Standards and Practices Committee Guide

July 2023

This Committee Guide has been prepared by ISA's Standards and Practices Department to assist Standards Committee volunteers and Chairs in the development and organization of Standards Committees and their work in creating standards, recommended practices, and technical reports. We welcome comments and recommendations. Please submit any comments to: ISA Standards, Email: standards@isa.org.

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A GUIDE FOR STANDARDS AND PRACTICES COMMITTEES

ISA Standards and Practices (S&P) is accredited by the American National Standards Institute (ANSI) to develop American National Standards using the Accredited Organization Method.

Under the ANSI Accredited Organization Method, only standards developers accredited by ANSI are eligible to sponsor documents for approval as American National Standards. As an ANSI-accredited organization, ISA is eligible to develop standards for ANSI by following ISA's accredited procedures. ISA has chosen to also follow these same practices while developing technical reports and recommended practices. ISA procedures define Standards Committees for each project or subject area responsible for establishing the need to develop, revise, reaffirm, and recommend withdrawal of ISA Standards in their assigned area of responsibility, with oversight from the S&P Board.

See Annex A, page 21, for the basic steps with typical time requirements for developing an ISA standard.

1 Committee operations

The Standards Committees are responsible for performing work on ISA standards (including technical reports and recommended practices) based on each committee's purpose and scope as approved by the ISA Standards & Practices Board. Committees should reflect the broadest possible representation from all organizations and individuals interested in the committee activities through membership on the committee. Committees gather and integrate all pertinent technical information related to the assigned task in order to develop the best possible consensus document that does not duplicate any other existing standard. Working groups, also referred to as subcommittees, may be formed to expedite the work of the committee.

1.1 Working groups

In order to complete necessary standards in an efficient manner, working groups related to the subject area of the committee may be formed. These working groups are subject to the same general requirements as committees defined in the accredited procedures, except for committee balance and reporting requirements. The balance requirements are assured at the Main Committee level, allowing the working groups to be balanced to the extent practical, but without the need of formal committee action if the desired balance is not obtained.

1.2   Committee functions

a) Prepare authoritative standards, technical reports, and recommended practices to simplify work, facilitate general understanding, and promote the interchange of information. Toward this end, committees are responsible for developing these documents in strict adherence with established procedures.

b) Prepare progress updates as requested by the Managing Director (MD).

c) Support the Managing Director in responding to an official request for interpretation of the standard.

d) Support other parts of the ISA organization.

2   Useful information

The following are links to useful resources.

- ISA website: https://www.isa.org

- ISA Connect website: https://connect.isa.org/home

- ISA Standards and Practices website: https://www.isa.org/standards-and-publications/isa-standards

- *ISA Standards and Practices Department Procedures* (accredited procedures): http://www.isa.org/standardsprocedures

- ISA Committee Tools: www.isa.org/standards-and-publications/isa-standards/committee-documents/isa-standards-committee-tools-and-guidelines

- International Electrotechnical Commission (IEC) Directives: https://www.iec.ch/news-resources/reference-material

3   Committee management

3.1   Committee roles

It is the responsibility of the committee to maintain, as appropriate, key roles, including:

- Chair or Co-chairs

- Secretary

- Membership Chair

- Liaisons

The Committee Chair provides leadership to the committee, plans and subdivides the work, appoints or elects Working Group Chairs, determines goals, and keeps the committee members and the Managing Director advised of progress. An effective Chair will keep the work moving on schedule.

3.2   Committee health

It is the responsibility of the committee to maintain committee health as defined by the S&P Board. The Managing Director of the committee will be responsible for assessment and documentation of committee health.

3.3   Recruiting committee members

It is the responsibility of the committee to develop and maintain an active membership by means of information outlets including:

- ISA Divisions

- Previous committee members

- *ANSI Standards Action, a*n online publication of the American National Standards Institute

- *InTech* or *ISA Insights*

- ISA Division, District, and Section newsletters

- Technical publications

- Personal contacts

3.4   Preparing for the first meeting

Before the first committee meeting, do the following:

a) Advise members of the date and location of the meeting at least four weeks in advance.

   Consider holding the first meeting as a face-to-face meeting, although a virtual meeting is acceptable. Potential face-to-face meeting options include ISA Technical Conferences and the annual ISA Automation and Leadership Conference.

b) Email the agenda, background information, and all other reference materials at least two weeks prior to the meeting—if not with the meeting announcement. Email members a few days before the meeting as a reminder.

c) Make every effort to have your Managing Director, or another S&P Board member, present at the first meeting.

d) Provide background and reference material to help the committee understand the reasons for developing the standard, or other document, and writing its charter (scope and purpose). Be sure to bring copies of the committee's scope and purpose, as approved by the S&P Board, to the first meeting. The scope and purpose statements for individual standards, recommended practices, and technical reports are not approved separately by the S&P Board; they are reviewed as part of the normal standards development cycle. Many committees use a modified version of their committee scope and purpose for developing their document's scope and purpose. The charter will identify whether the document is safety related, a designation which entails additional requirements as documented in the accredited procedures.

e) Remember that help is available from:

   - your Managing Director,

If necessary, email or call your staff representative to obtain your director's contact information. Invite the Managing Director to all meetings.

- other Committee Chairs and S&P Directors,

  Visit the ISA Standards Committee web pages to obtain contact information for Committee Chairs and Managing Directors.

- your ISA Standards staff support, and

- previous Committee Chairs or members if you are revising an existing document.

f) Review the S&P Department's accredited procedures (www.isa.org/standardsprocedures) before your first meeting.

g) Identify potential overlaps with other committees or standards (ISA and others, such as IEC).

   ISA Standards and Practices staff will provide a copy of any ISA standard, recommended practice, or technical report on request. Standards from other organizations may be requested through ISA S&P staff.

   If the activities of your committee relate to the activities of any international standards development organization (SDO), participants on that international body should be invited to join the committee.

h) Organize a balanced committee.

   Standards Committees should be balanced, and the makeup of the committee should follow the requirements of the S&P ANSI-accredited procedures, www.isa.org/standardsprocedures. Please note that safety-related documents require a different committee interest category distribution as defined in the accredited procedures. Develop and obtain a consensus on the scope and purpose of the standard.

NOTE   You must ensure that you stay within your S&P Board–approved scope and purpose. Submit any changes to the scope and purpose through your Managing Director to the S&P Board for approval. If a suggested project or an addition to an existing standard does not fall within the scope of the existing committee, contact your Managing Director for guidance.

Please consider the following information in your agenda for the committee's early meetings:

- Appoint a Secretary and a Vice-chair.

- Appoint Working Group Chairs when appropriate.

- Distribute copies of the S&P Board–approved scope and purpose.

- Review this guide.

- Decide who will constitute the committee (and working group[s] if necessary) and how the committee will function, i.e., core committee/corresponding members; working groups with specific responsibilities; frequency and location(s) of meetings, etc.

- Develop a Committee Roster, complete with members' names, companies, or organization affiliations, phone, email, status (voting or information member), and member interests as defined in the accredited procedures:

a) User: Individuals who are involved in using the type of product that is the topic of the standard, but who are not involved with the production or distribution of that type of product.

b) Producer: Individuals who are involved in the production of the type of product. This includes individuals involved in the design, engineering support, manufacturing, testing, and/or marketing of the type of product; and who are employed by or represent a producer (manufacturer/vendor) of the type of product.

   NOTE   A person who works for a company that purchases the product that is the subject of the standard and then transfers ownership of the product or an assembly that includes the product to an end user is not to be classified as a user.

c) Regulatory/Government: Individuals who represent governmental entities having regulatory interest in or influence over the type of product.

d) Testing/Certification/Approval: Individuals who represent organizations that provide testing, certification, and/or approval of the type of product.

e) Architect-Engineer, Engineer-Constructors, Integrators: Individuals employed by organizations involved with the design of systems or facilities in which the type of product is used, including application engineering and engineering support for installation and use of the type of product.

f) General: Individuals who do not meet any of the preceding interest categories. This may include, but is not limited to, experts from academia, professional associations, and experts who are retired or do not receive funding for their standards activities from any related organization.

- Distribute any available research and background material.

- Distribute copies of the draft document's scope and purpose for review, if available; if not, develop a scope and purpose for the document.

- Produce a tentative outline of the document, conveying topics that will be covered and those that will be excluded.

- Draft a work plan and schedule for the document.

4   Organizing the work

4.1   During the first meeting

At your first meeting, it is important to acquaint the committee with the rules that volunteer members of ISA Standards Committees are expected to follow, when conducting the business of the committee:

4.1.1   Copyright and intellectual property

It is essential that all copyright and intellectual property is respected by all committee members.

Review ISA's copyright and intellectual property presentation.

If a standard, recommended practice, or technical report incorporates copyrighted material, i.e., text, figures, tables, ISA staff must obtain written permission from the publisher before

reproducing the material. Contact your staff representative during draft development (before sending the draft for public review) and inform him or her of your request to publish copyrighted material. If you wait until the document is approved to inform ISA staff of copyrighted material, ISA will not be able to publish the document until we receive the permission, which can take months.

More information can be found on the ISA website https://www.isa.org/standards-and-publications/isa-standards/committee-documents/isa-standards-committee-tools-and-guidelines

4.1.2   Commercial issues

Commercial issues that must be avoided during committee meetings include:

- past, present, or future prices of products or services;

- pricing policies, such as discounts, credit, or factors that affect price;

- profit margins;

- sales or production quotas or inventories;

- allocation of territories, customers, or markets;

- practices of particular customers or competitors;

- warranties;

- status of any litigation, especially litigation involving competitors;

- boycotts against any company or competitor; and

- whether or not any policies or practices are unethical or involve unfair or deceptive trade practices.

4.1.3   Commercial equipment

Standards must not include details about proprietary and trademarked information. Standards should only make generic references to commercial equipment. If it is necessary to refer to a specific manufacturer, then a footnote must be included, stating the source (name and address only) of the equipment and materials. The reference in the footnote *must* include the words "or the equivalent."

4.1.4   Meeting and discussion conduct

Committee meetings should be orderly and must allow everyone a reasonable and adequate opportunity to be heard. Adhere to the topics on the agenda. The Chair is responsible for compliance with the rules. However, it is everyone's responsibility to end inappropriate discussions.

All discussions should take place in the scheduled open meeting, or as permitted under ISA accredited procedures. Avoid informal pre- and post-meeting discussions. This practice protects not only the committee members but also ISA from unfair business allegations.

4.2   Using online technology

Using Internet services and logging on to www.isa.org can greatly expedite the standards development and reaffirmation processes. Email and online conferences help reduce the time required between meetings. Using this technology is not only cost-effective, but increases overall efficiency as well. The S&P Board encourages all committees to use these technologies in developing standards.

4.2.1   ISA SharePoint, ISA Connect, and online committee work areas

Many electronic applications and tools are available to S&P Committees to expedite the standards development process. Each committee has its own SharePoint site, and on request may have an electronic mailing list (Listserv) with archived messages, and a directory or portal for file exchange.

Any member of the committee may access the directory and the email mailing list archives or send a message to the list through links on the committee's web page.

In addition, committees may use ISA's Connect tools to collaborate, for example, by setting up a dedicated committee community.

In order to facilitate the sharing of information and the protection of ISA's intellectual property, an agreed location, either SharePoint or Connect, should be used for the storage of all committee working documents.

4.2.2   Webinar hosting platforms

There are many webinar hosting platforms such as MS Teams, Zoom, and Webex, and the committee should choose an appropriate one to hold meetings.

Please be aware that not all companies allow corporate computer access to all remote meeting platforms such as Teams, Zoom, and Webex.

4.3   During subsequent meetings:

a)   Distribute work items appropriately.

As the committee work proceeds, it is important to divide the work into any apparent subtopics and if needed establish working groups to handle them. Divide the work into the smallest possible complete subjects. A working group will prepare a draft document for review by the working group and the Main Committee.

b)   Establish a tentative schedule of future work and reach agreement on the frequency of future meetings.

c)   Prepare rationale statements for the completed document that will explain to the reader or user the reasoning behind significant terms, complex material, and controversial requirements.

d)   Define and document any terms that may be misunderstood. Use terminology consistent with established standards, such as ISA-51.1 or IEC Electropedia. Cite source of definitions whenever possible.

e)   Develop explanatory statements to make the standard easier to use and reduce the number of negative comments received during public review. Include explanatory notes and similar material in

an annex, or, if there is a significant amount of informative material, consider publishing an ISA technical report.

f)   Establish liaisons with committees and organizations working in similar or related areas of expertise as the committee. The liaisons should be officially approved and documented by the S&P Board. To do so, send the following information to ISA staff:

- The S&P Committee name and the Chair's address, telephone number, and email address, if available.

- The Liaison's name, address, telephone, and email address, if available.

- The name of the committee/organization interfacing with ISA and the committee's/organization's address and telephone numbers.

g)   Compile a list of reference documents and source material. Be sure to note the source of all extracted information, drawings, etc., so ISA can obtain the required copyright release *before* publication.

h)   Maintain the committee membership, and balance voting membership throughout the draft development cycle. The accredited procedures, www.isa.org/standardsprocedures, recommends verification of committee membership on a yearly basis. Maintain the disclosure of affiliation of the committee membership.

Please note that non-responsive voting members make it difficult to obtain approval of the standard and may have their voting rights removed at the discretion of the Chair and fellow committee members.

Individuals and organizations with an interest in the committee's work may request to be listed as information members. The committee may also select individual experts to assist it. Observers and individual experts should be advised of the committee activities, may attend meetings, and may submit comments for consideration, but shall have no vote.

i)   Managing Main Committee or working group meetings

All meetings should run according to an announced agenda that is distributed well in advance of the meeting itself. This follows part of the principles of due process and openness. By supplying agendas, minutes, and meeting announcements, all interested parties have a chance to be informed and to participate in the development of the document. Another item that helps to coordinate meetings is having established procedures. These procedures would include information on voting rights, officers, what records are to be kept, and other pertinent information. (Be aware that only Main Committees have voting members. Working groups and other subgroups under a Main Committee do not have voting members and do not need to be balanced by interest categories.)

Another principle of the standards process that comes into play at this point is that of consensus. While most widely employed during the balloting process, consensus can also be used to help resolve contentious issues that may be encountered in meetings. Consensus means the majority agrees on an issue; therefore, it is important that a committee consider what level of consensus is required for activities such as voting. Does it mean satisfying a simple majority or should it mean more than that? (Unlike balloting, there are no strict rules here.)

Moving the Main Committee or working group forward is one of the primary goals for a Chair to keep in mind. It is the Chair's role to make certain that all have had an opportunity to voice their opinions on a subject. Meetings can be run informally, or formally, usually operating under Robert's Rules of Order, the venerable guide to the use of parliamentary procedure during meetings. Robert's is

particularly useful if there is any expectation that a meeting will be contentious. ISA occasionally provides training on this topic.

Robert's may also help when the group confronts the possibility of antitrust or collusion appearing in discussions. While certain actions that the group may make may not be unlawful in and of themselves, discussion of certain topics among competitors may suggest a tacit understanding to act together in a way that violates the law. This implication of collusion must be avoided at all costs. Some ways to do this are avoiding specific discussion of prices or any of the elements of pricing, such as pricing policies, discounts, warranties or guarantees, terms or conditions of sale, credit, shipping, or commercial liabilities. Discussion of general elements of prices, such as saying that including something may be too expensive or that the benefits may outweigh the costs, may be allowable. All parties have a right to be heard under the imperative principle of openness.

Conflict is sometimes unavoidable at meetings, since not everyone may agree on the best method for doing something in, for example, a standard. It's the Chair's role to serve as a balance in such situations. The Chair must be objective and cannot speak to one side or another on an issue unless he or she recuses themselves. The Chair also cannot make motions (although the Chair can entertain them). As such, the Chair should anticipate where a major conflict might arise and plan how to deal with it.

While anyone can attend Main Committee or working group meetings, the Chair should strive to have a balance of interests represented and to have active, interested, expert participants.

In addition, many committees and working groups use teleconferences and video conferences as a means of holding some of their meetings, or of giving members who can't travel a means to participate. Some have found they can increase their non-U.S. participation by using these technologies, while others have found that they increase their meeting attendance in general.

Sometimes, however, it is unavoidable that the meeting site will need to be at a hotel or other facility. The Chair should strive to hold these meetings in conjunction with ISA meetings when possible. Hosting by others at another location is acceptable provided that the meetings are not always held in only one location and by one host. The Chair should give others who are interested the opportunity to host meetings and rotate the location to attempt to gain additional participation.

j) Keep the membership list current

   • Send out verification of membership with the agenda.

   • Keep ISA S&P staff informed of all membership changes.

   • Update membership lists regularly at committee meetings and/or prior to committee ballots.

k) Guide to planning a working group meeting

   • Make sure that your meetings have the sole purpose of developing ISA documents. The objective of any ISA standards meeting is to develop and produce ISA standards, technical reports, or recommended practices that reflect a consensus among industry, government, and the general public, and to serve the interests of those groups. If your meeting has any other purpose as its primary function, then it might not be appropriate as an ISA standards meeting.

   • If you want to collaborate with another organization, ask for help. Sometimes it might be desirable for an ISA Standards working group to collaborate with a trade association, a consortium, or another standards organization on a particular project. Although this sort of collaboration is commendable for the consensus process, it can lead to business issues as well as legal complications that can jeopardize ISA's not-for-profit tax status. Therefore, before entering into

any sort of collaborative arrangement, you must have staff's assistance in developing a memorandum of understanding outlining the nature of the relationship. This guideline does not discourage hosting arrangements. Even for-profit organizations are permitted to host ISA standards meetings. Any financial support beyond hosting, though, must be approved by the ISA Standards & Practices Board and may require the development of a memorandum of understanding between the host and ISA.

- Put "ISA" in the name of the meeting. The title of any ISA standards meeting must include the term "ISA." Any advertisement, publicity, or electronic notification of the meeting must include the title. Furthermore, the ISA logo must appear on all published material.

- Conduct the meeting openly. Anyone who is interested in a standards activity or potentially affected by it is permitted to attend any ISA standards meeting. If there is a meeting fee, all attendees are required to pay it. (However, fees may be reduced or waived for students, life members, unemployed persons, retired persons, invited speakers, and ISA staff.)

- Refrain from discussions that violate antitrust laws. The fact that the meeting is a standards meeting does not absolve participants of the responsibility to avoid discussing subjects that may violate antitrust legislation. ISA adheres to the Antitrust Policy set forth in the most recent edition of the ANSI Essential Requirements: Due process requirements for American National Standards, which may be viewed at www.ansi.org (examples of subjects include validity of patents or the cost of using them, any ongoing litigation, pricing, or other issues related to antitrust).

- Avoid job recruiting. Job recruiting at an ISA standards meeting is inappropriate.

- Notify participants of recording. Notify meeting participants, in advance, if there will be audio recording, video recording, or photography at the meeting. Meeting organizers or the ISA Standards & Practices Board are permitted to restrict such activities if they might impede free discussion or compromise commercial value. Furthermore, recording or photography may be halted whenever they are disruptive.

- Press attendance is allowable at ISA standards meetings. If press chooses to attend, its presence should be announced.

- Avoid sales exhibits. Exhibits of vendor products and literature, sales presentations, and other marketing activities are not allowed at an ISA standards meeting.

4.4   Meeting documentation

4.4.1   Meeting invitations

We must remember volunteers typically have "day jobs" and may need to plan well in advance to be able to attend any meetings, and so invites should be sent in a timely manner (refer to S&P Procedure section 5.1.2 for recommended minimum times).

For recurring meetings, it is suggested a reminder is sent at least two weeks prior to the meeting date.

It is recommended that the time, location, and duration of the next meeting is part of the agenda of meetings.

Meeting invitations should be sent to the committee's and/or working group's Listserv. Invitations should include:

- purpose of the meeting,

- intended outcomes of the meeting,

- agenda, and

- if appropriate, documents that will be discussed, or referenced, in the meeting.

4.4.2   Agenda

Meeting agendas should be provided before any full committee meeting, and it is recommended for all subgroup meetings (using an optional Word template available from your staff representative).

Copies shall be distributed to all committee members and meeting attendees (refer to S&P Procedure section 5.1.2 for recommended minimum times).

Recommended content of the agenda:

a) meeting title

b) date/time,

c) location – for remote meetings include the link to the meeting address and any call-in credentials, such as meeting ID and passcode,

d) chairperson's name,

e) recorder's name,

f) meeting contents (activity description, desired result and person(s) responsible), and

g) next meeting.

Copies of the agenda for a Main Committee meeting should be distributed to all committee members and ISA staff.

4.4.3   Minutes

Meeting minutes are required for Main Committee meetings per S&P Procedure 5.3.1.

Minutes should be prepared for all full committee meetings (using the Word template available from your staff representative), and copies shall be distributed to all committee members and meeting attendees.

For working group meetings, minutes are not required, but it is expected that notes summarizing discussions and any decisions and action items, as well as attendance, should be captured. If there is significant discussion or disagreement on decisions, it is beneficial to capture the alternate opinions.

Copies of all committee minutes and notes should be sent to members of the committee and ISA staff. Minutes should always list committee members and guests present (may be as an attachment). All minutes should include a statement that the committee has approved, or approved with noted corrections, the minutes of the preceding meeting. At the start of any meeting the person responsible for capturing minutes, and other meeting notes, should be confirmed.

Minutes should follow established procedures as closely as possible. It is important that all committees follow our established procedures, so ISA may maintain its ANSI-accredited organization status.

The following significant items should be included in the minutes:

a)   additions and deletions to the distributed agenda,

b)   new committee appointments,

c)   status reports from any working groups or author groups (may be attachments),

d)   resolutions adopted or defeated by the committee (this includes resolutions directing responses to negative ballots or ISA comments),

e)   future action and information items assigned to committee members,

f)   reports of other relevant (domestic and international) standards activity (may be attachments),

g)   general announcements of interest to all committee members,

h)   reference to any information items distributed at the meeting (if possible, obtain an electronic version of all meeting-minutes attachments),

i)   proposed date and location for the next meeting,

j)   approved motion to adjourn,

k)   abstention or disapproval votes (if any), and

l)   deletion of references to company or product names or any other business issue, unless necessary for clarification.

Committee meeting minutes should be distributed as soon as possible, preferably within two to three weeks of the meeting. Minutes are distributed electronically by using an email list server or by posting to an agreed location.

Lengthy summaries of discussions should be avoided. Minutes should focus on agreed actions. If you have any question regarding the suitability of including an item in the minutes, please contact your staff representative.

4.4.4   Comment tracking

Comment tracking is important so that all comments received from document reviews or comment resolution meetings are captured to ensure that all comments are appropriately addressed.

Many committees use a common spreadsheet format developed to track comments. Although it is not compulsory to use this spreadsheet, it can be provided by staff or the MD along with guidance for its use.

The comment tracking document should be stored, as read only, at an ISA approved location, such as the committee's SharePoint site.

4.4.5   Participation tracking

Participant tracking is important to ensure that Main Committees maintain a balance of active membership, as well as determining voting status.

Participants for all committee activities, including meeting attendance, comment and voting participation, should be documented. It is recommended that the Committee Chair(s) develop some form of tracking

tool, for example a simple spreadsheet, and use this to document participation. This document should be reviewed periodically, at least annually, with the MD.

4.5   Develop an execution strategy

a)   Prepare a preliminary outline of the proposed standard, aligning to the scope and purpose of the standard.

b)   Prepare a table of contents to focus on the key concepts that support the outline and use as a reference to ensure that work progresses logically and methodically. Many Committee Chairs use the preliminary clauses in the table of contents to assign clause leaders specific areas of responsibility. Keep the table of contents relatively high level to avoid the need to collapse the preliminary clauses and remove the leadership roles assigned.

c)   If multiple areas of interest are to be considered, separate working groups should be considered to work in parallel with the Main Committee.

4.6   Developing a schedule

a)   Establish and review a schedule for each work item and ensure that working group leaders understand how it applies to their assignments.

b)   Assist the Working Group Chairs in organizing their work. If meetings are spaced far apart, check in for an informal status update at least one-to-two times per month to ensure progress is ongoing. If a shared website is in use, checking on document edits may be an informal means to monitor progress.

c)   If multiple working groups are active, it is important to schedule periodic main committee meetings to ensure coordination of activities such as reviews.

d)   Due consideration must be made for scheduling meetings for participants in other time zones.

4.7   Meeting planning recommendations

Meetings should be planned on a regular basis—physical or virtual —and members should be notified at least two weeks in advance of each meeting. Optimally, working group meetings should be held monthly. Working group meetings may be held separately from Main Committee meetings until a complete draft is obtained.

Virtual meeting durations of about two hours at a time have been found to be effective. Use of collaborative tools in the virtual environment can be effective at drawing out interaction from the less active participants. Ensure that all participants can use the chosen platform, as some company policies restrict the use of certain platforms, which can limit members participation if not considered.

Physical meeting locations can be varied to add interest and to provide travel relief. Let different members host meetings at their work locations if possible; this can provide interesting plant tours as well. Frequent committee meetings not only expedite work but also maintain the enthusiasm of committee members.

To optimize committee time, the Committee Chair should:

a)   assemble document drafts from material submitted by committee members,

b)   circulate drafts to the committee for review and comment, and

c)   recycle annotated drafts to working groups or individuals for rewriting.

4.8   Meeting effectiveness recommendations

Meetings should deal with major issues first. Use an agenda and be sure to follow it. Assign individuals tasks, such as preparing specific sections of the draft document for review by the full committee. Distribute all review comments, ballots, and other discussion material at least one week before meetings to allow Committee members ample time to review the information. If ballots are reviewed by the committee prior to the actual meeting, the time required to resolve disapproved ballots with attached comments often can be significantly reduced. Meetings should *not* be used to argue minor syntax issues until drafts are in the final stages. Rather, meetings should be used to report the points that have been resolved and those that should be resolved before the next meeting. At times, the Chair must discourage further discussion on subjects and proposed changes when it is obvious that they are supported only by a minority of the committee. With travel restrictions and tight budgets, meeting time should be used as wisely and effectively as possible.

4.9   Writing the standard

The vast majority of standards cannot be written well without the committee actually meeting and discussing all portions.

There are three types of ISA documents defined in the accredited procedures:

a)   STANDARD: A document that embodies requirements (normative material) that, if not followed, could directly affect safety, interchangeability, performance, or test results. In general, such requirements should already be widely recognized and used. A standard may contain informative material as long as it is clearly identified as such.

b)   RECOMMENDED PRACTICE: A document that embodies recommendations (informative material) that are likely to change because of technological progress or user experience, or which must often be modified in use to accommodate specific needs or problems of the user of the document.

c)   TECHNICAL REPORT: A document that embodies informative material. For example, reports of technical research, tutorials, and factual data obtained from a survey, or information on the "state of the art" in relation to standards on a particular subject.

The overall process of writing a standard is illustrated in the flowchart in Appendix A. The first step of this process is to create content that will be used for the Main Committee ballot.

4.9.1   Create working drafts

Working drafts are developed by members of the committee.

A common approach is to develop a framework, or an organizational structure, for how information, based on the scope, will be presented in the document.

Based on this an initial table of contents will be developed. This will help to provide structure for the document as well as identify sections of content, or clauses, that can be assigned to content editors.

It is also suggested that one person is assigned as the main editor to coordinate content creation.

Once assigned, each of the contributing editors will work to create working drafts of each section or clause and provide this content to the main editor to combine into an overall working draft document.

The main editor should be responsible for version control and ensuring that the document is formatted consistently. ISA Standards are formatted based on the IEC style guide and format. It is important that the editor is familiar with these. To help with this, due to the complex nature of the directives, it is suggested that the editor requests a mentor to help and/or attend available ISA or IEC training. Many comments

received during review or ballot are editorial in nature and the main editor should try to address these before comment resolution meetings to avoid taking up excessive volunteer time.

The working draft should be stored for committee member access at an ISA approved location, such as the committee's SharePoint site.

4.9.2   Review by committee

Once a good working draft has been completed, it is ready for committee review.

This is usually performed over a series of committee meetings where the document is collaboratively edited until the entire document has been reviewed and all outstanding actions completed.

The committee can expect this to be a very time-consuming process.

It is recommended that you attach the latest copy of the document to the review meeting invitations, so that participants have the opportunity to prepare.

4.10   Completing the draft and obtaining approval

When the working group obtains a majority approval of the document (standard, technical report, or recommended practice), it should be submitted to the Main Committee; for example, ISA12.xx standards should be submitted to ISA12. In later stages of development, it may be expeditious to simultaneously ballot the working group and the Main Committee. The voting period for letter ballots, as defined in the accredited procedures, is four weeks. An extension may be granted at the Chair's option, when warranted. Submit the completed document, after it is approved by a two-thirds vote of the Main Committee, to ISA staff for review and approval by ISA Standards and Practices Board. If the document is to become an ANSI document, it will be submitted for ANSI Public Review distribution.

During the final committee ballot procedure, it is important to observe and document the following procedures:

a)   A committee should be balanced (if possible) when it approves the final ballot. See S&P Department accredited procedures sections 4.1 (Committee composition) and 5.2 (Voting rules).

b)   Complete written records and copies of all ballots must be kept by ISA staff. Please forward any documents and any correspondence regarding comment resolution to ISA staff. Complaints may be delayed, so records must be maintained even after publication.

c)   The committee must address any committee negative ballots and all comments received during the final committee ballot. The committee must diligently attempt to resolve any negative comments and should acknowledge **all** comments, typically by responding to a compiled-comments spreadsheet. Repeat this process as many times as required.

The Committee Chair or the working group leaders prepare responses to the commenters stating how and why the committee did or did not resolve the comments. Commenters have an opportunity to amend their original votes based on those responses. The Chair sends the response spreadsheet and a copy of the updated draft, with tracked changes shown, to the commenters and to the ISA staff contact.

Commenters may also be notified of ballot resolution through the committee meeting minutes. The committee's discussion and resolution of negative ballots shall be documented clearly in the minutes. The Chair prepares a letter to commenters notifying them that comments were resolved during the meeting and were recorded in the minutes.

Templates with standard replies are helpful in handling similar comments. Wording that might alienate a reviewer should be avoided.

d)   Per ANSI requirements, all committee members must have an opportunity to review all unresolved negative comments. All committee members must be given an opportunity to change their original votes based on the unresolved negative or substantive changes made to resolve negatives.

e)   The Managing Director must be advised of any negative ballots and must be kept informed of the committee's attempts to resolve any negatives.

f)   After the committee has reached consensus, ISA staff will submit the draft for public review and any comments will be fed back to the standard committee.

g)   ISA staff will prepare the final draft and ballot report.

h)   This draft will be submitted to the S&P Board for approval. This is not a technical review, but rather a review to ensure that ISA's accredited procedures were followed correctly.

i)   ISA Staff is responsible for publishing and distributing standards, recommended practices, and technical reports. ISA staff also handles the submittal of standards to ANSI.

4.11   Publicizing the committee work

Committee presentations at ISA Meetings, Division Symposia, and even Section meetings can be useful to explain the need for, and provide explanations of, committee standards. Papers, articles in *InTech* magazine, and panel sessions at conferences can generate valuable input and awareness.

4.12   Revising a standard

ANSI procedures call for reaffirmation or revision of ANSI-approved documents to begin at least every five years. ISA considers this good guidance for all documents (standards, technical reports, and recommended practices). Committee work to accomplish this should begin in advance of the five-year time. Published ISA documents should be revisited every four-to-five years by the applicable committee to reaffirm, revise, or withdraw.

Revision of a standard should follow the same process as initial development as detailed above, with the exception that the initial working draft should be the currently approved standard document.

4.13   Considering work of other standard developing organizations (SDOs)

ISA committees should be aware of the work of any corresponding SDO committees throughout the development cycle. If additional information is required for committee consideration, contact your Managing Director or staff representative. ISA committees may adopt a published work of another SDO in its entirety or with modifications. This follows the same general process as described above for developing an ISA document.

In some cases, ISA may choose to adopt the work of other SDOs; in these cases, guidance should be requested from ISA staff to ensure the appropriate process is followed.

5   Recognition of achievement

Upon the conclusion of a committee's or working group's work, the Committee or Working Group Chair should note if any members have displayed exemplary work ethics or technical expertise in developing the standard(s), technical report(s), or recommended practice(s), so those members can be recognized accordingly.

At any time during the development process of the standard, technical report, or recommended practice, the Managing Director, Committee Chair, and Working Group Chair may acknowledge a member's work ethic or technical contribution to a standard or technical report.

Contact ISA staff for information about the award process.

6   Conclusion

The time it takes to finalize a standard, as well as the quality of the standard, depends on the extent of member participation. This, in turn, depends to a great extent on the Chair's and other committee leaders' level of personal enthusiasm, energy, and diligence in organizing and leading the committee's work.

We encourage you to ask for help. Former Committee Chairs, S&P Directors, ISA staff, and others are always available, but they cannot help you unless they know that you and your committee need assistance.

The ISA Standards & Practices Board appreciates your time and commitment to developing ISA Standards. We want you to enjoy the benefits that volunteering on a Standards Committee offers, including meeting the leaders in your technical area and learning from them; forming new personal and professional relationships; and receiving recognition for a job well done.

Annex A: Basic steps in developing a standard per ISA's ANSI-accredited procedures (www.isa.org/standardsprocedures)

	ISA Committee Standards Development Activity	Typical months required
A	Committee members who volunteer for the development team (DT) work together to write the initial draft	9–24 depending on draft length and changing availabilities of DT members
B	Committee and/or working group members review the draft and may submit comments	2
C	DT reviews and responds openly to all comments received and revises the draft as needed. If changes are extensive, return to step B.	3–12 depending on number and extent of comments and availabilities of DT members
D	Draft is issued for committee ballot. Voting members, balanced by interest categories, cast their votes. • voting and nonvoting members may submit comments • interested nonmembers may submit comments through separate ANSI public review process	2
E	DT and/or Committee Chairs (or designees) review all comments received and determine if changes are needed to the draft. • if *substantive* changes (i.e., that "directly and materially affect the use of the standard") are needed, return to step C regardless of ballot results; or • if ballot did not pass, return to step C If ballot passed and the needed changes, if any, are not substantive, changes are made and the Committee Chair declares draft approved.	1–3 depending on number and extent of comments and availabilities of DT members
F	Draft is submitted to ISA Standards & Practices Board for procedural approval as an ISA Standard.	1
G	The new ISA Standard is submitted to ANSI for procedural approval as an American National Standard.	2
H	If directed by S&P Board, the new ISA/American National Standard is submitted to the IEC for adoption.	IEC process

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Developing and promulgating sound consensus standards, recommended practices, and technical reports is one of ISA's primary goals. To achieve this goal the Standards and Practices Department relies on the technical expertise and efforts of volunteer committee leaders and members.

ISA is an American National Standards Institute (ANSI) accredited organization. ISA administers United States Technical Advisory Groups (USTAGs) and provides secretariat support for International Electrotechnical Commission (IEC) committees that develop process measurement, control and automation standards. To obtain additional information on the Society's standards program, please contact standards@isa.org or visit www.isa.org.