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TRAINING ACADEMY

Intermediate 1

Course 4

STANDARDISATION
TRAINING ACADEMY

Topic:

HOW STANDARDS ARE DEVELOPED WITHIN SDOS INTERNATIONALLY

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Module Objectives

After completing this module, you should be able to:

1. understand how standards development processes within SDOs are settled;
2. understand which deliverables are developed by ISO;
3. understand which deliverables are developed by IEC; and
4. understand which deliverables might be a good choice in a specific situation.

Key Terms

Amendment, International Standard (IS), ISO Deliverables, ISO Guides, ISO Publicly Available Specifications (ISO/PAS), ISO Technical Report (ISO/TR), ISO Technical Specification (ISO/TS), International Workshop Agreements (IWA), IEC Technical Specification (IEC TS), IEC Publicly available specification (IEC PAS), IEC Technical Report (IEC TR), IEC Guides, IEC Systems Reference Deliverable (IEC SRD), Interpretation Sheet, state-of-the-art, Technical Corrigendum



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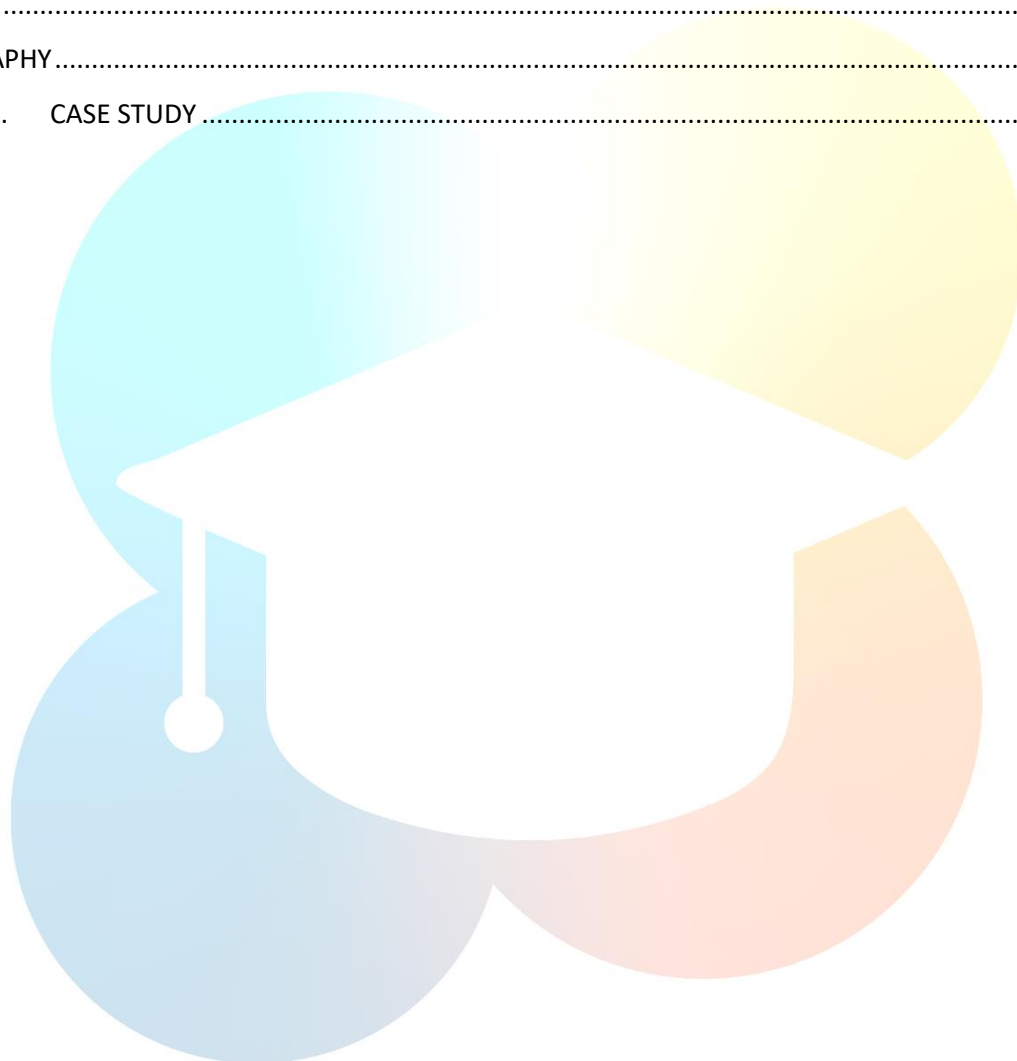


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1 THE DEVELOPMENT PROCESS OF ISO STANDARDS AND OTHER DELIVERABLES

The International Organisation for Standardisation (ISO) is an organisation that develops International Standards (ISs) and other deliverables, such as ISO Technical Specifications (ISO/TSs), ISO Technical Reports (ISO/TRs), ISO Publicly Available Specifications (ISO/PASs), International Workshop Agreements (IWAs), and ISO Guides.¹ ISO distinguishes the normative and the informative deliverables regarding what their content includes.² International Standards (ISs), ISO Technical Specifications (ISO/TSs), and ISO Publicly Available Specifications (ISO/PASs) are normative deliverables, ISO Technical Reports (ISO/TRs) are informative deliverables, and International Workshop Agreements (IWAs) and ISO Guides do not fit these categories. The International Electrotechnical Commission (IEC) develops its deliverables for specific electrical, electronic, and information technology areas.³

The International Organisation for Standardisation (ISO) is an organisation that develops International Standards (IS) and other deliverables, such as ISO Technical Specifications (ISO/TSs), ISO Technical Reports (ISO/TRs), ISO Publicly Available Specifications (ISO/PASs), International Workshop Agreements (IWAs), and ISO Guides.⁴ ISO distinguishes the normative and the informative deliverables regarding what their content includes.⁵ Normative documents can contain requirements, recommendations, permissions, or possibilities and capabilities, and informative documents can collect information obtained from survey results, informative reports, and “state of the art”, comparisons between different practices, methods, standards, and even test results.⁶ ISO normative deliverables are:

-  International Standards (IS),
-  ISO Technical Specifications (ISO/TSs), and
-  ISO Publicly Available Specifications (ISO/PASs).

ISO Technical Reports (ISO/TRs) are informative deliverables, while International Workshop Agreements (IWAs) and ISO Guides do not fit these categories.

¹ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

² ISO. (2019). ISO training. ISO deliverables. Accessed on January 26, 2023. Retrieved from: <https://www.youtube.com/watch?v=T--RIs3E7ZE&t=15s>

³ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

⁴ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁵ ISO. (2019). ISO training. ISO deliverables. Accessed on January 26, 2023. Retrieved from: <https://www.youtube.com/watch?v=T--RIs3E7ZE&t=15s>

⁶ ISO. (2019). ISO training. ISO deliverables. Accessed on January 26, 2023. Retrieved from: <https://www.youtube.com/watch?v=T--RIs3E7ZE&t=15s>

ISO Deliverables created by committees

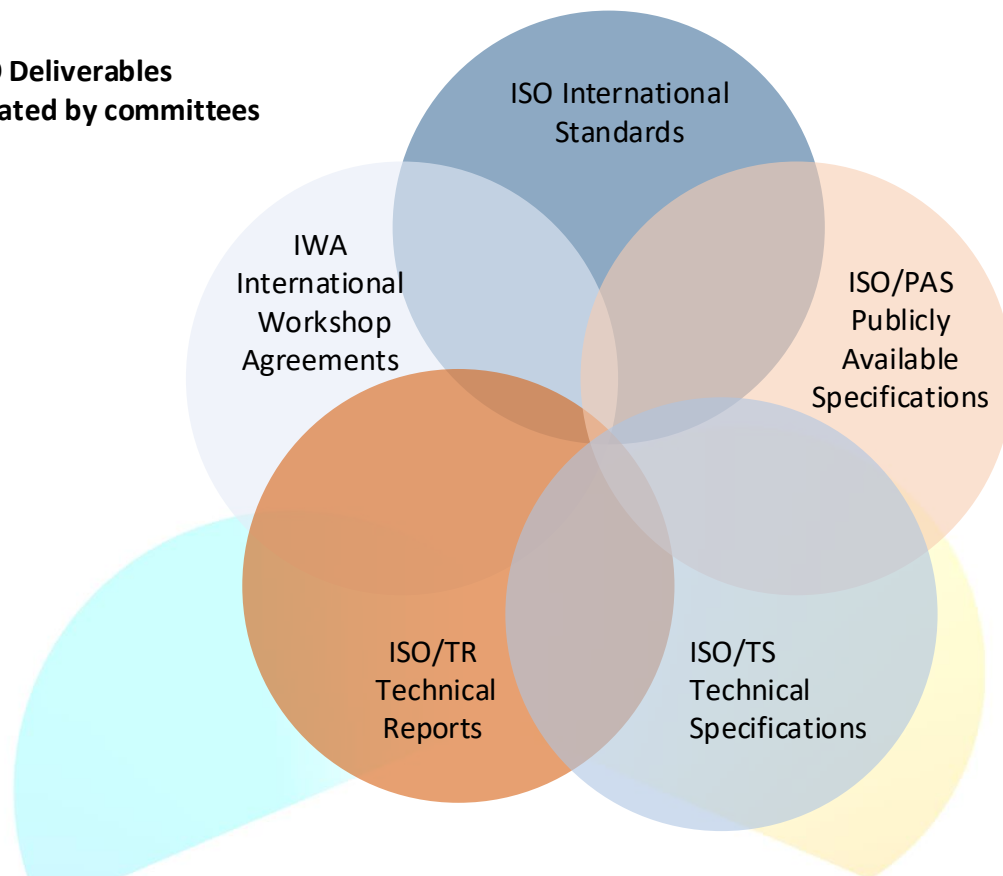


Fig. 1. ISO deliverables created by Committees ⁷

1.1 THE ISO STANDARD (IS) DEVELOPMENT PROCESS

The International Standard (IS) is a "standard that is adopted by an international standardising/standards organisation and made available to the public". ⁸ A helpful document for the standard development process is ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, developed with a description of stages of creating ISO deliverables. ⁹ Additionally,

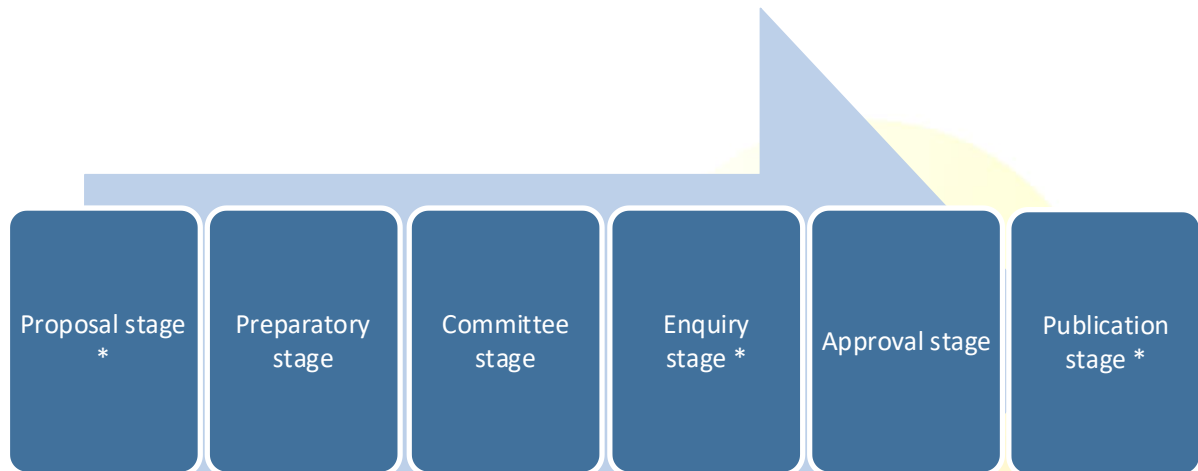
⁷ ISO. (2020). My ISO job – What delegates and expert need to know. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100037.pdf>

⁸ ISO/IEC (2004). ISO/IEC Guide 2:2004 Standardisation and related activities — General vocabulary. Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink/Open/8389141>

⁹ ISO/IEC (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

the ISO and the CEN agreed on technical cooperation (the Vienna Agreement) in exchanging technical information in standards development processes.¹⁰

The stages of the ISs development process are given in Figure 2.



* obligatory stage

Fig. 2. Stages for ISO standards development¹¹

Proposal stage. When the necessity for a new International Standard arises, the first step in its confirmation is submitting a new work item proposal (NP) to the Committee for the vote using the electronic balloting portal. The NP is submitted using Form 4, also nominating the project leader in the form.¹² Any issues considering copyright, patents, or conformity assessment should be brought as early as possible, preferably

¹⁰ ISO/CEN. (2016). Vienna Agreement. Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink/fetch/2000/2122/3146825/4229629/4230450/4230458/customview.html?func=ll&objId=4230458&objAction=browse&sort=subtype>

¹¹ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, pp. 26-35. Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

¹² ISO. (2022). Form 4. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

at this stage. As long as the scope does not change, ISO standards that are already published can skip this step for revisions and amendments.¹³

Preparatory stage. In the preparatory phase, the parent Committee will set up a Working Group (WG) which is made up of experts and a Convenor (usually the Project leader) who will prepare the Working Draft (WD). Issues around copyright, patents, and conformity assessment are again looked out at this and other stages by experts who will circulate successive WDs using the ISO/TC platform (or another) to share documents of standards development until they are satisfied that they have developed the best solution possible.¹⁴ Upon finishing the draft, it is forwarded to the WG's parent Committee, which decides whether to move to the Committee stage or the Enquiry stage next.¹⁵

At this stage, a helpful tool is the ISO brochure titled *How to write standards – tips for standards writers*.¹⁶

Committee stage. To finish the principal stage, consensus must be reached on the technical content. To achieve a consensus on the technical content, National Bodies will carefully study the texts of Committee drafts and submit all pertinent comments to the Committee, which have to be considered by Committee.¹⁷ This stage is not obligatory, and Committees may decide to skip it following Annex SS of ISO/IEC Directives Part 1 and Consolidated ISO Supplement.¹⁸

Enquiry stage. The Committee Manager will submit The Draft International Standard (DIS) to ISO Central Secretariat, at which stage the draft will be circulated to all ISO members who need to comment and vote on it within 12 weeks using the submission interface to submit.¹⁹ The DIS is approved at voting for the DIS with

¹³ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

¹⁴ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

¹⁵ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

¹⁶ ISO. (2016a). How to write standards – tips for standards writers. Accessed on January 26, 2023. Retrieved from: https://www.iso.org/files/live/sites/isoorg/files/developing_standards/docs/en/how-to-write-standards.pdf

¹⁷ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

¹⁸ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

¹⁹ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

a qualified majority in which 2/3 of the P-members are in favour, and less than ¼ of the total votes are negative. If no technical changes are introduced in the draft after voting, the project can go to publication.²⁰

Approval stage. This optional stage is used only for DIS that has incorporated technical changes following comments at the DIS stage (even if the DIS has been approved) and will have to include the FDIS stage. In this stage Committee Manager submits the Final Draft International Standard (FDIS) to ISO/Central Secretariat (ISO/CS).²¹ Then, upon circulating among all ISO members for an eight weeks vote (using The Submission Interface should when sending the draft to ISO/CS), the standard is approved if a qualified majority of two-thirds of the P-members of the TC/SC are in favour and no more than one-quarter of the total number of votes cast are negative.

Publication stage. After passing through the Approval stage, the manager will submit the project leader's responses to member body comments on the FDIS.²² If the approval stage was skipped, the secretary would submit the final document for publication. Only editorial corrections can be made upon submission to the final text, which the ISO Central Secretariat, as an International Standard, will send for publication.²³ Project leaders and Committee Managers must sign off within two weeks before the standard is published.

1.2 THE ISO TECHNICAL SPECIFICATIONS (ISO/TS) DEVELOPMENT PROCESS

The ISO Technical Specification (ISO/TS) is "a document that prescribes technical requirements to be fulfilled by a product, process or service. A technical specification may be a standard, a part of a standard or independent of a standard."²⁴ The ISO/TS which also may contain normative provisions may be prepared and published by a Committee if the subject in question is still under development or if the Committee has developed a document it wishes to publish as International Standard but fails the vote.²⁵

²⁰ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

²¹ ISO. (2022a). Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

²² ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

²³ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

²⁴ ISO/IEC. (2004). ISO/IEC Guide 2:2004 Standardisation and related activities — General vocabulary. Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink/Open/8389141>

²⁵ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

The Committee may also initiate new projects to create the development of the ISO/TS. The preparatory and approval stages are required and shall be carried out according to the steps defined for standard development.²⁶ The ISO/TS is approved at voting with the qualified majority, in which 2/3 of the P-members vote positively. If technical changes are introduced in the draft after voting, a subsequent ballot shall be required to approve the revised draft.²⁷ When the Committee (and its P members) has agreed on publishing the ISO/TS, it submits the draft electronically by the Committee's Secretariat to the Office of the CEO within 16 weeks for publication.²⁸ Completing ISO/TSs that offer different technical solutions is possible if they do not conflict with existing ISs. Therefore, the Committee will review the ISO/TSs 3 years following its publication to re-examine the situation that resulted in the publication of the TS and to achieve the agreement necessary for the publication of an ISs to replace the ISO/TS.²⁹ A date for this review is to be agreed upon in advance and be based on the stability date before the publication of the ISO/TS. Finally, the Committee decides on the withdrawal of the ISO/TS.³⁰

1.3 THE ISO PUBLICLY AVAILABLE SPECIFICATIONS (ISO/PAS) DEVELOPMENT PROCESS

If there is an urgent market need, a Committee can prepare and publish an ISO Publicly Available Specification (ISO/PAS) when a need arises for a preliminary document prior to the development of a full ISs, or the Committee has adopted a published document from an external organisation, which in the IEC may result in a dual logo publication with the external organisation, or the Committee has developed a document it wants

²⁶ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

²⁷ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

²⁸ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

²⁹ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

³⁰ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

to publish as per international standard.³¹ ISO/PAS must not conflict with an existing International Standard, although Competing Publicly Available Specifications on the same subject are permitted.³²

When proposing PAS, an optional Committee may be recommended by the Chair. To initiate the process simple majority vote of the Committee P members voting is needed.³³

PAS is approved for publication after eight weeks DPAS ballot when Committee P-members vote to publish the document as PAS by a simple majority. At this stage, only editorial changes can be made; otherwise, a new ballot must be approved if the draft is to be revised.³⁴

Suppose a Committee needs to deliver content quickly to the market. In that case, a PAS might be proposed from the outset or if an international standard or a technical specification is under development, for example, if the project cannot meet deadlines.³⁵

PAS is valid for three years in ISO and two years in IEC; within this time Committee can decide to withdraw PAS. If not withdrawn within this period, PAS will be transformed intact or with changes into another normative document.³⁶

³¹ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

³² ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

³³ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

³⁴ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

³⁵ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

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³⁶ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

1.4 THE ISO TECHNICAL REPORT (ISO/TR) DEVELOPMENT PROCESS

The ISO Technical Report (ISO/TR) can be published by a Committee when it needs to provide a rationale for specific requirements in a related IS or to publish information not normally published as an IS, which can be, for example, information obtained from a survey carried out among the National Bodies, information on work in other international organisations or information on the "state of the art" concerning standards of National Bodies on a particular subject.³⁷ This report is purely informative and doesn't contain requirements, recommendations or permissions, nor contain any matter implying that it is normative.³⁸

The Committee initiates the ISO/TR by a simple majority decision of the P-members. Stages required are the preparatory stage as set out in the preparatory stage for international standard development and the eight weeks DTR ballot approval stage for publication; also, an optional Committee stage can be used as in standard development. To publish the document as the ISO/TR, the Committee needs a simple majority vote of the P-members voting. Only editorial changes are allowed at this point; otherwise, new voting is required to approve the revised draft. Upon agreement on the publication of the ISO/TR, the draft is submitted electronically by the Committee's Secretariat to the Office of the CEO within 16 weeks for publication.³⁹

To ensure that the ISO/TR remain valid, the responsible Committee needs to review the report regularly. The responsible Committee also decides about the withdrawal of the ISO/TR.⁴⁰ However, considering ISO, the ISO/TR cannot be subject to a review process.⁴¹

1.5 THE INTERNATIONAL WORKSHOP AGREEMENT (IWA) DEVELOPMENT PROCESS

The International Workshop Agreement (IWA) is a document developed outside the ISO Committee to enable stakeholders from the market to discuss in an "open workshop" environment.⁴² The development process

³⁷ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

³⁸ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

³⁹ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁴⁰ ISO/IEC (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁴¹ ISO/IEC (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>.

⁴² ISO (2022a). Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

of the IWA consists of five phases: proposal, approval of the proposal, circulation of the proposal, approval of and publication of the IWA.⁴³ A detailed description of ISO's development process for IWA is given in Figure 9. The IWA development process is flexible and fast, so it shouldn't last longer than 12 months.

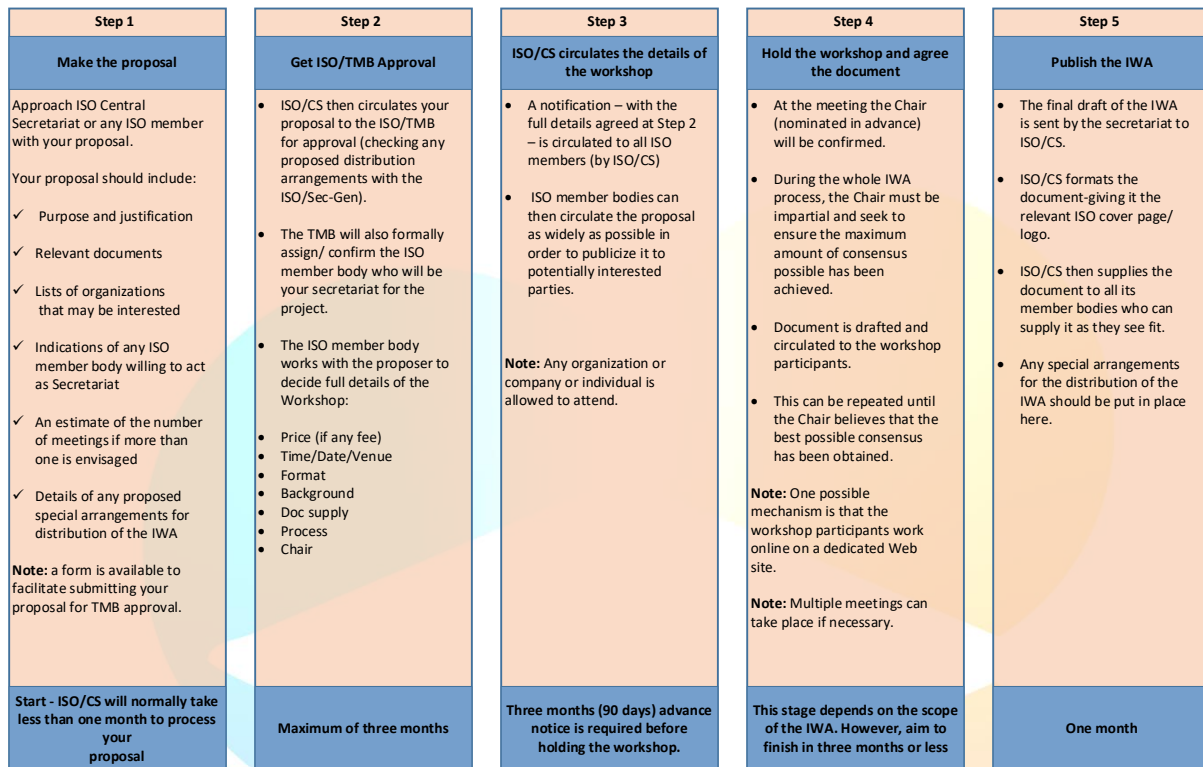


Fig. 3. ISO's International Workshop Agreements (IWAs) development process⁴⁴

Proposals to develop IWAs. ISO member bodies, liaison organisations, corporate bodies, and other organisations can propose an ISO workshop to develop the IWA.⁴⁵ Upon doing so, they shall provide details

⁴³ ISO. (2023). Process for developing an IWA. Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink/fetch/2000/2122/15507012/20695258/iwa.pdf?nodeid=20683323&vernum=-2>

⁴⁴ ISO. (2022). Process for developing an IWA. Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink/fetch/2000/2122/15507012/20695258/iwa.pdf?nodeid=20683323&vernum=-2>

⁴⁵ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

concerning the purpose and justification of the proposal by submitting relevant documents, cooperation and liaison, all in accordance with ISO/IEC Directives, Part 1, Annex C.

Approval of the proposal. When reviewing proposals, ISO Technical Management Board (ISO/TMB) will look for an analysis of the global interest in the subject proposed for IWA in different countries and by stakeholders. If accepted, ISO/TMB will find an organizer who will provide administrative and logistics support to the proposer.⁴⁶ The organizer is usually the member body from the country of the proposer if the proposer is not a member body of member bodies holding Secretariats in fields related to that covered by the proposal.

Circulation of the proposal. Once agreed on a date and venue for the first meeting of IWA, it should be announced to relevant bodies and all interested at least 90 days in advance and in the most appropriate way(s) to achieve the widest possible circulation (e.g. a publicly accessible website).⁴⁷ Also, the proposer and Workshop Secretariat will ensure that any ISO Committees with projects relevant to the subject will be invited to be represented at the workshop. A Workshop Programme with all relevant details is then circulated to registered participants, and all participants may submit their contributions to the IWA Workshop Secretariat.

⁴⁸

Approval of IWA. The proposer and workshop secretary shall designate the Chair of any particular workshop. The Chair shall act in a purely international and neutral capacity and, in particular, will:⁴⁹ Ensure that all points of view expressed during a workshop are adequately summed up so that they are understood by all present; Conduct the workshop with a view to reaching a consensus; Ensure that all decisions are clearly formulated and if needed, made available to the participants before the closure of the meeting of the workshop. Also, any organisation may register as a participant in a workshop. Furthermore, Workshop

⁴⁶ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁴⁷ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁴⁸ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁴⁹ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

Secretariats are responsible for ensuring that the outcome of the workshop is genuinely international.⁵⁰ Workshops are working practically autonomously using very flexible procedures but maintaining respect for general ISO policies, especially those concerning intellectual rights and the use of SI units.⁵¹

Publication of IWA. The workshop documents shall contain a description of the workshop consensus achieved, including any recommendations for possible future actions or revisions to the workshop documents.⁵² This document will proceed to publication without additional reviews or approvals by any other body unless the case of appeal is prompt. Any party has the right to appeal if:⁵³ the workshop and the process to arrive at its document have not complied with these procedures; the document resulting from the workshop is not in the best interests of international trade and commerce, or such public factors as safety, health or the environment; or the contents of the document resulting from the workshop conflict with existing or draft ISO standard(s) or may be detrimental to the reputation of ISO. Workshops decide on the content of the documents, which are sent to the ISO Central Secretariat for publication as IWA, numbered in a special IWA series, and include the list of participants in the workshop that developed it.⁵⁴ A detailed procedure for the development of International Workshop Agreements (IWAs) is given in ISO/IEC Directives Part 1, Annex SI.⁵⁵

⁵⁰ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:
<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁵¹ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:
<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁵² ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:
<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁵³ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:
<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁵⁴ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:
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⁵⁵ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:
<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

1.6 THE ISO GUIDE DEVELOPMENT PROCESS

Guides are “documents that provide advice to standards writers on how to deal with specific issues when drafting standards; or to national standards bodies on how to deal with issues specific to standardisation principles”.⁵⁶ ISO Guides are developed by ISO's Policy Development Committees, or by an IEC Advisory Committee or Strategic Group, an ISO group reporting to the ISO technical management board, or an ISO/IEC Joint Coordination Group.⁵⁷ When the group that prepares the Guide obtains the consensus, the draft is disseminated to ISO member bodies for Enquiry Vote. A draft is approved when at least $\frac{3}{4}$ of the votes by the ISO member bodies are positive.⁵⁸

The development processes of ISO deliverables are given in Figure 10. Except for IWA, the development process of ISO deliverables is the responsibility of Technical Committees (TCs). The IWA is a document developed outside the ISO Committee system to enable stakeholders from the market to discuss in an “open workshop” environment.⁵⁹

⁵⁶ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

⁵⁷ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

⁵⁸ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

⁵⁹ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

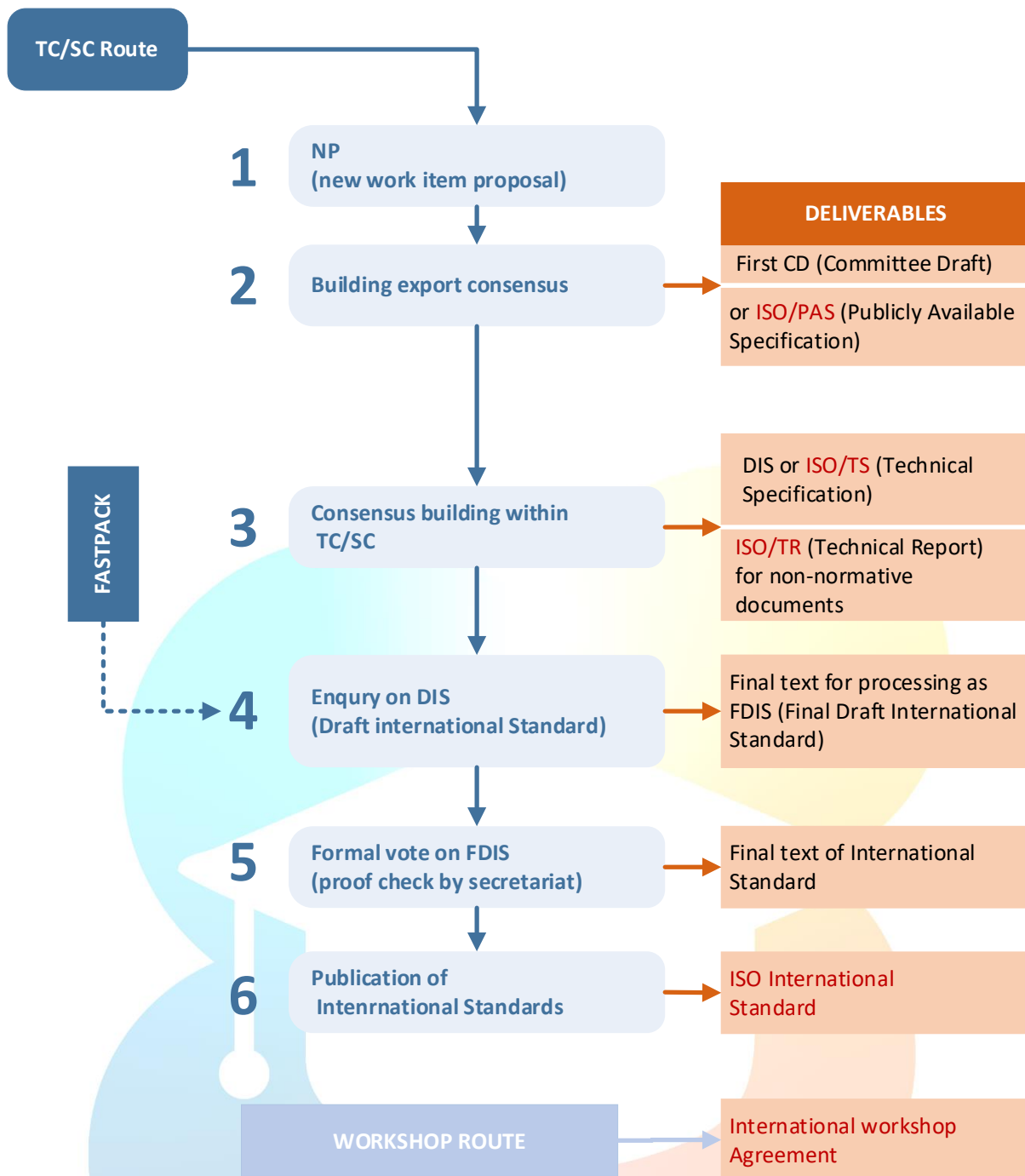


Fig. 10. ISO deliverables⁶⁰

⁶⁰ ISO. (2022). ISO deliverables. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/deliverables-all.html>

The development processes of ISO deliverables consist of the Proposal stage, Preparatory stage, Committee stage, Enquiry Stage, Approval stage and Publication. Proposal, Enquiry and Publication stages are obligatory and others could be skipped following ISO/IEC Directives Part 1 and Consolidated ISO Supplement. The first step in developing ISO deliverables is submitting a new work item proposal (NP) to the Committee for the vote using the electronic balloting portal. NP is submitted using Form 4, also nominating the project leader in the form. In the preparatory phase, the parent Committee will set up a working group (WG) which is made up of experts and a Convenor (usually the Project leader) who will prepare the working draft (WD). Upon finishing the draft, it is forwarded to the WG's parent Committee, which then decides whether to move to the Committee stage or Enquiry stage next.⁶¹ To finish the principal stage, consensus must be reached on the technical content. To achieve a consensus on the technical content, National Bodies will carefully study the texts of Committee drafts and submit all pertinent comments to the Committee, which have to be considered by Committee.⁶² This stage is not obligatory, and Committees may decide to skip it following Annex SS of ISO/IEC Directives Part 1 and Consolidated ISO Supplement.⁶³ At the Enquiry stage, the Committee Manager will submit The Draft International Standard (DIS) to ISO Central Secretariat. At that stage, the draft will be circulated to all ISO members who need to comment and vote on it using the submission interface to submit votes.⁶⁴ The DIS is approved at voting for the DIS with a qualified majority in which 2/3 of the P-members are in favour, and less than ¼ of the total votes are negative. If no technical changes are introduced in the draft after voting, the project can go to publication.⁶⁵ The approval stage is used only for DIS that has incorporated technical changes following comments at the DIS stage (even if the DIS has been approved) and will have to include the FDIS stage. In this stage Committee Manager submits the Final Draft International Standard (FDIS) to ISO/Central Secretariat (ISO/CS).⁶⁶ Then, upon circulating among all ISO members for an eight weeks vote (using The Submission Interface should when sending the draft to ISO/CS), the standard is approved if a qualified majority of two-thirds of the P-members of the TC/SC are in favour and no more than one-quarter of the total number of votes cast are negative. After passing through the Approval stage, the manager will submit the project leader's responses to member body

⁶¹ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

⁶² ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁶³ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022 Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁶⁴ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁶⁵ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁶⁶ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

comments on the FDIS.⁶⁷ If the approval stage were skipped, the secretary would submit the final document for publication.

If there is an urgent market need, a Committee can prepare and publish a Publicly Available Specification when a need arises for a preliminary document prior to the development of a full International Standard, or the Committee has adopted a published document from an external organisation, which in the IEC may result in a dual logo publication with the external organisation, or the Committee has developed a document it wants to publish as per international standard. PAS must not conflict with an existing International Standard, although Competing Publicly Available Specifications on the same subject are permitted.⁶⁸ When proposing PAS, an optional Committee may be recommended by the Chair. To initiate the process simple majority vote of the Committee P members voting is needed.⁶⁹ PAS is approved for publication after Committee P-members vote to publish the document as PAS by a simple majority. Technical Specification, which also may contain normative provisions, can be prepared and published by a Committee if the subject in question is still under development or if the Committee has developed a document it wishes to publish as International Standard but fails the vote.⁷⁰ The preparatory and approval stages are required and shall be carried out according to the steps defined for standard development.⁷¹ The TS is approved at voting with the qualified majority, in which 2/3 of the P-members vote positively. If technical changes are introduced in the draft after voting, a subsequent ballot shall be required to approve the revised draft.⁷²

A Technical Report (TR) can be published by a Committee when it needs to provide a rationale for specific requirements in a related International Standard or to publish information not normally published as an International Standard, which can be, for example, information obtained from a survey carried out among the National Bodies, information on work in other international organisations or information on the "state of the art" concerning standards of National Bodies on a particular subject.⁷³ This report is purely informative and doesn't contain requirements, recommendations, or permissions, nor contain any matter implying that

⁶⁷ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

⁶⁸ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁶⁹ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022 Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁷⁰ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁷¹ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁷² ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

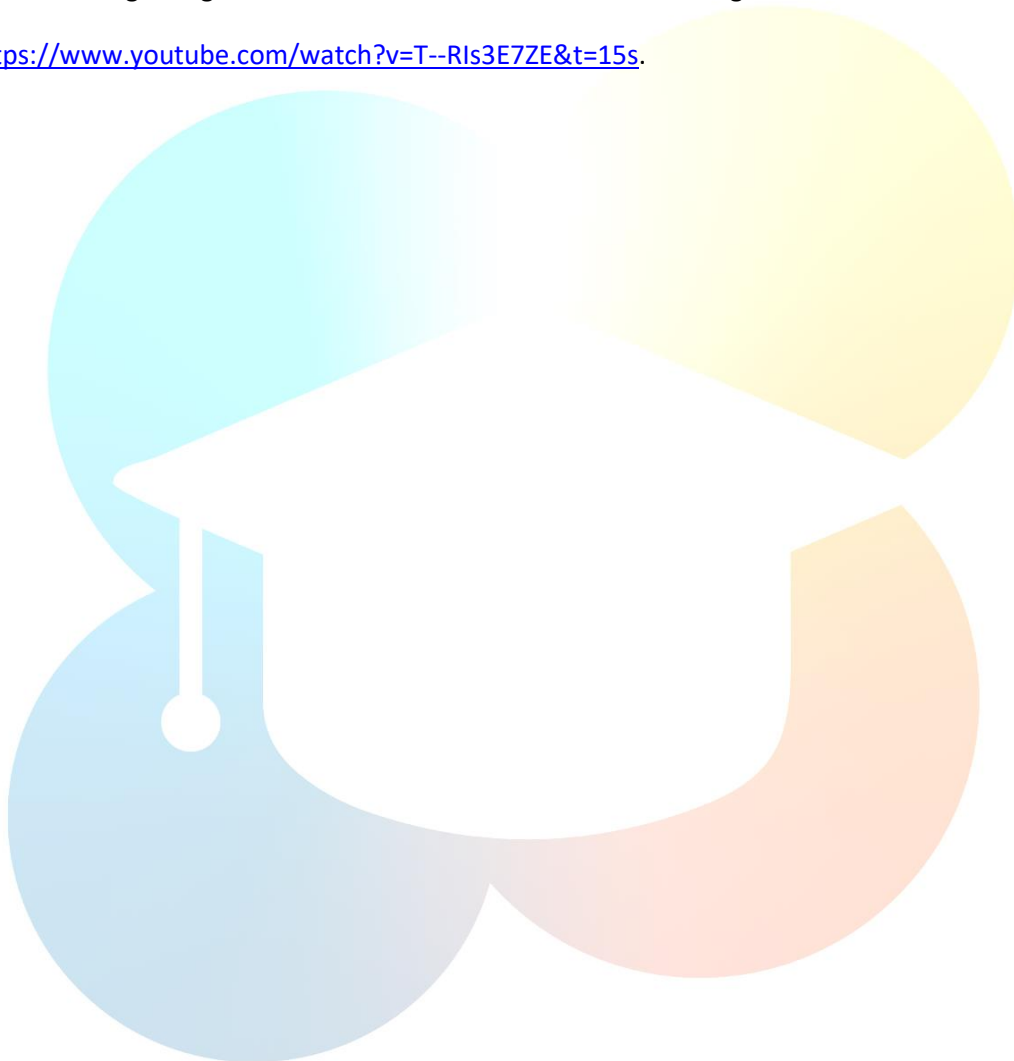
⁷³ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Annex SI- Procedure for the development of International Workshop Agreements (IWA). Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

it is normative.⁷⁴ The Committee initiates the Technical Report by a simple majority decision of the P-members. Stages required are the preparatory stage as set out in the preparatory stage for international standard development and the approval stage for publication; also, an optional Committee stage can be used in standard development. To publish the document as a Technical report, the Committee needs a simple majority vote of the P-members voting. Only editorial changes are allowed at this point; otherwise, new voting is required to approve the revised draft. Upon agreement on the publication of a Technical Report, the draft is submitted electronically by the Committee's Secretariat to the Office of the CEO for publication.

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The video material regarding ISO deliverables is available at the following link:

 <https://www.youtube.com/watch?v=T--RIs3E7ZE&t=15s>.



⁷⁴ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁷⁵ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

2 THE DEVELOPMENT PROCESS OF IEC STANDARDS AND OTHER DELIVERABLES

The International Electrotechnical Commission (IEC) develops its deliverables for specific electrical, electronic, and information technology areas.⁷⁶ Except for International Standards (ISs), IEC Technical Specifications (TSs), IEC Technical Reports (TRs), IEC Publicly available specifications (PASs), and IEC Guides, the deliverables developed by IEC are IEC Amendments, IEC Systems Reference Deliverables (SRDs), Technical Corrigenda, and Interpretation Sheets.

IEC Technical Specification (IEC/TS). The IEC/TS addresses ISs in terms of detail and completeness. Still, it has not yet passed through all ISs development approval stages because consensus has not been reached or standardisation is considered immature.⁷⁷

IEC Technical Report (IEC/TR). The IEC/TR focuses on a particular subject and contains data, measurement techniques, test approaches, case studies, methodologies and other valuable information for standards developers and other interested parties. They are never normative documents.⁷⁸

IEC Publicly available specification (IEC/PAS). THE IEC/PAS aims to speed up standardisation in fast-evolving technology, and it is developed to respond to an urgent market need. Also, the ISO/PAS brings the work of industry into the domain of the IEC.⁷⁹

IEC Guides. IEC Guides include rules, orientation, advice or recommendations for international standardisation and conformity assessment.⁸⁰

IEC Systems Reference Deliverable (IEC/SRD). The IEC/SRD is a guidance document that can address Standards Mapping, Roadmap(s), Databases, Architectures, Profiles, Interfaces and transfer functions across the domain, Use Cases, and Domain Definition.⁸¹

⁷⁶ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

⁷⁷ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

⁷⁸ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

⁷⁹ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

⁸⁰ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

⁸¹ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://webstore.iec.ch/webstore/webstore.nsf/xpFAQ.xsp?OpenXPage&id=GFOT-BCGB2Q>

The IEC Interpretation Sheet provides a formal explanation of an urgent request by standard users (e.g. testing laboratory, certification body, manufacturer, etc.).⁸²

The IEC Amendment adds to previously agreed technical provisions in an existing international standard.⁸³

The IEC Technical Corrigendum is issued to correct a technical error or ambiguity in ISs, an IEC/Ts, an IEC/TR, or an IEC/PAS, unintentionally introduced either in drafting or in printing, which could lead to the incorrect or unsafe application of the publication.⁸⁴

To learn more about the IEC deliverables, please visit the following link:

 <https://www.iec.ch/publications>

⁸² IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>.

⁸³ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

⁸⁴ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

SUMMARY

The International Organisation for Standardisation (ISO) is an organisation that develops International Standards (ISs) and other deliverables, such as ISO Technical Specifications (ISO/TSSs), ISO Technical Reports (ISO/TRs), ISO Publicly Available Specifications (ISO/PASs), International Workshop Agreements (IWAs), and ISO Guides.⁸⁵ ISO distinguishes the normative and the informative deliverables regarding what their content includes.⁸⁶ International Standards (ISs), ISO Technical Specifications (ISO/TSSs), and ISO Publicly Available Specifications (ISO/PASs) are normative deliverables, ISO Technical Reports (ISO/TRs) are informative deliverables, and International Workshop Agreements (IWAs) and ISO Guides do not fit these categories. The International Electrotechnical Commission (IEC) develops its deliverables for specific electrical, electronic, and information technology areas.⁸⁷ The International Electrotechnical Commission (IEC) develops its deliverables for specific electrical, electronic, and information technology areas. Except for International Standards (ISs), IEC Technical Specifications (IEC/TSSs), IEC Technical Reports (IEC/TRs), IEC Publicly Available Specifications (IEC/PASs), and IEC Guides, the IEC deliverables developed by IEC are IEC Amendments, IEC Systems Reference Deliverables (IEC/SRDs), IEC Technical Corrigenda, and IEC Interpretation Sheets.

⁸⁵ ISO/IEC. (2022). ISO/IEC Directives, Part 1 — Consolidated ISO Supplement — Procedure for the technical work — Procedures specific to ISO, Thirteenth edition, 2022, Accessed on January 26, 2023. Retrieved from:

<https://isotc.iso.org/livelink/livelink?func=ll&objId=4230452&objAction=browse&sort=subtype>

⁸⁶ ISO. (2019). ISO training. ISO deliverables. Accessed on January 26, 2023. Retrieved from:

<https://www.youtube.com/watch?v=T--RIs3E7ZE&t=15s>

⁸⁷ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

GLOSSARY

Amendment

adds to previously agreed technical provisions in an existing international standard.⁸⁸

International Standard (IS)

a "standard that is adopted by an international standardising/standards organisation and made available to the public".⁸⁹

ISO Deliverables

are ISO Standards, ISO/TS Technical Specifications, ISO/TR Technical Reports, ISO/PAS Publicly Available Specifications, IWA International Workshop Agreements, and ISO Guides.

ISO Guides

are "documents that provide advice to standards writers on how to deal with specific issues when drafting standards; or to national standards bodies on how to deal with issues specific to standardisation principles".⁹⁰

ISO Publicly Available Specifications (ISO/PAS)

If there is an urgent market need, a Committee can prepare and publish a Publicly Available Specification when a need arises for a preliminary document prior to the development of a full International Standard, or the Committee has adopted a published document from an external organisation, which in the IEC may result in a dual logo publication with the external organisation, or the Committee has developed a document it wants to publish as per international standard. PAS must not conflict with an existing International Standard, although Competing Publicly Available Specifications on the same subject are permitted.⁹¹

⁸⁸ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

⁸⁹ ISO/IEC. (2004). ISO/IEC Guide 2:2004 Standardisation and related activities — General vocabulary. Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink/Open/8389141>

⁹⁰ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

⁹¹ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

ISO Technical Report (ISO/TR)

can be published by a Committee when it needs to provide a rationale for specific requirements in a related International Standard or to publish information not normally published as an IS, which can be, for example, information obtained from a survey carried out among the National Bodies, information on work in other international organisations or information on the "state of the art" concerning standards of National Bodies on a particular subject. This report is purely of informative nature and doesn't contain requirements, recommendations, or permissions nor contain any matter implying that it is normative.⁹²

ISO Technical Specification (ISO/TS)

"a document that prescribes technical requirements to be fulfilled by a product, process or service". A technical specification may be "a standard, a part of a standard, or independent of a standard".⁹³

International Workshop Agreements (IWA)

a document developed outside the ISO Committee system to enable stakeholders from the market to discuss in an "open workshop" environment.⁹⁴

IEC Technical Specification (IEC TS)

addresses an IS in terms of detail and completeness. Still, it has not yet passed through all IS development approval stages because consensus has not been reached or standardisation is considered immature.⁹⁵

IEC Publicly available specification (IEC PAS)

aims to speed up standardisation in fast-evolving technology, and it is developed to respond to an urgent market need. PAS brings the work of industry fora and consortia into the domain of the IEC.⁹⁶

⁹² ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

⁹³ ISO/IEC. (2004). ISO/IEC Guide 2:2004 Standardisation and related activities — General vocabulary. Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink/Open/8389141>

⁹⁴ ISO. (2022a). Stages and resources for standards development. Accessed on January 26, 2023. Retrieved from: <https://www.iso.org/stages-and-resources-for-standards-development.html#>

⁹⁵ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

⁹⁶ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

IEC Technical Report (IEC TR)

focuses on a particular subject and contains data, measurement techniques, test approaches, case studies, methodologies and other valuable information for standards developers and other interested parties. However, they are never normative documents.⁹⁷

IEC Guides

include rules, orientation, advice or recommendations for international standardisation and conformity assessment.⁹⁸

IEC Systems Reference Deliverable (IEC SRD)

is a guidance document that can address Standards Mapping, Roadmap(s), Databases, Architectures, Profiles, Interfaces and transfer functions across the domain, Use Cases, and Domain Definition.⁹⁹

Interpretation Sheet

provides a formal explanation of an urgent request by a user of a standard (testing laboratory, certification body, manufacturer, etc.).¹⁰⁰

state-of-the-art

“a developed stage of technical capability at a given time as regards products, processes, and services, based on the relevant consolidated findings of science, technology, and experience”.¹⁰¹

Technical Corrigendum

⁹⁷ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

⁹⁸ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

⁹⁹ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://webstore.iec.ch/webstore/webstore.nsf/xpFAQ.xsp?OpenXPage&id=GFOT-BCGB2Q>

¹⁰⁰ IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

¹⁰¹ ISO/IEC (2004). ISO/IEC Guide 2:2004 Standardisation and related activities — General vocabulary. Accessed on January 26, 2023. Retrieved from: <https://isotc.iso.org/livelink/livelink/Open/8389141>

is issued to correct a technical error or ambiguity in an IS, a TS, a PAS, or a TR unintentionally introduced either in drafting or in printing, which could lead to the incorrect or unsafe application of the publication.¹⁰²



¹⁰² IEC. (2023). Accessed on January 26, 2023. Retrieved from: <https://www.iec.ch/publications>

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Appendix I. CASE STUDY

The ISO published an interesting model document of the standard draft following the ISO/IEC Directives, Part 2, 2016, Principles and rules for the structure and Drafting of ISO and IEC documents. To see the model document of an International Standard, please visit the following link:

 https://www.iso.org/files/live/sites/isoorg/files/developing_standards/docs/en/model_document-rice_model.pdf





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