



Conformity assessment

ance is essential. The risks of failure for all the organizations involved, and in particular for vehicle manufacturers, can be great.

Monitoring and assessment of suppliers, including their compliance to QMS, is thus an integral part of the automotive supply chain management strategy, where conformity assessment plays a crucial role.

Against inefficiency and redundancy

The approach of the International Automotive Task Force (IATF)¹⁾ to conformity assessment had its foundation in the early and mid-1990s, when multiple national automotive standards – as well as those of vehicle manufacturers – were used in assessments by organizations, customers and certification bodies.

Multiple standards meant multiple audits for supplier organizations. Although these audits were reasonably effective, this situation created redundancy and inefficiency for vehicle manufacturers and their suppliers.

1) The IATF is the recognizing body of ISO/TS16949 certification that includes the global automotive supply chain.

Ensuring vehicle performance

by Joe Bransky, International Automotive Task Force delegation leader to ISO/TC 176, Quality management and quality assurance

Effective supply-chain management is critical in the automotive industry. There are thousands of components in a vehicle's systems and sub-systems. Upon final assembly, the vehicles produced are shipped into a competitive and high-volume global vehicle market.

In many cases, vehicle manufacturers source over 70% of the vehicles' contents from supply organizations positioned at different tiers in the automotive supply chain. These organizations are asked not only to manufacture materials and parts, but also to design, develop, validate and introduce new technology.

In today's lean manufacturing environment, huge contingency stocks of inventory have given way to just-in-time logistics and delivery. The lean inventories of parts and materials mean that a supplier's quality management system (QMS) capability and related perform-

The Technical Specification (Standard) and the Certification Scheme (Rules)



Main Focus

IATF's challenge was to achieve harmonization so as to reduce these drawbacks, and also to improve assessment effectiveness. The automotive industry needed a better assurance of credible certification. IATF then sought an alternative that would address both the multiplicity of QMS standards and related certification practices, including oversight.

The harmonization initiative of the IATF resulted in two significant outputs and publications. The first was ISO/TS 16949:1999, *Quality systems – Automotive suppliers – Particular requirements for the application of ISO 9001:1994*.

This technical specification – developed through ISO technical committee ISO/TC 176, *Quality management and quality assurance* – was the result of a pilot study addressing the automotive industry's interest in harmonizing the myriad of existing standards. Following its release, a second edition has already been published based on the latest version of ISO 9001:2000 on quality management systems: ISO/TS 16949:2002, *Quality management systems – Particular requirements for the application of ISO 9001:2000 for automotive production and relevant service part organizations*. This specification covers the global automotive supply chain, where over 37 000 certificates of conformity have already been issued.

Initiatives of the International Automotive Task Force

In order to address certification practices and oversight, the IATF positioned itself as the recognizing body of ISO/TS 16949 in accordance with ISO/IEC Guide 62, *General requirements for bodies operating assessment and certification/registration of quality systems*²⁾.

2) ISO/IEC 17021:2006, *Conformity assessment – Requirements for bodies providing audit and certification of management systems*, replaces ISO/IEC Guide 62:1996 and Guide 66:1999, *General requirements for bodies operating assessment and certification/registration of environmental management systems (EMS)*.



Communication boards as shown here are used by organizations in the automotive supply chain to provide feed-back to all personnel. Such Boards are an important tool to focus on prevention, error proofing and corrective action processes subject to ISO/TS16949 audits.

The IATF then published its “rules” on auditing and certification management – *Automotive Certification Scheme for ISO/TS 16949:2002, Rules for Achieving IATF recognition* (now in its second edition). The IATF also established contracts for recognizing certification bodies (CB) so as to conduct audits and issue certificates of conformity.

“Effective supply-chain management is critical in the automotive industry.”

The IATF membership is a consortium of 14 voting members, including nine vehicle manufacturers and five supplier trade associations, where collaboration is essential for working towards credible conformity assessment. Five oversight offices situated in Europe and North America provide the infrastructure for its operations and implementation. An administrative office representing the five oversight offices was also recently opened in Beijing.

The oversight offices focus on witness audits, auditor qualification (licensing), database management, CB recognition and oversight including contract management. Some examples include the ongoing IATF witness auditing which has led to improved performance of CBs. CBs may be subject to suspension or non-recognition for failure to comply with the IATF requirements.

The IATF has a process for recognizing CBs. Although the IATF is not currently processing applications for CB recognition, the application process is rigorous and includes onsite audits by IATF oversight. The recognition process is lengthy, requiring extensive due diligence by the applicant. Another initiative addressing oversight responsibilities is the auditor qualification and licensing process. To audit ISO/TS 16949, auditors qualify through recognized CBs and licensing. The first-time pass rate is less than 50% for new applicant auditors seeking to be IATF licensed.

Unquestionable assurance

In summary, all of the important oversight activities and projects, including those described here, are tracked, measured and reported to the IATF. Its key objective is to unquestionably assure meaningful conformity assessment.

The IATF views ISO/TS 16949 and its related certification scheme as a manufacturing QMS standard. The focus of conformity assessment in this context is product realization related to product development, manufacturing processes including design, manufacturing operations, and the purchase of products and services.

About the author



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The IATF expectations are that supply organizations have a process-driven QMS that fulfils requirements, surfaces problems, addresses contingencies, effectively utilizes and manages people, and listens to its customers to address their needs and concerns. In order to achieve this, supply organizations need to understand the requirements and define their product realization processes, including support functions in accordance.

In addition, organizations need to monitor the performance of their processes based on internal and external feedback. Lastly, organizations must address customer concerns and feedback through proper planning focused on prevention and corrective action.

The third party audit conducted by IATF-recognized CBs is designed to assure conformity using the ISO/TS 16949 requirements as well as any customer-specific requirements that may exist. The IATF believes that this technical specification can bring an important level of QMS certainty to an organization.

Lessons learned

Below are the lessons learned by the IATF in the development and evolution of ISO/TS 16949.

- A systems approach is essential to effectively implement a standard and related conformity assessment leading to certification. The conformity assessment processes in place need

to respond to the fundamental questions of what is important and why.

- The standard and the certification scheme have equal importance.
- The former needs to be concise and robust with sufficient detail so as to be meaningful to the specifiers – customers and regulators requesting its application – as well as to key stakeholders. The certification scheme, on the other hand, requires proactive management, including specifying requirements for accreditation bodies, certification bodies and auditors. No new standard should be released without assurance of a defined management approach for credible conformity assessment.
- Accountability of both certification and accreditation bodies is critical to credible certification. Talking about accountability is not enough. A sanctioning authority is needed to make and monitor policy.
- Auditors need to be licensed with ongoing auditor development to meet changing customer requirements and dynamics of the marketplace.
- Among the important steps to be emphasized and effectively implemented when conducting an audit, are :
 - organization readiness;
 - audit planning;
 - process-focused audits; and

- review of organization performance measures to confirm that the management system in question is working effectively.
- Continual improvement of the system applies to all aspects of implementing effective conformity assessment.

Strength and credibility

In conclusion, IATF seeks to ensure credible certification through

- a robust standard with the specificity to meet industry needs; and
- a credible, well-managed certification scheme.

A vigorous standard is not enough if its certification scheme is weak, as this will ultimately undermine the confidence of suppliers, vehicle manufacturers, and all other interested stakeholders. The IATF's involvement – with resources and a management system – in conformity assessment within the automotive industry using ISO/TS 16949 thus brings value to all organizations involved.

The critical test is whether ISO/TS 16949 certification meets the needs of vehicle manufacturing and assembly centers concerning supply-chain QMS performance of vehicle engineering and manufacturing processes. The volume of certifications and the improvements in product quality and reliability by the certified supply chain confirm the credibility of ISO/TS 16949. In addition, this initiative is contributing to the overall improvement of supply-chain performance.

The model (left), adapted from ISO 9001:2000 best describes the way forward for effective conformity assessment. In IATF, we call this the “line of sight process approach” between the customer and the organization.

The late Peter Drucker, a well-respected management guru, best summarized the premise for IATF's direction with the following quote: “Customer demand and their willingness to pay for a product or service is the only measure of quality.”

Adapted from ISO 9001:2000 (printed with permission) – Model of process-based QMS

