

## New Work in International Standardization for April 2018

1. A New Field of Technical Activity – Musical Instruments [More>>](#)
2. A New Work Item Proposal – Guidelines on Integrating a Business Excellence Framework with ISO management system standards [More>>](#)
3. A New Field of Technical Activity – Karst [More>>](#)
4. A New Field of Technical Activity – Transaction Assurance in E-Commerce [More>>](#)
5. A New Work Item Proposal – Glass Clarity [More>>](#)

## International and regional items of interest for April 2018 are as follows:

1. WTO launches call for proposals for 2018 Public Forum [More>>](#)
2. Don't miss the chance to be part of Australia's trade future [More>>](#)
3. WTO DG: Better data needed to make trade work for women's economic empowerment [More>>](#)

## ISO items of interest for April 2018 are as follows:

1. Establishment of Project Committee ISO/PC 317 – Consumer protection: Privacy by design for consumer goods and services [More>>](#)
2. Establishment of Project Committee ISO/PC 318 – Community scale resource oriented sanitation treatment systems [More>>](#)
3. Establishment of Technical Committee ISO/TC 283 – Occupational health and safety management [More>>](#)
4. How ISO standards support World Health Day [More>>](#)
5. Playing safe with kids' toys [More>>](#)

## IEC items of interest for April 2018 are as follows:

1. How safe is your car from hackers? [More>>](#)
2. Evolving with digital transformation – with Phil Wennblom, new Chair of ISO/IEC JTC 1 [More>>](#)
3. Fly me to the sky [More>>](#)

**\*\* For further information about any article please email: [mail@standards.org.au](mailto:mail@standards.org.au)**

## New Work

### 1. A New Field of Technical Activity – Musical Instruments

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ISO has received a New Field of Technical Activity proposal from the Chinese National Standards Body (SAC) to **Form a new Technical Committee in the field of Musical Instruments.**

The scope of the new committee is proposed to be *Standardisation in the field of musical instruments including: standardization of classification, terminology, products, safe use, test methods and conformity assessment rules.*

The areas of standardization that are set out in the proposal are as follows:

1. Common and basic standards (classification and terminology)
2. Method standards (assessment and test methods)
3. Standards for product and accessory (including piano, violin family, guitar, accordion, aerophones, bows and strings)

It is expected that 4 new international standards will be proposed in the first year of work, pending approval of this proposal.

Standards Australia will be consulting with stakeholders for this proposal. For more information on the proposal, or to make a submission, please contact the Senior Stakeholder Engagement Manager, Brett Lovett, [brett.lovett@standards.org.au](mailto:brett.lovett@standards.org.au), by Friday 27 April 2018.

### 2. A New Work Item Proposal – Guidelines on Integrating a Business Excellence Framework with ISO management system standards

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ISO has received a New Work Item Proposal from the United Kingdom Standards Body (BSI) and the Canadian Standards Body (SCC) to **Form a new Project Committee to develop Guidelines on Integrating a Business Excellence Framework with ISO management system standards.**

Canada circulated a similar new work item proposal in early 2017 which received some international support but did not reach the required number of approval votes in order to be successful. Canada and the United Kingdom have now worked together to incorporate the feedback received in the initial NWIP to develop the new proposal.

The scope of the standard proposed is as follows:

*Organizations implementing single or multiple management systems and simultaneously the Business Excellence framework are faced with the major challenge of lack of alignment. This can be attributed to multiple factors, including but not limited to, organizational design/structure, responsibilities matrix, contextual understanding of the linkages/inter-dependencies, silo mentality and turf protection. “Guidelines on Integrating a Business Excellence Framework with ISO management system standards” will provide the roadmap on integrating the national/international business excellence frameworks with management system standards for enhancing organizational efficiency, facilitating effective decision-making, and promoting transparency, innovation and continuous improvement. Scope will exclude the development of an ISO Business Excellence standard and/or development of ISO Management System standard/s. Instead it will focus on the integration aspects, available best practices, and provision of useful practical tips for better organizational management.*

Standards Australia will be consulting with stakeholders for this proposal. For more information on the proposal, or to make a submission, please contact the Senior Stakeholder Engagement Manager, Catherine Dunkerley, at [Catherine.dunkerley@standards.org.au](mailto:Catherine.dunkerley@standards.org.au), by Friday 27 April 2018.

### 3. A New Field of Technical Activity – Karst

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ISO has received a New Field of Technical Activity proposal from the Chinese National Standards Body (SAC) to **Form a new Technical Committee in the field of Karst.**

The scope of the activity would be as follows:

*Standardization in the field of karst terminology, sustainable development of karst resources, environmental protection and management of karst environment, as well as investigation and assessment (including modeling methods and mapping of karst systems).*

The initial proposed programme of work includes standards development to cover the following:

1. Karst terminology
2. Sustainable development of karst resources, environmental protection and management of karst environment
3. Investigation, assessment (including modeling methods and mapping of karst systems).

Standards Australia will be consulting with stakeholders for this proposal. For more information on the proposal, or to make a submission, please contact the Stakeholder Engagement Manager, Simona Tomevska, [simona.tomevska@standards.org.au](mailto:simona.tomevska@standards.org.au), by Friday 4 May 2018.

### 4. A New Field of Technical Activity – Transaction Assurance in E-Commerce

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ISO has received a New Field of Technical Activity proposal from the Chinese National Standards Body (SAC) and the French National Standards Body (AFNOR) to **Form a new Technical Committee in the field of Transaction Assurance in E-Commerce.**

The scope of the new committee is proposed as:

*Standardization in the field of “transaction assurance and upstream/downstream directly related processes in e-commerce”, including the following:*

- *The assurance of transaction process in e-commerce (including easier access to e-platforms and e-stores);*
- *The protection of online consumer rights including both prevention of online disputes and resolution process;*
- *The interoperability and admissibility of commodity quality inspection result in cross-border e-commerce.*
- *The assurance of e-commerce delivery to the final consumer.*

The proposed new technical committee will cooperate with ISO/TC 68 *Financial Services*, ISO/IEC/JTC 1/SC 27 *IT Security Techniques*, in addition to liaising with other relevant technical committees.

Standards Australia will be consulting with stakeholders for this proposal. For more information on the proposal, or to make a submission, please contact the Stakeholder Engagement Manager, Rick Macourt, at [rick.macourt@standards.org.au](mailto:rick.macourt@standards.org.au), by Friday 11 May 2018.

### 5. A New Work Item Proposal – Glass Clarity

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ISO has received a New Work Item Proposal from the French National Standards Body (AFNOR) to **establish a new Project Committee to develop a standard for the classification and test methods for glass clarity, for glass including tableware, giftware, jewelry and luminaries.**

The proposed scope of the standard is as follows:

*The proposed International Standard will establish requirements for the use of the designations “clear glass” and “ultra-clear glass” for non-coloured glass according to their clarity and iron content. The standard will specify a procedure for measuring the clarity of glass items by means of a spectrophotometer. The standard will cover mineral glass and glass in items where the glass component is not covered by coating or decoration, and is therefore accessible for sampling.*

*The scope of this International Standard includes glass used as tableware, giftware, jewellery and luminaries. It excludes glass used in construction work, containers, medicine and laboratories, or in other types of technical applications.*

It is proposed that the existing document, IWA 8:2009, be used as a starting draft for the committee to commence their work.

Standards Australia is consulting with stakeholders for this proposal. For more information on the proposal, or to make a submission, please contact Stakeholder Engagement Manager Rick Macourt, at [rick.macourt@standards.org.au](mailto:rick.macourt@standards.org.au), by Friday 18 May 2018.

## International

### 1. WTO launches call for proposals for 2018 Public Forum

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The WTO has issued a call for proposals for this year's Public Forum, whose theme is "Trade 2030". Participants interested in organizing sessions at the Forum, scheduled to take place on 2-4 October, are invited to submit their proposals by 4 June 2018.

This year's Public Forum will focus on how technology is changing the way we trade and will assess how trade can continue to contribute to job creation, growth and sustainable development, particularly in the context of the Sustainable Development Goals under the 2030 Agenda. The Forum will debate how, in light of these technological developments, future trade can be more sustainable and the benefits shared more widely. Further information on this year's theme and the three sub-themes - sustainable trade, technology-enabled trade, and a more inclusive trading system - is available [here](#).

All sessions at the Public Forum are organised by the participants. These include civil society, academia, business, governments, parliamentarians and intergovernmental organizations. Participants interested in organizing working sessions or workshops will find further details in this [information note](#). The application form contained in the note should be completed and sent to [pf18@wto.org](mailto:pf18@wto.org) no later than **4 June 2018**.

#### Background

The Public Forum is the WTO's largest annual outreach event. It provides a unique platform for policy makers and representatives of government, business, workers, consumers, academics, civil society and others to come together and debate on a wide range of WTO issues and on some of the major trade and development topics of the day. Over 1,500 participants attend the Forum each year. [See more information on previous Public Forums](#).

Source: [https://www.wto.org/english/news\\_e/news18\\_e/pf18\\_09apr18\\_e.htm](https://www.wto.org/english/news_e/news18_e/pf18_09apr18_e.htm)

### 2. Don't miss the chance to be part of Australia's trade future

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The ASEAN-Australia Digital Trade Standards Cooperation Initiative was announced by Australian Prime Minister, the hon. Malcolm Turnbull, at the ASEAN-Australia Summit in Sydney, March 2018.

Standards Australia is working together with the ten National Standards Bodies across the ASEAN region to deliver the ASEAN-Australia Digital Trade Initiative. The Initiative seeks to promote the adoption and use of international standards to support digital trade by and between ASEAN Member States and Australia to increase economic integration and support standards harmonisation. It will also strengthen the multilateral relationships in the region, particularly among National Standards Bodies.

Standards Australia is seeking stakeholder input to the [Survey of ASEAN-Australia Digital Trade](#), to understand and utilise the current digital environment in each ASEAN Member State and Australia, and to identify the role of International Standards in shaping this.

The survey is available online here: <https://www.surveymonkey.com/r/ASEANAustralia>. Standards Australia encourages all interested parties to participate on behalf of an individual, organisation or government department. We thank you in advance for your response.

For further information on the Initiative please contact International Engagement Officer, Lucy Chalmers, at [lucy.chalmers@standards.org.au](mailto:lucy.chalmers@standards.org.au).

### 3. World Trade Organisation Director General Azevêdo: Better data needed to make trade work for women's economic empowerment

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The “right diagnosis” is needed to make trade work towards the economic empowerment of women, Director-General Roberto Azevêdo said in a video message to a workshop on Gender-Based Analysis and Trade held at the WTO on 16 March.

*“If we are going to make trade and development policies more gender-responsive, a first step is to improve our understanding of how these issues intersect with trade policies in key areas,”* DG Azevêdo said. He pledged that the WTO would continue working to improve the availability of data in this area, together with partner organizations.

His message was part of the opening session at the workshop convened by Canada, with the participation of specialists in the field, representatives from international organizations and WTO members.

The organisers held the workshop to build on the Buenos Aires Declaration on Trade and Women's Economic Empowerment. This initiative, launched at the 11th WTO Ministerial Conference in December 2017, has been endorsed by over 120 WTO members and observers. They pledge to share best practices for conducting gender-based analysis of trade policy and to cooperate on methods and procedures to collect gender-specific data, amongst other actions.

*“Canada is making efforts to align its public policy in support of gender equality, and this includes trade policy,”* said Stephen de Boer, Canada's ambassador to the WTO, as he opened the day-long workshop. *“We see the WTO as an ideal forum to have a broad exchange on how we can all leverage trade in support for gender equality.”*

*“We are on the right track,”* said Yvette Stevens, Sierra Leone's ambassador to the WTO. *“We need to spread these experiences.”* She welcomed the information shared during the event, and called for more country-specific considerations.

*“Trade does not have a gender, but it has a strong gender impact,”* added Ambassador Syed Tauqir Shah, of Pakistan. He called for better data on these impacts as a way to *“concretize this declaration”*.

The WTO is collaborating with the World Bank on generating new data and studying the understanding of the impact of trade on women. The joint study, due to be published in 2019, will look at data gaps on the relationship between gender issues and trade, review current literature and generate new data on the topic.

During the workshop, economists and policy-makers shared their methods for gathering and studying data on how gender and trade intersect — from women's participation as entrepreneurs and workers to their role as consumers. Many of the studies presented pointed to the fact that, in general, women-owned businesses export less than companies owned by men. A number of speakers also referred to data showing the benefits of increasing the participation of women in trade.

*“Women-owned businesses that export are on average more than 3.5 times more productive”* than female-led companies not engaged in international markets, noted Arancha González, Executive Director of the International Trade Centre.

This was the first of a series of workshops which proponents of the Buenos Aires Declaration pledged to hold over the coming months, tackling different aspects of the intersections between trade and women's economic empowerment.

Source: [https://www.wto.org/english/news\\_e/news18\\_e/women\\_19mar18\\_e.htm](https://www.wto.org/english/news_e/news18_e/women_19mar18_e.htm)

## ISO

### 1. Establishment of Project Committee ISO/PC 317 – Consumer protection: Privacy by design for consumer goods and services

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Following approval by ISO member bodies, the ISO Technical Management Board (TMB) has recently adopted Resolution 26/2018, to approve the proposal to establish a new Project Committee.

The new Project Committee will be ISO/PC 307 with the following title and scope:

**Title:** Consumer Protection: Privacy for design for consumer goods and services

**Scope:** Standardization in the field of consumer protection: privacy by design for consumer goods and services

The secretariat of the Project Committee has been allocated to the British National Standards Body, BSI.

Australia has registered their participation as an Observer Member to the new Project Committee. If you would like any further information on the work program or Australia's engagement, please contact Senior Stakeholder Engagement Manager, Brett Lovett, at [brett.lovett@standards.org.au](mailto:brett.lovett@standards.org.au).

### 2. Establishment of Project Committee ISO/PC 318 – Community scale resource oriented sanitation treatment systems

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Following approval by ISO member bodies, the ISO Technical Management Board (TMB) has recently adopted Resolution 37/2018, to approve the proposal to establish a new Project Committee.

The new Project Committee will be ISO/PC 318 with the following title and scope:

**Title:** Community scale resource oriented sanitation treatment systems

**Scope:** Standardization in the field of community scale resource orientated sanitation treatment systems

The secretariat of the Project Committee has been allocated to the American National Standards Body, ANSI.

Australia has registered their participation as an Observer Member to the new Project Committee. If you would like any further information on the work program or Australia's engagement, please contact Stakeholder Engagement Manager, Ron Pulido, at [ron.pulido@standards.org.au](mailto:ron.pulido@standards.org.au).

### 3. Establishment of Technical Committee ISO/TC 283 – Occupational health and safety management

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Following approval by ISO member bodies, the ISO Technical Management Board (TMB) has recently adopted Resolution 37/2018, to approve the proposal to establish a new Technical Committee.

The new Technical Committee will be ISO/TC 283 with the following title and scope:

**Title:** Occupational health and safety management



**Scope:** Standardization in the field of occupational health and safety management to enable an organization to control its OH&S risks and improve its OH&S performance

The secretariat of the Technical Committee has been allocated to the British National Standards Body, BSI.

Australia has registered their participation as a Participating Member of the new Technical Committee, with National Mirror Committee SF-001 *Occupational Health & Safety Management*. To find out more about the work program for the new Technical Committee, or to get engaged in Australia's National Mirror Committee, contact Senior Stakeholder Engagement Manager, Catherine Dunkerley, at [Catherine.dunkerley@standards.org.au](mailto:Catherine.dunkerley@standards.org.au)

#### 4. How ISO standards support World Health Day

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'*Health for all*' is the theme of the World Health Organization's World Health Day, and a new ISO committee recently formed aims to support this initiative.

Access to health services, quality care and safe medical practices and equipment is a fundamental right for everyone, everywhere. Good health and well-being is also one of the UN Sustainable Development Goals on the United Nations new roadmap to improve people's lives by 2030.

World Health Day, a global health awareness day recognised on April 7 each year, is part of the World Health Organization's (WHO) drive to support countries in moving towards Universal Health Coverage.

Not only is the WHO one of ISO's key partners, ISO also have more than 1 300 International Standards that focus on health across all kinds of sectors, from public health and medical devices to health informatics and traditional medicines.

ISO technical report ISO/TR 14639, *Health informatics – capacity-based eHealth architecture roadmap*, provides best-practice guidance on the implementation and use of information and communication technology, and a framework for health authorities to use when building their own eHealth architecture, leading to better public healthcare services.

In addition, standards like ISO 13485, *Medical devices – Quality management systems – Requirements for regulatory purposes*, help ensure medical devices meet all the regulatory requirements for quality.

What's more, a new ISO technical committee has recently been formed to help reduce global healthcare costs of health facilities. Lee Webster, Secretary of ISO/TC 304, *Healthcare organization management*, said a number of standards are currently in development to help them improve their effectiveness and reduce waste.

*"Healthcare organizations account for around 10 – 20% of the world's GDP," he said, "and the lack of standardization in their organization management practices means there is room for improvement, particularly across international boundaries.*

*"A new series of standards in development will help to reduce waste, improve data transparency and improve interdisciplinary cooperation, resulting in better healthcare at lower costs. What's more, recent research suggests patient satisfaction and outcomes are also improved in well-managed healthcare environments. So everyone wins."*

Source: <https://www.iso.org/news/ref2278.html>



## 5. Playing safe with kids' toys

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Keeping kids free from harm is the effect of ISO's widely used International Standard for toy safety. And it has just been updated to ensure it covers all bases.

Made for play, children's toys are rife with potential hidden hazards ranging from sharp edges to cords or small parts, to name a few. The humble plaything can cause great harm if not designed and manufactured correctly. A new version of ISO's most well-known toy safety standard has just been published to ensure it keeps safety up to scratch in our ever-changing world.

ISO 8124-1, *Safety of toys – Part 1: Safety aspects related to mechanical and physical properties*, defines requirements and test methods for toys intended for use by children under 14 years of age, and covers a reasonable lifespan of the toy. It specifies acceptable criteria for structural characteristics of toys, such as shape, size and contour, as well as aspects particular to certain toys such as tip angles for ride-on toys. It also includes appropriate warnings and instructions for use.

Christian Wetterberg, Chair of the technical committee that develops the series, said the 150-page standard covers a wide range of potential risks, such as sharp points, small parts and maximum kinetic energy values for projectiles, and has a strong impact around the world.

*"ISO 8124 already plays an important role in influencing the requirements for toy safety in many countries, so it is important that it remains as up to date and relevant as possible,"* he said.

*"The latest version includes updated definitions and warning requirements, revised specifications related to a range of materials and parts, such as cords and straps, and the addition of new items such as yo-yo balls."*

ISO 8124-1 is one of ISO's longest and most detailed standards. Other standards in the series include Part 2 on flammability and Part 4 for swings, slides and similar activity toys.

ISO 8124 was developed by ISO/TC 181, *Safety of toys*, Australia is a Participating Member of ISO/TC 181, with National Mirror Committee CS-018 *Safety of toys*.

Source: <https://www.iso.org/news/ref2279.html>

## 1. How safe is your car from hackers?

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IHS Markit predicts that more than 70 million connected cars will be on the road by 2023. Connected cars enable drivers to receive updated traffic information, send messages or access personalized entertainment systems, but they are also vulnerable to sabotage.

Most of the security experts gathered at the 2018 Geneva International Motor Show believe that manufacturers are not doing enough to protect their connected cars against malicious cyber-attacks.

### The cyber threat

Official UK data suggests that vehicle theft has risen by around 30% as criminals use new technology to break into cars. For example, “relay car hackers” use radio transmitters to intercept the signal from a car key, often succeeding in gaining access to a vehicle in less than a minute.

Malware is another commonly used ploy. Falling victim can take no more than registering for a bogus free Wi-Fi service, which is all that is required for criminals to take complete control of your car.

What is really worrying is that criminals don't need to acquire special expertise or invest in sophisticated equipment. The reality is that standard smartphones or cheap radio transmitters will provide hackers with all the technology they need to break into most vehicles.

Car theft is far from the only threat, however. A recent report warns that terrorists could hack into connected and autonomous vehicles in order to crash them deliberately.

So what is it that makes connected cars particularly vulnerable? “As cars continue to evolve, essentially becoming motorized computers, they are vulnerable to the very same threats and attacks as home computers, laptops and smartphones,” explains Carlos Moreira, the CEO of WiSeKey.

*“Unless appropriate cyber security measures are implemented, hackers can remotely access the vehicle's computer system, manipulate the brakes, engine and transmission.”*

### Snapping turtle technology

One of the most quoted statistics about connected cars is that, collectively, all the built-in software systems contain more than 100 million lines of code. That is twice as many lines of code as CERN's Large Hadron Collider, the world's most powerful particle accelerator, and seven times more than the Boeing 787 Dreamliner.

*“You can't secure every line of code,”* says Chuck Brokish of Green Hills Software, *“but you can identify critical components.”*

Brokish compares car security to the snapping turtles in his native Wisconsin. He claims that the amphibians combine powerful jaws with a shell so hard that cars can run over them without doing any damage.

Flip the turtles over, however, and their soft bellies make them extremely vulnerable, he says. Brokish likens this to the “medium robustness” security systems of connected cars, which offer protection against casual attacks but cannot cope with a targeted onslaught.

The experts say that connected cars should be fitted with security systems and mechanisms that provide the most stringent protection and rigorous security countermeasures. They are not.

*“It’s like leaving your front door open,” says Manfred Kunz of Marvell, “and expecting someone in your living-room to protect your home.”*

### **Creating a security-conscious culture**

Promon founder Tom Lysemose Hansen says the lack of adequate protection can be hard to understand: *“Various security-first practices, such as those for example already used in mobile banking, mobile payment or mobile authentication, could greatly reduce the risk of such an attack”.*

All the experts we met agreed that protecting vehicles against cyber threats poses an enormous challenge that requires close and constant cooperation between a number of organizations, automotive and original equipment manufacturers (OEMs), software companies and security solution providers.

Alex Manea, the Chief Security Officer of BlackBerry, urges manufacturers to authenticate every chip and electronic control unit and ensure they are loaded only with trusted software. Regular health checks via analytics and diagnostics software are essential, but he argues that the critical factor currently lacking in the industry is a security-conscious corporate culture.

*“Ensure that every organization involved in supplying auto electronics is trained in safety and security with best practices to inculcate this culture within the organization”, says Manea.*

### **The role of International Standards**

The message coming out of the Geneva International Motor Show is that more car makers should take responsibility for cyber security. The consensus among the analysts is that many manufacturers are only willing to do the minimum as security can be expensive.

In the end it will come down to whether consumers are prepared to pay more to move beyond snapping turtle technology. There are signs that this may be the case.

A recent report identifies consumer concerns about cyber security and safety as a significant barrier to continued growth in the connected car sector. Thirty-one per cent of respondents to Foley’s *Connected Cars and Autonomous Vehicles Survey* identified these concerns as the biggest obstacle to buying connected cars.

International Standards already provide manufacturers with the best practice guidelines they need to step up cyber security.

In this respect, a UNECE document on System Security Principles for *Intelligent Transport System and Connected and Automated Vehicles* highlights the important role played by the IEC in providing the tools to protect against cyber attacks. IEC develops International Standards for information technology, together with ISO. It lists no fewer than 11 ISO/IEC JTC 1 applicable Standards and guidance documents.

Source: <https://iecetech.org/Technology-Focus/2018-02/How-safe-is-your-car-from-hackers>

## **2. Evolving with digital transformation – interview with Phil Wennblom, new Chair of ISO/IEC JTC 1**

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Information technology has penetrated our homes, cities and workplaces, as billions of “sensorized” devices and systems that form part of the internet of things (IoT) help to simplify how we work, communicate and carry out daily tasks.

### **Surrounded by life-changing technology**

Advances in digitization, analytics, artificial intelligence (AI), and automation are creating performance and productivity opportunities. They are also redefining how businesses and industries operate, from agriculture, automotive/transportation and energy management, to entertainment, healthcare, manufacturing and retail.

Examples are all around us. Predictive analytics, based on AI machine learning and algorithms, can improve business processes, enhance decision making and enable optimizing and automating decisions, on demand, to meet business goals. Predictive analytics is being applied in a number of areas, including manufacturing for machine maintenance, and healthcare to improve patient care, disease management and hospital administration.

A more obvious form of AI is voice recognition technology, found in virtual personal assistants like Alexa or Siri. These assistants are being built into a growing number of smart devices and changing how we live. Replacing touch with voice, we will start to talk more to our smart appliances and ask them to do things for us, like find a specific TV channel, switch things on and off, and eventually tell the next generation of cars to drive us to our appointments.

### **Enhancing our world**

This technology brings benefits. Voice recognition will make life easier for people living with certain physical disabilities. Additionally, smart devices and systems (heating, lighting) in homes and other buildings already save energy and costs, by automatically adjusting temperatures and lighting, based on the presence or absence of people.

As cars become more connected and autonomous, they will depend greatly on computing technology and contain more software programmes offering services, such as infotainment and road traffic information. Hundreds of sensors will gather huge amounts of data about the immediate surroundings, ultimately enabling cars to communicate with each other and road infrastructure, with the aim of improving vehicle and road safety, as well as congestion.

### **Where Standards fit in**

In order for the different systems and platforms used across all these industries to function smoothly, they will need to ensure data privacy, cyber security and interoperability.

IEC standardization work addresses many of these points. The IEC and ISO Joint Technical Committee (JTC 1) produces consensus-based International Standards for information and communication technologies (ICT) for business and consumer applications.

It follows IT developments and technology trends, which will need and greatly benefit from standardization. The topics it covers are: AI, automatic identification and data capture techniques, biometrics, cards and personal identification, cloud computing, coding of audio, picture and multimedia information, IoT, IT security techniques, and more.

### **Interview with new JTC 1 Chair**

Phil Wennblom assumed the role of JTC 1 Chair in January 2018, bringing in-depth knowledge and experience in IT standardization. Currently working as Senior Director of Standards Policy for Intel Corporation, he has also served as Chair of INCITS – the US Technical Advisory Group, which mirrors the work of JTC 1.

*What do you hope to achieve?*

‘There is a lot of work to do, but I would highlight three main points:

1. In order for our experts and national body delegations to productively develop standards, we in JTC 1 must ensure that the directives, tools and approaches are conducive to their work, so we don't fall short anywhere.
2. During the 30 years of JTC 1, IT has changed dramatically. Today IT is being applied in many industry sectors and affects just about everyone, everywhere, in many ways. In JTC 1, we call this the digital transformation phenomenon, and it means we need to think differently about how we develop information technology Standards. It is more important now for us to cooperate with other IEC and ISO technical committees, to support their application of IT in their areas of work. We need to better understand their challenges and explore how we can help them succeed.
3. Also related to digital transformation, some stakeholders are now more interested in IT standards than when JTC 1 was formed, like governments for whom the standards are very relevant. There is also substantial innovation in applications and services developed entirely in software, and that part of IT is a little less well represented at JTC 1. So it will be important for us to proactively engage with stakeholders who are underrepresented in our process, so that we can develop IT Standards that meet everyone's needs.'

*What challenges do you see?*

'In an era of digital transformation, we need to work more cooperatively with other TCs at IEC and ISO and engage stakeholders who we think should be better represented in our work.'

Another ongoing challenge for JTC 1 is to be aware of new trends and developments and be prepared to take appropriate action at the appropriate time. We have an emerging technology and innovations group called JETI, which assesses technology opportunities and proposes actions that JTC 1 should consider, for it to remain relevant also in the future.'

*What will the hot topics be for 2018?*

#### **IoT**

In 2016 our IoT Working Group became JTC 1 Subcommittee (SC) 41. It's very active and is part of the foundation of IoT for other sectors, whether automotive, healthcare or even smart cities. So it's got a tremendous amount of important work to do.

#### **AI**

AI has quickly become a hot topic and we just formed JTC 1/SC 42 for AI. Its first meeting is in April and it will be important for this committee to begin its work. AI holds such promise for industry and society, but at the same time, some aspects of it concern people. It's changing quickly and there's so much innovation in this space. It would be a shame if regulations were put in place too early, which then reduced the opportunity to benefit from AI. This also means that there's an opportunity for voluntary standards to help set the norms that we all agree should apply to AI and its applications.

#### **Cyber security**

It would be hard to overstate the importance of cyber security. Fortunately this has been a very active area of JTC 1 for many years and it will continue to be one of our hot topics. JTC 1/SC 27, is widely recognized as the best place for the development of International Standards for cyber security. The challenge for this extraordinarily busy group is that there's so much to do in this area.

If an IoT device isn't secure, and you don't feel you can trust it, then it's not very useful. For cars or medical devices, the threat of being hacked is a concern. That's why cyber security and IT security need to be the underpinning of everything else.

Finally, even though Standards definitely play a significant role, they are not the total answer. Developers of products and services also have an important responsibility to ensure they incorporate security best practices in design and development.

Source: <https://iecotech.org/Technical-Committees/2018-02/Evolving-with-digital-transformation>

### 3. Fly me to the sky

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New technology is revolutionizing the way we will consider transport in the near future. Flying cars are one of the options on the cards and a number of IEC Standards can help the various industries involved.

Congestion is the bugbear of every car driver, especially in big cities. Commuting to and from work often involves snail's-pace progress through traffic jams, bumper to bumper with other cars. New technology is helping to transform the way we will use transport in the not so distant future. Various companies are hedging their bets on different scenarios.

For some, we will continue to own cars but these will gradually become more autonomous, taking over from us when we need them to, using artificial intelligence to guess our moods and, a bit like friendly robots, getting to know our preferences to enable them to adapt to our requirements. For others, we will cease to own cars, especially in big cities where parking space is at a premium, and instead, fleets of autonomous vehicles will be either rented or booked in the same way as a taxi. For yet a third group of visionaries, the future of transport will involve some form of flying. How better to avoid congestion than to be able to drive for part of the journey but then take off when necessary?

While huge legislation, insurance and safety certification issues must still be addressed, a number of companies have moved forward with the technology enabling car and aircraft to merge. Some of these developments were on show at the 2018 Geneva International Motor Show (GIMS).

#### **Pie in the sky?**

Pop Up is a project which was initially launched last and results from the work of three different companies – a German automotive giant, an Italian design and engineering outfit and a major European aircraft manufacturer.

While the project remains conceptual, the technology behind it has greatly moved on from where it was a year ago. The aerodynamic design of the air module and the rotor ducts has been refined so as to improve performance and reduce fuel consumption in cruise flight. A functional locking and latching system has been designed to couple the ground capsule with the air module. *“This is very complex because air and ground vehicles respond to completely different operating and safety dynamics,”* explains one of the engineers involved in the project.

A lot of work has gone into making the device lighter, using a feather weight mesh material. Engineers at GIMS were also demonstrating a clever human machine interface inside the capsule, based on facial recognition and eye-tracking. *“This is the second chapter in the story. We have worked with a third party to develop a personal assistant you will interact with in the capsule, using your eyesight to choose various travel and entertainment options,”* explains Emanuele Rivella, a systems engineer at the Italian outfit. According to Rivella, the ground capsule will operate like most other autonomous vehicles, using sensors, cameras, radar and LIDAR (light detecting and ranging) technology. It will also be fully electric. Data protection issues are also being looked into. *“We are researching quantum technology and its cryptography potential,”* Rivella adds. He agrees that International Standards, such as the ones prepared by the IEC, should help move the project forward.

A number of IEC technical committees (TCs) and their subcommittees (SCs) prepare International Standards for the components found in these technologies. Among the most relevant, IEC TC 47: Semiconductors, issues IEC 62969 which deals with the general requirements of power interfaces for automotive vehicle sensors. IEC TC 100: Audio, video and multimedia systems and equipment, publishes Standards that relate to digital cameras.

ISO/IEC Joint Technical Committee (JTC) 1: Information technology, includes several subcommittees which deal with the various technologies involved. ISO/IEC JTC1/SC 37 works on biometrics and publishes the ISO/IEC 19794 series on biometric interchange formats, for instance.

ISO/IEC JTC1/SC 38 deals with cloud computing, while ISO/IEC JTC1/SC 27 is looking at the thorny issues of data protection and cyber security. ISO/IEC JTC1/SC 42, which was set up in 2017, is dedicated to artificial intelligence. IEC TC 69: Electric road vehicles and industrial trucks, issues Standards pertaining to the power charging of EVs.

### **The flying Dutchman**

A Dutch company was showing PAL-V Liberty at the Geneva show, claiming it to be first production model of a flying car. *"We spent ten years developing the technology before getting to this stage,"* says Carlo Maasbommel, the company's vice-president of international business research and development. One of the main technical hurdles was creating a car that is light enough to fly, yet robust enough for the road. *"Around 45 engineers have been working on the project. Half of them come from the automotive sector and the other half from the aeronautical industry,"* he adds.

The dual engine propulsion drive train is based on two fully-certified aeroplane engines, produced by one of the leading manufacturers of aviation engines. According to Maasbommel, even if both engines fail, the device can still land using the rotors like a parachute. Unlike the Pop Up concept, the flying car is neither autonomous nor electric. It has a driver and a passenger seat. *"Initially we are targeting it at government services such as police or fire-fighters. We already have sixty orders on our books,"* he says. The PAL-V Liberty is expected to go into service in 2019, once all the various certifications have been obtained. According to Maasbommel, the device has been designed to meet the legislation requirements of most countries.

The IEC comprises several TCs that are relevant to the aviation industry. One of them is IEC TC 107 which develops process management Standards on systems and equipment used in the field of avionics. These include the electronics used in commercial, civil and military aerospace applications. IEC TC 97: Electrical installations for lighting and beaconing of aerodromes, prepares International Standards for power distribution systems adapted to the operational and safety needs of Aeronautical Ground Lighting (AGL).

IEC TC 21: Secondary cells and batteries, includes maintenance team (MT) 60952, which deals with the maintenance of the IEC 60952 series of Standards on aircraft batteries. IEC TC 29: Electroacoustics, publishes Standards that measure noise levels. One of these is IEC 61265, *Instruments for measurement of aircraft noise*, which specifies requirements for devices used to measure sound for the purpose of aeroplane noise certification.

Source: <https://iecetech.org/Technology-Focus/2018-02/Fly-me-to-the-sky>