

INTERNATIONAL
STANDARD

ISO/IEC/
IEEE
26512

Second edition
2018-06

**Systems and software engineering —
Requirements for acquirers and
suppliers of information for users**

*Ingénierie du logiciel et des systèmes — Exigences pour acquéreurs et
fournisseurs de documentation utilisateur*

IECNORM.COM : Click to view the full PDF of ISO/IEC/IEEE 26512:2018



Reference number
ISO/IEC/IEEE 26512:2018(E)

© ISO/IEC 2018
© IEEE 2018

IECNORM.COM : Click to view the full PDF of ISO/IEC/IEEE 26512:2018



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2018

© IEEE 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO or IEEE at the respective address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Institute of Electrical and Electronics Engineers, Inc
3 Park Avenue, New York
NY 10016-5997, USA

Email: stds.ipr@ieee.org
Website: www.ieee.org

Published in Switzerland

Contents

1	Scope	1
2	Normative references	2
3	Terms and definitions.....	2
4	Conformance.....	7
4.1	General	7
4.2	Definition of conformance.....	7
4.3	Conformance situations	7
5	Information for users within a system/software life cycle.....	8
6	Agreement processes within a system/software life cycle.....	10
6.1	General	10
6.2	Information for users acquisition process.....	11
6.2.1	Purpose of the acquisition process.....	11
6.2.2	Outcomes of the acquisition process	11
6.3	Information for users acquisition activities and tasks	11
6.3.1	General	11
6.3.2	Acquisition preparation.....	11
6.3.3	Supplier selection	13
6.3.4	Negotiating and agreeing to the contract.....	13
6.3.5	Contract management and monitoring.....	13
6.3.6	Acquirer acceptance.....	14
6.3.7	Acquisition closure	14
6.4	Information for users supply process	14
6.4.1	Purpose of the supply process	14
6.4.2	Outcomes of the supply process	14
6.5	Information for users supply activities and tasks.....	14
6.5.1	General	14
6.5.2	Opportunity identification and evaluation.....	15
6.5.3	Proposal preparation.....	15
6.5.4	Negotiating and agreeing to the contract.....	15
6.5.5	Contract performance.....	15
6.5.6	Delivery	17
7	Defining information for users requirements and constraints.....	17
7.1	Aspects of requirements and constraints.....	17
7.2	Schedule constraints.....	17
7.3	Usability requirements.....	18
7.4	Product modification requirements	18
7.5	Localization and translation requirements.....	19
7.6	Legal requirements	19
7.7	Safety requirements.....	20
7.8	Security requirements.....	20
7.9	Standards and conventions.....	20
7.10	Quality management requirements.....	20
8	Specification of the information for users	21
9	Statement of work.....	21
10	Request for proposal.....	22
10.1	Request for proposal topics.....	22
10.2	Project objectives.....	23
10.3	Requirements for supporting processes	23

10.4	Supplier capabilities and experience	23
10.5	Instructions for bidders	23
10.6	List of deliverable information for users products or services.....	23
10.7	Confidentiality and intellectual property	24
10.8	Proposal evaluation criteria.....	24
11	Information for users proposal	24
11.1	Information for users proposal contents	24
11.2	Understanding of requirements.....	25
11.3	Scope of the project	26
11.4	Processes	26
11.5	Experience, capabilities, and available resources.....	26
11.6	Schedule	27
11.7	Deliverables	27
11.8	Price proposal	27
Annex A (informative)	Requirements clauses and checklist for acquirers	28
Annex B (informative)	Requirements clauses and checklist for suppliers	31

IECNORM.COM : Click to view the full PDF of ISO/IEC/IEEE 26512:2018

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

IEEE Standards documents are developed within the IEEE Societies and the Standards Coordinating Committees of the IEEE Standards Association (IEEE-SA) Standards Board. The IEEE develops its standards through a consensus development process, approved by the American National Standards Institute, which brings together volunteers representing varied viewpoints and interests to achieve the final product. Volunteers are not necessarily members of the Institute and serve without compensation. While the IEEE administers the process and establishes rules to promote fairness in the consensus development process, the IEEE does not independently evaluate, test, or verify the accuracy of any of the information contained in its standards.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of ISO/IEC JTC 1 is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is called to the possibility that implementation of this document may require the use of subject matter covered by patent rights. By publication of this document, no position is taken with respect to the existence or validity of any patent rights in connection therewith. ISO/IEC and IEEE is not responsible for identifying essential patents or patent claims for which a license may be required, for conducting inquiries into the legal validity or scope of patents or patent claims or determining whether any licensing terms or conditions provided in connection with submission of a Letter of Assurance or a Patent Statement and Licensing Declaration Form, if any, or in any licensing agreements are reasonable or non-discriminatory. Users of this document are expressly advised that determination of the validity of any patent rights, and the risk of infringement of such rights, is entirely their own responsibility. Further information may be obtained from ISO or the IEEE Standards Association.

ISO/IEC/IEEE 26512:2018 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*, in cooperation with the Software and Systems Engineering Standards Committee of the IEEE Computer Society, under the Partner Standards Development Organization cooperation agreement between ISO and IEEE.

This second edition of ISO/IEC/IEEE 26512 cancels and replaces ISO/IEC/IEEE 26512:2010 with minor revisions:

- removal of superfluous definitions;
- updated version of the information management process from the normative standard ISO/IEC/IEEE 15288:2015;
- the addition of cross-reference Table 1, Acquirer and supplier processes;
- updates to the Bibliography; and
- editorial changes.

Introduction

This document was developed to assist users of ISO/IEC/IEEE 15288:2015 or ISO/IEC 12207 to acquire or supply systems and software information for users and information services as part of the life cycle processes. It defines the information development process from the acquirer's standpoint and the supplier's standpoint. This document addresses the identification, definition, and fulfillment of requirements for information for users as part of the acquisition and supply processes.

This document covers the requirements for information items used in the acquisition of information for users: the acquisition plan, document specification, statement of work, request for proposals, and the proposal. It also discusses the use of a Document Plan in the acquisition and supply processes.

This document is independent of the software tools that can be used to produce information for users, and applies to both printed and on-screen material, and to other media such as video or augmented reality systems. Much of its guidance is applicable to information for users for systems including hardware as well as software.

Earlier standards tended to view the results of the information development process as a single book or multivolume set: a one-time deliverable. Increasingly, information acquirers and suppliers recognize that most information for users is now produced from managed re-use of previously developed information (single-source documentation) adapted for new software or system versions, or presentation in various on-screen and printed media. While this document does not describe how to set up a content management system, it is applicable for organizations practicing single-source documentation, as well as for acquirers and suppliers of one-time deliverables.

Anyone who uses products that contain software needs accurate information about how the software will help the user accomplish a task. Information for users can be the first tangible item that the user sees, and so influences the user's first impressions of the product. If the information is supplied in a convenient form and is easy to find and understand, the user can quickly become proficient at using the product. Therefore, well-designed information for users not only assists the user and helps to reduce the cost of training and support, but also enhances the reputation of the product, its producer, and its suppliers.

Although software developers intend to design user interfaces that behave so intuitively that very little separate information is needed, this is rarely possible. Today's software offers increasingly robust functionality, not only within applications, but also across applications which intelligently exchange information with one another. Further, most software includes underlying rules and calculations, or algorithms that affect the results a user can obtain when using the software. These underlying programming mechanics are discernable by users, but only through laborious testing. For these and other reasons, information for users remains an essential component of usable software products and systems.

Information for users is often regarded as something done after the system has been implemented. However, for high-quality information, its development needs to be regarded as an integral part of the software or system life cycle. In fact, quality information for users or information management services are important enough to require specific planning.

Related standards for those acquiring and supplying information for software users include ISO/IEC 26514:2008 (IEEE Std 26514-2010), *Systems and software engineering — Requirements for designers and developers of user documentation*, and ISO/IEC/IEEE 26513, *Systems and software engineering — Requirements for testers and reviewers of information for users*. Other International Standards address the information for users and information management processes from the viewpoint of managers and agile projects.

This document is consistent with ISO/IEC 12207 and ISO/IEC 15288:2015 as an implementation of the Acquisition and Supply processes, which comprise the Agreement processes, and of the Information Management process.

This document is intended for use in all types of organizations, whether they have a dedicated documentation department or not. It can be used as a basis for local standards and procedures. Readers are assumed to have experience or knowledge of general agreement processes for acquisition and supply of products and services.

The order of clauses in this document does not imply that the acquisition activities need to be performed in this order, nor that information for users needs to be developed in this order or presented to the user in this order.

In each clause, the requirements are media-independent, as far as possible.

The checklists in Annexes A and B can be used to track conformance with the requirements of this document for acquirers and suppliers of information products.

The Bibliography contains references to source material used in the development of this document, as well as sources of additional information that might be useful to acquirers and suppliers.

IECNORM.COM : Click to view the full PDF of ISO/IEC/IEEE 26512:2018

IECNORM.COM : Click to view the full PDF of ISO/IEC/IEEE 26512:2018

Systems and software engineering — Requirements for acquirers and suppliers of information for users

1 Scope

This document supports the interest of system users in having consistent, complete, accurate, and usable information. It addresses both available approaches to standardization: a) process standards, which specify the way that information products are to be acquired and supplied; and b) information product standards, which specify the characteristics and functional requirements of the information.

As defined in ISO/IEC/IEEE 12207 and ISO/IEC/IEEE 15288:2015, the acquisition and supply activities make up the agreement processes of the software or system life cycle. Acquisition and supply of information for users and related services are specializations of those processes. Such services can be acquired and supplied for any part of the information management process, such as the following:

- information management;
- information design and development;
- information editing and review coordination;
- information testing, particularly usability testing;
- information production and packaging;
- information distribution and delivery;
- advice on the selection and implementation of information development tools and supporting systems; and
- information development process improvement.

This document provides an overview of the information management processes that are relevant to the acquisition and supply of information for users. It applies the Agreement processes (acquisition and supply) to information for users, and addresses the preparation of requirements for this information. These requirements are central to the information for users specification and statement of work discussed in this document. This document also addresses requirements for primary document outputs of the acquisition and supply process: the request for proposal and the proposal for documentation products and services.

This document is intended for use in acquiring or supplying any type of information for users and is independent of information development or management tools or methodologies.

This document might be helpful for acquiring and supplying the following types of information, although it does not cover all aspects of them:

- multimedia systems using animation, video, and sound;
- computer-based training (CBT) packages and specialized course materials intended primarily for use in formal training programs;
- maintenance documentation describing the internal operation of systems software;
- collaboratively generated, often known as “wiki”, documentation, which will usually need to be curated periodically; and
- information for users incorporated into the user interface.

This document is applicable to acquirers and suppliers of information for users, including a variety of specialists:

- analysts (e.g., business analysts, human factors engineers) who identify the tasks that the intended users will perform with the system;
- managers of the software or system development process or the information management process;
- managers of the acquisition process, and those who authorize and approve acquisitions; and
- managers and authors involved in proposal preparation.

It can also be consulted by those with other roles and interests in the information development process:

- information designers and architects who plan the structure, format, and content requirements of information products;
- experienced authors and editors who develop the written content for information for users;
- graphic designers with expertise in electronic media;
- user interface designers and ergonomics experts working together to design the presentation of the information on the screen;
- usability testers, information development reviewers, technical contacts;
- developers of tools for creating on-screen information for users.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC/IEEE 12207, *Systems and software engineering — Software life cycle processes*

ISO/IEC/IEEE 15288:2015, *Systems and software engineering — System life cycle processes*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC/IEEE 24765 (available at www.computer.org/sevocab) and the following apply.

ISO, IEC and IEEE maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org>
- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEEE Standards Dictionary Online: available at <http://dictionary.ieee.org>

3.1 accessibility

usability of a software or information product, service, environment, or facility by people with the widest range of capabilities

Note 1 to entry: Although “accessibility” typically addresses users who have disabilities, the concept is not limited to disability issues.

[SOURCE: ISO/IEC 26514:2008, Modified, Note 2 to entry has become Note 1 to entry, original Note 1 to entry has been deleted.]

3.2 analysis

investigation and collection phase of development that aims to specify types of users and their informational needs

[SOURCE: ISO/IEC/IEEE 24765:2010]

3.3 audience

category of users sharing the same or similar characteristics and needs (for example, reason for using the information, tasks, education level, abilities, training, experience)

Note 1 to entry: There can be different audiences for information for users (for example, management, data entry, maintenance) that determine the content, structure, and use of the information.

[SOURCE: ISO/IEC 26514:2008, Note 1 to entry modified and editorially revised: "intended documentation" has become "information."]

3.4 change control procedure

actions taken to identify, document, review, and authorize changes to a software or information product that is being developed

Note 1 to entry: The procedures help to ensure that the validity of changes is confirmed, that the effects on other items are examined, and that those people concerned with the development are notified of the changes.

[SOURCE: ISO/IEC 26514:2008, Modified, Note 1 to entry editorially revised.]

3.5 configuration management

discipline applying technical and administrative direction and surveillance to:

- identify and document the functional and physical characteristics of a configuration item;
- control changes to those characteristics;
- record and report change processing and implementation status; and
- verify compliance with specified requirements.

3.6 contract

relationship between acquirer and supplier, which in broad terms prescribes that one party will provide defined goods and services and the other party will pay a defined fee for them

Note 1 to entry: In many countries, contracts do not have to be written but the terms of the contracts referred to in this document are defined in writing.

Note 2 to entry: The contract relationship can have other names, such as "agreement." The acquirer determines which term is to be used in the application of this document.

3.7 customization

adaptation of a software or information product to the needs of a particular audience

ISO/IEC/IEEE 26512:2018(E)

[SOURCE: ISO/IEC 26514:2008]

3.8 design

⟨information⟩ stage of information development that is concerned with determining what information for users will be provided in a product and what the nature of the information will be

[SOURCE: ISO/IEC 26514:2008]

3.9 development

⟨information⟩ activity of preparing information for users after it has been designed

[SOURCE: ISO/IEC 26514:2008]

3.10 document

uniquely identified unit of information for human use

EXAMPLE Report, specification, manual, or book in printed or electronic form.

Note 1 to entry: A document can be a single information item or part of a larger information item.

[SOURCE: ISO/IEC/IEEE 15289:2015]

3.11 documentation

information that explains how to use a product

Note 1 to entry: The information can be provided as documentation that can be used independently of the system or embedded within the product and accessible as an integral part of it, or both. In this document, the term "information for users" is synonymous with the terms "documentation" and "software user documentation." Other forms of documentation (for example, "system documentation") are clearly identified as such.

EXAMPLE Printed manuals, on-screen information, standalone online help, videos, pop-up help.

[SOURCE: ISO/IEC 26514:2008, Modified, Note 1 to entry combined with Note 2 to entry and editorially revised, Note 3 to entry has become an example and has been editorially revised.]

3.12 illustration

graphic element set apart from the main body of text and normally cited within the main text

Note 1 to entry: In this document, the term "illustration" is used as the generic term for tables, figures, exhibits, screen captures, flow charts, diagrams, drawings, icons, and other types of graphics.

[SOURCE: ISO/IEC 26514:2008, Modified, definition now includes the word "element," after "graphic" and Note 1 to entry editorially revised.]

3.13 internationalization

process of developing information so that it is suitable for an international audience

Note 1 to entry: See 3.14 **localization**.

[SOURCE ISO/IEC 26514:2008, Modified, Note 1 to entry added.]

3.14**localization**

creation of a national or specific regional version of a product

Note 1 to entry: See 3.13 **internationalization**.

Note 2 to entry: Localization can be performed separately from the translation process.

[SOURCE: ISO/IEC 26514:2008, Modified, Note 1 to entry modified original "cf", Note 2 to entry added.]

3.15**on-screen information**

information that is intended to be read on the screen by the user while using software

EXAMPLE Pop-up help, help text on a screen.

[SOURCE: ISO/IEC 26514:2008, Modified, term was previously "on-screen documentation", definition now includes "information" while previous version included "documentation." Note 1 to entry has been editorially revised and has become an example.]

3.16**printed documentation**

documentation that is either provided in printed form, or provided in electronic form for the customer or user to print

[SOURCE: ISO/IEC 26514:2008]

3.17**process**

set of interrelated or interacting activities that transform inputs into outputs

[SOURCE: ISO 9000:2005]

3.18**product**

result of a process

[SOURCE: ISO/IEC/IEEE 15288:2015]

3.19**product authority**

person or persons with overall responsibility for the capabilities and quality of a product

[SOURCE: ISO/IEC 26514:2008]

3.20**project**

set of activities for developing a new product or enhancing an existing product

[SOURCE: ISO/IEC 26514:2008]

3.21 quality management

coordinated activities to direct and control an organization with regard to quality

[SOURCE: ISO/IEC/IEEE 15288:2015]

3.22 software

all or part of the programs, procedures, rules, and associated documentation of an information processing system

Note 1 to entry: For the purposes of this document, the term "software" does not include on-screen documentation.

[SOURCE: IEEE Std 828-2012]

3.23 style

set of language-specific editorial conventions covering grammar, terminology, punctuation, capitalization, and word choice

[SOURCE: ISO/IEC 26514:2008]

3.24 technical contact

person responsible for providing an information developer with technical information about a product or for checking the technical accuracy of drafts of information for users

Note 1 to entry: Technical contacts are often also known as subject-matter experts.

[SOURCE: ISO/IEC 26514:2008, Modified, "information developer," replaced "documentation developer," "so-called subject matter expert" removed, and Note 1 to entry added.]

3.25 topic

small part of a document that deals with a single subject

Note 1 to entry: In printed information for users, a topic is equivalent to a section (heading, subheading) and its content. In on-screen information, a topic consists of a title (heading) and information about a subject (typically, a task or a concept or reference information). For on-screen information, the system might present a topic without user intervention.

EXAMPLE Instructions on how to print the current document.

[SOURCE: ISO/IEC 26514:2008, Modified, Note 1 to entry includes content of previous Note 2 to entry with editorial modifications ("on-screen information" replaces "on-screen documentation"), Note 3 to entry has become an example.]

3.26 tutorial

instructional procedure in which the user exercises system functions, often using sample data that is supplied with the system or information for users

[SOURCE: ISO/IEC 26514:2008]

3.27

usability

extent to which a system or information product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use

[SOURCE: ISO/IEC 25064:2013]

3.28

user

person who performs one or more tasks with an automated system; a member of a specific audience

[SOURCE: ISO/IEC 25064:2013]

3.29

user interface

ensemble of software and hardware that allows a user to interact with a system

[SOURCE: ISO/IEC 26514:2008]

4 Conformance

4.1 General

This document may be used as a conformance or a guidance document for projects and organizations claiming conformance to ISO/IEC/IEEE 15288:2015 or ISO/IEC/IEEE 12207.

4.2 Definition of conformance

This document is meant to be tailored so that only necessary and cost-effective requirements are applied. Tailoring may take the form of specifying approaches to conform to the requirements of this document, or altering its recommendations to reflect the particular product or service more explicitly. The acquirer may involve other parties, including potential suppliers or any necessary third parties (such as regulators), before contract award, in determining the acquirer's requirements for tailoring of this document for the project. Annex A (normative) of ISO/IEC/IEEE 12207 describes the Tailoring Process. Tailoring decisions made by the acquirer should be specified in the contract.

Throughout this document, "shall" is used to express a provision that is binding, "should" to express a recommendation among other possibilities, and "may" to indicate a course of action permissible within the limits of this document.

Use of the nomenclature of this document for the parts of information for users (that is, chapters, topics, pages, screens, windows) is not required to claim conformance.

4.3 Conformance situations

Conformance may be interpreted differently for various situations. The relevant situation shall be identified in the claim of conformance:

- a) When conformance is claimed for an organization, the organization shall make public a document declaring its tailoring of the acquisition or supply process.

- b) When conformance is claimed for a project using user information development services, the content development management plans or the contract shall document the tailoring of the content development process

NOTE 1 One possible way for an organization to deal with clauses that cite “the documentation plan” is to specify that they shall be interpreted in the content development management plans for any particular content development project.

NOTE 2 A project’s claim of conformance is typically specified with respect to the organization’s claim of conformance.

This document may be referenced in contracts when the parties (called the acquirer and the supplier) agree that the supplier will deliver information for users in accordance with this document. It may also be adopted as an in-house standard by a project or organization that decides to acquire information for users from another part of the organization in accordance with this document.

5 Information for users within a system/software life cycle

Acquirers and suppliers of information for users work within the development life cycle of the product. The contract shall specify which of the following Information Management process activities are required:

- process implementation, which includes setting objectives; planning, management, and control; preparation of an information development plan;
- analysis and design, which includes preparing the information designs for the project; collecting information about the product and users, their tasks, and their needs for information, and designing information based on those needs;
- development and review, which includes structuring the content for usability, applying the information design by creating the written and graphic content, implementing the information in the specified media, and evaluating the information for users with the rest of the product;
- production, which includes the integration, preparation, reproduction, and packaging and delivery of the information; and
- maintenance, which includes keeping the information for users accurate throughout the product life cycle, including modifications for improved usability.

Since acquirers and suppliers of information for users work within the product life cycle, the information for users should ideally be developed in conjunction with the software or system components, so that the software or system and the information for users may be acquired and maintained together. The process of specifying the information for users should be a part of the development of the product as a whole, not a separate exercise. Although accurate information for users cannot be completed until the software component has been fully developed, the information for users and the product both benefit from concurrent development.

For simplicity, the life cycle stages are presented as if there were a clear starting point and end point for developing information for users. A single sequence of activities does not exist, however, that can be followed in all cases for all products and all types of information. For example, design and implementation activities for on-screen information are very closely interlinked, as are analysis and design, and the way they link together, and the way they are delivered, varies between projects.

The classic information development process applies to the life cycle of a single new product with a single new user manual, but it is much more likely that software or system and information for users are designed and developed under more complex circumstances, such as the following:

- A previously documented software product is being upgraded, offered in a new version or on different operating system platforms, or customized as part of system integration, and previous information for users needs revision.

- Previous information for users is now required using a different delivery vehicle, or in a different format or different media, or in different languages or versions, such as tutorials, online help, or advanced reference guides.
- Previous information for users is to be adapted or used as models for different products acquired or supplied by an organization.

It is much easier to create information for users if other information produced during the life cycle is available, such as an information development plan, system design document, system test plan, release records, and problem reports. Other documentation specific to the information development process can be useful, such as style guides and organizational procedures for information management and documentation reviews.

NOTE ISO/IEC/IEEE 15289:2015, *Systems and software engineering — Content of systems and software life cycle process information products (Documentation)*, provides recommended comments for the required documents throughout a system/software life cycle.

Rather than focusing on supplying a single book or help system, information for users acquirers and suppliers of information for users perform their tasks to support the Information Management process, whose activities are defined in ISO/IEC/IEEE 15288:2015, *Systems and software engineering – System life cycle processes*, subclause 6.3.6.3, as shown below. The contract shall specify which of the Information Management process activities are required.

a) **Prepare for information management.** This activity consists of the following tasks:

1) Define the strategy for information management.

NOTE Information about the same topic can be developed in different ways at different points in the life cycle and for different audiences.

2) Define the items of information that will be managed.

NOTE This includes the information that will be managed during the system life cycle and possibly maintained for a defined period beyond. This is done according to organizational policy, agreements, or legislation.

3) Designate authorities and responsibilities for information management.

NOTE Due regard is paid to information and data legislation, security and privacy, e.g., ownership, agreement restrictions, rights of access, intellectual property and patents. Where restrictions or constraints apply, information is identified accordingly. Staff having knowledge of such items of information are informed of their obligations and responsibilities.

4) Define the content, formats, and structure of information items.

NOTE The information originates and terminates in many forms (e.g., audiovisual, textual, graphical, numerical) and mediums (e.g., electronic, printed, magnetic, optical). Organization constraints, e.g., infrastructure, interorganizational communications, and distributed project workings, are taken into account. Relevant information item standards and conventions are used according to policy, agreements, and legislation constraints.

5) Define information maintenance actions.

NOTE Information maintenance includes status reviews of stored information for integrity, validity and availability. It also includes any needs for replication or transformation to an alternative medium, as necessary, either to retain infrastructure as technology changes so that archived media can be read or to migrate archived media to newer technology.

b) **Perform information management.** This activity consists of the following tasks:

1) Obtain, develop, or transform the identified items of information.

NOTE This includes collecting the data, information, or information items from appropriate sources (e.g., resulting from any life cycle process), and writing, illustrating, or transforming it into useable information for stakeholders. It includes reviewing, validating, and editing information per information standards.

2) Maintain information items and their storage records, and record the status of information.

NOTE 1 Information items are maintained according to their integrity, security and privacy requirements. The status of information items is maintained, (e.g., version description, date of issue or validity date, record of distribution, security classification). Legible information is stored and retained in such a way that it is readily retrievable.

NOTE 2 The source data and tools used to transform information, along with the resulting documentation is placed under configuration control in accordance with the Configuration Management process. ISO/IEC/IEEE 26531 provides requirements for content management systems useful for life cycle information and documentation.

3) Publish, distribute or provide access to information and information items to designated stakeholders.

NOTE Information is provided to designated stakeholders in an appropriate form, as required by agreed schedules or defined circumstances. Information items include official documentation used for certification, accreditation, license or assessment ratings, as required.

4) Archive designated information.

NOTE Archiving is done in accordance with the audit, knowledge retention, and project closure purposes. The media, location and protection of the information are selected in accordance with the specified storage and retrieval periods, and with organization policy, agreements, and legislation. Arrangements are put in place to retain necessary information items after project closure.

5) Dispose of unwanted, invalid, or unvalidated information.

NOTE This is done according to organization policy, and security and privacy requirements.

6 Agreement processes within a system/software life cycle

6.1 General

The acquisition and supply processes are clearly complementary. The following table lists the processes that are discussed below, in approximate time sequence, and shows their complementary relationships. Further, the requirements for these processes are presented as checklists in Annex A and Annex B for convenience in tracking conformance with the requirements of this document.

Table 1 – Acquirer and supplier processes

Acquirer processes		Supplier processes	
6.2	Information for users acquisition process	6.4	Information for users supply process
6.2.1	Purpose of the acquisition process	6.4.1	Purpose of the supply process
6.2.2	Outcomes of the acquisition process	6.4.2	Outcomes of the supply process
6.3	Information for users acquisition activities and tasks	6.5	Information for users supply activities and tasks
6.3.2	Acquisition preparation	6.5.2	Opportunity identification and evaluation
6.3.3	Supplier selection	6.5.3	Proposal preparation
6.3.4	Negotiating and agreeing to the contract	6.5.4	Negotiating and agreeing to the contract
6.3.5	Contract management and monitoring	6.5.5	Contract performance
6.3.6	Acquirer acceptance	6.5.6	Delivery
6.3.7	Acquisition closure		

6.2 Information for users acquisition process

6.2.1 Purpose of the acquisition process

The acquisition process provides the means for conducting business with a supplier of user information products or services in support of an operational system, or of elements of a system being developed. The purpose of the acquisition process is to obtain the product or service that satisfies the need expressed by the acquirer. The process begins with the identification of customer needs and ends after the acceptance of the product or service.

6.2.2 Outcomes of the acquisition process

As a result of successful performance of the acquisition process:

- information needs and goals are defined;
- acquisition strategies are defined;
- product and/or service acceptance criteria are defined;
- a contract is developed that clearly expresses the expectations, responsibilities, and liabilities of both the acquirer and the supplier;
- one or more suppliers are selected; and
- information or information services are delivered and accepted, satisfying the acquirer's stated need, which will usually specify constraints on cost, schedule, and quality.

6.3 Information for users acquisition activities and tasks

6.3.1 General

The acquirer shall implement the following activities in accordance with applicable organizational policies and procedures to achieve the outcomes of the acquisition process:

- 1) acquisition preparation;
- 2) supplier selection;
- 3) contract agreement;
- 4) contract management and monitoring;
- 5) acquirer acceptance; and
- 6) acquirer closure.

NOTE The activities and tasks in this process can apply to one or more suppliers simultaneously on the same project.

6.3.2 Acquisition preparation

This activity consists of the following tasks:

- 1) describing the need;
- 2) defining the information requirements;
- 3) identifying an acquisition strategy;
- 4) preparing an acquisition plan;

- 5) preparing a request for proposal; and
- 6) appropriately publishing and publicizing the acquisition requirement.

6.3.2.1 Describing the need

The acquirer shall describe a need to acquire or enhance an information for users product or service.

6.3.2.2 Defining the requirements for information for users

The acquirer shall define and analyze the system requirements relating to information for users. The acquirer may do this or may retain a supplier for the purpose. If the acquirer retains a supplier to perform requirements analysis, the acquirer shall retain approval authority for the analyzed requirements.

6.3.2.3 Identifying an acquisition strategy

The acquirer shall identify its acquisition strategy after performing make/buy analyses and considering the criteria of risk, cost, and benefits for each option. Options include one or more of the following:

- develop the information for users or obtain the service internally;
- develop the information for users or obtain the service through a contract with a supplier; and
- adapt or enhance existing items in the information for users.

6.3.2.4 Preparing an acquisition plan

The acquirer shall prepare, document, and carry out an acquisition plan. The plan shall include the following:

- requirements for the information for users;
- planned audience for the information for users;
- type of contract to be employed;
- responsibilities of the organizations involved and identification of the product authority;
- approach for developing and maintaining the information;
- risks considered as well as methods to manage the risks; and
- the acceptance strategy and conditions (criteria).

The acquisition plan should contain a schedule for the acquisition activities. The acquirer should establish a procedure for supplier selection including the proposal evaluation criteria and requirements compliance weighting.

6.3.2.5 Preparing the request for proposal

Using the information gathered under the subclauses above, the acquirer shall document the acquisition requirements and generate a request for proposal. Further details of the request for proposal are in Clause 10.

For acquisitions of information for users, the acquirer shall prepare a specification of information for users as described in Clause 8 and include it in the request for proposal.

6.3.2.6 Appropriately publishing and publicizing the acquisition requirement

The acquirer shall identify potential suppliers and communicate the request for information for users services to the identified suppliers.

6.3.3 Supplier selection

The acquirer shall assess the suppliers' capability to complete the information for users or services as specified in the request for proposal and select one or more suppliers based upon the evaluation of the suppliers' proposals.

If a supplier that meets the exact technical requirements is not identified, but one is identified that has acceptable experience and capabilities, and agrees to an acceptable cost, the documentation requirements and the acquisition plan may be modified. For example, the schedule may be modified so that the information for users is produced in phases along with the software development, or only the critical and most frequently used tasks may be documented.

NOTE 1 ISO/IEC 26514:2008 (IEEE Std 26514-2010) includes requirements for content of information for users.

6.3.4 Negotiating and agreeing to the contract

The acquirer shall prepare and negotiate a contract with the supplier that addresses the acquisition requirements, including the cost and schedule of the information for users product or service to be delivered. Acquirers and suppliers should agree on the overall schedules for the project, time, and cost.

The contract shall clearly express the expectation, responsibilities, and liabilities of both parties. The contract shall address intellectual property, usage, ownership, warranty, and licensing rights associated with the information for users or other deliverables, which shall also be defined. The contract shall specify the product authority and acceptance criteria for the deliverable information for users product or service.

The acquirer shall include or reference the process for tailoring requirements in the contract.

6.3.5 Contract management and monitoring

When the contract is under way, the acquirer shall cooperate with the supplier to provide necessary information in a timely manner and promptly resolve pending issues. The acquirer shall provide reviews of drafts and interim deliverables within the time specified in the contract. The acquirer shall monitor the supplier's activities in accordance with the agreed upon review, reporting, and testing processes.

The acquirer should incorporate input from the information supplier into the project's problem management processes and may consider a formal process for doing so. Information developers are frequently the earliest reporters of software issues.

The acquirer shall control changes to the contract by negotiating with the supplier as part of a change control mechanism. The acquirer and the supplier shall evaluate changes to the contract for information for users in regard to their impact on the overall project plans, costs, benefits, quality, and schedule.

If there is a change control mechanism, it should address the change management roles and responsibilities, level of formality of the proposed change requests and contract renegotiation, and communication to the affected stakeholders.

Information for users can be affected by changes to the design of software or to the training or support plans. Therefore, the implications of such changes should be assessed before approval is given for such a change. When product changes are made, the acquirer should immediately notify the suppliers, so that they work only with up-to-date information.

NOTE Small changes to a system can cause major changes to information for users, while major changes to a system do not always require major changes to the information. For example, modifying a system menu might be a small change to the system itself but might have major implications for the entire structure of a user manual. In contrast, completely revising the methods used within the software for some complex operation might be a major task in developing the software, but might not affect the user's view of the system at all, and therefore might not need changes to the information for users.

6.3.6 Acquirer acceptance

The acquirer should prepare for acceptance based on the defined acceptance strategy and criteria. As specified in the contract, the acquirer shall conduct acceptance review and acceptance testing of the deliverable information for users product or service and shall accept it from the supplier when the agreed-upon acceptance conditions are satisfied. A product or service may be supplied incrementally and payment or other agreed upon consideration may be provided in increments if so agreed.

As stated in the contract, the acquirer may take the responsibility for the configuration management and information management of the delivered information for users. As agreed, the supplier may provide continuing information management and information maintenance services for the acquirer.

6.3.7 Acquisition closure

When the supplied product or service has satisfied the conditions of the contract and identified open items have been satisfactorily closed, the acquirer concludes the contract by providing payment or other agreed-upon consideration and notification of conclusion of the contract.

6.4 Information for users supply process

6.4.1 Purpose of the supply process

The purpose of the supply process is to provide an information for users product or service to the acquirer that meets the agreed requirements. The supply process provides the means for conducting a project in which the result is an information for users product or service that is delivered to the acquirer.

6.4.2 Outcomes of the supply process

As a result of successful performance of the supply process:

- 1) an acquirer for a product or service is identified;
- 2) a response to an acquirer's request is produced (a proposal);
- 3) a contract is established between the acquirer and the supplier (as in the acquisition process); and
- 4) products and services that meet the agreed requirements are produced and delivered.

6.5 Information for users supply activities and tasks

6.5.1 General

The supplier shall implement the following activities in accordance with applicable organizational policies and procedures to achieve the outcomes of the supply process:

- 1) opportunity identification and evaluation;
- 2) proposal preparation;

- 3) contract execution;
- 4) contract performance;
- 5) delivery; and
- 6) closure.

The supplier may have subcontractors or second-tier suppliers. The supplier shall manage and control its subcontractors in accordance with the acquisition process described herein. The supplier shall flow down the contractual requirements so that work done by subcontractors or second-tier suppliers is performed in accordance with the prime contract requirements.

6.5.2 Opportunity identification and evaluation

The supplier should identify potential acquirers or representatives of acquirers for the supplier's information for users services.

If the potential acquirer has not clearly defined requirements or has prepared an insufficiently detailed acquisition plan, the supplier may perform a needs assessment, assist in requirements definition, or submit an unsolicited proposal for user information for users services.

If the acquisition process is being used and a request for proposals has been issued, the supplier should conduct a review of requirements in the request for proposal, taking into account organizational policies and other regulations.

The supplier should decide whether or not to bid on the request for proposals.

6.5.3 Proposal preparation

The supplier shall conduct a review of the acquisition requirements and determine how to apply its organization processes to manage the project and help improve the quality of the deliverable information product or service. The supplier should consider acquirer involvement and feasibility of achieving the requested schedule. The supplier should consider availability of resources, including access to the system being documented and to the documentation and information management systems and tools, as well as human resources.

The supplier shall prepare a proposal in response to the request for proposal. Clause 11 provides more information on information development proposals.

6.5.4 Negotiating and agreeing to the contract

The supplier shall negotiate and decide whether to enter into a contract with the acquirer to provide the user information for users or information service.

6.5.5 Contract performance

The supplier shall apply the information management processes as tailored for the contract to produce the agreed upon deliverables. The supplier shall conduct a review of the contract requirements to define the framework for managing the project and for ensuring the quality of the deliverable information product or service. The supplier shall implement and perform the project management plan and information development plan.

The supplier shall provide the acquirer access to the supplier's and subcontractors' facilities and to draft versions of information for users products as specified in the contract and content development management plans.

6.5.5.1 Information Development Plan

The supplier shall use the user Information Development Specification (Clause 8) to prepare an Information Development Plan. The Information Development Plan shall formally describe the scope of the planned information for users, as well as its structure, format, and content. The Information Development Plan should:

- reflect important information analysis and design decisions;
- generally cover the entire suite of information for users, including, for example, user manuals, online documentation, help text, and quick reference cards;
- provide the purpose of the information for the intended audience; and
- include draft tables of contents for the information, with estimated page or topic counts.

NOTE 1 ISO/IEC 26511:2011 (IEEE Std 26511-2011) and ISO/IEC 26514:2008 (IEEE Std 26514-2010) provide detailed requirements for information design.

After approval, the Information Development Plan should be placed under change control with the other content development management plans. The Information Development Plan should be distributed to relevant parties; this distribution should include information development staff, and may include acquirer staff and subcontractors (e.g., printers, typesetters, translators). If subsequent changes are made to the Information Development Plan (and agreed to by the supplier and acquirer), the acquirer and the supplier shall notify applicable stakeholders of the change.

NOTE 2 It is more difficult and more expensive to make major alterations to information structures or styles once development has started than it is to modify the design at the planning stage.

6.5.5.2 Quality management

The supplier shall monitor and control the progress and the quality of the information for users products or services throughout the contract. This shall be an ongoing, iterative task which shall include monitoring progress of technical performance, costs, and schedules, and reporting project status. The supplier shall provide the acquirer with evaluation, review, audit, testing, and problem resolution reports, as specified in the contract.

6.5.5.3 Configuration management

The supplier shall apply configuration control of versions of the information for users. In accordance with the contract, the supplier should determine:

- at which level version control is to apply, for example, whether it applies to a single file of information or to all the information for a particular module;
- the milestones within the project at which new versions are to be created, for example, after each set of tests;
- how changes to each version are to be controlled;
- how version control is to be applied to localized and customized versions;
- the backup and archive procedures;
- how records are kept of the history of each version, so old versions can be re-created if necessary; and
- at what stage, if any, the information for users becomes part of the software for version control purposes.

The supplier may request modification to the contract as part of the change control mechanism.

6.5.6 Delivery

The supplier shall deliver the information for users product or service as specified in the contract and the supplier shall accept and acknowledge payment or other contracted consideration.

The supplier shall transfer the responsibility for the product or service to the acquirer, or other party, as specified by the contract.

7 Defining information for users requirements and constraints

7.1 Aspects of requirements and constraints

This clause is a specialization of ISO/IEC/IEEE 12207 processes for stakeholder needs and requirements analysis. The purpose of the process implementation (initiation) activity is to understand the project objectives, requirements, and constraints. Information for users requirements and constraints are initially defined by the acquirer as part of acquisition initiation and are included in the statement of work or User Information Development Specification in the request for proposal. The acquirer and supplier of information for users shall gather or receive information about the wider context of the entire project to understand the requirements and constraints that affect the design and schedule for the information components. Requirements and constraints should consider the following aspects:

- requirements and objectives for the product;
- scale of the project, particularly the work that will require information for users;
- development and operating environment for the software;
- requirements and constraints for the information for users, such as the information development policy and standard formats and styles set by the producer of the product;
- constraints that may apply to the project cost, schedule, staffing, and equipment;

NOTE If information development design is not taken into account in the design of the system, the information for users might not be adequately concise, and therefore information development costs might be higher than necessary.

- intended acquirer and end-users for the product and the information for users including requirements for international audiences;
- usability and accessibility requirements;
- documentation media for the deliverables;
- legal and/or statutory requirements; and
- acquirer-supplied information, facilities, tools, and materials.

The organization should keep a record of the source of each requirement, so that it can be tracked back to its origins and its validity may be verified.

7.2 Schedule constraints

After a date for delivering the product has been agreed upon, it is important to use the date in all planning of information for users. When the project schedules are being defined, the acquirer should remember that information development cannot be completed until the software design is completed.

The following considerations in the overall software project schedule will influence the information for users development schedule:

- When will the alpha, beta, and acceptance testing start, and be completed?
- What is the delivery date for the finished product?
- When does the information need to be ready?
- What other milestones apply to the project, such as dates for early releases?
- What are the major dependencies between different activities in the overall project?
- If the product is to be localized or customized, what are the required delivery dates for the various localized and customized versions and when does the information need to be ready?

The amount of time needed for the following information development activities can be significant; the acquirer should allow time for them in the project's schedules:

- authors to observe and use the system or prototypes of the system during the development stage;
- performance of technical work necessary to embed information for users in the product;
- graphics to be created and screen captures to be taken;
- technical contacts to supply information and to check the accuracy of drafts;
- draft information being validated in field trials and usability trials (information development schedules for preparing such drafts will affect the timing of these exercises and trials);
- incorporation of amended pages;
- translation, if required; and
- production of media, printing and packaging, if required.

7.3 Usability requirements

The acquirer should formulate usability requirements for the information for users and specify how usability will be tested and measured. Usability requirements are a logical source of acceptance criteria. If the acquirer specifies that the supplier should test the product, the acquirer shall fully define the usability standard against which the information is to be measured. This includes specifying the measurement technique, recording process, and representative test subjects.

Usability measures for the information, independent of the usability of the system, may include the time for the following:

- learning about the contents of the information for users, particularly if more than one information deliverable is supplied;
- understanding the information structure and to learn how to use it;
- finding information, once the user is familiar with it; and
- performing a specified task using the instructions in the information.

NOTE ISO/IEC 26513:2009 (IEEE Std 26513-2010) provides requirements for testing, information for users including usability testing.

7.4 Product modification requirements

The acquirer should describe plans for making modified versions of the product available to users,

because modifications can affect all aspects of the design of the information for users. Modifications may include completely new versions, major upgrades, or minor updates supplied to existing users; customizations for specific users; or temporary corrections (patches). The requirements should specify the time scale for modifying the information and the delivery format of information updates.

NOTE If future versions of the product are intended, but not considered in the design of the information for users, the costs can be significantly higher.

7.5 Localization and translation requirements

The acquirer shall clearly define all languages to which the information for users may be translated. For some products that are to be exported, there might be a legal requirement for all or part of the information to be translated. Even if a supplier is not providing the translation or localization services, requirements for translation or localization will affect the design, schedule, wording, examples, and illustrations of the primary language version.

NOTE 1 If the product is to be translated or localized and those facts are not taken into account in the design of the system and the information for users, future costs can be significantly higher than necessary. The higher costs will be incurred for every translated or localized version. An important example is the graphic format used for diagram callouts: if callouts are constructed as raster graphics, they will be significantly more difficult to translate than callouts constructed as text.

Localization may apply to products to be made available in other countries using the same language as the source country. Cultural issues may need to be taken into account, both in the system and in the information for users.

NOTE 2 There can be variations in the target language: for instance Spanish versus Mexican Spanish, and UK English versus US English.

Translations of unapproved draft information can incur extra cost for rework. To give the translators more time to complete their work, the translation process may begin when the information deliverables are almost complete. When complete, any subsequent changes to the information may be identified electronically and then translated.

After translation, the acquirer shall verify that the system and its information for users are consistent. A native speaker of the target country should check localized or translated information for users to generate confidence that it is suitable for use in that country.

7.6 Legal requirements

The acquirer shall clearly define any legal requirements affecting the product that can affect the information development design. The acquirer may provide text and graphics (logotypes) approved by its legal advisers to address requirements set by:

- local (state or provincial), national, and international law;
- copyright status of the information;
- copyright status of text, graphics, and other material included in the information from other sources;
- data protection;
- acknowledgements of, and permissions for, the use of non-original material in the information;
- trademarks and logotypes;
- proprietary information;
- other intellectual property rights;

- escrow conditions;
- licensing;
- trade secrets;
- non-disclosure requirements;
- professional certifications; and
- warranties, whether expressed or implied, and guarantees.

NOTE In the case of international information for users, legally required text will vary by location.

7.7 Safety requirements

If there are particular requirements specifying how the user shall use the system in order to maximize safety, the acquirer shall specify those requirements.

7.8 Security requirements

The acquirer shall specify security requirements, including the prevention of copying of the information for users and the protection of sensitive personal data. The acquirer should specify whether it is necessary to check the integrity of on-screen information to allow for deliberate or accidental changes to its content made by the user.

7.9 Standards and conventions

The acquirer shall specify any mandatory standards for the information for users, such as:

- International Standards (e.g., ISO publications);
- national standards for the countries in which the product will be used;
- industry standards for the system on which the product will run;
- industry standards for the system on which the on-screen information will be viewed;
- accessibility standards and requirements; and
- company, product, or operating system standards and conventions.

The acquirer shall identify its applicable organizational policies and style guides. The acquirer should establish an order of precedence if there are conflicts among the standards and between the standards and the contract.

The acquirer shall identify if the information for users product will be part of a suite of products and the tools already specified for developing, maintaining, delivering, and viewing information for that suite. Use of an interoperable set of open, standardized tools should reduce the cost of maintaining information for users.

7.10 Quality management requirements

The information development services acquired using this document should be carried out under the control of the quality management system being used for the product development. Users of this document should operate a quality management system, which can be independently assessed for ISO 9001 compliance.

8 Specification of the information for users

In the acquisition and supply processes, the specification of the information for users establishes the scope of the deliverable and is the basis of its acceptance criteria and cost estimates. At a minimum, the specification of the information for users shall include the title or name, purpose and content, and intended audience of the information.

Information for users should give the specified audience information to assist them in performing their tasks while using the system. The information purpose should be specified as to whether it is instructional, reference material, or both.

In the initial specification, content of information for users should be defined at a high level in terms of user tasks or topics. It may also be defined by the expected number of functions, programs, pages, commands, or screens.

The specified information for users shall provide sufficient information for a clear understanding of:

- the purpose, functions, and characteristics of the system;
- how to install or use the system; and
- contractual rights and responsibilities while using the system.

The specification shall include requirements for accessibility of information for users to the intended audience.

NOTE 1 An example of requirements for software accessibility, known as Section 508 of the Rehabilitation Act of the United States of America, can be found at the URL listed in the bibliography.

The information specification should also indicate the intended media for delivery of the information to the users. The specification of the information for users may indicate the expected structure or components of the information suite, such as installation guide, quick reference card, online help, and reference manual.

NOTE 2 ISO/IEC 26514:2008 (IEEE Std 26514-2010) provides requirements and guidance for the design of suites of information for users.

Packaging of printed material

The acquirer should set durability targets for individual printed documents and media according to their expected use. Constraints on packaging include:

- local, state or provincial, or national requirements for recycling packaging materials;
- whether the software or system and the information for users are to be packaged together;
- whether there is an organizational style for packaging;
- whether the packaging should be the same as used for previous versions or for similar products;
- what medium will be used to distribute the product and the information for users; and
- what methods will be used to physically ship the product.

9 Statement of work

The statement of work defines the services, tasks, and processes that the supplier will provide. It should clearly define the scope and all requirements of the information for users project in a manner and level of detail that is understood by the supplier. The acquirer should determine which processes of this document are appropriate for the acquisition and specify any acquirer requirements for tailoring those

processes.

The acquirer shall specify who is responsible for the following:

- technical accuracy of the information for users;
- usability of the information for users with the software or system and vice versa;
- suitability of the information for users for the market;
- editorial quality of the information for users, including both text and illustrations;
- tests and reviews of the information for users;
- production of the information for users, including tools support;
- internationalization, translation, and localization;
- packaging and shipping of the system and the information for users; and
- final approval of all the information for users.

The statement of work should include the project management and control processes to be performed by the acquirer and the supplier. The statement of work shall also define the contract milestones at which the supplier's progress shall be reviewed as part of monitoring the acquisition.

The acquirer should specify whether any of the processes may be performed by parties other than the supplier, so that suppliers may, in their proposals, define their approach to supporting the work of other parties. The extent of supplier or third-party involvement in testing or verifying the information for users should be defined. The acquirer shall define the scope of those tasks that reference the contract.

NOTE In ISO/IEC/IEEE 15289:2015, the SOW is part of the contents of the contract information item.

10 Request for proposal

10.1 Request for proposal topics

The acquirer shall include the following topics in the information for users request for proposal to enable the supplier to prepare an appropriate proposal. The topics do not need to be in this order and may have different titles.

- a) objectives and scope statement;
- b) system and information development requirements: information specification and statement of work. (Clauses 7, 8, and 9);
- c) requirements for management, quality, and supporting processes;
- d) supplier capabilities and experience;
- e) instructions for bidders;
- f) list of deliverable information for users products or services;
- g) terms and conditions, including the product authority, acceptance criteria, and delivery requirements; and
- h) proposal evaluation criteria.

NOTE The contents of a request for proposal are defined in ISO/IEC/IEEE 15289:2015 and are here made specific for information for users products and services.

10.2 Project objectives

The overriding project objective should be to develop a product that meets user needs. The overriding project objective should be to develop a product that meets user needs. The design of the product should take account of those needs and the range of hardware and operating systems for which the product is being developed, and the acquirer and the supplier should avoid imposing constraints on the information for users that influence that design.

10.3 Requirements for supporting processes

The request for proposal may require the supplier to support or provide input for related processes, such as project management, information management, configuration management, quality assurance, validation and verification, security, and problem management. The acquirer shall specify change control procedures for the project in accordance with the configuration management system in use. The information development activities recommended in this document may be carried out under the control of the configuration management system being used for the product development. Users of this document should use a configuration management system, as addressed by IEEE Std 828-2012, *IEEE Standard for Software Configuration Management Plans*.

10.4 Supplier capabilities and experience

The acquirer may request a description of the supplier's related experience, organizational capabilities, and individual resources' experience in related work. These should be included in the proposal evaluation criteria.

The acquirer may require submission of statement of skills and experience of key resources of each team member, both from the supplier's organization and from subcontractors. The acquirer should state whether statements of skills and experience are considered as commitments to provide the named resource, or as representative of the supplier's capabilities.

10.5 Instructions for bidders

The instructions for bidders specify the content (and in some cases, the organization and format) that the acquirer expects to see in the proposal. Instructions for bidders produce a uniform structure for proposals that support proposal evaluation.

10.6 List of deliverable information for users products or services

The acquirer shall clearly identify in the request for proposal the items it will provide during the contract. These items should include:

- relevant software specifications, record formats, screen and report layouts, and other software design information necessary for the preparation of the information for users;
- access to an operating copy of the software, either onsite or remotely; hardware and software for using prototype or other versions of the software;
- technical contacts;
- a timely and accurate resolution process for questions raised by the supplier's staff;
- typical users for audience analysis and usability testing;

- a schedule of the milestones for each phase of the system and the information for users project, including draft submission dates; review completion dates; and the final delivery date;
- legal, security, and regulatory notices to be included in the information for users; and
- applicable standards, style and format guidelines, and other related items (unless generally available).

The list of deliverable items should be related to the expected project schedule. Unless an absolute due date is an essential requirement, delivery schedules in the request for proposal should be expressed in days or weeks after contract award, or before software beta product release, or other relative dates, such as release of the primary language version for information to be translated.

The acquirer shall specify who is responsible for providing the supplier with technical information about the product. The acquirer should also specify the methods to be used to supply information. These methods will typically include consultations with technical contacts, written specifications, and the product itself, possibly in development or prototype versions. The supplier shall communicate these methods to information development staff as appropriate.

The supplier may offer to obtain and provide specified items.

10.7 Confidentiality and intellectual property

In some cases, the material given by the acquirer to the supplier, including information and items of hardware and software, is required to be kept confidential and secured. The request for proposal should specify the level of confidentiality or security the acquirer requires from the supplier for the material passed to the supplier.

The acquirer shall be responsible for delivering correct and complete material to the supplier and for keeping the material up to date during the contract.

The acquirer and supplier shall exert due diligence to confirm that none of the material provided infringes on the intellectual property rights of any other party.

Contracts for information for users should define the ownership of rights. This may involve assignment of the future copyright in the information from the supplier to the acquirer. The assignment of copyright is then effective when and as the information for users is produced.

10.8 Proposal evaluation criteria

The request for proposal should indicate the relative weight of factors in the evaluation, such as ability to meet the technical requirements; experience; compliance with proposal instructions; project management; and cost.

11 Information for users proposal

11.1 Information for users proposal contents

The supplier should define and prepare a proposal in response to the request for proposal, including its recommended tailoring of this document.

In the instructions for bidders, acquirers often specify the format of the proposal response, and include as part of the proposal evaluation how well the supplier complied with “their format.”

Whether the request for proposal instructions for bidders define a “fill-in-the-blanks” response, or allow the proposer to design its own format, generally the following key sections of any proposal should be included:

- 1) executive summary;
- 2) understanding of requirements;
- 3) scope;
- 4) processes;
- 5) experience, capabilities, and available resources;
- 6) schedule;
- 7) deliverables; and
- 8) price proposal.

NOTE Not all of these sections will be used in all proposals. The sections used will depend on the needs of the particular project.

11.2 Understanding of requirements

The supplier shall review the initial requirements and determine whether they are accurate and realistic. The following should be emphasized in the requirements review, as they can have a significant impact on the proposed price and schedule:

- cost and scheduling constraints;
- suggestions about the style and content of the information;
- page size and book format; specific constraints on the maximum number of pages (for printed information) or file size (for on-screen information);
- languages into which the information for users is to be translated;
- infrastructure tools, protocols, languages, and procedures to be used; and
- availability of reusable material from existing information. If the same information is needed in both embedded and separate information for users performing the same tasks, then that information may be used in both types of information, in each place and structured appropriately.

The acquirer may request a point-by-point acceptance to each requirement in the Information Development Specification or statement of work. However, the supplier should respond with further analysis of any unusual, complex, or unclear requirements, demonstrating its expertise and capability for meeting the requirements.

The supplier should determine the level of risk and type of risks from its review of the requirements and requested schedule. The supplier should allow time for learning how to use any new tools and becoming familiar with the system (preferably by using it).

The supplier should include a statement referencing any standards to which the organization is claiming conformance, such as the ISO 9000 series of standards.

The supplier may demonstrate its understanding of the requirements based on evaluation of existing information for users, evaluations of localized and/or internationalized information, customer or user feedback from previous versions, and explanation of new product features.

If the stated requirements limit the design options so that users cannot be given a suitable set of information, the supplier should:

- question the requirements, explaining the reasons for the discrepancy; and
- suggest alternative solutions.

11.3 Scope of the project

The scope section of the proposal should indicate what services and information for users deliverables are to be included in the resulting contract. The scope section should align with the pricing and cover the same effort. The scope discussion may indicate work that is excluded, or planned for future phases.

11.4 Processes

The process section responds to the statement of work and demonstrates how the supplier will use its information management, documentation, management, and supporting processes to control and complete the work.

EXAMPLE The supplier can describe how its information for users will support the accessibility features of the product and how the information will itself be accessible. For on-screen information, file formats will need to be able to be read by screen reading programs, which in turn can output to speech synthesis or refreshable-Braille output devices. Illustrations will have meaningful titles and descriptions, and special consideration will be given in on-screen information to the logical structure, graphics, “page turning,” alert messages, entry fields, headings, and hypertext links.

The supplier may include a preliminary or sample project management plan or information development plan as part of its proposal.

The supplier should explain how it will back up and care for the acquirer's data. The supplier should specify how it will return, retain, or dispose of information provided by the acquirer at the end of the contract.

The supplier should explain how it will support version control.

11.5 Experience, capabilities, and available resources

The supplier may describe its experience in similar projects. Related experience may be expressed by a client list or descriptions of similar projects. It can be useful to include in the proposal samples of similar information for users produced by the supplier to indicate the intended style or format.

The supplier should describe the structure of the team in which the information development staff will work; and may include a team selection plan. Large organizations often want to know who the suppliers' subcontractors are and how they were selected.

As applicable for the project, human resources may include the following:

- project managers;
- experienced authors for developing information for users (rather than system designers or software engineers to do the work);
- editors;
- graphic designers with expertise in electronic media;

- user interface designers and ergonomics experts to design the presentation of the information on the screen;
- usability specialists for conducting usability tests and advising on matters concerning human abilities, limitations, and accessibility;
- testers to test empirically that the information for users matches the installation and operational use of the system;
- legal reviewers or contracts managers;
- managers and systems administrators for content management systems; and
- translators.

Other facilities and resources may include hardware and software for producing the information for users itself, prototype or other versions of the software to be used by authors to obtain information about the system being documented; usability laboratory space and staff; media vendors, printers, and packaging vendors.

11.6 Schedule

The supplier should state its compliance with the requested schedule. The supplier may propose an alternate schedule that would be more cost-effective. The schedule should indicate the allowable time for the acquirer to review and approve deliverables.

11.7 Deliverables

The supplier shall identify draft and final deliverable information for users' products and services. The deliverables should specify the number of printed copies, whether electronic copies are to be provided, disk and file formats (including software versions), and where they will be delivered.

11.8 Price proposal

The supplier shall specify the price of fixed price products and services or the rates for services. The price may be subdivided as specified in the request for proposal. The price should be consistent with the scope of work, level of risk, processes, and deliverables included in the proposal.

Annex A (informative)

Requirements clauses and checklist for acquirers

For the convenience of users of this document, this annex identifies those clauses that contain requirements for acquirers of information products. The following table (Table A.1) identifies the location of the specific requirements for use when verifying conformance.

Table A.1 — Checklist for acquirers

Clause no.	Guideline	Applicability		Conformance	
		Yes/ No	Reason not applicable	Yes/ Partial/ No	Comments
6.3.1	The acquirer shall implement the following activities in accordance with applicable organizational policies and procedures to achieve the outcomes of the acquisition process: [List of activities follows]				
6.3.2.1	The acquirer shall describe a need to acquire or enhance an information for users product or service.				
6.3.2.2	The acquirer shall define and analyze the system requirements relating to information for users.				
6.3.2.3	The acquirer shall identify its acquisition strategy after performing make/buy analyses and considering the criteria of risk, cost, and benefits of each option.				
6.3.2.4	The acquirer shall prepare, document, and perform an acquisition plan.				
6.3.2.5	For the acquisition of information for users, the acquirer shall prepare a specification of information for users described in Clause 8 and include it in the request for proposal.				
6.3.2.6	The acquirer shall identify potential suppliers and communicate the request for information for users services to the identified suppliers.				
6.3.4	The acquirer shall prepare and negotiate a contract with the supplier that addresses the acquisition requirements, including the cost and schedule of the information for users product or service to be delivered.				
6.3.4	The acquirer shall include or reference the process for tailoring requirements in the contract.				
6.3.5	When the contract is under way, the acquirer shall cooperate with the supplier to provide necessary information in a timely manner and promptly resolve pending issues				