



ISO 31000
Risk Management Standard



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Session on Human Factors:

The Relevance of »Estimation« in Risk Management

NO »INFORMATION« WITHOUT »ESTIMATION« IN ISO 31000

Agenda:

- ➊ Part 1: Addressing Human Factors is at the Core of Risk Mangement
- ➋ Part 2: Perception and Information
- ➌ Part 3: Information and Estimation
- ➍ Part 4: Conclusion

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- **Part 1: Addressing Human Factors is at the Core of Risk Mangement**
- Part 2: Perception and Information
- Part 3: Information and Estimation
- Part 4: Conclusion

Never ever forget the human factor? – few quotes in ISO 31000!

- 🌀 direct reference :

Section 3 (h) – Principles:

Risk management takes **human** and cultural **factors** into account.

- 🌀 indirect references:

Sections 2.7 & 4.3.3 (risk owner); 2.10, 2.11, 2.13, 3(i), 4.3.1 & 4.3.7 (stakeholder); 2.11, 3(h), 4.3.1, 4.3.3 & 4.3.5 (people); 2.19 (measured or determined ... subjectively); 3 (b), 4.2 (management); 3 (c) & (f), (decision makers & experts) etc.

- ☛ **Somebody (a human) is doing something.**

Section 5: only process related human factors

The focus of the section on the risk management process is on process-related human factors: reference is made in the subsections on establishing the context but not within the core process (sections 5.4 – 5.7; risk assessment, risk treatment, monitoring & review and recording)!

- Section 5.2 (communication and consultation):

Perception [of risk] can vary due to differences in values, needs, assumptions, concepts and concerns of stakeholders.

- Section 5.3 (establishing the context):

... objectives and concerns of external stakeholders are considered ... based on ... stakeholders perceptions ... (5.3.2); capabilities ... relationships ... culture (5.3.3); responsibilities ... assessment ... decisions ... (5.3.4)

Addressing human factors is at the core of management

- Leadership is guidance of employees!
- Multiple examples for risk related human factors
 - missing leadership competency
 - badly treated employees
 - employees perceiving themselves to be badly treated
 - unidentified conflicts and communication barriers
 - missing self-assuredness; employees who have problems
- Standardize interfaces (human-machine and human-human) (steps for confirmation)
- Keep cultural differences in mind
- The ETTO-Principle: Efficiency-Thoroughness Trade-Off (cf. Hollnagel, Eric; The ETTO Principle; Ashgate reprint 2011):
 - How will the process owner etto?
 - Which ETTO rule does management apply and which risk stems therefrom?
 - Which ETTO rule is applied in risk assessment and which risk stems therefrom?
 - Be suspicious of universal explanations and keep open for questions!

Agenda:

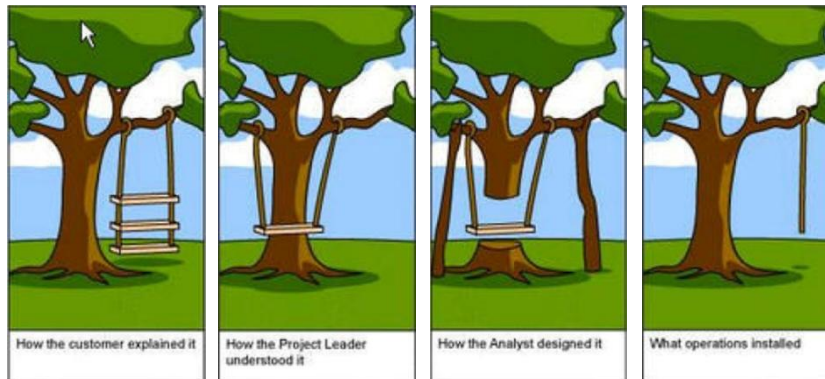
- ④ Part 1: Addressing Human Factors is at the Core of Risk Mangement
- ④ Part 2: **Perception and Information**
- ④ Part 3: Information and Estimation
- ④ Part 4: Conclusion

The Quality of Perception

Risk is the effect of uncertainty on objectives

- has to do with the unknown ►
- risk is related to perception!** (Peter Blokland on »The quality of perception«)

- Reality is out of reach to any of us!
- We only have our perception to work with!



Section 2.1: effect of uncertainty on objectives

- Note 1: An effect is a deviation from the expected ...
- Note 5: Uncertainty is the state, even partial, of **deficiency of information** related to, understanding or knowledge of an event, its consequence or likelihood.



Vocabulary used

- 🌀 **information** (note 5)
giving knowledge; news or knowledge given
 - objective basis
- 🌀 **understanding** (note 5)
know the meaning, nature, explanation of (sth.)
 - objective connotation
- 🌀 **knowledge** (note 5)
understanding, familiarity gained by experience
 - objective / subjective connotation?
- 🌀 **perception** [of risk] (section 5.2)
process by which we become aware of changes
(especially through the eyes **or the mind**)
 - technical action (process) – objective?
subjective regard (becoming aware)?

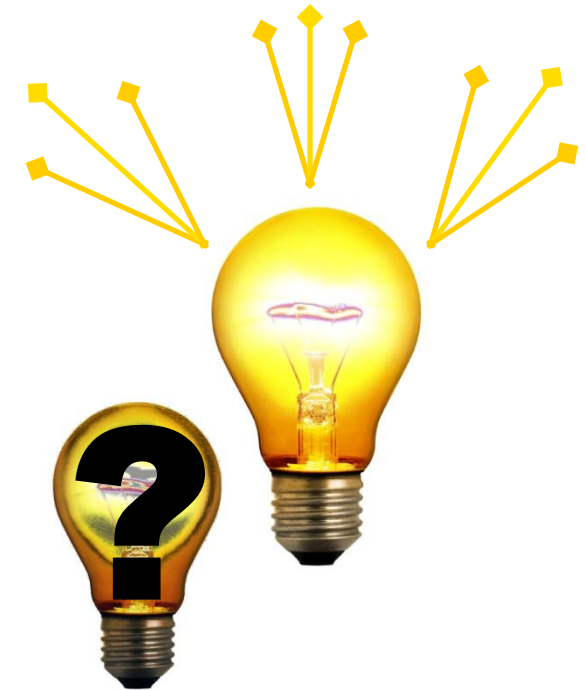
Explanations taken from The Advanced Learners Dictionary
of Current English; London, Oxford University Press 1971

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Human Factor in the context of Note 5

- 🕒 **estimation** (deficiency of information or estimation)
judgment ➔ estimate, consider, form an **opinion**
- ➔ **subjective basis**



Exegetical process required when using ISO 31000

- 🌀 **information** ➤ knowledge [understanding (know the meaning, nature, explanation of (sth.)), familiarity gained by experience] given
 - ◀ experience & explanation
- processing of data which inherently includes some element of estimation (judgement, consideration or forming of an opinion)
- no information without some form of estimation (only by estimation »objective« data become information)

(Frank Ashe commenting on LinkedIn discussion [Does the definition of RISK consider »ESTIMATION« sufficiently?](#) on the ISO 31000 Risk Management Standard Group)

The spirit of the Standard

Section (3), Principles, subsection (h):

Risk management takes **human** and cultural **factors** into account.

- Within the spirit of the standard human factors must be included even if that is not expressly stated in any particular sentence itself.

Just because a human factor is not expressly stated this does not mean that it is not implied. A risk management process is »management« – everything about management has a human factor!

(Alan Fortheringham and Frank Ashe commenting on LinkedIn discussion [Does the definition of RISK consider »ESTIMATION« sufficiently?](#) on the ISO 31000 Risk Management Standard Group)

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How to read the definition of Risk in section 2.1

Risk is any deviation from the expected with regard to the objectives of an organization due to a deficiency of information or estimation.

LinkedIn discussions with nearly 150 comments ➡

- 🔄 there is room for dissenting votes
- 🔄 thus agreement on this interpretation is desirable
- 🔄 any training on ISO 31000 should include this interpretation
- 🔄 clarification of the wording of Note 5 might be an option for the revision of ISO 31000 under way



Questions for a checklist useful for risk identification

- How complete are the data that will be / were estimated for a decision?
- How qualified was the estimation of those data?
- Are there additional data that reasonably should be collected and/or should another estimation of those data be made?
- Which Efficiency-Thoroughness Trade-Off has been made and what impact does this have on the quality of information?
- What is the expectation with regard to the objectives of the organization on basis of the information and what deviation should/can reasonably be taken into account?
- ... (add more questions specific to the organization)



Be prepared to be flexible!

- ➊ Risk management is not a predictive exercise
- ➋ Risk management means active early response

(Alan Fotheringham commenting on LinkedIn discussion [Is it the right time for a renewed discussion of the definition of »RISK«?](#) on the ISO 31000 Risk Management Standard Group)

- ➌ Preparing for the future is Risk Management; predicting the future is gambling!

(Brendon Young commenting on LinkedIn discussion [Is it the right time for a renewed discussion of the definition of »RISK«?](#) on the ISO 31000 Risk Management Standard Group)

Peter Blokland quotes Tolstoy: **The most difficult subjects can be explained to the most slow-witted man if he has not formed an idea of them already; but the simplest thing cannot be made clear to the most intelligent man if he is firmly persuaded that he knows already, without the shadow of a doubt, what is laid before him.**





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Thank you for your attention!

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