

# US Standards Group on QEDS

## TC 69 – Application of Statistical Methods – FAQs

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### How does the US TAG TO ISO/TC 69 function?

The US Technical Advisory Group (TAG) is the national body that ensures that US interests are pursued and represented in the development of standards within International Organization For Standardization (ISO) Technical Committee (TC) 69 on Application of Statistical Methods. The US TAG currently has approximately forty-five members representing a broad spectrum of research laboratories, US industries, government, and academic institutions. The TAG's role is to: develop consensus views on needs for future standards and promote these views within ISO/TC 69; identify experts to participate in the development of new standards; arrange for review and critique of draft standards; and prepare the US consensus position on ballots of ISO/TC 69 draft standards.

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### What do we mean by statistical standards?

Valid statistical inferences can be drawn only from data that satisfies specific assumptions. Statistical standards provide standard methods for collection of data, and statistical analysis and interpretation of that data in accordance with stipulated criteria that have undergone the gauntlet of peer review by qualified experts and a critical system of due process for adoption as international standards.

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### What are the current activities within ISO/TC 69?

There are currently five subcommittees that divide the work of developing and maintaining statistical standards within ISO/TC 69 on Statistics.

- Subcommittee (SC) 1 - Terminology and Symbols
  - This SC works on standards that deal with vocabulary and symbol for probability, quality control, design of experiments, and general statistics.
- SC 3 - Application of Statistical methods in Standardization

- This SC is tasked with standards on principles of sampling for bulk materials, graphical techniques, interpretation of data, normality tests, outliers, tests for means and variances, tolerance intervals, and median assessment.
- SC 4 - Statistical Process Control
  - This SC deals with standards for control charts, process capability, process performance, and machine performance.
- SC 5 - Acceptance Sampling
  - This SC's standards deal with sampling plans for attributes, variables, continuous, and sequential sampling. Some of this SC's most recent work involves use of accept-zero and parts per million (PPM) sampling plans.
- SC 6 - Measurement Methods and Results
  - This SC deals with accuracy and precision of measurements, proficiency testing, capability of detection, and calibration.

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### **Is this a national or international activity?**

The short answer is both! The ISO membership consists of the national standards organizations of many countries around the world. The American National Standards Institute (ANSI) is the US member of ISO. ISO has numerous technical committees covering a wide spectrum of interests that propose and develop standards which undergo a strict protocol of due process by which documents are moved from the initial proposal stage to adoption as International Standards. ANSI delegates the responsibilities of participation in ISO technical committees to various voluntary consensus standards writing organizations such as American Society for Quality (ASQ) and American Society for Testing and Materials (ASTM) as TAGs. ASQ holds the TAGs to ISO/TC 176, ISO/TC 207, ISO/TC 207/SC1, ISO/TC 207/SC2, ISO/TC 69 and IEC/TC 56. Participation in TAGs encourages and enhances the process of harmonization of national standards with international standards. Often national standards are adopted with little change as ISO standards and vice versa.

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### **Who benefits from statistical standards and how?**

Beneficiaries of the ISO/TC 69 standards are individuals, companies, industries and organizations that have a stake or interest in standards being developed within the ISO community, particularly those standards which have statistical content or depend on data analysis for decision making. Parties to contractual agreements for product acceptance; individuals and organization who have a need to demonstrate conformance to government regulatory requirements; and those who seek to meet the requirements of quality standards within the ISO family, probably stand to benefit the most from standardization on data collection methods, analysis techniques, and interpretation. As an example, ISO 17025 on Calibration Systems and other quality documents, require the reporting of uncertainty of measurement results. Documents, which address this need for clients with various levels of resources and in-house expertise, are currently under development with ISO/TC 69.

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### **Do I need a degree in Statistics to participate?**

A degree in statistics is not as important as subject matter command of the material. In the same sense that a diploma does not equate to understanding of the material, the lack of a diploma does not imply ignorance of a subject area. For example, an engineer who has worked for many years in a facility employing SPC could in fact be a great contributor to TC 69 efforts in SPC standards, having served in the trenches. Furthermore, such a participant could offer valuable insights into the presentation of ISO/TC 69 standards for high impact.

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### **What are the expectations from a volunteer?**

A volunteer is expected to start by agreeing to review documents, provide input and intend to participate in national and possibly international meetings. Given considerable backing of their company, I would expect that participants might wish to become a convenor of a working group on a topic of their interest.

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### **What is expected of new members?**

New members of the US TAG to ISO/TC 69 are expected to attend the annual Fall and Spring meetings and, if interested, the international meeting (late May or early June) of the TC. Depending upon each new member's interests and expertise, each new member will voluntarily join one or more working groups of one or more subcommittees of the TC. In the working groups/subcommittees of choice, the new member will be expected to participate in the review, revision and/or development of international statistical standards that are the responsibility of those working groups.

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### **Is this a subgroup of quality?**

The work of ISO/TC 69 deals with many concepts and standards that are very useful for quality professionals, especially for quality improvement. However, ISO/TC 69 deals with many other areas of applied statistics. Thus we suggest that any person interested in just about any area of applied statistics should be interested in the work of this technical committee.

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### **How do I approach my management for support?**

This is a company specific, management specific, situation specific undertaking that each individual has to deal with accordingly. The common elements that all can use to advantage in this process include literature and brochures of ASQ and the TAGs which describe their activities and the benefits of participation. You are the best one to describe how specific standards and your job requirements relate and how your

company can benefit from your participation. Talk to any and all ASQ members who are working in the area of your interest for ideas and assistance.

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### **What meetings does the TAG sponsor?**

The US TAG meets twice yearly for one day. A fall meeting is held in the Washington, DC area, and a spring meeting is held in another geographical locality. To facilitate the exchange of information and accommodate members who also participate in the US TAGs to ISO/TC 176, ISO/TC 207, ISO/TC 207/SC1, ISO/TC 207/SC2 and IEC/TC 56, the meetings are held concurrently with these groups. The TAG also sends a delegation to the annual reunion of ISO/TC 69; the location for this meeting rotates among the member countries of ISO/TC 69 on a yearly basis.

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