

IRIS 10th Anniversary

18 May 2016





UNIFE

UNIFE represents the European Rail Industry in Brussels since 1992. The Association gathers around 80 of Europe's leading large and medium-sized rail supply companies active in the design, manufacture, maintenance and refurbishment of rail transport systems, subsystems and related equipment. UNIFE also brings together 14 national rail industry associations of European countries. UNIFE members have an 84% market share in Europe and supply 46% of the worldwide production of rail equipment and services.



IRIS

IRIS (International Railway Industry Standard) certification promotes high quality throughout the rail supply industry through the implementation of a global system for the evaluation of companies supplying the rail industry.

IRIS aims to improve the quality and the reliability of the rail products, to implement and further develop a global system for the evaluation of companies supplying the rail sector, and to instill a culture of quality throughout the sector.

With more than 1300 companies IRIS-certified worldwide, the standard is now an international seal of quality, increasingly recognised by rail operators and manufacturers alike. The IRIS scheme was developed by UNIFE members and managed by the IRIS Management Centre under UNIFE responsibility.

Foreword from the UNIFE Chairman and Director General



Laurent Troger

Philippe Citroën

Dear reader,

The European rail supply industry is well known for the quality and reliability of its products. With this dedication to continuous improvement, in 2005 European rail industry leaders gathered under the umbrella of UNIFE to discuss creating a globally recognised quality standard for the industry. These intense discussions, which drew on well-established automotive and aerospace supply quality standards, resulted in the foundation of IRIS—the International Railway Industry Standard—in May 2006.

After 10 years and more than 1300 companies certified in over 51 countries, it is obvious that the IRIS is a major success. Furthermore, the standard has a bright future as requests for certifications continue to roll in and as IRIS expands its scope to include infrastructure companies and operators. IRIS is also on its way to becoming an officially recognised standard of ISO, the global authority on proprietary, industrial and commercial standards, following a decision by the UNIFE Presiding Board in 2015 and several successful meetings with the relevant ISO working group. This recognition by ISO will certainly boost the visibility of IRIS around the globe and further enhance the focus on quality within the global rail equipment value chain.

In order to broaden stakeholder awareness, UNIFE recently signed several MoUs on the IRIS standard with a number of well-known operators, including Russian Railways (RZD), German Railways (Deutsche Bahn), Belgian Railways (SNCB), Dutch Railways (NS), and Swiss Railways (SBB). This high-level commitment to quality from operators will result in increased demand for IRIS certification and ultimately to further quality improvements in the rail equipment supply chain.

On the occasion of the 10th anniversary of IRIS, the IRIS Management Centre has prepared this newsletter highlighting the standard's accomplishments over the past decade as well as taking a look at what the future holds for IRIS. We'd like to thank the UNIFE companies and IRIS stakeholders for their role in the success of this standard which continues to instill a culture of quality within our industry and sector.

With best regards,

A stylized, handwritten signature in blue ink, consisting of a large 'L' followed by a horizontal line.

Laurent Troger
UNIFE Chairman

A handwritten signature in blue ink, appearing to read 'Philippe Citroën' in a cursive style.

Philippe Citroën
UNIFE Director General



10 years of IRIS Leadership



Andreas Heinzmann

IRIS Chairman from 2005 to 2007

Andreas Heinzmann was one of the founders of the IRIS system and the first Chairman of the IRIS Group. Under his leadership, the certification system has been developed. Today he is Chairman of the International Competence Centre Rail GmbH, based in Switzerland. CC-Rail is the market leader in the niche segment of IRIS consulting and training.

The rail industry differs from other industries through its great tradition, the long life cycles of its products sometimes lasting over 40 years, and its small production quantities in a classical project business. However, it is also sometimes known for through a high tolerance against faults and often sorely afflicted customers and passengers.

Unfortunately, in the past, quality was not a priority in the rail industry. Surprisingly, however, the IRIS standard has seen the light of day ahead of some other industries. Honestly, I must admit that our motivation was not in the sudden realisation of the need for quality by managers in the rail industry. Rather, it was primarily due to pressure from rail (urban) operators (UITP) as well as the identification of massive potential cost savings on the part of railway manufacturers and cost optimisation for their suppliers. The launch and success of IRIS is especially attributed to the financial commitment of Alstom, Ansaldo Breda, Bombardier Transportation and Siemens. These companies empowered the IRIS standard due to their market power and ensured its significant promotion in Europe and Asia in cooperation with rail

suppliers like Knorr-Bremse, Voith, Faiveley, GHH and HARTING.

When we began the IRIS project in April 2004, our strategy was to launch the new standard as quickly as possible on the market, but still develop an innovative certification system. In addition to our daily business we were able to achieve this goal in only two years. On 18 May 2006, I presented the IRIS certification system for the first time with pride to the General Assembly of UNIFE in Geneva. Over these two years, we went far beyond the IRIS standard, since we established the Rules of Procedure for the IRIS Group, founded the IRIS Management Centre, developed the IRIS questionnaire including audit software, successfully produced a certification process and the IRIS assessment guidelines, attracted and authorised 14 certification bodies, provided initial training to their auditors, executed several successful audit trials, accomplished the IRIS branding, went live with the IRIS web portal and gave the IRIS system a home under the auspices of UNIFE. It was a gargantuan success for our team of quality pioneers!

IRIS was conceived for the rolling stock business, in the frame of aligning the tier 1 manufacturers of the supply chain.

During my chairmanship, we presented IRIS to the national associations, the certification bodies, and operators, alike, and encouraged them to recognise the certification. We worked on demonstrating IRIS benefits and convincing manufacturers and integrators that quality is a prerequisite to their businesses.

We started the campaign for IRIS certification in Western Europe, mostly among the companies primarily involved in the project, before promoting it in Eastern Europe and later, in Asia and in Russia. Now, 10 years later, IRIS is implemented and recognised around the world.

As part of the continuous improvement of the International Railway Industry Standard (IRIS) the UNIFE Presiding Board has approved evolving IRIS to an ISO/EN standard. Below you can learn more about how this is occurring as well as some key dates:

- Q4/2014, the IRIS Steering Committee approved the creation of a working group to investigate options to improve IRIS and its usage in the rail industry
- Q1 and Q2/2015, the working group evaluated in detail the options and made a recommendation,
- June 2015, UNIFE Presiding Board approved moving to an ISO standard
- Q3 and Q4/2015, the working group members drafted the update based on customer requirements, ISO 9001:2015 changes and industry recommendations
- Q1/2016, the new ISO version of IRIS was submitted to the

Across the years, IRIS opened its scope to other branches of the rail sector such as signalisation, allowing the certification to increase its presence and implementation throughout the rail system. The standard itself evolved over the years due to feedback received from the companies and auditors which helped IMC (IRIS Management Centre) put IRIS revision 2 in place. This revision of the standard made it more operational and took into consideration new parameters such as project management during audits.

Nevertheless, while working on promoting, improving and evolving the scheme, the objective always stayed the same: to obtain a level of quality that matched clients' expectations; first at the integrator level, then with operators and, last but not least, the passengers.

International Organization for Standardization

- Q2/2016, the new ISO version of IRIS is being aligned with all countries represented in the ISO working group
- 2017, the new ISO version of IRIS will be released and migration / transfer activities start
- All current IRIS certificates will remain valid until September 14th, 2018, in line with ISO 9001 transition phase
- All certification bodies responsible for issuing IRIS/ISO certificates have been informed
- In the case of questions, please contact the IRIS Management Centre: info@iris-rail.org

To conclude, a huge amount of activity has been completed over the past 18 months and I am pleased with what we have achieved. Via a continued effort and drive in 2016, I am convinced that we can significantly improve IRIS and its impact throughout the rail industry.



Hubert de Blay

IRIS Chairman from 2007 to 2014

Hubert de Blay was one of the founders of the IRIS certification and part of the IRIS group since its inception. Under his chairmanship, he significantly advanced the promotion and evolution of the standard. After a long career at Alstom, he retired in 2014.



Mark Manley

IRIS Chairman since 2014

Mark Manley is the current Chairman of IRIS Steering Committee and the IRIS Advisory Board and is Vice President of Quality at Bombardier Transportation. Since assuming these roles in December 2014, he continues to work on the future development of IRIS and increasing its recognition worldwide.

Progress over the time

Highlights of the evolution

Evolution of the implementation of IRIS:

During this last decade, the development, the recognition or the strength of IRIS within the rail sector was paved by several important steps:

1. Operators' involvement
2. RZD's improvement tool
3. Worldwide development

1. Operators' involvement

From 2007 on, first contacts were established with European operators on communication and acceptance of the IRIS scheme as a sector tool for improvement. They all participated on the preparation of the IRIS rev.02 Standard still applicable today. By including important needs of them resulting from their experience, we could enhance and prioritize the requirements and rules in order to obtain a stronger scheme.

Since 2015, we are setting common targets on future cooperation through the signature at high level of Memorandums of Understanding with mainline operators and public transport authorities.

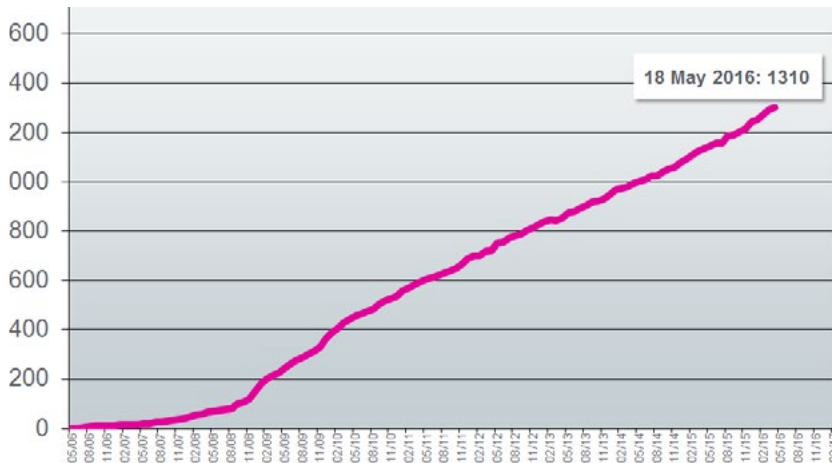
2. RZD's improvement tool

UNIFE and IRIS were chosen by the Russian Railway operator (RZD) as the main tool to develop a huge improvement program within the Russian rail industry. Many conferences, seminars, awareness trainings and meetings have been organised in the last seven years. More than 150 rail specialists were trained on the IRIS principles in order to enable a reliable cascading in their own organisations. After a first company got its IRIS certification in 2011, around 100 sites are currently certified in the Russian Federation. Tremendous achievements and improvements are registered and acknowledged by the actors of the program.

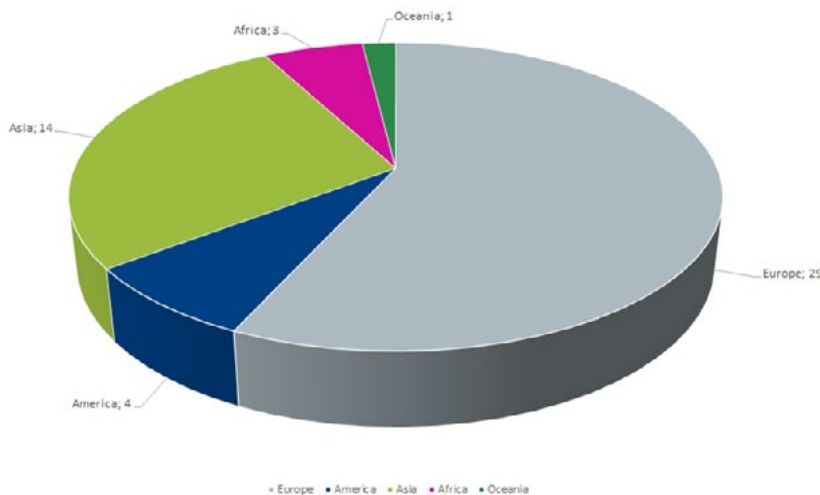
(see also dedicated article later)



Evolution of certificates in 10 years



Number of countries per continent having an IRIS certificate



3. Worldwide development

Originally developed by the European manufacturing industry, IRIS quickly got recognition out of the continental borders. The 100 first certificates were reached after only 1 ½ year, the 200 mark, only 5 months later! Since that period, we could always notice a continuous and steady growth.

The Asian development begun with the implementation of the IRIS principles in the local subsidiaries of the stakeholders of IRIS. The strong involvement of the Chinese supply chain into numerous worldwide projects created a crucial need for improvement. Globally, this was the case in all other countries (51) where IRIS is having a certified company up today.

Technical evolution of the IRIS standard

The development of the technical basis began in 2004 following the established IRIS goals, which to this day remains the foundation of the scheme:

1. Improved product quality and supply chain efficiency by process improvement and robustness,
2. Reduction of efforts and costs,
3. Fair evaluation by independent certification bodies,

4. Global recognition for and from rail sector.

Acknowledging that rail specific topics are not covered by the internationally recognised ISO 9001, the need of a specific rail standard for the industry was expressed. Inspired by standards already in place in other industry sectors such as automotive, aerospace and food,

the rail industry decided to create its own specific standard.

Across 2004 and 2005, technical experts from Alstom, Bombardier and Siemens, and AnsaldoBreda (from 2005 on) drafted the first version of the IRIS standard. Based on the ISO 9001 and a benchmark with other industries and standards (e.g. automotive,

aerospace, food) and also including the documentation and experience of railway system integrators, the working group issue the standard, documented in the IRIS Booklet rev.00.

One of the specificities of the IRIS certification development since the IRIS Rev. 00 are the IRIS “Knock-Out” (K.O.) requirements which

target basic process areas in the rail sector identified as being weak and requiring the attention of the sector immediately in order to avoid impacts on product quality.

Therefore, twelve IRIS K.O. requirements are defined for these process areas and must be assessed by the auditors during the Readiness Review (stage 1) and

in each audit. Depending on the audited organisation, some K.O. requirements may not be applicable and, therefore, are not scored. The figure below shows the areas for the twelve K.O. requirements. The green items represent the K.O. requirements, which are ALWAYS applicable.

Areas of K.O. requirements

1	Quality management system	7	Project management
2	Design and development	8	Quality management (in projects)
3	Design and development inputs	9	First Article Inspection
4	Design and developments validation	10	Commissioning/Customer service
5	Design approval	11	Control of changes
6	Validation of processes for production and service provision	12	Control of nonconforming process

The whole system was validated through several dry run audits to ensure its applicability.

After involving more than 30 technical experts, the IRIS system applicable for the rolling stock companies and activity manufacturing, was launched on 18 May, during the UNIFE General Assembly, including:

- an international standard based on the principles of ISO 9001
- a unique assessment tool (questionnaire/assessment sheet) with maturity level and scoring.
- an evaluation process with an assessment guideline to be per-

formed by IRIS-approved global certification bodies

- a web-based IRIS Portal (database) and Audit-Tool (Software)

In 2008 the IRIS rev.01 was launched. This revision included maintenance requirements; an output of several workshops among maintenance experts from the industry. Furthermore, following the decision of the UNIFE Presiding Board the new IRIS rev.01 was also applicable for Signalling companies.

This revision follows the continued evolution of IRIS in defined steps by extension of activities (design,

development, manufacturing, maintenance, and scopes (rolling stock and signalling)).

The next technical evolution was launched in June 2006, IRIS rev.02, after eighteen months of workshops with the active participation of operators as SBB/CFF/FSS, Nedtrain, SNCF, RATP. More than 80 operators' requirements were included in this revision, bringing a first recognition of the IRIS system by the customers and starting the cooperation and support.

- specific rail areas were strengthened (e.g. First Article Inspection) as key areas for the

Evaluation Process

Compliance	Level	Points	Actions requested	
			open item	closed item
Compliant	optimized	4	no specific action expected	–
	qualified	3	improvement action might be recommended	–
	defined	2	improvement action as per auditor's request	no specific action expected
Non Compliant	poor	1	corrective action mandatory; to be closed within 90 days	–
	insufficient	0	corrective action mandatory; to be re-audited within 90 days	corrective action mandatory; to be re-audited within 90 days

operators and were improved in the requirements.

- nearly 30% of the existing maturity levels of the questionnaire were strengthened, in order to allow space for improvement
- ISO 9001:2008 adds-on were integrated
- ISO 9004 recommendations were put as “should “ requirements .

Since 2009 the technical requirements are in application worldwide.

However, following the market needs and evolutions, rev. 02.1 was released. This step showed ISO's confidence in IRIS by obtaining the copyright for ISO 9001:2008. The rail sector could get a single document, gathering both requirements.

Technical improvements considering the ISO 9001:2015 version

After several years of stabilization and considering the upcoming ISO 9001:2015 version, the IRIS Steering Committee decided in 2014 to launch in June 2015 an IRIS Addendum.

Main focus was:

- consideration of correction received from the field (user, stakeholders, state of the art)
- improvement of the questionnaire (consequence new assessment sheet), especially maturity level optimized (3) and qualified (4) and including input from released guidelines
- addition of the IRIS scope of certification “Infrastructure”: Industrial elements (as per TSI -

Technical Specification for Interoperability), as approved by the UNIFE Presiding Board

Finally, the IRIS questionnaire is transformed into the IRIS Assessment sheet. This brings a huge simplification in the evaluation and helps the auditors and finally the companies with the evaluation and implementation of the IRIS requirements, which are kept since 2009.

The IRIS development over the past 10 years shows its necessity in the rail sector. Today, the key factor for quality is an efficient business management system, supported by sustainable processes, resulting in improved product quality through the supply chain.

HARTING - 1st company certified

HARTING specialises in the fields of electrical, electronic and optical connection, transmission and networking, as well as in manufacturing, mechatronics and software creation. The Group develops solutions and products such as connectors for energy and data transmission applications for rail equipment as well as for other sectors. Heinz Welling, General Manager, Corporate Quality & New Technologies, and Kenton Bew, Director, Global Quality for C & N Operations, reflect 10 years of running an IRIS-certified business management system.



For over 10 years, HARTING has used the IRIS standard as its business management model, but what advantage has it delivered?

With today's complex business environment, it can be all too easy to lose focus of the ultimate aim of a solution-led manufacturing business—in other words the on-time delivery of a quality and reliable product. To support this, HARTING has defined a vision to ensure long term success.

HARTING's vision is to :

- shape the future with technologies for people
- become a global company
- create value

To achieve these ambitions, one company goal is to continue to design and manage our processes efficiently and sustainably. The IRIS standard has helped us focus our thinking and has led to innovative new techniques to manage our products and processes from customer collaboration, design and development through to production and supply chain fulfilment. In 2006, HARTING chose the IRIS standard as a business management model to improve its products and processes, thereby supporting this important company goal. In continuously driving improvement and maturity levels across the past 10 years, our

IRIS audit scores are over 80% at each location.

Another company goal is to focus our business on growth markets. Rail transportation is an important part of the growth target markets portfolio at HARTING and, as such, ensuring IRIS Certification demonstrates HARTING's commitment to this important goal.

Today, 80% of HARTING's operations are IRIS certified which brings notable advantages to companies producing products, not just in the rail transportation market, but to other strategic growth market sectors. As HARTING sets its sights on international expansion, more operations will become IRIS certified, sharing the knowledge and strategic advantage gained from the existing IRIS certified locations.



Operator testimonial:

Swiss Federal Railway's experience with IRIS

For the past nine years, the Swiss operator, Swiss Federal Railways (SBB-CFF-FFS) has significantly contributed to the development of the IRIS standard through its participation in various working groups, the auditor validation committee and the IRIS Advisory Board (IAB) for the development of the IRIS standard.

Hans-Jörg Schürch, Business Excellence, Quality and Risk Management Manager and Susanne Schaub, Business Excellence Manager, work in the Business Excellence and Quality Management department of "Operating" (P-OP). P-OP looks after SBB's rolling stock for its passenger division. This includes the procurement of the fleet, light and heavy maintenance as well as cleaning/maneuver and asset management.



IRIS reflects the state of the art in management systems of the railway sector, exceeding the ISO 9001 by important requirements to ensure the quality of the railway industry by providing an assessment method which has a visible link to the excellence model EFQM.

One of the most important advantages of the IRIS standard is its closeness to the business. Not only are technical requirements on project management, including configuration management and FAI covered, but it also takes into account life cycle costs, risks and opportunities. The consideration of Communication and Customer Relationship Management also delivers a strong impact on quality.

Why has an operator such as SBB invested energy and manpower into a private standard?

First of all, the objective was to maximise the outcome of a standard which represents the state of the art in railway business management systems. In order to be reliable in its services and to maintain the high punctuality for which SBB is famous, P-OP depends on high-quality procured material. Therefore, SBB encourages all suppliers to be IRIS certified. IRIS certified sites are more likely to meet SBB's standards which are quite ambitious. As "Operating" has strived for excellence since 2006 the requirements are quite high. Twice, P-OP has applied for the Swiss Excellence Award and in 2014 was awarded the prize for "leading with vision, inspiration and integrity leadership".

As the market for railway products has some limits, it is crucial to have a reliable supply chain. This is what IRIS is all about – enabling organisations to have a strong management system in order to deliver high quality in a reliable way.

For its own business, P-OP has taken some of the requirements into its own system but has not yet sought certification for its maintenance line.

As the working groups are assembled with experts from system integrators, original equipment manufacturers, certification bodies and operators, the exchange of experience is enormous. The participation in various groups helps in enlarging the personal network from which the company can also take an advantage and gives inputs for benchmarks in the rail sector. These comparisons are necessary to enable an organisation to set ambitious and achievable objectives which are necessary for excellence. However, knowledge and system qualities alone aren't enough to achieving continual improvement, the very personal aspect in joining working groups and meetings, including the enthusiasm and passion of the agents are also indispensable ingredients to meet stakeholder requirements in a sustainable way.



IRIS as of today

Where are we today?

Today, we have a well-known system implemented worldwide, which is shown as having issued more than 1300 IRIS certificates in five continents.

The IRIS rev.02.1 and Addendum 2015 are applicable and the technical basis for IRIS certifications.

The IRIS Booklet rev.02.1 is available in five languages (English, German, French, Russian and Polish) and only in electronical form.

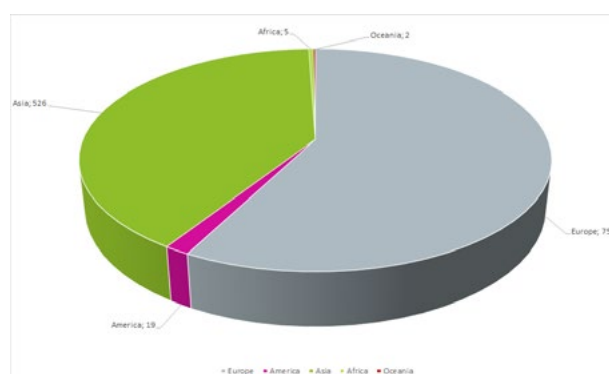
IRIS audits are performed by IRIS approved certification bodies, currently 16. These certification bodies are acting worldwide and can provide IRIS qualified auditors to performed the IRIS audits.

260 IRIS approved auditors are performing the IRIS audits, covering 26 languages and the respective process scopes. All IRIS approved auditors are centrally trained and validated by the IRIS Management Centre to ensure the same level of qualification independent of the certification body and the country. Furthermore, the certification bodies are monitor on regular basis through witness and office audit.

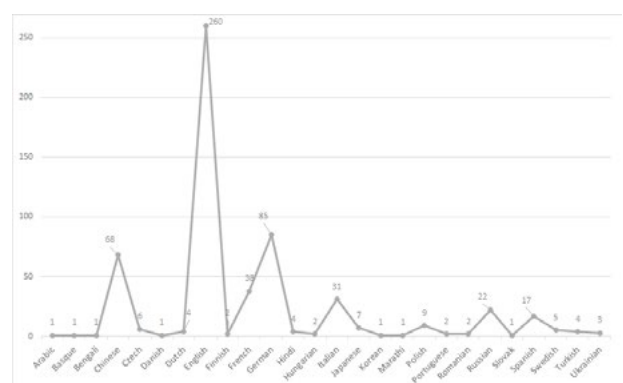
This bring confidence to the IRIS certified companies on the system.

Having more than 730 companies registered in the IRIS Portal not possessing today an IRIS certificate and preparing for undergoing the IRIS certification, shows the short-term forecast for the IRIS implementation and the increase of confidence in the system.

Distribution of certificates per continent



Number of auditors per languages



Why companies should be certified today?

The rail projects are becoming more and more complex technically but also challenging in terms of delivery times. Consequently, the supply chain is expected to develop and to be more reliable: the quality of the outputs has to increase.

After decades of focusing on product inspection, the customers have to cope with more sustainable actions within their suppliers. It is obvious that a process view at least or more a system view is required. Therefore, IRIS came right on time to address the requirements in line with customers' needs.

But the main expectation is to have confidence and trust in the organisations and their processes. This includes mastering and applying best practices on the daily business. The certification process defined for IRIS gives the company the opportunity to be rewarded with a real seal of quality.

So, both needs are covered by the IRIS scheme. Nevertheless, the confidence will not remain on the certificate itself: the relationship customer/supplier has to be continually extended, project by project, issue by issue in order to strengthen the necessary mutual trust. IRIS is the only global certification scheme within the rail sector. The expectations are high and will still raise until the satisfaction of the stakeholders is achieved.



Why to join us?

- To be recognised in the rail sector
- To be more visible in the rail market
- To reinforce your commitment to quality and continuous improvement
- To secure a competitive future

Operators involvement

SITARAIL becomes the first operator to be IRIS certified

Joel Hounsino, General Director of SITARAIL (an operator in Western Africa) explains why they decided to get involved in the IRIS certification process at the beginning of 2014. As a Railway concession operating between the Ivory Coast and Burkina Faso, he describes the specifications of the African network and rail market.

SITARAIL operates a single track line with a meter gauge and provides three freight trains per day and three passenger trains per week along the 1260 kilometres between the port of Abidjan and Ouagadougou. The current development of the area will be sustained by subsequent investments on the infrastructure and rolling stock in the short and medium term.

SITARAIL is part of Bolloré Group, which established the Bolloré Africa Logistics brand in 2008, uniting all of its activities on the African continent and in the countries that have commercial relations with Africa. Bolloré Africa Logistics is the leading integrated logistics network on the African continent and the leading operator of public-private partnerships between the ports and the rail activity.

Why did we choose IRIS certification?

Since 2010, SITARAIL has set three primary objectives:

- satisfy customers through a reliable and secure transport,
- increase its market share
- improve its management system

After setting the foundations of this ISO 9001 certification process, we realised during the first management review in December 2013, that any strategy to achieve the aforementioned objectives, must ensure the operations (transport activity), availability, and continuous provision of equipment in good working conditions and a well-maintained railway.

Therefore, we decided, in accordance with the Bolloré headquarters, to look for a standard that could meet our needs and aspirations. Which is how we became involved with the IRIS certification process. While no other operator has had this certification before, we strongly believed in the project and began the certification process in January 2014.





What are the specifications of the network and the African rail market?

Regarding railway infrastructure, the African network is about 54000 km, and hardly represents 5% of the total global rail network. The SITARAIL network is 1144 km, which is approximately 2.30 % of the African network. The railways in sub-Saharan Africa (excluding South Africa) only represent a bit more than a third of the African continental network.

The sub-Saharan Africa (excluding South Africa) rail network accounts for approximately 35% of the continental network, which is small compared to the worldwide market (about 2% of the global network). The modest size of this network explains its low presence in the sub-Saharan transportation market.

After analysis, and despite the importance of road transport (80% of total traffic), market share exists and can be conquered.

In order to achieve this goal, SITARAIL will have to develop tools to perform the maintenance of equipment and infrastructures. For instance, since December 2015, we noted 5% of increase in tonnage carried, and 5.4% growth of customer portfolio, due to the improvement of our service quality.

We are confident that the program for rehabilitation of the railway that has already begun alongside the ongoing renewal of our equipment, are opportunities to optimise our processes.

“ We are confident that the program for rehabilitation of the railway infrastructure alongside the ongoing renewal of our equipment, are opportunities to optimise our processes. ”

Collaboration with other sectors

Aerospace' experience on management system

As a relatively new standard, the founders of IRIS wanted to take advantage of the experience from other sectors with similar quality standards such as aerospace, automotive and food, and therefore initiated collaborations and exchange with these sector standards. These exchange activities can be seen in the current IRIS System, for example IT system and the reduction of audit time for organisation's already possessing an AS and/or ISO TS 16949 certification.

Colin Clarke, Coordinator Quality Assurance, at Bombardier Aerospace, has been Chairman of the Americas Aerospace Quality Group (AAQG) for many years and a key partner to IRIS, helping to facilitate best practice exchange between the two sectors.



The Aerospace Scheme (AS) for Quality Management is not controlled by a third party but instead by the industry. This means that industry members must be involved in the entire approval and certification processes for accreditation bodies, certification bodies, auditors and suppliers.

The industry involvement in the development and oversight of the AS is a pre-requisite for its acceptance by the regulatory authorities as a part of an organisation's supplier control

program. Information relating to the bodies involved in the certification process is stored in the Online Aerospace Supplier Information System (OASIS) database.

The relationship between AS and IRIS began in 2006, when Bombardier Transportation asked Bombardier Aerospace, which is a member of the International Aerospace Quality Group (IAQG) that developed the Aerospace Quality Management Standards 9100, 9110 and 9120, to share its experience and lessons learned during the development of those standards.

This relationship continues today through regular dialogue and idea exchange as we develop our experience with the various processes used in auditing, the training of auditors, and the certification of suppliers, among others.

Furthermore, personnel working with both schemes continue to

exchange information and share their experiences and speak at each other's internal and stakeholder meetings. For instance, AS representatives addressed the IRIS Steering Committee and at the UNIFE InnoTrans stand and IRIS leaders have given speeches at the IAQG's General Assembly and Other Party Management Team, which is a sub-committee of the IAQG responsible for managing the certification process on a global level.

Since its infancy, not very long ago, the IRIS scheme continues to focus on enhancement and on raising its profile, with the upcoming version set to become an ISO Standard. The rail and aerospace industries, like all others, focus on the improvement of quality throughout their supply chain in order to consistently deliver high quality products, while reducing non-value added activities and cost.

“ The rail and aerospace industries, like all others, focus on the improvement of quality throughout their supply chain in order to consistently deliver high quality products, while reducing non-value added activities and cost. ”



IRIS goes ISO

IRIS goes ISO: Presentation and Process

Since 2009, the IRIS Rev.02 requirements are applicable and include the ISO 9001:2008 requirements.

A new revision of the ISO 9001 was published in September 2015 and all related certificates must be updated before 14 September, 2018.

As a result, UNIFE has started in-depth work in order to:

- Analyse the new ISO 9001:2015 requirements
- Assess new rail specific needs
- Identify obsolete current requirements
- Understand the new “high level structure” of the management system standards of ISO.

This work resulted in a new version of an IRIS standard in early 2016 that is in line with all expectations of the involved stakeholders.

In addition to this work, the IRIS Steering Committee analysed the future challenges linked to quality, reliability, recognition and trust that the industry may face. As a result, the Steering Committee built a business plan to address solutions for the development of IRIS in the next five years, achieving the defined targets and priorities.

Finally, the IRIS Steering Committee asked the UNIFE Presiding Board to validate a switch of the IRIS standard to an official International Standard managed by ISO. This was accepted in June 2015 and UNIFE started the work with ISO last September with the following objectives:

- Move the technical requirements of IRIS (former Chap.3) to ISO
- UNIFE to take part of this work through an “A” Liaison
- Keep the certification process (Chap.1) and the assessment methodology (Chap.2) under sector control
- Prepare a new scheme for mid-2017 to guarantee the continuity of the existing certificates.



Strategic orientation

The evolution of the IRIS Standard towards an ISO Standard will bring several opportunities to the scheme. First and foremost, this would be an official global recognition of the specific business management system principles within the rail sector. This will open doors at different levels in the industry and with operators. Moreover, regulatory stakeholders will be able to support or even refer to this standard.

Second, a wider and quicker implementation in the rail supply chain will be possible. This will certainly mean an increased focus on implementation of the requirements and best practices instead of excessive evaluation of the standard's value amongst participating companies.

Third, it will give IRIS the opportunity to further develop the assessment of the organisations and facilitate the inclusion of new elements, such as performance measurement to improve quality policy application and consequently reinforce the customer acceptance. Combined with the effective application of the PDCA cycle, this should progressively push the rail sector to levels of quality already achieved in other business sectors.

Definition of the new standard

Building upon the proven IRIS approach for regular technical evolution, a new version of the IRIS standard was finalised in early 2016. This version was prepared by technical experts of the rail sector considering operators, and broader stakeholder feedbacks and market needs. A validation phase by a wider group of rail sector members was also performed.

Core Team members of this development team comment on key areas of this new version:

Project Management by Sabrina Paeglow, Siemens

Usually business in rail sector is project driven business but not a routine operation. In many projects, the level of complexity is high and new challenges are to be faced. This requires an excellent management of projects and the entire value chain.

The IRIS standard defines minimum requirements for enabling the acquisition and execution of projects (e.g. for phases/activities, deliverables, risks, controls, organization, scheduling) and for applying methods, tools and competencies.

By this, a clear guidance is provided to manage projects competently, efficiently and reliably as well as to achieve the project goals scope, time, cost and of course quality while optimizing resources and schedule.

Special Processes by Emilio Sereni, Bombardier Transportation

IRIS is, and will be even more in the new version, a standard for quality systems with the aim of improving product quality.

Special processes are directly influencing product quality and, in order to be properly managed, require not only skills and competencies but also clear identification of responsibilities and tasks to be performed.

Therefore in the new standard the number and the level of requirements for special processes have been increased, in order to drive companies to a full control of them.

Thanks to new technologies the number of special processes is continuously increasing, but the standard has a common approach to them, aligned with the existing international standards commonly applied in the railway sector.

Quality Deficiency Cost (QDC) by Andreas Heinzmann, CC-Rail

Philip Crosby said: "Quality is free. It's not a gift, but it's free. The 'unquality' things are what cost money."

Quality Deficiency Cost (QDC) is one of the most complex KPI, but it is a true game changer! If you do it right, the Quality function will change from a poor suppliant toward an acknowledged business partner, who provides real cost figures and facts for top management attention. Our advice: assign QDC in accordance with who has caused them (e.g. Engineering, Management, Operations or Supplier); not for finger pointing, but to challenge addressees who have to take improvement actions for reduction of financial deteriorations. We say: Stop the bleeding!

New IRIS version 2016 by Angela de Heymer, UNIFE IRIS

This technical evolution is a step forward in the goal of improving product quality by reinforcing key areas of the sector such as risk and opportunity, configuration and change management, and special processes, among others.

The improvements made in ISO 9001:2015 reinforce the process approach and risk-based thinking and, together with the specific rail requirements and the rail companies on implementation of the requirements, support rail companies in requirement implementation and, ultimately, in the improvement of their system and processes.

Transition phase

The IRIS rev.02.1 version will remain valid until further notice. The expected timeline for transition with ISO is connected and means that all IRIS audits (certification, surveillance and re-certification) will be performed according the current rules.

Consequently, all IRIS certificates will automatically have their validity ending by September 14th, 2018 as it will be the case for the ISO 9001 one's as well as the one's of other businesses (automotive, aerospace,...). We are aware of some particular situations which will be managed and solutions defined in due time.

Process review by Olivier Ringotte, Alstom

It is a must for an organization to improve the performance of its key processes. Process reviews help to obtain such improvement as specified with the next version of IRIS.

A process review is focused on one key process or a small set of, challenging the relevance of related performance indicators and the achievement of their targets. It also addresses the main process issues, status of required resources, adequacy of methodologies and tools... The main process stakeholders including the concerned managers decide and update action plans during these reviews to improve the process effectiveness. So with valuable process reviews, customer needs can be better achieved.



Any evolution of the timeline will be communicated in due time to the stakeholder.

Regarding the application mentioned above, we abet all IRIS certified companies to stay with the current certification version of IRIS until the new standard is released. The switch is a one shot action which is to be done before September 14th, 2018. Regarding the very consequent evolution contained in ISO 9001:2015, we believe that it is necessary to deeply analyse the impacts on your management system in order to implement safely and consistently the new requirements. The IRIS evolution will be in the same line to drive your rail projects.

Development of IRIS standard in Russia



V.A. Gapanovich , Senior Vice President for innovative development - Chief Engineer of JSC “Russian Railways”, presents the current status of the IRIS standard in Russia and explains the future development.

In 2007, JSC “Russian Railways” decided to implement the IRIS standard on Russian companies and suppliers of railroad products for the Russian rail system. In order to implement this project, we signed a memorandum on cooperation and license agreement between NP “UIRE” and UNIFE. In 2010, the first Russian enterprise - JSC “Izhevsk radio factory”, a manufacturer of railway automation and communication systems was certified.

To achieve this, the IRIS standard implementation programme at Russian enterprises was carried out in accordance with the guidelines set out in the field of strategic management of final product quality policy of JSC “Russian Railways”, approved in 2009. The significant task of certifying the key suppliers of rolling stock equipment and components has been successfully achieved. From 2010 to 2015, 108 companies obtained IRIS-certification in the Russian Federation, of which more than half are major system integrators in the

production of rolling stock and its component parts. It should be noted that all main suppliers of locomotives for the needs of JSC “Russian Railways”, as well as suppliers of rolling stock running on the public Russian railroads, are certified.

Today, the quality management system of JSC “Russian Railways” is regulated by three basic documents:

1. The Statute of the quality management system of JSC “Russian Railways”: approved by the Board of Directors of JSC “Russian Railways” in accordance with the order of the Government of Russian Federation, this Statute was developed on the basis of the provisions of the Development Strategy of “Russian Railways” holding for the period up to 2030. This document is the company’s master quality document and determines the basic requirements for quality management systems of the Group of companies

Holding. The basic principles enshrined in the system are: a focus on consumers, a process approach and the concept of risk-based thinking (determination of possible risks and minimising their negative influence).

2. The quality management strategy in holding “Russian Railways”, was approved this year. This strategy establishes the basic objectives of the company for quality and aims to increase quality achievement of key performance indicators of “Russian Railways” in all activity segments.

3. The quality management system of JSC “Russian Railways”: subsystem for supply quality management sets requirements for the quality management supply system to improve the quality of suppliers for the needs of JSC “Russian Railways” products in order to minimise the possibility of systematical failure.

The last two documents establish mandatory specifications for the implementation of the IRIS requirements for the enterprises of the railway industry in the Russian Federation.

Also, these requirements are firmly fixed in Russian contracts for the supply of rolling stock and component parts for railway transportation. As a consumer, JSC “Russian Railways” provides a number of preferences to companies certified for compliance with the requirements of IRIS. Firstly, the availability of an IRIS certificate is taken into account when organising tender procedures in the procurement of technical equipment. Secondly, priority is given in the annual competition of JSC “Russian Railways” to the best quality rolling stock and complex technical systems.

The official recognition in 2013 of the Russian language within the IRIS system and the start of the distribution of the Russian-language version of the standard through STANDARTINFORM company was an important milestone in the development of the IRIS standard in Russia. A bit later, IRIS certificates were also issued in Russian. Furthermore, in 2015, in context of the EXPO1520 event, a Memorandum of Understanding and Cooperation was signed between JSC “Russian Railways” and UNIFE. The aims of this are to maintain mutually beneficial cooperation, ensuring the quality of the rail products and the promotion of the IRIS standard.

In 2015, preparations began for the IRIS certification of structural units of JSC “Russian Railways” in the field of maintenance of high-speed multiple units and repair of freight wagons. In November 2015, the first unit certified for compliance with the requirements of the IRIS standard in JSC “Russian Railways” was the Southern Directorate of high speed communication for servicing of

electric trains Series ES-1 “Swallow” at the Adler station.

This IRIS certificate was awarded to the management of high-speed communication of Southern Directorate at the final session of Management Board of JSC “Russian Railways” by President of JSC “Russian Railways” O.V. Belozerov.



Areas of the IRIS standard development have clearly defined objectives in accordance with Russian Railways’ comprehensive programme of innovative development over the medium term until 2020, including:

- Cooperation with system integrators on certification of the supply chain,
- Certification of the largest manufacturers of infrastructure components, the suppliers of JSC “Russian Railways”;
- Certification of branches and structural divisions of JSC “Russian Railways” (three wagon-repair companies and production sites of high-speed communication management), and;
- Organisation of international conferences, exhibitions and workshops to share experience and study the best practices of the implementation of the IRIS standard.

From 6-8 July 2016, the next IRIS Advisory Board is planned to take place in Saint Petersburg, Russia, with a visit to the Luzhskaya sorting station for Oktyabrskaya Railroad and a meeting session on the harmonisation of technical legislation in the field of railway transport.

The Luzhskaya sorting station of Oktyabrskaya Railroad is the gateway to the Merchant Sea Port of Ust-Luga. It is one of the biggest transport projects in Russia, implemented by JSC “Russian Railways” in cooperation with Siemens AG and Bombardier Transportation.

10 years of development: the

*Chairmanship
handover*



*UNIFE General
Assembly in Paris*



*Framework Agreement
with Russian Register*



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*Bernard Kaufmann
becomes IRIS
General Manager*



2006

2007

2008

2009

2010

2011



Launch of IRIS



Evolution of IRIS certificates in

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2012

2013

2014

2015

2016



the world among the years

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