Servicing the services sector

- TNS on quality and management
- ISO 50001 “on fire”
Satisfaction guaranteed! – A service-oriented ISO for satisfied customers

Over its long history, ISO has strived to continually improve its products and processes in an environment that has remained anything but constant. Meeting the needs and expectations of its customers explains ISO’s successes over the last 65 years – a tough challenge given customers’ constantly evolving needs.

With the first year of the ISO Strategic Plan 2011-2015 now complete, the course has been set for progress. To build a community of satisfied stakeholders, ISO listens to customers, identifies their needs, learns from them and acts accordingly. My term as ISO Vice-President (technical management) for 2012-2013 will be no exception.

Focus is both internal and external. Internationally, standards that are “simpler, faster, better” will be developed using three routes: the ISO Chairs’ conferences held every three years; a unique face-to-face interaction linking an exchange of views, experience and best practice by the leaders of ISO committees.

Secondly, the ISO Living Laboratory project, a software model of the end-to-end ISO standards development process to identify factors key to ISO’s future success. New ideas will be tried out, new development approaches tested and existing paradigms challenged to achieve our goal to be the “the world’s leading provider of high quality, globally relevant International Standards”.

Finally, the TMB electronic newsletter informs the technical community of key decisions and how these affect them. Communications will be reviewed in the coming year, so stay tuned.

This drive for improvement extends to ISO’s external network and our partnerships with over 600 international and regional organizations in liaison with our technical committees. It is critical to reach out to standards development organizations outside the ISO system, be they international, regional or national, to fora and consortia.

We can learn from creative solutions already developed to meet customers’ needs irrespective of institutional borders. Clever, common and comprehensive solutions are needed for technical systems and their respective business models.

ISO understands key sector strategic issues by working with industry leaders to develop globally relevant, market-driven International Standards. In 2011, the partnership between the automotive sector and ISO reached an important milestone with the gathering of high-level industry leaders for the ISO President’s Forum – “The future of vehicles”.

Such direct encounters between the ISO system and industry customers define common responsibilities and set up the structure for large standardization programmes. A commitment must be made by all parties to adhere to decisions taken and to deal with upcoming problems in a flexible way.

In recent years, emerging economies have increased their involvement in ISO to reflect their growing economic importance. We hope to see even more countries contributing to the international standardization process. As the scope of our agenda broadens, new partners join the ISO system and the benefits that ISO standards can deliver to business, government and society are increasingly recognized.

Last but not least: standards are not developed to be left unread (in standards bodies or elsewhere). The distribution of International Standards via the ISO system is an important way to further customer satisfaction. When our member bodies promote ISO standards and adopt them as national standards, together with ISO’s global relevance policy, our collective effectiveness is enhanced.

No subject better illustrates ISO’s ability to adapt with the times than the portfolio of International Standards to meet the needs of the services sector, the theme of this issue of ISO Focus+. With the growth in this sector, emerging requirements have given rise to new approaches to satisfy market players and economic partners. In the last five years, ISO has created some 40 new technical or project committees, at least half related to services. These moves form part of ISO’s commitment to continuously improve ISO’s end product. We are confident that these deliverables will respond to current market requirements.

Elisabeth Stampfl-Blaha, ISO Vice-President (technical management)
The benchmarking progress – contributing to the debate on the Millennium Development Goals (MDGs) – is an important contribution to the global agenda. The World Economic Forum (WEF), at their 2012 meeting in Davos, Switzerland, has invited ISO to participate on WEF councils concerned with:

- Benchmarking progress – contributing to the debate on the Millennium Development Goals (MDGs)
- New platforms for global cooperation, problem solving and governance.

ISO Secretary-General Rob Steele noted, “One of the primary focuses at this Davos meeting was global risk. The Global Risks Report 2012 was presented, highlighting areas where escalating risk in financial markets, the consequences of climate change, societal revolution, and the unintended consequences of technology have increased the likelihood of instability. What is significant is the number of these areas where ISO has, and is developing, standards and some where we need to ask questions as to how we could do more – cyber-attacks being one.”

ISO standards support the UN Millennium Goals. International Standards address areas such as risk management, corporate governance, information security, road traffic safety, supply chain security, climate change, health and safety, consumer issues and societal responsibility – all pressing global issues.

**Malaysia: ‘Straight A students’**

Malaysia sees standardization as an important instrument for both economic and social development. An educational drive on standards was launched with the aim to increase awareness of, and knowledge about, standards and standardization.

As a starting point for stimulating standardization activities in the country, Standards Malaysia organized a workshop on the development of education about standardization for developing countries in Kuala Lumpur, in December 2011. The workshop was a collaborative platform to exchange and disseminate information.

The objectives were to get an update on the current state of knowledge; promote the importance of education on standardization to universities and to industry; initiate international joint research and publications in this domain; and improve the image of standardization among all stakeholders.

Workshop speakers emphasized not only the need for standardization education, but gave practical advice on implementation, by using modern concepts like design thinking and games. The first winners of the ISO Award for Higher Education in Standardization, China Jiliang University, Hangzhou, China (Prof. Song Mingshun) and the Rotterdam School of Management, Erasmus University, Rotterdam, the Netherlands (Dr. Henk de Vries), shared their experiences.

Representatives from industry, academia and the government also took part in the workshop, as did consumer groups and standards bodies. A presentation was made by Dr. Che Ahlan Taib, a quality management teacher focusing on the ISO 9000 series of standards at the School of Technology Management and Logistics, College of Business, University Utara Malaysia.

For more information: [www.standardsmalaysia.gov.my/v3a/Workshop.pdf](http://www.standardsmalaysia.gov.my/v3a/Workshop.pdf)

**World Water Day 2012**

Highlighting how much of the world’s freshwater supply is used to produce the world’s food, the theme of UN World Water Day 2012 is “Water and food security”. This year all the steps in the supply chain will be scrutinized to determine actions to be taken to save water and ensure food for all.

In timely fashion, ISO’s very recent brochure ISO & water addresses the issue, providing a concise overview of International Standards available and how they can help.

The new brochure underlines the benefits of ISO’s consensus-based approach, and outlines ISO’s water solutions for good business practice, management of resources, risk assessment, metrics and infrastructure. It looks at how ISO water standards can facilitate sustainable water management and increase water potential, helping alleviate water scarcity and contributing to achieving the UN’s Millennium Development Goals.

**Kids’ ISO 14000 programme**

To mark the 2012 Awareness Ceremony for The Kids’ ISO 14000 programme, which took place in Tokyo, Japan, in February, ISO Secretary-General Rob Steele sent his congratulations to the participants at this event.

Mr. Steele reported on the overwhelming challenges facing the planet due to the impact of global warming. He said, “Your work to raise everyone’s attention to the importance of the environment makes you outstanding ambassadors. You can be extremely proud of yourselves for working on this very important subject.”

The ISO Secretary-General also noted the inestimable loss of the guiding force behind the programme: the late Prof. Takaya Kawabe who founded The Kids’ ISO 14000 programme in 2000. “On behalf of ISO,” said Mr. Steele, “I pay tribute to Prof. Kawabe for his tireless efforts to raise awareness of environmental issues and his enthusiasm and energy that helped to make The Kids’ ISO 14000 programme the success it has become.”

James Brooks is TNS’ Global Operations Director and was appointed to the Global Executive team in November 2009. In this role, he is responsible for ensuring that TNS has the required operational capabilities to meet TNS’ clients’ needs. Prior to this appointment, he was the European Operations Director for TNS’ custom business.

Between 2005 and 2007, Mr. Brooks was the Global Operations Director for TNS Worldpanel where he was responsible for introducing new data collection and delivery techniques to the business.

Mr. Brooks has worked in the market research industry for 20 years, in both commercial and operational roles, with past employers including Lightspeed Research, Information Resources Inc. and Tesco.
ISO Focus+ : What is market research and why is the service so important?

James Brooks : Market research today is a global industry providing services to business, governments and citizen organizations around the world. It is a key provider of information and insight engrained in the fabric of everyday business and wider society.

Firstly, some statistics, as befits any market research piece. Our global industry organization, ESOMAR, estimated in 2010 expenditure on market research by businesses, governments and other sources was in excess of US$30 billion. This sum excludes the value of work done within businesses themselves and also work done by government departments such as the Bureau of the Census in the USA. These activities have been estimated by academic investigators to run to many billions in addition.

The accompanying Figures 1 and 2 show global regional shares and source of income and growth rates by region, illustrating the reach of market research both regionally and across businesses.

ISO Focus+ : With business located in 74 countries, how important is quality to the work of TNS, in particular, and to the industry, in general?

James Brooks : We collect data in a number of different ways, by personal interview, by telephone and via the Internet. Different techniques are used to a greater or lesser extent in different countries. For example, in the USA, the vast majority of our work is conducted over the Internet, whereas in Asia, face-to-face interviewing in respondents’ homes is the most common technique. Around the world each year we carry out over 30,000 different surveys and over 50 million interviews.

The public face of market research in the media is driven by the political and opinion polling that the industry undertakes. Whilst political / opinion polling may be the public-ly recognized part of our business, our largest clients are drawn from fast-moving consumer goods companies, automotive and technology businesses, and the public sector amongst others.

The characteristic of an ever-growing proportion of the work we do is that it is multi-country and that it is carried out continuously or with frequent repetition.

ISO Focus+ : What is the ISO standard on market research and has it achieved recognition and credibility?

James Brooks : An such an outcome cannot be achieved unless two conditions are satisfied. Firstly, that our surveys are designed so as to provide the basis for achieving these outcomes. By design, we mean addressing technical issues of sample design and selection, the statistical basis for survey sampling, questionnaire wording and structure, and the analysis that is then applied to the final result.

Secondly, that our surveys are processed so as to provide the basis for achieving these outcomes. By this we mean addressing the administration of the whole survey process, from the initial client enquiry through to the provision of the final report and archiving of data. In particular, we are concerned with the process of:

- Drawing the sample correctly once it has been designed
- Producing the questionnaire once it has been designed
- Training interviewers on how to correctly conduct interviews
- Validating the interviews carried out
- Validating data entry
- Editing of data
- Analysis of data
- Reporting of data

They can grow their business. These results cover areas such as innovation and product development, brand and communications, stakeholder satisfaction and the measurement of market sizes / shares.

The information and insights that we produce are used to guide key business decisions in areas such as new product launches, advertising campaigns and pricing. In the social / political research area, our work can be used to inform policy decisions. It is therefore vital that our clients can use our data confident in the knowledge that when results are provided, the data represents an unbiased estimate of a reality that can be measured, rather than the manifestation of a series of poorly collected, badly processed and erroneously analysed material.

Small errors in data entry or processing, or systematic errors in interviewing can lead to large and invalid estimates. In a rapidly changing world, our clients need data faster, with more flexibility of delivery, that can be used with confidence.

ISO Focus+ : With the globalization of the market research industry, TNS needs to ensure results that are comparable across countries, consistent through time, error free, on schedule, accessible and good value. How does TNS ensure its methodology is transparent and provides valid results that can be replicated using different suppliers?

James Brooks : Such an outcome cannot be achieved unless two conditions are satisfied. Firstly, that our surveys are designed so as to provide the basis for achieving these outcomes. By design, we mean addressing technical issues of sample design and selection, the statistical basis for survey sampling, questionnaire wording and structure, and the analysis that is then applied to the final result.

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The quality with which these basic processes are undertaken is that ISO 20252:2006, Market, opinion and social research – Vocabulary and service requirements, addresses. It is also why we are increasingly finding that using this ISO standard provides us and our clients with a common structure and system to meet the need, not only for good quality, but to be able to demonstrate and audit that achievement.

ISO Focus+ : In a company like TNS, whose survival depends on providing accurate results, how do International Standards allow the company to stay on top of its game?

James Brooks : Local TNS companies were amongst the pioneers of formal quality standards at a national level in the Netherlands and the United Kingdom over 30 years ago. Through our use of what were initially local industry administered schemes, we came to appreciate the positive benefits of formal quality standards.

By defining responsibilities, mapping processes and setting minimum prescriptive standards, we realized the benefits such systems bring to everyday work at all levels of an organization. This is particularly true in the data collection area of the business where such systems provide a means of identifying good performance provide self- respect to team members and provide an audit trail in the event of queries or errors being identified. Such systems reduce the risk of poor performance, improve productivity and systematized the processes, thus realizing the achievement of the consistency, punctuality and reliability we are seeking.

ISO Focus+ : TNS introduced a Global Operations structure. Can you please elaborate on this? What are the benefits of using a global strategy for quality standards?

James Brooks : As a first step, and as a priority, we agreed to a two-tier quality strategy for data collection. As a first tier, we agreed in late 2009 that we would introduce the data collection elements of ISO 20252 in all of our 50 plus countries by the end of 2012. We saw this standardization to a common minimum standard as the first step on our journey towards a global way of working that would support our client

About TNS

TNS, part of the Kantar Insight division of WPP – one of the world’s largest advertising and marketing services businesses is the largest survey business – in the world (collecting data by carrying out interviews with individuals). AC Nielsen (which conducts The ISO Survey of Certifications), the largest survey organization with a market share of 16%, conducts the majority of its business using data provided by retailers or wholesalers, or other third parties which present equally challenging issues of quality, but of a different nature to those of the survey process.

TNS originated in the United Kingdom in 1964 and through a combination of organic growth and acquisition, particularly from 1992, onwards grew to be the third largest market research company in the world. In 2008, it was taken over by WPP and has been integrated with great success into the Kantar division of WPP which manages all the insight businesses within WPP.

We carry out over 30,000 different surveys and over 50 million interviews.

With our global growth, we found local companies within TNS increasingly certifying to ISO 20252. By 2008, three years after the first publication of the standard, we had 10 companies globally certified. However, these years also saw the rapid increase in demand for multi-national research conducted in a consistent and centralized fashion.
needs. We saw this as a first step because our experience with quality standards is that they are a means to an end and not an end in themselves. In particular, to achieve our global objectives of consistency, reliability and replicability, we have learnt that there are many different ways a business can satisfy and achieve an ISO standard.

For a global business, however, it is imperative that all our businesses at national level work together to the same standards and detailed specifications and ways of working. In this respect a modern, technologically intensive service business is no different from a manufacturer of smart phones or car engines.

As a second tier to our strategy, we have developed best practice across our data collection practices. These are modelled on markets which already have certification to ISO 20252 and are used to support markets implementing the required quality standards in data collection. These best practices contain agreed processes specified after consultation with practitioners from within our companies around the world. They constitute the best state-of-the-art knowledge, supporting the hardware and software that we are currently using. They draw on our experience in particular on a small number of major international studies where we have pioneered new approaches to common

working using decentralized systems with centres of excellence deployed in local hubs with specific expertise and cost advantage.

The introduction of these two tiers of implementation – sometimes in parallel and sometimes sequentially – is providing us a basis for common performance metrics and benchmarking that we anticipate will realize significant quality improvement and cost efficiencies over the next five years. They are being deployed by a team of international experts via a series of local and regional workshops with teams drawn from country management. They are being supported by a library of best practice manuals, templates, case study materials and one-on-one mentoring to trouble-shoot and iron out implementation testing problems.

This ISO standard enables us to demonstrate our commitment.

The second step in our global quality strategy is to identify key markets for our clients that are not yet fully certified to ISO 20252. We have now identified a list of further countries for full ISO 20252 certification, and programmes are now in place in all of these, working alongside our wider data collection implementation plan. It is anticipated that by the end of 2012, we will have in total 19 of our national businesses, drawn from across all five continents fully certified to ISO 20252. Again, we should reiterate that we see this as a means to an end, not just an icon for display in the lobby of our offices.

ISO Focus+: Before we conclude this interview, are there any last thoughts you wish to share with readers?

James Brooks: In its short life so far, the ISO International Standard on market research has achieved recognition and credibility amongst both major suppliers and, more importantly, amongst our global clients. At TNS, we have always believed in the basic underlying skills and disciplines of our profession, and it is deeply satisfying to find that in this ISO standard we have support to enable us to demonstrate our commitment to those values in a meaningful and verifiable manner. At the same time, the improvements this brings us in efficiency, employee satisfaction and, not least, error and cost reduction, provide tangible returns on that faith.

Even the best organization can’t expect all its customers to be satisfied all the time. And complaints can provide benefits. Complaints can give an organization valuable information about how its products and services are performing. Positive treatment of unhappy customers can increase their loyalty. Three ISO standards offer a comprehensive framework for complaints management – from prevention, through handling to dispute resolution.


Fortunately, ISO has a system for complaints handling.
Smiling with confidence

Sustaining the service sector with standards

by Elizabeth Gasiorowski-Denis

Ranging from IT to market research and to tourism, services are the largest and most dynamic component of both developed and developing country economies, according to the World Trade Organization. Important in their own right, they also serve as crucial inputs into the production of most goods. Not only do services represent the fastest growing sector of the global economy, but they also are by far the largest component of GDP.

Now “service” is an extremely broad concept; it can refer to your relationship with your bank, your dentist, your psychologist, your travel agent, your advertising agency, and your telephone company, as well as anyone in the retail or hospitality business. The list can go on and on. Services are often tightly interrelated with and built on goods and technical infrastructures constituting a complex system of interaction between people, machines and other devices. Reflecting this tendency, standardization is now and has been for some years, extending beyond the traditional, technical fields to include the services sector.

A growing demand for standards to support quality, communication and good practices is needed to sustain the service sector.

How do standards help? First, and foremost, standards can help bring order and consumer reassurance, providing confidence and impartiality. Consumers everywhere would benefit greatly from more efficient services, whereas providers would enjoy better market access around the world. At present, there are several specifically service-related standards in selected areas, such as rating services and network services billing. Others are still under development, e.g. human resources.

These standards provide either a description of the service as such, e.g. by setting out typical parameters and definitions of procedures, or specify the requirements to be met by the company offering the service, e.g. as regards the technical equipment needed to deliver the service or the recommended qualifications of the staff performing it.

Service standards can help businesses gain essential competitive advantages, by creating transparency and enabling potential customers wishing to use the services to carry out effective comparisons before making their choice. Other benefits include an improved quality of service across national borders, lowered costs and more time saved.

Standardization of services will have a lasting influence on the market as a whole, because it will encourage competition, protect consumer interests, aid economic growth and establish the conditions required for free and fair trade.

The March 2012 issue of ISO Focus+ looks at the current developments in the international standardization of services and highlights the positive impact they will have, not only for specific services, but for the global market as a whole.

Articles cover a range of services for which International Standards are being developed, such as the universal financial industry message scheme, mobile person-to-business payments, tourism and related services and network services billing. An article on ISO/IEC Guide 76:2008 for the development of service standards is also included.

You will find all these and more in this exciting issue of ISO Focus+.

Elizabeth Gasiorowski-Denis is Editor in Chief, ISO Focus+.
“Mobile” has revolutionized the way we do things. This remarkable technology has taken the reality of accelerated information flow – and placed it into the palm of our hands. Few places remain out of reach and out of touch with smartphones and other ever more capable devices. Each day, clever people find new and interesting ways to use our connected world.

**Portable banks**

Mobile technology offers an opportunity to extend traditional banking by introducing a new way of accessing retail payments, as well as retail and wholesale banking services. Today’s mobile devices enable users to perform banking functions such as:

- Paying bills
- Opening accounts, accessing account balance information and reviewing transaction history
- Transferring funds between accounts or to a third party
- Locating cash machines and/or bank branches for face-to-face banking
- Paying at the point of purchase, either by some prepayment method, by direct funds transfer or by using third-party payment methods controlled by the individual user.

And this is just a partial list of functionality. For example, “loyalty programme services” are certain to grow in the mobile payments/banking arena.

“Mobile” has revolutionized the way we do things.

To better capture the breadth of these functions, as well as other functions or variations that may emerge, it might be more accurate to use the term “mobile commerce”. So, whether one speaks of mobile payments or mobile banking, or even mobile marketing (including loyalty solutions), a common thread is the need for standardization of the data elements and message structures for achieving such functionality.

Critical for the success of retail payments is the need for a standardized interface.

Our goal is to learn from the past and build for the future. The most successful payment systems, the debit and credit card, are almost ubiquitous and can be initiated almost everywhere on the globe. The working group hopes to emulate and expand on this success.

But we will also look at successful models in nations where bank accounts, and therefore debit and credit cards, are rare – such as M-PESA in Kenya, a mobile phone-based money transfer service that allows branchless banking – to see if they can be incorporated into the standard.

The market is dynamic and many players want to gain proprietary advantage. But, importantly, there is still room for standardization because for a payment system to gain traction, it needs to be broadly adopted, and it needs to allow for open commerce. The models that win will support all the necessary – and only the necessary – parties to the transaction; and winning models must also respect, but cannot be limited by, national borders.

**About the author**

Mark SB Tiggas is Senior Vice-President of Wells Fargo Bank, N.A., based in the USA. He heads the enterprise payments architecture team, which has an in-depth knowledge of industry trends and payment technologies. The team guides and coordinates payments technology-related enterprise investment decisions that maintain or enhance Wells Fargo’s position. Mark has been an active member of the national and International Standards development community. He is Convenor of ISO/TC 68/SC 7/WG 10.

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**Special Report**

March 2012

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by Peter Potgieser

In simple terms, “trade” is the exchange of goods and services from a supplier to a buyer. The resulting debt of the buyer is assumed to be compensated using a payment, taken care of by one (or more) bank(s). This scenario is depicted in Figure 1 (page 13).

Trade begins with a buyer’s need and ends with the fulfillment of that need. It comprises many activities, including enquiry, goods or services delivery and payment. Transactions take place within a pre-established system, on the basis of a functioning legal framework and technical infrastructure. Key steps include the supplier finding a buyer, the signing of a sales contract (electronic or otherwise), goods shipment and payment within the contractual deadline.

While all these activities together are called the supply chain, a closer look shows there are three parallel flows:

- The physical supply chain – goods or services flowing between supplier and buyer
- The financial supply chain – financial transactions such as payments and invoice financing, implied by the move of goods or services
- Underlying information flows supporting the physical and financial supply chains and including, for example, purchase orders, confirmations and invoices.

Each of the flows in Figure 1 has one or more supporting information flows: the physical supply chain is supported by the information flow [1], the financial supply chain by the information flow [2], and underlying information flows may take place in [1] to [4].

Improved efficiency

Over the past few decades much effort has been put into improving efficiency in the physical supply chain. This has led, for example, to reduced lead times, lower inventories, increased responsiveness and improved customer service.

Business benefits boosted by interoperability

Using automated and electronic systems, information can be processed faster and more accurately, cutting lead times. Similarly, if purchase orders are managed electronically, procurement is quicker.

Furthermore, if a company can accurately forecast purchases and sales, it will gain a competitive advantage by successfully managing its supply chain.

Improvements in financial flows in supply chains should match improvements to supply chain management. Having both financial and trade process information available electronically can: minimize human errors; reduce reconciliation time in the three-way match of purchase order, shipping receipt and invoice; and create a more tightly integrated supply chain.

However, if there would be a mismatch in information flows, resulting in, for example, delays in processing and reconciling invoices, then the “day’s sales outstanding” for accounts receivable will be higher than necessary, implying that working capital management needs to be able to deal with uncertainties.

Matching information flows in the supply chain – effective management of information flows – benefits all parties.

Interoperability

This requirement for “effective management of information flows” boils down to “interoperability”. This is defined as “the capability to run business processes seamlessly across organizational boundaries”.

Interoperability is achieved: by understanding how the business processes of different organizations can interconnect; by developing standards to support these business processes efficiently; and by specifying the semantics of messages exchanged between organizations to support these business processes in a scalable way. Standards for “(electronic) messages exchanged between the organizations to support these business processes” are developed by standardization organizations.

As a central prerequisite to establishing e-business, interoperability enables information to be presented in a consistent manner between business systems, regardless of technology, application or platform. It thus provides organizations with the ability to transfer and use information across multiple technologies and systems by creating commonality in the way that business systems share information and processes across organizational boundaries.

Figure 2 introduces (bottom to top) the basic layers of interoperability: Technical interoperability, which comprises the common methods and shared services for the communication, storage, processing and presentation of data. This includes the technical foundations for a secure environment, compatible technical standards and a common framework.

Semantic or business interoperability, which includes discovery and collaboration aspects such as workflow and decision-making transactions. This can require the alignment of business processes as well as operational synchronization of collaboration data.

Cooperating partners having compatible visions and focusing on the same things.

The appropriate synchronization of the legislation in the cooperating MS so that electronic data originating in any given MS is accorded to proper legal weight and recognition wherever it needs to be used in other MS.

Political context

The processes by which different organizations such as different public administrations collaborate to achieve their mutually beneficial, mutually agreed eGovernment service-related goals.

Legislative alignment

Ensuring that the precise meaning of exchanged information (concept, organization, services, etc.) is preserved and well-understood.

Organizational interoperability

The technical issues involved in linking computer systems and services (open interfaces, interconnection services, data integration, middleware, data presentation and exchange, accessibility and security services...).

Technical alignment

Figure 1: The relevant actors in a trade transaction, and information flows.

Figure 2: The five layers of interoperability.
What is XML?

XML stands for ‘eXtensible Markup Language’. It has been designed to structure, store and transport information (from sender to receiver), and not to display data. The aim of XML is to be self-descriptive.

The following example is a note stored as XML:

```xml
<note>
  <to>John</to>
  <from>Bob</from>
  <heading>Reminder</heading>
  <body>Don’t forget to call me!</body>
</note>
```

The note above is quite self-descriptive. It has sender and receiver information, it also has a heading and a message body. But still, this XML document does not do anything. It is just information wrapped in tags; a tag is like `<note>` (indicating a start) or `</note>` (indicating the end of an information field). Someone must write a piece of software to send, receive or display it.

XML tags are not predefined. Users must define their own tags. The design goals of XML emphasize simplicity, generality and usability over the Internet. It is a textual data format with strong support for the languages of the world. Although the design of XML focuses on documents, it is widely used for the representation of arbitrary data structures, for example in Web services.

Organizational interoperability

Generally speaking, these all need to fit in a legal and political context; in total that adds up to five layers. On each of the five layers, agreements between actors are needed for proper interaction.

In some standards

Industry standards are used at all levels—from technical to quality and from formal to informal. A distinction must be made between “use of a standard” (facilitating primary and secondary business processes) and “support of a standard” (embedded in products and services provided to buyers).

An interoperability initiative should stem from a business decision (organizational interoperability), elaborated outward into the lower and higher layers respectively. Contemporary development methods for standards for electronic messages focus on business essentials, in which translation into the actual messages used in the electronic data interchange is automated as much as possible. These development methods optimally support informal input, passed into electronic messages that actually need to be exchanged between actors. This enables their business processes to function and makes it possible to cope with evolution in the (business) interaction between actors. The format chosen for the electronic messages is usually eXtended Markup Language (XML) (see Box above).

ISO 20022

ISO 20022, Financial services – Universal financial industry message scheme, is such a development method and defines a methodology for developing financial message standards. As www.iso20022.org shows, the primary application area of messages developed in this way is indicated by [2] in Figure 1. This covers trade-supporting functions such as payments. Using matching interactions via [3] and [4] in Figure 1, and assuming sufficient detailed information present for automated systems to fulfill their roles, financial inflows and outflows can be managed better. This helps, for example, by reducing days’ sales outstanding and improving credit decisions, reducing the need for working capital so that money can be better used elsewhere.

In business, introduction of the electronic form of data interchange in business practice adds new dimensions. Here are a few examples.

ISO 20022 has been designed to enable larger, faster and more cost-efficient supply chains.

First, it should not limit the flexibility that parties require in their operation. Furthermore, exchanges of all information types need to be covered, as long as they are predefined, structured and can be processed by applications at both ends. These requirements also include the need to identify regulations and any requirement for legislative compliance which are satisfied by non-electronic message-based solutions, and would need to be met by any electronic business solution.

Second, standards developers are usually not the entities that implement them; and these, in turn, may be different from the entities that support (or use) them. Each group usually has its own drivers and interest and may be subject to different legal environments. Implementation does not necessarily always follow development automatically, and the different characteristics of the groups need to be recognized.

Finally, replacing existing paper documents on a one-for-one basis by electronic messages and then using them implies that the business processes handling them will almost certainly be the same as before. While promptly provided electronic information can bring benefits to business, making the most efficient and effective use of the electronic messages that replace paper documents requires “business process redesign”. The whole concept of change can be called the “dematerialization of business processes”.

The scenario in Figure 1 is a strong simplification. In international trade there are many actors involved, even in a single sale and delivery. They can all be grouped as schematically indicated in Figure 3. Here, traders and financial service providers can be recognized. Actors in roles such as customs, transporters and insurance have been clustered in “authorities” and “intermediaries”, in accordance with internationally adopted concepts for modelling business processes.

Developments take place in each cluster. Examples are: for financial service providers in Europe, the establishment of the Single Euro Payments Area (SEPA); and for traders, automation – electronic messages replacing paper documents. In addition, developments can be found on the interaction between clusters – an example is traders – authorities interaction, generally known as trade facilitation.

For obvious reasons all developments in the clusters, and those on the interaction between clusters, do not take place under centralized governance. Although more or less adhering to similar concepts, each cluster develops its own solutions for its own reasons, such as improving efficiency and reducing costs.

Implications of individual developments

In Figure 1, again only the most relevant actors in a trade transaction are depicted: buyer, supplier, and for each of these their respective bank. Not shown are the dozens of interactions that usually take place with authorities and intermediaries.

Generally, the development of electronic messages indicated by [1] in Figure 1 is done mainly by organizations such as GS1, OASIS UBL (Organization for the Advancement of Structured Information Standards Universal Business Language), and UN/CEFACT (United Nations Centre for Trade Facilitation and Electronic Business). In these cases the actual standard used for the electronic messages to exchange information between buyer and supplier is determined by parameters in the business sector.

The SE2 standard, for example, is heavily used in the retail sector. UBL is one of the preferred standards used to facilitate European Commission projects such as PEP-POL (public procurement online), which is used as a government-business interface in the EU. “Legacy” UN/EDIFACT (United Nations/Electronic Data Interchange For Administration, Commerce and Transport) is the international standard developed under the United Nations. An example of a message in this format is given below:

```
UNA:+7
UNH+IATB:1+E6FCP+LHP
PC+940101:0950+1'
UNH+1+PAORDERS:9311+IA'
MSG+1:45'
IPT+3+XYZCOMPANY
AVAILABILITY'
ERC+AV7:1+AMD'
IPT+3+NO MORE FLIGHTS'
ODI'
TTL+420493:1740+2030+JF
K+MIA+DLB:081+C'
PD+CC+3:Y3+8+Fl1:'
APD+74C:0:6+1+++++62'
TTL+420493:1740+2030+JF
K+MIA+DLB:081+C'
```

With XML, two significant differences are noticeable:

- There is no flexibility in the message; adding or deleting a field makes it incomprehensible by the receiving application.
- Translating it into a human understandable presentation requires detailed knowledge of the message structure and meaning of the elements.
ISO 20022 has been designed to allow for the adoption of innovative technologies, payment solutions and supply chain support functions that enable larger, faster and more cost-efficient supply chains. Recent implementations, particularly in automated payment solutions, have demonstrated major improvements in supply chain performance.

Better financial flow management in turn influences product supply chain performance. It can directly affect, for example, product availability on the shelf, on-time delivery, inventory value and the cash-to-cash cycle.

The adoption of ISO 20022 by standards developers can be measured by the increasing number of “business justifications”. These ask for the development of a certain (set of) message(s) where it can be observed that – within the cooperation agreements with other standardization organizations – the scope for application is absorbing functions from [3] and [4] as seen in Figure 1, providing ever increasing business process support.

H. How many times have you found your bills confusing, overloaded or simply inaccurate? Have you ever had problems paying, or been unclear about how to switch suppliers? Billing problems are a major cause of complaints made to utilities and utility industry ombudsmen. While the market has never fully addressed this failure itself, a new International Standard currently in development – ISO 14452, Network services billing – promises to make billing clearer, more customer friendly and better all round.

Against a background of market failure to resolve ongoing billing issues, and following related surveys, the ISO Committee on consumer policy (ISO/COPOLCO) stepped in.

ISO/COPOLCO’s working group on consumer protection in the global marketplace highlighted a need for an International Standard on this critical consumer matter. The recommendation met wide agreement, and ISO took on the task.

The new International Standard on network billing, ISO 14452, is expected to be published in the first quarter of 2012. It covers the following utility network services: electricity supply; gas supply; water; sanitation; district heating; and communications.

ISO 14452 aims to provide a market based, market sensitive way of dealing with customer concerns about billing.

The problem

Customers often experience problems such as:

- Bill shock
- Bills that are complicated, overloaded with information and confusing
- Unclear pricing
- Inaccurate bills
- Difficulties with payment methods
- Unclear information on offers and how to switch suppliers.

Billing problems occur for many reasons. These include:

- Poor pre-billing processes, for example in customer service, tariff and data management, meter reading and informing customers about billing.
• Creates and sustains a fairer, longer-term supplier-customer relationship
• Provides benchmarks for customer expectations
• Allows for the implementation of smart metering technology and the provision of improved customer information
• Facilitates innovation in billing, enabling suppliers to differentiate their services.

The solution

ISO 14452 is aimed at utility bills which include an element of metered or measured consumption. However, many of its key principles apply to all forms of billing and the standard states that suppliers should adopt its requirements even if usage is not metered or otherwise measured. Regional or national factors may require the standard to be adapted to meet prevailing cultural, social, economic, regulatory and even climatic conditions.

ISO 14452’s scope specifies minimum billing requirements for all consumption-based utility network services to domestic customers. This includes the processes required to produce the bill and address any issues after it has been sent out. It also provides guidelines for the content of the billing document or statement.

The standard applies to services which are unmetered, metered at the point of delivery, or metered remotely (for example at the supplier’s own premises). It covers any unmetered or unmeasured charges appearing on the same bill as metered or measured charges, as well as flat-rate charges.

The standard does not cover pricing, except as a requirement to provide information to customers. It applies only to billing for consumption-based utility network services, and to all bills or statements for such services in which there is an ongoing supplier-customer account relationship, regardless of the payment method used.

The scope of the standard includes: bills for metered consumption; bills where a formula is used to estimate consumption (for example, water bills based on the number of persons per household or the size of the house); and flat fees charged regardless of consumption (for example, telephony or internet bills where the tariff allows unlimited usage). It also applies to pre-payment customers where a supplier bill or account is needed for the customer to reconcile the amount paid in advance with the cost of consumption; or where the customer expects to receive a bill based on point of sale or other advertising (for example, mobile telephony and energy metering) in which codes, keys, electronic dongles or electronic cards are used to load and reload the service and to indicate what was purchased.

The standard does not cover unbilled services (mobile telephony paid for by pre-purchased SIM cards that are unmetered, for example) and unbilled services funded directly by the taxpayer.

Full coverage: pre- to post-billing

ISO 14452 sets out specific requirements for pre-billing processes; the production of the billing document; and for ensuring that issues arising after the bill has been sent are resolved to the customer’s satisfaction. Pre-billing issues covered include:

• Data standards
• Meter readings and other data used to calculate charges
• Definitions of products/services
• Provision of additional information required by customers
• Changes of a significant nature

Billing principles covered include timeliness; accuracy and reconciliation; and the bill validation process.

The bill is the prime means for the supplier to receive payment and may also be a tool for the main way for customers to view their consumption and price paid. While the standard acknowledges that bill design and layout is a matter for each supplier, it sets out a list of general principles to ensure that all bills are clear and understandable.

On the first page, fundamental information should appear prominently and include details of the supplier and customer, usage, payment and tariff; other charges; and general messages.

In addition to specifying requirements for the format and delivery of bills, the standard includes recommendations for annual statements.

Among the post-billing processes covered are billing disputes and enquiries, payment methods and processing, debt collection and helping customers who are struggling to pay their bills.

Putting customers first

The standard recognizes that effective policies and procedures are needed to identify and then manage the needs of vulnerable customers. Procedures include detailed guidance to help staff to identify vulnerable customers and ensure that special support is provided when a customer cannot understand advice given or take the necessary action.

Processes exist to ensure that customers can contact their supplier easily, make complaints and obtain appropriate redress where necessary.

In competitive utility markets it is also important that customers can easily end the contract and/or switch suppliers. The standard ensures there are no unnecessary barriers to switching and that transfers are completed within agreed timescales.

Finally, ISO 14452 also stipulates that compliance and continual improvement systems need to be developed and implemented. This is to ensure that billing procedures are regularly reviewed and updated to reflect customer feedback and external best practice.

Utilities benefit from ISO 14452 too – for a start, they should receive fewer complaints. This will reduce their operating costs, improve debt recovery, and increase customer satisfaction and loyalty. In addition, by using a common international Standard and billing practices, multinational utility companies can reduce their costs.

ISO 14452 helps utilities ensure that they provide their customers with clearly comprehensible, accurate, timely and complete bills, giving them enough information to verify their charges. In this respect the standard:

• Defines the minimum requirements for billing and payment collection
• Prevents or reduces complaints by tackling key issues
• Ensures that suppliers assist customers by billing appropriately and consistently

Restoring confidence

Clearer bills help customers verify the accuracy of charges and make them more confident about their bills and their supplier’s performance. In competitive markets, this also helps customers to choose the best and most suitable supplier.

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A framework for developing service standards

by Anne Ferguson

Good customer service matters to consumers in the vast services sector, which dominates the global economy. Standardization is at last increasing its activity in this key area and can gain from using ISO/IEC Guide 76:2008, Development of service standards – Recommendations for addressing consumer issues, which helps by addressing the consumer issues faced during service standards development.

According to the World Trade Organization, services are the fastest growing part of the global economy and account for two-thirds of world output, a third of world employment and nearly 20% of world trade.

The European Commission (EC) states that services account for some three-quarters of global GDP, and 50% of GDP in developing countries. Similarly, high figures apply around the world: in Japan, for example, almost 70% of GDP comes from the services sector. Of course within these totals, Internet-based e-services are increasingly important.

Creating a new guide

Despite the significant and still-growing importance of services, there have been a few false dawns in international service standardization. One was back in 1995, when ISO’s Committee on consumer matters (ISO/COPOLCO), considered the value of standards in a workshop called “Services, a challenge for international standardization”.

In 2001, another ISO/COPOLCO workshop considered “Improved services – how can standards help?”. It resolved to establish a working group of members, led by the British Standards Institution (BSI), to identify basic principles for consumer protection when developing service standards. This led to the aim of developing a guide that could provide a checklist leading to better standards. This would meet market needs and society’s expectations, therefore increasing consumer confidence. If appropriately used, it was felt that the guide could help to:

- Ensure a consistent approach between standards in different service areas, incorporating best practice (while recognizing that this would not necessarily ensure high-quality service or compliancy national legislation)
- Facilitate comparisons between services in different countries (but not to determine a uniform level of service)
- Improve attitudes to all consumers, including those disadvantaged through age, disability or poverty.

Other ISO/COPOLCO plans to improve customer satisfaction have led to the development of the ISO suite of complaints management standards (ISO 10001, ISO 10002 and ISO 10003).

Following the distribution of a questionnaire on service needs and the guide framework to ISO/COPOLCO members, responses were received from around the world. Views were reflected in a draft document discussed and refined at subsequent meetings.

Enter ISO/IEC Guide 76

The development of ISO/IEC Guide 76 was not progressing as quickly as hoped, due inevitably to the difficulty of grasping a new and, for some, demanding concept and the limited frequency of working group meetings, held at most twice a year. During this time BSI led the project, which also had strong input from around the world and particularly from Europe, Japan and North America. In January 2006, an issue of the then ISO Focus was devoted to services standardization, proclaiming on the cover, “Service sectors turn to standards”.

In the same year, a draft Guide 76 enquiry was issued and the draft document tested at a training session on the theme “Policy makers, consumers and standards bodies: working together to improve consumer services”, which took place alongside the ISO/COPOLCO events in Malaysia. In this session, standards-writers and consumer representatives attempted to use the guide to begin drafting sections of possible service standards on topics as diverse as tattoo parlours and the provision of water. A number of experts made valuable contributions. Comments from these “user tests” were incorporated in the final version. Following translation, ISO/IEC Guide 76:2008, Development of service standards – Recommendations for addressing consumer issues, was published in 2008.

Guide 76 provides an introduction to how key consumer principles relate to standards development. These principles are safety, information, choice, the right to be heard, access, fairness, quality, redress, environmental issues and compliance with laws and regulations. The guide facilitates a strategic approach to improving services in the public or private sector. It can be applied whether or not a formal contract is entered into, whether the services are delivered in person or online, and whether they are provided by large or small organizations.

Consumer questions

Whether a consumer is buying insurance or finding a new hairdresser, several questions may come to mind. These include: “Do I trust the service provider?”, “Have I got enough information to choose between the services on offer?”, “Do I understand the contract (particularly if there isn’t one written down)?” and “What can I do if I don’t get the service I expect?”.

The guide provides questions related to all stages of service delivery, from first thinking about the service, through engagement or purchase and service delivery, to after-sales or post-engagement. It then identifies the service elements, such as communication, personnel, billing or safeguards, to which the questions relate. Within each service element, there are related topic areas. For example, the service element “contract” includes the linked topics of “clarity and transparency”, “objectivity and fairness” and “format”. A full description is given for each topical area.

For ease of use, checklists are then provided for all topic areas within service elements. These are a quick way for service standard developers to establish whether their work covers all relevant topics. They also benefit organizations developing a new service or reviewing an existing one.

Three examples of applying the guide are given in an annex: a hotel, hairdresser and insurance provider. The examples were chosen to represent various kinds of organizations and show how different service elements can assume greater or lesser significance in different service sectors.

European guide

Parallel to work on an international level, there has also been increased regional activity in relation to service standardization. In Europe, two mandates from the EC and European Free Trade Area (EFTA) (M/340 or M/120) were given to the BSI to develop a European guide. A draft Guide 76 was presented at a workshop on “Service sector policy and standards” which was held in Brussels in March 2012.

Consumers

speak out!

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and M/371) to the European standards bodies CEN (European Committee for Standardization), CENELEC (European Committee for Electrotechnical Standardization) and ETSI (European Telecommunications Standards Institute) requested the delivery of standardization work to support the EU’s internal market for services.

Everyone thinking about developing service standards should start by consulting ISO/IEC Guide 76.

The second mandate led to CHESSS, CEN’s horizontal European service standardization strategy, an 18-month EC and EFTA funded project to determine the feasibility of generic service standardization in Europe. One recommendation from this final report was the production of a guidance document for the development of service standards prepared by CEN BT/163 and led by AENOR (Asociación Española de Normalización y Certificación). Recognizing the existence and value of ISO/IEC Guide 76, CEN Guide 15, Guidance document for the development of service standards, published in February 2012, will complement the ISO/IEC guide.

The new CEN Guide 15 has been welcomed by ANEC, the European voice of consumers in standardization, and a liaison organization to ISO/COPOLCO. Written for standards developers and covering all kinds of service, it acknowledges the many relevant ISO guides, particularly ISO/IEC Guide 76, standards, and the ISO concept database. It also mentions the necessity to take into account consumer needs.

Both the ISO/IEC and CEN guides provide service delivery diagrams and outline the areas which a standard should cover. However, whereas the focus of Guide 76 is business-to-consumer (B2C) service delivery with the main aim being to set out the consumer issues for consideration, the CEN Guide 15 recognizes the burgeoning array of business-to-business standards and the broader needs of all stakeholders.

Principal additional areas of the CEN Guide 15 are: guidance on considerations before developing a new service standard (pre-normative phase) which can be used to help identify whether there is a need for standardization; and the relationship with other standards, with an explanation of the difference between management system standards and service standards, and how to avoid duplication.

Also, while assessment of services and the relationship with legal requirements are addressed only briefly in ISO/IEC Guide 76, CEN Guide 15 covers these in more detail.

Next steps

To ensure high quality, customer-focused service standards, I recommend that everyone thinking about developing service standards should start by consulting ISO/IEC Guide 76.

Ideally, a future revision of ISO/IEC Guide 76 will incorporate the additional elements provided by CEN, but without losing the emphasis on consumer needs when delivering B2C services. As another goal, it would be good to see this harmonized guide adopted across Europe.

About the author

Anne Ferguson manages the Consumer & Public Interest (CPI) unit at BSI. This supports the BSI CPI network of volunteers and consumer organizations which participate in standardization. She was convener of the ISO/COPOLCO working group which developed ISO/IEC Guide 76 in its latter stages. At that time, she was also a consumer representative in the BSI Network, involved in developing customer satisfaction standards, while working as a freelance consultant in consumer affairs.

Servicing ICT

From information security to service management

by Edward Humphreys

A broad range of ISO/IEC (International Electrotechnical Commission) standards are addressing key issues faced by the world’s fast-growing information and communications technology (ICT) industry. These include preventing cyber attacks, ensuring information security and maintaining business continuity.

A common business tool in most organizations, ICT serves many business purposes and is used in a wide range of business applications and processes. Their use requires associated services provided within an organization, for example through an internal ICT services department, or through a third party.

Up and running

Over recent years, cloud computing has become a fashionable term for the delivery of services such as applications as a service, software as a service and infrastructure as service.

An example is data storage in a third-party cloud server. This can reduce an organization’s costs as it does not need to manage and maintain its own server. There is a possible downside too: can the cloud provider manage the ICT and data storage service sufficiently, securely and effectively?

This raises issues of how to provide effective ICT service management and information security. For example, if the cloud service provider is in one country and the provider of personal data is in another, how does the cloud provider protect its customers? In addition, how does the cloud provider conform to national laws when its clients are geographically dispersed around the world?

ICT services management also has a key role in the delivery of ICT services. If these are implemented properly it can increase efficiency and cost-effectiveness, increase flexibility in the use of ICT resources and applications, reduce response times and improve quality of service.

To achieve these benefits, information security plays a key role in ensuring effective service delivery.

In the case of critical national infrastructure, service provision needs to be carefully considered. Appropriate solutions and controls are necessary for ICT service management, ICT readiness and preparedness for dealing with disasters and continuity issues, incident handling and information security.

To guarantee delivery, critical infrastructure requires many services to be able to work together. Examples include medical, energy, utility and emergency services. Most of these rely on ICT-based systems to keep services up and running. In cyber attacks or other disasters, it is essential to be able to recover ICT systems to restore services quickly. Before an incident occurs...
Trade in services is at present the fastest-growing area of international commerce, creating new jobs and extending activities in areas running from the IT sector to tourist areas, each with its gamut of “sub-services” such as car hire and hotels, camping and accounting, among many others.
Security management system standard ISO/IEC 27001, which provides a full range of solutions to assist service providers with protecting their systems. One of the important aspects of system protection is to understand the risks the service provider faces. A risk-based process, ISO/IEC 27001, requires the service provider to undertake a risk assessment to help it decide what information security controls should be implemented to ensure service availability and continuity. ISO/IEC 27005 provides guidance on risk management for service providers that implement ISO/IEC 27001. Given the importance of information security to the provision of ICT services, ISO/IEC 27013 is being developed to consider the integrated implementation of ISO/IEC 27001 and ISO/IEC 20000.

The "other" business options

Additional standards in the ISO/IEC 27000 series provide guidance and service and application specific controls to support service providers. For example, ISO/IEC 27031 applies to any organization developing its ICT readiness to deal with incidents or threats, therefore ensuring business continuity. ISO/IEC 27035 provides organizations with guidance on information security incident management. This standard describes a basic set of documents, processes and routines. It also gives guidance to external organizations supplying information security incident management services.

ISO/IEC 24762 gives guidelines on the provision of ICT disaster recovery (ICT DR) services as part of business continuity management. This applies to both in-house and outsourced ICT DR service providers of physical facilities and services. In cloud computing, ISO/IEC JTC 1/SC 27, IT Security techniques, is developing two new standards: ISO/IEC 27017 covers cloud-specific information security controls; and ISO/IEC 27018 considers controls for personal data. Both of these standards are being designed and developed to work alongside ISO/IEC 27001.

As the preceding paragraphs suggest, various standards have been developed, or are being developed, to cover the requirements of information security and ICT service management. This portfolio of standards gives individuals, governments and businesses the security and peace of mind they need.

About the author

Prof. Edward Humphreys is chair of the working group responsible for the development and maintenance of the ISO/IEC 27000 family of standards. Involved in information security for 37 years, he has many achievements and awards to his name.

ISO/TC 232 is intended to create a suitable framework for preparing standards in education and training. The term “learning services” is used instead of “educational services” to encourage a focus on the learner and the results of the process, and to emphasize the full range of options available for delivering learning services. This includes the learning service provider (LSP) enabling and facilitating learning beyond teaching.

ISO/TC 232 is open to standards proposals from other areas of learning that share the concern of encouraging cooperation in quality assurance. Here, there is emphasis on exchanging models and methods and establishing common criteria and principles.

The core elements are: ensuring the quality and effectiveness of the education or training; improving knowledge transfer; and increasing the transparency and comparability of the range of learning services provided.

Standards are designed to help LSPs improve their ability to consistently provide quality services, improve organizational effectiveness and reduce costs. For stakeholders, the benefits are worldwide comparability, enhanced transparency of learning services offered and higher quality. The standards will help to overcome the huge variety of national service and management standards in learning services.

ISO/TC 232 is focused on the following main objectives and priorities:

- Enhancing service quality in the field of learning
- Enhancing the comparability and transparency of learning services
- Optimizing LSPs’ business processes
- Maximizing LSPs’ organizational effectiveness
- Protecting learners’ rights
- Reducing the possibility of discrimination
- Technical trade barriers in transnational learning services caused by using national standards.

Introducing ISO 29990

ISO/TC 232’s main achievement is ISO 29990:2010, Learning services for non-formal education and training. Basic requirements for education and training, including learning, learning results and improvement, the learning service and the competence of the LSP.
This International Standard aims to create a general quality model for language services. It also acts as a common reference for LSPs and their customers for planning, developing and implementing education and further education, as well as promoting development.

The standard follows a linear structure to ensure its implementation leads to continual improvement.

The standard’s ultimate aim is assuring the implementation of high-quality tutorial programmes and processes. When designing learning services, suitable methods and instruments have to be found and the specific responsibilities of the learner and teacher must be defined. It is also important to identify instruments for the support and supervision of the learning transfer. The curriculum must take into account modern learning ideas, methods for the promotion of individual learning processes and flexible learning forms.

ISO 29990 characteristics
ISO 29990’s core processes are oriented towards learning services.

The standard considers the quality of the services that are provided by the LSP by focusing on the inter-dependent processes of recognizing, understanding, leading and steering, and contributes to LSP effectiveness in achieving goals.

Participation is an essential, integrating component. It applies firstly to staff and associates, as well as to other LSP personnel. It includes active participation by learners and other interested parties.

Monitoring is extended with evaluations of the learning, learning services and LSP competencies (through the use of feedback mechanisms).

The transmission, retention, development and evaluation of staff and associates’ competencies, as well as other LSP personnel competencies, are a central requirement.

The standard offers sufficient flexibility for adjustments based on the LSP’s concrete needs and additional quality measures or benchmarks.

This is used to accredit language course providers that meet the organisation’s standards in audits. These audits take place every four years.

Since the establishment of ISO/TC 232, EAQUALS has enjoyed category A liaison status. Its members took a lively interest in the development of ISO 29990 and supported the Chinese proposal to create a standard for language LSPs, ISO 29991-1.

It is expected that, when it is published, some EAQUALS members will opt for certification against ISO 29991-1, in addition to accreditation by EAQUALS.

From the start, EAAL (European Association for Language Assessment - www.eaal.org), with members from over 20 European countries, and the German FDL (Forum Distance-Learning - www.forum-distance-learning.de), with 77 members, have been involved in the committee’s work. To support the implementation of ISO 29990, EAAL has developed a conversion and application manual for its members.

In Germany five large FDL members and providers of distance learning were among the first ISO 29990-certified enterprises. Between 15 and 20 intend to follow in 2012.

IFCES (International Forum for the Certification of Educational Services - www.ifces.org) is an international alliance of associations and other entities involved in quality assurance, research and professional development in education and training. It was founded by nine organizations of different kinds in Asia, Australia and the Americas, which all participated actively in the work of ISO/TC 232.

IFCES plans to develop the expertise and tools for high-quality advisory and audit services for LSPs seeking certification against education-related standards such as ISO 29990.

Substantial support
A number of national and international governmental institutions and organizations provide significant support.

The European Union supports ISO/TC 232’s work and the application of its results in a couple of projects. Within the Lifelong Learning Programme, the Transnational Quality project and QuiS - Quality guidance system for the provision of learning services for non-formal education in Europe (www.quis-european.eu). Through these projects, ISO/TC 232 experiences complement the work of QALL (Quality Assurance in Lifelong Learning – www.qall.eu). This aims to highlight good practice in quality assurance in vocational education and training and adult education, and to take forward recommendations in support of Europe-wide cooperation.

The EU-funded multilingual Web-based service supporting tool PROMIS will provide an application to support the implementation and administration of ISO 29990. This will be carried out in cooperation with DIN (German institute for standardization) publishing house Beuth and R&K, the German centre for productivity and innovation.

Beuth has already published a DIN document with guidelines for the implementation of ISO 29990. It has also organized a DIN-Academy conference with R&K. Participants from eight countries exchanged their experiences applying ISO 29990 in the year since its publication.

In Germany, the federal governments of Berlin and Brandenburg have supported ISO/TC 232’s work from the start. This has been done on a national and international level with the funding of several projects, organization of conferences and provision of advice.

The intQuaVET (International Quality in Vocational Education and Training) project is supported by the Berlin senate and the Ministry of Labour, Social Affairs, Women and Family of Brandenburg. The objective is to assist LSPs with ISO 29990 implementation through consultancy, training and developing suitable instruments to apply this standard.

In Japan, JAMOTE (Japan Association for Management of Training and Education), an association of learning service providers, associations, manages the ISO/TC 232 Japanese mirror committee, and it has been actively involved in the development and promotion of ISO 29990. One example of JAMOTE’s activities is the development of the Japanese certification scheme for ISO 29990 with the collaboration of learning service provider associations, relevant government ministries, and business groups in Japan. The scheme has already been used for ISO 29990 certification in Japan, and it has been affecting relevant government ministries’ policies and measures in the field of education and training.

In India, NABET (National Accreditation Board for Education and Training), a board of the Quality Council of India, accredits auditors in conformity assessment, quality schools governance, vocational training and skills certification.

NABET has aligned its accreditation mechanism to cover ISO/IEC 17024 and ISO 29990. NABET Chairmain Vijay K. Thadani has said: “We believe in leveraging these existing internationally accepted standards and customizing them for our local needs, versus re-inventing the wheel.” (Quality India, a QCI Publication, September 2011, p17).

About the author

Dr. Thomas Rau is Chair of ISO/TC 232, Learning services for non-formal education and training, and DIN task force educational services. He is project manager in the German network of RKW Centres for Productivity and Innovation. Dr. Rau was worked as a consultant and trainer for many years. He holds a diploma in political science and a PhD in international economic relations.
Welcome !

Welcome to ISO Focus, a newsletter that provides information about the latest developments in ISO. In this issue, we will be discussing the ISO/TC 228 committee, which focuses on tourism-related standards.

ISO/TC 228 in figures

Established in 2005, ISO/TC 228, Tourism and related services, was mandated to standardize terminology and specifications of services offered by tourism service providers, including related activities, tourist destinations and the requirements for facilities and equipment used by them, so as to provide tourism buyers, providers and consumers with criteria for making informed decisions. Here are some figures:

- Six international meetings with participants from more than 20 countries each.
- 10 working groups.
- 54 participant members.
- 16 observer members.
- 19 organizations in liaison.
- 11 International Standards published.
- 19 active projects.

2011 saw a growth of tourist arrivals by over 4% according to the UN World Tourism Organization (UNWTO) – an impressive figure given the global economic recession, major political changes in the Middle East and North Africa as well as natural disasters including the tsunami in Japan. The sector is directly responsible for 5% of the world’s GDP, 6% of total exports, and employs one out of every 12 people in developing and developed countries alike. International arrivals are on track to reach the one billion mark milestone in 2012, an encouraging development at a time of economic challenges when job creation is urgently needed. International Standards can boost confidence in the industry, to further stimulate growth.

Transparency, quality and promotion of tourist activities were the goals behind the creation of ISO technical committee ISO/TC 228, Tourism and related services. The committee has published, and is working on developing, standards in areas like scuba diving and snorkelling (training, service providers, excursions), terminology for hotels and other types of tourist accommodation, health tourism, tourist information and reception services, beaches, natural protected areas, adventure tourism, yacht harbours and industrial tourism, among others.

ISO/TC 228 works to develop International Standards that truly respond to market needs, are practical, target-oriented and feasible. Its documents do not impose unnecessary demands on the tourism industry and always respect its diversity. It aims to firmly support tourism, and not compromise legitimate or appropriate activity by:

- Being a tool for the tourism industry to better commercialize its products, services and offers
- Assisting the management of the tourism industry regardless of the status of the enterprise
- Help developing countries to promote themselves
- Transfer knowledge and best practice
- Improve customer satisfaction, attract and reassure tourists.

All these factors together contribute to a general and common benefit, the stimulation of the global tourism market.

Weathering the storm

However, the road to progress is often bumpy, and the tourism industry presents some very unique challenges. Often a highly developed industry in many countries, with no history of formal international standardization, there are understandable concerns (i.e. standards could restrict and control business interests in an unacceptable manner).

Throughout its existence, misgivings have been expressed regarding the ISO/TC 228 scope in certain topics – the most important concerns relate to accommodation, catering, travel agents and tour operators. Although the committee’s scope does not exclude the development of standards in those fields and important support can be found from some world regions, there is also enough opposition from others as to consider it not appropriate to tackle the subject at this time (though there have been specific proposals, they have finally been withdrawn).

However, one standard is being developed for ‘Environmentally friendly accommodation establishments’. For the very particular possibility to develop an international accommodation classification system, there has so far been unanimous agreement not to enter into the subject.

ISO/TC 228 aims to increase consumer confidence in the tourism market.

Some argue that cultural and geographical differences are intrinsic to tourism products and activities and hence desirable, since tourist expectations will vary according to the destination and type of activity. These diverse characteristics serve to make the destination and the experiences unique and attractive.

Others, however, are of the opinion that international standardization responds to the needs of trade, promotion, marketing, communication, consumer protection, hygiene, accessibility, including design for all, transparency, management and technical specifications and all the related terminology.

As part of ISO’s consensus-based standards development process, ISO/TC 228 has acknowledged all concerns, and only develops those standards that meet market requirements and tourism customer needs. Organizations in liaison, in turn, are well placed to provide technical advice based on years of experience and a thorough knowledge of their respective industries.

The aim is to align the ISO work programme with expressed business environment needs and trends and to allow ISO/TC 228 to prioritize among different projects, to identify the benefits expected from the availability of International Standards, and to ensure adequate resources for projects throughout their development.

by Elena Ordozgoiti
Meeting today's industry needs
by Eduardo Moreno

Tourism is undergoing a transformation process that is significantly affecting the industry's traditional business model. For instance, while two-thirds of tourism's economic activity was highly concentrated by tourism professionals whose aim is the promotion the creation of a European common brand.

ISO standards strive to be market oriented and respond to common interests.

It stated the goal to: Develop a European Quality Tourism brand, based on existing national experience to increase consumer confidence and quality in tourism products and reward vigorous efforts by tourism professionals whose aim is the quality of tourism services for customer satisfaction.

Moving forward
It will take time, effort and cooperation to promote the international element to an industry that aims, by its very nature, to sell its "difference". However, as discussed above, the intention is not to destroy this otherness, but to enhance it by facilitating the cultural exchanges that tourism is all about. International Standards might actually incite tourists to consider new, exciting and unfamiliar destinations they hesitate to go to today, by making processes simpler, easier and more enjoyable.

Not just sitting pretty
The latest developments on standards were discussed at the 11th plenary meeting of the technical committee ISO/TC 217, Tourism and related services, and its working groups for developing standards in the field.

Progress was made on different items such as microbiological limits for cosmetics, analytical methods, sun protection test methods and the Guidelines on technical definitions and criteria for natural and organic cosmetic ingredients and products.

The meeting was hosted by SNZ Standards New Zealand, ISO member for New Zealand, and CFTA, the New Zealand Cosmetic, Toiletry, Perfumery Association and took place in November 2011 in Auckland, New Zealand.

Participants at the ISO/TC 217 plenary in Auckland, New Zealand.

Happy birthday, JTC 1!
Just in time to celebrate JTC 1’s 25th anniversary, a new ISO brochure focuses on The force multiplier for ICT innovation.

It concentrates on the work developed by the joint technical committee of ISO and IEC (International Electrotechnical Commission), ISO/IEC JTC 1, Information technology.

The force multiplier for ICT innovation explains how ICT standards developed by ISO/IEC JTC 1 are absolutely essential to the interoperability of different component parts and products from different manufacturers. Individuals, businesses and governments can all benefit from ICT International Standards.

The brochure covers five examples of the newest innovative and interoperable ICT solutions under the responsibility of ISO/IEC JTC 1 that are offering huge benefits to ICT companies and customers alike:

- Smart cars
- Bar codes and RFID
- Information security
- Biometrics
- Cloud computing

It describes new developments and the future direction of the joint technical committee’s work and also addresses JTC 1’s work on issues of accessibility.

Noisy seas
With the aim of quantifying noise in the world’s oceans and other waterways, and establishing appropriate standards for the generation, transmission, and reception of underwater sound, ISO has formed a new subcommittee, SC 3, within ISO/TC 43, Acoustics, devoted to underwater acoustics.

A combination of factors contribute to making the seas noisy places: commercial shipping, noise from ships, military ships and submarines, air guns used for oceanographic research and minerals exploration, water sports, active sonar, acoustic communications, offshore alternative energy sources, and marine construction projects, along with natural and biological sources.

Governments, industry, environmental organizations as well as concerned scientists and engineers are struggling to understand the impacts that this noise may have on marine ecology, marine animals, oceanographic research, underwater biological and anthropogenic acoustic communications, and underwater surveillance of major waterways and ports for protection from potentially catastrophic natural and/or terrorist events. These efforts have revealed that there is a need to standardize the methods of measurement and assessment of underwater sound generated by various sources, as well as its propagation and reception by transducers and biological organisms.

SC 3’s scope will focus on methods of measurement and assessment of the generation, propagation and reception of underwater sound and its reflection and scattering from the seabed, sea surface and biological organisms, and will include all aspects of the effects of underwater sound on the underwater environment, humans and aquatic life.

Mastering project management
Progress on the development of ISO 21500, Guidance on project management, took a giant leap forward at a recently concluded meeting in Paris, France. As with any international committee process, the final outcome is a melding of different concepts and perspectives, and the journey was as important as the initial destination. ISO 21500 is expected to be published late 2012.

Publishing ISO 21500 is only the start of a process to develop a family of portfolio, programme and project management standards. A new ISO technical committee ISO/TC 258, Project, programme and portfolio management, has been established with a mission to create a useful and functional set of integrated standards to help improve project management worldwide. This development will be lengthy and will seek to meet the needs of organizations of all sizes.

To start moving forward on the right track, work has already started within ISO/TC 258 to develop consensus on the overall framework that defines project, programme and portfolio management. Because of the wide diversity of approaches, consensus is needed at both the conceptual level – what the ideas actually are – and then at the semantic level, what do the words describing the ideas precisely mean?

Within the boundaries created by this emerging framework, the defining architecture will need to be developed and agreed, including understanding how the different components interact and support each other.

The case for standards
ISO standards strive to be market oriented and respond to common interests. They will only progress if balanced and strong support from stakeholders is present. Their implementation should enhance rather than blur individual business identity, innovation and local taste.

There are already cases of existing business models in the tourism market involving shared standards for companies offering the same products. These have been shown, nevertheless, to promote competition by helping establishments differentiate themselves by providing the best attention and experiences to clients.

Europe is no stranger. The 2010 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions

About the author
Elena Ordugoiti, is Head of the Services Unit of AENOR, the Spanish national standards and certification body. She is also Secretary of ISO/TC 228, Tourism and related services.

Entitled, Europe, the world’s No 1 tourist destination, a new political framework for tourism in Europe, promoted the creation of a European common brand.

ISO 50001 “on fire”
Energy management standard goes global

Since publication of ISO 50001 last year, implementation and certification to ISO’s new energy management standard is gaining pace around the world. Statistics to the end of January 2012 (compiled by Reinhard Peglau, Senior Scientific Officer on Environmental Management at the German Federal Environment Agency), indicated that about 100 organizations in 26 countries had already achieved certification, and are reaping the benefits in increased energy efficiency, reduced costs and improved energy performance.

ISO 50001:2011, Energy management systems – Requirements with guidance for use, is a new voluntary International Standard that establishes a framework for large and small industrial plants and commercial, institutional and government facilities to improve the way they manage energy. Improved energy performance can provide rapid benefits for an organization by maximizing the use of its energy resources and energy-related assets, thus reducing both energy cost and consumption.

But is ISO 50001 really living up to the bold claims made for it? ISO Focus+ decided to find out by asking four early ISO 50001 adopters to report on the measurable effects of ISO 50001 implementation. The organizations were selected from four very different sectors – a drinks manufacturer, a shipping line, a hotel, and a university campus – to ascertain if all were achieving energy saving benefits (see also, “Early ISO 50001 adopters report major gains through energy management standard”, ISO Focus+, October 2011).

Coca-Cola Enterprises – United Kingdom

Coca-Cola Enterprises Ltd. of Wakefield, England, Europe’s largest drinks manufacturing plant, is thought to be the first company in the food and drinks sector to achieve ISO 50001 certification. The accomplishment forms part of the US parent company’s plans to make the Wakefield plant one of the most efficient in the world. Since 2007, Coca-Cola has invested GBP 51 million in improving its operations at Wakefield, which produces 6,000 cans of soft drinks every minute. The plant has cut water consumption by 10% and energy use by 16.5%, and has implemented ISO 50001 in its bid to further Coca-Cola’s ambition to become a low-carbon business.

ISO Focus+ asked Ian Johnson, Operations Director at Coca-Cola Enterprises, to comment:

ISO Focus+ : What difference do you expect ISO 50001 implementation and certification to make to Coca-Cola?

Ian Johnson: Coca-Cola Enterprises is proud to be the first company in the global food and beverage industry to be officially recognized for its energy management practices, and believes the certification will help us drive forward with new efficiencies and cut our carbon footprint and costs even further. We now have a structured approach to identify opportunities to improve, and then a formal management review to follow through on actions and record success.

ISO Focus+: Can you outline some of the energy saving measures and initiatives you are implementing to meet ISO 50001 requirements?

Ian Johnson: We currently have several energy initiatives in place, including LED lighting, bottle blowing oven optimization, and air recovery from our compressed air systems. The standard focuses on energy consumption, but we use the same approach for our water consumption. Various initiatives have helped to cut energy consumption at the site. These include:

• Introducing natural light to our lines where possible
• Filling cans and bottles at more ambient temperatures to cut energy used by chillers
• Installing a real time monitoring system to measure how much energy and water is being used, where, when and under what circumstances.

Coca-Cola’s ISO 50001 certified facility in Wakefield, England, Europe’s largest drinks manufacturing plant.
ISO Focus+: Can you already comment on the benefits of implementation?

Ian Johnson: The benefits we have seen so far are around the focus it brings to energy saving in the business, and the systematic approach that must be followed. This helps us to achieve continual improvement of energy performance, including energy efficiency, energy use and consumption. In addition, there is a financial benefit for the business given the current high prices of energy.

A financial benefit for the business.

Going for ISO 50001 certification provides a point of focus and galvanizes the people involved to identify and deliver significant improvements.

Northern Marine Management – United Kingdom/USA

In late 2011, Northern Marine Management Ltd (UK) and Northern Marine Management LLC (USA) (NMM), part of the Stena Sphere Group, reportedly became the first shipping company in the world to achieve ISO 50001 certification. The organization manages 57 vessels, including the Stena tanker and gas carrier fleet, and vessels for other blue-chip ship owners.

ISO Focus+ asked Philip Fullerton, NMM’s Technical Director, to comment.

ISO Focus+: What difference do you expect ISO 50001 implementation and certification to make to NMM?

Philip Fullerton:ISO 50001 certification is a way point in assessing all the processes and projects we have completed over the last six years to measure, trend and reduce fuel consumption on board our whole fleet of technically managed vessels. The ability to apply and successfully pass the ISO 50001 certification audit allows us to demonstrate that we have sound practices and procedures to allow optimization of energy supply for the fleet.

ISO Focus+: Can you outline some of the energy saving measures and initiatives you are implementing to meet ISO 50001 requirements?

Philip Fullerton: Initially we focused on energy management processes on board the vessels to achieve a baseline for achieving optimal performance prior to investing in technical enhancements. The priority was to develop a fleet-wide energy management reporting tool so we could achieve a consistent level of accurate reporting. We believe that if you cannot measure fuel consumption you cannot manage it. Establishing the baseline was the backbone of the project to show how far away from the optimum we were operating. Raising awareness among the ship’s officers is the most important controllable factor. If voyage management is not executed properly then the additional bunker consumption is significant. Commercial and environmental impacts are huge. We had an objective to reduce fuel consumption by 5% and this was achieved over a two-year period. Since the objective was met we have continued to refine the savings, and with ISO 50001 a more structured approach can be taken.

ISO Focus+: Can you already comment on the benefits of implementation?

Philip Fullerton: The main benefit is external verification of progress on the steps we have taken to manage the energy consumption on the managed fleet. This also benefits us by refining our structured approach to an International Standard, which can later be used for benchmarking.

Shipping receives a huge amount of annual audits, but as we were the first shipping company to gain ISO 50001 certification there was no precedent for the audit programme, so no stone was left unturned. This meant that even experienced auditors were surprised that, while the implementation process was clear, the audit process was so stringent.

Heritance Ahungalla Hotel – Sri Lanka

The Heritance Ahungalla, described as Sri Lanka’s leading five-star resort, recently became the first hotel in the country to achieve ISO 50001 certification. The decision to implement the energy management standard was taken by owner Aitken Spence Hotel Management as a tool to reduce energy consumption, particularly in view of ever-increasing costs and energy supply limitations in Sri Lanka.

By implementing ISO 50001, the hotel is now able to effectively manage energy consumption without compromising guest comfort, and expects to meet current and future energy efficiency targets required by green house gas emissions reduction legislation.

ISO Focus+: asked Refhan Razeen, General Manager of the Heritance Ahungalla, to comment:

ISO Focus+: What difference do you expect ISO 50001 implementation and certification to make to the hotel?

Refhan Razeen: We expect to reduce energy consumption by 8% per occupied room compared to last year’s consumption.

ISO Focus+: Can you outline some of the energy saving measures and initiatives you are implementing to meet ISO 50001 requirements?

Refhan Razeen: We have a central air conditioning system divided into five hotel sections A to E. During low occupancy, rooms are allocated in such a way that air conditioning can be switched off section by section. For example, if there are only 59 rooms in occupancy at a given time, the front desk will make sure that those rooms are allocated to section A. Since the four other sections are not used, significant energy can be saved by the hotel for each day they remain unoccupied. However, if a guest requests a room in another section, we have no option but to switch power back on to that section since it is our duty to cater to customer needs first.

Additional energy saving incentives include:

• Replacing all incandescent light bulbs with energy saving bulbs
• Creating staff awareness
• Establishing energy efficient operating procedures for significant energy-consuming machines and equipment
• Reducing cold room opening hours
• Operating laundry machines only when fully loaded
• Operating kitchen pastry-mixer machines at off-peak hours only
• Implementing proper preventative maintenance schedules for all equipment
• Cleaning chiller condensers periodically
• Cleaning machine filters regularly.

ISO Focus+: Can you already comment on the benefits of implementation?

Refhan Razeen: By setting a target to reduce the energy bill by 8%, the bottom line expenses will be reduced too. During November 2011 we achieved a considerable reduction in the energy bill. Reducing operating costs during low occupancy periods also helps the hotel immensely. By practicing energy saving thoroughly and conscientiously we not only save money, but also contribute to the national grid in a very positive way.

Also, by regular training and seminars on energy saving we have managed to educate our staff to a level where they are now conscious of energy consumption. Leaflets on energy saving methods, which can also be applied at home, have been distributed to every employee.

Heritance Ahungalla.

(left to right) Malin Hapugoda, Managing Director and Susith Jayawickreme, Deputy Managing Director of Aitken Spence Hotel Management, watch Dr. Sri Lal de Silva, Chairman of Quality International Certification Services (QICS), light the traditional Sri Lankan oil lamp to signify the opening of the ISO 50001 certification award ceremony.
University College Cork – Ireland

University College Cork (UCC) claims to be the first university worldwide and the first public sector body in Ireland to achieve ISO 50001 certification. Aided by ISO 50001 implementation software (Enertis) that covered significant energy users, energy saving opportunities, energy actions and planning, corrective actions and audit management, UCC implemented its energy management programme in just four months.

While universities may not immediately spring to mind in relation to energy management, they are ideal candidates for ISO 50001 certification, says UCC. A university campus typically comprises a vast amount of building stock, and an energy bill that makes up a large portion of its running costs.

ISO Focus+ asked Maurice Ahern, Energy and Telecoms Manager for UCC, to comment:

ISO Focus+: What difference do you expect ISO 50001 implementation and certification to make to the university?

Maurice Ahern: It has increased the visibility of our energy management activities among all staff and students. We have been actively implementing energy improvements for over 20 years but now our efforts are receiving a much higher profile. ISO 50001 certification has given us independent external verification of our good work. Being a world-famous university has facilitated raising our profile externally. This increased profile is allowing us to increase the support for our efforts from our senior management.

ISO Focus+: Can you outline some of the energy saving measures and initiatives you are implementing to meet ISO 50001 requirements?

Maurice Ahern: Every year we have been adding energy saving projects, many utilizing advanced technologies. The completion rate of these projects has not changed as a result of ISO 50001 implementation. However, as a result of the energy review process of our energy management system, we have identified many opportunities to improve operational control of our equipment and systems. Natural gas for building heating is our largest energy use and its consumption has fallen by 5.2% in the past six months, coinciding with the period of preparing for certification. Examples of ongoing energy initiatives include:

- Installing thermal solar heating in the O’Rahilly building
- Upgrading lighting in all Boole Lecture Theatres and in the Perrotts Inch and Perrotts Avenue car parks
- Refurbishing ventilation in the civil engineering IT laboratories
- Upgrading lighting and thermal heating for Crossleigh House as a test case for energy research by the Civil and Environmental Engineering Department
- Installing extra heat metering in the Central Campus buildings
- Upgrading roof insulation in the Council Room, and Enterprise and Connolly buildings
- Upgrading the Building Management System (BMS) site wide communications network
- Upgrading data loggers for the energy monitoring and targeting (M&T) system
- Monitoring water usage and implementation of further savings in consumption, e.g. replacement of conventional urinal control to an enzyme based system
- Upgrading boilers, steam traps and heating plant rooms, including insulating steam pipes, as part of the annual rolling upgrade programme.

Our capital programme uses the most up-to-date energy saving technologies supported by the Sustainable Energy Authority of Ireland (SEAI). Energy awareness focuses on electricity usage and the objective is to reduce electricity consumption in all college buildings. Monthly electricity consumption monitoring reports are circulated to all staff, and we distribute energy awareness posters across the campus.

We have projects some of the annual energy savings directly attributed to these energy initiatives in terms of total electrical kWh or thermal kWh saved per annum, as follows:

| Air handling Unit (AHU) | 85,560 elec/kWh |
| Quadrangle heating upgrade | 397,268 therm/kWh |
| Staff and main restaurant lighting upgrades | 15,472 elec/kWh |
| O’Rahilly Building solar photovoltaic system | 5,227 elec/kWh |
| North Mall wind turbine | 3,107 elec/kWh |
| Cold water booster pumps upgrade | 14,892 elec/kWh |

The solar photovoltaic and wind turbine projects have long paybacks but will be used as test cases for energy research by researchers and students in the Department of Civil and Environmental Engineering.

ISO Focus+: Can you already comment on the impact of ISO 50001 implementation?

Maurice Ahern: Improved operational control of existing equipment and systems has received a strong focus as a result of implementing ISO 50001. We have been impressed by the new savings opportunities we have identified, many at low cost. As an educational establishment with a strong sustainability faculty and ethos, we use our own energy projects and management system to assist in our academic research into improving energy sustainability.

Our energy management system, based on a platform developed by Enertis, has recently been demonstrated online at an ISO/DEVC** national energy management seminar in Delhi by Liam McLaughlin, who acts as consultant in our ISO 50001 implementation. We are delighted to allow others to see our system in the hope that it will help them in their efforts to improve their energy performance.

Our energy management system, based on a platform developed by Enertis, has recently been demonstrated online at an ISO/DEVC** national energy management seminar in Delhi by Liam McLaughlin, who acts as consultant in our ISO 50001 implementation. We are delighted to allow others to see our system in the hope that it will help them in their efforts to improve their energy performance.

**ISO/DEVC** is an ISO committee established to address the needs of developing countries. ISO/DEVC’s membership comprises over 135 national standards institutes from industrialized as well as developing countries. Its overall objective is to help developing countries focus on acquiring world-class technological competence and on achieving a good understanding of the technical requirements underlying global trade. Assisting developing countries in the fields of standardization and related activities is a key goal.

The kangaroo is very energy efficient. It can reach speeds of more than 50 km/h while using less energy than any other mammal. So mother kangaroos have more energy for looking after junior! Translate that into business terms. If your organization can reduce the energy it needs to operate, it can devote more resources to value-adding processes.

ISO 50001 for energy management.

ISO 50001:2011, Energy management systems, is available from ISO national member institutes (listed with contact details on the ISO website at www.iso.org) and ISO Central Secretariat Web sites at www.iso.org or e-mail to sales@iso.org

International Organization for Standardization – www.iso.org
Standards in Action

Taking the pulse of market research

Ipsos uses ISO standards to promote culture of change

by François Delabre

Leading market survey and research specialist, the Ipsos group, implemented and helped develop the ISO 20252 standard on market, opinion, and social research. A major user of ISO 9001 (quality management) and ISO/IEC 27001 (information security management), Ipsos attributes ISO standards as helping to ensure continual improvement and create a culture of positive change.

Ipsos is an independent research company controlled and managed by research professionals. Founded in France in 1975, Ipsos has grown into a worldwide research group with a strong presence in all key markets. In October 2011, Ipsos completed the acquisition of Synovate. The combination of the two companies makes Ipsos the third largest global market research company, now established in 84 countries. Our expert teams deliver insightful expertise across six research specializations: advertising, customer loyalty, marketing, media and public affairs research, as well as survey management.

Ipsos Interactive Services (IIS) is the Group’s operational wing responsible for online data collection, predominantly via online panels, integrating similar organizations on other continents. Our goal is to act as a worldwide leader for online research operations, via operational hubs in Europe, North and Latin America, and Asia.

IIS supports the diverse and growing business activities of the Group, now spanning research in advertising (Ipsos ASI); innovation and branding (Ipsos Marketing); media, content and technology (Ipsos MediACT); social and corporate reputation (Ipsos Public Affairs); and customers and employees (Ipsos Loyalty).

We are major users of ISO 9001 (quality management) and ISO/IEC 27001 (information security management). In addition, Ipsos participated in the development and implementation of ISO 20252:2006, Market, opinion and social research – Vocabulary and service requirements, and ISO 26362:2009, Market, opinion and social research – Access panels in market, opinion and social research – Vocabulary and service requirements.

ISO 20252:2006, Market, opinion and social research – Vocabulary and service requirements, applies the principles of ISO’s quality management standards (specifically ISO 9000:2005, Quality management systems – Fundamentals and vocabulary) to market, opinion, and social research and harmonizes at the international level the requirements of the various national standards and industry codes that already exist for the sector.

The International Standard sets out guidance and requirements relating to the way in which market research studies are planned, carried out, supervised, and reported to clients commissioning such projects. Therefore, ISO 20252 covers all the stages of a research study from the initial contact between the client and service provider to the presentations of results to the client.

Access panels are becoming a key tool of market, opinion, and social research. An ISO standard, ISO 26362:2009, Access panels in market, opinion and social research – Vocabulary and service requirements, supports this evolution by providing definitions and requirements to increase the quality and efficiency of access panels, as well as providing internationally harmonized criteria to facilitate comparison of the results of access panels worldwide.

ISO 26362:2009 provides definitions and guidelines for good practice, tackling issues such as recruitment, validation of identity, size, and profile of panels. Its application will help address any limitations and exploit their potential to the fullest. The standard can also be used to evaluate access panels and assess their quality.

The International Standard is based on, and should be used in conjunction with, the more generic ISO 20252:2006.
These three ISO standards have helped us ensure continual improvement and create a culture of positive change throughout the organization. The following is an account of our implementation experiences, and the benefits to Ipsos in time and money saved.

**Implementing ISO 20252**

While preparing for certification to ISO 20252, Ipsos Morit, our United Kingdom associates, worked very closely with ISO to provide feedback to enhance the final version of the standard. Subsequently, Ipsos Morit became the first company in the world to achieve ISO 20252 certification, followed closely by IIS.

IIS also participated with ISO technical committees in several countries, working on the development of ISO 26362:2009, Access panels in market, opinion and social research – Vocabulary and service requirements (see Box, page 41). We contributed to some significant amendments aimed at increasing the criteria of quality in the new standard, based on our view that it would provide a very efficient tool for elevating quality standards across the market research industry.

Currently the term “access panels” covers various levels of quality, and there is a clear need to differentiate between highly professional management of panels, as opposed to what we might call “address database management.”

**Ipsos’ standards strategy**

In formulating our ISO standards strategy, we decided to focus first on ISO’s European structure. Here we confronted several major challenges prompted by the dramatic growth in Ipsos’ European business, following the switch to online data collection.

Recruitment needed to be very high to absorb a growth rate of over 100% per year. In just six years we built an entirely new company of over 600 employees, and at the peak had to integrate over 40 new employees per month.

The new organization was located in Eastern Europe, so we had to face not only a non-mother tongue language issues but also had to provide a culture of very high level of quality to secure Ipsos’ business. In addition, we had to transfer some very sensitive knowledge, and finally, provide Ipsos with a significant level of quality to secure Ipsos’ business.

We had to prove we could deliver a very high level of quality, but an external audit brings credibility and also a real objective status to our performance.

**Integrating ISO standards concepts**

There were several steps in our ISO standards implementation strategy. The first was to integrate ISO 9001 procedures into a fast growing business to standardize processes and training materials. From the beginning, we decided to incorporate the EFQM standard as well, so our procedures were very detailed, and focused not only on production.

We also decided to group three functions – quality, training and development under the same umbrella. This created a strong coherency within the company. IIS invested heavily in training employees in quality, security, and market research, and baked this knowledge into appropriate applications and information systems to make it easier for staff to meet the requirements of the ISO standards.

One of the ISO standards concepts we focused on was “listening to the customer.” IIS set up a system to gather feedback from customers in various countries. Customer satisfaction feedback is now fully integrated into several performance indicators for each level of the organization. Customer focus principles are also promoted within IIS, with performance measured by company managers who are perceived as internal customers.

Another useful principle was that of fact-based decision making. IIS continuously monitors key aspects of its business. Each department has its own performance indicators that are monitored and reported monthly. This helps us understand various aspects of our complex business better, and enables us to make appropriate decisions at an early stage.

In a second phase, IIS had to build more flexibility into its quality and security management system, and focused closely on the process approach. So we created a flexible Business Processes Management (BPM) system to avoid standard documentation and accommodating any changes in the processes as they happened.

These implemented and monitored approaches became powerful aids to continuous improvement. They also saved us a lot of time when using Six Sigma gap improvement methodologies, setting aggressive goals for higher efficiency.

**Implementing ISO 20252**

While preparing for certification to ISO 20252, Ipsos Morit, our United Kingdom associates, worked very closely with ISO to provide feedback to enhance the final version of the standard. Subsequently, Ipsos Morit became the first company in the world to achieve ISO 20252 certification, followed closely by IIS.

IIS also participated with ISO technical committees in several countries, working on the development of ISO 26362:2009, Access panels in market, opinion and social research – Vocabulary and service requirements (see Box, page 41). We contributed to some significant amendments aimed at increasing the criteria of quality in the new standard, based on our view that it would provide a very efficient tool for elevating quality standards across the market research industry.

Currently the term “access panels” covers various levels of quality, and there is a clear need to differentiate between highly professional management of panels, as opposed to what we might call “address database management.”

**Ipsos’ standards strategy**

In formulating our ISO standards strategy, we decided to focus first on ISO’s European structure. Here we confronted several major challenges prompted by the dramatic growth in Ipsos’ European business, following the switch to online data collection.

Recruitment needed to be very high to absorb a growth rate of over 100% per year. In just six years we built an entirely new company of over 600 employees, and at the peak had to integrate over 40 new employees per month.

The new organization was located in Eastern Europe, so we had to face not only a non-mother tongue language issues but also had to provide a culture of very high level of quality to secure Ipsos’ business. In addition, we had to transfer some very sensitive knowledge, and finally, provide Ipsos with a significant level of quality to secure Ipsos’ business.

We had to prove we could deliver a very high level of quality, but an external audit brings credibility and also a real objective status to our performance.

**Integrating ISO standards concepts**

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**Separating information security**

Our effective ISO 9001-based quality management system (QMS) was very helpful in achieving ISO 20252 certification. In fact, IIS directly integrated those few requirements not covered by our quality procedures, enabling us to merge both standards into a stronger QMS.

However, we decided to keep the ISO/IEC 27001 management system quite separate. Although the procedures and documentation are managed according to ISO 9001, information security requires a more specialized approach since it applies to potential events. Most of the security incidents we cover are linked to potential risks, and it is quite difficult to expect employees to focus daily on something that has not happened, and is unlikely to happen. So here we need a constant educational process, reinforced training, awareness building, and internal audits.

We also developed a strong application that gives us many benefits, including increased responsibility, process flexibility, traceability, and real time measurement of each process step, allowing us to continuously enhance cycle time and utilization.

**Benefits**

As a result of implementing the three ISO standards, we have managed to create a continuous improvement culture in just five years. Each employee is fully aware of his or her personal, team, and departmental objectives, and current and past performances. Customer feedback is closely monitored and any issues are automatically communicated to the manager in charge for analysis, and corrective or preventive actions.

We believe these standards have helped us create a culture of change. Each new standard or re-certification audit is an opportunity to review existing processes, adapt them to our organizational dynamics, and create a common feeling in our online business that the key word is “change.”

We have also moved increasingly to fact-based management decisions. Over time we have revised our information systems to create a strong coherency with our performance objectives. Our management team can now measure and understand the key factors of the business.

The result is that we can anticipate the need for decisions, set clear objectives for improvement, and speed up our reaction time. Decision making is now much easier since we already have the data to back it up.

**Future objectives**

From a management perspective, we feel that ISO standards could be more oriented to fit financial objectives. There is a risk in delegating the quality strategy to a quality group within the organization. However, when this quality group provides financial or strategic information, ISO management system methodologies can be seen not only as organization standards, but also as real performance management tools.

A potential new challenge will be to work more closely on social responsibility (SR). Ipsos has joined the United Nations Global Compact programme. To sustain this program, Ipsos Interactive Services is also very interested in the ISO 26000 standard providing voluntary guidance on social responsibility. We expect that to give us a strong framework to help achieve our SR objectives.

**Useful tips**

I believe that for an organization to merely seek certification to a standard is the wrong approach. In the fullest sense of implementation, ISO management system standards provide methodologies and frameworks that help managers develop specific strategies on which to grow their companies.

Should I wish to grow my company on the basis of environmental excellence, for example, then I would ask which standards would help me develop a strategy and focus on efficient implementation, without losing time in re-inventing the wheel. In that aim, our experiences at IIS show that ISO standards provide actionable tools and ideas based on professional knowledge, saving valuable time and money.

**About the author**

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Climate change threatens freshwater reserves. According to the Intergovernmental Panel on Climate Change, general glacier retreat in many mountain areas, and increased risks of extreme weather events with droughts and heavy precipitation, pose a challenge to the safe supply of drinking water. Furthermore, in 2032 there may be a billion people more on this planet with whom water resources will have to be shared. To preserve water quality, therefore, we will have to manage it better.

Testing water quality
To ensure water is potable, monitoring through chemical analysis needs to be carried out regularly. This is done to: verify quality; assess the impacts of agriculture, industry, tourism and other human activities; and evaluate the consequences of contamination and pollution.

In 2011, WHO published the fourth edition of its guidelines for drinking-water quality. This builds on over 50 years of WHO guidance on drinking-water quality, starting with the publication of the first International Standards for drinking water in 1958. The WHO guidelines are based on the assumption that monitoring environmental quality and the protection of human health are inseparable. They are considered an authoritative basis for the setting of national regulations and standards for water safety in support of public health, including protection against ionizing radiation. Since the first edition, WHO has referred to ISO’s work on the measurement of water-based radionuclides.

The system of radiological protection, progressively developed with the increasing use of nuclear energy, was established early in this process. It is based on the assumption that any exposure to radiation involves some level of risk, and recognizes the link between environmental radioactivity and public health.

Today, before authorizing routine low-level liquid or gaseous radioactive discharges from a nuclear plant, an assessment is made of the potential exposure to ionizing radiation from the released radionuclides. The exposure models used take into account the characteristics of the expected radioactive source term, the possible conflicting use of natural resources including water, and the different routes by which potential exposure can affect people.

Subsequently, the measurement results obtained through the radionuclide monitoring of releases and of environmental and food-stuff samples, including drinking water, validate the estimates of the installation’s impact (in terms of exposure) and substantiate authorized discharge limits. The credibility of the exposure assessment is therefore based largely on the quality and reliability of the radionuclide measurement results.

National legislation of countries with nuclear facilities (industrial, medical, research and military) sets the rules for the continuous monitoring of radioactivity in the atmosphere, water and soil. This is to comply with the system of radiological protection elaborated by the International Commission on Radiological Protection (ICRP).

WHO has referred to ISO’s work on the measurement of water-based radionuclides.

Each year hundreds of thousands of radioactivity measurements are performed on environmental samples and reported to national authorities for regulatory purposes and public information. Most of them concern monitoring of drinking water for radioactivity.

Dispersed by currents and winds, released radionuclides know no borders. This was sadly demonstrated during the Chernobyl and Fukushima accidents.

National stakeholders on nuclear issues, such as industry, control authorities, local associations and public information commissions, are linked with international stakeholders. Legal instruments require stakeholders to be informed of radioactivity levels in emissions as well as in internationally traded foods. Countries are more likely to place their trust in the quality of radioactivity data exchanged since they mutually recognize the services performed by accredited laboratories using common standards.

Tested and true
Standards on test methods for radionuclides are therefore reference documents and meet the technical concerns that arise repeatedly in the relations between economic, scientific, technical and social stakeholders, both nationally and internationally.

During a controversial situation, stakeholders are likely to carry out measurements on samples from the same sites. It is essential to use agreed and appropriate methods and procedures for: the sampling, handling, transport, storage and preparation of test samples; the test method; and calculating measurement uncertainty. This is covered in ISO/IEC 17025:2005, General requirements for the competence of testing and calibration laboratories.

In this framework, the normative approach aims to ensure the accuracy or validity of the test result through calibrations and measurements traceable to the International System of Units. This approach guarantees that radioactivity test results on the same types of samples are comparable over time and between different test laboratories.

Most International Standards are used by the laboratories that carry out radionuclide activity measurements required by national authorities, as they have to get specific accreditation for radioactivity measurement on food and/or drinking water samples. Since 1978, ISO technical committee ISO/TC 147, Water quality, has developed standards on the metrological requirements to monitor the radioactivity of water intended for human consumption; and since 1999, ISO/TC 85, Nuclear energy, nuclear technologies, and radiological protection, has

developed standards on the measurement of radionuclides in the various environmental components.

ISO/TC 85 focuses on the drafting of standards on the radiological characterization of all sites, and the routine radiological monitoring of sites potentially affected by the discharge of radioactive effluent.

In most drinking water, since the activity concentrations of individual radionuclides are low and their determination is time-consuming, detailed analysis is normally not justified for routine monitoring. WHO therefore recommends the use of a preliminary screening procedure to determine the gross (total) alpha and beta radiation emitted by all radionuclides in water before identifying any specific radionuclide.

1.5 million children under five die each year as a result of water- and sanitation-related diseases.

Following the publication of these four standards, SC 3 was disbanded. The ensuing periodic revision of these standards demonstrated the need for reviews. This was due to the availability of new equipment and procedures used to measure radioactivity in most laboratories that monitor drinking-water quality.

In 2002, it was decided to resume activities on radiological methods at working group level (WG 4). The initial mandate was limited to the revision of the four above-mentioned standards that were subsequently published.

New series of standards

In 2007, the need to draft new standards, in line with WHO recommendations, led to the adoption of a first set of new work item proposals (NWIP) on new test methods for gross alpha and gross beta activity used by test laboratories. A year later, a second set of NWIP was adopted on the measurement of strontium-90, polonium-210 and carbon-14.

As naturally occurring radionuclides in drinking water usually give radiation doses higher than those provided by artificially produced radionuclides, and are therefore of greater concern, in 2009 a third set of NWIP was proposed on test methods for radium-226, radon-222, lead-210 and uranium radioisotopes. These are currently being drafted.

The initial mandate of WG 4 was extended to a set of 15 new standards comprising 20 documents. This led to the proposal to re-establish SC 3 in 2010, which was adopted in 2011 with a new title, SC 3, Radioactivity measurements. The subcommittee aims to focus on priorities resulting from the latest WHO recommendations, taking into account the technical consequences of regulatory changes in drinking-water quality control.

Six working groups are drafting test methods for the natural radionuclides lead-210, radon-222, radium-226, uranium, tritium and carbon-14, as well as the artificial ones plutonium and americium.

When published, this set of ISO standards on radioactivity measurement will answer the needs of test laboratories. They will adhere to WHO and ICRP recommendations on assessing drinking-water safety with respect to naturally occurring and artificial radionuclides. In addition, they will be used to identify spatial and/or temporal trends in the radiological characteristics of the water source, required to ensure adequate water management of the water quality for other uses such as crop irrigation and freshwater fish farming.

The above-mentioned ISO standards and NWIP rely on the trust built up between the two international organizations and experts representing monitoring laboratories in 23 countries. In the latest (2011) edition of the WHO guidelines, they are listed as references for the measurement of radionuclides in water in chapter 9 on radiological aspects.

About the author

Dr. Dominique Calmet is a project leader in France’s Atomic Energy and Alternative Energy Commission. He has had a significant, long-term involvement with ISO, which continues with his current role as Chair of ISO technical committee ISO/TC 147, Water quality, subcommittee SC 3, Radiological methods. Over the years he has written many articles on radioecology and radioactivity measurement.

The value of ISO standards relies on government, research, academia, international organizations and NGOs. Some of the organizations contributing to ISO’s water standards include the World Health Organization, the World Meteorological Organization, the Food and Agriculture Organization, the Organisation for Economic Co-operation and Development, the International Water Association, Consumers International, among many others.

Because of the important contribution that International Standards can make to addressing this vital and global challenge, water has become one of ISO’s strategic priorities. A recent ISO task force investigated areas where standardization could help and issued a set of recommendations for future work. Find out more on ISO & water.

ISO & water, published in English and French, is available free of charge by contacting the Marketing, Communication & Information department (sales@iso.org). It can also be obtained from ISO national member institutes. The brochure can be downloaded as a PDF file free of charge from the ISO Website (www.iso.org).

Maria Lazarte is Assistant Editor, ISO Focus.


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Going strong
ISO in figures

by Roger Frost

In 2011, references to ISO and its standards on Internet media sites increased by 128,937 compared to 2010 to reach a total of 467,830 – a rise of 38%. How many people have an idea of the size of ISO and its standards development operations? To answer such questions, ISO has just published ISO in figures.

This new edition of the four-page leaflet reveals that at the end of 2011, ISO comprised a network of national standards bodies of 163 countries.
The job of developing voluntary ISO International Standards for business, government and society was being carried out by a total of 3,335 technical bodies, including 224 technical committees, each of which addresses a specific sector of business or technology.

In 2011, ISO published 1,206 new or revised standards, bringing the total number of current standards in the ISO catalogue at the end of the year to 19,203.

An indication of the demand for new ISO standards is that during 2011, 1,419 new projects for ISO standards were registered, raising the number of items in the work programme to 4,007.

Much of ISO’s work of developing standards is now carried out electronically, both to increase efficiency and also to cut the financial and environmental impact of travel. At the same time, face-to-face meetings and technical meetings were held each working day, somewhere in the world.

Thirty-eight ISO national member bodies provided the administrative and technical services for the committees developing standards – a full-time staff equivalent to 500 persons.

Coordination of the worldwide activities of ISO was carried out by a staff of 151 people from 20 countries at the ISO Central Secretariat in Geneva.

The operational cost of running the committee secretariats was estimated at 140 million Swiss francs, which 55% was financed through member-ship fees and 45% through other revenue sources, including sales of publications and income from services.

ISO Secretary-General Rob Steele comments: “While these figures are useful in providing an idea of the size of the ISO system and its operations, the most important are those that reflect the priority we give to developing standards that meet the needs of our customers, users and stakeholders.”

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It can also be obtained from ISO national member institutes. The brochure can also be downloaded as a PDF file free of charge from the ISO Website.

Roger Frost is Head of Communication Services, ISO Central Secretariat.

2012 marks the 100th anniversary of the sinking of the Titanic. One of the deadliest maritime disasters of all times, the Titanic claimed the lives of 1,513 people. And yet, before the ship embarked on its first and only voyage, it was deemed “unsinkable”, having been designed with the latest most advanced technology of the day. Since then, the memory of the Titanic and the lives lost have driven efforts for safety and progress in the maritime field, and much has been improved.

The April issue of ISO Focus+ looks at how International Standards supported the maritime industry and improved safety, notably through the work of ISO technical committee ISO/TC 8, Ships and marine technology. One of the first ISO technical committees to be established, it addresses issues such as lifesaving and fire protection, navigation and ship operations, ship design, pipes, machinery, and much more.

The success behind its standards is the result of wide stakeholder involvement, and cooperation with key actors such as the International Maritime Organization. In addition to this work, other ISO committees also impact the maritime industry, one example being ISO/TC 104 on freight containers, especially important since 90% of the world’s trade moves by sea, and 90% of cargo travels by container.

The portfolio of articles in the next ISO Focus+ highlights some of the latest developments in the maritime sector. Although hopeful at the giant strides made by the industry since the Titanic, it remains conscious that maritime incidents can still occur. Such incidents are a stark reminder not to rest on our laurels, but to keep moving forward with the goal of striving always to be better. There is, and will always be a need for progress. And the ISO standards development process is a valuable medium for continual improvement.
The first link in a global supply chain may be a little guy carrying a heavy load. The difference between hard work and exploitation depends on criteria like adequate pay, working conditions, health and safety factors, and social protection. Labour practices comprise one of the seven core subjects of social responsibility defined in ISO 26000, along with 37 underlying issues and seven overarching principles. All are based on consensus among 99 countries and 42 international organizations from both public and private sectors. People worldwide now demand that organizations behave in a socially responsible manner. ISO 26000 shows how – and the benefits of doing so. Link up now!