

Systems and software engineering - Software product  
Quality Requirements and Evaluation (SQuaRE) -  
Common Industry Format (CIF) for usability: User needs  
report (ISO/IEC 25064:2013)

## EESTI STANDARDI EESSÕNA

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English Version

Systems and software engineering - Software product  
Quality Requirements and Evaluation (SQuaRE) - Common  
Industry Format (CIF) for usability: User needs report  
(ISO/IEC 25064:2013)

Ingénierie des systèmes et du logiciel - Exigences de  
qualité et évaluation du produit logiciel (SQuaRE) -  
Format industriel commun (CIF) pour l'utilisabilité:  
Rapport sur les besoins de l'utilisateur (ISO/IEC  
25064:2013)

System- und Software-Engineering - Qualitätskriterien  
und Bewertung von Systemen und Softwareprodukten  
(SQuaRE) - Allgemeines Industrieformat (CIF) zur  
Gebrauchstauglichkeit: Dokumentation der  
Erfordernisse von Benutzern (ISO/IEC 25064:2013)

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## European foreword

The text of ISO/IEC 25064:2013 has been prepared by Technical Committee ISO/IEC JTC 1 “Information technology” of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) and has been taken over as EN ISO/IEC 25064:2017 by Technical Committee CEN/TC 122 “Ergonomics” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2017, and conflicting national standards shall be withdrawn at the latest by November 2017.

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### Endorsement notice

The text of ISO/IEC 25064:2013 has been approved by CEN as EN ISO/IEC 25064:2017 without any modification.

# Contents

Page

Foreword .....	v
Introduction .....	vi
1 Scope .....	1
2 Conformance .....	1
3 Normative references .....	2
4 Terms and definitions .....	2
5 Purposes of a User Needs Report .....	5
5.1 General .....	5
5.2 User Needs Reports for existing products, services and systems .....	6
5.3 User Needs Reports for new products, services and systems .....	6
5.4 User Needs Reports for determining, verifying, changing and elaborating context of use .....	6
5.5 Relationship to other CIF information items .....	6
6 Content of a User Needs Report .....	6
6.1 Content elements .....	6
6.2 Initial indicators of the needs for system/product/service or improvement .....	7
6.3 User responsibilities and goals .....	7
6.4 Source data on which user needs are based .....	7
6.4.1 General .....	7
6.4.2 Identified and reported user needs .....	8
6.4.3 Identified and reported management and other stakeholder needs that impact on user needs .....	11
6.4.4 Identified performance deficiencies/problems/potential improvements .....	12
6.5 Consolidated user needs .....	14
6.6 Recommendations (if appropriate) .....	15
6.7 Data collection methods/procedures .....	15
6.7.1 Content .....	15
6.7.2 Selection of participants for user needs assessment .....	16
6.7.3 Description of user needs assessment participants .....	16
6.7.4 Methods and procedures .....	17
6.8 Supporting information .....	17
6.8.1 System/Product/Service description, objectives, constraints .....	17
6.8.2 Data collection instruments .....	18
6.8.3 Data summaries .....	18
Annex A (informative) Users of User Needs Report .....	19
Annex B (informative) User Needs Report Format .....	20
B.1 General .....	20
B.2 Title page .....	20
B.3 Executive summary .....	20
B.4 Introduction .....	21
B.5 Initial indicators of the need for system/product/service or improvement (If appropriate) .....	21
B.6 Methods and procedures .....	21
B.7 Identified user needs .....	21
B.8 Identified management/other stakeholder needs .....	21
B.9 Identified performance deficiencies/problems/potential improvements .....	21
B.10 Consolidated user needs .....	21
B.11 Recommendations .....	21
B.12 Report annexes (supporting information) .....	21
B.12.1 System/Product/Service description, objectives, constraints .....	21

**B.12.2 Data collection instruments.....21**  
**B.12.3 Data summaries .....21**  
**Bibliography.....22**

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## Introduction

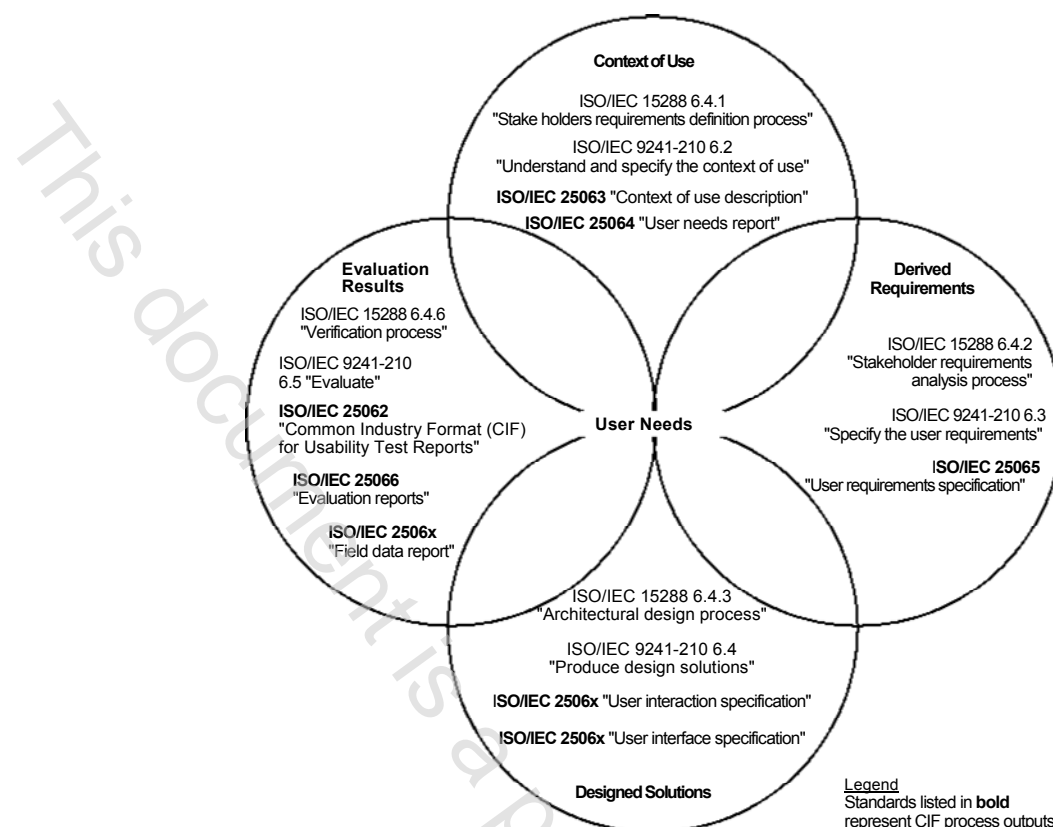
The human-centred design approach of ISO 9241-210 is well established and focuses on making systems usable. Usability can be achieved by applying human-centred design and testing throughout the lifecycle. In order to enable a human-centred approach to be adopted, it is important that all the relevant types of information related to usability are identified and communicated. This identification and communication enables the usability of a system to be designed and tested.

This International Standard provides a framework and consistent terminology for reporting on the assessment of user needs. Specifying user needs in a consistent manner will assist those developing and acquiring interactive systems. It describes a set of user needs report content elements as part of a human-centred approach to design of interactive systems. A user needs report is intended to assist developers in determining user requirements for a system, product, or service.

The Common Industry Format (CIF) for Usability family of International Standards is described in ISO/IEC TR 25060 and is part of the SQuaRE series (ISO/IEC 25000 – ISO/IEC 25099) of standards on systems and software product quality requirements and evaluation.

CIF standards are planned for the following information items:

- Context of use description (25063)
- User needs report (25064)
- User requirements specification (25065)
- User interaction specification (2506X)
- User interface specification (2506X)
- Usability evaluation report (25066)
- Field data report (2506X)



**Figure 1 — Relationship of CIF documents to user centred design in ISO 924-210 and system lifecycle processes in ISO/IEC 15288**

Figure 1 illustrates the interdependence of these information items with the human-centred design activities described in ISO 9241-210 as well as the corresponding System Life Cycle processes described in ISO/IEC 15288. The figure depicts the activities as a set of intersecting circles. The circles overlap to represent that the activities are not separate, but rather, overlapping in time and scope and the outcome of each activity provides the input to one or more other activities. As each human-centred design activity can provide input to any other, there is no starting point, no endpoint, or linear process intended.

Human-centred design relies on user needs that are first identified based on the context of use analysis. User needs are documented in the User Needs Report (ISO/IEC 25064), which is an intermediate deliverable that links the Context of Use Description (ISO/IEC 25063) that contains Information about the users, their tasks and the organizational and physical environment, to the user requirements. These items are developed during the Stakeholders Requirements Definition Process described in ISO/IEC 15288.

The "Produce design solutions" activity focuses on designing user interaction that meets user requirements. This activity takes place during the Architectural Design, Implementation, and Integration processes described in ISO/IEC 15288 and produces the information items "User Interaction Specification" and the "User Interface Specification".

The "Evaluate" activity starts at the earliest stages in the project, evaluating design concepts to obtain a better understanding of the user needs. Design solutions can be evaluated multiple times as the interactive system is being developed, and can produce various types of evaluation report, and usability data such as that described in ISO/IEC 25062 can support the ISO/IEC 15288 validation process that confirms that the system complies with the stakeholders requirements.



# Systems and software engineering — Software product Quality Requirements and Evaluation (SQuaRE) — Common Industry Format (CIF) for usability: User needs report

## 1 Scope

This International Standard describes the Common Industry Format (CIF) for reporting user needs. This specifies the contents and provides a sample format of user needs reports. Specification of management needs, as well as other stakeholder needs, is considered to the extent that they directly impact on user needs. The purpose of the User Needs Report and the intended users of the information are identified, as well as the relationship of user needs to other outputs of human-centred design. The audience of this standard includes all users stated in the scope of ISO/IEC 25000. Annex B of ISO/IEC 25000 describes the users of the information item “user needs report” in detail. Annex A of this International Standard provides a list of typical users of a User Needs Report.

User Needs Reports include:

- documentation of information collected from various sources relevant to user needs
- the consolidated user needs based on the analysis of the collected information

The User Needs Report is applicable to software and hardware systems, products or services (excluding generic products, such as a display screen or keyboard). User Needs Reports are relevant for existing and new products, services and systems, although the extent to which use needs are reported depends upon the type of system, product, or service involved. It can also contribute to determining, verifying, changing and elaborating the context of use. The content elements are intended to be used as part of system-level documentation resulting from development processes such as those in ISO 9241-210 and ISO/IEC JTC1/SC7 process standards.

This International Standard does not prescribe any kind of method, lifecycle or process. To ensure that these content elements can be used within the broadest range of process models and used in combination with other information items, the descriptions use the classifications in ISO/IEC 15289 and ISO/IEC 15504-6.

**NOTE** The content elements documenting user needs can be integrated in any process models. For the purpose of establishing process models, ISO/IEC 24774 and ISO/IEC 15504-2 specify the format and conformance requirements for process models respectively. In addition ISO/IEC 15289 defines the types and content of information items developed and used in process models for system and software lifecycle management. ISO/IEC 15504-5 and 6 define work products, including information items, for the purpose of process capability assessment. Process models and associated information items for human-centred design of interactive systems are contained in ISO TR 18529 and ISO TS 18152 respectively.

## 2 Conformance

A user needs report conforms to this International Standard if it contains all of the required information elements specified in clause 6.

### 3 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document, (including any amendments) applies.

ISO/IEC 25063<sup>1</sup>, *Systems and software engineering — Systems and software product Quality Requirements and Evaluation (SQuaRE) — Common Industry Format (CIF) for Usability: Context of use description*

### 4 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 4.1 accessibility

extent to which products, systems, services, environments and facilities can be used by people from a population with the widest range of characteristics and capabilities to achieve a specified goal in a specified context of use

Note 1 to entry: Context of use includes direct use or use supported by assistive technologies.

[SOURCE: ISO 26800:2011, 2.1]

#### 4.2 action

user behaviour that a system accepts as a request for a particular operation

[SOURCE: ISO/IEC TR 11580:2007]

#### 4.3 context of use

users, tasks, equipment (hardware, software and materials), and the physical and social environments in which a product is used

[SOURCE: ISO 9241-11:1998]

#### 4.4 dialogue

interaction between a user and an interactive system as a sequence of user actions (inputs) and system responses (outputs) in order to achieve a goal

[SOURCE: ISO 9241-110:2006]

#### 4.5 effectiveness

accuracy and completeness with which users achieve specified goals

[SOURCE: ISO 9241-11:1998]

#### 4.6 efficiency

resources expended in relation to the accuracy and completeness with which users achieve goals

[SOURCE: ISO 9241-11:1998]

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<sup>1</sup> To be published.