



focus

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Your gateway to International Standards

Transport trends



Taking quality management a step further in the rail industry can lead to only one destination: better and safer trains. A recently published ISO technical specification promises to help keep the world's trains on time and on track for efficient and sustainable development.



by Clare Naden

The rail industry has been shaping our world since its birth in the 1800s – from the Puffing Billy steam locomotive, which chugged around England hauling coal wagons during the Industrial Revolution, to Japan’s sleek, super-fast maglev train, which reached 603 km/h in a test run in 2015. Trains are now a principal form of transport of people and goods the world over. While their purpose remains largely unchanged, technology in the sector has developed faster than a TGV, with modern trains tipped to reach up to 800 km/h by 2020.

Like other industries, rail has had to adapt and evolve in a rapidly changing and increasingly interconnected world. In order to survive and grow, however, it must develop strategies and initiatives to improve business performance. To meet the challenges this poses, [UNIFE](#), the European Rail Industry Association, promotes “rail market growth for sustainable mobility”, with a view to driving innovation and shaping an interoperable and efficient European railway system.

In this new era of smart technology, [UNIFE](#) and its members are focused on “providing the best technology to meet the challenges of growing transport volumes and the demand for sustainable and environmentally friendly transport”.

Contributing to economic development and innovation, standardization is an essential tool in their strategy. Thus,

UNIFE and its members “also work on the setting of interoperability standards and co-ordinate EU-funded research projects that aim at the technical harmonization of railway systems”.

Standardizing rail

For UNIFE, targeted action on standardization is a means of greatly increasing the economic impact of an innovation or an industrial property right. In this respect, standardization is also an essential element of innovation policy. It is clear that creating innovative and sustainable technical solutions for the railway industry – from digital communications to electrification schemes – will help to increase its competitiveness.

But how do you keep quality on track? Holding pace with technology advancements – along with the volume and reach of the rail industry – requires a firm focus on quality at every step of the supply chain. For more than ten years, that focus has been supported by IRIS (International Railway Industry Standard), UNIFE’s European-led standard based on ISO 9001:2008, *Quality management systems – Requirements*, which sets certifiable quality guidelines. First launched in 2006, the IRIS certification scheme grew quickly and, at the last count, there were more than 1500 certificates issued in 50 countries worldwide.



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“In less than ten years, it has become very well known globally,” says Bernard Kaufmann, IRIS General Manager at UNIFE, “with, increasingly, many large rail companies requesting that their suppliers everywhere certify to the standard.”

He adds: “But we knew we needed to ensure the standard continued to grow and would be even more widely used, recognized and trusted. So the decision was made to take it that step further and make it an ISO International Standard.”

Fast track to quality

Thus the standard development process was set in motion, with many of the world’s biggest train manufacturers, system integrators and operators including Alstom, Bombardier, Siemens, Faiveley, Knorr-Bremse, Nabtesco, Voith, DB, CR, SBB, SNCF and various rail research organizations getting on board. But knowing that ISO 9001:2008 was up for revision and that existing certificates to the IRIS would soon expire, time was running thin. “So we opted for a technical specification, which can be produced in a much shorter time period, with the intention of evolving into a full standard further down the track,” Kaufman explains.

And so ISO/TS 22163, *Railway applications – Quality management system – Business management system requirements for rail organizations: ISO 9001:2015 and particular requirements for application in the rail sector*, was developed by ISO technical committee ISO/TC 269, *Railway applications*, whose secretariat is held by DIN, ISO’s member for Germany, with input from 35 rail industry and standardization experts from 11 countries.

The key difference between ISO/TS 22163 and the previous version of IRIS, says Kaufmann, is an increased focus on safety and project management. “Train builders these days build mainly to individual specifications – there are no two trains the same for the same customer. At the same time, there are large differences in each train, to meet cultural, geographical and customer-led demands and requirements. Therefore, the rail industry is very much a ‘project business’, with safety being key. So the technical specification was developed very much with this in mind.”

The end of the line

Gilles Chopard-Guillaumot, Director of BNF, the French organization for railway standardization, who is heavily involved in ISO/TC 269 and led the project for the new standard, said another key benefit is a reduction in costs. “[Rail industry] organizations certified to ISO/TS 22163 can avoid additional assessments, including by purchasers or against ISO 9001, which means higher quality and greater confidence for lower certification costs.” This is good news for all players in the supply chain, not to mention those at the end of the line: the passengers.

“The technical specification was published initially in English and French, and more languages will come soon. Its wide use by the industry will positively impact the safety and reliability of trains and networks,” adds Chopard-Guillaumot, who is also involved in the standard’s revision work, which has already begun. “With the help of even more industry experts from more countries, we will now develop [it] into a full International Standard.” ■