D 39v18

QSE internal audit

Goal of the module: To conduct an internal audit according to ISO 19011 in order to:

- identify improvement opportunities
- increase the satisfaction of interested parties
- evaluate the performance of the QSE integrated management system

1 Scope

The word audit comes from Latin "audire" = to listen.

Audit: *a systematic and independent survey to determine whether activities and results comply with pre-established measures and are capable of achieving the objectives*

Audits are mostly internal or external.

Internal audits, also called first party audits, are a requirement of the quality, safety and environmental (QSE) standards (cf. sub-clause 9.2).

External, customer (or supplier) and certification audits, also called second and third party audits, are not within the scope of this module.

Internal audits are the most widespread tool for checking and evaluating the effectiveness of a integrated management system (IMS). It is never intended to find the weak points in personnel. The internal audit has entered many company's daily lives as it has become inseparable from:

- any management system
- internal communication
- daily improvement
- corporate culture

It's only through other people's eyes that one can really see one's weakness. Chinese proverb

An internal audit is of (cf. figure 1-1):

- the integrated management system
- a process
- a product (service, project)

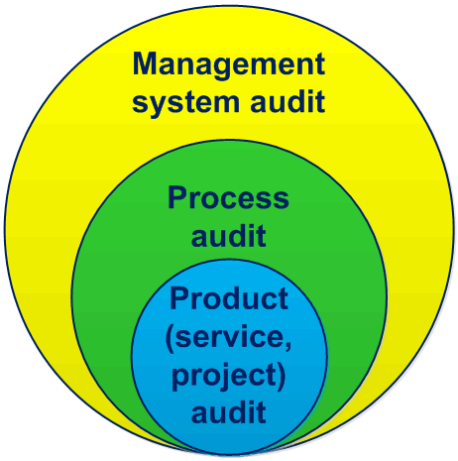

Figure 1-1. Internal audit types

Process: *activities that transform inputs into outputs*

The internal audit results are part of the inputs of the management review and allow the identification of fields in which to improve the integrated management system (IMS) as:

No system is perfect

As shown in figure 1-2, for the process “Perform an audit”, top management (via the management review) is considered as an audit client with needs and expectations, which are themselves related to processes and various requirements.

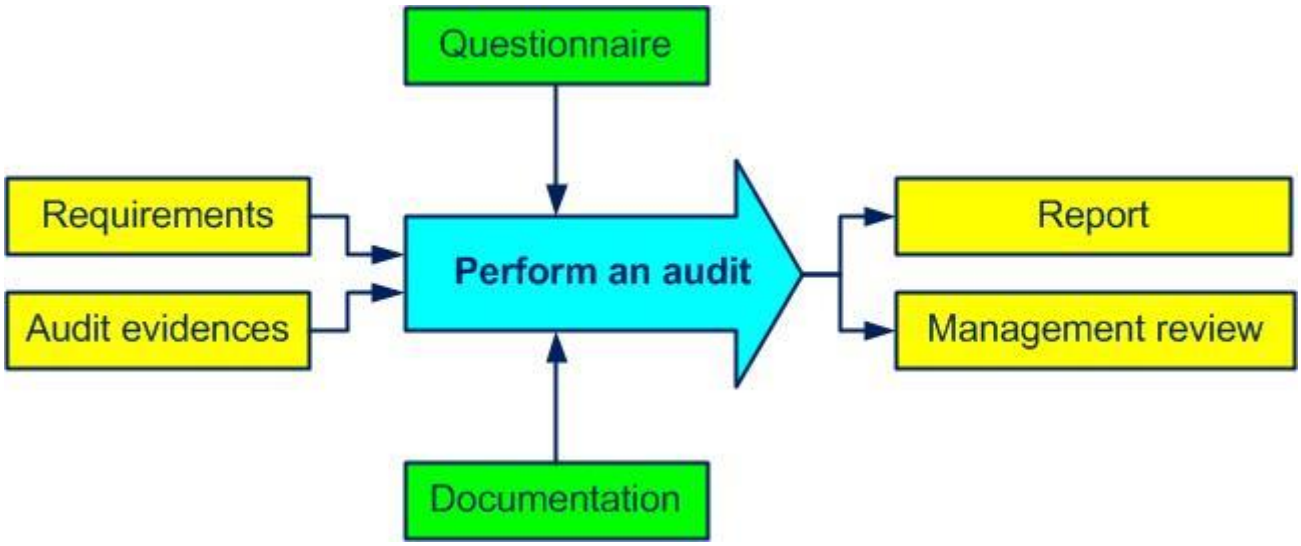

Figure 1-2. Perform an audit process

In the 1980s internal audits were mostly documentary - did you write down what you do?

Later, in the early 2000s, internal audits were more about conformity - does what you do meet the requirements of the standard?

Now internal audits are essentially about effectiveness - how do you improve your performance?

2 Normative references

The advice given by the ISO 19011 document can be summarized in the following fields:

- audit principles - clause 4
- audit program - clause 5
- audit activities - clause 6
- auditor competence - clause 7

A good knowledge of the ISO 9001 standard is required to understand and follow this module.

 This module is based on the following generic and international standards:

- **ISO 19011 (2018): Guidelines for auditing management systems**
- **ISO 9001 (2015): Quality management systems – Requirements**
- **ISO 14001 (2015): Environmental management systems – Requirements with guidance for use**
- **ISO 45001 (2018): Occupational health and safety management systems. Requirements with guidance for use**
- **ISO 9000 (2015): Quality management systems – Fundamentals and vocabulary**
- **ISO 9004 (2018): Quality management — Quality of an organization — Guidance to achieve sustained success**

All these standards and many more can be ordered in electronic or paper format on the ISO site.

More than 28,000 standards (in English and other languages) are available on the Public.Resource.Org site.

3 Definitions

The beginning of wisdom is calling things by their proper names. Chinese proverb

The majority of the terms and definitions of the QSE standards are identical. A small part of the terms have slightly different definitions.

Some terms specific to quality:

Customer: *anyone who receives a product*
Customer satisfaction: *top priority objective of every quality management system related to the satisfaction of customer requirements*
External provider (supplier): *an entity that provides a product*
Interested party: *person, group or company affected by the impacts of an organization*
Organization: *a structure that satisfies a need*
Product (or service): *every result of a process or activity*
Quality: *aptitude to fulfill requirements*
Quality objectives: *quality related, measurable goal that must be achieved*
Stakeholder: *person, group or company that can affect or be affected by an organization*

Examples of interested parties: investors, customers, external providers, employees and social, public or political organizations

Some terms specific to occupational health and safety:

Acceptable risk: *risk reduced to a tolerable level*
Accident: *undesired event causing death or health and environmental damages*
Hazard: *situation that could lead to an incident*
Incident: *undesired event that could lead to health damages*
Occupational health and safety: *everything that can influence the wellbeing of the personnel in a company*
Safety: *aptitude to avoid an undesired event*

Some terms specific to environment:

Compliance obligation: *legal requirements and others*
Environment: *space in which any organization functions*
Environmental aspect: *every element of an organization that interacts with the environment*
Environmental impact: *every change in the environment caused by an organization*
Environmental objective: *environment related, measurable goal that must be achieved*
Environmental performance: *measurable results of the environmental management system*
Environmental indicator: *value of a parameter, associated with an environmental objective, allowing the objective measure of its effectiveness*

Some common terms:

Audit client: *everyone requesting an audit*
Audit conclusions: *outcome of an audit*
Audit criteria: *everything against which audit evidence is compared*
Audit findings: *every deviation from audit criteria*
Auditee: *everyone who is audited*
Auditor: *everyone who is trained to carry out audits*
Competence: *personal skills, knowledge and experiences*
Conformity: *fulfillment of a specified requirement*

Corrective action: *action to eliminate the causes of nonconformity or any other undesirable event to prevent their recurrence*
Documented information: *any support allowing the treatment of information*
Indicator: *value of a parameter, associated with an objective, allowing the objective measure of its effectiveness*
Management system: *integrated system allowing objectives to be achieved*
Nonconformity: *non-fulfillment of a specified requirement*
Requirement: *explicit or implicit need or expectation*
Risk: *likelihood of occurrence of a threat or an opportunity*
Top management: *group or persons in charge of the organizational control at the highest level*

In the terminology of integrated management systems, do not confuse the following:

- anomaly, defect, dysfunction, failure, nonconformity, reject and waste:
  - anomaly is a deviation from what is expected
  - defect is the non-fulfillment of a requirement related to an intended use
  - dysfunction is a degraded function which can lead to a failure
  - failure is when a function has become unfit
  - nonconformity is the non-fulfillment of a requirement in production
  - reject is a nonconforming product which will be destroyed
  - waste is when there are added costs but not value
- accident and incident
  - an accident is an unexpected serious event
  - an incident is an event which can lead to an accident
- audit and inspect
  - to audit is to check and improve the IMS
  - to inspect is to verify the conformity of a process or product
- audit, auditee and auditor
  - an audit is a process of evaluating and improving the IMS
  - an auditee is the one who is audited
  - an auditor is the one who conducts the audit
- audit program and plan
  - an audit program is the annual planning of the audits
  - an audit plan is the description of the audit activities
- control and optimization
  - control is meeting the objectives
  - optimization is the search for the best possible results
- customer, external provider and subcontractor
  - a customer receives a product
  - an external provider provides a product
  - a subcontractor provides a service or a product on which a specific work is done
- effectiveness and efficiency
  - effectiveness is the level of achievement of planned results
  - efficiency is the ratio between results and resources
- environmental aspect and impact
  - environmental aspect is the element which reacts with the environment
  - environmental impact is the change of the environment resulting from an aspect
- follow-up and review
  - follow-up is the verification of the obtained results of an action
  - review is the analysis of the effectiveness in achieving objectives
- hazard and risk:
  - hazard is the state, the situation, the source which can lead to an accident
  - risk is the measurement, the consequence of a hazard

- indicator and objective
  - an indicator is the information on the difference between the achieved result and the pre-set objective
  - an objective is a sought after commitment
- organizational chart and process map
  - the organizational chart is the graphic display of departments and their links
  - the process map is the graphic display of processes and their interaction
- process, procedure, product, activity and task
  - a process is how we satisfy the customer using people to achieve the objectives
  - a procedure is the description of how we should conform to the rules
  - a product is the result of a process
  - an activity is a set of tasks
  - a task is a sequence of simple operations

Remark 1: each time you use the term "improvement opportunity" instead of nonconformity, malfunction or failure, the auditee will gain a little more confidence in you.

Remark 2: the use of ISO 19011, ISO 14001, ISO 45001 and ISO 9000 definitions is recommended. The most important thing is to determine a common and unequivocal vocabulary for everyone in the company.

Remark 3: the customer can also be the user, the beneficiary, the initiator, the client, the prime contractor, the consumer.

Remark 4: ISO 19011 version 2018 uses the terms procedure (), record () and documented information together. We also use the terms procedure and record together with the term documented information.

For other definitions, comments, explanations and interpretations that you don't find in this module and annex 06, you can consult:

- Online Browsing Platform, ISO
- Electropedia, IEC
- ISO 9000 (2015): Quality management systems. Fundamentals and vocabulary

Books for further reading on internal audits:

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Denis Provonost, Internal Quality Auditing, ASQ Quality Press, 2000
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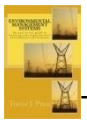
-  Trevor Price, Environmental Management Systems: How to boost organizational environmental performance, CreateSpace, 2014
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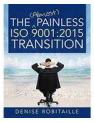
-  Denise Robitaille, The (Almost) Painless ISO 9001:2015 Transition, Paton Professional, 2015
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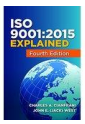
-  Charles Cianfrani, John West, ISO 9001:2015 Explained, ASQ Quality Press, 2015
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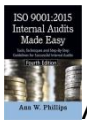
- 

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Milton Denth, The ISO 14001:2015 Implementation Handbook, ASQ, 2016
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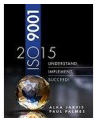
- 

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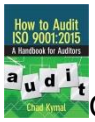
- 

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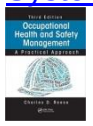
- 

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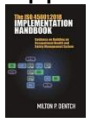
- 

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Fred Dobb, The ISO 9001, 14001 or 18001(45001) certification audit: Make it painless, Eliminate auditors' invalid nonconformities, Brodsworth & Woods, 2018

-  Stephen Asbury, Health and Safety, Environment and Quality Audits: A Risk-based Approach, CRC Press, 2018

When I think of all the books still left for me to read, I am certain of further happiness. Jules Renard

4 Principles

4.1 Management principles

The seven quality management principles (cf. figure 4-1) will help us achieve sustained success (ISO 9001, sub-clause 0.2).

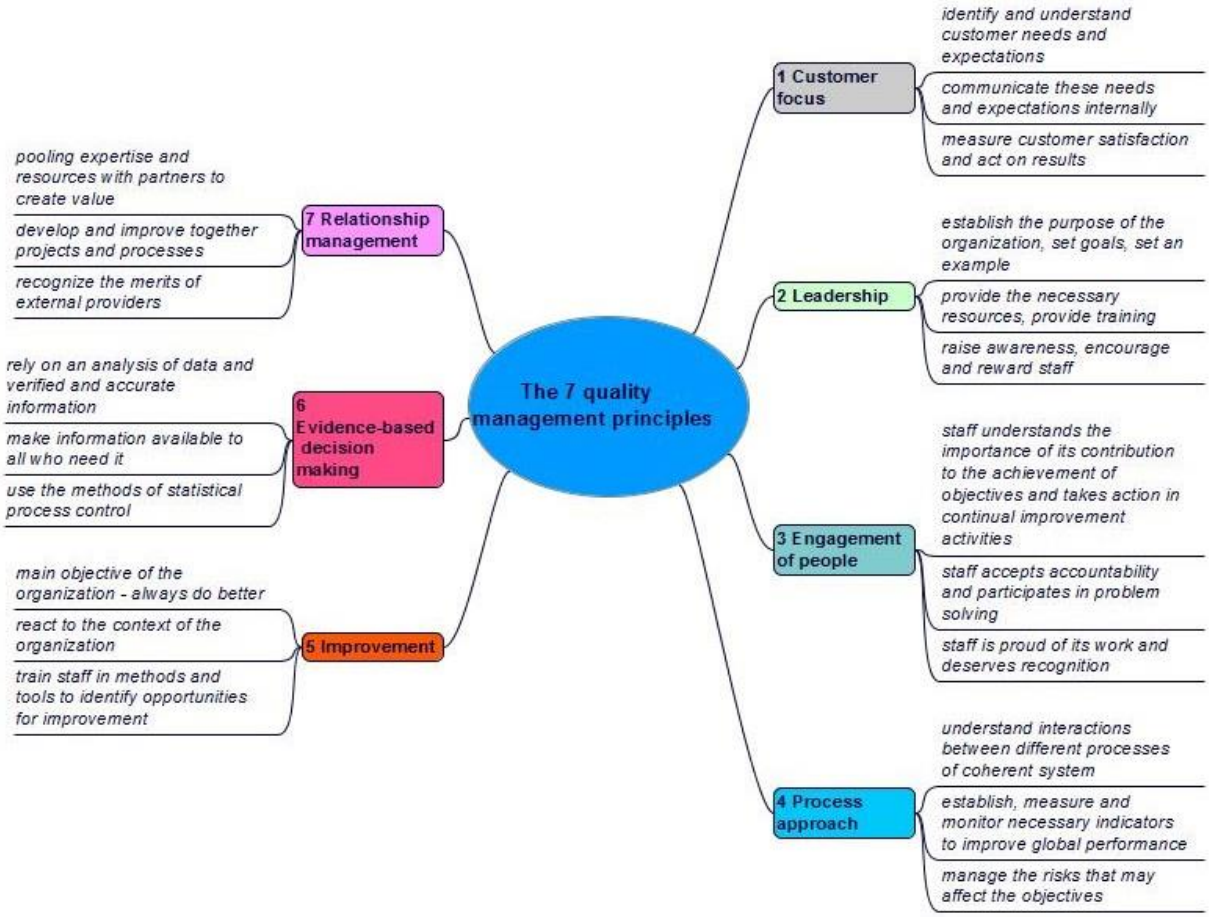

Figure 4-1. The 7 quality management principles

4.2 Audit principles

Certain principles must be followed for an audit to be a value added tool.

For the auditor:

- professional ethics, to guarantee:
  - mutual trust
  - compliance with legal requirements
- impartial presentation, to ensure:
  - honest and precise audit conclusions
  - detailed findings and audit reports
- professional integrity, to guarantee:
  - the importance of the task
  - the trust given
- confidentiality, to treat with care information which is:
  - sensitive
  - confidential
- independence, to:
  - conduct an impartial audit

    - write objective conclusions
- the evidence-based approach, to reach conclusions that are:
    - reliable, verifiable and
    - reproducible
- risk-based thinking, to achieve the objectives of the audit by:
    - identifying and decreasing threats
    - seizing opportunities

But also:

- common sense - always the best tool
- curiosity, to learn and succeed
- goodwill to help the auditee identify improvement opportunities
- understandable language
- positive attitude is gratifying for the auditee

For the audit:

- independence (the auditor and audited activity do not have conflicts of interest), to guarantee:
    - objective conclusions
    - findings based on objective evidence
- a factual approach, to ensure:
    - the audit evidence is verifiable
    - the audit conclusions are repeatable

For the auditee:

- remain available
- do not try to hide the truth
- do not be afraid of the answers
- objectively accept the nonconformities found
- be aware of participating in the improvement of the IMS by being:
    - benevolent and
    - cooperative

An auditor cannot audit their own department as:

No-one should be a judge in his own case. Latin proverb

Minute of relaxation. Cf. joke “The engineer and the shepherd”

4.3 Performance of the IMS

For an integrated management system what is of interest is the degree of achievement of objectives or, in other words, performance. The performance of a IMS is measured by its effectiveness and, above all, by its efficiency (see figure 4-2).

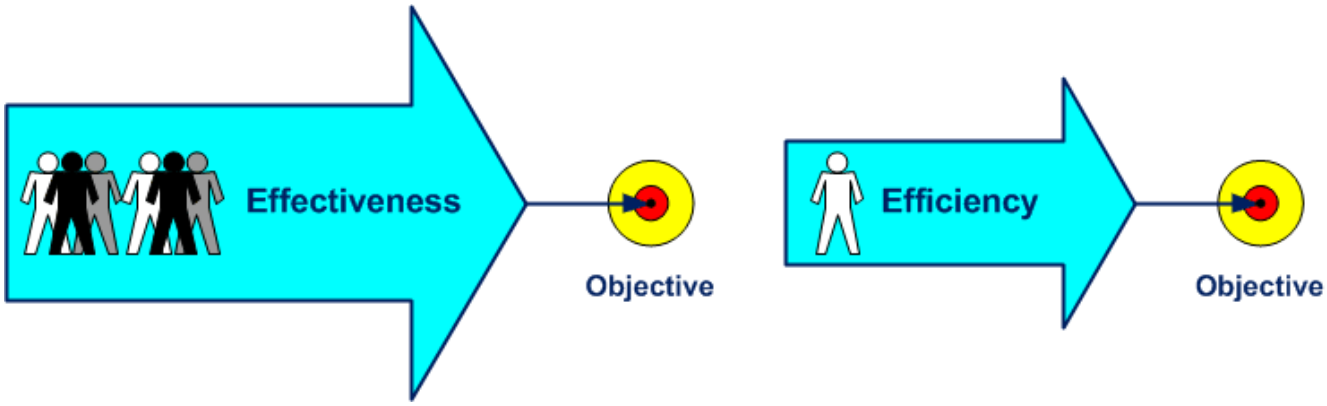

Figure 4-2. Performance of a IMS

Effectiveness: *capacity to perform planned activities with minimum effort*
Efficiency: *financial relationship between achieved results and resources used*

N.B. We can be effective because we achieved our objective, but are not efficient if we used too many resources or tolerated and produced too much waste!