

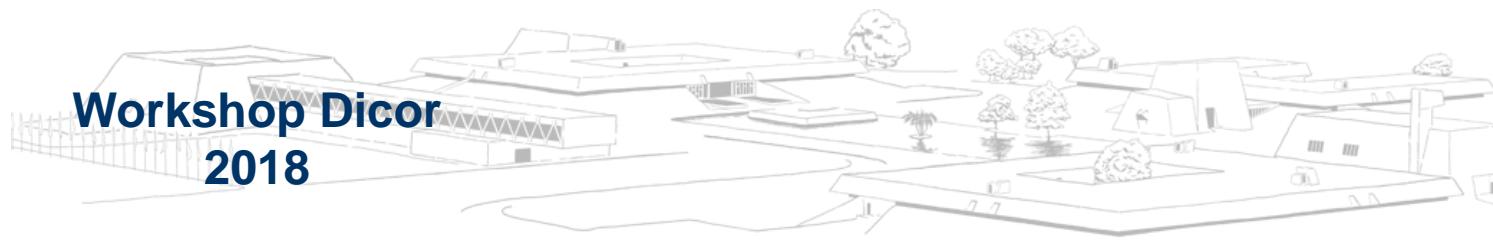
Workshop Dicor
2018



Workshop de Avaliadores da Dicor - 2018

**Avaliação de competência segundo as
ISO 17021-2 e 17021-3**

Mauricio Pereira



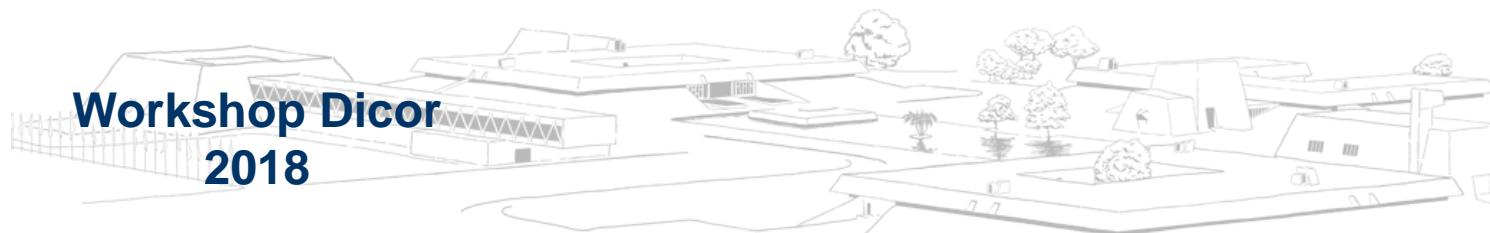
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TS 17021-2

**Tabela A.1 –
Conhecimen
to para
auditoria e
certificação
de SGA**

| Conhecimento | Funções de certificação | | |
|---|---|--|-----------|
| | Conduzindo a análise da solicitação para determinar a competência requerida para a equipe auditora, para selecionar os membros da equipe, e para determinar a duração da auditoria. | Analisando relatórios de auditoria e decidindo sobre certificações | Auditando |
| Terminologia ambiental | X (7.1.1) | X (7.2.1) | X (5.1) |
| Métrica ambiental | N/A | N/A | X (5.2) |
| Técnicas de monitoramento apropriadas aos aspectos e à área técnica do SGA | N/A | N/A | X (5.3) |
| Técnicas para avaliação de aspectos e impactos ambientais e sua significância ambiental | X (7.1.2) | X (7.2.2) | X (5.4) |
| Aspecto ambiental do projeto | N/A | N/A | X (5.5) |
| Avaliação de desempenho ambiental | N/A | X (7.2.3) | X (5.6) |
| Requisitos legais e outros | N/A | X (7.2.4) | X (5.7) |
| Prevenção e resposta a emergências | N/A | N/A | X (5.8) |
| Controle operacional | N/A | N/A | X (5.9) |
| Fatores relacionados ao local | X (7.1.3) | N/A | X (5.10) |

Nota N/A significa não aplicável.

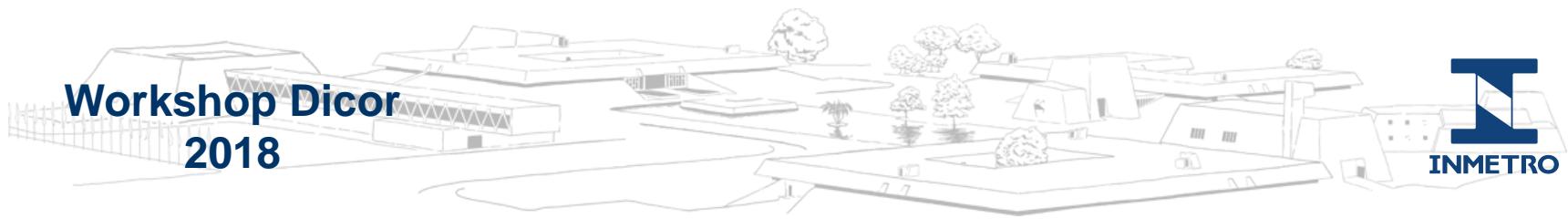


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Table A.1 — Knowledge for EMS auditing and certification

| Knowledge | Certification functions | | Auditing |
|---|--|--|----------|
| | Conducting the application review to determine audit team competence required, to select the audit team members, and to determine the audit time | Reviewing audit reports and making certification decisions | |
| Environmental terminology | X (7.2.1) | X (7.3.1) | X (5.2) |
| Environmental metrics | a | a | X (5.3) |
| Environmental monitoring and measuring techniques | a | a | X (5.4) |
| Environmental aspects and impacts | X (7.2.2) | X (7.3.2) | X (5.5) |
| Life cycle perspective | a | a | X (5.6) |
| Environmental performance evaluation | a | X (7.3.3) | X (5.7) |
| Compliance obligations | a | X (7.3.4) | X (5.8) |
| Emergency preparedness and response | a | a | X (5.9) |
| Operational control | a | a | X (5.10) |
| Factors related to the site | X (7.2.3) | a | X (5.11) |
| Scope | X (7.2.4) | X (7.3.5) | X (5.12) |
| Communicated information | a | a | X (5.13) |
| Context of the organization | a | a | X (5.14) |
| Risks and opportunities | a | a | X (5.15) |

^a Not applicable.



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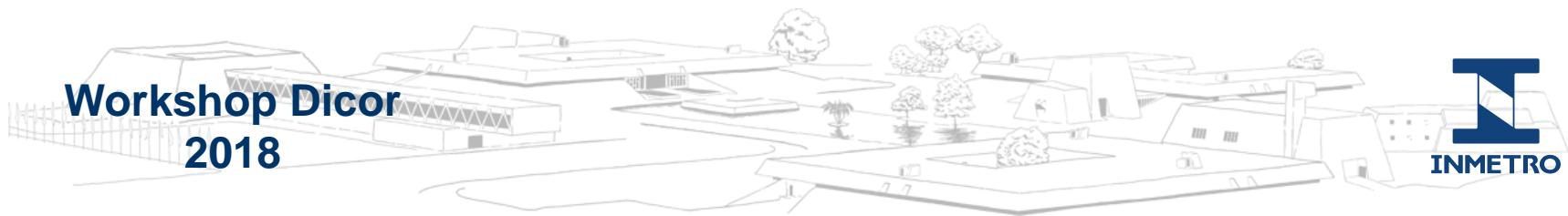


ABNT ISO/IEC
TS 17021-
2:2014

| Conhecimento |
|--|
| Terminologia ambiental |
| Métrica ambiental |
| Técnicas de monitoramento apropriadas aos aspectos e à área técnica do SGA |
| Técnicas para avaliação de aspectos e impactos ambientais e sua significância ambiental |
| Aspecto ambiental do projeto |
| Avaliação de desempenho ambiental |
| Requisitos legais e outros |
| Prevenção e resposta a emergências |
| Controle operacional |
| Fatores relacionados ao local |
| Nota N/A significa não aplicável. |

| Knowledge |
|--|
| Environmental terminology |
| Environmental metrics |
| Environmental monitoring and measuring techniques |
| Environmental aspects and impacts |
| Life cycle perspective |
| Environmental performance evaluation |
| Compliance obligations |
| Emergency preparedness and response |
| Operational control |
| Factors related to the site |
| Scope |
| Communicated information |
| Context of the organization |
| Risks and opportunities |
| a Not applicable. |

ISO/IEC
17021-
2:2016(E)



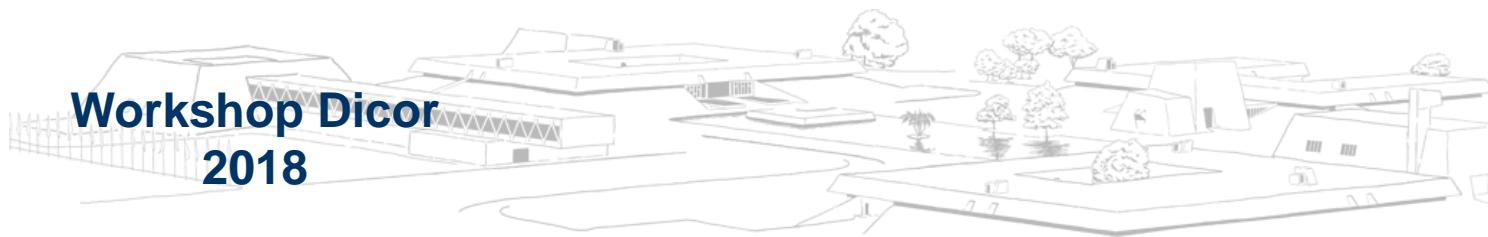
5.12 Scope

Each EMS auditor shall have knowledge to determine that the scope of an EMS is appropriate within the context of an organization and its activities, products and services.

5.13 Communicated information

Each EMS auditor shall have knowledge related to auditing of communicated information to enable the audit of the reliability of relevant environmental information related to the EMS.

NOTE - This includes knowledge of factors impacting upon reliability, such as transparency, appropriateness, truthfulness, factuality/accuracy, completeness and intelligibility (see ISO 14001:2015, A.7.4).



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5.14 - Context of the organization

5.14.1 - Each EMS auditor shall have knowledge to determine that an organization has identified the external and internal issues, including environmental conditions relevant to the context in which it operates that have the potential to affect the organization's ability to achieve the intended outcomes of its EMS.

5.14.2 - Each EMS auditor shall have knowledge to determine that an organization has identified the needs and expectations of interested parties relevant to an organization's EMS.

5.15 - Risks and opportunities

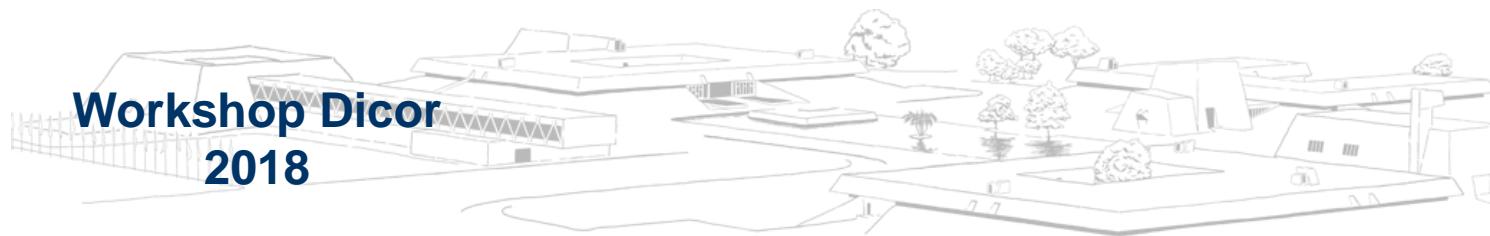
5.15.1 - Each EMS auditor shall have knowledge of methods for determining risks and opportunities and how these methods can be applied in an organizational context.

NOTE 1 - The term "risks and opportunities" is defined in ISO 14001:2015, 3.2.11.

NOTE 2 - Examples of methods for determining risks and opportunities include SWOT (Strengths-Weaknesses-

Opportunities-Threats), PESTLE (Political-Economic-Social-Technological-Legal-Environmental), Delphi

technique, Probability and Impact matrix and risk facilitation workshops.

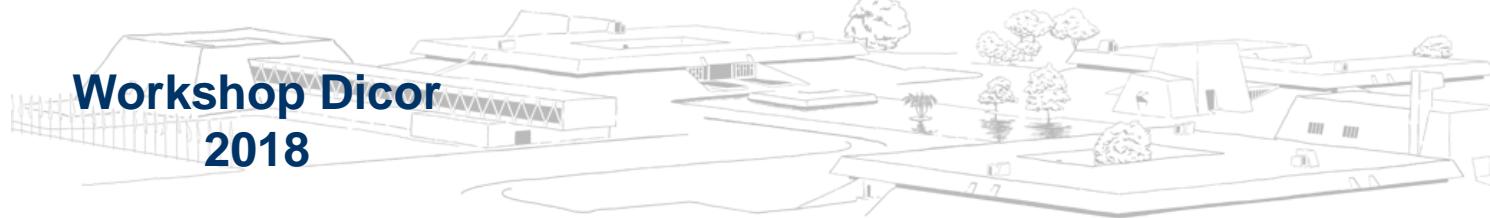


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TS 17021-3

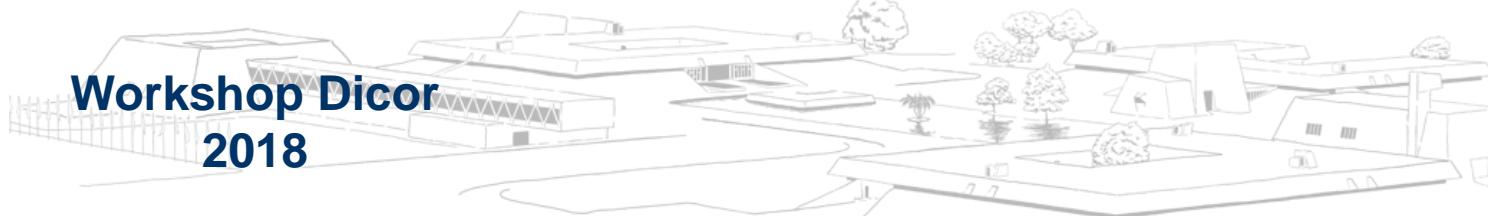
**Tabela A.1 –
Conhecimen
to para
auditoria e
certificação
de SGQ**

| | | Funções de certificação | | |
|---|---|-------------------------|--|-----------|
| Conhecimento | | | | |
| | Conduzindo a análise da solicitação para determinar a competência requerida para a equipe auditora, para selecionar os membros da equipe, e para determinar a duração da auditoria. | | Analisando relatórios de auditoria e decidindo sobre certificações | Auditando |
| Terminologia de sistema de gestão, princípios, práticas e técnicas. | | 6.3.1 | | 5.2 |
| Normas e documentos normativos do sistema de gestão da qualidade | 6.2.1 | 6.3.2 | | 5.3 |
| Práticas de gestão empresarial | | | | 5.4 |
| Setor de negócio do cliente | 6.2.2 | 6.3.3 | | 5.5 |
| Produtos, processos e organização do cliente | 6.2.3 | | | 5.6 |



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| Knowledge | Certification functions | | |
|---|---|--|-------------------------------------|
| | Conducting the application review to determine audit team competence required, to select the audit team members, and to determine the audit time. | Reviewing audit reports and making certification decisions | Auditing and leading the audit team |
| Fundamentals, vocabulary, terminology, principles, practices and techniques of quality management | | <u>6.3.2</u> | <u>5.2</u> |
| Quality management system standards/normative documents | <u>6.2.1</u> | <u>6.3.1</u> | <u>5.3</u> |
| Context of the organization | | | <u>5.4</u> |
| Client products, processes and organization | | | <u>5.5</u> |



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17021-3:2013

Conhecimento

Terminologia de sistema de gestão, princípios, práticas e técnicas.

Normas e documentos normativos do sistema de gestão da qualidade

Práticas de gestão empresarial

Setor de negócio do cliente

Produtos, processos e organização do cliente

Knowledge

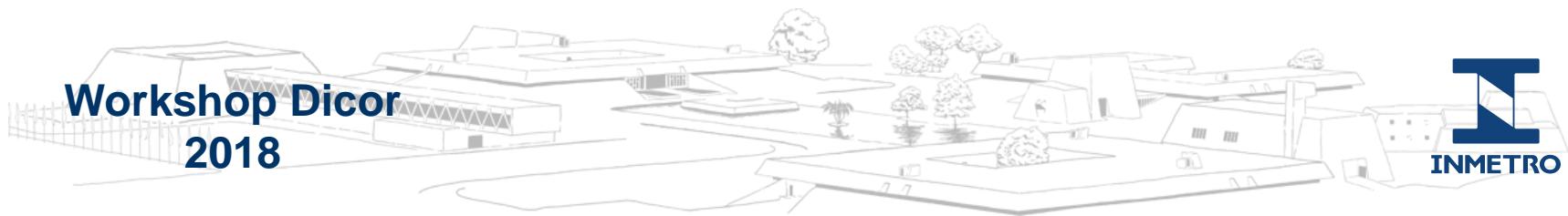
Fundamentals, vocabulary, terminology, principles, practices and techniques of quality management

Quality management system standards/normative documents

Context of the organization

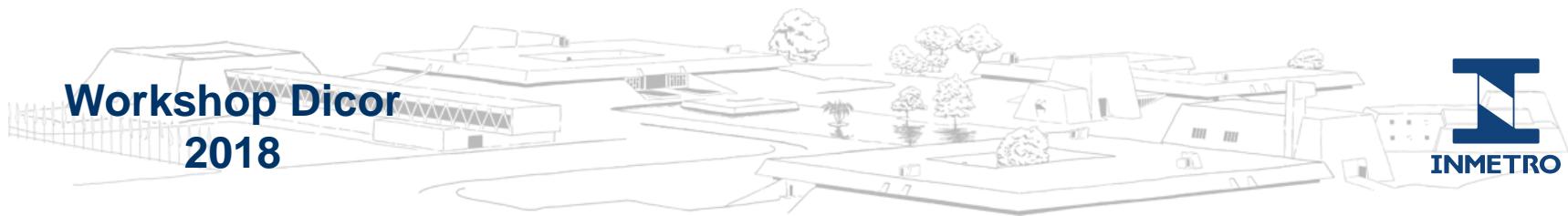
Client products, processes and organization

ISO/IEC
17021-3:2017



5.3 Context of the organization

The audit team shall have business sector knowledge to determine whether an organization has appropriately determined:
a) the external and internal issues, relevant to its purpose and its strategic direction and that affect its ability to achieve the intended result(s) of its QMS;
b) the needs and expectations of interested parties relevant to the organization's QMS including the requirements for the products and services of the organization;
c) the boundaries and applicability of the QMS to establish its scope.
NOTE A business sector is understood to be the economic activities covering a broad range of related technical areas.



5.4 Client products, services, processes and organization

The audit team shall have knowledge of: a) terminology and technology specific to the technical area; b) statutory and regulatory requirements applicable to the product or service specific to the technical area; NOTE Statutory and regulatory requirements can be expressed as legal requirements. c) characteristics of products, services and processes specific to the technical area; d) the infrastructure and environment for operation of processes affecting product and service quality;



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