Quality first!

A robust Quality Management System (QMS) is undoubtedly more than just a necessary condition for delivering and guarantying Quality performance; it is truly the cornerstone for a continued increase in supply chain performance and an obvious key tool to drive “Quality first”.

The Japanese aerospace industry has adamantly engaged in this pathway and the hard work to establish robust QMS is now showing. The JAQG has played a leading role in drumbeating certification of the Japanese aerospace supply chain. The number of certified suppliers tells the story and, in the wake of the 32nd IAQG meeting held in Nagoya-city past October, I would like to give JAQG due recognition. No doubt the Japanese industry will reap the benefits of more robust QMS with higher quality, efficiencies, customers’ confidence and thus expanded business opportunities.

It is one example of how the JAQG, IAQG and its stakeholders – Civil and Defense Authorities alike – came together to align and deliver quality.

There is a bright future of possibilities ahead of us. This Newsletter highlights how diverse, progressive and supportive the IAQG activities are for continually improving quality performance throughout the value chain. Let’s mention the IAQG 9100 series future revision, what is at stakes and the way forward. Let’s mention also the IAQG 9110 revised standard for higher Quality and Safety in Maintenance Repair and Overhaul. Check for the Supply Chain Management Handbook and its further developments: all added up, there is now a unique collection of guidance materials proposed free of charge to all stakeholders. Share your views and concerns with us and experiment the feedback via OASIS: it will really drive improvement into the ICOP audit process! Have a look also at the IAQG policy on Human Factors, which clearly shows the necessity to consider HF at the very early phases of design.

As you can see, IAQG is conducting a variety of initiatives, all coordinated and aligned on one single goal, our raison d’être: building up Supply Chain excellence.

Xavier Sahut d’Izarn
IAQG President
VP Quality,
Safran
Shorttakes from Nagoya
IAQG 32nd meeting

Transition to 91XX:2009 certification: 100% completed in Japan

Japan are ahead of time and first to complete transition to JIS Q 9100:2009. This is a prominent example of Japanese drumbeat of the IAQG internal certification scheme. Progress is being closely monitored with a transition audit being expected end of 2012. In parallel, certification of the supply chain in the Asia-Pacific region boasts an impressive 84.2% (Europe is at 70.5%) and with an increase of 12% in the number of suppliers certified for the second consecutive year (72.6% in 2011 and 60.6% in 2010). So far, 75% of IAQG company members in Asia-Pacific and slightly less in Europe have mandated or strongly recommended 9100 certification to their suppliers. An average of 222 and 658 eligible supplier sites are now 91xx:2009 certified in the region.

Next revision of 9100 standard announced

The purpose of next revision is to incorporate the changes in ISO 9001:2015 as it is the base of IAQG 9100 standard, clarify the current requirements and reflect the significant improvements to be brought to QMS. Its publication is scheduled in late 2015.

A new international standard for Statistical Product Acceptance Creation and release of such a standard gained IAQG council’s approval.

IAQG General Assembly at JA2012 and communications

The 2012 Japan International Aerospace Exhibition provided a good opportunity to host the IAQG General Assembly. Over 100 organizations* from and outside Japan came together in a one-day sharing event, with keynote speeches from the Japanese Ministry of Defense and JAL (Japan Airline) Engineering Co., Ltd. It was a time when the needs of the IAQG members could be closely listened to and when Japanese suppliers could directly share the newest Quality information with IAQG member companies at international level.

The IAQG/JAOG activities were also marketed at the JA2012 trade show in a promotion effort – more specifically the Supply Chain Management Handbook (SCMH) and IAQG requirements as ways forward to improve quality in the aerospace industry.

Quality control now in Japanese defense equipment procurement

International standards such as ISO 9001 and JIS Q 9100 were first actively cascaded and applied by the Japanese Ministry of Defense (MOD). In a second step, JIS Q 9100:2009 was deployed to the Japanese defense industry. The Japanese MOD acknowledged JIS Q 9100:2009 as a key enabler for blending previous requirements into an integrated one. This quality management specification is called DSP Z 9008 and, from April 2013 onwards, it will be unified into common specifications.

IAQG welcomes such recognition from the Japanese MOD as very supportive of the overall efforts towards the adoption of 9100 standards by Defense Authorities, in particular the NATO.

Human Factors: From reactive and proactive to predictive

To reduce human errors, the point is now to focus on predictive methods and no longer on reactive and proactive methods strictly, and also to take human factors into much consideration in future design and production phases. The IAQG fully supports JAL operators’ call for action in this domain and for real-life examples to assess.

*72 domestic and 30 foreign
The need for considering Human Factors in initial design and manufacturing

Human Factors are heavily considered in root cause analysis, leading our industry to change the way we train and develop our workforce, be it in Design Engineering, Operations, or in Service. Human Factors are found in the performance of our daily jobs, when making decisions every day; they are the cause for some of the most horrific accidents in aviation history.

When an assembly operator is preoccupied with problems at home and fails to perform the job requirements properly, they are endangering the lives of those people that use the products they work on. When a maintenance worker is not properly trained and fails to perform their duties per the requirements of the job, they are creating the possibility of an accident that can cost human lives.

We must be aware of Human Factors playing a key role in the Quality of products and step up to cover these situations. Our industry must evolve into considering these factors during all the phases of our product lifecycle, from initial design, into manufacturing and also in our maintenance, repair and overhaul activities.

Looking at Human Factors in the early phases of product lifecycle: A welcome step forward

Considering Human Factors during the design phase of our products makes good sense in order to build a product that would be easier to use and to maintain; yet, they have been almost completely absent in the early phases of the product lifecycle. This is now changing as the regulatory agencies have also recognized the need to address Human Factors in the design and production of products. Human factors are actively considered in the Maintenance, Repair and Overhaul of product in repair stations.

The FAA highly encouraged the Human Factors Training Program that assists repair stations in designing and implementing their own training on this subject, even though Human Factors are not directly covered by the FAA in the Code of Federal Regulations. There are also discussions taking place with the EASA to introduce Human Factors into the Design and Production regulatory requirements, and no longer only detailed in the maintenance regulations EASA Part 145. There is no timeline for this change but EASA has said that they would actively support its inclusion by organizations.

Learn more about this white paper at http://www.sae.org/iaqg/handbook/sem11termsofuse.htm or contact any member of the People Capability team.
9110:2012 revised: One standard for higher quality and safety in Maintenance, Repair and Overhaul

Safety first and foremost
The MRO business is still the same – maintain, repair and overhaul – while maintenance organizations and repair stations are operating in a more complex environment. They must continually improve quality and safety of their products and services if they want to meet and even exceed, customer expectations as well as the substantive regulatory requirements of the aviation and defense industry.

Being global our industry, by its very nature, is one of great diversity. There are differences in regional and local regulation, requirements and expectations. This raises the bar for everyone, all over the globe, and makes the target more difficult to achieve.

Organizations are challenged to purchase products and services from a worldwide base of suppliers at all levels in the supply chain; MRO suppliers are equally challenged to deliver products to multiple customers with varying quality and airworthiness requirements.

In all cases, and whatever the industry constraints, aviation safety remains the undisputable number 1 priority.

A worldwide industry engagement towards global cohesion
The industry reasserts the need to push and unify these requirements and regulations within a global, consistent framework, which can only be achieved through global coordination efforts from all stakeholders. This is the purpose of the revised IAQG 9110:2012.

IAQG 9110:2012 focuses on a process approach-based Quality Management System specific to the maintenance, repair and overhaul business and details those maintenance industry requirements that will meet the demanding airworthiness regulations for products and services, mainly in the areas of:

- Safety policy and safety objectives
- Human factors
- Risk management
- Counterfeit and suspected unapproved parts
- Certifying staff
- Control of work transfers
- Continuing airworthiness
- Key characteristics and critical items
- Customer satisfaction

The IAQG 9110: 2012 standard is based on ISO 9001 and supplements IAQG 9100 Aviation, Space and Defense industry requirements.

We firmly believe that adopting IAQG 9110:2012 is the timely answer to the challenge of safety improvement and a key to risk mitigation - timely, because the maintenance industry is segmented into certified and non-certified maintenance organizations or repair stations.

The reality is that non-certified players fall outside the regulatory oversight of Aviation Authorities and are monitored only by their customers – the airlines, OEMs and MROs...

Adherence to IAQG 9110 standard and adoption of a recognized certification process such as ICOP will ensure that organizations implement conforming, effective Quality Management System processes and stay focused on quality, safety and continual improvement issues.

For Regulatory Authorities, OEMs and customers of civil and military maintenance services, all of whom are struggling with supplier oversight resources, the benefit of encouraging suppliers to obtain IAQG 9110 certification is clear: It provides an additional layer of control and confidence that enhances the MRO suppliers’ quality system.

A coordinated approach to actively promote and recognize IAQG 9110 as a catalyst to implement an effective QMS and monitor subcontractors being not Part 145 certified has been engaged with the European Aviation Safety Agency (EASA) and industry stakeholders.

With shared benefits for all.
As an industry stakeholder or customer have you ever asked one of the following questions?

- How can I influence a Certification Body Lead Auditor’s audit plan?
- How do I report certified supplier performance issues?
- How can I communicate a Certification Body concern to an Industry Controlled Other Party (ICOP) Accreditation Body?
- Can I communicate directly with a Certification Body or Accreditation Body regarding a concern or issue?

All of the above questions can be addressed by using the OASIS Feedback function – a robust process – to communicate directly with our approved AB and CBs that are listed in the OASIS database.

Feedback is a persistent reminder to live up to stronger performance and we welcome your feedback as such! The degree to which we integrate feedback into our process is key to creating a supportive environment, “Drive Improvement”, and improve the ICOP audit process of the IAQG.

This is why we encourage stakeholders to utilize this feedback loop when a Supplier or CB performance issues arises, when clarification regarding the status of 9100/9110/9120 quality management system certification is needed or if you have a general question about the reported data in the OASIS database. And more precisely, to communicate any of the following – considerations for future audits, data question or correction, feedback about a supplier, on-time delivery issues or product conformity issues, or else questions about the certificate itself and, self-evidently, any other issues you may want to explore with us.

The IAQG has established AB and CB requirements within the 9104-001 “Requirements for Aviation, Space, and Defense Quality Management System Certification Programs” standard that require(s) timely response and action to be taken based on feedback received: Your feedback will not go unnoticed and it will be addressed per established requirements.

Talk to us and make a difference! It’s all it takes to ensure that performance issues are adequately assessed and action taken to address your concerns.

Additional guidance on the OASIS Feedback process can be found at: http://www.iaqg.org/iaqgdb/oasishelp/feedbackprocess.pdf

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**OASIS feedback: What else does it take to Drive Improvement?**

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**ICOP in focus**

ICOP is a global harmonized process for certification of an organization’s Aerospace Quality Management System:

- It is defined by the IAQG 9104-001 which provides for international recognition.
- **Industry Controlled** - IAQG provides direct oversight and management of the 9100 series AQMS certification activities via its sectors .
- **Other Party** - Certifications are completed by authenticated certification bodies that are recognized through the ICOP process. Auditors are authenticated against identical requirements based on 9104/3.

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**OASIS, the On-line Aerospace Supplier Information System of IAQG**

OASIS is a single source repository where all information related to QMS certifications (ICOP), auditors and audit results is stored.

Only general information such as accreditation bodies, certification bodies, certified supplier sites, approved auditors is public.

**Today** there are:

- 14,793 supplier sites certified
- 13,34 sites certified to 9100
- 425 sites certified to 9110
- 1,020 sites certified to 9120
- over 49,357 registered users
- 1,154 registered aerospace auditors
- 80 listed certification bodies

* October 2012
**SCMH: continually moving forward**

You've most probably heard about using the Supply Chain Management Handbook (SCMH) to improve and maximize the quality performance of your supply chain. If not, let’s just say that the SCMH is a collection of guidance materials to promote best practices in supply chain quality management and help you to **continuously improve On Time, On Quality Delivery (OTOQD)** throughout the entire value stream.

The SCMH is designed to help the supply chain to understand the requirements for quality management systems in our industry and what is to be expected.

The SCMH is structured into 11 chapters to reflect the **11 elements of a supply chain business process model**; through this approach, we are ensuring that we fully cover all levels of the product lifecycle.

The SCMH is **made available free of charge** to organizations at all levels of the supply chain, customers included.

Go to [www.iaqg.org/SCMH](http://www.iaqg.org/SCMH) to check out the Supply Chain Management Handbook.

First released in October 2008, the SCMH has been progressively enhanced as changes and improvements were identified and new material developed by the IAQG subject matter experts.

Several new sections – e.g., “Delivery Metrics Definition Guidance”, “Sales, Master Scheduling and Sequencing”, “Sub-tier Supplier Control Management” – have been completed since the beginning of 2012 and several others enhanced, such as the “Managing Product and Process Variation in Support of 9103” section that was updated to reflect the changes in the recently revised 9103 Standard.

Additional topics, mainly “Advanced Product Quality Planning (APQP)” and “Counterfeit & Suspect Unapproved Parts Prevention”, will be delivered in the next few months.

Thinking about tomorrow, the idea is to continue generating new sections in the handbook. There is some content development work ahead, in particular regarding Customer Support and Control of Service Operations in Chapter 10. We are looking to identify those candidate subjects that would be of interest to IAQG company members and our supply base as well as the resources to support the working taskforce: please give us your views and answer the SCMH survey at

[https://www.surveymonkey.com/s/SCMH_Chapter_10_Interest](https://www.surveymonkey.com/s/SCMH_Chapter_10_Interest)

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**The Journey begins. The road ahead for the IAQG 9100: 2015 series revision**

Why does it take so long to produce a revision to a standard? There are a few major considerations which are part of the development process.

The 9100 “Requirements for a Quality Management System” is the foundation standard of the International Aerospace Quality Group (IAQG), therefore it is imperative that stakeholders are engaged and the writing teams listen to the voice of customer. These stakeholders include regulatory agencies, relationship partners, certified organizations, IAQG strategy streams, Certification Bodies, Aerospace Auditors, etc.

A further consideration is the impact of revising 9100, because there are several other standards that use 9100 as their baseline, often referred to as “the 9100 Series”. These other standards use most of the 9100 content with specific exceptions and requirements for the purpose they serve.
The term “9100-series” includes the following IAQG published standards:

- **IAQG 9100** Quality Management Systems - Requirements for Aviation, Space and Defense Organizations (IAQG Series Baseline Standard)
- **IAQG 9110** Quality Maintenance Systems - Aerospace - Requirements for Maintenance Organizations
- **IAQG 9120** Quality Management Systems - Aerospace - Requirements for Stockist Distributors
- **IAQG 9115** Quality Management Systems - Requirements for Aviation, Space and Defense Organizations - Deliverable Software
- **IAQG 9137** Guidance for the Application of AQAP 2110 within a 9100 Quality Management System

If you are a 9100 series stakeholder, think about clarifications and improvements that could be made to the 9100-series standards because your opportunity to influence the standard is quickly approaching.

The 9100 series teams are required to coordinate their schedules with the baseline ISO 9001 revision. This coordination is undertaken in order to keep our supply chain certifications aligned to the much more widely used ISO 9001, which has over one million certifications to date. Of course 9100 complements ISO 9001 by including aviation, space and defense specific requirements defined in bold-italic text. These additional requirements address the needs of the industry, which often produces complex high value products, many of which are subject to tight regulation.

So as you can see there is a lot of coordination that needs to happen behind the scenes in order to revise the 9100 standard together with the other standards that use it as a baseline, including the certification and auditing requirements. It is the use of our collective requirements for QMS, auditing and certification that make the IAQG standards stand out worldwide for their innovation and forward thinking.

The next revision of the 9100 Series is currently scheduled for publication in late 2015 shortly after the next ISO 9001 revision is released. This date will depend upon the ISO 9001 standard being published and all integration and coordination activities with our other standards being complete. The goal for this particular revision is to release all related standards together with deployment support materials and training at the same time. This has never been done before and is a true challenge for an international quality organization.

When the 9100 is revised it isn’t just the 9100 writing team producing the standard, it is the entire IAQG community coming together with a shared vision and goal in order to create the foundation for the 9100 series of standards. We should be proud of the work that we do in raising the bar and expectations for quality for all of our organizations and suppliers. It is this responsibility and common vision that keeps the IAQG viable and focused on the industry, our future and on improving quality throughout the supply chain.

The next steps of the 9100 series revision will be to use basic project management techniques commencing with high level planning, identification of resources, formation of teams, determination of schedules identification of integration points and stakeholder engagement. It is this focus that will deliver the next draft revision in readiness for review, approval through ballot and ultimate publication. The key here is having everything worked in parallel so we can achieve a release of not just 9100 but the whole 9100 series, along with the deployment and training support material.

Producing a series of standards of this magnitude could be compared to riding a roller coaster. There will be ups and there will be downs, but no matter what, it will be a wild ride.

This revision of 9100 is once again an opportunity for the aviation, space and defense industry to show the world our vision for quality, through the innovation and forward thinking we have become known for. It is a prime example of what a common quality management system can do for the supply chain to improve performance. All of our organizations are striving for value from our quality management system standards and certifications. We have a great responsibility and also a great opportunity to lead not only the industry, but also the world in developing what some would say is the premiere QMS standards. They look to the IAQG and the 9100 series of standards for that vision and innovation that has become the cornerstone we are known for throughout the world. It has been said that you can judge your success buy those who want to copy and use your ideas. If that is the case the IAQG has exceeded its expectations with its vision, innovative ideas, creativity and focus on producing quality products.

So, why does it take so long to publish a standard? Because building a consensus international standard that truly addresses the needs of stakeholders worldwide requires time and dedication for planning, development and review, using project management skills to align this worldwide audience and multiple standards in order to make it happen.

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Your feedback and contributions are encouraged. Please send comments to:

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