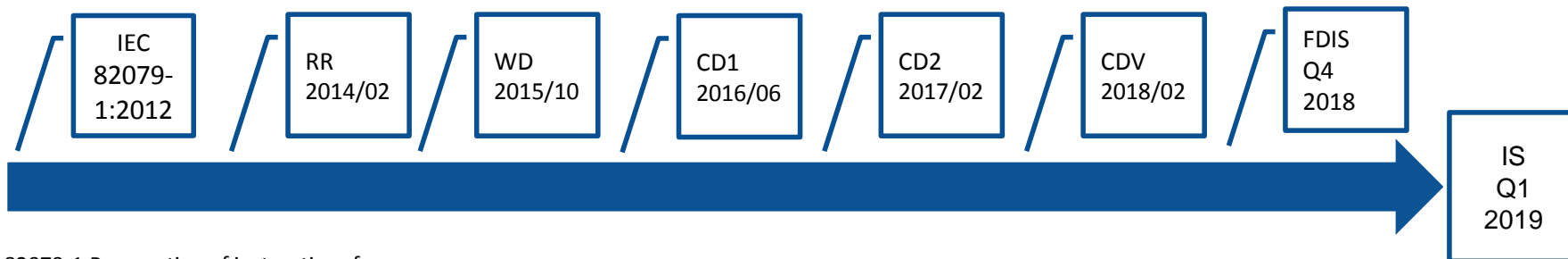# What's New?

The IEC/IEEE 82079-1 Revised – What You Should Know about the Upcoming New Version

Dr. Claudia Klumpp, tekom

turning into the home stretch…

| IEC 82079-1:2012 | RR 2014/02 | WD 2015/10 | CD1 2016/06 | CD2 2017/02 | CDV 2018/02 | FDIS Q4 2018 | IS Q1 2019 |

IEC 82079-1 Preparation of instructions for use -- Structuring, content and presentation -- Part 1: General principles and detailed requirements

IEC/IEEE 82079-1 Preparation of Information for Use (Instructions for Use) of Products –
Part 1: Principles and general requirements

|	
RR	= Review Report
WD	= Working Draft
CD	= Committee Draft
CDV	= Committee Draft for Voting
FDIS	= Final Draft International Standard
IS	= International Standard

82079-1 Ed.2 in a Nutshell – What is new?

- **Participation of IEEE (besides ISO and IEC)**
- **New title**
- **New concept of information for use**
- **New structure**
- **Conformity assessment for the information for use and the information management process**
- **New clause „Information management process"**
- **New clause „Structure of information for use"**
- **New clause: „Means, format, and media of information for use"**
- **New clause: „Professional competencies"**

Organizations Involved
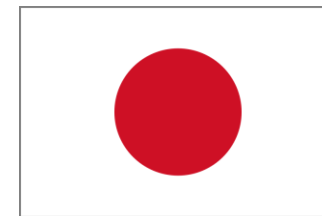
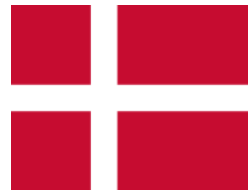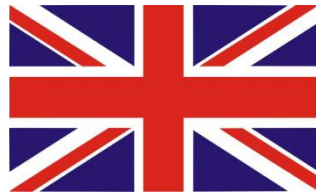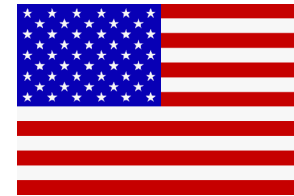**ISO / IEC Joint Working Group 16**
To monitor the needs for revision of the IEC 82079: Preparation of instructions for use - Structuring, content and presentation
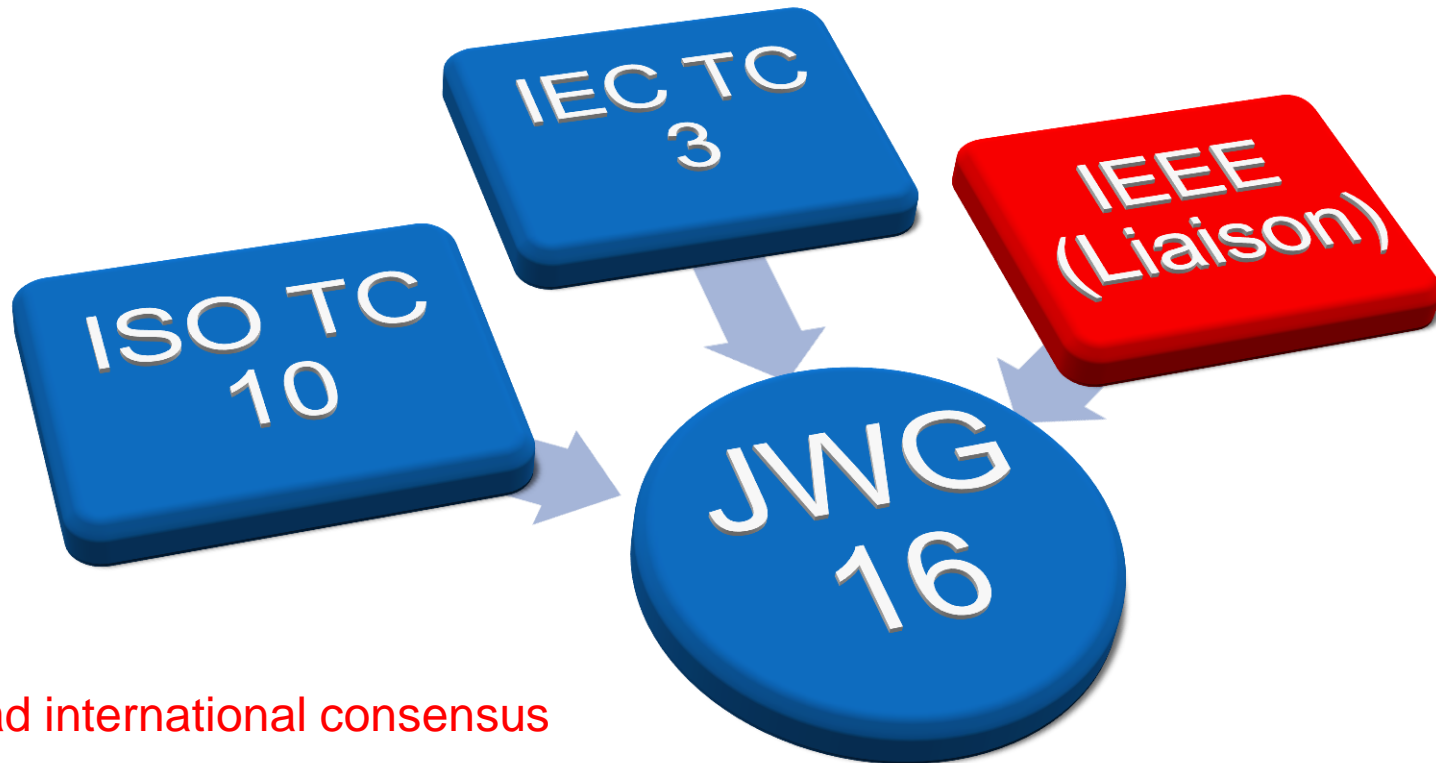
broad international consensus

JWG 16 - Members

- 2 convenors
- 23 members
- from 9 countries

Further comments from:
- Austria
- Czech Republic
- Finland
- Norway
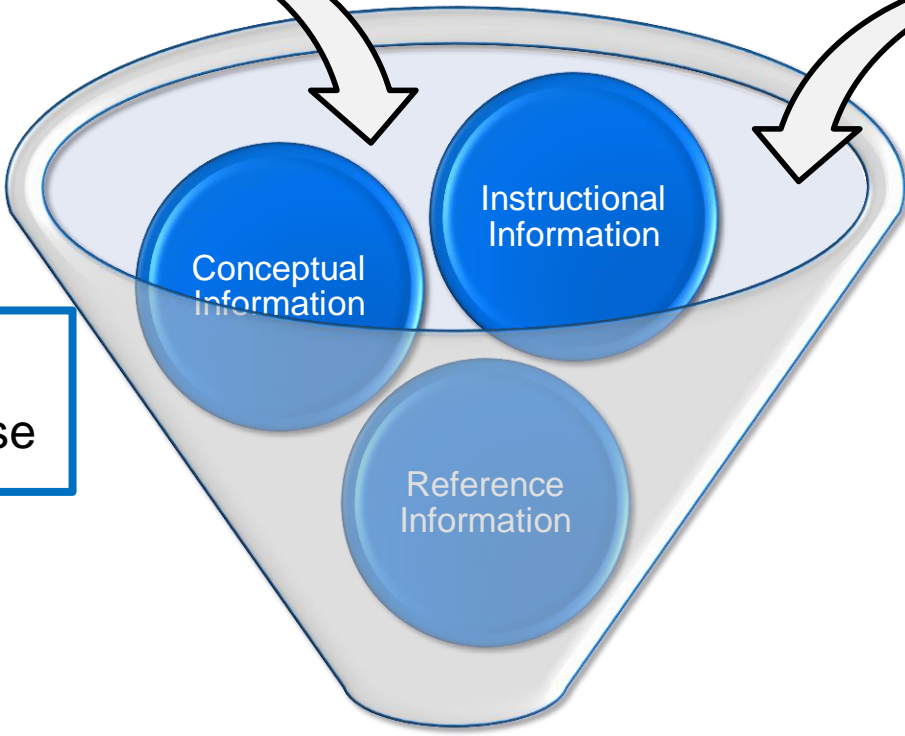- Sweden

The new title

"IEC / IEEE 82079-1 Ed. 2 Preparation of information for use (instructions for use) of products – Part 1: Principles and general requirements"

replaces the current title

"IEC 82079-1 Ed.1 Preparation of instructions for use – Structuring, content, and presentation – Part 1: General principles and detailed requirements"

Why „Information for use" instead of „instructions for use"?

- Instructions for use (or instructions) were used in IEC 62079 and IEC 82079-1 Ed. 1 for contents not only addressing and covering activities or operations to be performed. Instructions for use always also comprised information describing the product, or reference material.

- 'instructions' was always too limited and kind of misleading. It is to preclude the possibility that 'instructions' might be misconstrued as being limited to meaning 'detailed information on how to do or use with.'

- With the revision and drafting of IEC 82079-1 Ed.2 the concept of 'information for use' is introduced in a more comprehensive way.

- The content for 'information for use' comprises of information based on three pillars
  - Instructional information
  - Conceptual information
  - Reference information

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Concept of Information for Use

Conceptual Information

Instructional Information

Reference Information

Information Development Process

Instructions

Functional Description

Instruction Handbook

Service Information

Information for Assembly

Product Tutorial

Troubleshooting Information

Information for Operation

Information for Maintenance
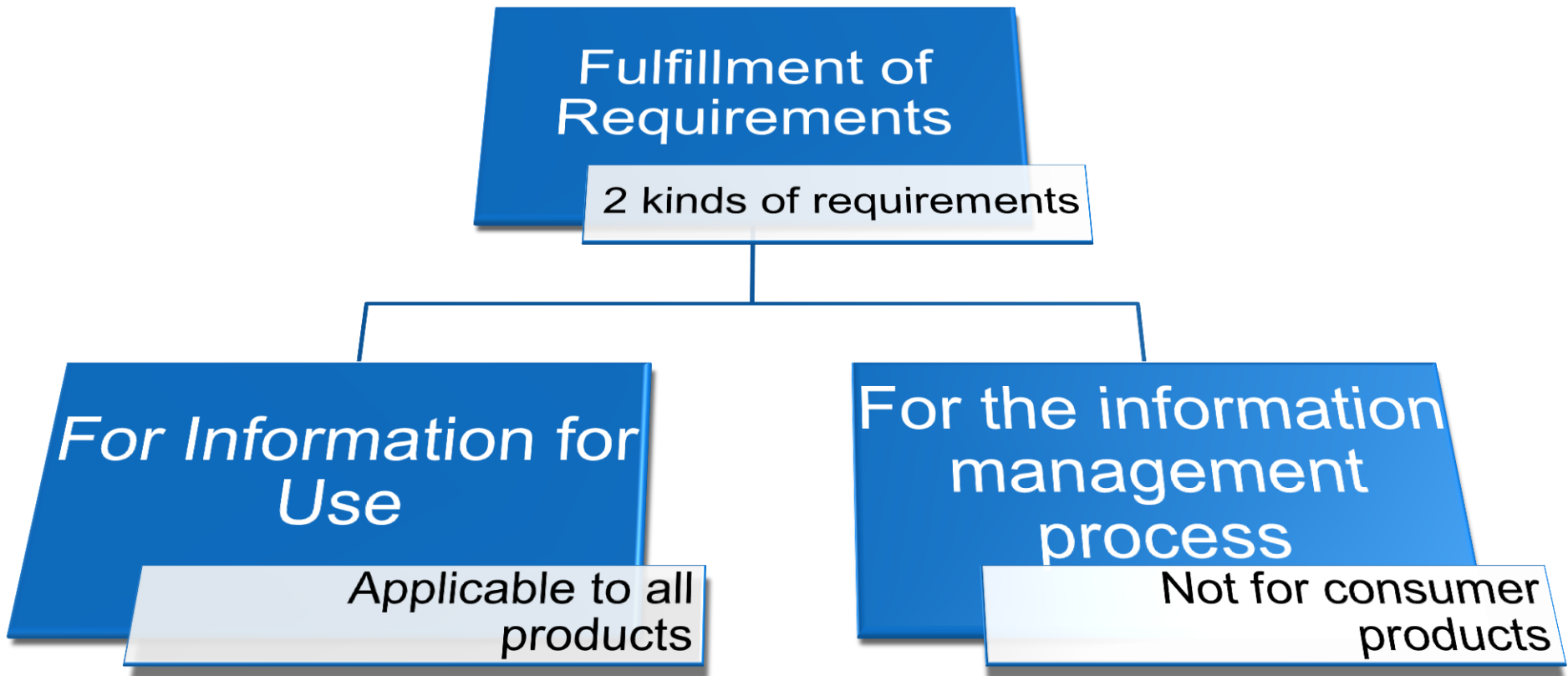
© Dr. Clau...

Goals for the new structure

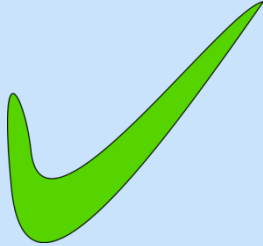Improvement of the inner structure of Part 1 to ease the application of the standard, e.g.
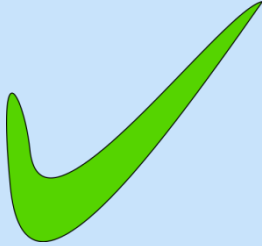
- Bringing together all provisions for one issue (e.g. the safety relevant provisions), reorder content/text to make it compliant with the main structure
- Integration of new aspects, such as professional competencies

New Structure

IEC/IEEE 82079-1: 2018 CDV	Amendments	IEC 82079-1: 2012
1 Scope	updated and slightly broadened	1 Scope
2 Normative references	updated	2 Normative references
3 Terms and definitions	updated	3 Terms and definitions
4 Conformity assessment of information for use	updated and amended by the conformity with the information management process	7 Evaluation of conformity to this part of the 82079 series
5 Principles	fundamentally revised	4 Principles
6 Information mangement process	new	Annex D (Informative) Planning the preparation of instructions for use
7 Content of information for use	revised	5 Content of instructions for use
8 Structure of information for use	new	6 Presentation of instructions for use
9 Means, format and media of information for use	new	
10 Professional competencies	new	4.2 Quality of communication

Fulfillment of Requirements

2 kinds of requirements

For Information for Use

Applicable to all products

For the information management process

Not for consumer products

Fulfillment of Requirements	for information for use supporting a particular product	for the information management process
All Products besides Consumer Products	✔	✔
Consumer Products	✔	🚫

Fulfilling the Requirements of IEC/IEEE 82079-1

Claim of Fulfilling Requirements can be made for	
Information for use supporting a particular product by fulfilling the requirements of	**Information management process** by fulfilling the requirements of
5.2 Purpose of Information for Use	5.4 Use of Repeatable processes
5.3 Information Quality	6 Information Management process
7 Content of Information for Use	10 Professional Competencies
8 Structure of Information for Use	
9 Media and Format of Information for Use	

Requirements for Information for Use Supporting a Particular Product

Clause 5.2 - Requirements related with the purpose of information for use:

What is the purpose of information for use?

Information for use shall provide the necessary information for the target audiences to make safe, efficient, and effective use of a supported product.

- Three information types to meet this purpose:
  - Conceptual Information
  - Instructional Information
  - Reference Information

1. **Information for use shall** be given the same attention and importance as every other part of the product.

2. **Information for use shall** be usable and relevant for the target audiences with respect to their expected tasks and goals.

3. **Information for use shall** promote the safe use of the product

- **Clause 5.3 - Fulfill 7 principles to ensure information quality:**
  - Completeness
  - Minimalism
  - Correctness
  - Conciseness
  - Consistency
  - Comprhensibility
  - Accessibility

Requirements for Information for Use Supporting a Particular Product

- **Clause 7 - Content of information for use**
- **Clause revised on the basis of clause 5 of the current standard**
- **Identification of**
  - the information for use
  - the supported product
  - the supplier

  Use it as a checklist!

- **Importance of retaining the information**

Example 1:

IMPORTANT

READ CAREFULLY BEFORE USE

KEEP FOR FUTURE REFERENCE.

Example no.1 is already in the current version but does not meet all requirements, e.g. ANSI Z535.6, legibility (capital letters)
Example 2 meets the requirements

Example 2:

For safe and proper use, follow these instructions. Keep them for future reference.

Figure 2 - Examples for notice to retain information

Source: IEC/IEEE 82079-1 CDV   © Dr. Claudia Klumpp, tekom

Requirements for Information for Use Supporting a Particular Product

- **Clause 7 - Content of information for use**
- **Presentational conventions**
  - **shall be listed and explained**, when this convention is essential to understand the information, for example, the use of a particular typeface for text to be entered by the user, keyboard keys, or menu items
- **Terminology**
  - If the information for use of a system contains documents from various other suppliers, the m**eaning of different terms shall be explained**
- **Explanation of**
  - abbreviations
  - technical terms
  - safety signs
  - graphical symbols
  - markings
- **Information for use needed during the life cycle of the supported product**
  - Maintenance, replacement of parts, repair and troubleshooting information for skilled and non-skilled persons
  - Maintenance of complex systems shall combine maintenance and service procedures for all key components)
  - Maintenance of complex systems shall include
    - Safety precautions for performing maintenance, such as complete or partial shutdown
    - Procedures for accessing subsystems or components to perform maintenance

Requirements for Information for Use Supporting a Particular Product

- **Clause 7 – Content of information for use**
- **Safety related information are**
  - Safety signs and product safety labels
  - Safety nots
  - Warning messages
- **Signal words for warning messages:**
  - **For harm to persons**
    - DANGER
    - WARNING
    - CAUTION
    - In certain circumstances, signal phrases such as „DANGER OF DEATH" „RISK OF BLINDING" or „BEWARE OF FUMES" can be more effective at drawing greater attention to some instructions or safety information than signal words.
  - **Signalwords for damage l to property or the supported product**
    - NOTICE
    - BEWARE
    - TAKE CARE

8 Structure of information for use

New: use of leading criteria for structuring

Table 2 - Structuring Principles

Principle	Consideration for subdividing and arranging topics
Task	in the order that tasks are performed
Product	the product's functions or elements
Product life cycle	stages, e.g., shipping, installing, operating, servicing, repairing, disposing
Target audience	segmentation of information according to audiences' information needs
Cognitive	important first, from simple to complex
Parameter	alphabetic sort for ease of reference, e.g., parameter lists, indexes

Source: IEC/IEEE 82079-1 CDV

Requirements for Information for Use Supporting a Particular Product

- **Clause 8 Structure of information for use**

- **Detailed structure of step-by-step instructions**

- **Navigation and information delivery**
  - Printed:
    - Page numbering (if more than two pages)
    - Table of contents (if more than 12 pages, current version: 5 pages)
    - Index
  - Dynamic delivery
    - Individualized delivery (need-to-know)
    - Context sensitivity
    - Search functions
    - Links to related topics

Requirements for Information for Use Supporting a Particular Product

- **Clause 9 Means, format and media of information for use**

- General:

  - The **supplier shall determine** the means, format and media of the information for use according to the nature of the target audiences and based on their needs.

  - Format and media **shall allow permanent and easy access**

  - List of possible means and media are provided

- Further items to be considered:

  - Durability of chosen media

  - Use of animation or audio-visual demonstration

  - Location and availability

  - Printable information

  - Downloadable information / updates

  - User interaction and search features

  - Suitability for the conditions of use (light, humidity, etc.)

Requirements for Information for Use Supporting a Particular Product

- **Clause 9 - Means, format and media of information for use**

- **Attracting attention to safety –related information**
  - New aspect: If warning messages are integrated between the steps of a procedure, the formatting of the warning message should not distract the user from reading the information

Do not overemphasize warning messages between steps of a procedure

- **Clause 6 Information management process**

- **General:**
  - The supplier **shall implement information management processes** for planning, designing, producing, and sustaining information for use.
  - The **information management process shall generate, obtain, confirm, transform, retain, retrieve, and disseminate information**, as appropriate.

- **Four process groups:**
  1. Analysis and planning of information (6.2);
  2. Design and development, including review, editing, and testing (6.3);
  3. Production and distribution (6.4); and
  4. Sustainment, including maintenance and improvement (6.5).

1. **Analysis and planning of information**
   - Instructional procedures shall be formulated **based** on a **market analysis** or an analysis of the characteristics, **needs and intended tasks of the target audiences**.
   - The **analyses shall be performed early in the life cycle** of the supported product, and by collecting information about the product.
     - General analysis
     - Target audience analysis (more detailed)
     - Media (concept)
     - Analysis of local language requirements
     - Information sources
     - Information sustainment
     - Risk management (task or use case - based risk-assessment)
     - Contractual agreements and legal constraints
     - Configuration management
     - Human resource management
     - Quality assurance

2. **Design and development, including review, editing and testing**

- The development process **shall include**:
  - Preparation of information design concepts, templates or models;
  - Information gathering;
  - Selection of a content structure;
  - Application of an information design to create the written and graphic content;
  - Implementation the information in the specified media
  - Editing and reviewing the content, and evaluating the information for use with the supported product.
  - Usability testing should be used to demonstrate that information for use allows the target audiences to perform the described tasks, or point out defects. (a table with examples of empirical methods, such as interviews, usability testing, self-assessments and checklist is included)

3. **Production and distribution**

   • shall comprise the integration, preparation, reproduction, packaging and distribution of physical media or electronic copies of the information for use

4. **Sustainment, maintenance and improvement**

   • shall include **continuing target audience feedback**

   • shall include the **establishment a method** for receiving information on changes, updating information for use, and making updates available to the target audiences

- Skills, responsibilities and competencies **are crucial** for the quality of information for use

- Skills, responsibilities and competencies of persons involved in the preparation of instructions for use needed to be addressed in more details. The provisions in the current version are too common and vague.

- This applies to the competencies of translators as well.

Professional Competencies

- New clause on professional competencies

„The creation of information for use <u>shall</u> be assigned to competent persons. Organizations should analyse their content creation process, identify the tasks to be performed to achieve the required results, evaluate the competencies which are needed to perform these tasks successfully and finally designate the tasks and responsibilities to persons who cover these competencies. Responsibilities should be assigned to separate persons where the size of the organization permits."

  - Task related competencies
  - Three Levels of proficiency

Professional competencies

Three levels of proficiency:

Various levels of proficiency should be identified. The following shows a typical scheme for proficiency levels.

Level 1:

Responsibilities of proficiency level 1 should include the use and application of relevant standards to define the information structure and to develop or update information.

Level 2:

Responsibilities of proficiency level 2 should include the ability to determine the requirements for the information products taking into account the purpose and domain to which they apply.

Level 3:

Responsibilities of proficiency level 3 should include the ability to manage the process of information creation, develop content strategies, take over responsibility of standard conformity, and to lead information development teams.

Professional competencies - translators

- Competent translators or language specialists <u>shall</u> be responsible for the translation including checking and proofreading.

- The translators
  - should have basic competencies as stated in proficiency level 1
  - should be fluent as well in the original as in the target language
  - should be native speakers in the target language.
  - should be familiar with the type of product and any product-specific terminology.

How to evaluate the fulfillment of requirements

Evaluation of Fullfillment of Requirements (Annex A, informative)

Assessing Requirements for	
Content (clause 7): **comprehensiveness check**	The information management process (clause)
Structure, format and media (clause 8 and) **desk effectiveness check**	**Process assessment**
information for use intended for consumers **empirical effectiveness check**	**Competency assessment**

Any Questions?

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Standards

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