



#108

focus

Your gateway to International Standards

in the cloud



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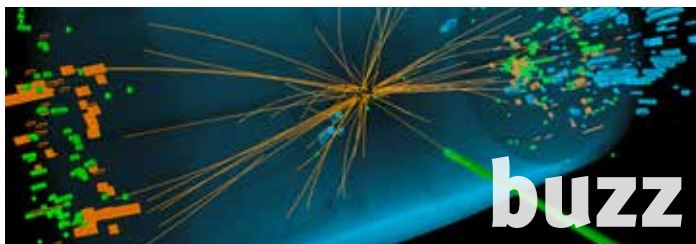


#108



ISO focus

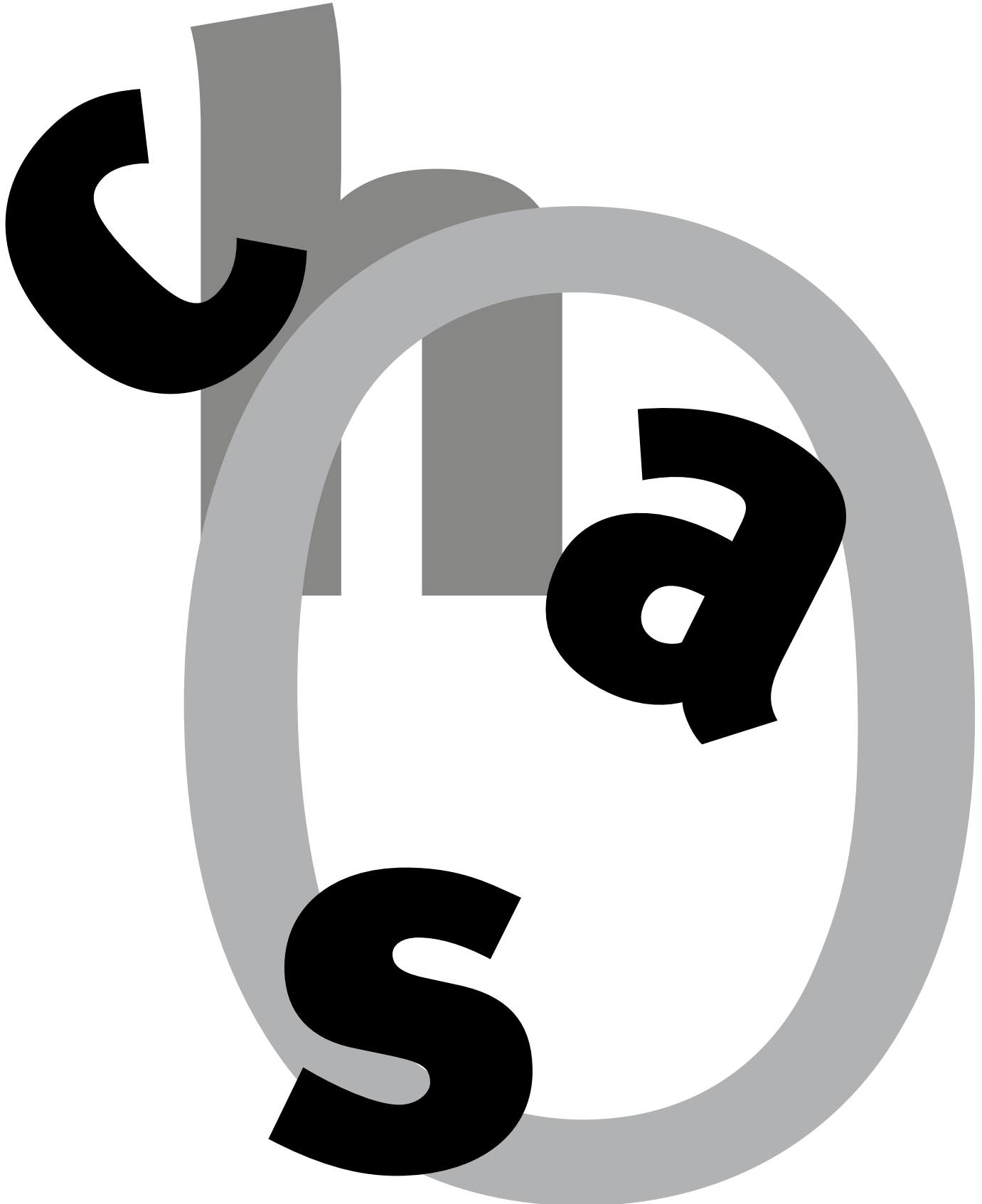
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End of cloud





It's a safe bet to assume that most of us are already using cloud services. If you've ever used Hotmail, Gmail, Yahoo! Mail or any webmail service, then you've been storing your e-mails in the cloud.

The cloud is really just another word for servers on the Internet. Using the cloud means you're outsourcing tasks to those servers that might otherwise be performed by your local device. The most common one is to use the cloud for storage; so, instead of storing data on your computer, it is stored on remote servers that you access via the Internet.

Let me use the analogy I read on CNN.com, which goes something like this. Think of the cloud like putting your money in a bank. You're putting your property in a dedicated storage space. Using a bank means you don't have to keep all your money under the mattress at home, while using the cloud means you don't have to have every photo you've ever taken eating up valuable space on your iPad. And when you do want to see your photos, storing them on the cloud allows you to access them on any device – similar to how banks allow you to withdraw money from any cash machine.

The leak of personal photos of Hollywood celebrities has many debating potential vulnerabilities in the cloud. But for those of us who don't intuitively understand technology, the questions remain: Is storing data in a public cloud environment and delivering applications as services putting companies at greater risk of data loss or breaches?

In this *ISOfocus* issue, we address some of the basic questions surrounding cloud computing (including the savings and business utility the technology can offer). We also explore privacy concerns of the cloud services industry and how these are addressed by ISO/IEC 27018 – the first International Standard on security of personal data in the cloud. What's more, another feature highlights the cloud's effect on the IT industry, of which 43% is outsourced. These are huge numbers.

So what does this mean? How alarmed should we be about the security of the millions of photos, videos and documents we store in cloud accounts? The answer is more straightforward than we think. There are options out there for consumers and businesses alike to pick a cloud model that works for them and alleviates their data and privacy concerns in the long term. That's one solution to cloud security worries. But here's another: as consumers and businesses, we should also take responsibility for keeping our personal data safe by double-checking our facts. Did the cloud provider remain transparent about its data processing practices? Did the cloud provider implement ISO/IEC 27018? So the next time you post your personal photos on the cloud, tell yourselves this: standards are only good in as far as they are used. No ISO/IEC 27018, no deal!

Don't play the blame game. Do shoulder your share of the cloud burden. Keeping your head in the clouds won't make the problems go away any faster. But then again, we'll still have to wait and see what the next five years of cloud computing have to offer... and the possibilities are endless. ELIZABETH GASIOROWSKI-DENIS

chaos

SHARE WITH US
YOUR THOUGHTS, IDEAS
AND FEEDBACK!

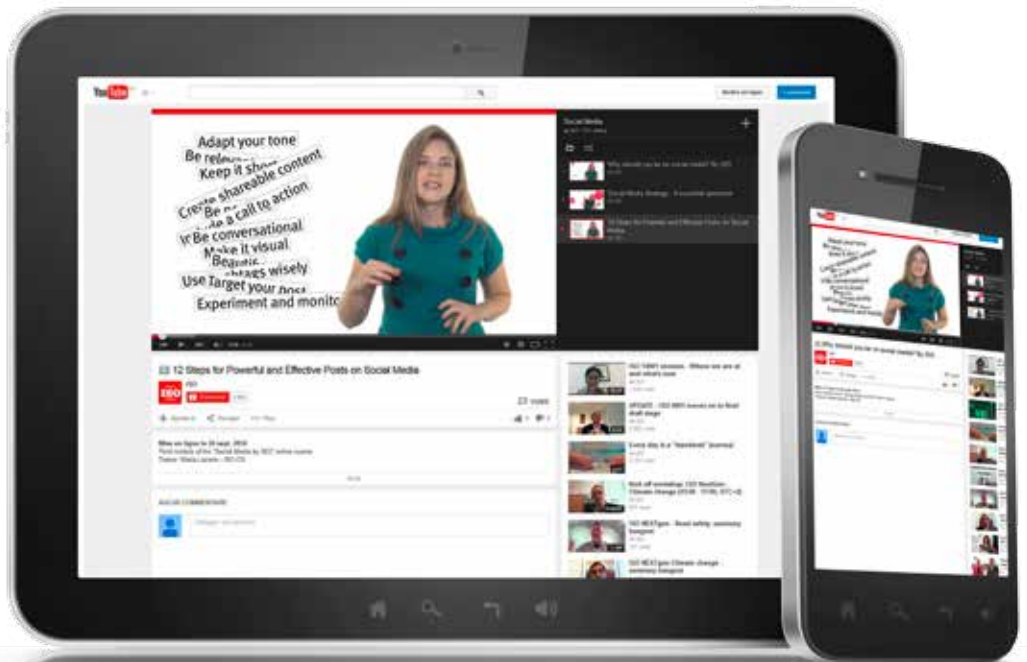


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ISO Social Media Manager
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Pack a punch with powerful posts

Most of us use social media to talk about subjects that interest us, whether by curating great stories or creating our own. Yet sometimes, no matter how good we think our content is, it just doesn't get the engagement we had hoped for. There could be many reasons why you are not reaching your audience, but a common culprit is not taking the time to really think about how you write your post. So take stock and ask yourself: How do you behave on social media? As you click on someone else's post, think about what attracted you to it. A catchy headline? An interesting visual? An exciting subject? All of the above? And don't forget to take all this into account next time you are sharing your own content.

To help you write a great post every time, we have created a short video offering 12 useful and simple tips to engage your audience. You will find some of this advice on the opposite page, but to see all 12, watch the video on our YouTube channel!



Geeks corner!

Attending a conference?
Here are 5 tips on
how to use social
media during the
event (Mashable).



This video is part of
a series on social media.

Find out more:

iso.org/learnsocialmedia



Write a **great post** every time!



Pitch your post

Adapt your tone to the social network and audience you are targeting.

Consider: Be informal and entertaining on Facebook, but business-like on LinkedIn.



Be relevant

Tell your audience what they need to know, not what you want to say.

Ask: What makes your post interesting to your audience?

Keep it short

Say one thing and say it well.

Avoid: Don't drown your audience with too many messages.



Create shareable content

Write posts your audience will enjoy sharing.

Ask: Is your content entertaining?
Newsworthy? Inspirational?
Does it give important information?

Be conversational

Be human, emotional and persuasive.

Connect: Use personal pronouns, ask questions, listen and respond.



Beautify

Make your post attractive.

Write: Use eye-catching, short and pertinent comments and titles.
Add relevant and powerful images.

Trust

and **confidence**
in cloud privacy

The use of cloud computing is soaring, and by 2016 this growth will increase to become the bulk of new IT spend, according to Gartner, Inc. But as more and more information on individuals and companies is placed on the cloud, concerns are being raised about just how safe an environment it is.



Confidence around cloud security is at an all-time low.

It's big, if the numbers pan out. According to analyst firm Gartner (2013), the marketplace for cloud computing will grow 18.5% to USD 131 billion in 2017 from USD 111 billion in 2012. What's more, 2016 will be a defining year for cloud, as the cutting-edge technology will just get more sophisticated in the next few years.

Growing concerns

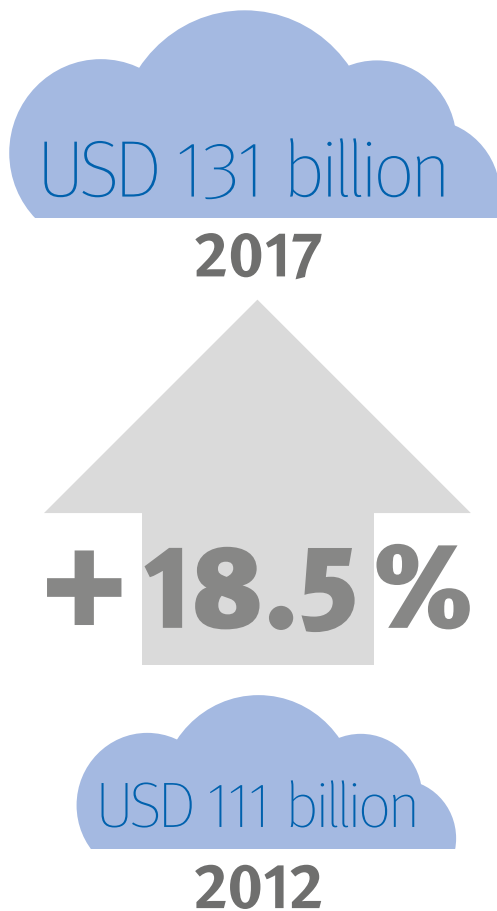
Yet, despite the rapid escalation of cloud services use, many remain hesitant. Worse, there are some who refuse to adopt any cloud-based applications at all, citing security and privacy concerns, operational challenges or the inability to control information once it leaves the perimeter. According to a 2014 global study from BT, data security and trust in cloud-based services are

a cause for unease among IT decision makers within large organizations. In fact, the study showed that security was the main concern for as many as 76% of those surveyed when using cloud-based services. Almost half of respondents (49%) admitted that they are "very or extremely anxious" about the security implications surrounding the cloud.

Even while 79% of those surveyed in the US (70% globally) are still adopting cloud storage and Web applications within their business, it is clear that confidence around cloud security is at an all-time low.

Research has shown that 89% of the global workforce community currently lacks understanding of the ways security protection applies to the cloud. The issue is not the security of the cloud itself, but the knowledge available to users.

ISO/IEC 27018
provides confidence
in the cloud industry.



The growing marketplace of cloud computing.

No need to panic!

Such genuine fear for the safety of one's most precious cloud-stored assets, such as personal information, is absolutely understandable but also largely overstated.

A specialist in cloud computing law at global law firm Covington & Burling, Maria-Martina Yalamova, says that, frequently, reputable cloud service providers offer much greater security than individuals or enterprises can achieve on their own. "These providers invest significant resources in ensuring that their systems utilize state-of-the-art security measures, and routinely stress-test and strengthen these measures. Many comply with international security standards and are subject to contractual and legal/regulatory obligations to keep data secure and private. And they offer customers a range of privacy controls to protect their data, depending on the type of data involved."

The cloud story has moved on from the early days. As with any technology or delivery model, the embryonic stages bring fear, uncertainty and doubt. Remember, too, that it wasn't so long ago when we wondered if PCs would be able to withstand the onslaught of security threats they faced.

The same is true of cloud, according to Knut Blind, Professor of Standardization at the Rotterdam School of Management and Innovation Economics at the Technische Universität Berlin, sponsored by Fraunhofer Fokus. He believes times have most certainly changed when it comes to security and associated fears.

Migrate with confidence

Fact is, not all clouds are created equally, and the quality of service and support can differ dramatically from provider to provider. The overarching problem here is trust. By improving trust, people and businesses will be more likely to embrace the benefits of cloud computing, such as lower costs and improved scalability and deployment times. The thing is, this level of confidence can only be built if the type of data is taken into consideration when planning any uptake of cloud.

Prof. Edward Humphreys, Convenor of the ISO working group responsible for information security management standards including ISO/IEC 27001, ISO/IEC 27002 and the cloud security standard ISO/IEC 27017, believes that creating a climate of trust is the most important prerequisite when outsourcing IT. "Companies need to have assurance in the underlying cloud provider.

"Many users may not understand that they need to select a cloud service provider that has good governance over the processing of personal data; and those that do know this may have difficulty knowing how to verify that good governance is in place. This situation can lead to increased risks for the protection of personal data."

So what can be done? Certainly cloud service providers should take action to improve their customer confidence, says

Have you been a victim?

Victim of cloud cybercrime? Don't despair. You're not alone.

According to Maria-Martina Yalamova, a lawyer who specializes in data privacy at law firm Covington & Burling, there are a number of remedies:

1. The first step will be to investigate the intrusion, and then monitor how and where the data is being used, predicting next steps where possible.
2. The precise remedies will vary according to local law, but often bad actors are best dealt with by the police, to whom information about the relevant individuals can be provided. Bad actors may not respond to civil measures (such as cease-and-desist measures, or court orders).
3. Once a bad actor is identified, it might also be possible to seek compensation from them. Whether the benefits of doing so would outweigh the costs will depend on the circumstances of the case.
4. Lastly, the individual and his/her advisors should bear in mind that an over-the-top response risks drawing public attention to the intrusion, further eroding the victim's privacy.

Courtesy of Maria-Martina Yalamova

Humphreys. In practice, this means: "A cloud service provider needs, as part of its governance process, to have a system of controls in place that specifically addresses the protection of personal data. Starting with a data processing agreement, which outlines the governance process and important issues that may be relevant to meeting their legal obligations, will help customers have confidence in selecting the right cloud service provider. Demonstrating compliance to ISO/IEC 27001, extended with controls on the protection of personal data from ISO/IEC 27018, can add a further level of customer confidence."

Prof. Knut Blind agrees: "With more and more individuals using cloud services, cloud providers must offer well-designed and user-friendly security controls. Businesses have to set up appropriate information security management systems."

Secure cloud service

So how can companies create a standard service level agreement for cloud services? How can they make better-informed decisions when assessing whether to use a cloud computing solution and which solution best meets their business needs?

Published in 2014, ISO/IEC 27018 is the first International Standard that focuses on protection of personal data in the cloud. Although only a few months old, the new standard should finally give cloud users confidence that their service provider is well-placed to keep data private and secure.

Yalamova adds, "ISO/IEC 27018 specifies certain minimum types of security measures that cloud providers should adopt, if applicable, including encryption and access controls. The cloud standard also requires cloud providers to implement security awareness policies and make relevant staff aware of the potential consequences (for staff, the cloud provider and the customer) of breaching privacy and security rules."

As the first-ever standard that deals with the protection of personal data for the cloud, ISO/IEC 27018 has the following key objectives:

- Help cloud service providers that process personally identifiable information to address applicable legal obligations as well as customer expectations
- Enable transparency so customers can choose well-governed cloud services
- Facilitate the creation of contracts for cloud services
- Provide cloud customers with a mechanism to ensure cloud providers' compliance with legal and other obligations

In a nutshell, ISO/IEC 27018 provides a practical basis to induce confidence in the cloud industry. At the same time, the public cloud industry will have clear guidance in order to meet some of the legal and regulatory concerns of its clients. What's not to like?


Bringing order to cloud chaos

The more quickly users can trust to use the cloud correctly (with full security precautions in place), the better for business and data, and their company's profitability as well. And there has already been a big improvement thanks to ISO/IEC 27018 as cloud providers have taken more security precautions for their clients' data. Of course, we as individuals are also expected to assess the benefits, risks and implications for privacy when considering a cloud computing service. And, let's not forget to take responsibility for keeping our personal data safe, for example by choosing strong passwords and by double-checking that the cloud provider we choose has adopted appropriate security measures and remains transparent about its data processing practices. So don't let hype and trust derail you from embracing the cloud – the savings and business utility is much too important to pass up. ELIZABETH GASIOROWSKI-DENIS



So don't let hype
and trust derail you
from embracing the cloud.

5 Things you should know about ISO/IEC 27018



The **new standard** is based on existing **information security standards**, including **1** ISO/IEC 27001 and ISO/IEC 27002

2 The combination of a common set of control objectives, controls and guidelines based on ISO/IEC 27002, and additional cloud-specific control objectives and controls, **helps govern the processing of personal data in the cloud**

3 **Cloud service providers** can comply with applicable **obligations**

4 **Transparency** enables cloud service customers to select well-governed cloud-based **personal data** processing services

5 A mechanism for exercising audit and compliance rights helps **prevent risks** to the protection of **personal data**

A full-page background image of a bright blue sky filled with numerous white, fluffy clouds of varying sizes and densities. The clouds are scattered across the entire frame, creating a textured and dynamic appearance. The lighting is bright, suggesting a clear day.

The age of cloud computing



Donald Deutsch on how ISO/IEC standards on cloud computing help.

Cloud computing is a new way of delivering, consuming and producing IT resources via the Internet. Forging new standards work will only boost the potential and make the technology even more promising.

Cloud computing is quite possibly the hottest, most discussed and often misunderstood concept in information technology (IT) today. This revolutionary concept has reached unexpected heights in the last decade and is recognized by governments and private-sector organizations as major game-changing technology.

Organizations and individuals alike are keen to store and process their data in the cloud, access from anywhere applications and important information maintained in the cloud – and do this faster and at lower cost than through conventional means. Commercial enterprises and public-sector organizations are eager to gain promised efficiency and agility, while the average user desires the cloud’s ubiquity and flexibility. And, above all, everyone wants to reduce cost.

But what exactly is it? Until recently, most software programs ran on your personal computer. In simple terms, an individual ran applications on his/her personal computer and each enterprise had racks of servers to support its operations. With cloud computing, they now run on large networks of remote servers that enable the sharing of data-processing tasks, centralized storage and online access to computer services – all over the Internet.

We spoke to Donald Deutsch, Chair of joint technical committee ISO/IEC JTC 1, *Information technology*, subcommittee SC 38, *Cloud computing and distributed platforms*, about just what cloud computing is, what the benefits and risks are, and how standards can help.

ISOfocus : Cloud computing is all the rage. But does the cloud really enable anything new? How does it work?

Donald Deutsch : Few technological innovations have generated as much hype, offered so much promise or been as widely and rapidly embraced as cloud computing. At the bare minimum, cloud computing is a form of IT involving the use of resources that are not owned, controlled and maintained by the single user. Rather, the resources are accessed over a network and are shared among some community of users. With cloud computing, those resources can be dynamically provisioned – if users need more computing power, more storage, or more processing capabilities.



Cloud computing services may be provided by more than a single computer or even a single computing centre; users may actually be sharing resources across various, multiple and maybe even not co-located facilities.

What are the advantages of using cloud computing?

Cloud computing does mean different things to different people. Depending on one's focus, the benefits of cloud computing are to:

- Reduce expenditure on information and communication technology by deploying and using resources in a more cost-effective way
- Offer greater speed, computing power and capacity to individual users through the sharing of resources
- Make computing more accessible to individuals and to organizations of all sizes
- Increase security (read article on page 6)

The first international cloud computing standards have just been published: ISO/IEC 17788 and ISO/IEC 17789. Could you please explain how these will help?

Drawing on the knowledge of experts from over 30 countries, these standards lay down the basic terminology and architectural framework for this expanding segment.

ISO/IEC 17788, *Cloud computing – Overview and vocabulary*, provides definitions of common cloud computing terms, including those



Cloud computing
does mean different
things to different
people.



for cloud service categories such as Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS). It also specifies the terminology for cloud deployment models such as “public” and “private” cloud. More technical in nature, ISO/IEC 17789, *Cloud computing – Reference architecture*, contains diagrams and descriptions of how the various aspects of cloud computing relate to one another.

What’s the next phase of the cloud? How will this impact the work of JTC 1/SC 38?

Cloud computing is a shift in the paradigm for providing IT capabilities to users that may impact a great deal of future IT products, systems and services. These first international cloud computing standards provide a sound foundation for follow-on standards as needs become clearer in this area.

Building on the ISO/IEC 17788 and ISO/IEC 17789 foundational standards, JTC 1/SC 38 working groups (WGs) are developing standards to assist providers and consumers of cloud computing technology and services:

- WG 3 – Service level agreement
- WG 4 – Interoperability and portability, and
- WG 5 – Data and their flow across devices and cloud services



WG 3 experts, having completed a Committee Draft for Part 1, *Overview and concepts*, of the multipart standard on service agreement, are now preparing drafts for Part 2, *Metrics*, and Part 3, *Core requirements*. As for WG 4 and WG 5, established by subcommittee SC 38 in October 2014, they will hold their first meetings early in 2015. Anyone interested in participating in these work sessions should contact donald.deutsch@oracle.com or their national standards body. ELIZABETH GASIOROWSKI-DENIS



EVERY DROP COUNTS

Water is one of the world's most precious – and lucrative – resources, and we must do everything in our power to keep it flowing. Thankfully, preserving our “blue gold” has just got easier thanks to a new ISO standard on water footprinting.

ISO 14046, *Environmental management – Water footprint – Principles, requirements and guidelines*, provides both governments and industry with reliable, scientifically consistent information for tracking and reporting their water footprint, i.e. the potential environmental impact of water use and pollution.

Based on life-cycle assessment, the standard helps assess the magnitude of potential environmental impact by determining the water quantity used and the changes in water quality. It then goes a step further with tried-and-tested damage limitation strategies that optimize water efficiency and management at product, process and organizational levels.

Sustainability is a key priority for governments and businesses alike, and the ability to accurately assess a water footprint is a vital step towards this goal.

KEEPING ENERGY MANAGEMENT SYSTEMS UP TO SCRATCH



An effective energy management system is an essential business ingredient and having it certified to a recognized standard can bring a number of benefits. Now, the certification process is even better with a new standard for auditors and certification bodies who certify to ISO's energy management system standards.

ISO 50003:2014, *Energy management systems – Requirements for bodies providing audit and certification of energy management systems*, lays down the

requirements for competence, consistency and impartiality in the auditing and certification process. It covers the audit planning process, the initial certification audit, conducting the on-site audit, and ensuring the people conducting the audit have the right skills to do so. The new standard is intended to be used with ISO/IEC 17021 on conformity assessment.

THE TRIPS AND TRAPS OF SUSTAINABLE PROCUREMENT

Making procurement sustainable is a universal goal. But with increasing market demands for environmentally “safe” products, the issue of “green-washing” has come into existence, warns the US Environmental Protection Agency. How, then, is it possible to ascertain which labels can be trusted?

Sustainable procurement is a process whereby organizations meet their needs for goods, works and utilities in a cost-effective way that generates benefits not only to the organization itself, but also to society and the economy, while minimizing damage to the environment. A tall order at the best of times!



Rising to the challenge, future ISO 18617 on sustainable purchasing will disseminate the practices contained in ISO 26000, *Guidance on social responsibility*, throughout supply chains. Providing guidelines and principles for all stakeholders, the new standard will help sort the wheat from the chaff by explaining how to differentiate between programmes that genuinely tackle environmental, human rights or corruption issues within the supply chain, and those that are mere “window dressing”.



GREENHOUSE GAS **STANDARDS** GET REVAMP

The market need for climate change projects has never been more dynamic. Which is why ISO is revisiting its greenhouse gas standards and making them fit for purpose.

First published in 2006, ISO’s range of standards for greenhouse gases is an essential tool for reducing greenhouse gas emissions and regulating emissions trading. Now, ISO/TC 207/SC 7, the subcommittee for greenhouse gas management, is reviewing several standards to ensure they meet our ever-changing market needs.

These include ISO 14064, parts 1 and 2, on quantification and reporting at the organizational and project levels, as well as ISO 14064-3 and ISO 14065, which set out the greenhouse gas validation and verification requirements used by greenhouse gas programmes around the world.

Outsourcing's *booming*

Outsourcing is a good business strategy. It improves efficiency, cuts costs, speeds up product development, and allows companies to focus on their “core competencies”. And with help from a new ISO standard, the future is looking bright.



business

To many people, outsourcing is a frightening proposition. Yet this new business model, which has been adopted worldwide across both the private and the public sectors, provides multiple benefits. It enables an organization to achieve business objectives, add value, tap into a resource base and mitigate risk. In other words, from individual items all the way to systems management, choosing to use external providers allows the company or organization outsourcing a job (the “client”) to focus on what it does best.

While the common public stereotype of outsourcing may be to make financial savings by taking advantage of lower-cost labour in another country (known as “offshoring”), outsourcing can be domestic as well as foreign. It can also give the client access to expertise and to a level of productivity not available in house. When a skills or production deficit exists (frequently in information technology) and the service provider can furnish a remedy, an outsourcing solution can meet the needs of both parties.

Statistics on the subject are an eye-opener. Accounting and consultancy firm Deloitte recently published its *2014 Global Outsourcing and Insourcing Survey*, which covers the political implications, regulations, outsourcing destinations, technology and vendor management. For example, the **udemy.com** platform for online courses published some revealing statistics for 2013. In that year, 43% of the IT sector had been outsourced. This jumped to 60% in the following year. Deloitte also predicts outsourcing will continue to expand at rates of 12% to 26% across the functions analysed.

Economies of scale

Though the “father” of outsourcing may well be the early 19th-century British economist David Ricardo with his economic principle of “comparative advantage”, it was only in 1989 that imaging solutions company Eastman Kodak took the then revolutionary step of outsourcing its information technology systems. Up until that time, the ideal model for business was a large and well-integrated company that owned, managed and directly controlled its assets. But large corporations found themselves unable

Problems arise
from the lack of, or poor,
governance practices.

ISO 37500 addresses
issues of flexibility
in outsourcing
arrangements.

to compete globally as bloated management structures hindered flexibility. Diversification became a rallying cry to broaden corporate bases and take advantage of economies of scale. For many large companies, this resulted in a strategy of concentrating on core business and competencies, identifying what was critical to the company's future growth and what was not.

Assessing risk and reward

While outsourcing might appear to be an ideal solution for entities desirous of keeping overheads as low as possible and that infernal "head count" down, there are also perils to avoid.

Many studies have been carried out to examine the pros and cons of outsourcing. Booz Allen Hamilton, a leading management and technology consultancy, issued a report in 2014 describing "a mixed report card on traditional outsourcing". It nevertheless pointed out: "Savings typically result because the outsourcing supplier can access a cheaper, more flexible workforce and the latest, most efficient technology. Organizations claim that they achieve, on average, a 15% cost reduction through outsourcing." Datamark Incorporated, which delivers enterprise content management services to Fortune 500 companies, backs these claims. In its 2014 White Paper, it performed single-year and multi-year cost analyses for "individual item" business process outsourcing decisions. Taking a representative sample from the businesses under study, Datamark found cost savings of 31% on a single-year cost analysis, while a three-year study of the same sampled business showed savings of 33%. This obviously represents a very significant decrease in expenditure for some businesses and gives impetus to others to follow this attractive business model.

How ISO can help

Adrian Quayle, outgoing Chair of project committee ISO/PC 259, *Outsourcing*, and Dr. Gargi Keeni of Tata Consultancy Services spoke to *ISOfocus*. Quayle explained that it had become apparent that standards makers would need to tackle the issues now arising from this business practice. ISO/PC 259 was created in response to the wide range of methodologies that developed at the inception of the outsourcing industry. These had invariably, over time, come to cover similar processes and themes. Following a pan-European survey conducted by the Netherlands standards body NEN, a proposal to develop an ISO International Standard was made.

Outsourcing practitioners were looking for a common vocabulary across all industry sectors, including typical outsourcing concepts, to improve the understanding of all stakeholders involved in managing the outsourcing life cycle.

This ultimately led to the drafting and publication of ISO 37500:2014, *Outsourcing*, whose authors were experienced sourcing/outsourcing practitioners involved in deals worldwide.



This new business model
provides multiple benefits.

Great pains were taken to ensure the standard provided a generic and industry-independent foundation, so that it may in the future be supplemented and tailored to suit industry-specific needs.

A collaborative spirit

Among the experts who were called upon, Dr. Keeni was a key contributor. As she told *ISOfocus*, “It was a challenge to accommodate the viewpoints of all stakeholders, in the public and private sectors.” Nevertheless, she praised the collaborative spirit of all, which was key to resolving conflicting points of view over complicated requirements, in particular regarding whether innovation and continuous improvement should be factored into the life cycle, or if the importance of not infringing contractual requirements should take precedence.

Quayle, for his part, explained, “As well as focusing on the common processes and best practices for success, the team put governance at the heart of the standard. Experience has shown that many of the problems arise from the lack of, or poor, governance practices.”

ISO 37500 addresses issues of flexibility in outsourcing arrangements, accommodating changing business requirements. The risks involved in outsourcing are confronted to enable mutually beneficial collaborative relationships.

All sides of the outsourcing industry were invited to participate in the writing of the standard. Although the document is very much sector-agnostic and addresses outsourcing independently of the size of the organization, the experiences gathered by experts from an array of industries, including manufacturing and the information technology enabled service (ITeS), were highly valuable when putting the standard together. No doubt that, as ISO 37500 gains popularity and traction, even more sectors will weigh in and provide their know-how for the next revision of the standard.

Future looks bright

Over the past 25 years, the outsourcing industry has grown from nothing to a multi-trillion US dollar business worldwide. As a consequence, ISO will need to expand its involvement to cover the myriad ways outsourcing is being implemented.

The economies of scale, financial rewards, as well as the flexibility and increased productivity promised by outsourcing, will be a hot commodity for years to come, as the skyrocketing rates of increased outsourcing affect every segment of society.

Initially focused on highly transactional back-office processes or non-critical services, outsourcing now encompasses strategic functions, with some companies off-loading entire segments of their value chain.

So what does the future hold? As outsourcing spreads exponentially throughout the world, issues that have not yet come into existence will inevitably arise. ISO's job will then be to monitor developments and trends and create standardized solutions to help all stakeholders find a way around – or over – the obstacles that block their path. MARY RITCHIE



The ins and outs of outsourcing

Outsourcing is a very topical issue, but one fraught with controversy. While done with the best of intentions to increase company revenues and provide a competitive edge, the business model is often met with suspicion. Some say it results in lower quality of products and services, sluggish turnaround times, and an irate customer base – not to mention disgruntled employees fearing for their jobs.

In practice, however, much depends on how effectively the process is managed. ISO 37500, the first International Standard to deal with the subject, will help make outsourcing a success. Published in 2014, it sets to harmonize communication and improve the understanding of everyone involved in the business of outsourcing. Here, Peter Bannink, Project Leader for ISO 37500, puts a more positive spin on the question.

What has been the benefit of outsourcing?

The outsourcing of services has created a new industry, made possible through all the technological improvements that have taken place over the years.

What motivated the creation of ISO/PC 259?

A number of fundamental issues: globalization, cultural misunderstanding, and the fact that there is no one language on outsourcing in international waters. But also too many “toos”: too much focus on cost cutting rather than added value; too little governance; and too little effort in building sustainable relationships.

What were the areas of expertise involved?

The more the merrier... for a well-rounded consensus! Authors came from very different industries: pension funds, financial services, administration, IT, consultancy, packaging, and energy.

How did you reconcile concerns on both sides of the divide?

Which divide? In a global community there are no boundaries. Companies must seek efficient production processes and knowledge worldwide. We did not create a political document, but a consensus of experts.

What solutions does the standard propose?

Governance on outsourcing is placed at the heart of the outsourcing life-cycle model. Governance is not just about steering processes, it also entails fostering good relationships and creating an effective decision-making process between the client and the provider.

Can outsourcing's poor public image be remedied?

Why? Because of the loss of jobs? This is a temporary situation. We all seek wealth and good fortune. The infusion of good standards and free trade is beneficial to all citizens of our global village. Outsourcing is not an evil, it is a means to spread wealth more evenly throughout the world. However painful this may sometimes be on an individual basis, people are forced to change.

BUILDING BETTER NATIONAL **HEALTH SYSTEMS**



From major disease outbreaks to everyday medical treatment, having the right information in place is vital for any national health system. While global health scares and epidemics are symptomatic of a country's ability to manage its nation's health, minor treatments also rely on having robust information systems.

ISO has published a set of guidance documents for health informatics designed to help strengthen national health information systems. Developed by standards experts from all over the world, ISO/TR 14639, *Health informatics – Capacity-based eHealth architecture roadmap*, offers best practice on the implementation and use of information and communications technology as well as a framework for health authorities to use when building their own eHealth architectures – ensuring their country is fighting fit!

HAPPY STAFF **FOR HEALTHY PROFITS**

The first draft of ISO 45001, *Occupational health and safety management systems – Requirements*, is under development. The budding standard is designed to help companies and organizations around the world ensure the health and safety of their employees.

“According to International Labour Organization (ILO) statistics published this year, around 2.3 million died as a result of work-related accidents or diseases (ill health) in 2013,” explained David Smith, Chair of ISO project committee ISO/PC 283 on occupational health and safety management systems.

So what's the answer? By implementing a strong occupational health and safety management system, organizations can reduce accidents and ill health, and avoid costly prosecutions, while creating a culture of positivity in the organization. Easily the best way to a happy and productive staff!



SECOND-HAND GOODS GET AN A+

Call it a new social trend or an act of anti-consumerism resistance, the trade of second-hand goods is steadily increasing. As we are going through an economic crisis, this alternative consumption pattern is driven by the need to reduce not only costs but also environmental impacts. But does this mean we should compromise quality for price?

Just because a second-hand product is cheaper does not necessarily imply that it should be less performing than a new one. We are not talking here about compromising quality but about reinventing the life cycle between seller or donator and buyer or recipient.

With the assumption that second-hand goods should pose no health, safety or environmental risks beyond those risks generally permitted for new goods, and that their quality, durability, and usability should meet the expectations of a reasonable consumer who has full knowledge that the goods are in second-hand condition, ISO has published a technical specification, ISO/TS 20245:2014, *Cross-border trade of second-hand goods*, which establishes minimum screening criteria when dealing second-hand goods across national boundaries.



NORDIC WORLD SKI CHAMPS GET SUSTAINABILITY TICK

The next Nordic World Ski Championships, to be held in Sweden next year, are set to be sustainable as well as spectacular, with the host having achieved certification to ISO 20121 event sustainability management systems. Audited by the SP Technical Research Institute of Sweden, “Falun 2015” demonstrated that its event management system meets all

the conditions for improved sustainability throughout the event and is in conformity with its stated sustainable development policy.

Increasingly used in major events around the world, including the 2012 London Olympics, ISO 20121 specifies requirements for an event sustainability management system that is applicable to all types of event or event-related activities. The standard is available to purchase from your national ISO member.



With expanding world economies and soaring demographics, the need for sustainable infrastructure is one of the great global challenges of our time.

The subject was addressed head on during two ISO conferences on infrastructure, held recently in London and Singapore.



Building on solid ground

To serve our economies and lifestyles, we need better roads and railways, cleaner water, sustainable energy, bigger schools and hospitals – in short, better infrastructure. Infrastructure is being recognized as one of the key enablers of economic recovery and represents USD 4 trillion a year. Proof of this is that investment in this crucial area has been maintained despite the cuts imposed by austerity.

Regulating the sprawling sector are scores of industry-specific codes and regulations. But with as many standards as there are countries, this is cause for confusion, and there can be no better time to bring consistency to this frequently chaotic arena. Which is why, in October 2014, ISO hosted two conferences in London and Singapore, organized respectively by BSI and SPRING, its members in the regions.

Jacques Lair, Chair of technical committees for sustainable development in communities (ISO/TC 268) and sustainability in buildings and civil engineering works (ISO/TC 59/SC 17), was one of the experts who attended the events. He shares with us some interesting insights on a field that has been the mainstay of his career.

ISOfocus: With half the world's people now living in cities, what are some of the challenges for the infrastructure services sector? How did the recently held infrastructure events in both London and Singapore address these issues?

Jacques Lair: The events in London and Singapore shed some light through examples of major world cities that have developed planning projects centred on the theme of infrastructure. Yet, to my mind, the urban dimension wasn't adequately represented. The approach taken was deliberately focused on big cities that have opted for urban densification rather than urban sprawl.

Is this a true reflection of reality? Can this be considered a universal choice? One only need look at North-American cities to see that residential districts ramble on for miles around the city centre into areas that are increasingly removed from those models described throughout the conference? Is this the correct response to citizens' expectations? Is it a good approach to sustainable development? Government policies aside, user expectations will need to be taken into account in one way or another, though

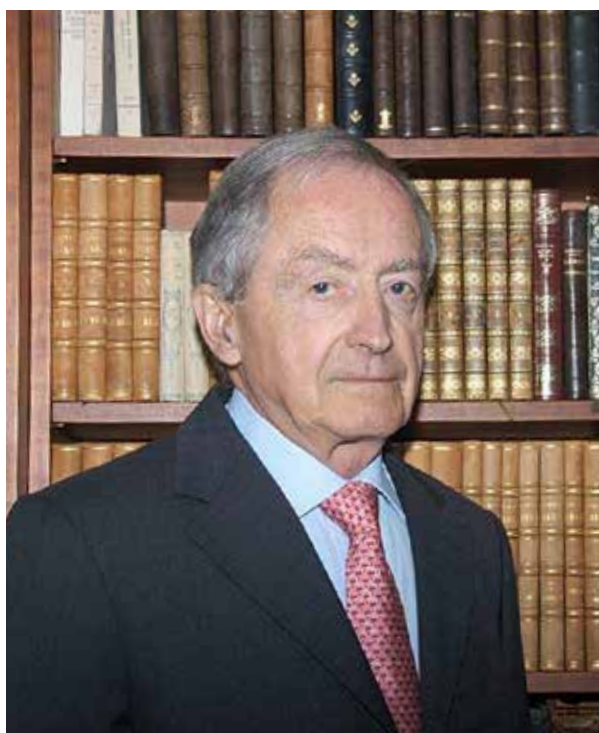
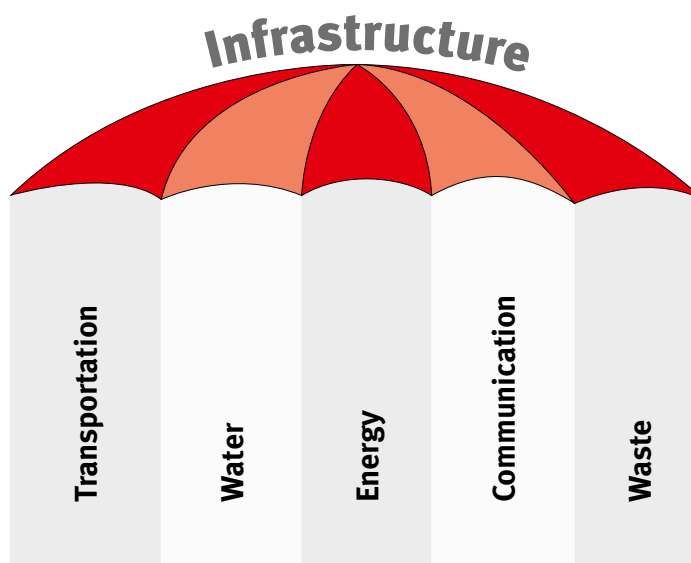


Under the infrastructure umbrella

What is infrastructure? In a nutshell, infrastructure can be seen as the backbone of society. If today you were able to drink a glass of water, drive your car or take the bus, you have infrastructure to thank for it.

Following is a snapshot of the areas it covers.

- **Transportation**: individual private transport, pedestrian areas, cycle paths and roads, public collective transport by road, rail, tram and underground train, etc.
- **Water**: from drinking water to wastewater, including water collection, distribution and wastewater treatment.
- **Energy**: all forms of energy and its production, use and reporting, including side effects and collateral damage (greenhouse gas emissions, all types of pollution) as well as life-cycle assessment.
- **Communication**: all modes of communication, including information and communication technologies.
- **Waste**: waste collection, sorting and treatment.



Jacques Lair, Chair of two ISO technical committees related to infrastructure.

without neglecting citizens' cultural differences and lifestyle habits. I believe that intelligent infrastructures can be considered today at a sustainable cost if they are implemented in highly urbanized and densely populated areas.

The infrastructure & transportation services (I&TS) sector is a diverse global industry that is currently facing widely differing market conditions, pressures and opportunities in its various markets. Could you please elaborate on this?

For industrial companies, the sectors of infrastructure and transport (see above) constitute a business opportunity, and one which is all the more significant given the huge potential for innovation in the short, medium and long term, both on the domestic and international markets.

Arguably, the concepts of infrastructure and smart cities will need to be adapted to the specific social and economic contexts of each country or region. The needs of a city, and the way we accommodate the societal expectations of its citizens, will be fundamentally different depending on level of development, government practices, traditions, philosophical and religious beliefs, and cultural contexts. Future standards will therefore need to be drafted in such a way that users can adapt them to account for all these different parameters.

User expectations
will need to be taken
into account
in one way
or another.

What are the emerging challenges for the future of infrastructure, and specifically for construction companies and infrastructure operators? How can International Standards help?

For a start, this shift can and must give renewed impetus to the construction and urban development sectors. The added value provided by these activities should bring great benefits to companies if they understand the full potential of this transition.

By their very nature, these markets have an international scope, and the larger companies will find themselves competing with their counterparts in other countries. International Standards will of course play a crucial role when it comes to setting the requirements, responding to enquiries and operating such infrastructures, but also when sharing experiences and identifying best practices. They should also open the doors to these markets, which are not simply limited to design and construction activities but also include the maintenance, operation and end-of-life of such networks.

Besides, the Building Information Model (BIM) will open up new opportunities for our businesses, designers and contractors as this rational approach should also allow the integration of the various success factors from the inception, thereby facilitating choices and decisions.

As the Chair of two ISO technical committees, ISO/TC 59/SC 17, *Sustainability in buildings and civil engineering works*, and ISO/TC 268, *Sustainable development in communities*, what for you are the main priorities?

There is no doubt in my mind that both technical committees are closely connected. Sustainable development in communities cannot be envisaged without sustainability in buildings and civil engineering works. How, then, could the content of their respective standards be so radically different?

So far, these two committees have used a similar approach and developed International Standards that are open enough to be easily implemented in all countries. A surefire sign of this is the growing and diverse number of countries, big and small, participating in these committees, hailing from a variety of socio-economic, political and cultural contexts.

Now, on to a more personal question: You have been involved in the building sector for many years. What is it about this field that interests you most? In retrospect, would you do anything differently – or not?

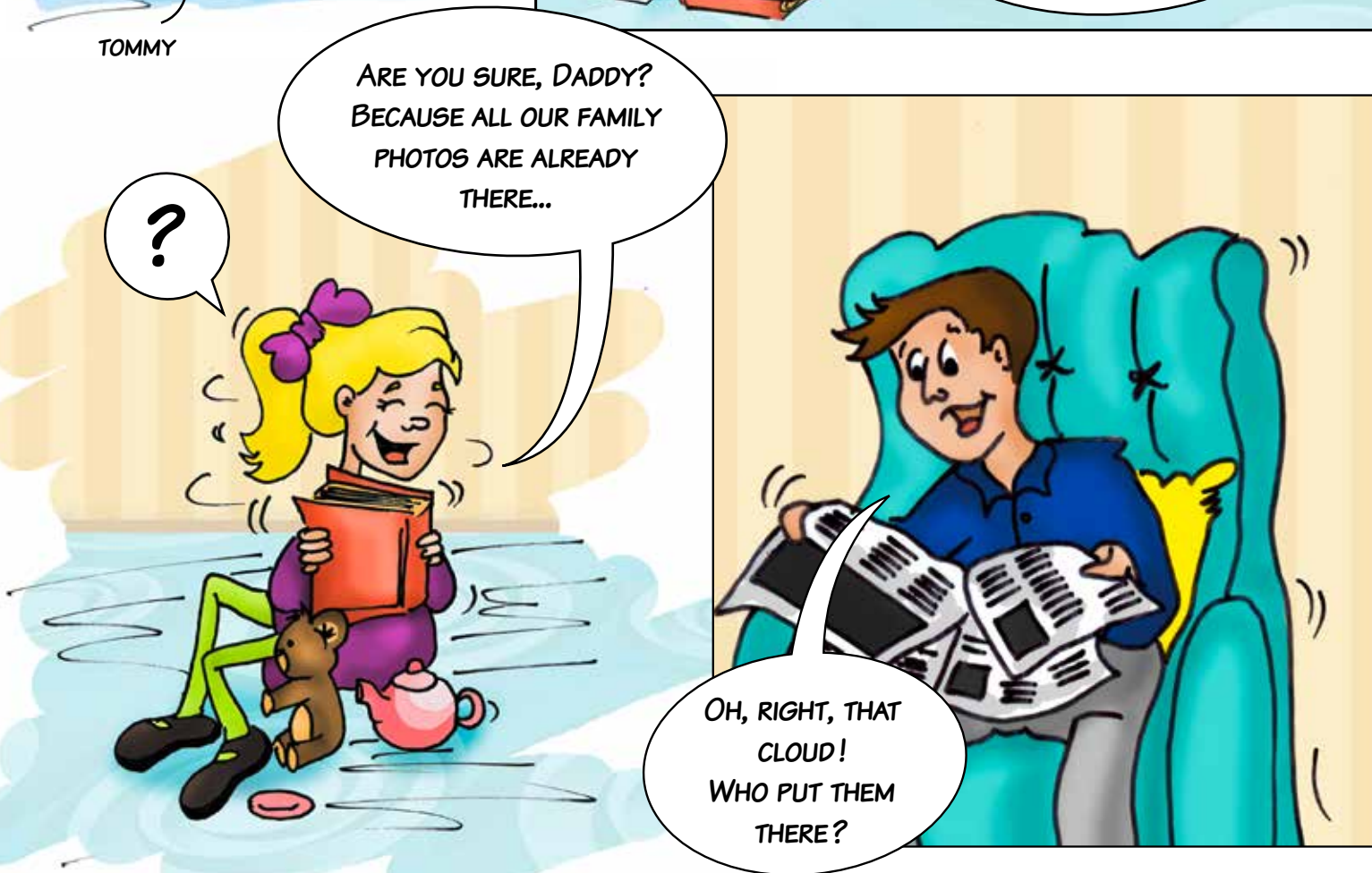
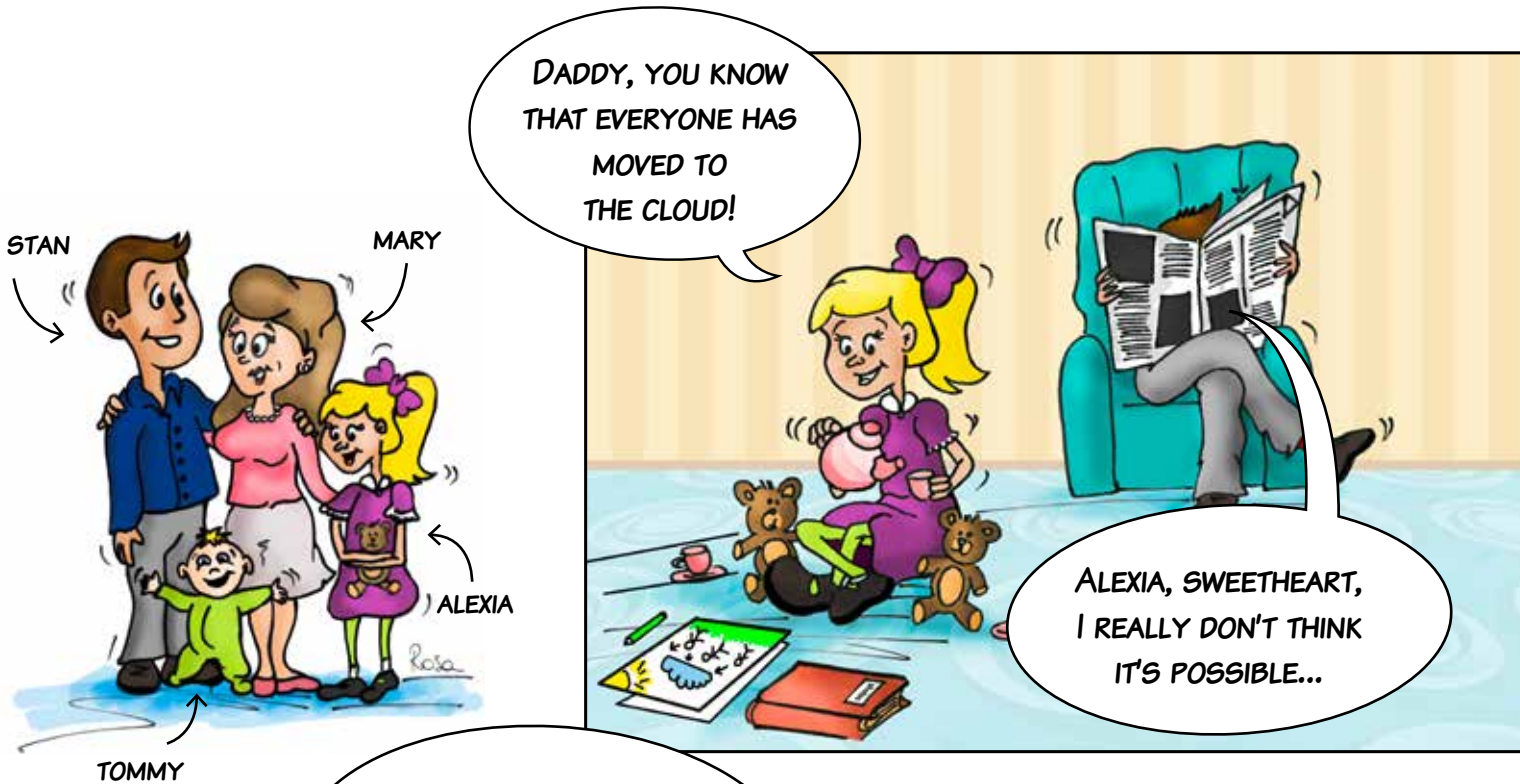
I have indeed been in the building sector for a very long time. I have dedicated my entire professional life to it. Now, retired from business, I try to bring my modest contribution to the most fascinating structure I know: international standardization. What was it I found most interesting about my job? Although every construction process is identical, each constructed object – be it a building or a civil engineering work – is unique. Every day, we create prototypes based on different locations, techniques and periods, and while a significant number of these works may appear to be similar, to us constructors, they are entirely different.

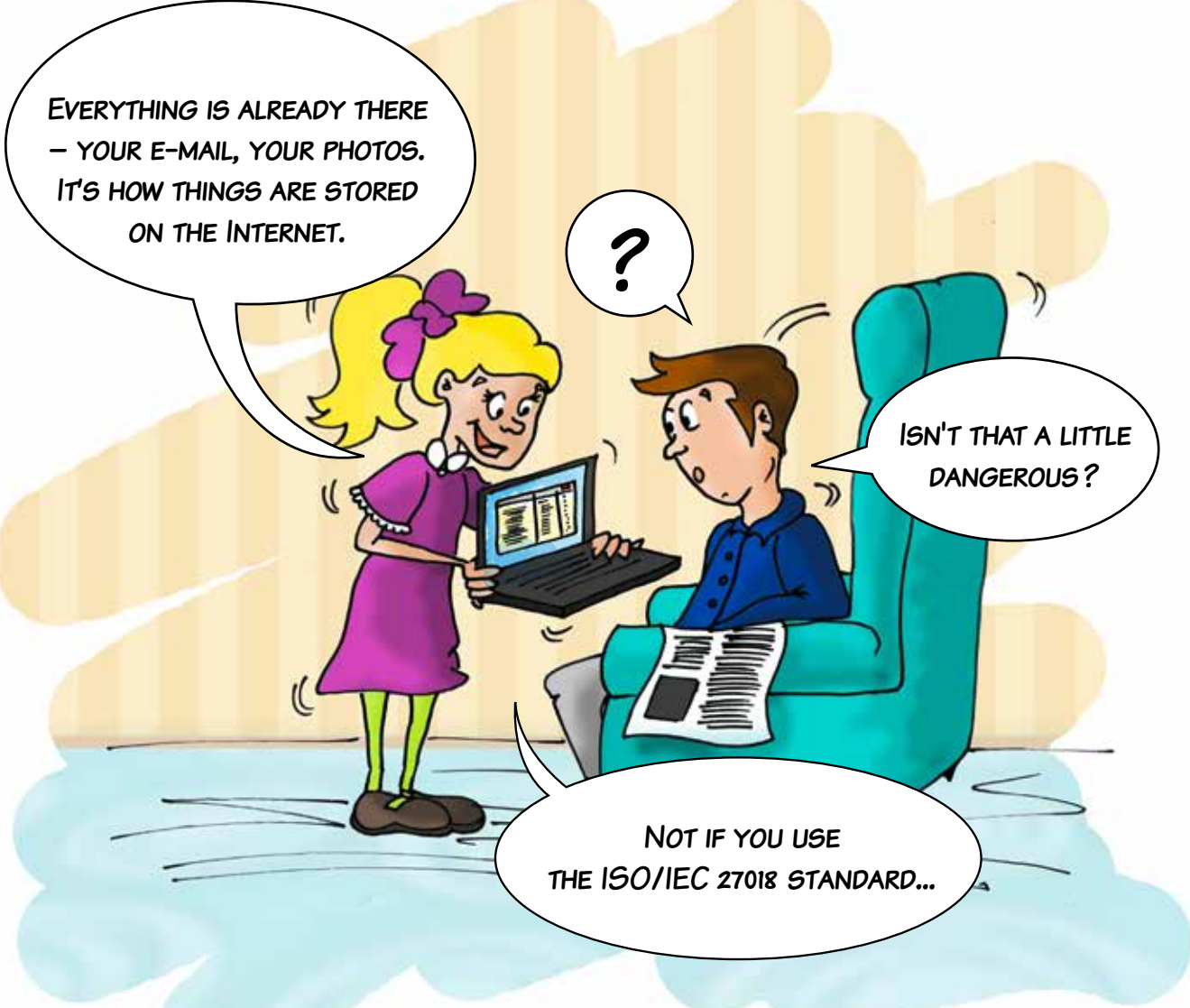
Today, having led many a building project, both in France and abroad, I fully appreciate the importance of standardization, which enables us all to speak the same language and gives us a system of documents and consistent calculation methods to rely on – so we can enjoy fair business and industrial practices and equal opportunities for all.

Of course, if I were to start over, I would do the same again. But with the modern tools available today, this new life would certainly be even more fascinating. SANDRINE TRANCHARD

Alexia adventures

How one little girl changes the world.





A photograph of a modern library interior. The space is filled with tall, dark metal bookshelves on both sides, creating a long, narrow aisle. The floor is made of light-colored wood. In the background, a person is sitting at a long wooden desk, working on a laptop. The room has large windows and a high ceiling with exposed wooden beams and modern lighting fixtures.

Education enterprise



Education is big business in the US. It is not only logical but imperative that higher education get off the sidelines and into the competition. Two leaders of the education facilities industry, Mike Anthony and Rich Robben, explain the importance of standards in the education sector, and why assertive engagement in global standards development has become a necessity.

Boasting a USD 300 billion annual spend, education is big business in the US. Higher-education institutions, in particular, are run like small corporations in order to increase efficiency and effectiveness. Universities are exceptional performers, which would grow as global companies if they were set free in the market to pursue their own destinies. Take the University of Michigan, for example. With operating revenues and expenses that run into billions of dollars at its three campuses, including the University of Michigan Health System and the Athletic Department, this prestigious seat of learning looks more like a megabucks enterprise.

Like all money-making corporations, universities need standards if they are to operate properly: standards for buildings, technology, teaching, and health and safety, to name but a few. But herein lies the challenge. While most industries rely on sector-specific standards, education requires a whole string of standards – spanning business, government and society – to keep its activities ticking over.

McKinsey & Company, a management consulting firm that helps leading organizations across the globe to improve their performance, predicts that just keeping pace with the projected global GDP growth will require an estimated USD 57 trillion in infrastructure investment between now and 2030. Yet this figure could be reduced by as much as 10% to 20% if businesses and entire industries were more engaged in standards development. And campuses are a natural place to start because their “city within a city” characteristic makes them ideal study units for cities of the future.

An unsung industry

Charged with the smooth running of operations and infrastructure at the University of Michigan, the most extensive campus in the US, we are the stewards of one of the largest assets owned by any community – its schools, colleges, universities and hospitals. Unlike most European campuses, where square footage is integrated into the city, US campuses – particularly land-grant institutions – have real footprints of many square kilometres with their own energy production, telecommunications, water management and road systems. Although they are legally separate from the host community, their risk aggregations and economic expectations are as complex as, say, a mega-cap global corporation.



Western Michigan University's solar car team members dismantle their car at the American Solar Challenge (16 July 2012, Ann Arbor, MI, United States).

Given this footprint it is not only logical but imperative that higher education get off the sidelines and into the competition. We inherit a long conversation about how we must combine business acumen with social impact and not let purely commercial operations distract us from our core mission of education and research. But the facts are there. Taking into consideration staff and faculty salaries, the US education industry accounts for about 8% of the gross domestic product (GDP) – that’s twice the US defense budget. In fact, the facilities-only component has an annual spend in the order of USD 300 billion, i.e. twice General Electric’s current annual sales. In light of such figures, we should rank No 3 on the Fortune 500 list!



Education is big business
in the US.

Big and small fish

As stewards tasked with leaving our campuses in better shape than we found them, we are expected to “act like a business”. But businesses need standards to operate successfully, which are the fruit of long, drawn-out discussions among a comprehensive group of market stakeholders. In the education world, however, we lack one important resource: leverage. General Electric, for example, is one of some 300 members that fund the USD 25 million National Association of Electrical Equipment and Medical Imaging Manufacturers (NEMA), which develops the technical standards that support the USD 120 billion electrical industry in the US. The cost of this enterprise is conveyed into every light bulb, motor and smart-grid gizmo we buy. That’s right: an industry less than half our size spends USD 25 million a year on global standardization and innovation processes.

To advance this discussion, we deploy a term of art – incumbent interests – which captures a characteristic of the regulatory landscape known to many of the world’s standards development organizations: the overwhelming presence of incumbent *producers* and *general interests* – which hold a strong market position – relative to the comparative sparseness of the *user interest*, especially from the public sector. Incumbents tend to be manufacturers, insurance and labour organizations that can easily weave the cost of their engagement in standards development activities into the product and/or service they provide to their “customer”.

At the opposite end of the spectrum, the public sector user interest – cities, counties, states, and large universities such as our own – faces a much greater challenge. We too have a customer, but that customer wants public safety, economic development and opportunity, lower cost and higher value. Because of the complexity of the built environment and the quickening of risk, these public safety goals are often at odds with the goals of the balance sheet. We refer to the interest charged with public safety (typically, the building inspector or fire marshall whose budget allocation is by reason undisputed) as the *user/enforcer*. Conversely, those of us running these small cities are known as *user/owners* because, as the final fiduciary for safety and solvency, we are the ones actually paying the cost for the consequences of standards or lack of standards.

Two-tier system

Standardization processes are the most efficient way to reconcile the competing requirements of safety versus economy. Yet the user/owner is not at these consensus meetings because he cannot afford to be at anything near the scale of the incumbents. There is no capacity in the budget to do anything other than “put out fires” and “keep the assembly line rolling”. A University of Michigan study of global standards development bodies revealed that almost all were short on user/owner participation. The most visionary among them – NSF International, Underwriters Laboratories and the National Fire Protection Association – do actually pay the travel costs of users, but only for user/enforcers, i.e. the conformity assessment professionals who will be using their documents.

The scarcity of the user/owner is not the fault of national standards accreditation organizations, it is the fault of the industry itself. As ANSI President and CEO S. Joe Bhatia squarely explained during a presentation at the University of Michigan in October 2014, “If you talk to the CEOs and C-suite executives, they do not have any focus on this subject. Unless and until there is a major economic ramification : either a big order was lost or there was a lawsuit.”

It is difficult to argue that a USD 300 billion industry cannot find even USD 3 million to support a cadre of thought leaders to advocate effectively. In any other sector of the US economy a 100 000:1 payback would be seized with both hands.

How trade associations can help

This is not the only challenge the education sector faces to get its voice heard. No single organization represents the education facilities industry. As things currently stand, the 25-odd non-profit trade associations that service the US education industry are “membership organizations”, which is the very reason they are prevented from evolving effectively in the standards space. Their business model is a “gathering place” that requires incumbents to sponsor conferences, thus presenting a conflict of interest when, as a user, they would frequently be at odds with producers and general interests. What’s more, the US tax code for 501(c)(3) non-profit organizations places nuanced restraints upon engaging directly in political debate with government units, which is where many regulations are promulgated using documents accredited by ANSI, our national standards institute and an official ISO member.

A better way to achieve tangible results for their members would be to become accredited standards developers themselves and to use all the social media tools available to drive value into the industry. This is the model that the University of Michigan has executed for the past several years and it works.

The University of Michigan Law Library is housed in an iconic Gothic building.



Standardization
processes are
the most efficient
way to reconcile
competing
requirements.

Market in balance

Of course, no one knows if a balanced market will take 10% to 20% off the McKinsey USD 57 trillion infrastructure challenge. With a global gross domestic product of USD 75 trillion, we could meet it head on in less than a year if we didn't have to spend anything on food, health, energy and education. So we have to spread our infrastructure spend over many years. How, then, can we spend it most effectively?

Market theory supports the tenet that outcomes derived from broad stakeholder participation lead to better results and are more accepted in the marketplace. But market theory also asserts that everything that can be known is contained in the price. Long before competitive bids are taken, fundamental choices about material versus labour, first cost versus life-cycle operation and maintenance, and safety versus economy are being made in an interdependent network of documents that are the literature of our industry. Step up the number of participants and leading practice discovery is hastened. It happens every day with consumer products. Clearly, international standardization provides the platform for meeting the McKinsey challenge if only we could get one of the largest stakeholders in infrastructure purchase – the education industry – engaged farther up the value chain.

This, unfortunately, is far from easy. The only enterprise that has ever come close to providing education industry leaders with meaningful results in assertive advocacy began at the University of Michigan in 1997 and is still thriving today. It drives value into its own balance sheet by boosting user/owner participation among its peers, encouraging ANSI accreditation by the 25 trade associations that service the industry, and creating accredited standards developers where none exist. Meanwhile, as we persist in our efforts for balanced representation, here are a couple of points for the standards community to consider:

- Identify the user/owner as the final fiduciary in a more granular fashion. It is not sufficient to label them “user” in standards suites that apply to infrastructure because the user/enforcer is also a stakeholder with widely different interests.
- Give national standards accreditation organizations their own ISO standard, which should enable them to identify the complexity of the infrastructure market and provide a framework for resolution of the market imbalance we now face.

Our industry is in the middle of a complicated price journey. Assertive engagement in global standards development is paramount in heavily regulated sectors like education with its multi-dimensional requirements for consensus. We have everything to gain from linking the ideals of the academy with practical business sense. We even have the success of consumer products such as automobiles and computers to draw on for insights into the reciprocal dynamics of standardization and innovation. Which begs the question: To what degree can public sector infrastructure benefit from the engagement in standards development? And to what degree do we fail in our mission if we do not try?

Mike Anthony & Rich Robben

For more information:

- <http://standards.plantops.umich.edu/>
- www.plantops.umich.edu/director/standards/
- [@StandardsUMich](https://twitter.com/StandardsUMich)

FATHER OF ISO/IEC 27001 RECEIVES PRESTIGIOUS AWARD

Leading information security expert Prof. Edward Humphreys is the proud recipient of the Wolfe Barry Medal for exceptional services to standardization over the last 39 years, both in the UK and internationally. BSI's most prestigious standards award was presented at the Standards Forum held at the Radisson Blu in London's Marble Arch on 20 November 2014.

The Medal was granted in recognition of Prof. Humphreys' many significant achievements, not least his active involvement in the UK series of standards BS 7799, parts 1 and 2, for information security, which later acquired international status as ISO/IEC 27002 and ISO/IEC 27001.

Referred to as the "father of ISO/IEC 27001", the professor's strategic vision was also at the root of an information security management certification, and he personally developed the first accreditation standard, which has since been given the ISO/IEC stamp.

Prof. Humphreys has served as Convenor of ISO/IEC JTC 1/SC 27 working group 1, *Information security management systems*, since its inception in 1990. He has also been Chair of the UK mirror committee to SC 27 IST/33 since 1991.



Prof. Edward Humphreys (left) receives the Wolfe Barry Medal from **Dr. Scott Steedman**, Director, Standards, at BSI.



THE BEST OF BRAZILIAN QUALITY

One of quality's greatest advocates is undoubtedly Dr. Nigel Croft, Chair of ISO/TC 176/SC 2 on quality systems. Such is his standing in the community that he was admitted as 39th member of the Brazilian Academy for Quality (ABQ), a non-profit whose members include professionals from academia, industry and other private or public organizations recognized for their contribution to quality engineering, quality management and excellence in management.

The Academy, through its collaboration with academia, business and national and local government, works towards improving quality of life for the Brazilian people. Notable members include former government ministers, corporate leaders as well as respected industrialists and academics dedicated to the Brazilian quality movement.

After graduating from the UK universities of Cambridge and Sheffield, Dr. Croft spent much of his professional life in Brazil. Before being appointed Chair of ISO/TC 176/SC 2 in 2010, he was an affiliate of ABNT, ISO member for the country and Brazilian delegation to ISO/TC 176, for 15 years. The ceremony fittingly took place on World Quality Day 2014 (13 November).

TURNING INNOVATION INTO REALITY

“International Standards are instruments that support technological change, process improvement and technology transfer among sectors and across borders,” said ISO Secretary-General Rob Steele at ISO’s recent International Conference on Standardization and Innovation.

Held at CERN, the European Organization for Nuclear Research, in Geneva, Switzerland, the two-day event was a hub of ideas and innovation, bringing together the cream of experts and academics from a range of subject areas to discuss how standardization and innovation are inexplicably linked.

The programme featured celebrities of the innovation world, including Prof. Didier Pittet, Director, Infection Control Programme, at the University of Geneva Hospitals and Faculty of Medicine, and Consultant to the World Health Organization (WHO), who is the man behind the widespread use of antibacterial gel in hospitals.

Other topics included technologies and the opening of new markets, innovation and business strategy, innovation policies, innovation in the green building sector, and much more.

www.iso.org/sites/standardsinnovationconference/presentations.htmlv



USING ISO STANDARDS TO SUPPORT PUBLIC POLICY

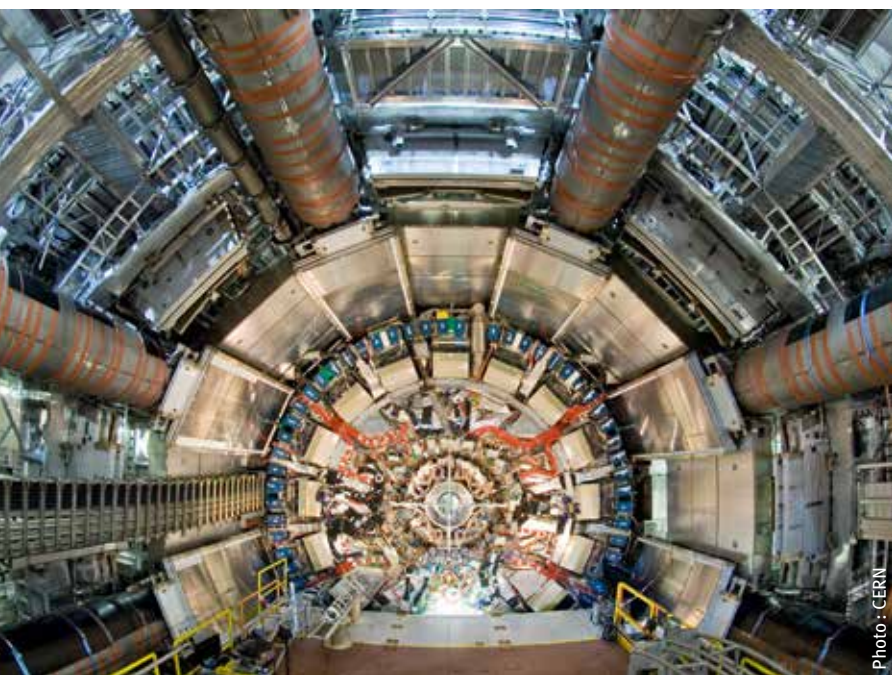
International Standards can be very useful tools in a policy maker’s toolkit. Some potential advantages include: offering ready-made solutions that already have international buy-in, and meeting the obligations of World Trade Organization (WTO) members to reduce technical barriers to trade.

To help policy makers achieve the many benefits of using standards, ISO has recently published a new Website and joint ISO/IEC brochure detailing how to reference International Standards in public policy decisions and regulations. This includes public procurement, incentive systems, or awareness campaigns.

Similarly, ISO’s Committee on conformity assessment (CASCO) has launched a Website that helps policy makers use conformity assessment tools in regulation: www.iso.org/cascoregulators.

Promoting the engagement of policy makers in International Standards development is a priority for ISO and a workshop with policy makers is planned for 2015.

For more information: www.iso.org/policy





Let's talk **#cookstoves**

by MARIA LAZARTE

About three billion people regularly use open fires and leaky stoves, exposing themselves and their families to serious health risks. To raise awareness about the risks of air pollution at home, and how clean cookstoves and fuels can improve health, livelihoods and environmental outcomes, the Global Alliance for Clean Cookstoves organized a Tweetchat on 21 October, exactly 30 days ahead of their Cookstoves Future Summit. The move was supported by experts from ISO/TC 285, *Clean cookstoves and clean cooking solutions*, who are developing standards to address this problem. Here is a selection of what was said that day.



Why are clean cookstoves and fuels important for your organization ?

ISO @ISOstandards

Clean cookstoves solutions can have a huge impact on quality of life, especially for women in developing countries.

GlobalMoms Challenge @globalmomshall

Moms could spend more time on family nutrition/earning \$/ getting more education. Lower risk of burns and respiratory illness.

WorldLungFoundation @WorldLungFdn

Of 10M who die from lung disease, poor home cooking hits the poorest, most vulnerable. 3B at risk!

Shot@Life @ShotAtLife

Many children are exposed to harmful smoke from inefficient cookstoves and suffer from dangerous diseases like pneumonia.

Girl Up @GirlUp

Girls and women can spend up to 5 hours/day searching for and collecting materials for fuel. That time could be spend in school.

MAMA @mamaglobal

The majority of people affected by cooking toxins are women and girls. Clean cooking is critical for maternal health.

US EPA Research @EPAresearch

Cleaner cookstoves save lives, improve livelihoods, empower women and protect the environment.

Clean Cookstoves @cookstoves

The use of wood & charcoal cooking is a driver of deforestation worldwide. Clean cookstoves help our forests.

Climasphere @climasphere


Inefficient cooking releases toxic pollutants like black carbon and methane with major climate impact. Clean cookstoves reduce these emissions.

Climasphere @climasphere

Cleaner, sustainable household energy needs to be part of global energy discussions. Clean cookstoves and fuels are part of the solution.

Radha Muthiah @RadhaStoves

Cleaner and more efficient cookstoves have cross-cutting impacts that align with many other international goals.



What advancements are being/should be made in the clean cookstoves and fuels sector?

GlobalMoms Challenge

@globalmomshall

We must find cooking solutions that honor the way families like to eat! Community input is essential.

+SocialGood

@plus_socialgood

Seeing more cross-sector collaboration on energy solutions like clean cookstoves. For ex, the SE4ALL Summit.

WorldLungFoundation

@WorldLungFdn

Research. In 22 years 1985-2007, only 44 studies focused on indoor air pollution and acute respiratory illness in development context.

Shot@Life **@ShotAtLife**

We have 2 of the best solutions to protect children from pneumonia: vaccines and clean cookstoves.

Girl Up **@GirlUp**

Searching for fuels puts girls' safety at risk. Through clean cookstoves and fuels, more girls can have the opportunity to stay safe.

Clean Cookstoves

@cookstoves

Exciting news: we are now at a point where sustainable, accessible clean cooking solutions exist and are being scaled up.



What more can be done to scale up the use of clean cookstoves and fuels?

WorldLungFoundation @WorldLungFdn

Social marketing to increase adoption – healthy, economically good for family, makes great local food.

Climasphere @climasphere

Keep up the work! Estimates find universal adoption of advanced biomass cookstoves could have an impact equivalent to reducing CO₂ by 25-50%.

Girl Up @GirlUp

Girls need increased access to clean cookstoves. Having an efficient stove that uses less fuel will give girls more time to be girls!

UNA-USA @unausa

We can ensure elected officials know people in their district care about clean cookstoves and want to see the US or kith the UN on the issue.

Project Gaia @project_gaia

It is important for more people to know the benefits of clean energy cookstoves and its impact on reducing toxic gases.



Did you know?

Envirofit Intl @Envirofit

Schools in Kenya feeding 300 children can spend up to 50% of their food budget (\$ 3300) on fuel.

DigitalUnion @TheDigitalUnion

Exposure to cooking smoke causes 4M+ deaths yearly.

Envirofit Intl @Envirofit

Empowered women are 2.7x more likely to be top sellers of clean cookstoves.

Radha Muthiah @RadhaStoves

Dozens of new enterprises entered the clean cooking sector in 2013, providing jobs and signaling the attractiveness of the market.



Photo : Barclays

Barclays **banks**

With their intermediary role in the economy, banks hold a unique position with regard to sustainable development. But as banking and financial services group Barclays found out, having a healthy environmental policy is also good for business.



on sustainability

Today's environmental concerns are altering the landscape in which banks operate. The banking industry has not been seen as a sector with significant environmental impact. Until recently. Due to their efficient credit approval systems, banks are well equipped to weigh up risks and attach a price tag to said risks. And it's precisely through this price differentiation that banks can foster sustainability. But banks can also develop more sustainable products, such as environmental and ethical investment funds. Add to that the huge scope to improve their internal environmental performance and it's easy to see why banks hold part of the answer to greater world sustainability.

Leading the way, British multinational banking group Barclays is committed to greening the industry and has been taking steps to identify, prioritize and manage its environmental risks. How? By implementing a stringent Environmental Performance Evaluation (EPE) using the ISO 14001 suite of standards whose recent additions include ISO 14031, designed to help companies get the best out of their environmental management systems by quantifying environmental information.

Based on a simple model that offers a best-practice approach for sustainability, ISO 14031 identifies three key performance indicators (KPIs) spanning three axes: management (MPIs), operations (OPIs) and the environment (ECIs) (see Box on page 47). To find out more, we asked Emma Page, Director of Barclays' CRES Environmental Management Team, to tell us how the forward-thinking bank did it their way.

EPE in a nutshell

Environmental Performance Evaluation, best known to professionals under the barbaric acronym of EPE, uses key performance indicators (KPIs) to compare past and present environmental performance with objectives and targets in order to extract trends, identify strategic opportunities and evaluate risk. Hinged on one keystone standard – ISO 14031 – it is designed to be a “business as usual” management tool, which fits nicely into your business, regardless of size or structure.

One of the main positives is that it recognizes different types of indicators and how they relate to each other and to distinctive aspects of the organization. Joining up the different management KPIs breaks the “siloesd” approach we practitioners face when trying to put information in perspective and draw meaningful comparisons with past performance, commonly recognized best practice and peer organizations across industry.

The plus for banking

Whilst banking is not the most polluting of sectors through its direct operations (i.e. management of branches and office buildings), banking operations involving the financing of projects and developments from other industries carry much more serious environmental risks. In short, Barclays' greatest environmental impacts arise from the lending and investment side of the business.



Barclays makes significant effort and investment into designing and building its office space.

And this is where environmental indicators – ECIs – come into their own to help manage local environmental impacts in a globally consistent and positive way, such as judicious investment in sustainable operations and technology.

The Barclays way

Barclays works across its operations and regions globally to make a difference. One example of how we use management indicators, or MPIs, is the inclusion of environmental categories in our corporate real estate to promote effective decision making at the top and track the environmental impacts of these decisions. Other indicators include the minimum performance criteria used to tackle potential threats to biodiversity, natural resources and the livelihoods of people in rural communities, in particular East Africa, which help set out our parameters of lending. All MPIs are embedded in our lending and investment assessment policies where adherence to the Equator Principles risk management framework and Green Bonds facilitate decision making and the granting of business loans.

At Barclays, we are also acutely aware of our operational footprint and have been developing stringent operational indices (OPI indicators) to measure our electricity and water consumption, improve our waste disposal and recycling, and, of course, reduce our “carbon legacy”. Significant effort and investment goes into designing and building office space, identifying and tracking reduction initiatives and sharing best practice globally. To better manage our indirect impacts, we also work closely with our suppliers through our Supplier Code of Conduct, encouraging them to improve the environmental burden of their products and services.

Finally, to better monitor its sustainability indicators (ECIs), Barclays has established an Environment Task Force. In a bid to direct capital towards environmentally and socially sustainable economic development, this group has been focusing on several key areas including accelerating the development of environmental products and services.

As a bonus, all these performance indicators are backed by benchmark schemes such as the Carbon Disclosure Project, the Dow Jones Sustainability Index, and the FTSE 4 Good Index, which enhances their credibility.

Comparing apples and pears

EPE is at the core of Barclays' business approach. So how do our sustainability efforts measure up relative to our industry peers? That's a difficult call, really. Comparing EPE across the entire sector is not easy as measurement practices are not identical across the board. Organizations may also include or ring-fence part of their portfolio, or they may use different metrics to benchmark and/or normalize the information. Such "anomalies" can undermine transparency and prevent stakeholders or shareholders from comparing performance in a like-for-like manner.

There would be universal benefits to be gained from harmonization, which can be achieved through adopting ISO 14031. Without a set of formally recognized EPE criteria, adopted horizontally across the industry, organizations risk missing out on the true value of environmental management. What we need is an aligned approach. How else can a company use its environmental performance and sustainability to promote itself? VIVIENNE ROJAS

Solar panels on the roof at Absa Towers in Johannesburg, South Africa, where Barclays has an office.



Photo : Barclays

Performance pays off

A recent addition to the ISO 14001 suite of standards for environmental management, ISO 14031 helps organizations, big and small, evaluate their environmental performance as part of a wider sustainability programme. It uses three measuring indicators to compare the past and present environmental performance of an organization:

- **Management Performance Indicators (MPIs)**, which provide information about the management efforts to influence an organization's environmental performance (i.e. business decisions)
- **Operational Performance Indicators (OPIs)**, which provide information about the performance of an organization's operations (impacts related to the manufacture or consumption products and services)
- **Environmental Condition Indicators (ECIs)**, which provide information about the condition of the local, regional, national or global environment (a baseline for environmental measurement over time)

The standard also takes companies through the crucial process of properly choosing its indicators, by providing typical examples. A down-to-earth and practical concept for a more sustainable future.



ISO members from the Asia region met in Singapore, mid-November 2014, to share ideas on marketing, communication and IT.

The event welcomed 80 members and a number of external speakers and was designed to help national standards bodies meet the challenges of creating awareness about their work, and improving sales and uptake of national and international standards.

Opening presentations highlighted the vast growth the Asia region has experienced in recent years, suggesting that all factors point towards a vibrant market for standards.

For example, a 2014 McKinsey Global Institute analysis reported that “non-harmonized standards and regulations” was one of nine barriers to trading in ASEAN countries, according to survey respondents. In addition, international distributor IHS, who also spoke at the event, explained that as Asian companies move up the value chain, their need for standards increases. “The higher up the value chain, the more expensive fixing errors becomes and using standards can help make sure the mistake isn’t made in the first place,” said IHS’ Matt Sweeney.

With this in mind, ensuring that the region is truly taking advantage of what standards can offer was the main focus of the rest of the event, and a number of members shared their ideas and challenges. Standards Australia highlighted how important it is to keep the message simple when trying to build relationships with important stakeholders. How to engage with “Mum, Dad and the Prime Minister” is an important question to ask, according to Standards Australia’s Adam Stingemore, who stressed the importance of keeping

the message relevant to the audience and concise for the time-pressed!

Standards Malaysia echoed the importance of simplicity, referring to their recent re-branding exercise and a new tagline “Accepted by Malaysians, recognized by the world”. Their creative campaign for World Standards Day, featuring standards superheroes and the line “Together we protect the citizens of the world”, shows how the role of standards can be made understandable to the general public. ISO’s Chinese member SAC presented the steps they were taking to make ISO standards more available to domestic companies using an ISolutions Webstore. This ready-made solution allows ISO members to sell ISO content online in their own markets. SAC have now set about translating the platform in an effort to help Chinese companies through the buying process.

For more information about ISolutions, please contact brinster@iso.org. Japanese member JSA explained how they have created a new marketing unit that cuts across the organization’s activities to help form a stronger relationship with their stakeholders, and Singapore member SPRING highlighted a number of successful awareness campaigns including media coverage, a sponsored series of features, and industry events on infrastructure, building and cities. KATIE BIRD



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