departments will differ from those of local government. The societal category includes consumers as well as non-government organisations, charities, academia and issue-based groups: different entities with different needs.

**'Stakeholder needs drive the specific standardization process and its outputs. The process brings together stakeholders, their needs, and the resources of the Standardizers to produce a standard - an agreed way of doing something, or other appropriate solution. Timing and speed vary with the task'.**

The middle section of the map depicts the range of standardization activities and describes the organisations that facilitate these activities. The process or 'route' used by each type of organisation varies with the intended outcome and is driven by each stakeholder's need.

The image of the atom illustrates the dynamic nature of standardization. Standardization brings together representatives from different stakeholder groups with diverse needs. The players include regulators, researchers, standards developers, standards sellers, standards purchasers, trainers, consultancies, certification & accreditation bodies, testing houses as well as the users of standards themselves. The combination and interaction of these players will vary depending on the specific needs of stakeholders and the mechanism that facilitates the standardization process.

The standardization process is catalysed by organisations known as 'Standardizers'. Standardizers are set up to assist the standardization process and work with stakeholders to develop solutions appropriate to their requirements. These organisations may be 'formal' (e.g. the National Standards Body, BSI or the International Standards Organisation, ISO) or 'informal' (e.g. a consortia of business representatives or a private alliance of companies).

Formal and informal formal bodies offer alternative standardization routes with different timescales and a range of outputs. Formal standards bodies place strong emphasis on balancing business and societal interests and are traditionally prominent in developing standards for the construction and manufacturing industries. Informal standardizers are often formed on an ad hoc basis to solve a problem or to find a solution to a specific issue. The ever-shrinking product lifecycles that prevail in the IT sector have contributed to growth of informal standardizers in recent years.

The participants operating at the 'coal face' of the standardization process are individuals representing a specific company, government, societal interest or representative body (e.g. trade association or professional institution). Whether the standardizer is formal or informal, the process of standardization is based on reaching consensus amongst the participants.

### **Current Practice & Future Technology**

There are two broad objectives of standardization:

- Standardizing current practice
- Standardizing future technology

'Standardizing current practice' aims to harmonise established or existing products and services. ISO 9000, for example, is an attempt to harmonise existing management practices through a formal international standard.

'Standardizing future technology' aims to support development and commercialisation of innovation, especially within emerging industries. For example, the standardization of the DVD format enabled DVD to become the fastest growing consumer technology in history. In this example, standardization helped reduce costly duplication and create a valuable new market for business, while bringing an exciting new technology to consumers.

The circular imagery on the Map describes the evolutionary nature of standardization. As a solution is found to one need, (e.g. a common language for programming on the internet) other needs emerge that mandate different solutions (e.g. the need for security of internet information).

These solutions may be documented in tangible outputs such as formal standards, technical specifications, codes of practice, codes of conduct, guidance documents, and specifications for services. Solutions may also include ongoing support, training and guidance on use and implementation of standards. Once again the solution generated by standardization activities will vary depending on the requirements of the stakeholders. While these outputs are valuable to the individuals that use and apply the solution at the organisational level, the true benefit of standardization lies in the socio-economic outcomes these solutions enable.

**'The elements of standardization can be combined to produce a range of beneficial socio-economic outcomes'**

This far right column on the map, the destination of our standardization journey, describes the range of socio-economic 'Outcomes' created by standardization. It is important to distinguish between outputs and outcomes. While the 'output' of the process is likely to be a document or tool, the 'outcome' is the result of the use and application of the tool: the end rather than the means. Outcomes reflect the balance and alignment of stakeholder interests, shaped through standardization.

Whichever route was taken through the elements of standardization described on the map, these socio-economic outcomes are the ultimate destination. Outcomes include new business architectures, the commercialisation of innovation, the creation of sustainable competitive advantage, the spread of best practice, effective public policy, cost-effective compliance, access to new markets, consumer assurance and improved health, safety and environmental conditions. It is important to note that, in most cases, a single outcome meets the need of several stakeholders. A regulator requiring implementation of public policy, a business requiring cost effective compliance and a consumer who requires safe, reliable products may all seek reassurance from the application of a single solution. Standards thus represent a powerful communication tool, which facilitates global business.

The map describes a number of specific outcomes or destinations at the end of the standardisation journey, many of which represent the start of another adventure! The outcomes of standardization not only meet today's stakeholder requirements, they create opportunities for stakeholders in the future.