

Foundational Body of Knowledge for the ICT Profession
(ICT BoK) - Part 1: Body of Knowledge

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Foundational Body of Knowledge for the ICT Profession (ICT BoK) - Part 1: Body of Knowledge

Corps de connaissance fondamental pour les
professionnels des technologies de l'information et de
la communication (ICT BoK) - Partie 1 : Corps de
connaissance

Europäischer Grundwissensbestand für den IKT-Beruf
(ICT BoK) - Teil 1: Der Wissensbestand

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 17748-1:2022) has been prepared by the Technical Committee CEN/TC 428 “ICT professionalism and digital competences”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by October 2022, and conflicting national standards shall be withdrawn at the latest by October 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This series consists of two parts:

- EN 17748-1:2022, *Foundational Body of Knowledge for the ICT Profession (ICT BoK) - Part 1: The Body of Knowledge*, published as a European Norm (EN).
- CEN/TR 17748-2:2022, *Foundational Body of Knowledge for the ICT Profession (ICT BoK) - Part 2: User Guide and Methodology*, published as a CEN Technical Report (TR).

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document provides a tool to support mutual understanding and provide transparency of language through the articulation of **knowledge** required and deployed by Information and Communication Technology (ICT) professionals.

Complementary to the EN 16234-1 (e-CF), that provides a common European language for ICT professional competence, this document, EN 17748-1:2022 (ICT BoK) makes an additional contribution to increasing transparency and maturity of the ICT Profession across Europe.

This document identifies knowledge and sub divides each knowledge unit into three elements:

- a) **common knowledge** applicable to all ICT professionals regardless of speciality;
- b) **base knowledge** that provides a foundation and underpins each of a range of different disciplines/specialisms;
- c) **specialised knowledge** pertaining to in-depth, very specific expert knowledge.

For c) specialised knowledge, where applicable, sources of further specialist knowledge are signposted as examples to relevant in-depth complementary sources.

To support users of this document, the following narrative provides an overview of the design philosophy and principles adopted during the standard's construction. In addition, these underpinning principles will provide guidance for future document updates.

The Guiding Principles:

This document is an enabler; it is designed to be a tool to empower users, not to restrict them.

This document provides a structure and content for application by many types of users from organisations in the private and public sector, educational institutions, learning program and certification providers of all categories including Vocational and Educational Training (VET), Higher education (HE) and Continuous Professional Development (CPD) and ICT organisations from the demand and supply side, social partners, professional associations and individuals. In this broad application context, this document is designed to support common understanding, it is not intended to mandate the use of each and every word used in the document.

This document is an integrated component of the four building blocks of ICT professionalism for Europe and offers the identification of essential knowledge elements common to the ICT profession.

This document is neutral and intrinsically linked to the EN 16234-1 (e-CF). It does not follow the specific interests of a few major influencers; it has been developed and will be maintained through the CEN standards process.

This document expresses common, base and specialised knowledge of relevance to the ICT profession in the following context; knowledge, alongside skill and attitude, is an integrated component of competence as defined in the EN 16234-1 (e-CF).

Knowledge units are the core structure of this document; they are labelled to enable easy access from viewpoints relevant to the user. Flexibility of application is supported by tagging from four perspectives; the EN 16234-1 (e-CF) areas and competences, CWA 16458 (European ICT Professional Role Profiles) and from traditional knowledge domains.

Knowledge units are articulated at a general level of granularity and each is further detailed by the provision of knowledge elements presented in a common template. Knowledge elements are accompanied by examples of the application of each.

1 Scope

This document provides a reference of 42 knowledge units as required and applied in the Information and Communication Technology (ICT) professional work environment that can be understood across Europe. An intrinsic link with the EN 16234-1 (e-CF) is an essential characteristic of this document.

The document is created for application by:

- educational institutions, learning programme and certification providers of all types including:
 - Vocational and Educational Training (VET);
 - Higher education (HE);
 - Continuous Professional Development (CPD);
- ICT service, user and supply organisations;
- ICT professionals, managers and human resource (HR) departments;
- social partners (trade unions and employer associations), professional associations, accreditation, validation and assessment bodies;
- market analysts and policy makers; and
- other organisations and stakeholders in public and private sectors.

This document is provided as one fundamental building block of ICT Professionalism for Europe.

The prime objective of this document is to provide a significant contribution to the broad concept of ICT professionalism founded upon four building blocks, body of knowledge, e-CF competence, professional ethics and education and training. Complementary to the EN 16234-1 (e-CF) that provides an efficient and broadly accepted common European language about ICT professional competence, the European ICT Foundational Body of Knowledge (ICT BoK) makes an additional contribution to ICT professional knowledge, increasing transparency and maturity of the ICT Profession across Europe.

Specifically, the document provides a structured library of knowledge elements applicable to ICT professionals across a broad spectrum of disciplines. The knowledge elements are identified as either:

- a) common knowledge** applicable to all ICT professionals regardless of speciality;
- b) base knowledge** that provides a foundation and underpins each of a range of different disciplines/specialisms;
- c) specialised knowledge** pertaining to in-depth, very specific expert knowledge.

Although providing and adding value to all stakeholders, knowledge defined by this document, provides a particularly useful perspective and entry point for educational institutions seeking to participate in ICT professional competence development. As a natural extension to EN 16234-1 (e-CF) dimension 4 knowledge examples, this document further facilitates the use of the shared European language for ICT Professional competence. By expanding the knowledge content of the EN 16234-1 (e-CF), it adds value to its application alongside further connected references.

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.

EN 16234-1:2019, *e-Competence Framework (e-CF) - A common European Framework for ICT Professionals in all sectors - Part 1: Framework*

CWA 16458 (all parts), *European ICT Professional Role Profiles*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardisation at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

Information and Communication Technology

ICT

<technical> digital computers and internet (communication) systems, including software, hardware and networks

[SOURCE: EN 16234-1:2019, definition 3.1]

3.2

Information and Communication Technology

ICT

<economic and political> cross sector of enterprises, including manufacturers, product suppliers or service providers relating to the ICT field

[SOURCE: EN 16234-1:2019, definition 3.2]

3.3

ICT professional

person having the competence to plan, build, run, enable and/or manage Information and Communication Technology and having a professional ICT qualification and/or ICT occupational experience, including both employees of ICT companies and ICT employees of organisations in all other sectors (they are in the scope of this document)

[SOURCE: EN 16234-1:2019, definition 3.3]

3.4

ICT user

person having the competence to use devices, software and systems to support his/her private, educational, civic or work activities and normally having no professional ICT qualification or ICT occupational experience (they are not in the scope of this document)

[SOURCE: EN 16234-1:2019, definition 3.4]