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Your gateway to International Standards



The small-business  
**advantage**



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March-April 2015



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## lead small, think

One thing that's certain in today's uncertain economy is that it's better to make things happen rather than wait for them to happen. Being proactive in terms of small business opportunities is not as easy as it sounds. It takes a lot of time, commitment, labour and determination, not to mention a fearless spirit, both to come to life and stay alive.

Those people brave enough to quit their day jobs and start a new business create financial independence, helping not only themselves, but also the economy and society, by generating jobs and stimulating local economies.

Starting a small business is all about initiative and entrepreneurship. The theory goes something like this: entrepreneurship often kick-starts economic development. Many small businesses are founded not only to provide income based on an existing profession or product, but also as a way to introduce new processes, ideas and products to the market. And, yes, that translates into some big revenues.

You might also be surprised to know that more than 90% of all companies are, in fact, SMEs. What is even more intriguing is that a majority of SMEs are actually micro-firms with less than 10 employees. Hence why many have called them the backbone of the global economy. This is probably one of the world's best kept secrets!

You may ponder where standards fit into this landscape. Are small businesses even using standards? Are they participating in their development? The answer to both these questions is: not as much as they could or should be.

In this issue of *ISOfocus*, we look at how SMEs promote diversification of economic activities, support sustainable development, stimulate innovation and develop entrepreneurial skills, while contributing significantly to exports and trade. We also look at why International Standards are of economic importance, and how SMEs (despite all obstacles) stand to gain most from their use.

Providing effective small-business support should be a keystone of any economy and helping them reap the benefits of using standards should be one of the focus areas. It will require new ways of working together across public and private sectors and an openness to innovative ideas and models. Crucially, in supporting small businesses, we – and by that I mean the International Standards community – should not start from a blank slate but should take into account the best practices already serving small businesses around the world. And there are some great examples featured in this issue!

Regrettably, there is no silver bullet or one-size-fits-all solution. It takes a unique combination of many different factors and players to serve the diverse landscape of the small-business sector. One thing is certain: International Standards are one of the building blocks that help enterprises of all shapes and sizes to work more efficiently, increase productivity and access new markets, while vitalizing and strengthening the economy. Isn't it time we all embrace the small-business community? By doing so, we actively facilitate the positive growth of both our economy and, most importantly, our society as a whole.

# What #access4all taught us

@MariaLazarte  
ISO Social Media Manager  
lazarte@iso.org



## Our first global campaign



**timing is EVERYTHING**

To draw people's attention, we timed the campaign to coincide with a major event related to our theme: **the International Day of Persons with Disabilities.**

**be resourceful**

We developed social-media-friendly videos, an infographic and an article. We also identified existing resources we could reuse, and created key messages. We **shared all this with our members**, who contributed their own success stories, creating a large content database.

**Speak with one voice**

We weren't there to talk about ourselves but to join in a conversation where **everyone talked about their work and their success stories.**

**#access4all** was the first global social media campaign of the standards community. The aim was to leverage the power of the ISO family – a community made up of national standards bodies from 166 countries, over 700 partner organizations, some 100 000 experts and our partners – so that we could jointly maximize our impact. After all, isn't that what social media is about?

For a whole week, ISO and its members, regional standards bodies, international organizations and other stakeholders used a common hashtag to talk about accessibility. The results were impressive. Together we reached over 650 000 unique social media users and made over 2 million impressions (number of times our combined posts were seen). Not bad for a first try!

**stand united**

A common look and feel gave us a sense of purpose and unity.



**create a powerful hashtag**

A catchy hashtag mobilized our audience with a call to action.

**#access4all**

**get "tweet-chatting"**

Live chats can be fun, lively and conversational – and they really get people talking.



**plan ahead**

Announce the campaign **early.**

This gives key participants plenty of time to create/translate content.



**secure buy-in**

Make sure participants agree the initiative is of **value to them.**

We couldn't meet everyone in person, but the **participation rate** was much higher among those we had discussed the campaign with.



**What do THE FIGURES say?**

Over **900** tweets/RTs/posts

Over **650 000** unique users reached

Over **260** users

Over **2 million** impressions

and... **10** languages

# The big business of small companies



*Crowds flock to Portobello Road, London, the world's largest antiques market with over a thousand dealers selling every kind of artefact and collectible.*

Around the world, the small and medium-sized enterprise (SME) sector is a vital engine of innovation and job creation. Understanding the real challenges and opportunities shaping the future of SMEs, then, is a matter of the highest importance.

Small business is – quite frankly – big business. It is estimated that more than 90% of the world's businesses are small and medium-sized enterprises (SMEs). Surprised? Don't be. SMEs are, on average, the businesses that are generating growth, creating jobs, growing faster and innovating more. But most of all, they are a good deal less complicated (structurally) and more efficient and flexible than are large firms.

It's not all a bed of roses though. While SMEs make a huge impact on income, employment and wider economic output, their fortunes have been disproportionately affected by the financial crisis. SMEs are both an engine of job creation and a significant factor in job destruction, making them the embodiment of Schumpeter's "creative destruction", i.e. the disruptive process of transformation that goes hand in hand with innovation. Confirming these observations, an EU estimate alluded to the shocking fact that as few as 50% of firms that started trading in 2001 survived beyond five years.

The question of how to serve SMEs is not new. Many researchers, academics and economists have searched for a winning formula over the years, with mixed results. So the question remains: what can be done to bolster SMEs? There is no magic formula for ensuring there is a thriving global SME community – if so it would have probably been implemented long ago – but the expanded use of International Standards can foster entrepreneurship and help small businesses compete on an equal footing.

## Why small businesses matter

There is no global agreement on the definition of SMEs, but one thing virtually every country does agree on is that they are essential for economic prosperity. Small companies make up the vast majority of businesses in most countries and employ a significant percentage of the global workforce. Although precise data is unavailable, World Bank research across the world's economies has estimated that SMEs consistently form around 95% of existing businesses and employ approximately 60% of private-sector workers. They are also believed to contribute about 50% to world gross value add (GVA).

In the USA, for example, the Small Business Administration identified more than 28.2 million businesses operating in the country as of March 2014, with about 63% of new jobs being created from small business between 1993 and mid-2013. Of these 28.2 million enterprises, most have "self-employed" status, making up roughly three-quarters of the US's total business pool.

## Path out of poverty

According to the United Nations Industrial Development Organization, which sees to the economic welfare of developing countries, integration into the global economy through economic liberalization, deregulation and democratization is seen as the paramount way to triumph over poverty and inequality. Important to this process is the development of an animated private sector in which SMEs can play a central role.

Export specialist Khemraj Ramful, Senior Adviser, Export Quality Management, International Trade Centre, explains how SMEs are essential in poverty reduction programmes because of

their potential contribution to economic growth. By facilitating their access to information on technical regulations and standards, assisting them with meeting the requirements of International Standards and paving the way to competent conformity assessment services, we can help these small-scale firms to thrive in an increasingly competitive global market, so that they can play their part in alleviating poverty. Ramful firmly believes that standards are the solution. "ISO International Standards have a definite role to play in the removal of technical barriers to trade and in assisting enterprises in developing economies that are connected to global value chains. Implementing International Standards can help provide that confidence." But most importantly, he asserts, "For the man on the street, this means that International Standards like the ISO standards can contribute to improving exports, which would have an impact on job creation and poverty alleviation in developing economies."

## As good as it gets

There's both good news, and bad news. The good news is that International Standards provide as many benefits for small businesses as they do for global enterprises. The strategic use of International Standards can make a significant difference to the annual turnover of an SME, sometimes the difference between success and failure.

For smaller firms, some of the benefits of using International Standards include:

- The opening up of export markets as products become compatible on a global scale
- Heightened operational efficiency
- Increased confidence as customers from all over the world recognize ISO International Standards

Be that as it may, for many small businesses, making the decision to participate in a standards development process remains difficult, as managers are typically reluctant to allocate resources to a long-term process that promises, at best, intangible benefits. However, if the company is committed and participates actively in the process, the return on investment can be substantial.

The principal benefits of participation include visibility, in-depth understanding, innovation, competitive advantage, networking possibilities, and opportunities to access potential customers. In other words, non-participation in standardization hands decision making over to the competition. So what's the bad news? A number of recent surveys have linked the low representation of SMEs in standardization to such obstacles as time, personnel or financial resources. According to the 2014 German Standardization Panel, a report on how companies conduct their standardization activities and implement standards, small firms are



Small business  
is big business.



Micro beauty salon in the suburb of Dali, Yunnan Province, China.

hampered by financial constraints that prevent many of them from taking an active part in standards development. According to Knut Blind, Europe's most prominent academician working in the field of standardization, "formal" standards, such as ISO standards, are used in almost equal measure by all of the thousand or so companies involved in this annual survey, regardless of size. There is one exception, however: while the larger companies of this world have the resources to develop and implement complementary company internal standards, smaller companies with fewer resources rely more heavily on the availability of formal International Standards.

For Blind, it is still a challenge to convince small companies to participate in standardization and send people to the committees. "Most SMEs, particularly the smaller ones, lack the necessary resources to commit to long-term strategies and investments, which are only paying back in the future. Their management is largely involved in daily operational practice, and there is no time or money available for activities not directly related to the daily business. They are forced, therefore, to have a short-term view of their business and are limited in reacting to anticipated changes such as future regulations or the development of new standards."

### Not all benefits are equal

Where Blind sees fundamental challenges for small companies, which must be addressed by awareness-raising activities, a number of small businesses are already reaping the profits of standards use. In a recent interview, Isabelle Jacobi Pilowsky of Rentes Genevoises, the oldest contingency-fund company in Switzerland, extolled the virtues of standards. The small company has long been committed to managing its real estate portfolio responsibly using ISO standards, in particular ISO 50001 to control the energy expenditure of its buildings.

The first results are very positive, enthuses Jacobi Pilowsky. "Our target was to cut our CO<sub>2</sub> emissions by 3% and in 2012, we achieved a 4.7% reduction." An excellent initiative for the 30-person company. ISO 50001 allows the institution to set itself targets – and keep to them – such as improving the energy efficiency of their 60-strong building stock and reducing the cost of energy consumption while improving comfort for its tenants.

When asked about advice for other SMEs, Jacobi Pilowsky clasps her hands and exhales. "There's plenty!" she says, listing a score of useful tips which include the need for measurement tools and scorecards to track performance, the constant monitoring of objectives, and training of all stakeholders. For more tips, see "Secrets to energy success" on page 13.

A market stall is the quintessential small business. Pictured here: the Mısır Çarşısı (Egyptian Bazaar) in Istanbul, Turkey.



# THE ECONOMICS OF SMALL BUSINESS

SMALL OR MEDIUM-SIZED

around  
**95%**

BIG CORPORATIONS

around  
**5%**

EXISTING  
BUSINESSES

Source: World Bank

## PRIVATE-SECTOR EMPLOYMENT

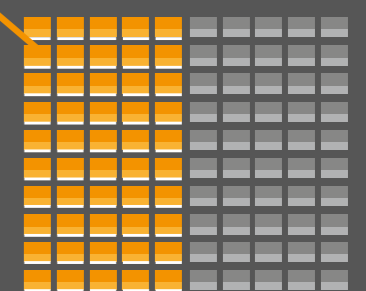


Source: World Bank

## CONTRIBUTION TO WORLD GROSS VALUE ADD

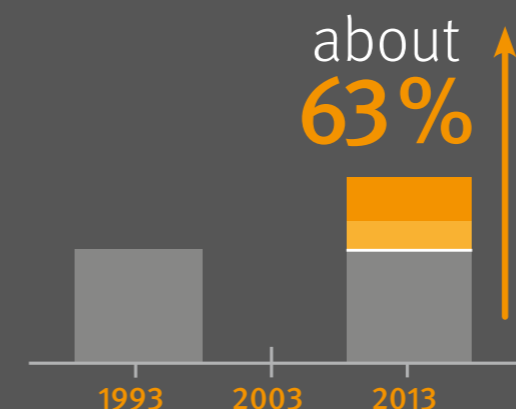
SMALL OR MEDIUM-SIZED

about  
**50%**



Source: World Bank

## EVOLUTION OF CREATED JOBS



## IMPACT ON

INCOME

EMPLOYMENT

WIDER ECONOMIC OUTPUT

While Rentes Genevoises succeeded on its own terms, the role of trade associations in improving the situation for SMEs should not be forgotten. Quite simply, trade associations are “strength in numbers”. A top priority would be therefore to establish or improve relationships with these industry groups, discuss their respective roles, and provide them with knowledge and materials. In Brazil, the non-profit Sebrae helps small businesses compete on an equal footing and get a foothold in the market. It aims to strengthen the national economy, where smaller companies make up an astounding 99% of all Brazilian enterprises and contribute to 25% of the country’s GDP. The organization provides support on many levels, such as information technology and finances as well as on ways to access innovation and technology through standards.

Take, for example, the beauty parlours business. There are about 500 000 legally formalized beauty parlours in Brazil, which, until recently, were operating without parameters or formal standards. This is why, a few years ago, Sebrae (in collaboration with ISO’s Brazilian member ABNT) set up a project to help the beauty sector with their standardization needs. In 2014, the first national standard for the beauty sector – *Terminology for Beauty Commerce* – was published by ABNT. To help the sector’s SMEs get to grips with standards, two supporting documents are also being made available: *Good practices for beauty establishments* and *Competencies of people working in beauty stores*.

“The wave of professionalization initiated by the standardization process was divided into two law bills which regulate the beauty services business in the country (law bills are still in the National Congress),” explains Heloisa Menezes, Sebrae’s Technical Director. “Sebrae, as the coordinator of the process, now has the challenge of disseminating these new technical standards in Brazil, to promote competitiveness and complement systemic improvements already underway with entrepreneurs.”

### Doomed to fail?

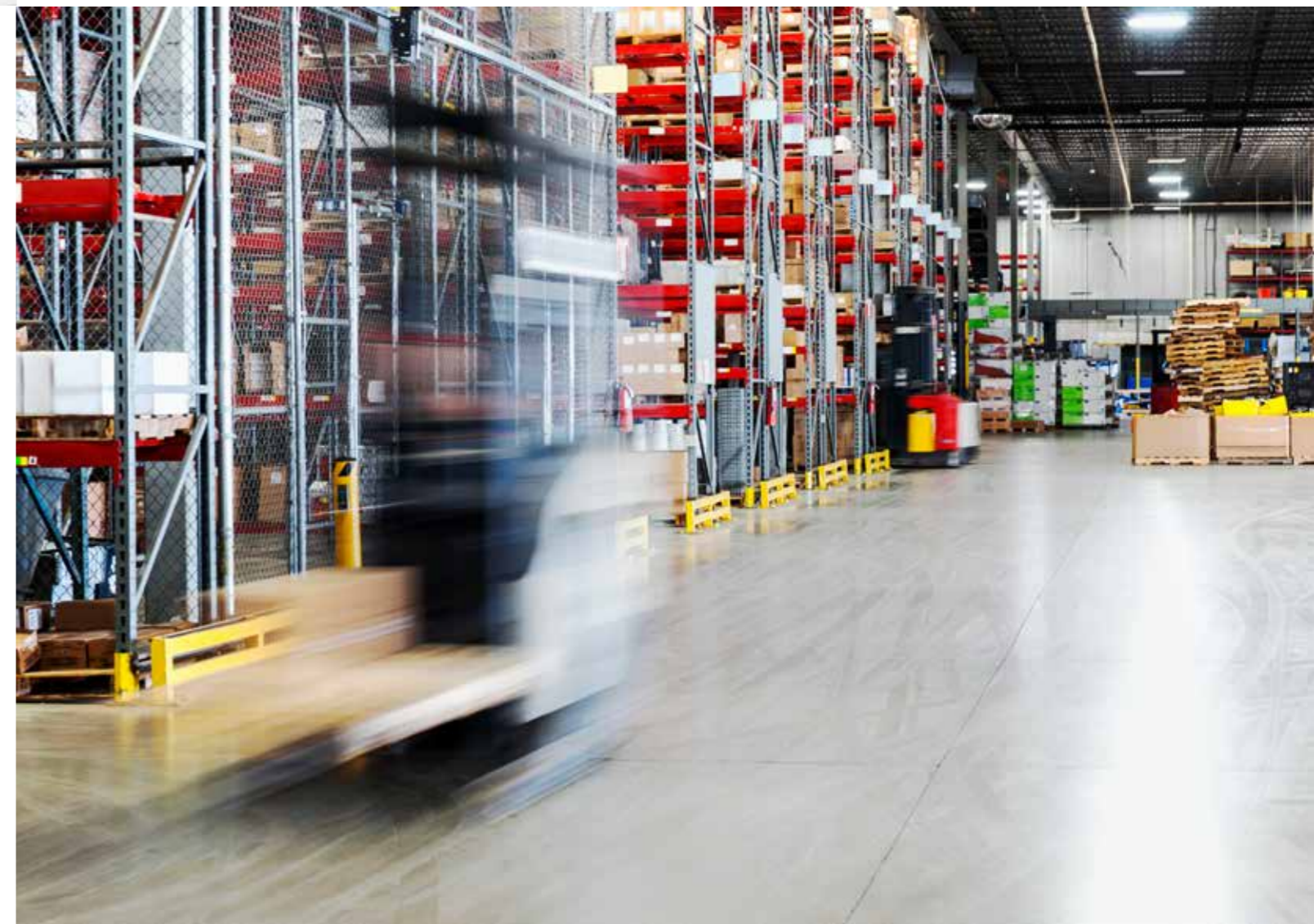
Are all small businesses doomed to fail? The answer is of course “no”. Interestingly enough, a small number of high-growth businesses do go on to reach a significant size and employ many workers. Furthermore, within the cycle of business births and deaths, SMEs expose incumbents to competition and innovation that force them to change and become more productive. That innovative stimulus helps economies grow.



SMEs are responsible for introducing most of today’s products and services on the markets and are typically much better at identifying and adopting new trends than larger, established corporations. They promote diversification of economic activities, support sustainable development, stimulate innovation, develop entrepreneurial skills, not to mention the significant contribution they make to exports and trade. More importantly, they are structurally a good deal less complicated and more efficient and flexible than larger firms.

With small businesses accounting for approximately half of a country’s business and workforce, we need standard solutions that help small businesses leverage their competitive advantage more effectively. While standards will not shelter small companies from failure, nor will they increase their survival rate, they will level the playing field, allowing them to compete on fair and equal terms. And when they do, we can look forward to a new economic map emerging, where smaller businesses play a big role in shaping the world – at last. ELIZABETH GASIOROWSKI-DENIS

We need standard solutions that help small businesses leverage their competitive advantage more effectively.



### Secrets to energy success

Are you an SME wanting to implement ISO 50001?

Do you need help in doing so? Have no fear!

We asked Isabelle Jacobi Pilowsky of Rentes Genevoises to share with us her top six tips:

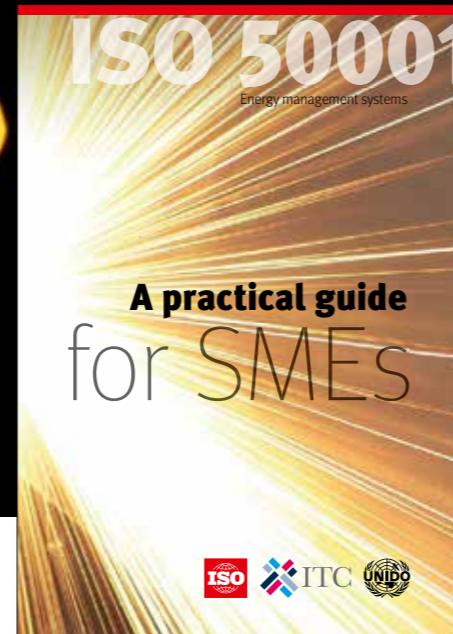
1. Implement measurement tools for energy performance indicators as well as scorecards that are representative of the objectives set.
2. Clarify all processes related to the management of energy resources.
3. Base relationships with partners and suppliers on contracts stipulating the services to be provided and the objectives to be achieved in terms of economies of scale.
4. Train and/or raise awareness of all stakeholders.
5. Formalize and monitor the annual planning of your energy management system.
6. Ensure continual improvements are built into the system.

This should help even the smallest company face the future in confidence.



# Breaking the energy barrier for smaller firms

Energy management and energy efficiency remain largely the preserve of big business. This is why tailored advice for SMEs might help break the energy barrier and open more energy-saving opportunities.



**E**nergy management and efficiency is not just for big companies, small businesses can also achieve big savings. According to the US Department of Energy, small buildings consume almost half of overall energy use and have the potential to save approximately USD 30 billion annually. Since energy, environmental and operational savings are so great, it is no longer a question of whether a business can afford to upgrade, but whether it can afford not to.

Liam McLaughlin, a leading expert in the subject of small businesses, and principal author of the ISO/ITC/UNIDO handbook *ISO 50001 – A practical guide for SMEs*, explains why tailored advice for SMEs will help them cut costs, be less impacted by future variations in energy prices, and make their business more sustainable long term.

**ISOfocus:** What are some of the energy challenges SMEs face today? Are there any misconceptions?

**Liam McLaughlin:** With pressures on to remain competitive and reduce costs, SMEs – like most companies – are looking for ways to become leaner and meaner with their energy use.

Here's the thing. SMEs may think that energy management and energy efficiency are for big businesses with lots of extra resources/money to invest, as well as the technical know-how to reduce energy cost. This, however, is not the case. In reality, few organizations “naturally” have the necessary technical expertise in that area.

What's more, it is often easier for SMEs to implement these principles than larger organizations. This is because a small business usually has fewer layers of management, and therefore less bureaucracy, making it simpler and faster to make changes and improvements.

**Why is targeted advice for SMEs important?**

It is important for SMEs to realize the potential of energy savings and other benefits. They frequently do not know where or how to begin, often steered by advice rather than by the best financial return in terms of cost and benefit. This is where targeted advice enables them to develop a

SMEs are looking for ways to become leaner and meaner with their energy use.

better understanding of where energy is being used in the organization and how savings can be made.

**What do we need to know about SMEs?**

SMEs may have a perception that improved energy efficiency involves compromising other areas such as safety, productivity, comfort or quality. This needn't be so, particularly if a practical and sensible approach is taken.

International research, not to mention my own experience, has shown that there are non-energy benefits in addition to cost savings through improved operation and control of energy using dedicated systems. These non-energy benefits include enhanced comfort, increased productivity and quality, and reduced maintenance costs, just to name a few. They result from an improved understanding of how equipment and systems work.

**Any tips to SMEs?**

There are plenty, but I will focus my advice on two areas: management and technical.

**Management ideas:**

- Be open to changes in work practices.
- Get support from top management.
- Assign clear roles and responsibilities for those involved.

**Technical ideas:**

- Understand where and why you use energy.
- Understand how your energy consumption varies. Does it vary from day to day or week to week? Why? Or, more importantly, why not?
- Measure and work out your baseload. This means understanding why you use energy when there is little or no activity in your company, i.e. at night or at weekends or during periods of no production. This can be measured by taking manual readings of your electricity and fuel meters.
- Keep metrics and reports as simple as possible.

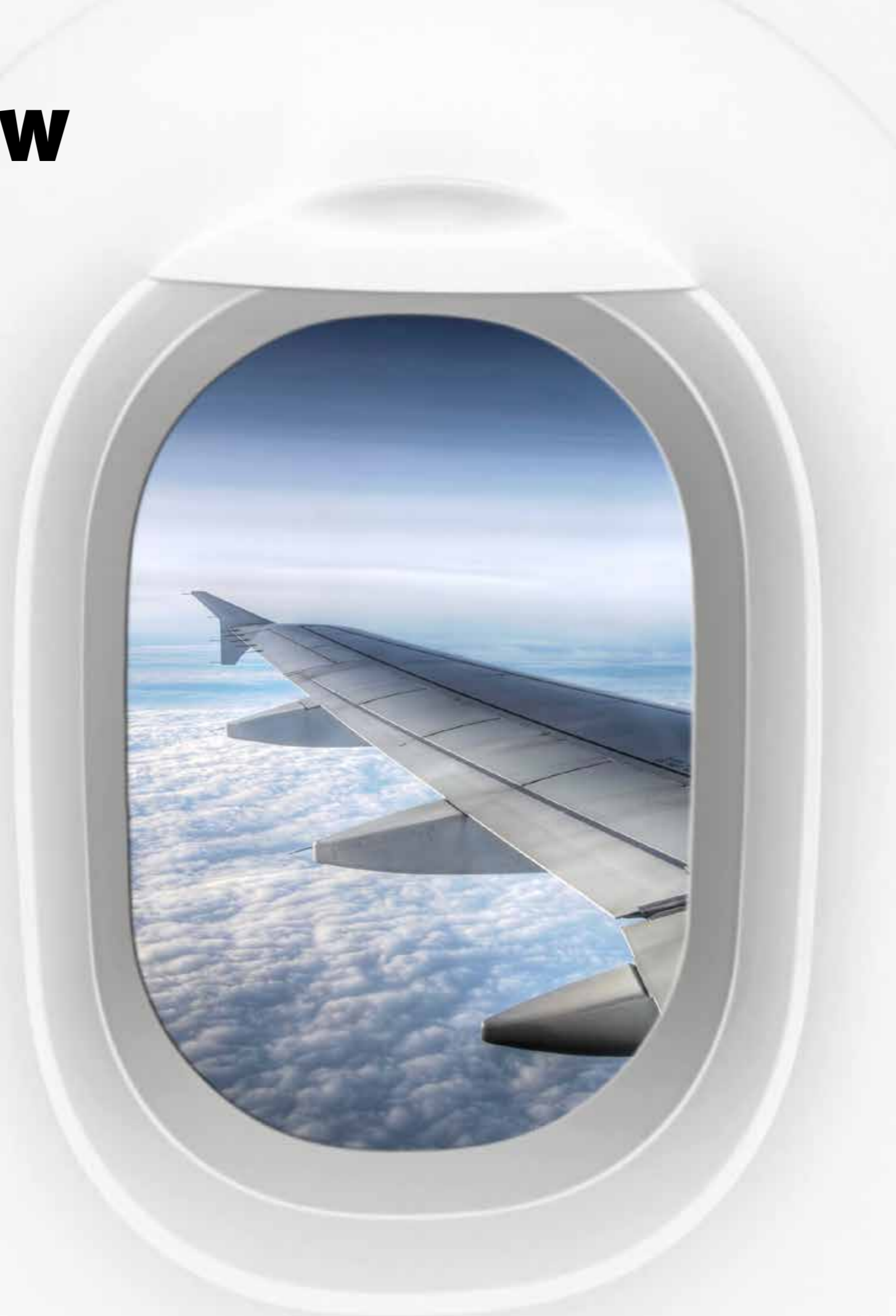
So don't feel daunted, get energy-saving!

# Dawn of a new space era?

Is the dawn of the space revolution over, or are we teetering on the brink of a new chapter?

Rusty Rentsch, Chair of ISO/TC 20, *Aircraft and space vehicles*, shares his thoughts on the aerospace spaceflight industry and its future.

Fifty-four years ago, on 12 April 1961, the age of manned space exploration began when Soviet cosmonaut Yuri Gagarin (then only 27 years old) orbited the Earth aboard the Vostok 1 spacecraft. This historical moment symbolized man's conquering of the final frontier, ushering in a new era in space exploration and scientific discovery. To commemorate the anniversary of this momentous endeavour, the United Nations dedicates 12 April as the International Day of Human Space Flight. Before Gagarin's mission, events such as human space walks or the creation of orbital space stations were beyond anyone's imagination. But during the last few decades, spaceflight missions have been bringing technological and scientific achievements that – in one way or another – are being used in society every day and everywhere. But is the dawn of the space revolution over, or are we teetering on the brink of a new chapter? We decided to ask Rusty Rentsch, the new Chair of ISO/TC 20, *Aircraft and space vehicles*, for his thoughts on the aerospace spaceflight industry, the future of the robotic spacecraft, groundbreaking innovations and missions, and how standards on the horizon will play a key role in the current space era.



**ISOfocus:** As we celebrate this month the 54<sup>th</sup> anniversary of the first international human spaceflight, it's fair to say that this is also a celebration of the aerospace world as a great example of global cooperation, even amongst political rivals, for peaceful purposes. How do you view some of the success in aerospace innovation as a global collaborative effort?

**Rusty Rentsch:** Like many people, I am in awe when watching an airplane fly, seeing a rocket launch, hearing a jet engine reach its maximum thrust, or watching a human being walk in space. It is amazing that over the many millennia of mankind's existence, it has been a mere 110 years since we proved we could overcome gravity with powered flight, and only 54 years since reaching beyond Earth's atmosphere.

Global collaboration and international standardization have played a significant role in continuing achievements to push the envelope of the possible. It is no surprise to me that scientists and engineers who share this passion do so without labels of nationality; they focus their energy and collaborate on new technologies allowing for man's advancements in knowledge and capability.

One impressive example of this success is the International Space Station. The international partnerships responsible for the design and construction of the station and its ongoing achievements demonstrate our ability to work together without borders for the benefit of humanity.

**Rusty,** very few people may realize how much innovation in the aerospace sector finds its way into everyday life. What kinds of things have you seen, not just in standards, but in your work with the Aerospace Industries Association (AIA) in the USA?

Many aerospace innovations have made their way into everyday life. Many of these we take for granted. Good examples include getting directions on your smartphone or Global Positioning System (GPS), looking up the local weather forecast, or watching the Olympics on television. Very few realize that these daily activities would not be possible today without satellite and communication technology.

I still find it amazing that my smartphone knows my location, which helps me look for nearby goods and services. I am also fascinated that through links of satellite information, I can within seconds look at doppler radar on my personal device to assess the duration and intensity of a pending storm. While these might seem

to be minor personal conveniences, extrapolated over the global population and enterprise applications, you can comprehend the significant benefit of these innovations.

The AIA, which participates in ISO work through ANSI, ISO member for the USA, advocates for many issues that ultimately benefit the world. The AIA believes policy makers must ensure there are robust and balanced aerospace research programmes, not only for the substantial benefit of America, but also for the resulting unmanned aircraft systems and airport infrastructure. As a trade association, it also advocates for increased funding for NASA – a unique agency that both inspires young people with amazing discoveries and creates innovations that often make their way into everyday applications.

The AIA is also a member of civil aviation organizations involved in advancing substantive goals that improve air transportation fuel efficiencies and will assist in reaching carbon-neutral growth from 2020 forward. Through the International Coordinating Council for Aerospace Industries Associations (ICCAIA), it has joined world airlines, airports, air traffic management organizations, and business aviation in supporting these targets. ICCAIA works, under the International Civil Aviation Organization (ICAO), to develop a meaningful CO<sub>2</sub> standard for new civil aviation aircraft.

Lastly, the AIA participates in international groups that are facilitating the interoperability of business systems and processes using the ISO 10303 series of standards, whose protocols it sees as the path to interoperability and long-term archival and retrieval of data.

**As the AIA holds the Secretariat of ISO/TC 20 on behalf of ANSI, what are some of the key issues you are following in the industry today?**

While aerospace is very competitive from a company and national perspective, it is also a global community. The AIA's mission is to ensure the success of the US aerospace industry, which relies



*Rusty Rentsch, Chair of ISO/TC 20, Aircraft and space vehicles.*



Boeing forecasts  
more than 36 000  
new airplanes by 2033.

on international partnerships, customers and language. In turn, it is important to the success of non-US aerospace manufacturers that there is openness in the US market. Therefore, the focus areas of ISO/TC 20 align very well to the objectives of the AIA. The technical committee ensures that internationally accepted standards exist for the design, construction, test and evaluation, operation, air traffic management, maintenance and disposal of components, equipment and systems of aircraft and space vehicles, including issues related to safety, reliability and the environment.

**For those unfamiliar with ISO/TC 20, it is worth noting that two new subcommittees have been developed on unmanned aircraft systems and airport infrastructure. What are your thoughts on the relevance of these topics as part of the global aerospace agenda?**

We are very excited about the launch of the two new subcommittees for unmanned aerial systems (ISO/TC 20/SC 16) and airport infrastructure (ISO/TC 20/SC 17), both of which are relevant topics for ISO/TC 20 and the global aerospace industry. In particular, the unmanned aerial systems (UAS) sector is an emerging growth opportunity for aerospace. The scope of applications for UAS is expanding rapidly, for both military and commercial purposes. Online shopping companies such as Amazon and Google envision a UAS delivery service capable of delivering small packages in a short time frame. If this comes to fruition, there will be a need for more standards. There are many organizations and countries developing standards for UAS. ISO/TC 20/SC 16 will not duplicate those standards; rather they will find opportunities where there are needs and gaps for UAS International Standards.

Airport infrastructure will address important standardization topics such as: “grooving” of landing and take-off lanes; asphalt paving; vertical signalling, and electric-electronic board signalling. It is important for pilots of international flights to encounter common infrastructures and communication boards at all airports. ISO/TC 20 is looking forward to the work programmes offered by these subcommittees.

**Lastly, what do you see as a general strategy for companies in the aerospace sector in the short and long term, especially in terms of collaboration? Do you think there are opportunities for smaller countries or smaller companies to play a bigger role in the aerospace sector and in ISO/TC 20?**

Short- and long-term forecasts see exponential growth in the commercial aerospace industry alone. The IATA Airline Industry Forecast 2013-2017 expects demand to expand by an average of 5.4% compound annual growth rate (CAGR). Boeing forecasts more than 36 000 new airplanes will have to be produced by 2033 to meet this demand and replace retiring aircraft. This means that industry will have to find more efficient ways to produce new aircraft and support equipment, airports will have to expand capacity and workforce will have to increase to operate said equipment. Technology and standards will play key roles in meeting growth demands. I believe that this will drive the need for new entrants of companies and countries into the aerospace market. Certainly, one could expect this will drive opportunities for smaller countries to enter the aerospace industrial base. If this happens, I hope that these new country entrants will consider being part of ISO and ISO/TC 20.



# The Arctic's black gold

Forget the North Sea and the Middle East, it is the frozen oceans of the Arctic which are the next great frontier that companies such as Statoil are exploiting. The Norwegian company, the petroleum industry, authorities and other implicated parties are bringing together all their expertise to ensure this vital venture is done with one objective in mind: *safety first* in a cost-efficient manner.



The never-ending quest to find new deposits of fossil fuels has pushed far north. But wildcatting – the drilling of wells outside known oil or gas fields – is out of the question in such fragile ecosystems. A delicate balance must be maintained between protecting the pristine environment of the Arctic and finding and extracting the natural treasures that lie within its bowels. As if that weren't enough of a challenge, the cost of such exploration and exploitation must not be so prohibitive that it renders the endeavour futile.

The Norwegian petroleum industry, authorities and other implicated parties are bringing all their expertise to bear on this vital, and controversial, venture. Extensive studies have been carried out to evaluate the safety of practices. These surveys are conducted not only to ensure drilling is not wreaking havoc on the environment, but that the

people working in the field, in such extreme conditions, benefit from the greatest protective measures.

*ISOfocus* interviewed the key actors in the sector – Statoil, one of the world's largest petroleum companies with operations in 36 countries, and the Norwegian Petroleum Safety Authority – to shed light on the issues involved.

## **A petroleum giant**

Norwegian energy giant Statoil doesn't easily get cold feet. Created from the merger of three major Norwegian petroleum companies in 1999, it is the largest operator on the Norwegian Continental Shelf with 60% of total production. Hermod Johansen, Safety Manager of Statoil, explained to us the work his company is carrying out in the Arctic.

Norway's ambition is to stimulate competition through standards.

Statoil has been involved in petroleum operations in the Arctic for many years. In 2014, it drilled three wells at 73° north. "That's as far north as we've been," said Johansen, underscoring the company's pioneering spirit. But, he clarified, there are three regions in the Arctic. These are known as the "Workable Arctic", e.g. the southern Barents Sea and East Coast Canada; the "Stretch Arctic", e.g. the north-eastern Barents Sea; and the "Extreme Arctic", e.g. North-East Greenland.

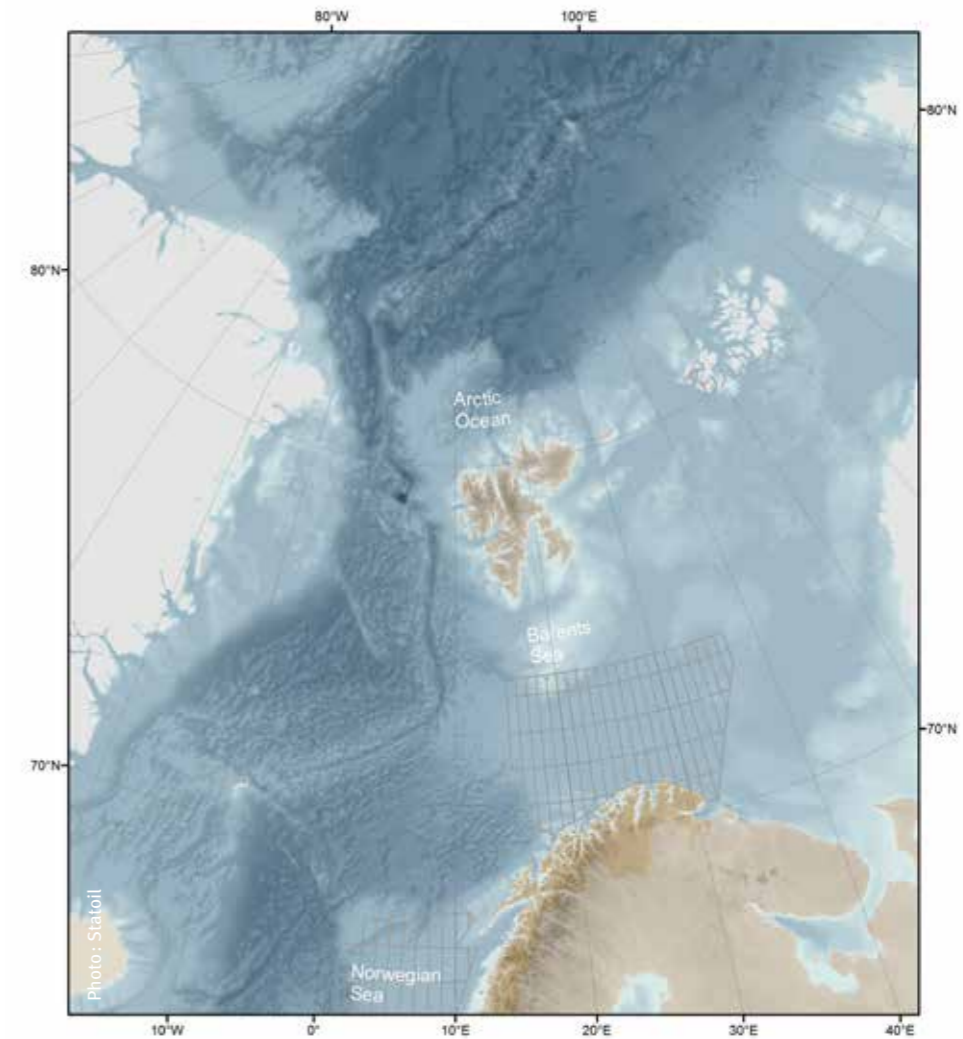
### Challenges in the Barents Sea

Conditions in the Barents Sea are extremely challenging owing to the great distances involved, limited infrastructure and communications, and environmental concerns. Temperatures are extreme and factors such as the winter darkness, atmospheric factors, polar depressions, fog and sea ice must be taken into consideration.

Johansen is adamant: "When we drill in the Norwegian part of the Barents Sea at 73° north, it will initially only be in the summer, and here we draw on knowledge from the industry in the US, Canada and Russia. We believe in partnership and cooperation, and we must find cost-effective solutions in the Arctic, otherwise it won't happen."

Statoil's safety expert speaks from a place of knowledge as the company was responsible for drilling the first well in the Barents Sea in 1980. Since then, they have been involved in 98 of the 109 wells drilled there, and have been the operator for 72 of them. As Johansen concludes with well-deserved pride, "We think it's fair to say that we're a company with considerable experience in this region."

And experience they certainly need to mete out solutions to many potential disasters. "Our planning allows us to scale our emergency response capability according to the results of our environmental risk assessments," asserts Johansen. In Norway, we have a very robust oil spill response capability in NOFO (the Norwegian Clean Seas Association for Operating Companies), which is a recognized, leading, efficient and robust oil spill response organization. It coordinates operating companies, Norwegian local authorities and the fishing industry in oil spill operations.



The industry has also learned a lot from previous incidents and implemented this into its contingency plans. In fact, Johansen is quick to state that Statoil wouldn't have planned drilling at all if they hadn't felt confident that they had the right response capability in place if something unexpected should happen. Safety measures underwent great scrutiny. The exploration wells were designed to reduce the risk of a blowout. A number of barriers within the well would have to be breached before any oil could escape to the surface.

### Safety first

Because crude oil and natural gas are hot and highly pressurized, their extraction is subject to much regulation. Roar Heum, Manager, Business Area Petroleum, at Standards Norway, says, "The Norwegian Petroleum Safety Authority (PSA) is an important contributor to national and international oil and gas standardization."

The PSA is an independent government regulator with responsibility for safety, emergency preparedness and

the working environment in the Norwegian petroleum industry. Norway's regulations for petroleum operations offshore and on land are risk-based, and give great emphasis to principles for reducing health, safety and environmental risk. For the PSA, the principle of tripartism is important and standardization should be a suited arena for this. Cooperation between unions, employer organizations and authorities is, according to the PSA, a prerequisite for developing robust regulations and standards.

How safe, then, is Arctic exploration? Svein Anders Eriksson, Section Head, Petroleum Safety Authority of Norway, puts our mind at rest: "The overruling requirement in petroleum regulation is that activities shall be safe and performed prudently with no harm to people, the environment or assets."

The industry's step-by-step approach to drilling operations has provided valuable experience and knowledge to standardization organizations and to regulators. It is important that the lessons from current activities be captured in standards in order to allow others to perform activities in similar regions and provide a basis for further exploration.



Photo: Harald Pettersen/Statoil

## Across borders

Standards are the foundation for keeping the petroleum industry at the cutting edge of innovation. Jacob Mehus, Acting Managing Director of Standards Norway, gives us the details. “As the Norwegian standardization body and member of ISO, Standards Norway is engaged in bringing Norwegian oil and gas technology to the world. Standardization offers an independent and open arena for the public and private sectors, helping all parties.”

Norway’s ambition is to stimulate competition through standards to help make the Norwegian Continental Shelf (NCS) competitive and attractive for investment and to encourage exports.

It is also essential for Norway to maintain good relations with her northern neighbours, fostering a common understanding of potential risks and arriving at joint, harmonized solutions. Says Mehus: “If a blowout should occur on the Russian side in the North, it will also be catastrophic for Norway. The safety level will increase if we agree on joint solutions that have been prepared by the best experts we all have. Standardization offers a great forum for this.”

## Strategic standards

When Jonas Gahr Støre, former Norwegian Minister of Foreign Affairs, proclaimed it essential that the same standards be applied by both Norway and Russia in their activity on the Barents Sea, he also stressed the importance of industry endorsing standards which would be drafted by the most competent experts. ISO was the obvious forum to reach these objectives. And sure enough, in 2011, ISO technical committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, subcommittee SC 8, *Arctic operations*, was created in Moscow.



Conditions in the Barents Sea  
are very challenging.

Photo: Helge Hansen/Statoil



Photo: Trond Isaksen/Statoil

Specific technical requirements can slow or hinder the development of innovative and safe solutions. For this reason, responsible parties need guidance on practical solutions that meet regulatory requirements. Such guidance is provided in International Standards. Industry is able to develop and revise standards at a quicker pace than is possible for authorities to revise regulations with specific technical requirements.

Given the reality that the petroleum industry is global, the PSA currently makes reference in its regulations to 160 standards and other normative documents. Of these, 40% are currently International Standards.

Eriksson explains the rationale for this: “Reference to International Standards in our guidelines presupposes that they provide an acceptable level of health, environment, safety and emergency preparedness so that the petroleum industry can assume compliance to the regulatory requirements by applying the recommended solutions in the standards. International Standards should also ensure added value and cost-effectiveness for petroleum industry development and operations on the Norwegian Continental Shelf.”

As for Statoil, the main benefits of being actively involved in standardization are that it provides the company with

access to experience, a good general overview, influence and the opportunity to establish a broad network. As an actor in the standards arena, Statoil can both influence and ensure the transfer of international expertise. For the oil conglomerate, this means a phasing out of national industry standards in favour of International Standards.

## New frontiers

So what’s on the northern Arctic horizon? The world’s demand for energy sources remains largely undiminished. Countries in the developing world have now joined the energy race. And until reliable and cost-effective alternative fuels can rival petroleum as the black gold standard to power the planet, exploration and exploitation must continue... with all the consequences this implies for people and the natural environment.

But with the help of ISO’s International Standards, we can make this inevitable process as painless as possible for the environment, as lucrative as possible for industry and as safe as possible for those souls braving one of the planet’s most extreme environment to bring the world the petroleum products it demands. MARY RITCHIE

## CAPTURING FREIGHT CARBON

With more than half the world's CO<sub>2</sub> emissions generated by the transportation sector, a new International Workshop Agreement (IWA) from ISO represents a major step towards reducing emissions from freight transport.

As billions of tonnes of goods are shipped around the globe to meet consumers' seasonal tastes and demands, international freight transport has become increasingly important for worldwide deliveries. According to the US Environmental Protection Agency (EPA), of the 28 % of greenhouse gas emissions produced by the transportation sector, approximately 30 % come from freight. Without action, the threat to the environment may only worsen.

The IWA 16 defines the framework for coherent methods to quantify CO<sub>2</sub>e emissions of freight transport (total and intensity). It provides a gap analysis identifying starting points and recommending further specification and possible alignment on mode-specific and intermodal levels, including transshipment centres and warehouses.

The IWA is the result of a workshop kicked off in Berlin, Germany, in July 2014, and hosted by DIN, ISO member for Germany. It sets the stage for all transport stakeholders to innovate and find more environmentally efficient solutions.

IWA 16 is available from ISO national members ([www.iso.org](http://www.iso.org)) or the ISO Store.



## WATER AND SUSTAINABLE DEVELOPMENT

ISO's portfolio of more than 19 000 standards includes at least 430 which, directly or indirectly, support the objectives of this year's World Water Day on the theme of "Water and sustainable development".

Held annually on the 22 March, World Water Day is a United Nations initiative and, this year, it will focus on the need for sustainable solutions for the future.

International Standards developed by ISO can contribute to the objectives of World Water Day 2015 because they provide global tools to help us manage our shared water resources equitably and durably.

ISO 14046:2014, for example, provides guidelines on how to measure our water footprint while ISO 24510:2007 explains how to identify the water needs and expectations of users and assess if these are being met.

## HOW TO BANK ON STANDARDS

If there is one area where you can bet your bottom dollar that standards make a difference, it's the financial industry. A testament to this is the recent surge in uptake of ISO 20022, ISO's financial services family of standards.

As the industry adjusts to doing business with more and more regulations and restrictions, it increasingly recognizes how standards can help by providing clarity and consistency to a highly complex field. Now part of the regulatory landscape, ISO 20022 was a key topic at the Sibos Forum, the world's premier financial services event. Based on Extensible Markup Language (XML), it provides a system for encoding the messages that form the basis of electronic transactions in the financial sector.

The standard is useful for financial services organizations and end users such as corporates, software developers, government agencies, regulators and tool vendors, when exchanging financial data. And with soaring volumes of financial transactions and increasingly sophisticated messaging, adopting ISO 20022 has never made more sense.

## ENERGY ADVICE FOR SMES

Rising energy costs and ever-growing demands make energy efficiency a priority for businesses, both large and small. Energy bills are very often a significant part of an SME's budget. A new handbook ISO/ITC/UNIDO will help.

Written to be used in concert with the International Standard, *ISO 50001 – A practical guide for SMEs* describes the requirements of ISO 50001, providing further guidance in the form of concrete examples on how to plan and implement energy efficiency measures, often without the need for investment in new technology or systems. And considering the high number of SMEs in any economic sector or supply chain, collective efficiency improvement measures can have a major impact on energy costs for the sector and the nation at large, as well as substantial benefits for the environment.



## UN GLOBAL ROAD SAFETY WEEK

Firmly committed to road traffic safety, ISO is providing major support for the Third UN Global Road Safety Week, held in April this year.

Road accidents are a leading cause of death among young people, so this year's theme "children and road safety" (#SaveKidsLives) is particularly timely. The road safety week aims to raise awareness of children on the world's roads; generate action to better ensure their safety; and promote the inclusion of safe and sustainable transport in the post-2015 development agenda.

ISO has developed over 200 standards related to the specific subject of road safety through its three technical committees: ISO/TC 22, *Road vehicles*, ISO/TC 204, *Intelligent transport systems*, and ISO/TC 241, *Road traffic safety management systems*. What's more, ISO 39001:2012, *Road-traffic safety management systems – Requirements with guidance for use*, has the potential to make an immense impact on the development of traffic safety and diminish a major public health problem across the world.

## MAKING IT HAPPEN FOR WOMEN

"Make it happen" is the theme of this year's International Women's Day, which aims to encourage effective action for advancing and recognizing women. Since its inception in 1911, International Women's Day, which is held annually on 8 March, has prompted thousands of events to mark the economic, political and social achievements of women.

Standards play a key role in promoting gender equality and ensuring women are equally represented, celebrated and valued in many areas and industries. In fact, it is one of the key factors for the establishment of ISO 26000 as an essential ingredient in social responsibility. With ISO standards, we can all "make it happen" and step closer to a world where gender inequality no longer exists.



# China's crusade for **anti-piracy**

Engaged in the fight against copyright piracy and counterfeit standards, the Standardization Administration of China (SAC) has successfully dismantled a number of nefarious online networks, ensuring standards users get the real McCoy. Mr. Guo Hui (SAC) and Nicolas Fleury (ISO/CS) tell us more.

Widespread use of the Internet has significantly increased the number of standards copyright violations.

When it comes to the protection of intellectual property rights, China has had its work cut out. In recent years, widespread use of the Internet has significantly increased the number of standards copyright violations, which can leave a company at risk of using illegal copies of standards. Yet the quality of a country's goods and products is crucial for competing on international markets, and intellectual property infringement is seen as a threat to economic success – and to the successful application of standards. China is no stranger to this notion and has made substantial efforts to curb these online practices.

So in October 2010, a special campaign was set up, dubbed “Sword Net Action”, to deal with Internet copyright piracy. During a special operation, a total of 512 complaints and reports from all over the country resulted in 190 administrative cases and 93 (presumably criminal) judicial cases. In addition, 137 sets of servers and related equipment were confiscated, and 201 Websites were referred for shut-down. The less traditional forms of piracy, such as the infringement of copyright in industrial standards, received considerable news coverage.

## Campaign for copyright

There are two main reasons for protecting the copyright of International Standards. The first is that a large portion of the standards development process is financed through revenues from the sale of standards and the commercial exploitation of their content. According to market research consultants Outsell, standards sold by national and international standards bodies amounted to USD 515 million in 2013, much of which was ploughed back into standardization activities.

The second, and less obvious, motivation is to ensure people have access to the genuine and most up-to-date version of a standard that exactly reflects the consensus reached in the technical committee. Rampant piracy undermines the authority of standards and threatens their validity, misleading consumers and resulting in major trade disputes (over food safety issues, agricultural hazards and other similar problems) and huge losses.

## China in action

Clearly, the unauthorized copies available on peer-to-peer or file exchange platforms on the Internet or on Webshops are problematic. Here's one example: Chinese Web services companies such as **baidu.com**, the second most popular search engine after Google, and **docin.com**, employ a “digital coin” system, which allowed



## Baidu removed more than 500 000 illicit documents, while Docin deleted over 160 000 illegal copies of ISO standards.

users to upload thousands of pirated standards to their digital libraries. The coins earned may then be used to “purchase” English-language and Chinese translations of textbooks and other written material.

Determined to stamp out the problem, SAC, ISO’s member for China, took action to crack down on copyright piracy, which resulted in Baidu removing more than 500 000 illicit documents, while Docin deleted over 160 000 illegal copies of ISO standards.

Measures took many creative forms: **doc88.com** implemented a new screening application that automatically shields the upload of illegal copies; **baidu.com** devised a unique “DNA anti-infringement” system to compare the contents of official and illegal copies; and **docin.com** used a clever “keyword filtering system” that automatically searches and deletes illegal copies. As for **3dportal.cn**, it simply closed down its Standards Forum, explicitly banning users from uploading counterfeit standards.

Complaints were also treated very seriously, with Baidu opening a real-time “green channel” ensuring the grievances of copyright owners can be dealt with as soon as they are received. Docin, for its part, established a special team with a fast-track procedure to address complaints of illegal standards.

### The Chen and Wang Affairs

Around the same time, a number of Websites selling unauthorized standards were identified through the combined efforts of ISO and its members, including SAC. Together with the Chinese authorities – agencies such as public security, the procuratorate and the culture enforcement department – SAC gathered hard evidence of the illegal sales of pirated ISO standards taking place on these Websites.

A public prosecution ensued, initiated by the People's Procuratorate of Lucheng District, Wenzhou City, and on 21 November 2012, a Mr. Chen was found guilty of the crime of copyright infringement for illegal profit and sentenced to one year in prison, a two-year suspension and a fine of USD 30 000. His illegal earnings were confiscated. In September of the following year, suspicious activities uncovered by ISO led SAC to investigate yet another case of online infringement involving **pdfstd.com**, a platform



Illegal reproductions of standards confiscated by the Chinese Authorities.

selling illegal copies of International Standards. This time, the Shanghai Public Security Bureau set up a special team to deal with the case. After months of intensive investigation, and with ISO’s support, SAC, the Public Security Ministry and the National Copyright Administration of the People’s Republic of China (NCAC) identified a suspect – a Mr. Wang, who was duly arrested.

Evidence showed that Wang and his partners in crime had rented four virtual servers overseas and set up five Websites – including the by now infamous **pdfstd.com** – through which they had sold over 100 000 pirate copies of International Standards. In October 2014, Wang was sentenced to three years in jail, a four-year probation, and a fine of USD 30 000 for the crime of copyright infringement.

### When government gets involved

Of course, such results would never have been possible without the resolve of the Chinese government and its nationwide crackdown against intellectual property rights infringement and counterfeit goods. Coordinating operations was the National Leading Group on the Fight Against Intellectual Property Rights Infringement and Counterfeiting, which served as the linchpin between several



Mr. Wang receiving a three-year sentence for copyright infringement.

national authorities and agencies. Together, they developed a method of investigation that proved highly effective in uncovering standards piracy.

Finally, in 2013, conscious of the need to use original copies of standards for goods and services produced in China, the government added standards copyright protection to the list of “ten targeted cases” recorded under the “Sword Net Action” campaign against online piracy, signalling its determination to protect the integrity of International Standards.

### Pushing precedents

The legacy of these court cases was huge, generating unprecedented public interest. Riding on their success, SAC used these examples with the news media to educate people about copyright policies and laws, explain the importance of respecting intellectual property rights and working with standards from authorized sources.

The “Zero Tolerance for Infringement of International Standards” report published in *China Press* and *Publishing Journal* garnered an overwhelming 212000 views on the Internet. And as one of Sword Net Action’s most critical cases, the Wang story made national headlines in major news agencies and television channels across the country – including CCTV, Beijing Television, and China News Service – as well as in online media.

### Leveraging World Standards Day

In an attempt to rally international sympathy to its cause, SAC – in collaboration with China’s Administration of Quality Supervision, Inspection and Quarantine Department (AQSIQ) and the National Copyright Administration of China (NCAC) – used the opportunity of World Standard Day (WSD) 2014 to promote the need for copyright protection in International Standards. In a Workshop held in Beijing on 21 October, China declared its moral obligation – as a



*Mr. Guo Hui, Vice Administrator of SAC, and Nicolas Fleury, Director at ISO/CS, presenting accolades to representatives of Chinese Authorities in Shanghai.*

The “Zero Tolerance for Infringement of International Standards” report garnered 212 000 views on the Internet.

permanent Council member of ISO – to protect International Standards against piracy.

The following day, as part of the WSD activities, the Shanghai Copyright Administration hosted a seminar in Shanghai to explore cases of piracy and infringement. ISO and SAC’s positive experience in combatting piracy at the international level helped drive home the relevance of policies for protecting International Standards. All were hopeful that, through concerted action among all interested parties in the fight against standards copyright infringement, the Chinese experience might be replicated globally in years to come.

### Stronger together

Is the golden age of copyright piracy almost over? China and SAC have indeed come a long

way in recent years. In a letter of gratitude to its Chinese member, ISO Secretary-General Rob Steele praised the efforts of the Chinese government to protect International Standards, stating: “The actions taken significantly reduced further damages that could have occurred for ISO and certainly contributed to the copyright protection of ISO standards in China and worldwide.”

Yet the fight is far from over. Some “pirate” Websites are notoriously difficult to pin down. Cleverly feigning innocence with registered domain names and foreign-based servers and payment platforms, they willfully engage in illegal activity on the homefront. So can piracy ever be stopped completely? Probably not. This is not a prophecy of gloom, however, and the Chinese experience might just be the dawn of a new global collaboration.

*Mr. Guo Hui, Vice Administrator of SAC, speaking at the Seminar on International Standards Copyright Protection in Beijing.*



# Stakeholders in Singapore **engage for standards**



*Choy Sauw Kook, Assistant Chief Executive of SPRING Singapore.*

Photo : SPRING

Ongoing engagement with stakeholders is integral to the Singapore Standardization Programme.

Here, Assistant Chief Executive of SPRING Singapore, Choy Sauw Kook, explains how stakeholder engagement helps the national standards body respond to shared challenges, drive improvements and strengthen collective action.

**E**ngaging with stakeholders is crucial to the success of any business. Not surprisingly, at SPRING Singapore, ISO member in Singapore, stakeholder engagement enables us to move forward with our priorities, ensuring that our strategy is aligned with the opportunities and issues that are most relevant in the markets where we operate. But, most importantly, stakeholder feedback guides our development and business strategy. This is why ongoing engagement with stakeholders is integral to the Singapore Standardization Programme. It is taken into account in all components: the structure and organization of the national standardization programme; the appointment of industry associations leading standards development and promotion; and the identification of new areas of standardization and work items.

### **Benefits of collaboration**

As Singapore's national standards body, we administer our standardization programme through an industry-led Standards Council, which advises us on the policies, strategies and initiatives of the national standardization programme. It comprises eminent individuals from the business community as well as senior management from key government agencies that leverage on standards to fulfil their policy objectives.

We, at SPRING, work closely with the Council to set up standards committees that include a broad range of

stakeholders: industry associations, professional bodies, universities, government agencies, consumer bodies and the private sector to oversee the standardization needs of our diverse economy, which range from biomedical, marine & offshore, bunkering and food manufacturing, to banking, IT and tourism.

Some 1300 technical experts volunteer their valuable time to participate in the various standardization initiatives as well as in the 150 ISO technical committees. Thanks to their engagement, the standards developed have made a significant impact on our industry.

A case in point: in 2003, we worked with regulators, professional bodies and industry associations in the building and construction sector to develop 2D computer-aided design standards for the construction industry. These standards have helped transform the industry, moving from paper-based filings to electronic submissions of construction-related drawings. A recent case study estimates that cost savings of more than SGD 320 million have resulted for the industry over 10 years through the adoption of these standards.

Our structure and organization helps provide a foundation for a strong private-, public- and social-sector partnership in our standards development, promotion and implementation work. Some 40% of our national standards are referenced in various technical regulations to ensure public health, safety and environmental protection. This has been made possible by engaging public agencies in our work.



Photo: SPRING

ISO Secretary-General **Rob Steele** (front row, third from right) and industry stakeholders discuss management systems standards in Singapore.

Our stakeholders  
are the cornerstone  
of our success.

### Outreach efforts

For our process to be effective, we like to cast a wide net. Hence, we have also partnered industry associations and professional bodies to lead the development, promotion and implementation of standards. To date, two industry associations and one professional body from the manufacturing and building and construction sectors were appointed as standards development organizations (SDOs) to manage some of the standards committees.

These SDOs tap into their large networks and close connections with industry to gather inputs for the standards developed. Many of their members form a new pool of technical experts in various standards committees. They have also broadened outreach efforts to more companies through seminars, conferences and workshops, creating a sprawling and dynamic thought community. The result? A runaway success. Over a three-year period, SDOs doubled industry's participation in standards development and reached out to more than 3000 organizations.

Together with the SDOs, we work with universities and polytechnics on standards education initiatives that enable students and young professionals by giving them the necessary knowledge about the strategic role and value of standards.

### Anticipating new needs

SPRING engages existing and new stakeholders in strategic planning sessions, industry dialogues, conferences and pro-tem committees. These enable us to identify standards to facilitate new growth areas, raise productivity, improve resource efficiency as well as support safety and social needs.

In 2014, for example, we organized a regional conference with the ISO Regional Office in Singapore and the public and private sectors. The event aimed to develop a roadmap of new ISO standards to support the infrastructure sector in the Asia-Pacific region over the next decade.

These regular stakeholder engagement platforms help us anticipate and keep pace with the standardization needs of industry and government agencies. Other examples of new work items include the development of standards for additive manufacturing, robotics, electric vehicles, nanotechnology and the Internet of things.

### All about stakeholders

Our stakeholders are the cornerstone of our success. They are actively involved in the promotion of standards through events such as new standard launches, exchange or awareness events, as well as quality and standards conferences. Since many of them are volunteers, we proactively recognize their contributions through annual standards partners award events, and national-level awards. We also regularly feature their work in various media, magazines or even promotional videos.

As a national standards body, we believe it is important to build a sustainable and win-win partnership with various key stakeholders and ensure their participation in our national standardization initiatives. The pay-off is well worth it: tangible benefits to Singapore, its economy and society as a whole.



Photo: SPRING

Silver Industry Standards Committee Strategic Planning Session – Identifying new standards to promote active ageing in Singapore.

# Lactis takes energy to **new heights**

At last milk that tastes good and saves the planet!

The Moldovan dairy producer Lactis implemented ISO 50001 for energy management systems and has made significant improvements in its energy consumption. Today, the small company reveals how it all came about.



The air intake for the boilers was optimized by installing manual closers, leading to one boiler being switched off completely.

Lactis S.A. is a dairy in the Moldovan town of Rîșcani. The company processes milk and produces fresh dairy products, solid, semi-solid and melted cheese, and butter, under its own trademark “Lactis”. Energy usage is notoriously high on dairy farms, so Lactis decided to focus on energy efficiency and started to implement ISO 50001 for energy management systems (EMS) in 2011. The result was impressive: its electricity consumption was reduced by approximately 4% and natural gas consumption by around 22%. *ISOfocus* asked Gheorghe Angheluta, Managing Director of Lactis S.A., to share the company’s recipe for success.

**ISO focus: What were the main steps taken to implement ISO 50001 in Lactis?**

**Gheorghe Angheluta:** One of the first steps in the implementation phase was to identify the biggest energy consumers, so we set up a monitoring system to collect and analyse data. Relevant drivers were earmarked and linked to production and energy consumption figures. The

results were revealing: the energy guzzlers were identified and could be eliminated immediately. **Savings: 4 300 kWh with no financial investment**

One striking example of this can be seen in our compressors, which are very energy-intensive. The installation of 11 second-hand electrical meters allowed us to measure their consumption and plan for the individual production areas. Now, unusually high consumption is detected immediately and changes are made accordingly. **Savings: 8 000 kWh, payback in one year**

Productivity has also increased, much to our delight! We originally had two boilers working in parallel to supply the production process, but with some clever organizational changes, we were able to switch off one boiler completely. Now, there are no peaks in steam consumption but a steady supply, and the remaining boiler operates more efficiently. **Savings: 229 000 kWh, no investment costs**



Photo : Lactis

Gheorghe Angheluta, Managing Director of Lactis S.A.

We also identified that hot water was being produced 24 hours a day, even though it is only needed during daytime hours. Nowadays, water is heated strictly during production times.

**Savings : 140 000 kWh, payback period one month**

Conversely, the cool water feeding the refrigeration system is required throughout the year. Initially, a constant amount of water was pumped from storage containers outside the building to the individual areas. However, our cold water needs change according to the season and in summer there is a higher need for cooling than in winter. The water was supplied using one pump, located in the centre of the basement, which is perfect for the water quantity consumed in summer but oversized for the winter. We therefore installed a second smaller pump that significantly reduced electricity consumption in the winter months.

**Savings : 15 000 kWh, payback period 4 month**

**How was this made possible?**

With help from the United Nations Industrial Development Organization (UNIDO) programme, and sponsorship by the Global Environment Facility, Lactis was able to implement ISO 50001.

**Have you seen ongoing improvements? If so, can you give an example or two?**

Yes, improvements have been ongoing. So far in 2014, we have reduced our electricity consumption by around 2% and natural gases by approximately 5%. We have seen enormous benefits, both in our economic performance and for society and the environment in general, by simply scaling down our consumption of resources and curbing emissions.

**What is the most important advice you would give other SMEs?**

The main thing for anyone – including SMEs – to realize is that this is no easy ride. The decision to implement an energy management system is an important one, particularly at the plant level. It is essential you hire a skilled expert to help with the implementation.



Photo : Lactis

Electric motors were dismantled and operation was adjusted to the real pumping needs.



Photo : Lactis

Old electric meters were installed to facilitate individual measurements.

The main thing to realize is that this is no easy ride.

**About Lactis**

Lactis S.A. is an open joint-stock company producing and selling dairy products, of which about 15 % on the Moldovan market.

- 185 employees
- One plant with a milk processing capacity of 25 000 tonnes a year
- An energy-oriented approach since 2009
- Performance improvements after one year, at a constant level of production (October 2012):
  - 22 % reduction in natural gas consumption
  - 4 % reduction in electricity

**LACTIS improvements 2011-2012**

Total No. of EMS measures implemented	11
Gross monetary savings (USD)	22 000
Annual energy savings (MWh)	328
Total investment (USD)	6 900
Overall payback period (in years)	0.32
Annual GHG emissions reduction (tonnes CO <sub>2</sub> )	160

**Any plans for 2015?**

There are plans to use a Freon system to maintain the temperature of the hot water used in production. We also have a long list of other activities we would like to implement, but some of them, of course, require capital investment.

We have strategically chosen to start with the “low-hanging fruit” and implement the simpler, no- or low-cost measures that would deliver immediate energy and money savings. We are now pursuing our efforts to further improve energy-efficient control of our operations and technological processes while working in parallel to develop more technically difficult projects requiring capital investments.



# Quality scenery & service in Salta, Argentina

Salta, Argentina, has a thriving tourism sector, representing 6.5 % of the province's GDP and accounting for 1 700 000 visitors in 2014 alone. Clelia López, Head of Quality at MINTUR, Argentina's National Ministry of Tourism, explains why high quality of reception in tourism information offices is key.

The province of Salta, in north-western Argentina, is famous for its dramatic scenery of Andean peaks, red-rock valleys and romantic vineyards, as well as for its thriving metropolis – the city of Salta – high on colonial charm. Boasting 1 700 000 visitors in 2014 alone, the region is unarguably a leader on the Argentinian tourist map. The province stands for quality with its 220 tourist providers and 26 tourist information offices certified to quality programmes. In fact, the Salta Tourist Board, an agency under the aegis of the Ministry of Culture and Tourism of Salta was granted the country's National Quality Award in 2012 for its outstanding tourism policy.

With such exponential figures – tourism represents 6.5 % of Salta's GDP – the tourist industry is clearly the mainstay of the local economy, and Salta has much to gain from ensuring its visitors have a pleasant experience during their stay. This is why, focused on serving today's most discerning travellers, many tourist information bureaus in the region are getting certified to ISO 14785, which lays down the basic quality requirements for services provided by said offices.

This certification guarantees the high quality of reception in tourism information offices, including friendly service and inspirational ideas from a dedicated staff, and a range of local maps and leaflets. *ISOfocus* asked Clelia López, Head of Quality at MINTUR, Argentina's National Ministry of Tourism, if their new policy for quality had resulted in greater visitor satisfaction. But with 48% of tourists coming back, Salta must be doing something right!

#### **ISOfocus: Why did Salta decide to use ISO 14785?**

**Clelia López:** Salta is a leader when it comes to quality. The Salta Tourist Board has been part of the Argentinian mirror committee to ISO/TC 228, working group WG 3, for tourism information offices since 2009, so embracing ISO 14785 once it was published seemed like a natural progression. Experts from Salta were in on the action throughout the standard's development, reviewing the drafts and contributing their input. They attended one international meeting, which took place on home turf, in Iguazú, Argentina.

Having worked in the "kitchens" of standardization, they knew all the ins and outs of the standard and were aware of the myriad benefits it can provide. This insider knowledge meant they were able to begin implementation early.

## Trip out in Salta

With its high mountain valleys, verdant forests and dramatic desert landscapes, in Salta province you can touch the clouds. Here are a few good reasons to visit Salta.

**“Salta La Linda”**: Visit the province’s capital city, featuring well-preserved colonial architecture.

**Fun & adventure**: Enjoy outdoor activities such as hiking, climbing, horse-riding or zip-lining, as well as a host of water sports from sailing and water-skiing to rafting and sportfishing.

**Natural worlds**: Immerse yourself in exuberant rainforests for a spot of wildlife and birdwatching. With 657 avian species, the province of Salta has the largest variety of birds in Argentina.

**Desert flats**: Discover the barren beauty of the Puna desert and its pre-Hispanic mud-hut villages, where isolation is a way of life.

**Rural roots**: Live the life of the rural farmers or ride out with the gauchos on a horse-riding tour.

**Wine trail**: Take a wine-tasting stroll through Salta’s historic vineyards. Some of these wineries are very high above sea level.

**Culinary delights**: Overdose on Salta’s tasty empanadas (meat- and vegetable-stuffed pastries), which are among the best in the country.

**Music scene**: Visit Salta’s typical “peñas” (folk music venues), where you can enjoy local food while watching music and dance performances.

**Pachamama**: Join in the August celebrations in honour of Pachamama, the Andean mother earth. Following the ancient Kolla tradition, wells dug in the ground are filled with food and beverages, thanking Mother Earth for her generosity.

**Train to the clouds**: Enjoy one of the world’s greatest railway experiences – a breathtaking ride that climbs to 4 220 m without the help of cable tracks.

**Handicrafts**: Stock up on ponchos and other textile goods made of hand-spun alpaca and llama wool using traditional Andean weaving techniques. Salta is also famous for its silversmithing.

Moreover, Salta has had an ISO 9001 quality management system in place for many years and was well equipped to go a step further by certifying its tourist offices. So when their ISO 9001 certification came up for renewal, it seemed like the perfect opportunity to get certified to ISO 14785 – killing two birds with one stone.

### Can you describe some of the initiatives taken?

The National Ministry of Tourism of Argentina (MINTUR) was on hand to help them assess their situation. Armed with checklists, they carried out a thorough diagnosis to determine how close they were to complying with the standard’s requirements. Then, they devised an action plan to address the areas that were not covered. Teams were set up, coached by external consultants, to tackle the different issues.

### What did you find to be the biggest challenge?

The race against time! Being the first to certify to this standard was the biggest challenge. So it was decided to implement the standard in its English version, before it was translated. The driving force was Salta’s enthusiasm for reaching this goal. Salta had done all the leg work for the National Quality Award in 2012 and had excellent statistics and data analysis, which made the process relatively painless.

### How many staff worked on the project?

The entire staff got involved – that’s 12 people altogether. All had been highly trained in working with standards, even before it was decided to implement ISO 14785. Senior managers also gave generously of their time.

### What were the main results and impacts?

Salta is committed to investing in tourism, which is widely regarded as a key driver for socio-economic progress. As more tourist information offices get certified to ISO 14785 for the excellence of their services, it should gradually become easier for industry buyers, service providers and indeed the “consumers” themselves to make informed decisions.

This certification supports a more ethical and accessible form of tourism – under the banner “tourism for all” – which should serve to reassure and attract visitors, and hopefully promote Salta as a first-class tourist destination. Besides, streamlining the services offered to visitors will help reduce the number of complaints and polish the organization’s image.

Salta is a modern province, on a par with the world’s most developed countries. Being able to display the prestigious and universally recognized ISO label is a fantastic way for Salta to strengthen its leadership in the realm of tourism.

### How did the ISO member in Argentina view your accomplishment?

Welcoming the efforts of Salta’s Ministry of Tourism in applying ISO 14785, Gustavo Pontoriero, Management Systems Chief Officer at IRAM, the ISO member for Argentina, said: “We hope other information offices in Argentina and abroad will follow this example. It will make travel an easier and more enjoyable experience for visitors worldwide.”

### Do you have any tips or advice for ISO 14785 users?

Let your own “reality” dictate how you operate. First, and most importantly, you need to get your human resources up to speed with the standard by providing sufficient training and empowerment courses. You can even create small groups for specific projects, if needed. Then draw up an exhaustive checklist to gather information.

The quality of the service dispensed by tourist information officers can make or break a visitor’s travel experience. ISO 14785 helps ensure a consistent level of service from tourist bureaus across the region, whether they are publicly or privately operated and regardless of destination. In the province of Salta alone, 18 cities are still working with the standard. This is a call to all tourist information offices: What are you waiting for? Hop on the quality bandwagon!

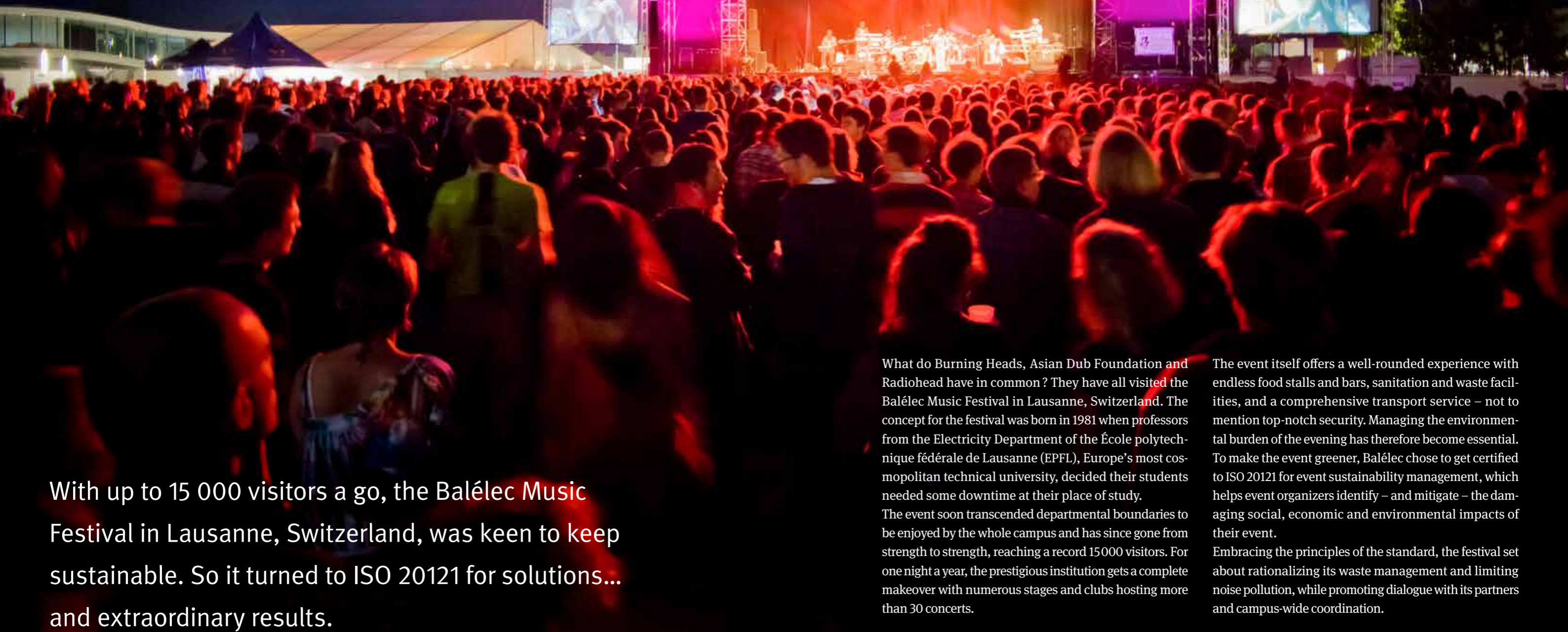
Salta is committed to investing in tourism.



Photos: MINTUR



# International music festival goes green



With up to 15 000 visitors a go, the Balélec Music Festival in Lausanne, Switzerland, was keen to keep sustainable. So it turned to ISO 20121 for solutions... and extraordinary results.

What do Burning Heads, Asian Dub Foundation and Radiohead have in common? They have all visited the Balélec Music Festival in Lausanne, Switzerland. The concept for the festival was born in 1981 when professors from the Electricity Department of the École polytechnique fédérale de Lausanne (EPFL), Europe's most cosmopolitan technical university, decided their students needed some downtime at their place of study. The event soon transcended departmental boundaries to be enjoyed by the whole campus and has since gone from strength to strength, reaching a record 15000 visitors. For one night a year, the prestigious institution gets a complete makeover with numerous stages and clubs hosting more than 30 concerts.

The event itself offers a well-rounded experience with endless food stalls and bars, sanitation and waste facilities, and a comprehensive transport service – not to mention top-notch security. Managing the environmental burden of the evening has therefore become essential. To make the event greener, Balélec chose to get certified to ISO 20121 for event sustainability management, which helps event organizers identify – and mitigate – the damaging social, economic and environmental impacts of their event. Embracing the principles of the standard, the festival set about rationalizing its waste management and limiting noise pollution, while promoting dialogue with its partners and campus-wide coordination.

The result is quite a turnaround : reusable cups and dishes, pocket ashtrays, refundable public transport... Certified in time for its 2014 edition, the Balélec Music Festival shows us there are greener ways to have fun as explained by Miriel Steudler, Quality Manager for the event.

**Why did the Balélec Festival organizing committee decide to use ISO 20121 ?**

In 2007 Balélec became the first Swiss music festival to implement ISO 14001 to better manage its environmental impact. The pioneering spirit pervading the organizing committee and our quest for continual improvement prompted us to look at ISO 20121 for the events industry, which provided the ideal opportunity to include social and economic aspects into our existing management system. Socio-economic concerns had been given extra attention these past few years to ensure the survival of the event into the future. The fact is, from one edition to the next, the festival must adapt to the site of the venue – the campus of the EPFL (École polytechnique fédérale de Lausanne) – which is undergoing constant transformation, as well as to local residents and the wishes of its partners, concerned about their sponsorship policy. What’s more, the certification awarded in recognition of these efforts serves to highlight the professionalism of the committee, largely composed of volunteer students.

**The 2015 edition of Balélec is the second year that ISO 20121 will be used in the festival. What lessons have you learned from the first year? And what are you hoping to do differently?**

We have noticed that by improving our internal communication and the coordination between the different units, we are able to avoid a number of misunderstandings and glitches that might reflect negatively on our image, including costly consequences on our reputation and reduced efficiency. We aim to continue in that vein.

Besides, our annual debriefing session and the compilation of external complaints brought up a number of issues in need of attention. We hope to put formal procedures in place and monitor their progress to prevent similar errors from recurring this year. We are pursuing our efforts for better waste management, extended sanitary facilities and improved coordination with the university authorities, while keeping our partners informed of our sustainability approach.

**With more than 120 partners participating in Balélec, what did you find to be the biggest challenge?**

What makes Balélec Music Festival so special is the uniqueness of its venue – the EPFL campus, which has hosted the event for the last 34 years. For one memorable evening, revellers and students are free to roam the corridors, classrooms and entire grounds of the university, experiencing this academic institution in a completely new light.

The sheer magnitude of the event, with its well-oiled yet complex organization, implies ongoing dialogue and coordination between the committee and our 120 partners, while meeting the constraints imposed by the university. Our constraints, as it happens, are often twofold as we try to balance the needs and expectations of the university with those of our partners. Moreover, the event’s growing popularity brings additional constraints, which must be weighed against the restrictions dictated by a continually evolving campus, forcing us to adapt each year.

**Could you please share with our readers some logistical information (i.e. number of staff, budget allocated, time spent preparing for ISO 20121).**

The Balélec Festival takes place over one evening. Recent editions have attracted 15 000 participants for a budget of around 650 000 Swiss francs, making it one of the largest festivals in the French-speaking part of Switzerland. The organizing committee is composed of 50 members, including some 15 new members each year. We also get a further 350 volunteers joining us for the duration of the event.

We made the decision to implement ISO 20121 in September 2013 and were officially certified on 4 April 2014. Three committee members, myself included, were involved in the project. Two of us had already worked with ISO 14001, which enabled us to build on the existing system and expand it more easily. The budget allotted to the system is our certification budget ; broadly speaking, we allocate over 10% of our budget to sustainable development activities, including transport, sanitary facilities, reusable cups and plates and waste disposal.

**What were the main results and impacts ?**

The organizing committee changes every year. The standard forces us to endorse certain procedures, which facilitate the change and help everyone quickly find the right information and meet objectives. The standard’s PDCA (Plan-Do-Check-Act) structure also means there is a common thread linking one edition with the next and helps us improve as we go along.



Photo : Quentin Ligier

*Hip hip hooray ! Sitting on the “Big Stage”, the Balélec organizing committee give three cheers for a job well done.*

We encourage  
all events industry  
professionals  
to follow our lead.

The main environmental impacts we tackle are waste, sanitation and noise. In terms of our social impacts, we work to keep the communication and collaboration flowing between the EPFL and its neighbours. As for the economic aspects, we focus on keeping our sponsors happy and ensuring our partners get a reasonable return on investment.

**Do you have any tips or advice for ISO 20121 users ?**

Mobilizing the whole team and building momentum around the process is essential if you hope to reap the full benefits of an ISO 20121 management system. The committee’s involvement and motivation are key when it comes to successfully implementing the standard and achieving all of its objectives.

Sustainable development is a hot topic right now, but the standard’s strength resides above all in adapting to the needs, size and vision of each individual event. We are proud of our achievement and remain confident that we can make the most of ISO 20121 in the future. We encourage all events industry professionals to follow our lead.

