

Vision, mission and principles



The ISO/IEC Joint Technical Committee 1 for information technology (JTC 1) is one of the largest and most prolific committees in international standardization. With over 3 400 published standards developed under the broad umbrella of the committee and its 23 subcommittees and 5 working groups, JTC 1 makes a huge impact on the IT industry worldwide, which facilitates digital transformation in a Secure, trustworthy, and sustainable way.

Vision

To improve the lives of everyone on the planet through the development and delivery of international standards for IT, which make everything smarter, better connected, more reliable and trustworthy.

Mission

The mission of JTC 1 is to provide information technology standards that are applicable across domains (sometimes referred to as horizontal or foundational standards), and to work together with ISO and IEC technical committees that are utilizing IT to develop domain specific standards.

Ensuring that JTC 1 standards are globally recognized, enable global interoperability and enable sustained development and retention of investment are paramount. JTC 1 will do this by developing, maintaining, promoting and facilitating the use of IT standards that respond to the needs of many stakeholders, including consumers, businesses, governments, and other organizations.

JTC 1 will continue to be a globally recognized hub of formal standardization in IT. JTC 1 technology standards enable products and services that improve the lives of everyone on our planet and will continue to evolve its programme of work and grow as new and emerging technologies become mainstream.



Principles

1. JTC 1 will initiate standards development at appropriate times, for corresponding IT areas that align with the evolving global IT market.
2. JTC 1 will provide a standards development environment which attracts technical experts and users, and allows for future growth and expansion as emerging technologies achieve market acceptance.
3. JTC 1 will ensure that user needs, including multicultural and accessibility requirements, are fully met such that its standards promote international trade.
4. JTC 1 will provide a wide range of quality standards within its scope to cover identified global needs.
5. The JTC 1 community will actively promote the use of its standards and the timely implementation of IEC and ISO Standards on a worldwide basis.
6. Cooperation and collaboration with IEC and ISO TCs are a prime focus for JTC 1 to ensure quality standards are developed. JTC 1 actively seeks to include experts from ISO and IEC in related fields.
7. JTC 1 recognizes the value of the work of other organizations and the contribution they make to international IT standardization and will complement existing and forthcoming JTC 1 projects by working with other leading-edge activities with the objective of providing the best standards worldwide.

Speed

JTC 1 is able to respond quickly to emerging market trends and able to publish standards in as little as 18 months. This relies heavily on flexible and streamlined procedures, which are underpinned by the JTC 1 Supplement to the ISO/IEC Directives. Identifying the important market trends is assisted by the very effective Advisory Group on JTC 1 Emerging Technology and Innovation (JETI), which proactively tracks emerging technology trends and market innovations, explores opportunities for new standards development, and facilitates timely action by JTC 1. Speed to publication is also enhanced with the utilisation of the JTC 1 Publicly Available Specification (PAS) transposition

process, assisting in the transposition of technical specifications to international standards, from sources outside JTC 1.

Growth

JTC 1 strives to make the public more aware of its work and to encourage more participation from its current members and those in countries that are not currently involved, as projects regularly benefit from a greater diversity of participants. JTC 1 and its subcommittees invest in outreach and workshops, virtually and co-located with meetings to make the public more aware of the work, which has resulted in the establishment of relationships with consumer, government, regulatory and other stakeholder organizations.

JTC 1 makes some documents, such as white papers, publicly available to encourage awareness and feedback. JTC 1 has an Advisory Group on Communications to enable its public communications activities, and JTC 1 works closely with the ISO Central Secretariat and the IEC Secretariat to share information about JTC 1 activities via their marketing communications programmes.

Quality

The market needs high quality standards and JTC 1 works to retain and improve the quality of its standards and the processes that support their development. Many new proposals now include preliminary drafts, justification studies and design specifications, as appropriate. In addition, many working groups under JTC 1 meet virtually, to enable timely decisions and faster progress in standards development. While standards development has accelerated, there is still opportunity to improve timeliness of standards delivery by speeding up and improving the quality of the publication process.



Standards are evolving to include more embedded intelligence with features such as referenced software code and smart identifiers. Although standards are unlikely to become machine readable overnight, a proactive initiative to embrace near- and long-term opportunities to make them smarter and more useful than paper documents will be important for the success of ISO and IEC.

While the JTC 1 structure works well, JTC 1 is proactive in pursuing opportunities for additional improvement. JTC 1 regularly utilizes advisory groups to study new areas of opportunity, and to establish practices that apply across JTC 1, such as the systems integration approach.

Collaboration

The standards that are developed by JTC 1 can span multiple domains and multiple IT fields. For this reason, JTC 1 and its subcommittees collaborate very closely with each other as well as with other IEC and ISO technical committees utilizing liaison relationships, joint working groups, and less formal interactions. The collaboration ensures that standards are developed with the right experts, from the right fields to achieve the expected technical quality of the publications. In addition, recently formed subcommittees include collaboration in their scopes; JTC 1 is interested in exploring other new methods for improved collaboration and cooperation.

Cooperation

Utilizing the JTC 1 PAS process, JTC 1 has been able to fill a number of gaps in IT standardization through cooperation with consortia and other standards development organizations. These entities play an important role in the standardization process and landscape, developing additional standards that often gain a wide market acceptance. Recognizing the significant role that consortia play in IT standards, JTC 1 has sought to work

cooperatively with them, through liaison relationships that may enable joint work, and through the JTC 1 PAS process.

Cross domain

IT no longer fits into neat and isolated pillars, but stretches across technical domains, which require special attention and considerations. JTC 1 uses its evolutionary systems integration approach to enable cross-domain collaboration in the development of standards that need cross-functional expertise and where there are requirements for wider coordination both within JTC 1, ISO and IEC, and with external entities.

ISO/IEC JTC 1

IT standards for business and consumer applications

ISO/IEC JTC 1 consists of the following subcommittees (SCs) and working groups (WGs):

- ISO/IEC JTC 1/SC 2 Coded character sets
- ISO/IEC JTC 1/SC 6 Telecommunications and information exchange between systems
- ISO/IEC JTC 1/SC 7 Software and systems engineering
- ISO/IEC JTC 1/SC 17 Cards and security devices for personal identification
- ISO/IEC JTC 1/SC 22 Programming languages, their environments and system software interfaces
- ISO/IEC JTC 1/SC 23 Digitally recorded media for information interchange and storage
- ISO/IEC JTC 1/SC 24 Computer graphics, image processing and environmental data representation
- ISO/IEC JTC 1/SC 25 Interconnection of information technology equipment
- ISO/IEC JTC 1/SC 27 Information security, cybersecurity and privacy protection
- ISO/IEC JTC 1/SC 28 Office equipment
- ISO/IEC JTC 1/SC 29 Coding of audio, picture, multimedia and hypermedia information
- ISO/IEC JTC 1/SC 31 Automatic identification and data capture techniques
- ISO/IEC JTC 1/SC 32 Data management and interchange
- ISO/IEC JTC 1/SC 34 Document description and processing languages
- ISO/IEC JTC 1/SC 35 User interfaces
- ISO/IEC JTC 1/SC 36 Information technology for learning, education and training
- ISO/IEC JTC 1/SC 37 Biometrics
- ISO/IEC JTC 1/SC 38 Cloud computing and distributed platforms
- ISO/IEC JTC 1/SC 39 Sustainability, IT and data centres
- ISO/IEC JTC 1/SC 40 IT service management and IT governance
- ISO/IEC JTC 1/SC 41 Internet of things and digital twin
- ISO/IEC JTC 1/SC 42 Artificial intelligence
- ISO/IEC JTC 1/SC 43 Brain-computer interfaces

- ISO/IEC JTC 1/WG 11 Smart cities
- ISO/IEC JTC 1/WG 12 3D printing and scanning
- ISO/IEC JTC 1/WG 13 Trustworthiness
- ISO/IEC JTC 1/WG 14 Quantum information technology
- ISO/IEC JTC 1/WG 15 JTC 1 vocabulary

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