



BSI Standards Publication

European Professional Ethics Framework for the ICT Profession (EU ICT Ethics)

National foreword

This Published Document is the UK implementation of CEN/TS 17834:2022.

The UK participation in its preparation was entrusted to Technical Committee IST/43, Information technology for learning, education and training.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

This publication is not to be regarded as a British Standard.

© The British Standards Institution 2022
Published by BSI Standards Limited 2022

ISBN 978 0 539 18237 8

ICS 03.100.30; 35.020

Compliance with a Published Document cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 August 2022.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 17834

July 2022

ICS 03.100.30; 35.020

English Version

**European Professional Ethics Framework for the ICT
Profession (EU ICT Ethics)**

Europäischer berufsethischer Rahmen für den IKT-
Beruf (EU ICT Ethics)

This Technical Specification (CEN/TS) was approved by CEN on 17 July 2022 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of 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, Türkiye and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

European foreword	5
Introduction	6
1 Scope	7
2 Normative references	8
3 Terms and definitions	8
4 Structure of the Professional Ethics Framework	10
4.1 <i>Introduction</i>	10
4.2 <i>Basic Definitions</i>	10
4.2.1 How to define ICT professional ethics	10
4.2.2 EN 16234-1 (e-CF) definitions of ICT and ICT professional	10
4.2.3 CEPIS definition of ICT professionals.....	11
4.2.4 IFIP and ACM definition of ICT professionals.....	11
4.2.5 Professionalism in related e-Skills projects	11
4.2.6 ICT professional ethics in related e-Skills projects	11
4.2.7 Professional ethics	12
4.2.8 ICT Professional ethics.....	13
4.3 <i>The history of the EC and European values in terms of ethics</i>	13
4.3.1 Introduction.....	13
4.3.2 Human dignity	13
4.3.3 Freedom	14
4.3.4 Democracy.....	14
4.3.5 Equality.....	14
4.3.6 Rule of law	14
4.3.7 Human rights.....	14
4.4 <i>European values of ICT ethics - prior research and policy work</i>	14
4.5 <i>Framework content and structure</i>	17
4.6 <i>ICT Professional Ethical Responsibilities</i>	20
4.7 <i>Language and the Ethics Framework</i>	21
4.8 <i>Standards and frameworks, the liaison with ethics</i>	22
5 Ethical theories, models and frameworks in ICT fields	23
5.1 <i>Introduction</i>	23
5.2 <i>Exploitation of theories, models and frameworks</i>	24
5.2.1 Ethical theories and models.....	24
5.2.2 Ethical frameworks	24
5.2.3 Methodology and scope	25
5.2.4 Ethics reflection from theory to ICT practice, the role of Case Studies cases	25
5.3 <i>Challenges and solutions to real settings implementation</i>	46
5.3.1 ICT related challenges	47
5.3.2 Strengths and weaknesses of the implementation process.....	47
5.3.3 Effective components of the framework	47
5.3.4 Professionalism and organisational ethics	48

6	ICT professional ethics as part of competence and knowledge.....	48
6.1	<i>Introduction</i>	48
6.2	<i>How to use with EN 16234-1 (e-CF).....</i>	49
6.3	<i>How to use with CWA 16458 (EU Role Profiles).....</i>	49
6.4	<i>How to use with other ethics codes.....</i>	50
6.5	<i>How to use with tools/methods.....</i>	50
7	Taking the framework into the organisation: context, culture and leadership	50
7.1	<i>Introduction</i>	50
7.2	<i>What is the value proposition?.....</i>	51
7.3	<i>The five main ICT business areas and their connection to EN 16234-1 (e-CF).....</i>	52
7.4	<i>Organisational steps to implement ICT ethics within an organization.....</i>	53
7.5	<i>Implementation of the framework in the daily life of an organisation.....</i>	54
7.5.1	<i>Leadership and Organizational structure.....</i>	54
7.5.2	<i>Implementation method.....</i>	55
8	Implementation: ICT Ethics framework (ICTEF) in practice	56
8.1	<i>ICTEF implementation guidelines.....</i>	56
8.2	<i>Guidelines for code of ethics implementation.....</i>	56
8.2.1	<i>Drafting Code of Ethics</i>	57
8.3	<i>Guidelines for Ethics Committee/Ethics Board Implementation</i>	60
8.3.1	<i>Scope</i>	60
8.3.2	<i>Independence</i>	61
8.3.3	<i>Transparency.....</i>	61
8.3.4	<i>Composition</i>	61
8.3.5	<i>Ethics Committee - Tasks</i>	62
8.4	<i>Guidelines for the Ethical Dialogue.....</i>	62
8.5	<i>Guidelines for Ethics Canvas.....</i>	63
8.6	<i>Guidelines to use ICT Ethics framework in an ICT Professional body.....</i>	65
8.7	<i>Procedures.....</i>	65
8.7.1	<i>Internal procedure to trigger ICT ethics issues.....</i>	66
8.7.2	<i>Public procedure to trigger ICT ethics issues.....</i>	66
8.8	<i>Register.....</i>	67
8.9	<i>Ethics by design tools.....</i>	67
8.9.1	<i>The life cycle of technology: The entire value chain.....</i>	67
8.9.2	<i>Ethical Operating System OS Toolkit (Ethical OS Toolkit).....</i>	68
8.10	<i>How to use with other frameworks.....</i>	69
9	How to use ICT Professional Ethics Framework in education and training.....	70
10	Assessment of the development and engagement with ICT ethics.....	71
10.1	<i>Introduction</i>	71
10.2	<i>Ethics assessment in ICT Professionalism.....</i>	71

10.2.1	European initiatives of e-competences' assessment	72
10.2.2	Specific indicators of ethics performance in ICT professional environments	74
10.2.3	Design of a Life Cycle Readiness Assessments	80
10.3	<i>The benefit of digital toolkits for ICT ethics competences and skills' assessment</i>	<i>81</i>
10.4	<i>Specific ICT Use case development as a "proof of concept" for assessment toolkits</i>	<i>82</i>
10.4.1	Use Cases for assessment.....	82
11	Ethics in ICT Professional roles.....	86
11.1	<i>Benefits of thinking ethically in ICT professional environments</i>	<i>86</i>
11.2	<i>ICT profiles aligned to ethical attitudes: factors affecting this alignment</i>	<i>87</i>
Annex A (informative) Overview of EN 16234-1 (e-CF) competences compared with Berlin Declaration ethics values		89
Bibliography		98

European foreword

This document (CEN/TS 17834:2022) has been prepared by Technical Committee CEN/TC 428 “ICT Professionalism and Digital Competences”, the secretariat of which is held by UNI.

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.

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 announce this Technical Specification: 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

The current document, the European Professional Ethics Framework for the ICT Profession (EU ICT Ethics), provides a foundation for defining practical guidelines to improve ethics for different organisations across all technical areas. In addition, it provides a basis for aligning existing guidelines and initiatives and establishing comparisons to support the vision of an ICT professional workforce. It offers the possibility to coalesce other ethics focused initiatives around a common structure.

Professional ethics is an essential component of any profession; mutual understanding leads to improved outcomes and differentiates professions from jobs. A professional ICT workforce across European society and industry (founded on the four building blocks of ICT professionalism: Professional Ethics; Education and training; Bodies of Knowledge; Competences) will support and enhance the exchange of ICT resources and services throughout Europe and internationally.

This document is related to EN 16234-1 e-Competence Framework (e-CF) – A common European Framework for ICT Professionals in all sectors – Part 1: Framework and incorporates its structural concept. It describes a blueprint of requirements and highlights connections to the competences, skills and knowledge required to identify and address the ethical challenges that ICT professionals face in daily activities.

This strong association with the EN 16234-1 (e-CF) naturally extends to the ethics principles described in the Transversal Aspects of the EN 16234-1 (e-CF) and enables ethics related requirements and procedures to be defined and implemented in the context of specific ICT professional roles and environments.

This document organises Professional Ethics into a manageable structure and provides guidance on practical use through a methodology and application guide to support implementation through a range of methods and contexts. It also provides a platform for universities and vocational training institutions to design and improve ICT ethics courses specifically for ICT professionals. This makes qualification attainment more transparent in European internal markets and, in addition, it offers input into accreditation processes provided by relevant national ICT professional bodies.

The European Professional Ethics Framework for the ICT Profession benefits all ICT Professionals and all stakeholders reliant upon the capability of ICT Professionals. This includes wider society and a trusted, ethical and professional ICT workforce that contributes to enabling the goal of an economically vibrant, socially just and sustainable Europe.

The document is based on a fixed structure, which is intended to ensure the uniformity of such CEN documents and their reliable placement in the context of other standards, specifications and reports.

The following recommendations are given to support the readability of the document.

- **Newbie / Beginner:** If new to the topic of professional ethics and for example an ICT professional or a manager in an organisation primarily interested in the basic aspects, it is recommended to first read Clauses 4.3 and 4.4 as an introduction. Then read Clause 5.2.4 and especially the Case Studies in Clause 5.2.5 before reading Clause 5 in total and the rest of the document from the start.
- **ICT Ethics in the European Context:** If interested in the embedding of the Framework in the European context, then read Clause 4.4 before reading the rest of Clause 4 in context.
- **Ethics and organisational culture:** If interested in the connection between organisational culture and ICT ethics and want to know how you can implement this topic in your organisation, it is recommended to jump directly to Clause 7.
- **Practical application:** If already on the way to take some practical first steps in the field of ICT professional ethics in an organisation and you are interested in practical help and tools, it is recommended to jump directly to Clause 8.

1 Scope

This document contains basic information and fundamental considerations on embedding ICT in European values. It includes concepts and structures for using the framework and practical suggestions for the concrete implementation of organisational and individual aspects as scoped by the European ICT Professionalism framework and its basic underlying references.

The scope of occupations associated with Information and Communication Technology is very wide and therefore, to define a boundary, this document is based upon the target audience of the EN 16234-1 “e-Competence Framework (e-CF) – A common European Framework for ICT Professionals in all sectors – Part 1: Framework”.

Beneficiaries and users of this document include educational institutions embracing universities and VET, public and private, certification providers, industry, including HR departments, large companies and SMEs, and the ICT professional community.

An extended benefit of a common ethics framework is the enhanced perception of ICT as a ‘professional’ career. The overall attractiveness of employment within ICT from the perspective of potential employees will be improved by the establishment of a recognised ICT Profession in which ethics play a significant role.

EN 16234-1 (e-CF) is the starting point and guiding document for this technical publication, being closely connected with the other deliverables and references for a shared European language for ICT professional development.