



Every two months, Prof. Dr. Thorsten Arnhold provides an update on developments within the IECEx System.

**This is my first article for Hazardex since I left my role as the IECEx Chairman at the end of 2019. According to our rules, after two terms of three years, the chairmanship of the IECEx System must be handed over to a new person. In my case, I handed the position onto Paul Meanwell, a manufacturer's representative from South Africa.**

In the future I will remain active for the IECEx System as a member of the executive and as the convener of the new working group for marketing. As of 2020, I am the German representative on the Conformity Assessment Board (CAB) of IEC which is comprised of representatives from 15 member countries of the IEC, the CAB and IEC officers.

The CAB is responsible for setting the IEC's conformity assessment policy, promoting and maintaining relations with international organisations on conformity assessment matters, creating, modifying and disbanding conformity assessment systems, monitoring the operation of conformity assessment activities, and examining the continued relevance of the IEC's conformity assessment activities in general.

The representatives of the systems, i.e.

# A new start

the respective Chairmen and Executive Secretaries, are invited to the CAB meetings to report about the status of their systems and to get relevant and updated information. During the six years as Chairman of IECEx, I became quite experienced with the work of this organisation. This new opportunity will help to widen my perspective on the global conformity assessment activities of IEC.

I will also try to broaden the scope of topics for my articles in Hazardex and I am sure that there will be plenty of safety and security related issues from all four systems to report on. If we consider just two global megatrends, the growing need for energy and cyber security, we can see some interesting developments regarding conformity assessment at IEC.

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For example, IECEE (IEC - System for Conformity Assessment for Electrotechnical Equipment and Components) members use the principle of mutual recognition (reciprocal acceptance) of test results to obtain certification or approval at national levels around the world.

The IECEE schemes address the safety, quality, efficiency and overall performance of components, devices and equipment for homes, offices, workshops, and health facilities. For the past couple of years, we have been dealing with appropriate assessment schemes to ensure the security of components, OT systems and

complete industry IT infrastructures. The bases for this are the IEC standard series 62443 for Operational Technologies (OT) and 27000 for Information Technology (IT). Both standards can be combined with sector specific standards, such as the IEC 62351 series for the electrical energy sector. Now, a program to test and certify the cyber security of products and systems in the electrotechnical sphere can be offered to the international industry, customers and regulators.

Another development is related to the IECRE system for the conformity assessment of products and systems in the renewable energy sector. The safety and quality of solar panels, wind power generators and marine energy equipment is crucial for the acceptance and sustainability of renewable energy solutions. Conformity assessments can help to achieve safe and long-lasting equipment. This is important for investors and assurance companies who rely on the achievement of the prospected life time of renewable energy equipment for their commercial calculations.

One important precondition for the large-scale use of renewable energies is smart supply networks or smart grids from the producer to the end customer. 'Smart' is beautiful but can be particularly vulnerable to cyber threats – which takes us back to cyber security.

Another precondition is the availability of powerful energy storage technologies, which can buffer the characteristic volatility of renewable energies. One of the most promising carriers is hydrogen. However, hydrogen is explosive and so we come back to the IECEx System. This list of examples showing the relevance of conformity assessments can go on and on, but I will stop there. I am looking forward to offering further insights into the work of the IEC conformity assessment systems in my future comment pieces. ■