



focus

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Your gateway to International Standards

A time for
TRUST



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July-August 2016



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Director of Marketing, Communication and Information | **Nicolas Fleury**

Head of Communication | **Katie Bird**

Editor-in-Chief | **Elizabeth Gasiorowski-Denis**

Editors | **Maria Lazarte, Sandrine Tranchard**

Copy editor and Proofreader | **Vivienne Rojas**

Contributing writer | **Ann Brady**

Designers | **Xela Damond, Pierre Granier, Alexane Rosa**

Translators | **Alexandra Florent, Cécile Nicole Jeannet, Catherine Vincent**

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In the business of **BUILDING TRUST**



Photo: DSM

Fadilah Baharin, CEO of Department of Standards Malaysia (DSM).

With trust, businesses and consumers embark on a lifelong journey towards solutions that will meet their mutual expectations – productivity, performance and quality of life. Standards help bridge this relationship, instilling confidence on both sides.

The doctrine of trust in all its manifestations is believed to rest on three key dimensions: care, competence and commitment. Relationships thrive when you feel somebody cares enough to understand, shows sincerity in providing solutions or meeting expectations, and demonstrates long-term commitment to making things better. This thought process, in principle, applies to all businesses and their relationships with the ever-discerning consumers of today.

According to the 2016 Edelman Trust Barometer, published by independent public relations firm Edelman, the reason trust in business has increased is because companies produce economic growth, contribute to the greater good and allow people to be productive members of society. That said, two of the 16 trust-building leadership attributes cited in the report raise pertinent questions, namely whether CEOs place a premium on offering high-quality products and services, and whether they are focused on driving innovation and introducing new products, services or ideas.

The Barometer also highlights the critical issue of “trust inequality”. Historically, the allocation of trust in leadership rested on the belief that elites had access to superior knowledge and better connections than the general public, a status worthy of respect. Today, rising income disparities and displays of low integrity and greed from our leaders have flipped the classic pyramid of influence on its head, meaning that the trust of the mass population can no longer be taken for granted. This can best be addressed by embracing the new reality of influence, that is to say that trust must be earned with those who can influence and garner positive responses from all those consumers and stakeholders who matter to you and your business.

The big question is how do we earn trust? I believe standards instil trust. Standards are no longer about product differentiation but about creating a uniform experience that gives your customers confidence in your products and services. The differentiation and marketing edge now lies in how successfully your brand or organization has been

able to build and nurture consumer relationships that are sustainable, solely by promising the same “quality” and “experience” every single time.

When releasing the Malaysia’s National Transformation Programme Annual Report in April this year, the Right Honourable Prime Minister Najib Razak highlighted standards and their compliance as one of the 24 key elements towards building resilient and sustainable socio-economic development beyond 2020. Whilst our government has acknowledged the importance of standards, we still need to strike a balance in the receptiveness of the people. For only when that balance is struck will we know that standards have built that trust.

We see a demonstration of that balance with halal. When the Internet began to peak in 2000, providing a wealth of information at the click of a mouse, Muslim consumers became agitated. Whilst the Web can be a great source of information, it can also be a hive of rumours and spread ominous stories that cast doubt over the true “halal-ness” of their food.

We came up with the solution in the form of the first ever standard on halal food¹⁾. It helped businesses to reassure the masses as to the halal status of their food.

Halal is just one example. In other areas, we are still racing to catch up with our South Korean and Japanese neighbours, whose names suffice to instil confidence in the quality of their products. But whilst small and medium-sized enterprises are all jumping on the bandwagon to make their products and services standards-compliant, consumers also need to get on board and demand quality. Last year, Malaysia was recognized by the World Bank as an emerging economy, yet without the pressure exerted by consumers, our country cannot shatter the glass ceiling that precludes it from being recognized as a developed economy. As CEO of Standards Malaysia, that is my mission. ■

1) Malaysian standard MS 1500, *General Guidelines on the Production, Preparations and Handling of Halal Food* (since renamed *Halal Food – Production, Preparation, Handling and Storage – General Guidelines*).

Campaigning for world health

We need standards in place to care for ourselves and our loved ones. This was the message brought forward by the week-long social media campaign **#healthstandards** organized to coincide with World Health Day (7 April).



Collaboration for standards

The campaign brought together ISO members, partners and stakeholders to talk about the need for standards in the health sector. Thanks to all who participated and welcome to the members who joined an ISO global campaign for the first time!



2 008 065
impressions (number of times all tagged posts were seen)



Over **361 342**
unique users reached



Over **669**
tweets with #healthstandards



Over **264**
contributors



Participating members and partners

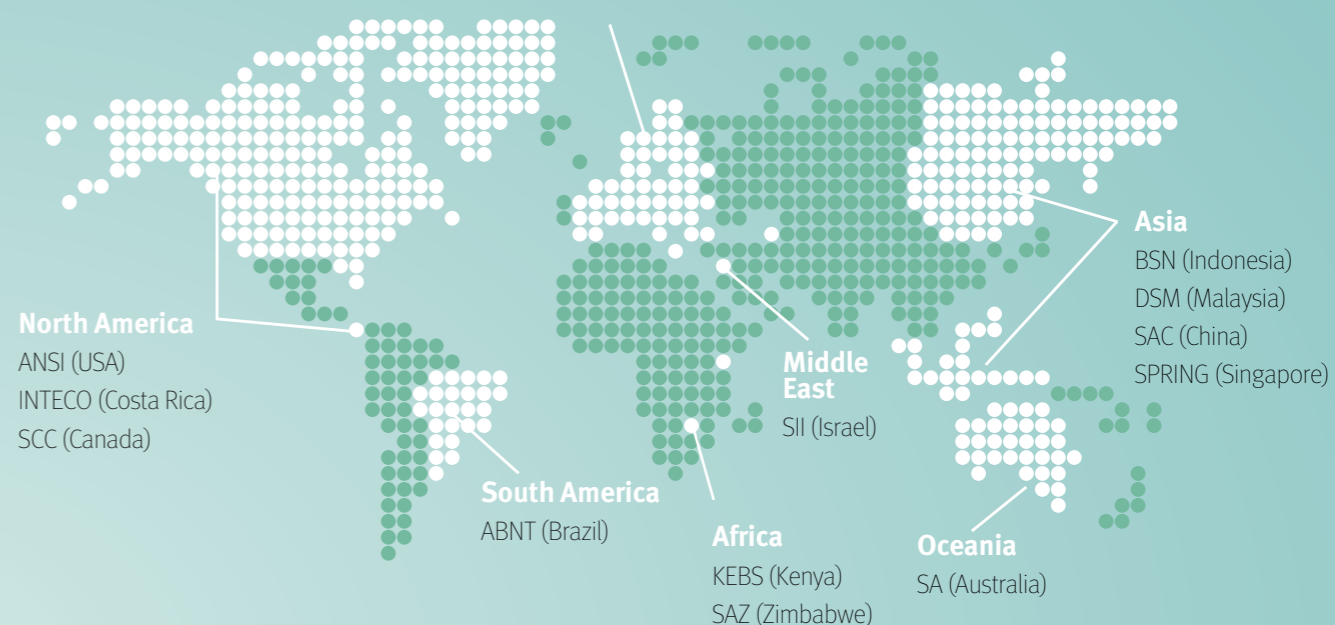
This list may not be exhaustive, apologies if we missed you!

Europe

- AENOR (Spain)
- ASRO (Romania)
- CYS (Cyprus)
- DIN (Germany)
- ISS (Serbia)
- NSAI (Ireland)
- SARM (Armenia)
- SFS (Finland)
- SIS (Sweden)
- SN (Norway)



IEC
CEN
CENELEC

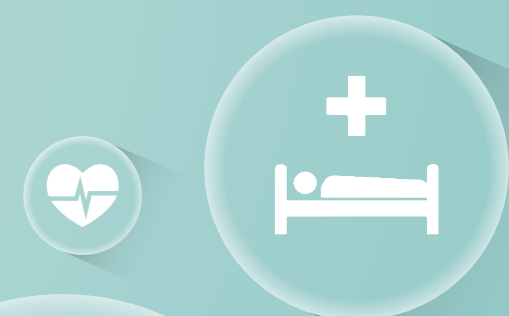


Members best practice

Members contributed prolifically to this effort, with health experts' quotes and photos for the campaign Website (Australia), a video from AENOR's CEO on the significance of standards for health (Spain), and translations of infographics by Standards Norway, among many more examples!

Symbol challenge

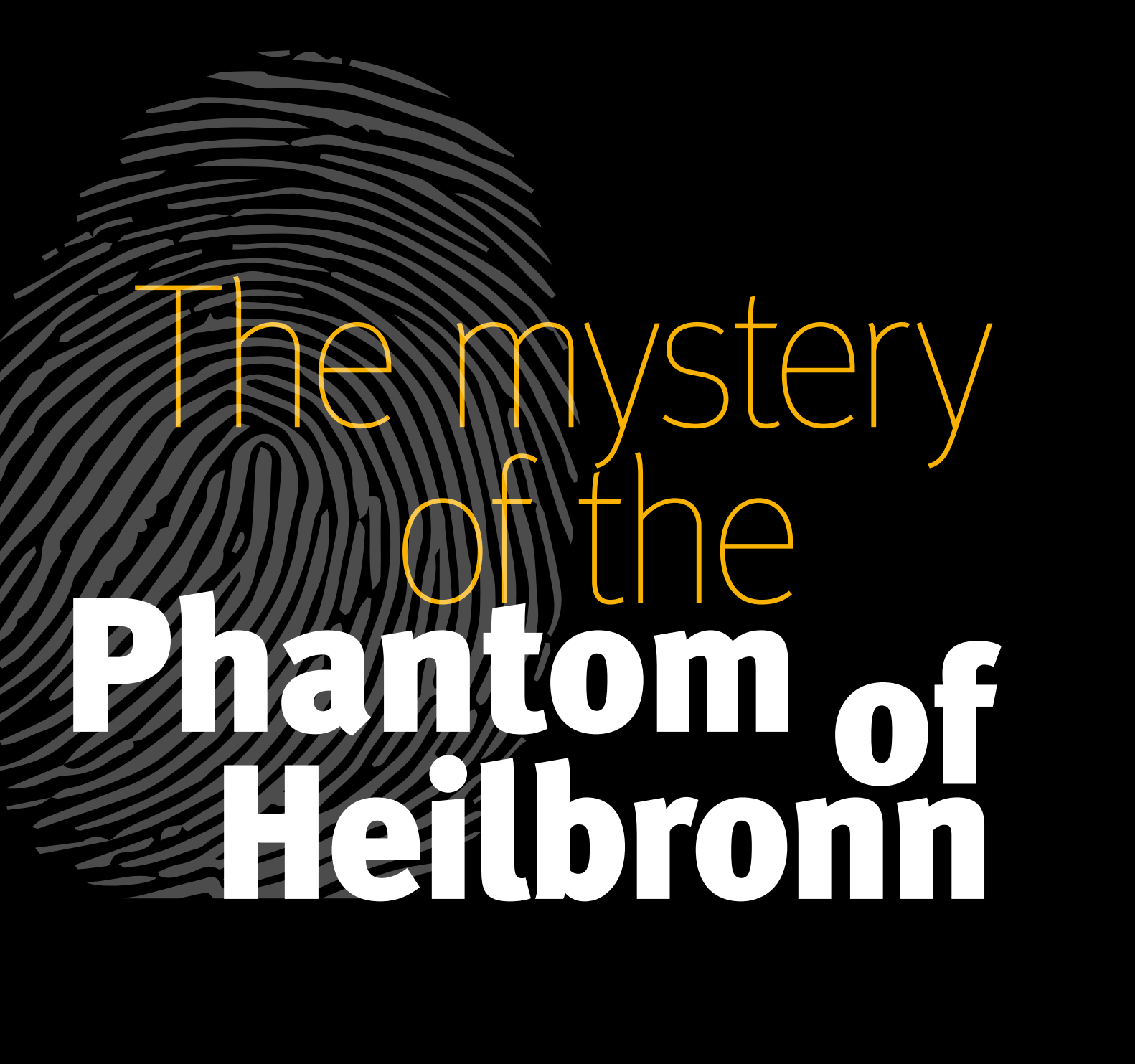
Part of the campaign included a "Guess the medical symbol" challenge. Without these symbols, there would be a lot more confusion and lost information in the health sector, where absolute precision is paramount!



Missed the campaign?

See all articles here:
www.iso.org/healthstandards
and keep an eye out for the next ISO campaigns later this year.





The mystery of the Phantom of Heilbronn

by Elizabeth Gasirowski-Denis

A female serial killer named “Phantom of Heilbronn” was linked to 40 crimes, six of which were murders.

Yet in 2009 it was discovered that she didn’t exist.

Here, we look at this fascinating tale of DNA contamination introduced to each crime scene and how ISO 18385 will assist forensic science in addressing this issue.



If your DNA is found on a weapon or at a crime scene, does that make you guilty? The police might think so, but a female serial killer dubbed the “Phantom of Heilbronn” shows that the presence of foreign human DNA is far more common than previously thought, a finding that has led to serious repercussions for forensic science.

A woman referred to as the “Phantom of Heilbronn” assumed national prominence in Germany after the murder of a policewoman. The Phantom’s crimes were too numerous to mention – scores of brutal murders and thefts, a string of brutalities extending as far back as 1993. What did this series of ruthless attacks and petty crime have in common? Very little, with the exception of DNA from one individual recovered at each crime scene... and pointing to the same culprit.

You may be thinking: They have DNA, why can’t they find the Phantom? The investigation was complicated by several factors, contends Dr Linzi Wilson-Wilde, Director, National Institute of Forensic Science, Australia New Zealand Policing Advisory Agency. These factors included the geographical disparity of the crime scenes, the lack of pattern in her list of accomplices (including Slovaks, Serbs, Romanians, Albanians and Iraqis) as well as the fact that persons convicted for some of the crimes denied her existence, she had not been captured on any security camera, and certain witnesses described her as looking like a man.

The inconclusive evidence finally led investigators to reconsider. “The number and diversity of the crimes had raised the suspicion of contamination,” explains Wilson-Wilde. Human genetic material had inadvertently been transferred to the forensic sampling equipment, bringing a series of criminal investigations back to square one.

DNA confusion

After spending so many years tracking the perpetrator of such heinous crimes, the mystery of the Phantom was solved in March 2009. Investigators came to the conclusion that the “Phantom” criminal did not exist and the DNA recovered at the crime scenes had already been present on the cotton swabs prior to being used for collecting DNA samples.

As embarrassing as this case might be, it highlighted some very real issues about the risk of human-to-product contamination. The introduction of foreign DNA to a crime scene sample, either at the site itself or during laboratory analysis, can have devastating effects on an investigation.



But how exactly can foreign DNA be introduced? Quite simply, it comes down to the manufacturing process of consumables used in the recovery and processing of DNA material. Consumables used at a crime scene or during subsequent forensic testing are one potential source of such DNA contamination, explains Wilson-Wilde. “In recent years, DNA analysis techniques have acquired an increased sensitivity resulting in profiles being produced from consumables which have had genomic DNA deposited on the items during the manufacturing process.”

According to one theory, the swabs used in the Phantom cases all came from the same factory, which employs several women, one of whom matched the DNA recovered from the crime scenes. The cotton swabs were put through the proper sterilization procedures (used to kill bacteria, fungi and viruses), but still became contaminated with

human cells in the form of skin particles, sweat, saliva or other bodily secretions.

Cutting out contamination

It begs the question: How can the global forensic science community prevent this from happening in the future? Part of the answer lies in a new ISO standard, published earlier this year, which is intended to minimize the risk of DNA contamination.

ISO 18385, *Minimizing the risk of human DNA contamination in products used to collect, store and analyse biological material for forensic purposes – Requirements*, is the world’s first International Standard on the manufacture of forensic consumables. The new standard outlines the requirements for the manufacture of kits and consumables for DNA analysis by the global forensic science community.

“ISO 18385 provides guidance to manufacturers on how to minimize the chance of a contamination event,” says Wilson-Wilde. “The standard also sets pass/fail criteria so that manufacturers can, for the first time, test their products against the requirements of the forensic industry to ensure they are fit for purpose.”

ISO 18385 is being recognized internationally as setting the standard for the forensic DNA community. The standard is important because

- In forensic DNA analysis, contamination is possible and the quality of consumables used in the recovery and processing of DNA material has been acknowledged as a route for the introduction of contamination
- It helps to avoid incidents such as the “Phantom of Heilbronn” or “Woman without a Face”
- End users will be able to purchase consumables with confidence from manufacturers meeting the standard and satisfy the requirements of their own accreditation to ISO/IEC 17025 certifying the competence of testing and calibration laboratories

ISO 18385 will be used by police forces and forensic science laboratories as well as manufacturers for the forensic DNA community. It is expected to minimize the risk of contamination of consumables used in the recovery and processing of DNA samples, and, in so doing, increase the public confidence in forensic DNA analysis.

Wilson-Wilde adds: “Implementing ISO 18385 will give confidence to forensic scientists that the products they use are fit for purpose and appropriate measures have been taken to significantly reduce contamination, thereby diminishing the number of extraneous DNA contributing to DNA profiles, potentially making results easier to interpret. This all leads to greater confidence in forensic science results by police and the courts.”

Putting trust back

A contaminated consumable used in an investigation has the potential not only to skew an investigation in the wrong direction, but also to eliminate an offender or to convict an innocent party – or ghost – as seen with the Phantom of Heilbronn.

The case has had far-reaching consequences on the forensic community. Wilson-Wilde explains: “In the Phantom of Heilbronn case, police spent eight years, an estimated EUR 2 million and over 16 000 hours of overtime searching for a ‘female serial killer’ linked to over 40 crimes across Germany, Austria and France.” In addition to the obvious waste of thousands of man-hours, there were dozens of savage crimes whose culprits were virtually ignored while investigators chased a ghost.

Despite this disturbing case, DNA evidence is still viewed as one of the more reliable practices in forensic science, provided the appropriate procedures are followed. Yet from this incident, and many others since then, it is clear that even the best of techniques and practices must be accompanied by International Standards. In forensic science, there is no such thing as “trust me”. ■

ISO 18385 is
the world’s first
International
Standard on the
manufacture
of forensic
consumables.

DNA

A perfect match... almost



The Phantom of Heilbronn is an extraordinary mystery which has baffled European detectives for many years! Here are the highlights of the story.

WHAT'S THE MYSTERY?

The Phantom of Heilbronn, often alternatively referred to as the “Woman without a Face”, was a hypothesized unknown female serial killer whose existence was inferred from DNA evidence.



WHAT HAPPENED?

From 1993 to 2009, **40** crime scenes, ranging from murders to burglaries, were connected together with one DNA PROFILE.



HOW BIG WAS THE INVESTIGATION?

The police spent **8** years,



...an estimated EUR **2** million,



...and over **16 000** hours of overtime searching for the “Phantom”.



A reward of USD **400 000** was offered for information leading to her arrest.



The investigation mobilized more than **100** policemen in Germany and Austria.



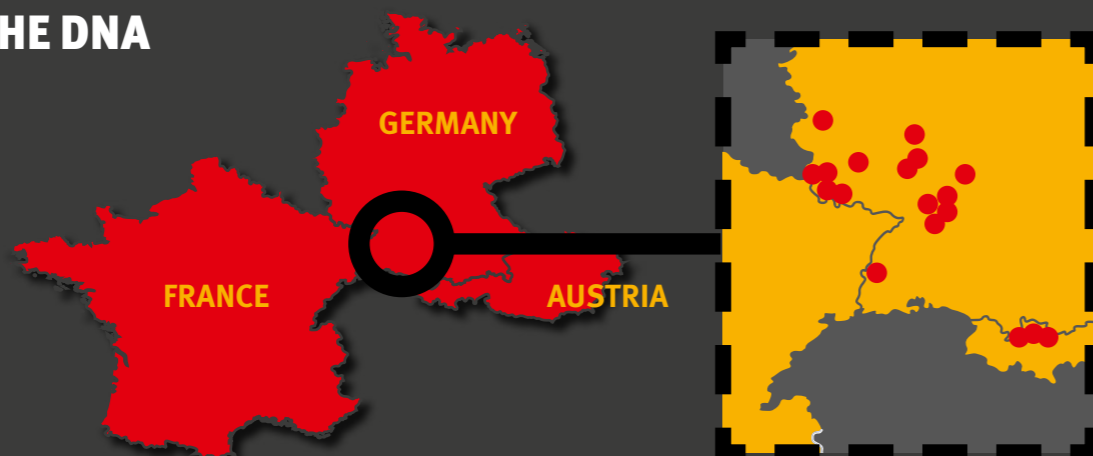
WHEN DID THE CASE TAKE A TURN?

Investigators discovered the very same DNA sequence on the burned body of a male asylum-seeker in France – an anomaly since the sequence was of a female. They eventually found out that **THE PHANTOM SERIAL KILLER DID NOT ACTUALLY EXIST** and that the laboratory results were **DUE TO CONTAMINATION OF THE COTTON BUDS** used for DNA probing.



WHERE WAS THE DNA RECOVERED?

DNA was found at numerous crime scenes in:



Traces were found, for instance:



on a **CUP** after the killing of a 62-year-old woman in Idar-Oberstein, Germany



on a **KITCHEN DRAWER** after the killing of a 61-year-old man in Freiburg, Germany



on a **SYRINGE** containing heroin near Gerolstein, Germany

WHAT'S THE ANSWER?

ISO 18385, *Minimizing the risk of human DNA contamination in products used to collect, store and analyse biological material for forensic purposes – Requirements*, is the world's first International Standard on the manufacture of forensic consumables.

The new standard outlines the requirements for the manufacture of kits and consumables for DNA analysis by the global forensic science community.



DO YOU TRUST the food you eat?

by Ann Brady

The global food industry has never faced more challenges.

From tainted dairy products to contaminated beef, high-profile cases crop up regularly to dent consumer confidence, while leading companies work hard to reclaim lost faith.

So, how trustworthy is your food?



The consequences of food fraud are estimated to cost legitimate food retailers up to USD 15 billion a year.

Food safety is something we tend to take for granted. When we scan well-stocked supermarket shelves to select food and beverages for our weekly shop, most of us trust – and expect – that the contents of the packets of foodstuffs on display will match the information on the labels. The provenance of the food is something we rarely question, but is everything we eat and drink really what we think it is?

The horsemeat scandal shattered consumer confidence in the food industry. It turned the spotlight on the whole issue of food safety and food crime, exposing potential fault lines in increasingly complex food industry supply chains, which offer huge potential to criminals to pursue their misdeeds.

This was a Europe-wide issue, with meat products, from ready meals to beef burgers, found to have been contaminated with horsemeat and pork. The scandal erupted after tests were carried out by the Irish Food Authority on a range of meat products sold in major supermarkets. Prior to that, no such tests had been carried out as no one had expected horsemeat, or pork, to be found in beef products.

In the UK, for example, an independent review into the food system in the wake of the horsemeat scandal called for an urgent overhaul of how the food system was policed. The recommendations in the report eventually led to the establishment of the National Food Crime Unit, which works with not only police forces across the UK but also with Europol and the Food Fraud Network that links food safety authorities across Europe.

Fighting the food fraud

Food fraud has been around for a long time and the sums involved are huge. According to the Grocery Manufacturers Association, the consequences of such fraud are estimated to cost legitimate food retailers up to USD 15 billion a year. Dressing up food ingredients is common practice worldwide. But the scale of the fraud could make us choke. In Italy, for example, inferior olive oil has allegedly been passed off as superior extra-virgin olive oil; in the United States, the Food and Drug Administration has warned consumers that cheese labelled as “100% Parmesan” could be bulked with cheaper substitutes, such as inferior cheese or even wood pulp. And that fish supper you enjoy so much may have been injected with saltwater.

The doctoring of inferior ingredients is one thing, but food fraud has a much darker side. In the early 1980s, hundreds of people died from contaminated cooking oil in Spain and, more recently, in China the industrial chemical “melamine” was found in powdered baby milk, leading to fatalities and thousands of infants falling ill.

Over the past decades, food supply chains have grown increasingly complex and many of today’s food products repeatedly cross national boundaries, creating more opportunities for criminals to practise food fraud. Consider this. According to an article in the *Financial Times*, an average cod can travel 10 000 miles before it ends up on a dinner plate. It may be caught in the Bering Sea, then prepared and frozen in a factory in eastern China, taken by cargo ship for processing in Europe or the US, and undergo one final journey before ending up as, say, a fish finger on a plate in Moscow. The farm-to-fork journey has involved a lot of hands, with a lot of opportunity for criminals to step in and exploit weak links in the chain.

Along with a growing global population – and as the world becomes ever more complex and interconnected – there is a clear, urgent and compelling need to standardize regulations on an international level. Food fraud has become more sophisticated and harder to detect, presenting regulators with an even bigger challenge. In the wake of the horsemeat scandal, for instance, authorities were left scrambling in their efforts to organize a coordinated approach to deal with the crime. Indeed, so far there have been only a few prosecutions – encouraging news for criminals.





Best in class

The scale of the challenge is huge. Large supermarkets stock thousands of different food products, and smaller food businesses do not have the resources to “police” their supply chains. With a growing pressure to produce affordable food, there is increasing temptation to cut corners on health, safety and quality controls, which in turn puts more pressure on governments and food regulators. So what lessons have been learned since 2013 and what can be done to restore trust?

ISOfocus asked industry experts for their perspectives on these issues and what needs to be done to regain consumer confidence and ensure that the food we are buying is healthy and nutritious – and how the ISO 22000 family of standards can help.

Certification bodies play a critical role in efforts to improve the safety of food systems. Food certification promises higher standards and transparency, but is it an effective weapon in tackling food fraud? The FSSC 22000¹⁾ Food Safety Management System (FSMS) certification scheme helps companies to produce safe food and gain the trust

of customers. The system was designed to provide companies in the food industry with an ISO standard-based FSMS certification that is recognized by the Global Food Safety Initiative and includes auditing by certification bodies accredited to ISO/TS 22003, which encompasses requirements of ISO/IEC 17021.

Aldin Hilbrands, FSSC 22000’s Technical Director, says: “We support food companies with best-in-class rules and regulations, laid down in the global FSSC 22000 certification scheme, to produce safe food and gain the trust of their clients.”

He asserts that better public-private collaboration would go a long way to restoring trust and ensuring quality and brand integrity. Public authorities and the private sector both want to protect consumer health, “but in many countries these parties do not yet work closely enough to advance food safety in a more efficient and effective manner”.

With governments and food regulators coming under increasing pressure to maintain health and safety standards, it is encouraging to note that the FSSC 22000 is increasingly being contacted by governments in North America and Europe to explore smarter ways of aligning efforts on this issue, Hilbrands says. Furthermore, he adds, “unannounced audit elements are planned to be included in the certification cycle of the scheme soon”, which will also help to ensure product integrity.

1) Created in response to the needs of the international food sector, the Food Safety System Certification 22000 (FSSC 22000) provides an independent ISO-based food safety management scheme for third-party auditing and certification. FSSC 22000 is fully recognized by the Global Food Safety Initiative, an industry-driven global collaborative platform to advance food safety.

Certification and
International Standards
can help to mitigate risks.

Gaps in the system

The National Registry of Food Safety Professionals (NRFSP) is another US certification body that is accredited to develop and provide food manager certification examinations. The big challenge, says Lawrence Lynch, President of the NRFSP, “is how, as a certification body, we play a role in supporting a food safety culture rather than simply providing an examination”. Lynch recognizes the scale of the problem to find “common ground in the world of food” and says there are “plenty of gaps in this food system”. He acknowledges that the certification by itself would probably never prevent, say, the likes of the horsemeat scandal but that, when administered as part of a larger food safety management system, those who have the certificate “should be in a better position to identify inherent weaknesses in the chain and communicate concerns before they become a scandal”.

According to Lynch, what gives the NRFSP extra clout is that it applied for, and was eventually granted, accreditation under ISO/IEC 17024 for its food manager exam programme. “While adoption of the ISO/IEC 17024 accredited certification of persons by retailers has been slow, the National Registry has been able to start a conversation about the value of certified persons by accreditation to ISO/IEC 17024 on a national stage,” he says.



Coaching consumers

Of course, any conversation on food safety and food fraud has to include the consumer. The role that consumers play is a big issue for Consumers International, the world federation of consumer groups. ISO 22000 helps manufacturers ensure food safety and uses traceability to guarantee the origin of food ingredients. However, consumers bear some responsibility for safety after purchase if they fail to handle food properly by allowing cross-contamination and poor hygienic practices and ignoring advice from manufacturers.

Sadie Homer, Senior Policy Advisor on Standards, Consumers International, and food quality expert Philip Creed, a Consumer Representative on BSI/CEN/ISO food standards committees, believed this responsibility should not be left entirely to state regulatory bodies; better consumer education and knowledge are key. “One challenge for many consumers is understanding the basics of handling food safely at home – how to store it appropriately, how to avoid cross-contamination, how to cook food or reheat prepared foods properly and how to dispose of waste food safely.”

They go on to say that the ISO 22000 food safety management system “helps by ensuring that the food on sale in supermarkets has been produced in ways which minimize the risk of microbial infection and contamination entering the consumer’s kitchen”.

The scale of the challenge is huge.

According to Homer and Creed, ISO 22000 has made a significant contribution to tackling food fraud. “Since its introduction in 2005, the standard has been taken up by many thousands of food manufacturers worldwide and formed the basis of many tailored food safety management programmes, thus providing consumers with more assurance that the food they buy has been manufactured safely from traceable ingredients.”

To harm or not to harm ?

The ISO 22000 family of standards that focus on different aspects of food safety management is clearly an effective tool in tackling a very complex subject. Albert F. Chambers, President of Monachus Consulting, a management service company specializing in agrifood industries, has been involved with the development of the ISO 22000 standards since September 2003 and has contributed as an expert and national delegation leader to the development of ISO 22000, ISO/TS 22003, ISO 22004 and ISO 22005. For him, it all comes down to trust. “Whether you are looking at food from the local or the global perspective, the food business operates on a very high level of trust. Food safety management system standards, such as ISO 22000, are voluntary tools that food businesses are using to enhance that level of trust,” he says.

Chambers draws the distinction between “intentional adulteration or misrepresentation of foods or food ingredients for economic gain” and “intentional contamination or adulteration where there is an intent to cause public health harm and/or economic disruption”. He says there are well-recognized approaches that a food business can take to deal with the latter – usually called “food defence” measures – and they are accepted as prerequisite programmes within the ISO 22002 series of technical specifications. While the working group of experts revising ISO 22000 have still to incorporate the measures a food business can take to fight food fraud, he says that existing provisions of the standard define some very workable processes: “knowing your suppliers, setting clear specifications, requesting reputable certificates of analysis, etc.”

ISO 22000 is a world-class standard.



FOOD FRAUD



IT OCCURS WHEN PRODUCTS ARE DELIBERATELY:



DILUTED



MISLABELLED
OR MISREPRESENTED



TAMPERED
WITH



SUBSTITUTED WITH
ANOTHER PRODUCT

AN AVERAGE COD CAN TRAVEL **10 000 MILES**
BEFORE IT ENDS UP ON A DINNER PLATE.



**THE FARM-TO-FORK JOURNEY HAS
A LOT OF HANDS AND A LOT OF
OPPORTUNITY FOR CRIMINALS TO
EXPLOIT WEAK LINKS IN THE CHAIN.**

FOOD FRAUD IS ESTIMATED TO COST LEGITIMATE FOOD
RETAILERS UP TO:

USD 15 BILLION A YEAR.



ISO 22000 ON FOOD SAFETY:

- DEMONSTRATES AN ORGANIZATION'S COMMITMENT TO FOOD SAFETY
- ENSURES CONTROLS AT ALL STAGES OF THE FOOD SUPPLY CHAIN
- IMPROVES THE INTERNAL PROCESSES NEEDED TO PROVIDE CONSISTENTLY SAFE FOOD

FRAUDULENT FOOD – a few examples...

- Beef burgers contaminated with horsemeat and pork



- Cheese labelled as "100% Parmesan" bulked with cheaper substitutes



- Fish injected with saltwater



- Inferior olive oil passed off as superior extra-virgin olive oil



Producing good-quality, nutritious and affordable food in a world of 7.4 billion people is always going to be a huge challenge. Surprisingly enough, Chambers claims the biggest threat to food safety doesn't come from the criminal fraternity but from unintentional contamination. "This can happen when food businesses don't have good systems in place to prevent biological, physical or chemical contamination and when they don't implement those systems consistently," he says.

Quelling food fears

So is the farm-to-fork journey any safer? Despite the lack of prosecutions related to the horsemeat scandal, it did teach all stakeholders in the food industry some valuable lessons. Food crime is now a known risk to companies. Authorities across the EU, for instance, are working more closely on food fraud, and there is a bigger push to educate the consumer on food hygiene and improve food labelling. All of these, plus certification for the industry and International Standards can help to mitigate risks.

No doubt there will be more scandals of the horsemeat variety in the future. However, Chambers believes that the ISO 22000 standards should make us all feel more reassured about our weekend supermarket shop.

"ISO 22000 is a world-class standard," he says. "If properly used, and fully implemented, it provides the toolkit that a food business at any point along the food chain needs to produce safe food. It incorporates the best in management practices and the latest in food safety systems design, with very strong provisions for internal and external communication as well as an intense focus on both the competence of personnel and the improvement of the system over time." Food for thought indeed. ■



Combatting *toy-related injuries*

by Elizabeth Gasiorowski-Denis

Toys are the treasures of childhood. But if you're not careful, toys can be hazardous, too. Knowing what dangers are linked with certain toys and age groups can help parents better protect their children from injuries. Here, we look at how ISO/TR 8124-8 aims to design age-appropriate toys with the highest level of safety in mind.

Were you ever injured while playing with a toy as a kid? Whether you fell off your bike and scraped your knee or hurt your eye with a flying object from a toy, you are not alone. Toy injuries are common. According to a 2014 study published in the medical journal *Clinical Pediatrics*, over three million US children were treated in emergency departments for a toy-related injury from 1990 to 2011. In 2011 alone, that translates to a child

getting hurt every three minutes. A little over half of the injuries are to young children under the age of six. So what types of health and safety hazards plague our toy shelves? One of the most prominent dangers among unsafe toys is those with small parts. These are particularly dangerous for children under three. Toys with small parts, designed for older children, can cause choking when a tiny tot puts them in his or her mouth.



Not all toys are safe or age-appropriate.

Age-appropriate play

Unfortunately, not all toys are safe or age-appropriate. Injury often results when a toy is misused or used by children who are too young for that particular toy. This is very tragic considering how much effort goes into protecting the youngest members of society. “The right to safety is a paramount right of a consumer,” clarifies Antonio Bonacruz, Test Coordinator of children’s products at CHOICE, a consumer advocacy group based in Australia. “Consumers expect that toys are as safe as they can be. Toy suppliers must ensure that the toys they supply are suitable for the age of the child for which they are intended.” Toy makers need to be aware that children of different ages have varying abilities, interests, preferences and strengths. They also need to consider that the safety of children relies on giving them the right toys to suit these traits. Bonacruz explains: “Suppliers must clearly indicate the age suitability on toys, and they must do it based on reliable sources such as standards and professional evaluation, and not on guesses, and

certainly not on what they simply think would cover their backs.” Age determination is an important factor in ensuring that toys are appropriate and safe for their “little” users, says Dr Pratik Ichhaporia, Director, Technical Services, North America, at Intertek, a total quality assurance provider. He explains: “Age grading of toys is very important to enable the manufacturer to design toys for intended audiences and ensure that a toy is subjected to appropriate safety requirements.” Safeguards and standards giving guidance as to the age appropriateness of certain toys can make a significant positive impact on the safety of toys in the marketplace. These safeguards can also contribute to a dramatic decline in toy-related injuries.

Diverging standards

Age grading of toys has long been one of the more subjective tasks for manufacturers, retailers, importers and testing labs. Diverging national and regional standards have only complicated matters further by offering no unique source of reliable information.

SMART TOYS FOR EVERY AGE

Give a kid a new toy – almost any toy – and chances are you’ve got a happy kid. While they should be fun, toys should also be age-appropriate, stimulating, and safe. ISO/TR 8124-8 covers what’s called “age grading”. It tracks the development cycle from birth to age 14 for children with regard to toys.

10-14 years
Sophisticated microscope and science equipment, electronics, video & computer software...

3-4 years
Tricycles, bicycles, doll houses with furniture, doll clothing, doctor kits, costumes & dress-up accessories...

7-8 years
Strategic board & card games, electronic & computer games, jump ropes, flying discs...

12-18 months
Shape sorters, water toys, small vehicle toys, trains without tracks, simple role-playing toys...

6-9 months
Rubber or plastic keys and rings, plush & stuffed toys and dolls, textured geometric shapes...

18-24 months
Toys for sand and water, puzzles with insert frames, rocking and ride-on toys, push toys with high handles...

3-6 months
Rattles, teething rings, fabric & textured balls to grasp, play mats, activity gyms...

WARNINGS

Certain toys intended for children under 3 years of age require hazard warning labels: For example, according to EU Toy Safety Directive 2009/48/EC and ISO 8124-8, the following graphic must be used along with the statement of risk and hazard.

For the US market, a warning statement is required for toys and games containing small parts that are intended for children at least 3 years old but less than 6 years old.

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Illustrations : Alexane ROSA

Let's work together to
make child safety and
security a reality.



Bonacruz admits that variations in regulation and standards for toys and games from country to country and region to region can cause issues for manufacturers. Referring to the number of different standards, he summarizes: “For decades, there has been a lack of a reliable information source that gives guidance as to what ages of children a certain toy is suitable for. There are a few reference materials, but most are out of date. In other regions, there is no uniformity in how age determination is conducted.”

Putting aside the lack of harmonized standards, some toy makers may also face disadvantages due to size. Bigger toy suppliers, and perhaps some government bodies, probably do have experts who conduct the age determination whereas the smaller players most likely do not.

Yet, despite all these issues, age determination is a critical step in the distribution of toys and children's products for a number of reasons.

Instilling confidence

In an effort toward furthering the alignment of global toy safety requirements, ISO has just published ISO/TR 8124-8 addressing the determination of the lowest age at which children start playing with toys in specific toy sub-categories, which is based on the development stages and abilities of children. ISO/TR 8124-8 is the eighth part of the ISO 8124 series of standards on the safety of toys and provides a comprehensive solution to age grading questions, taking account of current anthropometric, developmental and behavioural expertise.

The other seven parts of the series specify requirements or test methods for different categories of hazards or toys and have many dependencies on the age of the intended user. These standards have become increasingly influential in the development of requirements for toys worldwide and are fully adopted by many countries or used in the creation of their own national standards or regulations.

Of the new technical report's appeal, Ichhaporia says: “ISO/TR 8124-8 is succinct, making it user-friendly to evaluate a toy's age grade. Additionally, since it was recently developed and had various stakeholders including regulators, manufacturers and service providers engaged in the development process, the document takes into consideration recent data and developments in this area.”

So how has this ISO technical report been received by the marketplace? And are toy makers using it in their products?

Making products safe

Hasbro, one of the largest toy makers in the world, manufactures millions of toys for children of all ages each year around the world. The company uses ISO/TR 8124-8 in its age grading process.

Lisa Deluise, Quality Product Analyst at Hasbro, explains: “ISO/TR 8124-8 provides us with an additional and important tool for use in the determination of the appropriate lower age grade for a product. It is also viewed as the most current document that includes guidelines for new technologies (e.g. electronics, computers, software) that are being incorporated into toys.”

Deluise admits that the preparation and review of ISO/TR 8124-8 by an international group of experts in toy safety makes it stand apart from all the others. “The technical report is important to Hasbro because it is an international consensus document which has collected and represents different viewpoints and cultures from around the world. At Hasbro, this type of forward-looking standardization is important to us.”

Hasbro's Quality Product Analyst isn't the only one that believes that ISO/TR 8124-8 is an important step toward further aligning global toy safety requirements. Referring to global harmonization, Bonacruz comments: “I think ISO/TR 8124-8 is the first document that internationalizes age determination of toys. With the amount of international involvement in its development, and the level of trust given to an ISO publication, I am confident that ISO/TR 8124-8 will become widely used internationally.”

No doubt that the technical report will simplify matters for regulators and industry – as long as consumers

respect the warning labels. But, sadly, this sometimes is not the case.

Parents' responsibility

What adult hasn't been tempted to choose a toy for an advanced two-year-old by looking in the toy section for much older children? The adult may not have realized that small parts, which are a choking hazard for the two-year-old child, may have determined the age recommendation instead of the cognitive development level. Even the size of the pieces if the toy breaks must be considered.

Millions of toys are out there, and hundreds of new ones hit the stores each year. While it's one thing for manufacturers to include warning labels on toys, it's another thing for parents to follow them. For instance, when a label asserts, “this toy is not appropriate for children under 3”, it isn't because the manufacturer thinks the item might be too tough for a 24-month-old to figure out, but because the toy is small (or has small parts) and poses a choking hazard.

By choosing age-appropriate toys – which is not far removed from requiring a child to wear a helmet – parents reduce their offspring's risk of injury. After all, toys should be fun for children; they shouldn't be dangerous or cause harm. Let's work together to make child safety and security a reality. ■



NEXT GENERATION OF EXPERTS

Two university students were invited to a recent meeting of the ISO working group responsible for the application of ISO 9001 in local government (ISO/TC 176/WG 4) in Madrid, Spain. The event was also attended by representatives of the Madrid Town Hall, Spanish Federation of Municipalities and Provinces (FEMP), and the Union of Ibero-American Capital Cities (UCC) to discuss the revision of ISO 18091, which provides guidelines for the application of ISO 9001 in local government. Students Ângela Nogueira and Susana Martins, who are currently completing a master's in Integrated Management of Quality, Environment and Occupational Health and Safety at the School of Technology and Management of Porto Polytechnic, were welcomed to observe the working group's proceedings. Referring to their attendance at the ISO meeting, the two university students said it was a "very enriching experience, both at the personal and academic level" and will help shape the development of their thesis, which includes two implementation projects based on ISO 18091. The ISO/TC 176/WG 4 meeting was hosted by AENOR, the ISO member for Spain, with support from the Fundación Participa.



Photo: Sandra Feliciano

PAN AMERICAN STANDARDS COMMISSION

The recent Pan American Standards Commission (COPANT) meeting was hosted by the Servicio Ecuatoriano de Normalización (INEN) in Guayaquil, Ecuador, in April 2016. Some 80 delegates were in attendance representing COPANT members, international and regional organizations, and other guests, despite the area's significant earthquake just one day prior.

Emphasizing the strong relationship between ISO and COPANT members, Acting ISO Secretary-General Kevin McKinley gave an update on current ISO activities. Participants also discussed a range of ways the ISO Regional Engagement Strategy – currently under review – can best capture member needs in the future.

At the workshop themed "Trade Facilitation through the Quality Infrastructure", Kevin McKinley presented best practices governing international standardization processes. Organized by the Quality Infrastructure Council for the Americas (QICA), the workshop provided successful examples of applying the provisions of the Technical Barriers to Trade Agreement of the World Trade Organization (WTO TBT) by using the pillars of quality infrastructure – regulation, standardization, metrology, accreditation and conformity assessment – to facilitate trade.

The next COPANT meeting is scheduled for 30 April-5 May 2017, as a joint COPANT-PASC meeting, and will be hosted by the Standards Council of Canada (SCC) in Vancouver, British Columbia. The 2018 COPANT meeting will take place in Jamaica.



Photo: COPANT

STRENGTHENING COOPERATION FOR SOUTH ASIAN COUNTRIES

ISO and the South Asian Regional Standards Organization (SARSO) signed a Cooperation Agreement to help strengthen ties between ISO and its members in the South Asian region. The Agreement serves as the foundation for mutual beneficial cooperation in promoting and undertaking harmonization of national standards in countries of the South Asian Association for Regional Cooperation (SAARC). It is designed to remove technical barriers to trade and facilitate the flow of goods and services in the region and to present the common interest of SAARC member countries.

The ISO and SARSO Cooperation Agreement has made provisions for SARSO to take part in the ISO Strategic Plan and *ISO Action Plan for developing countries* and their yearly implementation plans. Among the various cooperation efforts, SARSO will also encourage its member states to contribute to studies on the economic and social benefits of standardization; capacity building of standardization and conformity assessment infrastructures; and technical assistance and education and training programmes related to standardization and conformity assessment.

Last year, ISO Council recognized SARSO as the regional standards organization for the South Asian region.



ENGAGING THE ASIA PACIFIC REGION

The Pacific Area Standards Congress (PASC) – a forum to strengthen international standardization programmes for the Asia Pacific region – gathered for a series of meetings in Bali, Indonesia, in May 2016.

Hosted by BSN, Indonesia's national standards body and ISO member for the country, the 39th meeting brought together PASC members, representatives from the Asia Pacific Laboratory Accreditation Cooperation (APLAC) and Asia Pacific Metrology Programme (APMP), as well as senior leadership of IEC, ITU-T and ISO.

Kevin McKinley, Acting Secretary-General of ISO, provided updates on the implementation of the *ISO Strategy 2016-2020*, services standardization, and the *ISO Action Plan for developing countries*. Alan Morrell, Director of the ISO Regional Office, Singapore, presented on the ISO Regional Engagement Initiative (REI). PASC strongly encouraged its members to continue the development of their engagement with the ISO Regional Office's activities, and make their stakeholders aware of the unique value and services provided.

Looking ahead, the Standards Council of Canada (SCC), ISO member for the country, announced that it will host PASC 40, a joint COPANT-PASC meeting, on 30 April-5 May 2017 in Vancouver, British Columbia.



ASEAN REGION TACKLES TRADE BARRIERS

More than 80 delegates attended the 45th ASEAN Consultative Committee on Standards and Quality (ACCSQ) held in Singapore in April 2016. The ACCSQ oversees ASEAN's cooperation in the area of standards, technical regulation and conformity assessment procedures (STRACAP) to reduce technical barriers to trade and facilitate trade in ASEAN and beyond.

Kevin McKinley, Acting Secretary General of ISO, and Alan Morrell, Director of the ISO Regional Office, Singapore, attended the meeting and highlighted how the use of International Standards helps facilitate the greater free flow of goods – both in the ASEAN region and around the world. Side meetings were also held with various national and regional agencies.

The ACCSQ was formed by the ASEAN Economic Ministry in October 1992 with the aim of removing technical barriers to trade in order to facilitate the implementation of the Common Effective Preferential Tariff Agreement and to realize the ASEAN Free Trade Area. 2016 is a significant year as ASEAN embarks on the next phase of the ASEAN Economic Community (AEC) under the ASEAN 2025 vision.

EUROPE'S ACTION PLAN ON RESPONSIBLE BUSINESS CONDUCT

A multi-stakeholder forum seeking feedback on responsible business conduct in the European Union took place in Brussels, Belgium, in March 2016. More than 35 participants from an array of sectors and stakeholders attended the event.

The forum was opened by European Commission's Elzbieta Biełkowska (Commissioner for Internal Market, Industry, Entrepreneurship and SMEs) and Richard Howitt, MEP, with presentations delivered by representatives of ISO, ILO, the OECD, Amnesty International and UN Global Compact, among many others.

The Commission promotes corporate social responsibility (CSR) in the EU and encourages enterprises to adhere to international guidelines and principles, including ISO 26000 on social responsibility. The EU's policy is built on an agenda for action to support this approach. CSR is used as a synonym to reference "sustainability", "responsible business conduct" or "business and human rights". While diverse, they all address "the responsibility of enterprises for their impacts on society" as defined by the European Commission in its 2011-2014 strategy on CSR. Across the full day of panel discussions, numerous policy ideas and suggestions were put forward by delegates. The forum represents another milestone of the EC's multi-stakeholder review process before the official drafting and adoption of a new strategy on CSR.



Opening up trade with conformity assessment

by Katie Bird

In a continuing effort to reach new markets, Vietnam is taking big steps to modernize its system of standards and conformity assessment. The move is expected to improve access for Vietnamese products and services to international markets, as well as promote the competitiveness of national businesses.

Any technical regulations used should be based on international standards.

Testing, inspection and certification (or conformity assessment as they are collectively known) are all about building trust – trust that products are safe and will work as intended, trust that regulations are being respected, and trust that products sourced from international markets are compatible. For Vietnam, a country eager to access international markets and accelerate trade, investing in conformity assessment is an important step. Since 2007, Vietnam has been a member of the World Trade Organization (WTO) in addition to a member of the TPP (Trans-Pacific Partnership) Agreement. These two agreements focus on opening up new international markets for Vietnamese goods and services. *ISOfocus* spoke to Mr Tran Van Vinh, Director General of STAMEQ, the Vietnamese national standards body and ISO member for the country, who explained his belief that international standards play a crucial role in opening up international markets.

Reducing obstacles

“To date we have harmonized over 45% of our national standards with international and regional versions,” he said. “This expresses our commitment to the World Trade Organization’s Technical Barriers to Trade (WTO TBT) Agreement and reflects how much we believe in the potential of international standardization to improve access for Vietnamese products and services to international markets, as well as promote the competitiveness of national businesses.”

The WTO TBT Agreement aims to ensure that while WTO member countries have the right to set rules for products they are importing – for example, countries may want to set rules to protect the health of their citizens – these requirements should not create unnecessary obstacles to international trade. For this reason, the agreement suggests that any technical regulations used should be based on international standards such as those developed by ISO. This helps protect against discrimination and means exporting countries are expected to adhere to the same requirements.

But promoting international trade and the free movement of goods isn’t just about using the same requirements for the product. Reassuring a trading partner that the product in question does indeed adhere to the requirements in the standard is also very important. This is where conformity assessment comes in.

The advantage of such a clear policy on conformity assessment is indisputable.

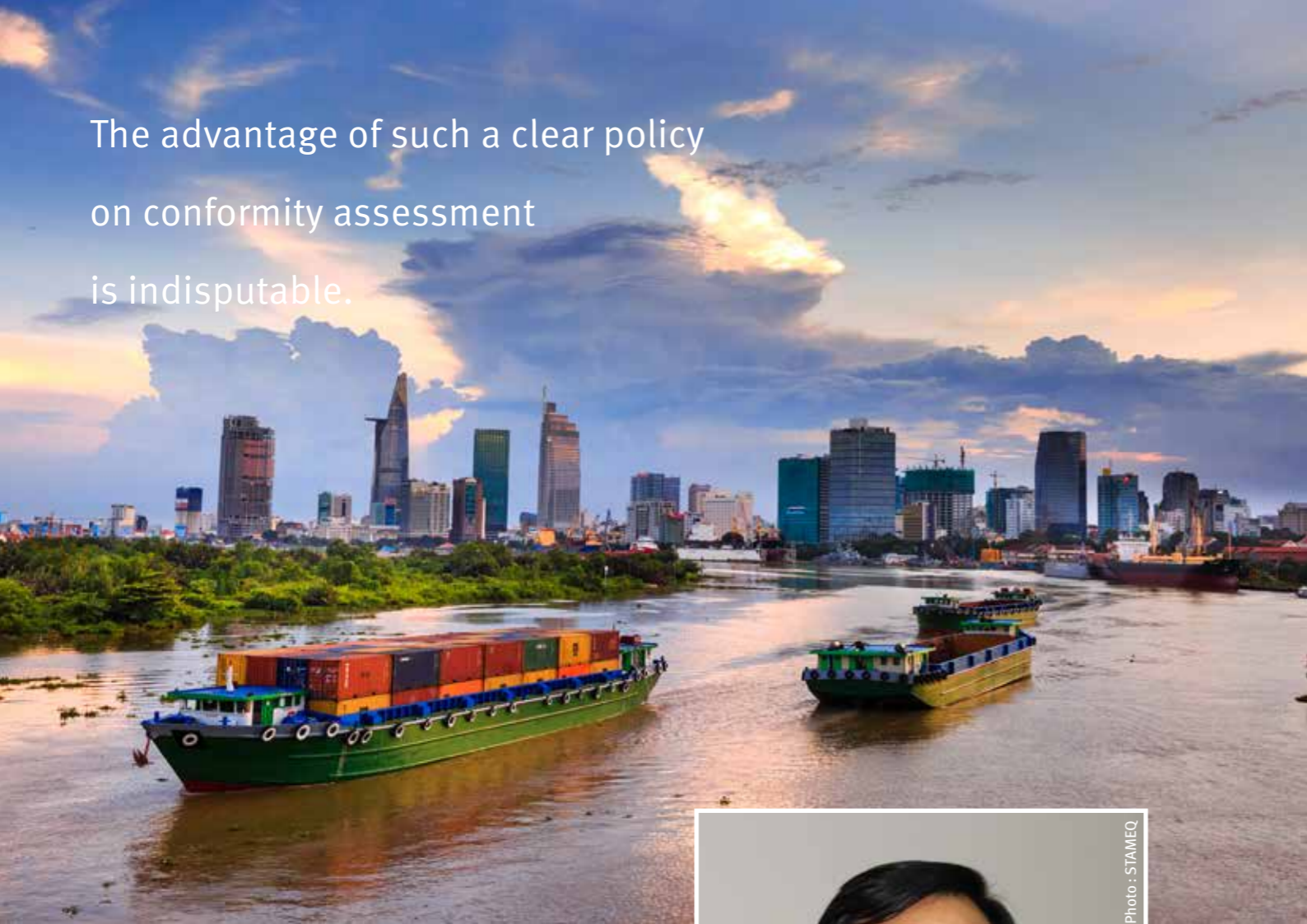


Photo: STAMEQ

Mr Tran Van Vinh, Director General of STAMEQ.

Trust in the results

Conformity assessment is the practice of showing that a product, service or system meets the requirements of a standard. Usually, it includes activities such as testing, inspection and certification and is performed by auditors, laboratories and certification and inspection bodies. However, it is important to be able to trust the results of conformity assessment. For example, how do we know that a laboratory is doing its job correctly? And doing it in the same way as another laboratory in a different country? This question is even more important when trading across borders.

ISO develops and publishes a number of standards to help make conformity assessment activities as uniform as possible across industries and across the world. These standards are developed by a committee focusing on conformity assessment issues called CASCO and are referred to as the “CASCO toolbox”.

For example, one of the most well-known of these standards is ISO/IEC 17025, which specifies the requirements for laboratories performing testing and calibration activities.

Using standards such as these helps ensure that the test results are reliable and, more importantly, comparable across laboratories and countries, reducing the need for multiple tests by both exporting and importing countries.

Vietnam’s path to progress

Mr Tran Van Vinh explained that, to date, 29 of the standards in the CASCO toolbox have been adopted as national Vietnamese standards, with ISO/IEC 17025 clearly being the most popular. “As of December 2015, the number of testing laboratories accredited¹⁾ under ISO/IEC 17025 is 966, and the number of accredited calibration laboratories is 88, a significant growth from years ago when the number of conformity assessment bodies in Vietnam was very limited,” he said.

The widespread use of this standard is related to a number of policy decisions in the country, he clarified, where accreditation to ISO/IEC 17025 is a priority criterion for regulators when choosing laboratories to carry out state-supporting services. In addition, following the requirements of ISO/IEC 17025, and related standards such as ISO/IEC 17011, ISO/IEC 17020, ISO/IEC 17021 and ISO/IEC 17065, is mandatory in Vietnam for conformity assessment bodies and the accreditation body carrying out their activities.

“The benefits of these standards are twofold,” Mr Tran Van Vinh explained. “They provide a set of international requirements that help conformity assessment bodies to develop their competence, but also a basis for regulators to ensure that the operations of conformity assessment bodies are in line with international rules.”

The advantage of such a clear policy on conformity assessment is indisputable – it will help the goods produced in Vietnam to easily access the international market. ■

Getting involved in standards

The importance of conformity assessment standards to Vietnam is reflected in their decision to participate in CASCO’s standards development work. Under a new programme to support members in developing countries and take a more active role in ISO’s standards development work, ISO supported STAMEQ to attend recent CASCO meetings. According to Mr Tran Van Vinh, this has been a very valuable experience, which has allowed the national standards body to:

- Remain up to date with international trends in conformity assessment and develop a national plan based on this knowledge
- Develop new national conformity assessment plans to facilitate commercial flow
- Bring experiences from a national and regional level to the international stage

“In the context of global economic integration, I fully understand the practical significance of using international standards as an effective tool to remove unnecessary technical barriers to trade, thus promoting sustainable development.”



1) Accreditation is the formal recognition by an independent body that a conformity assessment body such as a certification body operates according to international standards.



Things you should know about **laboratory test results**

When selecting a laboratory to fulfil your testing, calibration or measurement needs, you must be sure that they can supply you with accurate and reliable results. Herein lies the need for ISO/IEC 17025 and what contributes to a laboratory being technically competent to do your testing.

Trust is not a
one-time event.

Confidence in products and services on the globalizing trade scene is getting increasingly hard to create. Both private-sector organizations – be it manufacturers, suppliers, importers/exporters or customers – and government authorities are looking to reliable laboratories to meet testing requirements. The first and most important step in setting a laboratory apart from its competition is using ISO/IEC 17025¹⁾.

Regardless of the arena a laboratory works in, ISO/IEC 17025 aims to improve the ability to consistently produce valid results. The standard can help create the conditions – as well as satisfy the technical demands – that companies need to have confidence. But there is still a gap between reality and desirability, and what enables test results to achieve this confidence. *ISOfocus* spoke to Heribert Schorn, Director, Institute for International Product Safety GmbH, an accredited test laboratory based in Bonn, Germany, about the important role of ISO/IEC 17025. Here, he tells us what steps are needed to build a climate of confidence.

1) ISO/IEC 17025 is currently under revision, with the new edition expected to be published by end of 2017.



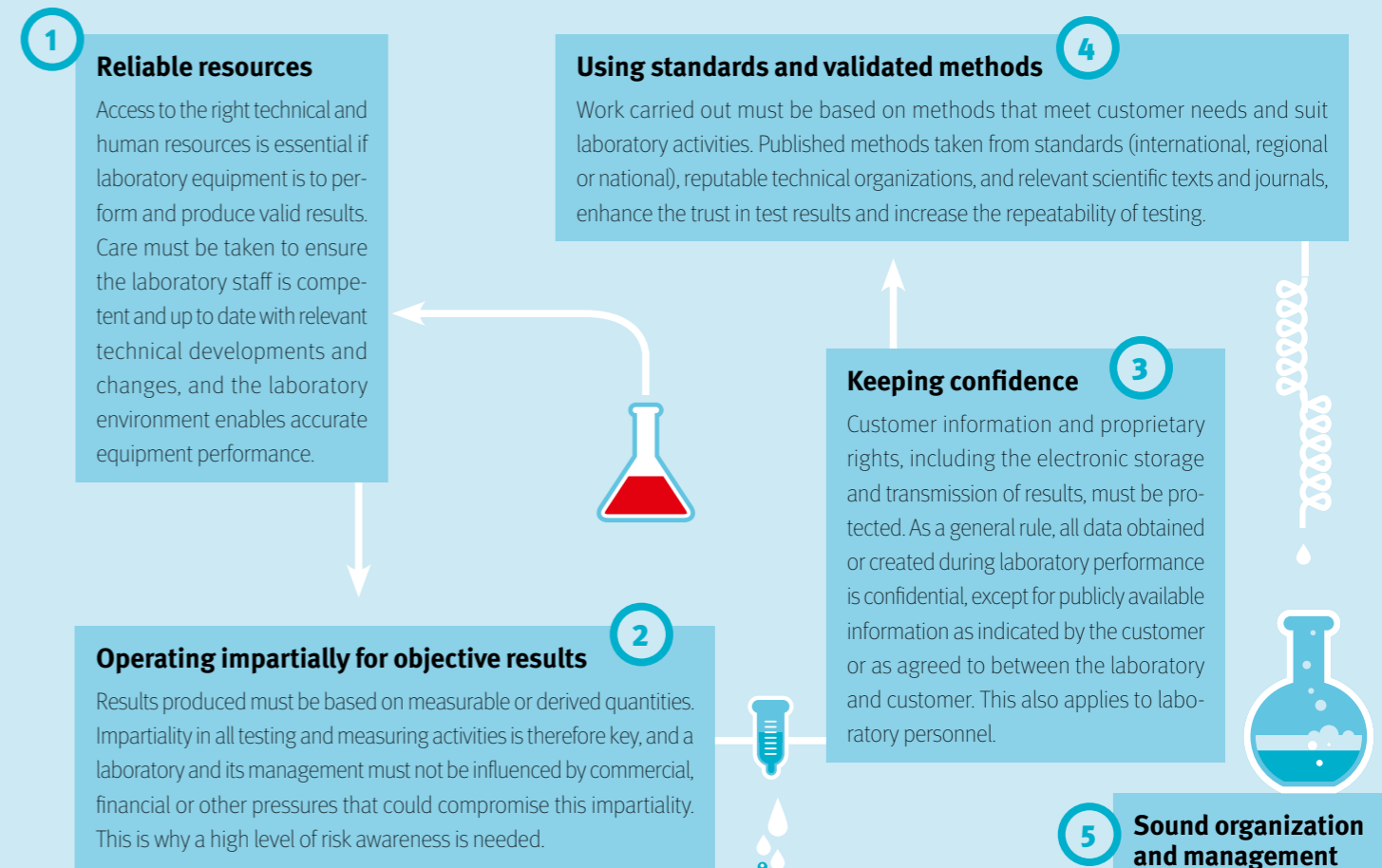
Building trust

Trust in testing and measurement results is vital not only for product safety, but also for the growth in global trade. Consumers, users, the public sector and manufacturers must have confidence that laboratory test results are free of any doubt, can be repeated anywhere in the world with the same results, and are performed competently under no bias. Herein lies the need for ISO/IEC 17025.

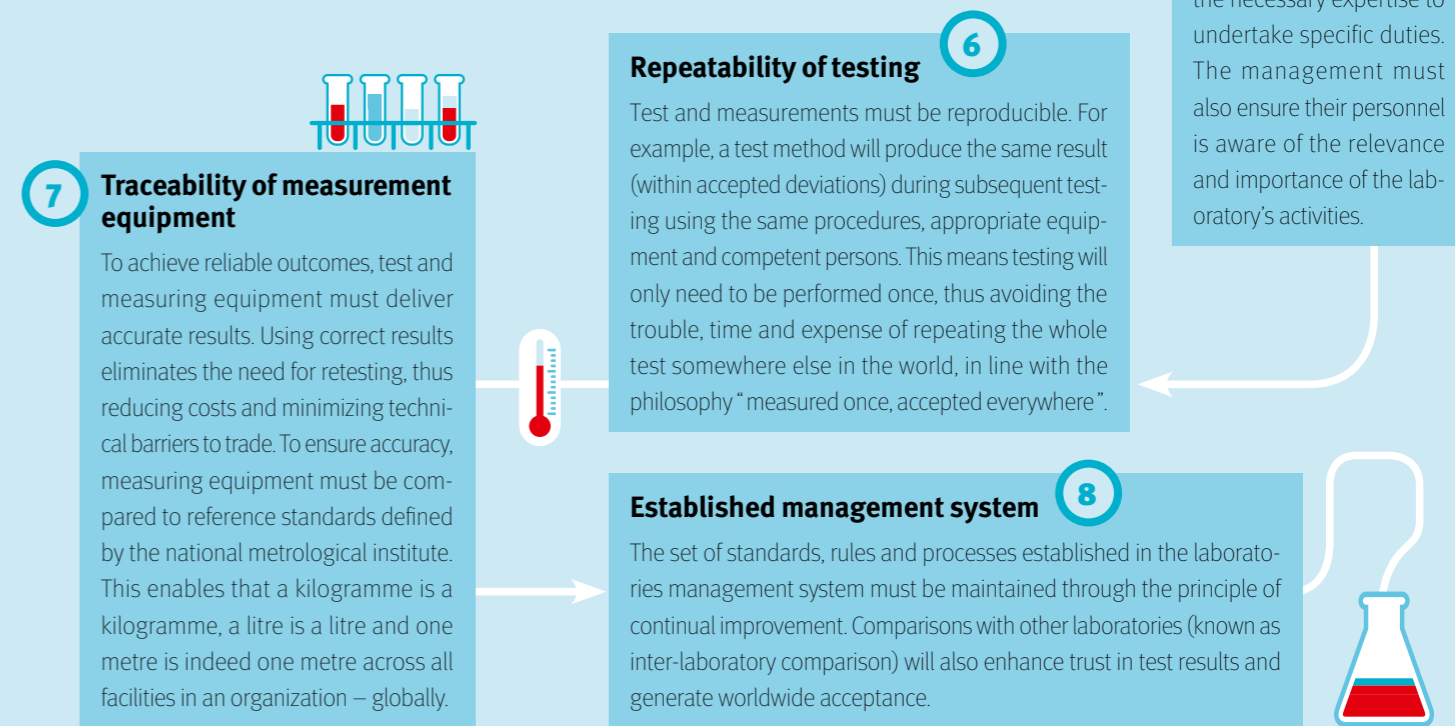
The standard aims to help laboratories in any organization or sector generate trustworthy results. Test results obtained from a laboratory operating in conformance to ISO/IEC 17025 provide the company with increased confidence in its technical capabilities and staff, and, ultimately, in the quality of its products.

ISO/IEC 17025 hinges on eight key elements that enable laboratory owners and managers to operate their organization in a reliable manner. These elements – although not exclusive – represent the key issues that facilitate trust and align with the requirements contained in ISO/IEC 17025.

ISO/IEC 17025
hinges on eight
key elements.



LABORATORY EIGHT KEY ELEMENTS





ISO/IEC 17025
needs to be
used to create
that climate of
confidence.

How to implement ISO/IEC 17025

Trust is not a one-time event. Trust in test results that are predictably reliable must be retained by the day-to-day operations of the laboratory and by its staff. This means the quality management system must be understood, accepted, maintained and improved by a competent personnel.

ISO/IEC 17025 is the main standard sought by laboratories for accreditation and peer evaluation²⁾, and is recognized by industry, government bodies and regulatory agencies on a global scale. The standard helps enhance a laboratory's reputation, verify and support data quality, and demonstrate technical capability and expertise.

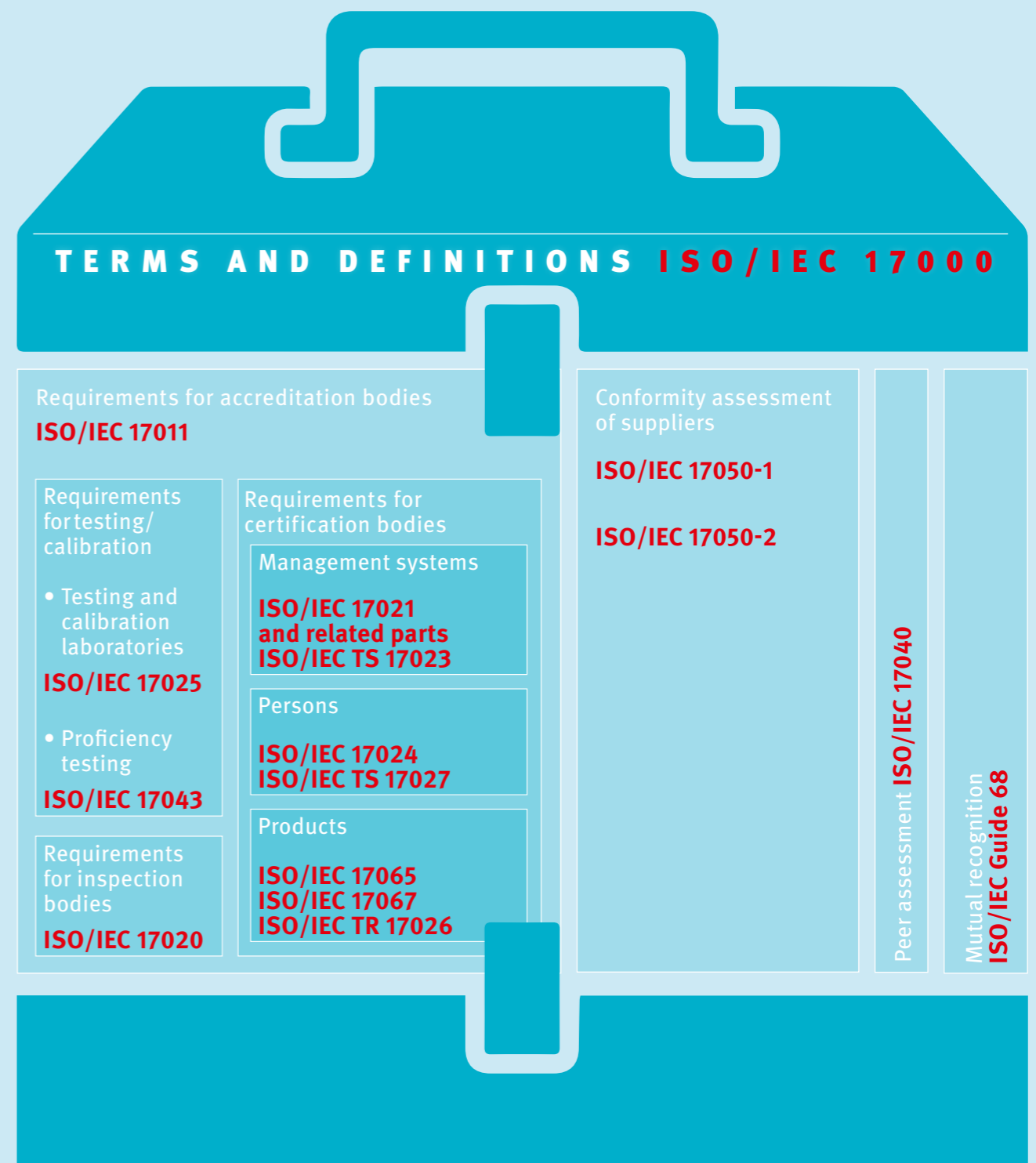
When products or services are built on trustworthy test results, there is a far better likelihood that consumers will buy, all other factors being equal. But for this to happen, ISO/IEC 17025 needs to be used to create that climate of confidence. ■

²⁾ To demonstrate the competence and conformity with ISO/IEC 17025, laboratories can be accredited or vetted by a peer evaluation programme (see CASCO toolbox).

CASCO TOOLBOX

Conformity assessment tools to support public policy

Regulators in many sectors specify the use of conformity assessment by referring to relevant International Standards and Guides, known as the CASCO toolbox. Most of them are developed and published jointly by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).



Ecuador's **anti-bribery** crusade

Bribery is a significant business risk in many countries and sectors. Systemic bribery lowers economic growth and discourages investment. One step closer to stamping out corruption, Ecuador's national standards body is making certain that the country will be free of this dishonest practice.

MEMBER EXCELLENCE

Offering or accepting bribes in Ecuador is illegal and punishable by imprisonment for up to five years. Yet bribery continues to be a serious issue, costing lives and eroding economies, not only in Ecuador but all over the world.

Corruption is one of the main obstacles to sustainable economic, political and social development, for developing, emerging and developed economies alike. Overall, bribery reduces efficiency and increases inequality. Estimates show that the cost of corruption equals more than 5% of global GDP (USD 2.6 trillion, World Economic Forum) with over USD 1 trillion paid in bribes each year (World Bank).

Bribery can be as petty as paying off a police officer for a speeding ticket or as profound as paying to win a major contract. At the end of the day, those hurt most by corruption are the world's weakest and most vulnerable. To share with us their experience, the Ecuadorian Service for Standardization (INEN), ISO member for the country, tells us how national efforts are helping to shape a brighter (and less corrupt) future.

Preventing corruption

Corruption is a widespread problem in both public and private sectors. Corruption undermines the rule of the people and thus the very foundation of democracy. If basic public services are not delivered to citizens due to corruption, the state eventually loses its credibility and legitimacy. As a result, disappointed citizens might turn away from the state, retreat, migrate, or stand up against what they perceive to be the corrupt political and economic elites.

In recent years, the Ecuadorian government has stepped up its anti-corruption activities. Its efforts have become more systemic, with greater emphasis on instituting appropriate policy measures to prevent malpractice. Anti-corruption has been a priority with the creation of the Commission for the Civic Control of Corruption Law. The Commission investigates, identifies and differentiates acts of corruption, and imposes any possible sanctions thereof, as well as diffusing transparency values and principles regarding public matters (National Congress, 1999). The Commission, supported by its own legislation, coordinates activities



Photo: INEN

César Díaz Guevara, INEN's CEO, with his trusty team of colleagues responsible for writing this article.

with public and private institutions independent of state powers. Ecuador has also adopted international tools at regional level under the Inter-American Convention against Corruption with the purpose of developing mechanisms that eradicate corruption practices.

The standards solution

Despite these measures, corruption in Ecuador remains a concern. The Ecuadorian Standardization Service (INEN) has taken on the challenge of cracking down on the problem by providing an alternative solution.

In 2016, INEN established a national mirror committee to better contribute to the development of the future ISO 37001 standard on anti-bribery. This has created a powerful platform for anti-corruption efforts in that it recognizes the fundamental need to involve all stakeholders, and that the fight against corruption requires a national consensus and coordination of activities.

Earlier this year, the committee held its first meeting, bringing together some 110 participants from both the private and public sector under the Chairmanship of the Public Procurement National Service (SERCOP), responsible for the Handbook of Good Practices in Public Procurement. The meeting discussed a range of topics for implementation in the public, business and civil society sectors of the country. These topics related to access to confidential and privileged information as well as training for the future implementation of the standard.

As the fruits of that collective effort, INEN would like to strengthen the country's anti-corruption programmes

and strategies. The hope is to establish a culture of integrity, transparency, openness and compliance within the country based on best-practice principles contained in ISO 37001. This, in turn, is expected to avoid ethical, economic or political concerns that could lead to the obstruction of the country's development.

Winning the war

It is little wonder, then, that the future ISO standard aiming to help organizations fight bribery will make for a welcome addition not only in Ecuador, but all over the world. ISO 37001, *Anti-bribery management systems*, is designed to help organizations implement effective measures to prevent and address bribery, and instil a culture of honesty, transparency and integrity.

ISO 37001 will apply to all organizations, regardless of their type, size and nature of business or activity, and whether in the public, private or voluntary not-for-profit sectors. The standard will help establish that the organization has implemented reasonable and proportionate measures designed to prevent bribery. These measures include leadership from the top, training, risk assessment, due diligence, financial and commercial controls, reporting, audit and investigation.

For Ecuador, adopting ISO 37001 will enable the country to incorporate a new approach to strengthen national anti-corruption strategies. While it cannot guarantee that bribery will not occur, it can provide the tools and systems to greatly reduce the risk and help organizations deal with it effectively if it does arise. ■



What to expect when **buying second-hand goods**



How can we be sure that the second-hand kettle we buy won't blow up in our face? Purchasing used products can bring its share of bad surprises, but ISO/TS 20245 helps make sure those hand-me-down treasures are not a swizz.

When you buy a second-hand washing machine, you are willing to accept that it may have a few scratches, but not that it causes flooding or explodes during the spin cycle. We expect the products we buy – whether new or previously used – to be fit for purpose, safe, free from defects and to last for a reasonable amount of time.

Be it out of necessity or through a defiant act of anticonsumerism, the trade of used goods has increased exponentially in the last decades, especially in developing countries and countries with transitional economies. But does this mean we should compromise quality for price? Just like any factory-bought product, used goods should meet the expectations of a reasonable consumer, who has full knowledge of their second-hand status. This means they must fulfil acceptance criteria in terms of quality, product information and usage requirements, with additional details about their condition.

On the assumption that second-hand items should pose no health, safety or environmental risks beyond those generally admitted for new goods, ISO project committee ISO/PC 245 published ISO/TS 20245, which establishes minimum screening criteria for the cross-border trade of second-hand goods. This is important as it helps regulate an unruly market and diverts thousands of tonnes of unwanted materials from our landfills.

Published in 2014, ISO/TS 20245, *Cross-border trade of second-hand goods*, is the first global

technical specification on goods that are traded, sold, donated or exchanged between countries. It specifies how to evaluate and classify products on a ranking based on their condition: A (very good), B (good), C (fair), and D (poor). These measurable criteria are destined to be used by importing or exporting parties or governments for in-transit and port-of-entry screening of second-hand goods, and will ensure that both consumers and the environment are protected.

Here, Rae Dulmage, Chair of ISO/PC 245, *Cross-border trade of second-hand goods*, tells us why we can shop second-hand with confidence.

ISOfocus: As the tide of previously owned goods hitting the market grows, what measures must be taken to ensure consumer protection?

Rae Dulmage: When you look at yourself in the mirror, you often don't notice that you are ageing; the same is true of the products you use as a consumer. After years of good service, our lawnmower may now need five tries to start up, our dress suit is getting a bit shiny and our computer is beginning to run slow. Yet these are the products we buy in second-hand shops or through e-commerce Websites like Amazon or eBay. They may be a little shabby, substandard, or downright dangerous, but we buy them because the excitement of getting a "really good deal" can cause us to miss the warning signals.



Consumers and resellers need to take a hard look at the history of use and condition of the product they can obtain before they part with their cash. As customers, we should be looking out for signs of abuse, repair, general wear and tear, and improper operation. We should also demand the manuals and records of service, as well as any recalls. And some goods, especially those related to primary safety or life-safety protection, should quite simply not be re-used.

A few smart questions can help you decide whether a product is worth buying. What am I going to use it for? How long do I expect it to last? Don't just take someone's word for it, check under the hood. Most importantly, buy from a reputable dealer who knows what he is selling. And apply the principles of ISO/TS 20245.

How can International Standards protect consumers against unsafe and hazardous goods?

The second-hand market has brought goods like television sets, refrigerators, computers and mobile phones within easy reach of those who cannot otherwise afford them. This has created a special class of consumers who need protection against substandard and unsafe second-hand goods.

In this respect, International Standards can be viewed as buoys or marker posts that guide us against unsafe and hazardous products. They establish a set of consensus-based international and measurable criteria against which second-hand goods can be evaluated to protect consumers against risk to health and safety when purchasing such items. By being adopted in various countries and organizations, they can help consumers separate the wheat from the chaff, clearing the system of unacceptable products and bringing trust and consistency to the market.

Could you please describe how the work of ISO/PC 245 will increase consumer confidence and trust?

Currently, there are some excellent associations and organizations in the market with really good practices related to how they handle second-hand goods. This trend is certainly not universal, however, and is often tied to a regional approach. At the end of the day, the work of ISO/PC 245 is about providing the means to make those good practices universally applicable and available. If such occurs, consumer confidence and trust will be greatly enhanced. That is why it is so important that the work of the committee be embraced by all parties. In order to assess how well ISO/TS 20245 was received, ISO launched an online survey to gather feedback from



Rae Dulmage, Chair of ISO/PC 245, Cross-border trade of second-hand goods.

Getting a “really good deal” can cause us to miss the warning signals.

users of the standard on their views and priorities to be included in future editions of the document.

How is the feedback from this survey on ISO/TS 20245:2014 being fed into the development of the future standard?

Although the feedback has been limited, what we have received did point out the need to take into consideration the use of international product codes as well the Basel Convention, which is designed to reduce the movements of hazardous waste between nations. After much discussion, we concluded that ISO/TS 20245 should not be restricted to consumer products, but include other types of goods.

We also got comments from some members of the ISO/IEC/ITU/UNECE Memorandum of Understanding on electronic business that were helpful. As a forum that aims to facilitate world trade in the field of electronic business and promote synergy in standardization, it brought to light many areas of divergence and overlap to be addressed in the future.

Another suggestion we got was that a sample checklist would be useful. Given the move towards a circular economy, an alternative economic model whereby products are designed to be reconfigured or repurposed and leased equipment recycled back into the market, the standard needs to consider the whole life

cycle. So far, it is left up to the users of ISO/TS 20245 to decide which products are subjected to the standard's regulation.

With millions of people around the world buying used or second-hand goods, how will the future standard step up controls and oversight?

If we can fit all the requirements for second-hand goods, waste, lightly used products and sustainability in a consistent life-cycle approach, two outcomes can be envisaged. The first is that people will become aware that unsafe products have to be passed on in a safe end-to-end way, so putting something out on the curb, shipping it out of sight or dropping it off at a recycling centre will no longer be an option. The other positive fall-out is that we will have a better stream for handling used goods and, hopefully, increasing sustainability. The committee hopes that the uptake will be expanded with the future standard. If countries enforce ISO/TS 20245 requirements as part of their import regulations, organizations integrate them in their purchasing and processing practices, and charities make them a common feature of their operations, unsafe and unreliable products will gradually be eliminated from the market and disposed of in the proper way. As for consumers, they will get safe and serviceable second-hand goods that provide value for money. ■

The price is *right*

In an increasingly price-conscious world, being able to compare prices of equivalent products in order to make an informed choice is a consumer right. But with the explosion of pre-packaged goods in different types of packaging and product sizes that has hit our shop shelves, making that choice is no easy task. To get around this, an ISO standard is being developed that aims to improve the way quantities are displayed.



The average retail store these days can sometimes feel like a jungle. Multiple types of packaging, different weights and volumes means comparing similar products on price can be a minefield. Unit pricing is one way that consumers can wade through the jungle by displaying the price of the product as a standard unit of measurement. A 250 ml carton of milk sold for USD 1, therefore, would be equivalent to a 1l carton sold for USD 4. But unit pricing is not widespread, and where it exists, it is not always visible or consistent in terms of quantities used, making it ineffective.

The answer lies in harmonization. A new ISO project committee – ISO/PC 294 – has just been formed to develop a standard for unit pricing that will establish guidelines and principles of unit pricing, to make it accessible and useful for both retailers and consumers. We sit down with John Furbank, Chair of ISO/PC 294, *Guidance on unit pricing*, to discuss the status of unit pricing as it stands and how a new ISO standard can help.

ISOfocus: Unit pricing is already used quite widely and, in some countries, it is even a legal or regulatory requirement. Why, then, was it decided to develop an ISO project committee in this area?

John Furbank: We know now that the sale of pre-packed items is increasing throughout the world. At the same time, many retail chains operate across national boundaries and use the same system for marking prices in all their stores. It was therefore agreed that an International Standard could result in displays that are consistent in a locality and provide guidance to governments or businesses wishing to introduce unit pricing regimes.

Currently, unit pricing is quite ad hoc, varying from legislative requirements to voluntary codes. In some countries, it is rarely present, while in others, such as Canada and the US, it is legislated in some states but not all. Where it does exist, activity can be uncoordinated or difficult for consumers to

Unit pricing will assist consumers in making informed purchasing decisions.

use, because, for example, the unit price is not adjacent to the sale price or the layout of information is not consistent throughout the store, making it difficult to read.

Unit pricing, then, will assist consumers in deciding which item is the best value for money, something that is difficult to do when, for example, tins of tuna are offered for sale at USD 1.99 for 95 g, USD 2.75 for 145 g or USD 3.69 for 185 g. The value of an International Standard is that it can bring best practice guidance to the various codes and regulations and may be used by industry to develop better and more user-friendly unit pricing systems.

Unit pricing will assist consumers in making informed purchasing decisions and thus potentially save money by comparing the actual price per unit quantity of products that are of the same nature or between different brands. It is also suggested that consumers may, by saving on basic items, purchase more items knowing that they are still within budget.



John Furbank, Chair of ISO/PC 294, Guidance on unit pricing.

Evidence suggests that consumers can save money over time.

In countries that have unit price legislation already, such as EU countries, the US and Australia, an International Standard will be beneficial because parts of the standard could be voluntarily adopted by retailers to enhance the quality of their unit pricing, thus acting as a catalyst for improving existing legislation/guidelines.

Last but not least, the standard could help educate consumers on how to use unit pricing effectively, which is currently lacking.

How will standardization of unit pricing help consumers? Will they risk a rise in prices as retailers see the adjustment of units being measured?

The objective of the standard is to establish best practice by defining principles for:

- Displaying and disclosing the unit price of products
- Designing labels and information material displayed by written, printed or electronic means
- Educating consumers in the use of unit pricing

The cost of incorporating unit pricing into existing pricing display systems in supermarkets, hardware stores or pharmacies would be marginal because the unit pricing module may be added to existing software and incorporated in shelf labels printed on a normal commercial office printer.

Evidence suggests that consumers can save money over time, and I feel certain that there will at least be a reduction in price for basic commodities such as cereals, flour and sugar when consumers can clearly see which store or brand is the cheapest. Of course, some customers may still choose to buy the more expensive item if it is from their preferred manufacturer or supplier, but the important thing is that they will be presented with information that enables them to make an informed choice. A large pack of washing powder that will last two weeks, for example, may be a more economical option than buying a smaller pack each week, but this would be difficult to establish without unit pricing.

How will this impact retailers? And what trickle-down effects will consumers see?

The aim of the International Standard is to encourage retailers to use best practice when developing and maintaining a unit pricing scheme. I believe that providing better unit pricing gives retailers a competitive edge by encouraging consumers to have more trust in the store that shows it has their best interest at heart. This, in turn, helps boost customer satisfaction and improves the store's reputation as being customer-focused and providing better value for money.

Moreover, retailers will be able to reduce design and research costs by developing a system using the standard's guidance on positioning, visibility and configuration of labels. Displaying the unit price in a user-friendly manner may also promote the appeal of private store brands.

How do you see the future standard being received by retailers, regulators and consumers?

Consumer groups, locally and internationally, are very supportive of the standard's development (Consumers International is a liaison member of ISO/PC 294). I am confident that regulators and retailers will see the value of this standard if it provides, as intended, a practical method of encouraging good trading practices and, for retailers, a platform for consumer engagement.

What are your long-term expectations of the standard? What changes will it bring about in the industry, if any?

Many retail chains operate across national boundaries and use the same system for marking prices

in all their stores wherever they are situated. The standard will encourage tailor-made systems for particular countries or areas so that consumers may easily compare the unit price of items in different, but adjacent, stores. This, in turn, could increase competition between stores.

It is my belief that the International Standard will promote the development of future regulatory requirements for unit pricing, which will be of benefit to both consumers and suppliers. In some countries, such as Australia, which have unit pricing regulations in place, the standard will help identify weaknesses and improve the layout, prominence and visibility of labels. What's more, it will establish a pathway for educating consumers on how to use this information.

Conversely, in countries where unit pricing does not currently exist, the standard will provide a guide on what principles need to be applied to make any proposed unit pricing scheme useful for consumers and practical for retailers. ■

