



Technical Report

ISO/IEC TR 33023

Information technology — Process assessment — Application of ISO/ IEC TS 33073 processes to the ISO/IEC 33020 process capability measurement scale

*Technologies de l'information — Évaluation du processus —
Application des processus ISO/IEC TS 33073 à l'échelle de la
mesure de la capacité de processus de l'ISO/IEC 33020*

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Foreword

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Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

Introduction

This document provides a mapping of the ISO/IEC TS 33073 processes to the ISO/IEC 33020 process attributes with the intent of demonstrating support for the levels 1 to 3 of the ISO/IEC 33020 process capability measurement framework.

This document is primarily addressed to developers of process assessment models for the process quality characteristic of process capability. It is also addressed to the lead assessor and other stakeholders, such as the sponsor of the assessment, who need to be assured that the requirements of the ISO/IEC 33020 process measurement framework have been met.

Within this document:

- [Clause 4](#) provides a summary description of the relationship between the ISO/IEC 33020 process attribute outcomes and the ISO/IEC TS 33073 processes.
- [Annex A](#) extends the summary mapping in [Clause 4](#) by providing details of the relationship between the ISO/IEC 33020 process attribute outcomes and the ISO/IEC TS 33073 process outcomes. Links to the information items listed in [Annex C](#) are identified. These details are provided for validating by inspection the relationships between the ISO/IEC 33020 process attribute outcomes and the ISO/IEC TS 33073 process outcomes.
- [Annex B](#) focuses on the relationships between the generic practices associated with ISO/IEC 33020 and the ISO/IEC TS 33073 base practice descriptions. These model elements are linked via the information item characteristics listed in [Annex C](#).
- [Annex C](#) provides a listing of the applicable information items and their characteristics.
- [Annex D](#) provides an overview of the key concerns arising from the application of ISO/IEC/IEEE 24774 when attempting to demonstrate objective relationships between process model elements.

Information technology — Process assessment — Application of ISO/IEC TS 33073 processes to the ISO/IEC 33020 process capability measurement scale

1 Scope

This document provides a specification for associating the processes of ISO/IEC TS 33073 with the process attribute outcomes of ISO/IEC 33020 with the intent of demonstrating support for levels 1 to 3 of the process capability measurement scale defined in ISO/IEC 33020.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 33001, *Information technology – Process Assessment – Concepts and vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 33001 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Content of the process capability measurement framework

4.1 General

In ISO/IEC 33020:2019, Clause 5 the relationship between process attributes and process capability levels is described.

Process capability is defined in ISO/IEC 33020:2019 Clause 5 on a six-point ordinal scale that enables process capability to be assessed from the bottom of the scale, 'incomplete', through to the top end of the scale, 'innovating'. The scale represents increasing capability of an implemented process, from failing to achieve the process purpose through to continually improving and able to respond to process change.

The relationship between the process capability levels and the process attributes is shown in [Table 1](#). In addition, a summary view is presented of the relationship of the process attributes to the processes associated with ISO/IEC TS 33073.

The process ORG-03 supplier management from ISO/IEC TS 33073:2017 do not appear in the list in [Table 1](#). The outcomes of this process do not have any discernible relationship to the process attribute outcomes of ISO/IEC 33020.

The name of the process ORG-01 (asset management) has been renamed in this document as customer property management in order to bring it in line with the intent of ISO 9001:2015, 8.5.3 (property belonging to customers or external providers).

A knowledge management process (COM-12) has been added to the ISO/IEC TS 33073 common processes list. This process has been added to support the intent of ISO 9001:2015, 7.1.6 (organizational knowledge). In order to support the intent of ISO/IEC 33020:2019 PA 3.1 and 3.2, COM-12 is supported in this document as COM-12A (Knowledge Management: Establish) and as COM-12B (Knowledge Management: Maintain).

Table 1 — Relationship between the ISO/IEC 33020 process capability levels and process attributes, and the ISO/IEC TS 33073 processes

Process capability level	ISO/IEC 33020:2019 process attribute outcomes	Reference	ISO/IEC TS 33073:2017 processes
1	5.2.3.2 PA 1.1 Process performance process attribute	-	The processes in this group are typically identified in the assessment scope. Certain processes in ISO/IEC TS 33073, namely, ORG-01, and members of the TEC process group, are likely candidates.
2	5.2.4.2 PA 2.1 Performance management process attribute	COM-01	Communication management
		COM-11	Risk management
		TEC-05.1	Product/service planning
		TEC-05.2	Product/service control
2	5.2.4.3 PA 2.2 Documented information management process attribute	COM-02	Documentation management
		TEC-01	Configuration management
3	5.2.5.2 PA 3.1 Process definition process attribute	COM-03.1	Human resource management: Determine competencies
		COM-08	Operational planning
		COM-10.1	Performance evaluation: Establish
		COM-12.1	Knowledge management: Establish
		TOP-01	Leadership
3	5.2.5.3 PA 3.2 Process deployment process attribute	COM-03.2	Human resource management: Provide competencies
		COM-06	Management review
		COM-09	Operational implementation and control
		COM-12.2	Knowledge management: Maintain
		ORG-02	Measurement resource management
3	5.2.5.4 PA 3.3 Process assurance process attribute	COM-04	Improvement
		COM-05	Internal audit
		COM-07	Non-conformity management
		COM-10.2	Performance evaluation: Perform
		TEC-02	Process changes

4.2 Relationships between model elements

The rationale for the selection of the ISO/IEC TS 33073 processes and their associations with the ISO/IEC 33020 process attribute outcomes can be found in [Annexes A](#) and [B](#).

[Annex A](#) elaborates the summary mapping in [Clause 4](#) by providing extended details of the relationship between the ISO/IEC 33020 process attribute outcomes and the ISO/IEC TS 33073 process outcomes. Links to the information items described in [Annex C](#) are provided in a summary format. The level of detail provides the basis for validating by inspection the relationships between the ISO/IEC 33020 process attribute outcomes and the ISO/IEC TS 33073 process outcomes.

[Annex B](#) focuses on the relationships between the ISO/IEC 33020 generic practices and the ISO/IEC TS 33073 base practice descriptions. These model elements are linked via the information item characteristics, as listed in [Annex C](#).

Annex A

(informative)

Associations between the ISO/IEC 33020 process attribute outcomes, ISO/IEC TS 33073 process outcomes and information items

A.1 General

This annex describes the relationships between the ISO/IEC 33020 process attribute outcomes and the ISO/IEC TS 33073 process outcomes. The model outcomes are linked by applicable information item characteristics, as described in [Annex D](#).

A.2 Associations between the ISO/IEC 33020 process attribute outcomes, ISO/IEC TS 33073 processes and information items

Information item characteristics provide the link between the ISO/IEC 33020 process attribute outcomes and the ISO/IEC TS 33073 process outcomes. Each linked information item in [Table A.1](#) is indicated by its reference label and name, and the reference number of the characteristic.

[Table A.1](#) provides the basis for a detailed validation by inspection of the associations between the ISO/IEC 33020 process attribute outcomes and ISO/IEC TS 33073 process outcomes in accordance with ISO/IEC/IEEE 24774:2021, Annex B model mapping considerations.

Table A.1 — Associations between the ISO/IEC 33020 process attribute outcomes, ISO/IEC TS 33073 process outcomes and information item characteristics

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
5.2.3.2	PA 1.1 Process performance process attribute 1) the process achieves its defined process outcomes.	ORG-01	Customer property management 1) Items requiring customer property management are identified.	07-1 Product asset 1)
		ORG-01	Customer property management 2) Customer property status is known.	08-46 Product asset communication record 1)
		ORG-01	Customer property management 3) Changes to customer supplied product under management is controlled.	08-46 Product asset communication record 1)
		ORG-01	Customer property management 4) The integrity of customer supplied product is assured.	07-1 Product asset 2)
		TEC-03	Product/ service changes 1) Product/ service change requests are identified and classified.	11-13 Product/service design change request 1)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
		TEC-03	Product/ service changes 2) Product/ service change requests are assessed using defined criteria.	08-54 Product/ service design change evaluation result 1)
		TEC-04	Product/ service design 1) Design for each product/ service component is developed in accordance with defined requirements.	03-47 Product/ service design 1)
		TEC-04	Product/ service design 2) External and internal interfaces for each product/ service component are defined.	03-47 Product/ service design 2)
		TEC-06	Product/ service quarantine 1) Product/ service that does not conform to requirements is identified.	08-38 Nonconformity: Documentation 1)
		TEC-06	Product/ service quarantine 2) Nonconforming product/ service is placed under quarantine.	11-10 Nonconforming product quarantine request 1)
		TEC-06	Product/ service quarantine 3) Alternative approaches are identified regarding disposition of the nonconforming product/ service.	08-28 Nonconforming output disposition record 1)
		TEC-06	Product/ service quarantine 4) Agreed actions are taken regarding disposition of nonconforming product/ service.	08-32 Nonconforming product disposition evaluation result 1), 2)
		TEC-06	Product/ service quarantine 5) Product/ service that has been corrected is re-verified to demonstrate conformity to requirements.	08-35 Nonconforming product re-verification record 1)
		TEC-06	Product/ service quarantine 7) Product / service is released from quarantine when authorised.	08-33 Nonconforming product quarantine release authorisation 1)
		TEC-07	Product/ service requirements 1) The required characteristics and context of use of products/ services are identified.	12-23 Product/ service requirements 5)
		TEC-07	Product/ service requirements 2) The constraints for a product/ service solution are defined.	12-23 Product/ service requirements 8), 9), 10)
		TEC-07	Product/ service requirements 3) The requirements for the product/ service are defined.	12-23 Product/ service requirements 1), 2), 3), 4), 6), 7), 11), 12)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
		TEC-07	Product/ service requirements 4) The requirements for validating the product/ service are defined.	08-66 Product/service requirements review record 1)
		TEC-08	Product/ service review 1) Criteria for the review of product/ service is identified.	08-59 Product/service performance review record 3)
		TEC-08	Product/ service review 3) Required review activities are performed.	08-59 Product/service performance review record 1) 08-66 Product/service requirements review record 1)
		TEC-08	Product/ service review 4) Action items are identified.	08-59 Product/service performance review record 2) 08-66 Product/service requirements review record 2)
		TEC-09	Product/ service supply 2) Product/ service request(s) are evaluated in terms of mandated product/ service delivery criteria.	03-39 Management system strategy: supplier capability 1) 08-66 Product/service requirements review record 1)
		TEC-09	Product/ service supply 3) A response to a customer's product/ service request is produced.	08-65 Product/service requirements communication record 1)
		TEC-09	Product/ service supply 6) Conformity to applicable stated and implied customer and supplier requirements by internal processes and/or product/ service provided is verified.	03-50 Product/service objectives 2) 08-63 Product/service release approval record: Conformity 1)
		TEC-10	Product/ service validation 3) Required validation activities are performed.	08-72 Product/service validation record 1)
		TEC-11	Product/ service verification 3) Required verification activities are performed.	08-75 Product/service verification record 1), 2)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
5.2.4.2	PA 2.1 Performance management process attribute 1) results to be achieved are determined and communicated;	TEC-05.1	Product/service planning 1) The objectives for the scope of the work associated with the development of the product/service are defined.	03-50 Product/service objectives 1) 04-06 Product/service lifecycle model: Establish 1), 2)
5.2.4.2	PA 2.1 Performance management process attribute 2) risks that can affect performance of the process are determined and addressed;	COM-11	Risk management 1) Criteria for the assessment of risks and the acceptable level of risk are identified.	03-57 Risk and opportunity identification criteria 1)
		COM-11	Risk management 2) Risks are identified.	08-79 Risks and opportunities: identification 1)
		COM-11	Risk management 6) Selected risks are treated.	08-78 Risk treatment action log 1)
		TEC-05.1	Product/service planning 6) Plans for the development of the product/service are developed.	04-08 Risk management planning 1) 04-09 Risk management planning: risk treatment effectiveness evaluation 1) 04-10 Risk management planning: risk treatment implementation 1) 04-11 Risk management planning: risk treatment options 1)
5.2.4.2	PA 2.1 Performance management process attribute 3) performance of the process is planned, monitored, measured, evaluated and adjusted (as needed);	TEC-05.1	Product/service planning 1) The objectives for the scope of the work associated with the development of the product/service are defined.	04-06 Product/service lifecycle model: Establish 13), 15)
		TEC-05.1	Product/service planning 2) The feasibility of achieving the objectives of the product/service development with available resources and constraints are evaluated.	08-57 Product/service feasibility review record 1)
		TEC-05.1	Product/service planning 3) The tasks and resources necessary to complete the product/service development are sized and estimated.	03-49 Product/service lifecycle model: Planning 4), 5), 6) 04-06 Product/service lifecycle model: Establish 6), 7), 8)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
		TEC-05.1	Product/service planning 5) Interfaces between customer and relevant interested parties are identified.	04-06 Product/service lifecycle model: Establish 14)
		TEC-05.1	Product/service planning 6) Plans for the development of the product/service are developed.	03-46 Product/service delivery: Planning 1), 2), 3) 04-06 Product/service lifecycle model: Establish 5)
		TEC-05.2	Product/service control 5) Deviations in product/service performance from plans are investigated and analysed.	08-60 Product/service provision change evaluation record 2) 09-08 Product/service planning performance evaluation report 1)
		TEC-05.2	Product/service control 7) Corrective action is defined and directed, when product/service achievement is not meeting targets.	08-58 Product/service implementation record 1), 2), 3) 08-60 Product/service provision change evaluation record 1)
		TEC-05.2	Product/service control 8) Product/service replanning is initiated, as necessary.	08-64 Product/service release record 1)
		TEC-05.2	Product/service control 9) Product/service action to progress (or not) from one scheduled milestone or event to the next is authorized.	08-64 Product/service release record 1)
		TEC-05.2	Product/service control 10) Product/service objectives are achieved.	08-64 Product/service release record 1)
5.2.4.2	PA 2.1 Performance management process attribute 4) responsibilities and authorities for performing the process are determined, assigned and communicated;	TEC-05.1	Product/service planning 4) The responsibilities and authorities needed at each stage of product/service development are identified.	04-06 Product/service lifecycle model: Establish 9)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
5.2.4.2	PA 2.1 Performance management process attribute 5) resources necessary for performing the process are determined, provided and maintained (as needed);	TEC-05.1	Product/service planning 3) The tasks and resources necessary to complete the product/service development are sized and estimated.	03-49 Product/service lifecycle model: Planning 1), 2), 3) 04-06 Product/service lifecycle model: Establish 10) 12-25 Product/service resource requirements 1)
		TEC-05.2	Product/service control 1) Performance measures or assessment results are available.	03-48 Product/service lifecycle model: Control 1)
		TEC-05.2	Product/service control 3) Adequacy of resources is assessed.	03-48 Product/service lifecycle model: Control 2)
		TEC-05.2	Product/service control 4) Progress reviews are performed.	03-48 Product/service lifecycle model: Control 1)
5.2.4.2	PA 2.1 Performance management process attribute 6) person(s) performing the process are competent on the basis of appropriate education, training, or experience;	TEC-05.1	Product/service planning 4) The responsibilities and authorities needed at each stage of product/service development are identified.	08-51 Product/service competencies: Provision: Planning 1)
		TEC-05.2	Product/service control 2) Adequacy of roles, responsibilities, accountabilities, and authorities is assessed.	08-50 Product/service competencies: Provision: Control 1)
5.2.4.2	PA 2.1 Performance management process attribute 7) interfaces between the involved parties are managed to ensure both effective communication and the level of control expected.	COM-01	Communication management 1) Information content is defined in terms of identified communication requirements.	12-02 Communication requirements 1)
		COM-01	Communication management 2) Parties to communicate with are identified.	12-02 Communication requirements 3)
		COM-01	Communication management 3) The party responsible for the communication is identified.	12-02 Communication requirements 5)
		COM-01	Communication management 4) Events that require communication actions are identified.	12-02 Communication requirements 2)
		COM-01	Communication management 5) The channel for the communication is selected.	12-02 Communication requirements 4)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
		COM-01	Communication management 6) Information products are communicated to relevant interested parties.	08-03 Audit result communication record 1) 08-30 Nonconforming product customer communication record 1) 08-65 Product/service requirements communication record 2) 08-76 QMS Communication records 1), 2), 3)
		TEC-05.1	Product/service planning 5) Interfaces between customer and relevant interested parties are identified.	04-06 Product/service lifecycle model: Establish 11), 12) 12-04 Customer - interested parties interface considerations 1)
5.2.4.3	PA 2.2 Documented information management process attribute 1) requirements for the documented information of the process are determined;	COM-02	Documentation management 4) Documented information is current, complete and valid.	12-09 Information management requirements: preservation 2), 3)
5.2.4.3	PA 2.2 Documented information management process attribute 2) requirements for control of the documented information are determined;	COM-02	Documentation management 2) The forms of documented information representation are defined.	12-05 Documentation management requirements 1), 2), 3)
		COM-02	Documentation management 4) Documented information is current, complete and valid.	12-09 Information management requirements: preservation 1)
		TEC-01	Configuration management 1) Items requiring configuration management are identified.	03-51 Product/service taxonomy 1), 2)
		TEC-01	Configuration management 3) Changes to items under configuration management are controlled.	12-03 Configuration management requirements 1)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
5.2.4.3	PA 2.2 Documented information management process attribute 3) documented information is appropriately identified, and controlled according to requirements;	COM-02	Documentation management 1) Documented information to be documented is identified.	05-3 Quality policy: Documentation 1) 08-18 MS Implementation log: Documentation 1), 2) 08-25 Management review: Documentation 1) 08-39 Organizational competencies: Documentation 1)
		COM-02	Documentation management 2) The forms of documented information representation are defined.	03-02 Information item identification: External origin 1)
		COM-02	Documentation management 4) Documented information is current, complete and valid.	12-10 Information management requirements: status 1)
		COM-02	Documentation management 6) Documented information is available to relevant interested parties.	05-2 Quality policy: Availability 1) 12-07 Information management requirements 1), 2)
		TEC-01	Configuration management 2) The status of configuration items and modifications is known.	09-06 Product/service configuration status report 1)
5.2.4.3	PA 2.2 Documented information management process attribute 4) documented information is reviewed and approved for suitability and adequacy in accordance with planned arrangements and adjusted as necessary to meet requirements;	COM-02	Documentation management 5) Documented information is released according to defined criteria.	08-17 Information item approval record 1) 08-62 Product/service release approval record: Authorisation 1), 2)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
5.2.4.3	PA 2.2 Documented information management process attribute 5) documented information is determined, maintained and retained to the extent necessary to have confidence that the process has been performed as planned and to demonstrate the conformity of products and/or services to their requirements.	COM-02	Documentation management 1) Documented information to be documented is identified.	02-8 Process change implementation log: Documentation 1) 03-14 Management system (MS) scope: Documentation 1) 03-52 Product/service taxonomy: Documentation 1) 08-12 Corrective action: Documentation 1) 08-31 Nonconforming product customer communication record: Documentation 1) 08-43 Process change approval: Documentation 1)
		COM-02	Documentation management 3) The documented information content status is known.	03-14 Management system (MS) scope: Documentation 2) 08-67 Product/service requirements status record 1)
		COM-02	Documentation management 4) Documented information is current, complete and valid.	05-4 Quality policy: Maintenance 1), 2) 08-69 Product/service review: Documentation 1) 11-14 Product/service requirements change request 1)
		COM-02	Documentation management 7) Documented information is archived, or disposed of, as required.	12-08 Information management requirements: disposition 1)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
5.2.5.2	PA 3.1 Process definition process attribute 1) a standard process, including appropriate tailoring guidelines, is established and maintained that describes the fundamental elements that must be incorporated into a defined process;	COM-08	Operational planning 1) Process requirements are identified.	05-5 Quality policy: Requirements 2), 3), 4), 5) 12-01 Communication process requirements 1) 12-11 Infrastructure requirements 1) 12-14 Management system change evaluation criteria 1) 12-18 Process requirements: Environment 1)
		COM-08	Operational planning 7) Methods for monitoring the effectiveness and suitability of the process are determined.	03-18 Management system strategy: Establish the management system 5)
		COM-08	Operational planning 8) Plans for the deployment of the process are developed.	03-03 MS Measurement information gathering events 1), 2) 03-42 Organizational planning schedule 1) 04-03 Audit programme plan 1) 04-05 Management review schedule 1), 2) 04-07 Product/service review schedule 1) 08-80 Risks and opportunities: planning 1)
		COM-10.1	Performance evaluation: Establish 1) Performance monitoring and measurement needs are defined.	03-08 MS Measurement methods: Determination: Measurement 1)
		COM-10.1	Performance evaluation: Establish 2) Performance measures, derived from the performance measurement needs, are identified.	03-08 MS Measurement methods: Determination: Measurement 2) 03-40 Organizational measures 1)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
		COM-10.1	Performance evaluation: Establish 3) Performance measurement methods, supportive of the performance measures, are identified.	03-08 MS Measurement methods: Determination: Measurement 3)
		TOP-01	Leadership 1) The context of the organization, including the expectations of its relevant interested parties, are understood and analyzed.	03-11 MS Relevant Interested parties 1) 03-29 Management system strategy: external and internal issues 1) 12-12 MS Relevant Interested parties MS expectations 1)
		TOP-01	Leadership 2) The scope of management system activities is defined, taking the context of the organization into consideration.	03-13 Management system (MS) scope 1), 2), 3), 4), 5)
		TOP-01	Leadership 3) The management system policy and objectives are defined.	03-33 Management system strategy: management commitment 3), 4) 03-53 Quality objectives: Documentation 1), 2) 03-54 Quality objectives: Establish 1) 03-55 Quality objectives: Requirements 1), 2), 3), 4), 5), 6)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
		TOP-01	Leadership 4) The management system and operational process strategy is determined.	03-08 MS Measurement methods: Determination: Measurement 1), 2), 3) 03-09 MS Measurement methods: Determination: Quality assurance 1), 2), 3) 03-10 MS Measurement methods: Determination: Quality management 1), 2), 3) 03-15 Management system strategy: Determine the processes: Quality assurance 1) 03-16 Management system strategy: Determine the processes: Quality management 1) 03-17 Management system strategy: Documentation 1), 2) 03-18 Management system strategy: Establish the management system 1), 2) 03-30 Management system strategy: improvement 1), 2) 03-36 Management system strategy: process environment 1), 2), 3), 4), 5), 6), 7), 8), 9)
		TOP-01	Leadership 5) Commitment and leadership with respect to the management system is demonstrated.	03-33 Management system strategy: management commitment 1), 2), 5), 6), 7), 8), 9), 10), 11)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
5.2.5.2	PA 3.1 Process definition process attribute 2) the required inputs and the expected outputs for the standard process are determined;	COM-08	Operational planning 2) Process input and output products are determined.	03-18 Management system strategy: Establish the management system 3)
		TOP-01	Leadership 4) The management system and operational process strategy is determined.	03-37 Management system strategy: product preservation 1)
5.2.5.2	PA 3.1 Process definition process attribute 3) sequence and interaction of the standard process with other processes is determined;	COM-08	Operational planning 4) The sequence and interaction of the process with other processes is determined.	03-18 Management system strategy: Establish the management system 4)
5.2.5.2	PA 3.1 Process definition process attribute 4) roles, competences, responsibilities and authorities for performing the standard process are determined;	COM-03.1	Human resource management: Determine competencies 1) The competencies required by the organization to produce products and services are identified.	12-16 Organizational competence: Requirements 1)
		COM-08	Operational planning 5) The required competencies and roles for performing the process are identified.	03-44 Organizational roles and responsibilities 1) 12-16 Organizational competence: Requirements 1) 12-17 Organizational roles and responsibilities 1), 2), 3), 4), 5)
5.2.5.2	PA 3.1 Process definition process attribute 5) resources for performing the standard process are determined;	COM-08	Operational planning 6) The required resources for performing the process are identified.	03-43 Organizational resource needs 1) 12-13 MS Resource requirements 1), 2), 3), 4)
5.2.5.2	PA 3.1 Process definition process attribute 6) knowledge necessary for the operation of the standard process is determined [and maintained].	COM-12.1	Knowledge management: Establish 1) A taxonomy for the application of knowledge assets is identified.	03-31 Management system strategy: knowledge: establish 1)
		COM-12.1	Knowledge management: Establish 2) The organizational knowledge, skills, and knowledge assets are developed or acquired.	03-31 Management system strategy: knowledge: establish 2)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
5.2.5.3	PA 3.2 Process deployment process attribute 1) a defined process is deployed based upon an appropriately tailored standard process;	COM-06	Management review 1) The objectives of the review are established.	03-12 Management review: Objectives 1), 2)
		COM-06	Management review 2) The status and performance of an activity or process are assessed in terms of the established objectives.	08-26 Management review: Implementation 1)
		COM-06	Management review 3) Risks, problems and opportunities for improvement are identified.	08-26 Management review: Implementation 2), 3)
		COM-09	Operational implementation and control 3) Actions required to achieve the management system objectives are implemented.	08-19 MS Implementation log: Implement 1), 2) 08-20 MS Implementation log: Provide 1), 2), 3) 08-21 MS Implementation: Maintain 1)
		ORG-02	Measurement resource management 2) Measurement resources for performing tests and calibrations is acquired.	08-20 MS Implementation log: Provide 3)
5.2.5.3	PA 3.2 Process deployment process attribute 2) required roles, responsibilities and authorities necessary for performing the defined process are assigned and communicated;	COM-09	Operational implementation and control 1) The required roles, responsibilities and authorities are allocated.	03-21 Management system strategy: Responsibilities: Quality management 1), 2) 03-38 Management system strategy: roles and responsibilities 1), 2) 08-81 Roles and responsibilities assignment record 1)
5.2.5.3	PA 3.2 Process deployment process attribute 3) required person(s) necessary for performing the defined process are competent on the basis of defined education, training and experience;	COM-03.2	Human resource management: Provide competencies 1) Identified competency gaps are filled through training or recruitment.	12-15 Organizational competence: Provision 2) 12-22 Product/service competence: Provision 2)

Table A.1 (continued)

ISO/IEC 33020:2019 process attribute outcomes	Description	ISO/IEC TS 33073:2017 processes	Description	ISO/IEC TS 33073:2017 information items
		COM-03.2	Human resource management: Provide competencies 2) Understanding of roles and activities in achieving organizational objectives in product and service provision is demonstrated by each person.	08-40 Organizational competencies: Evaluation record 1) 12-15 Organizational competence: Provision 1) 12-22 Product/service competence: Provision 1)
		COM-09	Operational implementation and control 3) Actions required to achieve the management system objectives are implemented.	12-15 Organizational competence: Provision 1), 2) 12-22 Product/service competence: Provision 1), 2)
		COM-09	Operational implementation and control 4) Suitability and effectiveness of the actions taken to achieve the management system objectives are reviewed.	08-41 Organizational training effectiveness evaluation result 1) 08-70 Product/service training effectiveness evaluation result 1)
5.2.5.3	PA 3.2 Process deployment process attribute 4) required resources necessary for performing the defined process are made available, monitored and measured;	COM-09	Operational implementation and control 2) The required resources are allocated and applied.	02-5 Measuring equipment asset list 1) 02-6 Measuring equipment maintenance log 1) 08-23 MS Resources provision record 1), 2), 3)
		ORG-02	Measurement resource management 3) Measurement resource items are identified.	02-4 Measurement resource calibration log 1)
		ORG-02	Measurement resource management 4) The calibration status of measurement resource items is confirmed at appropriate intervals.	02-4 Measurement resource calibration log 2), 3), 4)
		ORG-02	Measurement resource management 5) Measurement resources are maintained in accordance with defined requirements.	02-6 Measuring equipment maintenance log 1)