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ISO 17021: Accreditation for Certification Body.

What is ISO 17021: Accreditation for Certification Body?

Accreditation is the independent, third-party evaluation of a conformity assessment body (such as certification body, inspection body or laboratory) against recognised standards, conveying formal demonstration of its impartiality and competence to carry out specific conformity assessment tasks (such as certification, inspection and testing)

Accreditation bodies are established in many economies with the primary purpose of ensuring that conformity assessment bodies are subject to oversight by an authoritative body. Accreditation bodies, that have been peer evaluated as competent, sign regional and international arrangements to demonstrate their competence. These accreditation bodies then assess and accredit conformity assessment bodies to the relevant standards.

An authoritative body that performs accreditation is called an 'accreditation body'. The International Accreditation Forum (IAF) and International Laboratory Accreditation Cooperation (ILAC) provide international recognitions to accreditation bodies. There are many internationally recognized accreditations bodies approved by the IAF and ILAC.

The Emirates International Accreditation Centre (EIAC) is the largest accreditation body in Middle East region, whereas in South Asia the Pakistan National Accreditation Council (PNAC) and National Accreditation Board for Testing and Calibration Laboratories (NABL), Quality Council of India (QCI) are the largest. In East Asia, the China National Accreditation Board is the largest, while the United Kingdom Accreditation Service (UKAS) is the largest in Europe. The National Association of Testing Authorities (NATA) and the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) being the largest in the Oceania region, with the South African National Accreditation System being the largest in Africa.

Fields involved

Accreditation processes are used in a wide variety of fields:

- Accredited investor
- Accredited in Public Relations
- Accredited registrar
- Construction
- Diplomatic accreditation
- Educational accreditation
  - Higher education accreditation
    - ACGME (USA)
    - List of recognized higher education accreditation organizations
    - List of unrecognized higher education accreditation organizations
      - Accreditation mill
      - List of unaccredited institutions of higher learning
  - Pre-tertiary education accreditation
- Email sender accreditation
- Food safety
  - Global Food Safety Initiative
- Health & Safety Compliance (UK)
- Healthcare
  - American Association for Accreditation of Ambulatory Surgery Facilities
  - Accreditation Commission for Health Care
  - Electronic Healthcare Network Accreditation Commission
  - Emirates International Accreditation Centre (EIAC)
  - International healthcare accreditation
  - Commission on Accreditation of Rehabilitation Facilities
  - Hospital accreditation
  - Joint Commission (USA)
  - United Kingdom Accreditation Forum
- Information assurance
- Personal trainer accreditation
- Professional certification
- Systems engineering
- Translating and interpreting
  - National Accreditation Authority for Translators and Interpreters (Australia)
- Sustainability
  - Sustainable Forest management such as the Forest Stewardship Council (FSC)
  - Sustainable fishing such as the Marine Stewardship Council (MSC)
  - Sustainable aquaculture such as the Aquaculture Stewardship Council (ASC)
  - Sustainable tourism such as the Global Sustainable Tourism Council (GSTC)

Accreditation standards

Many accreditation bodies, such as the UKAS, EIAC, EGAC, PNAC, IAS, NABCB operate according to processes developed by the ISO as specified in ISO/IEC 17011. Accredited entities in specific sectors must provide evidence to the accreditation body that they conform to other standards in the same series:

- ISO/IEC 17020: "General criteria for the operation of various types of bodies performing inspection" (2012)
- ISO/IEC 17021-1: "Conformity assessment. Requirements for bodies providing audit and certification of management systems" (2015)
- ISO/IEC 17024: "Conformity Assessment. General requirements for bodies operating certification of persons" (2012)
- ISO/IEC 17025: "General requirements for the competence of testing and calibration laboratories" (2017)

This is a list of published International Organization for Standardization (ISO) standards and other deliverables. For a complete and up-to-date list of all the ISO standards, see the ISO catalogue.

The standards are protected by copyright and most of them must be purchased. However, about 300 of the standards produced by ISO and IEC's Joint Technical Committee 1 (JTC 1) have been made freely and publicly available.

ISO Brand

This is a dynamic list and may never be able to satisfy particular standards for completeness. You can help by adding missing items with reliable sources.
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Conformance testing

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Conformance testing — an element of conformity assessment, and also known as compliance testing, or type testing — is testing or other activities that determine whether a process, product, or service complies with the requirements of a specification, technical standard, contract, or regulation. Testing is often either logical testing or physical testing. The test procedures may involve other criteria from mathematical testing or chemical testing. Beyond simple conformance, other requirements for efficiency, interoperability or compliance may apply. Conformance testing may be undertaken by the producer of the product or service being assessed, by a user, or by an accredited independent organization, which can sometimes be the author of the standard being used. When testing is accompanied by certification, the products or services may then be advertised as being certified in compliance with the referred technical standard. Manufacturers and suppliers of products and services

rely on such certification including listing on the certification body's website, to assure quality to the end user and that competing suppliers are on the same level.

Aside from the various types of testing, related conformance testing activities include:

- Surveillance
- Inspection
- Auditing
- Certification
- Accreditation.

Forms of conformance testing

The UK government identifies three forms of testing or assessment:

- 1st party assessment (self assessment)
- 2nd party assessment (assessment by a purchaser or user of a product or service)
- 3rd party assessment (undertaken by an independent organisation)

Typical areas of application

Conformance testing is applied in various industries where a product or service must meet specific quality and/or regulatory standards. This includes areas such as:

- biocompatibility proofing
- data and communications protocol engineering
- document engineering
- electronic and electrical engineering
- medical procedure proofing
- pharmaceutical packaging
- software engineering
- building construction (fire)

Electronic and electrical engineering

In electronic engineering and electrical engineering, some countries and business environments (such as telecommunication companies) require that an electronic product meet certain requirements before they can be sold. Standards for telecommunication products written by standards organizations such as ANSI, the FCC, and IEC have certain criteria that a product must meet before compliance is recognized. In countries such as Japan, China, Korea, and some parts of Europe, products cannot be sold unless they are known to meet those requirements specified in the standards. Usually, manufacturers set their own requirements to ensure product quality, sometimes with levels much higher than what the governing bodies require. Compliance is realized after a product passes a series of tests without occurring some specified mode of failure.

Compliance testing for electronic devices include emissions tests, immunity tests, and safety tests. Emissions tests ensure that a product will not emit harmful electromagnetic interference in communication and power lines. Immunity tests ensure that a product is immune to common electrical signals and electromagnetic interference (EMI) that will be found in its operating environment, such

as electromagnetic radiation from a local radio station or interference from nearby products. Safety tests ensure that a product will not create a safety risk from situations such as a failed or shorted power supply, blocked cooling vent, and powerline voltage spikes and dips.

For example, Ericsson's telecommunications research and development subsidiary Telcordia Technologies publishes conformance standards for telecommunication equipment to pass the following tests:

Standardization and agreements

Several international standards relating to conformance testing are published by the International Organization for Standardization (ISO) and covered in the divisions of ICS 03.120.20 for management and ICS 23.040.01 for technical. Other standalone ISO standards include:

- ISO/TR 13881:2000 Petroleum and natural gas industries—Classification and conformity assessment of products, processes and services
- ISO 18436-4:2008 Condition monitoring and diagnostics of machines—Requirements for qualification and assessment of personnel—Part 4: Field lubricant analysis
- ISO/IEC 18009:1999 Information technology—Programming languages—Ada: Conformity assessment of a language processor

The principal requirements of the standard are illustrated below:
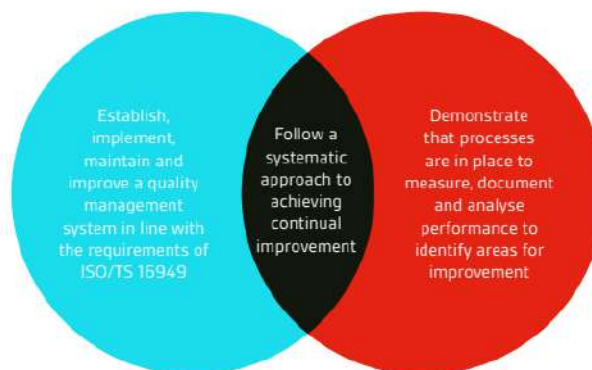
The next few pages of the guide takes you through the Plan-Do-Check-Act (PDCA) methodology, common in all ISO management systems and how DCS can help and support you on your ISO/TS 16949 journey.
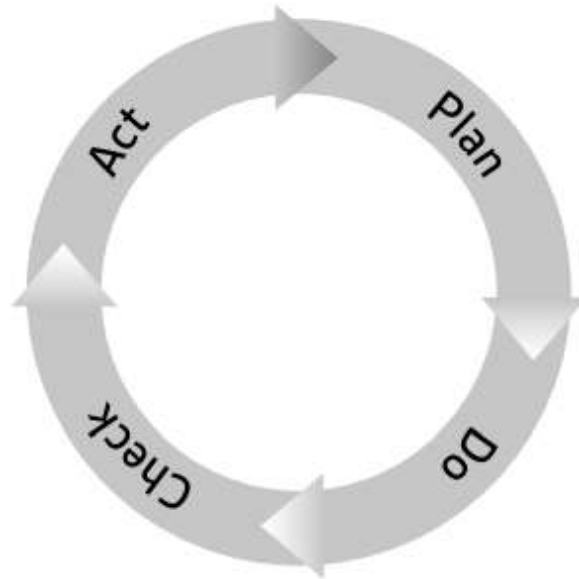
Understanding the principles of continual improvement

Act
Correct and improve your plans to meet and exceed your planned results

Plan
Establish objectives and draft your plans (analyse your organization's current systems, establish overall objectives, set interim targets for review and develop plans to achieve them)

Check
Measure and monitor your actual results against your planned objectives

Do
Implement your plans within a structured management framework

Act

Plan

Check

Do