

CEN/TC 428
ICT Professionalism and Digital Competences

Business Plan 2022



Executive Summary

The purpose of this Business Plan 2021 is to provide a medium-term vision of the way ahead for the CEN/TC 428, with its expanded workload and the new context of ICT Professionalism¹. It provides an overview of the business and political environments that make this TC relevant and useful, and outlines its objectives and priorities. The structure and membership of the TC is outlined, as well as a strategy to expand the participation among European standards bodies and international observers.

Providing standards to guide the maturing of the IT profession brings enormous benefit and a tool to create mutual understanding and a trust within the IT professional stakeholder community across all sectors of business and economics: mainly and first of all related to the four agreed building blocks of IT professionalism, but also in a wider sense related to any other aspect of the IT profession aligned with European strategy, policies, social needs, or innovation trends.

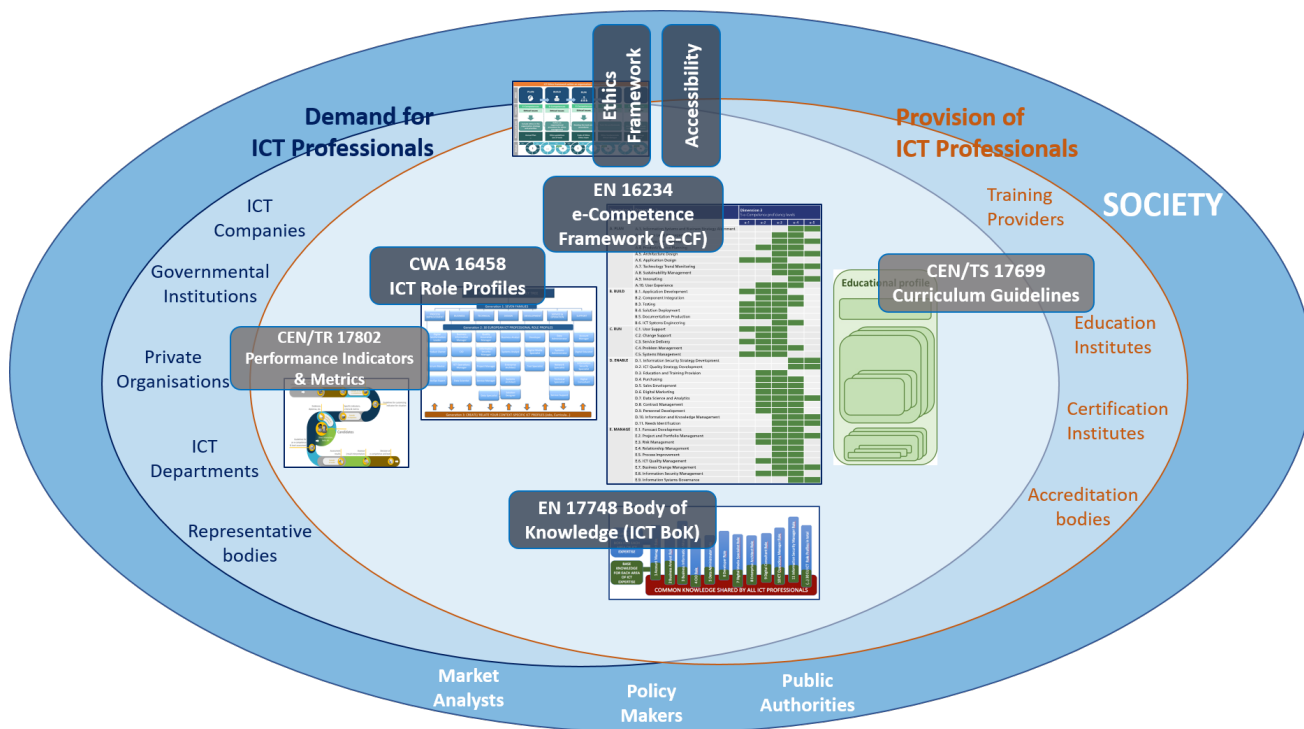


Figure 1 – CEN/TC 428 ensuring high-quality standards for the ICT professional eco-system

CEN/TC 428 ensures shared high-quality standards for the ICT Profession in Europe. The above figure positions the ICT Professional Community and the underpinning ICT Professionalism standards in the ICT field and society as a whole. The Figure 1 illustrates the different parts and perspectives of the ICT Professionalism eco-system. Key drivers are the demand for ICT professionals and the provision of ICT professionals, respectively positioned at the left and the right side in the figure. The demand side is composed of ICT organisations and all kind of private and public organisations with an own demand for ICT professionals. The supply side within this picture deals with educating and training people to become ICT

¹ see EN 16234-1:2019 Definition 3.1

professionals, including HE, VET and all kind of other public and private learning providers. Positioned at the bottom of the figure are market analysts, authoritative bodies and policy makers.

CEN/TC TC428 standards ensure that all these different parties have access to and can make use of a shared, neutral and up-to-date language to develop ICT Professional competences, skills, knowledge and roles as needed by the sector.

The ICT professional is in the midst of this eco-system, where the CEN/TC 428 standards with e-CF in its core serve to capture that professionalism and provide a common language to all the different entities dealing with IT Professionalism within the eco-system to the benefit of society as a whole.

1. Business and Political Environment for CEN/TC 428

1.1. Background

CEN/TC 428 was set up in 2014, initially as a Project Committee, with the initial task of establishing the European e-Competence Framework (e-CF) CWA 16234-1 as a formal European standard. This objective was achieved in April 2016, as EN 16234-1:2016.

Subsequently, in 2016 the remit of CEN/TC 428 was defined as responsibility for the standardisation of a common language of professional digital and IT competences, skills and knowledge applied in all domains. And finally, in 2018, the mission of CEN/TC 428 was established as responsible for all aspects of standardization related to maturing the IT Profession in all sectors, public and private.

The TC builds on the work of a predecessor body, the CEN Workshop on ICT Skills, which had developed the e-CF as a CEN Workshop Agreement (CWA), together with a suite of many other CWAs. That Workshop closed earlier in 2018, and in order to fill the gap thus created for a community of IT professionals, industry and academic representatives, the Council of Professional Informatics Societies (CEPIS) has established an expert group *IT Professionalism Europe (ITPE)*, in part to take forward the wider consultative role.

The title of our TC, and that of ITPE, both use the word “professionalism”. This is a significant departure from and broadening of the ICT skills scene, moving on from the earlier emphasis on competences and related matters, to the full range of knowledge, education, training, accreditation, assessment, certification, and ethics.

The use of this word also emphasises the focus of the TC on the skills of ICT professionals, rather than the digital skills of citizens generally, important though those are.

The recognition of the ICT profession as a mature, self-confident profession, requires the standardisation of the key building blocks that characterise a profession: competences, a body of knowledge, education and training, and professional ethics.

Within the work programme of the TC, the competence pillar has been addressed with a project to update the EN 16234-1 e-CF. In 2018, the European Commission promoted a standardisation request to develop standards for a comprehensive European framework for the ICT profession by 2025. Accordingly, in summer 2018, CEN endorsed a batch of five projects, consistent with this new direction, aiming to provide solid,

trustable and up-to-date standard references in support of the other building blocks. This provides a substantial and comprehensive baseload to re-energise the TC, building on previous work.

1.2 The Business and Economic Environment

The following political, economic, technical, regulatory, legal, societal and international dynamics describe the business environment of the sector, products, materials, disciplines or practices related to the scope of this CEN/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards.

Digital, Information and Communication Technologies are critical components of the continued progress and welfare of business and social aspects of Europe. Europe is strongly challenged to develop sufficient appropriate skills and competences of its citizens and employees in all sectors and levels, from beginner to ICT professional, to boost the digital economy and society as a whole.

Looking at ICT professional skills and competences in particular, demand continues to exceed supply of the skilled professionals who design, build, implement and manage new digital technologies.

The “2030 Digital Compass: the European way for the Digital Decade” writes that Europe in the world of tomorrow has to rely on a digitally skilled workforce and “way more digital experts than today”. The gap is perceived from 8 currently to 20 million professionals required in 2030.

As the World Economic Forum (WEF) in their *Future of Jobs* report estimate, skills in the area of encryption and cybersecurity, cloud computing, distributed ledger technology and robots/humanoid are the most in demand.

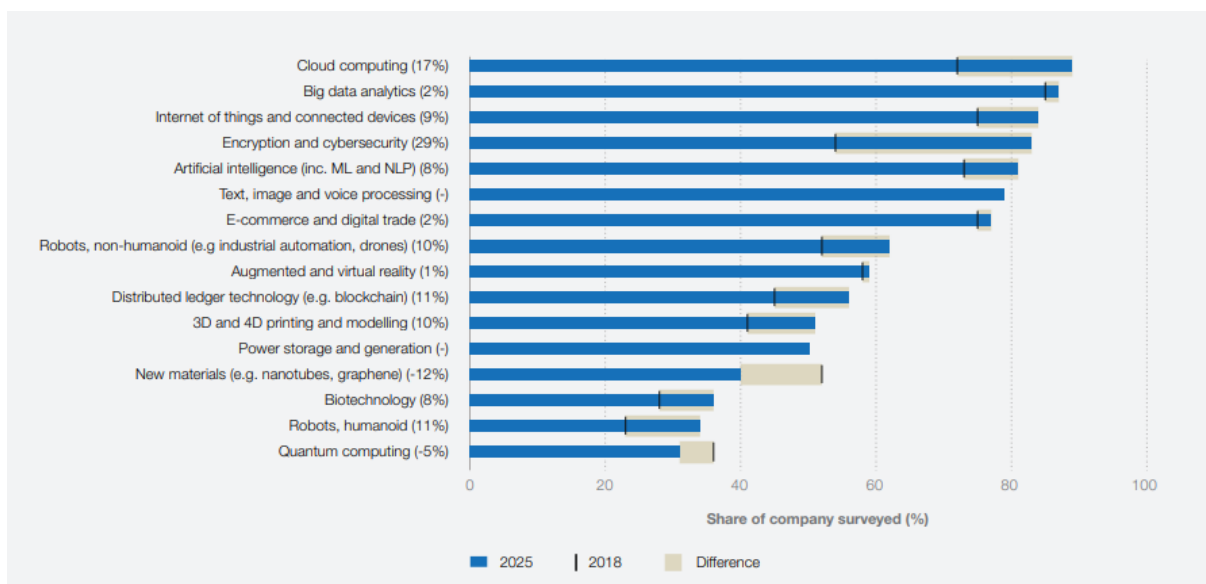
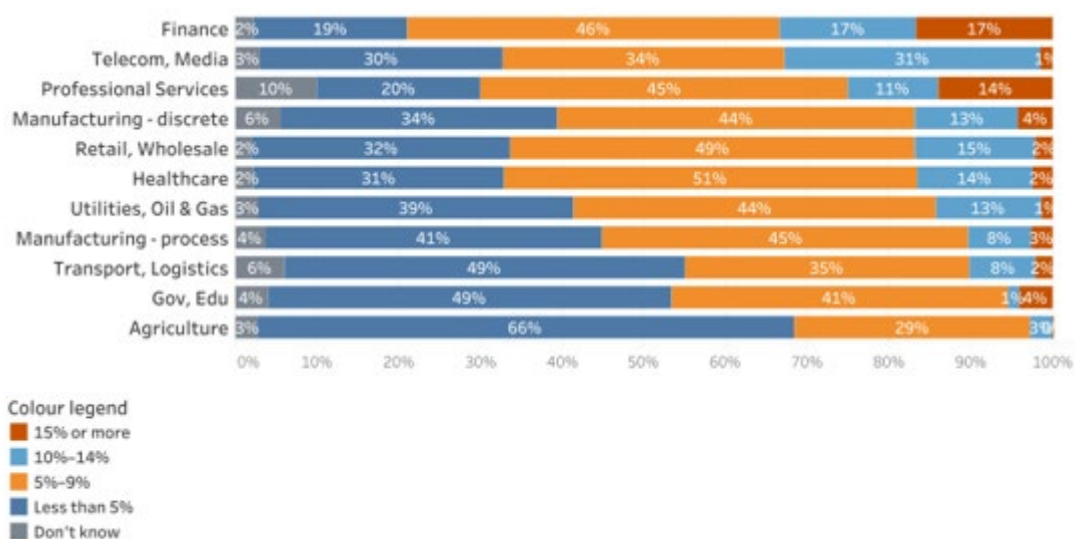


Figure 2 – Technologies likely to be adopted by 2025 (by share of companies surveyed)

1.3. Quantitative Indicators of the Business Environment

The ICT sector in Europe represents an important share of the economy, with about 4% of GDP and employing more than 6 million people². The value added of this sector in the EU28, spanning from components to software products and services, is around €630 bn, and represents close to 10% of the added value of industrial activity overall.

Even more important is the contribution of ICT to all other sectors. The current plans of the European Commission show more and more an understanding of the importance of IT and new technologies as an enabler of new growth and achieving the targets of the Green Deal.



Source: Advanced Technologies for Industry Survey, July 2019

Figure 3 – What percentage of your organisation’s revenues is invested in IT and new technologies?

A review of European Commission services, based on Eurostat data, shows that:

- The demand for ICT professionals is enormous, requiring more than doubling in 9 years.
- European ICT full-time employment in 2020 was estimated at 11.3 million, with a forecast of over 12 million employees by 2023, and a target of 20 million by 2030.
- Europe still lacks skilled ICT specialists to fill the growing number of job vacancies in all sectors of the economy. A crucial issue underpinning this is the need to modernise our education and training systems, which currently do not prepare young people sufficiently for the digital economy and society, and to move to a life-long learning approach so that people can adapt their skills sets throughout their life-times as needed.
- To help bridge the digital skills gap in Europe, the European Commission has launched the Digital Skills and Jobs Platform, the new home of high-quality information, initiatives and resources on digital skills from across Europe.
- Analysis made by Commission services for the post-COVID 19 recovery estimated the needs for ICT investment to close the gap with leading competitors in the US and China at €125 billion per year.

² The European Commission's Joint Research Centre - The 2020 predict report.

- The European Investment Bank has flagged the risk that instead of increasing their investments, 45% of firms would reduce them after the COVID-19 crisis.

1.4. Political Environment

The business and economic environment clearly generates the political environment. The following developments in particular should be mentioned, though this is a non-exhaustive list:

1. The European Commission has promoted IT Professionalism definition and development as an important element for European competitiveness in the Information and Knowledge Society, with special relevance of EASME/COSME/2014/012 initiative (Directorate General Internal Market, Industry, Entrepreneurship and SME – DGGROW). Final report “Development and Implementation of a European Framework for IT Professionalism” was published in January 2017:

“Standardising is a mean to further mature a profession. This is also the direction that the European Commission and key stakeholders are following: the European e-Competence Framework (e-CF) evolved in April 2016 into a European Standard (EN 16234-1). The ambition is to do more. A European framework for IT professionalism – as described in this report – would provide a standard that includes not only IT competences, but also other essentials for any IT professional: foundational body of knowledge, education and training qualification and certification, and finally ethics and code of conduct”.

2. The Commission then promoted in 2018 a standardisation request to develop standards for a comprehensive European Framework for the ICT Profession by 2025 in its Rolling Plan for ICT Standardization 2018, with a renewed request to make further progress towards this comprehensive framework in the 2020 Rolling Plan.
3. In February 2020, the European Commission presented the EU Digital Strategy “*Shaping Europe’s digital future*” focused on three key objectives to ensure that digital solutions help Europe to pursue its own way towards a digital transformation that works for the benefit of people through respecting European values:
 - Technology that works for people;
 - A fair and competitive economy;
 - An open, democratic and sustainable society³.
4. Also in February 2020, the European Commission presented “*2030 Europe’s Digital Compass: The European way for the Digital Decade*”. The Commission proposes a Digital Compass to translate the EU’s digital ambitions for 2030 into concrete terms. They evolve around four cardinal points, including that of *Digitally skilled citizens and highly skilled digital professionals*; with the objective

³ COM(2020) 67 final COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. Shaping Europe’s digital future. Available on: <https://eur-lex.europa.eu/legal-content/ES/TXT/?uri=CELEX:52020DC0067>

by 2030 of 20 million employed ICT specialists in the EU, with convergence between the numbers of women and men.⁴

5. In June 2020, the European Commission released the “*Report on technology trends, technology uptake, investment and skills in advanced technologies*”, related to demand and supply of skills for technological transformation, concluding that EU27 shows strengths in several advanced technologies driven by science and engineering but has weaknesses in key digital technology fields.⁵
6. In December 2020 in a ministerial meeting, the EU Member States signed the “*Berlin Declaration on Digital Society and Value Based Digital Government*” that re-affirms European leaders’ strong commitment to fundamental rights and European values and emphasises the importance of digital public services, setting out seven key principles with related policy action lines at national and EU level.⁶

Next to the facts that technology has to work for people and that Europe strives to create a fair and competitive digital economy, Europe’s Digital Future is also linked to the 2050 climate-neutral target. These priorities have resulted that the digital transformation monitor is transformed into the Advanced Technologies for Industry monitor⁷. This Monitor is looking at sixteen advanced technologies (listed below) that are a priority for European industrial policy and that enable process, product and service innovation throughout the economy, and hence foster industrial modernization. It is interesting that what formerly were called new digital technologies are now combined with engineering technologies. Advanced technologies are defined as recent or future technologies that are expected to substantially alter the business and social environment. A first report *on technology trends, technology uptake, investment and skills in advanced technologies* has been published⁸ (July 2020).

<ul style="list-style-type: none"> • Advanced materials • Advanced manufacturing • Artificial Intelligence • Augmented and Virtual Reality • Big data • Blockchain • Cloud technologies • Connectivity 	<ul style="list-style-type: none"> • Industrial biotechnology • Internet of Things • Micro- and nano-electronics • IT for Mobility • Nanotechnology • Photonics • Robotics • Security
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⁴ COM(2021) 118 final COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS 2030 Digital Compass: the European way for the Digital Decade. Available on: <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:52021DC0118>

⁵ Available on: <https://ati.ec.europa.eu/reports/eu-reports/report-technology-trends-technology-uptake-investment-and-skills-advanced>

⁶ Available on: https://ec.europa.eu/isa2/sites/default/files/cdr_20201207_eu2020_berlin_declaration_on_digital_society_and_value-based_digital_government.pdf

⁷ <https://ec.europa.eu/growth/tools-databases/dem/monitor/content/welcome>

⁸ <https://ati.ec.europa.eu/reports/eu-reports/report-technology-trends-technology-uptake-investment-and-skills-advanced>

1.5 International environment

The conclusion of these developments in Europe is that the importance of professionalism in the digital environment is on the agenda. The combination of the IT sector with other sectors is now seen as the opportunity to accelerate the growth of trained professionals in advanced technologies. Those other sectors have a longer history and a broader experience with standardization, regulation and setting up professional institutes and societies and a positive track record of implementing those skills in business environments.

Organizations from United Nations (UN) with its CSTD⁹ ¹⁰, ITU and IFIP are starting initiatives like WSIS and AI for Good to pay attention to the information/digital society including digital skills. Thanks to Covid they reached out to a much larger community world-wide. Professionalism of the IT profession is always part of that agenda. WEF has become an important source and influencer with its *Future of Jobs* reports.

The standards developed within the European CEN/TC 428 can play an important role in understanding of and bridging the different schemes developed in different committees. Although a large number of specific technology standards are developed under supervision of ISO, they are not yet looking at IT professionalism and the competences needed by ICT professionals in general and in the broader context.

In order to avoid any confusion, we close this section with some brief remarks on Brexit. Despite the withdrawal of the United Kingdom from the European Union on 31 January 2020, the UK remains a full member of CEN and this TC 428 through the British Standards Institution (BSI). CEN has explicitly confirmed that UK expert stakeholders retain all rights of participation, leadership and voting in standards development committees as previously¹¹.

The only likely effect is that future EU statistics are likely to be based on the current EU27 members, excluding UK.

2. Benefits Expected from the Work of CEN/TC 428

Information & Communication Technologies have increasing importance in most economic and social activities. Consequently, the standardization related to maturing the IT Profession should be a mandatory activity to achieve the key benefit to develop a comprehensive European IT professionalism framework by 2025.

The success of the EN 16234-1 “*e-Competence Framework (e-CF) - A common European Framework for ICT Professionals in all industry sectors - Part 1: Framework*” standard proves that sharing a common language of ICT professional knowledge, skills and competences can contribute significantly to increasing

⁹ <https://unctad.org/topic/commission-on-science-and-technology-for-development>

¹⁰ <https://unctad.org/topic/commission-on-science-and-technology-for-development>

¹¹ https://www.cencenelec.eu/news/brief_news/pages/tn-2021-032.aspx

transparency and efficiency in professional development. This needs to be maintained and further expanded, especially with the regard to the four main building blocks of the ICT profession.

- Providing a common language to describe ICT Professional competences
- Providing a classification scheme to collect and better understand the ICT labour market
- Establishing a firm foundation for the maturing of the ICT profession
- Assist the creation of more ICT professionals to meet the existing skills gap
- Developing suitable learning programmes, including for the existing workforce
- Ensuring the creation of a trustworthy ICT profession by delivering an ICT Professional Ethics framework
- Underpinning education, training and certification of ICT professionals
- Underpinning trust in the ICT profession/professionals
- Underpinning liaisons with other sectors regarding digital competences
- Enabling comparability of different educational programmes
- Improving the image of the ICT profession

Professionalism embraces a strong understanding of the link between business and ICT, and the work of the TC will reinforce and extend that link. The benefits will include a direct and constructive impact on market players and stakeholders, across countries and stakeholder perspectives (e.g. employers, qualification providers), and will also have a positive influence on internal organisational interactions, (e.g. between HR and ICT departments).

Besides that, the development of a mature IT profession will provide the best tool to manage effective solutions to the social, business and political concern about regulatory challenges by the impact of digitization. It will contribute to protection of the environment and the improvement of business efficiency in all sectors of the economy.

3. Scope of TC 428

The formal definition of the scope of the TC is provided in Technical Board decision C027/2018.

Essentially, CEN/TC 428 is responsible for all aspects of standardization related to digital competences and maturing the ICT profession in all sectors, public and private. This includes, at a minimum, activity related to four major building blocks of ICT Professionalism:

1. Competences (standardisation of a common language of ICT skills and knowledge)
2. Education, training, accreditation, assessment and certification
3. ICT Ethics
4. Body of Knowledge (BoK)

The main areas of standardization where CEN TC 428 will develop its activity are:

- Maintenance of the e-CF, the core standard EN 16234-1, developed by and underpinning the work of the TC, along with its supporting Technical Reports, User Guide, Methodology, and Case Studies.
- ICT Professional Role Profiles
- Interaction with different frameworks (including EQF, ESCO, SFIA)
- Body of Knowledge for ICT

- Development of curriculum guidance, education, training, accreditation, assessment and certification, related to e-CF and other standards or technical specifications produced by CEN TC 428
- Developing an ICT professional ethics framework, including practical implementation at professional and organizational level well beyond designing codes of ethics but as an essential driver of ICT professional behaviour. Promoting standardisation or pre-standardisation activities related to ICT Ethics management in organizations in the ICT sector and society in general as a response to social and political concern about the ethical side of pervasive ICT
- Guidance for assessing attainment against the published standards
- Development of relations to sectors and markets as mentioned in the *Digital Compass* and the *ATI Monitor*

Definition, maintenance and evolution of digital professional competences in all sectors, always looking at current business adoption and new emerging technologies and trends as they become relevant to the ICT profession as a whole.

All conceptual developments shall be consistent and interrelated.

As stated, the main focus is on professional rather than user skills.

However, it should be noted that the work of TC-428 takes place within the wider context of European (and International) frameworks, agreements and models supporting shared understanding and approaches to education, training, competence and skill development. They also provide confidence in shared criteria for quality and assessment to foster mobility of workers and students. The outputs of CEN/TC-428 are aligned with these models and frameworks and the relationship is described in each deliverables as relevant to its particular content.

The most relevant frameworks/models to the work of CEN/TC 428 are:

- the European Qualifications Framework (EQF): provides defined generic descriptions of different levels of learning outcomes;
- the European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET);
- ISO standards;
- the European Foundation for Quality Management (EFQM) excellence model.

4. Objectives of CEN/TC 428 and Strategies to Achieve Them

4.1. Defined objectives of CEN/TC 428

CEN/TC 428 is responsible for all aspects of standardisation related to ICT professionalism, contributing to the development of a solid basis for ICT professionalism.

Further standardisation of IT Professionalism involves, at a minimum, the activity related to the agreed four building blocks of ICT Professionalism:

1. Competences
2. Education, training and certification

3. An ICT professional ethics framework
4. A Foundational Body of Knowledge

4.2. Areas of Work

A non-exhaustive list of areas where CEN TC 428 will be active is as follows:

1. Maintenance, evolution and updating EN 16234 (e-CF) and its related documents, with due consideration to alternative frameworks.
2. Remaining cognisant of other competence frameworks and schemes (e.g. SFIA and Japanese IT Competence Dictionary), engaging with their advocates and creators to avoid duplication and where possible to work towards interoperability, a single framework, and a common language to describe the ICT competence landscape.
3. Deliver standards, technical specifications and technical reports as appropriate for the three additional agreed building blocks of ICT Professionalism: education and certification (including e-curriculum guidelines and the development of an education model), a foundational body of knowledge, and professional ethics.
4. Deliver standards, technical specifications and technical reports as appropriate for ICT professional ethics framework, especially related to ICT Ethics management in organizations and in ICT sector and society in general, being proactive to respond at social and political concern about the ethical side of specific digital trends and deep impact digital initiatives.
5. Deliver standards, technical specifications and technical reports as appropriate, for assessment of competence against published standards (common metrics), irrespective of how acquired, by certification, prior learning or experience.
6. Maintenance and updating of CWAs relevant to the area of digital competences and ICT professionalism e.g. CWA 16266 Curriculum for training ICT Professionals in Universal Design.
7. Explore and define required competences, knowledge and professional ethics in existing and advanced technology domains, in the context of business adoption, e.g. artificial intelligence, autonomous systems, security, healthcare, fintech, cloud, blockchain etc., and consider strategies to align them with the core content of EN-16234-1.
8. In due course, consider the plethora of current frameworks and schemes concerned with organisational capabilities.
9. Actively promote awareness and use of TC 428 standards and technical specifications in European initiatives, especially at the European Commission and ICT sector level, as well as in other European or international standardisation initiatives related with ICT.
10. Engage proactively with external global organisations.
11. Standards for digital credentials, including micro-credentials and electronic portfolios.

4.3. Strategies to achieve the CEN/TC428 defined objectives

CEN/TC 428 will produce clear definitions and sound orientation materials to support selection and recruitment of ICT professionals, as well guidance regarding qualification, training, assessment and continuous professional development. New outputs and deliverables will facilitate the widespread adoption of the ICT Standards by companies and organisations, increasing the transparency, mobility and efficiency of human resources in the ICT sector.

CEN/TC 428 will adopt a proactive coordination attitude, firstly related to other CEN initiatives affecting IT professionalism, and in general related to other European initiatives. The TC will aim to catalyse and promote coordination among parties and initiatives with impact on IT professionalism. The TC should consider a leadership or coordination role as appropriate, as umbrella body of the European ICT professionalism standards definition and maturity, promoting the coordination and coherence of the European ICT professionalism evolution.

As this work progresses, additional topics of interest will be proposed and addressed by the TC. In particular, the TC could contribute to other aspects of IT professionalism, for example in response to new European Union strategies, social needs or innovation trends.

The TC will seek to broaden its membership, as discussed below.

5. Participation in CEN/TC 428

All CEN national members are entitled to nominate delegates to CEN Technical Committees and experts to Working Groups, ensuring a balance of all interested parties. Participation as observers of recognised European or international organisations is also possible under certain conditions. To participate in the activities of this CEN/TC 428, stakeholders are advised to contact the national standards body in their country.

It is normal that those bodies operate a “mirror” or “shadow” committee to match the work of the TC. Annex A provides the CEN system information.

It is desirable that the participation in TC 428 is representative of as many national bodies and ICT multi-stakeholder perspectives as possible in order to meet the objective of maturing the ICT profession throughout Europe. To this end it will be part of the role of the members of TC 428 to raise awareness of the work of the Technical Committee leading to the enhancement of its work.

Specifically, the TC is currently well supported by the major countries in Western Europe. We are weaker in representation from Eastern Europe, despite the strong history of IT in some of those countries. An attempt will be made to address this by considering specific actions related to TC activities, for example, perhaps holding one meeting per year in Eastern Europe.

The CEN structure, based on national standards bodies, may inhibit the participation of the major international vendors (who typically have international or European leadership teams) despite their involvement in the early development of the previous CWAs. Therefore, the TC will devise mechanisms to overcome this, leveraging good practice and experience to engage with relevant related organisations, and has already established liaisons with a number of related bodies, such as ITPE, CEPIS, EeSA, SBS etc.

Finally, noting that the ICT sector is essentially international, the TC will seek every opportunity to collaborate with the other large ICT markets in the world, namely USA, Japan, China and India.

In order to pursue these objectives, the TC will consider some form of informal occasional communication from CEN TC to national bodies, to facilitate additions to its membership and to the national mirror committees.

6. Factors affecting completion and implementation of the CEN/TC 428 work programme

The main success factors for the TC are the effort and enthusiasm of the National Body members, experts and their employers, and the Secretary, with project financing coming from a number of sources, most notably the European Commission.

The ambitious work programme proposed for CEN/TC 428 will rely heavily on this continued interest, contribution, funding and high-level expertise of participants to deliver quality outputs, as well as the European Commission priorities in the domain of the TC, i.e. digital competences and IT professionalism.

There is also a dividend to be gained by productive liaisons as described below, with, for example, national standards bodies, CEN Workshops (e.g. Big Data), other TCs like CEN/CLC JTC 13 “Cybersecurity and data protection, CEN/CLC Focus Group “AI – Artificial Intelligence” and CEN/CLC/ETSI eAccessibility, and relevant ISO groups, like ISO JTC 1/SC7 “Software and systems engineering” and ISO/IEC JTC 1/SC27 “Information security, cybersecurity and privacy protection”.

Annex A CEN system information

A.1 Structure of the TC

The structure of the TC aims to reflect the range of stakeholders and best practice in terms of governance. Membership comprises the Chairperson, Secretary and CEN national members, as well as a number of approved observers, e.g. the European Commission and other organisations granted observer status from time to time.

The Chair – The Chair provides overall leadership and conducts meetings in an impartial manner, guiding the meeting in order to reach balanced and prompt decisions while ensuring that all points of view are heard and considered. At the November 2018 meeting of the TC, it was agreed to appoint a **Vice-Chair** to support the Chair.

The Secretary – The secretary provides professional management support, in the form of administrative, operational and technical services, and particularly to the Chair to ensure that the TC functions efficiently in accordance with CEN rules.

Technical Committee – The Technical Committee acts as the decision-making body. It decides on starting new work items, comments and votes on draft deliverables and decides on final standards. It is the responsibility of the TC to build consensus amongst all its members. The degree of consensus is evaluated and measured amongst the national delegations (vote in meeting) or amongst the CEN Members (vote by correspondence).

Working Groups – The drafting of standards is usually carried out in Working Groups. Each of these groups is dedicated to a more specific aspect of the overall subject. A new project can be delegated to an existing working group or a new working group can be established to accomplish the project.

Ad Hoc Groups – A TC can decide to establish an 'ad hoc group' to perform a specific task that is not directly related to an existing WG (e.g. perform a feasibility study).

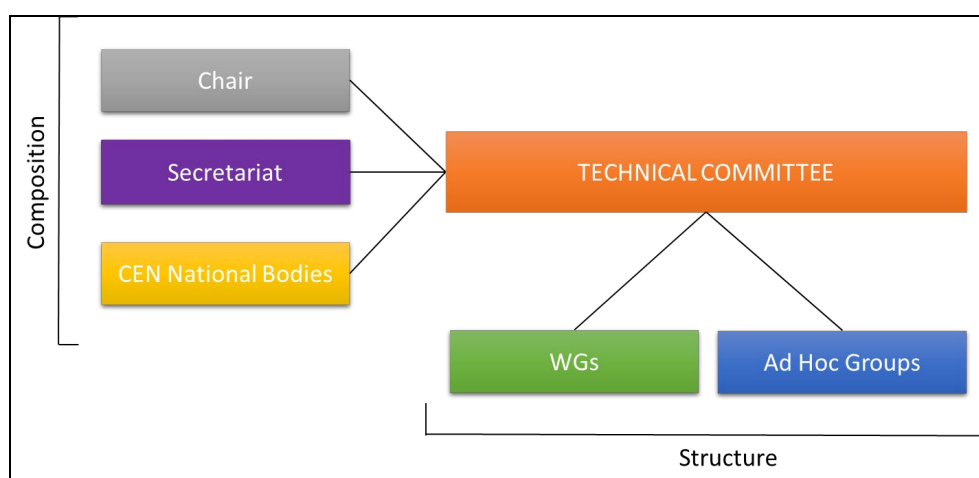


Figure A.1 – Composition and Structure of TCs

A.2 Types of Products of the TCs

The TC will deliver a variety of documents as specified by CEN, appropriate to the work in hand.

European Standards (EN) are technical documents designed to be used as a rule, guideline or definition. They will be consensus-built, repeatable ways of doing something. Standards are created by bringing together all interested parties such as manufacturers, consumers and regulators of a particular material, product, process or service. All parties benefit from standardisation through increased efficiency and quality as well as lower development costs.

Besides European Standards (EN), CEN/TC 428 may also develop Technical Specifications (TS) and Technical Reports (TR). These deliverables are developed more easily and quickly than European standards.

A Technical Specification can be produced when there is no immediate need for a European Standard or when the technology is not yet mature enough. Technical Specifications require less time to be developed and do not have to be adopted by the national members. A Technical Specification can be converted into a European Standard when deemed ready.

Technical Reports contain information on the technical content of standardization work. This information is not suitable to be published as an EN or TS. A Technical Report may include, for example, data obtained from a survey, data on work in other organizations, or any other data that might be useful to a CEN member.