



CEN/TC 428  
ICT Professionalism and  
Digital Competences

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# Standards for a shared European language in IT professional development: Competence is the key

# Irish Computer Society

The Professional body for IT in Ireland

- The voice of the IT profession in Ireland
- The natural home for IT professionals who want and need a respected, highly visible professional body, with their interests at heart
- An inclusive, diverse membership organisation, that recognises different specialisms, credentials and stages of career development
- Embraces new ideas in line with our fast-paced industry.
- Focused on standards of professionalism
- Growth of the IT talent pipeline for the IT industry



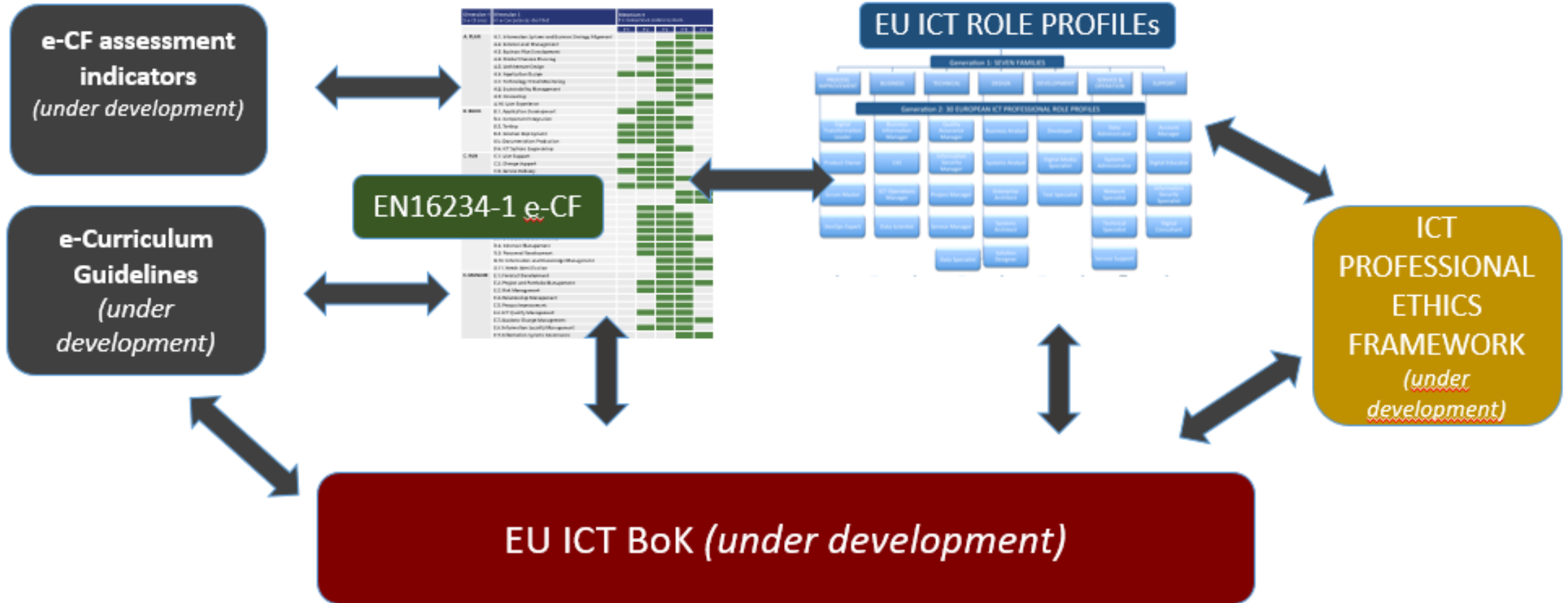
# Relevance of a professional body

- A professional body
  - speaks for the profession
  - Supports it in challenging times
- Changing landscape - same challenges, plus more
  - Social, economic, climate
    - Digital transformation
    - Healthy and green society
  - Vulnerabilities in digital space, dependence on external tech
    - Skills shortage
    - Digital Divide
    - Covid
    - Digital Sovereignty
- Trust/confidence/respect
- Must build on strengths, address weaknesses

# CEN Technical Committee 428

- Delegates from CEN National Standards Bodies
- Established in 2014 to create ICT competence standard from the CWA European e-Competence Framework (EN 16234-1:2019)
- Focus on maturing the IT profession
- Responsible for all standardisation related to the ICT Profession
  - Development of standards, TS, TR on remaining 3 “pillars” of ICT Professionalism and other prioritised areas
- Supported by European Commission

# Professionalism Pillar Interactions



# Background

# A Challenging Time – Ireland and Europe and the World

- There are a rolling 12,000 IT vacancies in Ireland every month
  - Likely higher as Covid has increased the demand across Europe
- 40+% Irish citizens do not have basic digital skills
- These are two sides of the same coin -
  - Digitally literate population is necessary to engage with a digital economy and digital public services
  - Narrowing of the digital divide is needed for wellbeing of people
  - Sharp focus on digital inequality during Covid-19
    - Education
    - Working from home
    - Skills not as good as we thought



# Professionalism

Development, promotion and adoption of common professional practices and professional standards by the IT workforce. IT Professionalism emphasises competent and careful individual practice and collective action to develop an IT profession that is recognised, respected and accountable

## Professionalism Brochure

“Build the best IT Workforce to deliver Europe’s digital transition”

# Professional Practice

**Standards** are regulations, rules or guidelines for technical, HR or ethics fields

They are developed by consensus among experts

Professional **practice** in IT is the set of **common behaviours** by IT workers that implement standards, covering:

- Approach to work and career
- Routine decision making and interpersonal relationships
- Emphasis on **competent** and **careful** individual practice, and collective action to ensure the IT profession is **recognised** and **respected**.

# Professional Practice

## Professional Competence

- Technical, business and soft skills
- Validated learning
- Continuous professional development

## Professional Attitude

- High quality and best practice
- Regulations, standards and legislation
- Impact positively on society and the environment

## Professional Community

- Participate in professional communities
- Commit to a code of conduct
- Promote and protect the reputation of the IT profession



# Professionalism in IT

## Professional Competence

### Professional Standards

- e-CF
- BoK
- Curriculum
- KPI's
- Ethics



### Professional Practice

- Competence
- Attitude
- Community

# Recovery and Resilience for Europe

- Welcome for the RRF that includes 20% for digital transition and reform
- 4 Cardinal Points for digital in RRF targets in Europe
  - A **digitally skilled population** and highly skilled digital professionals
    - **Empowered and capable citizens** – protected from cyberattack
    - **20m ICT specialists (7.8m in 2019)**
  - Secure and high-performing, sustainable digital infrastructures
  - Digital transformation of businesses
  - Digitalisation of public services – **KEY to citizen skills**
  - **Citizen/user skills to high level professional skills** part of a continuum, neither makes sense without the other

User Skills



Professional Skills

# Europe's Digital Decade: Digital Targets for 2030



Press release | 9 March 2021 | Brussels

## Europe's Digital Decade: Commission sets the course towards a digitally empowered Europe by 2030

### ICT Specialists: 20 millions

Advanced digital skills require more than mastering coding or having a basis of computing sciences. Digital training and education should support a workforce in which people can acquire specialised digital skills to get quality jobs and rewarding careers. As of 2019, there were 7.8 million ICT specialists with a prior annual growth rate of 4.2%. If this trend continues, the EU will be far below the projected need of 20 million experts e.g. for key areas, such as cybersecurity or data analysis. More than 70% of businesses report a lack of staff with adequate digital skills as an obstacle to investment. There is also a severe gender imbalance with only one in six ICT specialists and one in three STEM graduates being women. This is compounded by a lack of capacity in terms of specialised education and training programs in areas such as Artificial Intelligence, quantum and cybersecurity and by a low integration of digital subjects and educational multimedia tools in other disciplines. Addressing this challenge requires massive investment to train future generations of workers and to up-skill and re-skill the workforce.



#### Skills

**ICT Specialists: 20 millions** + Gender convergence  
**Basic Digital Skills:** min 80% of population



#### Secure and sustainable digital infrastructures

**Connectivity:** Gigabit for everyone, 5G everywhere  
**Cutting edge Semiconductors:** double EU share in global production  
**Data - Edge & Cloud:** 10,000 climate: neutral highly secure edge nodes  
**Computing:** first computer with quantum acceleration



#### Digital transformation of businesses

**Tech up-take:** 75% of EU companies using Cloud/AI/Big Data  
**Innovators:** grow scale ups & finance to double EU Unicorns  
**Late adopters:** more than 90% of SMEs reach at least a basic level of digital intensity

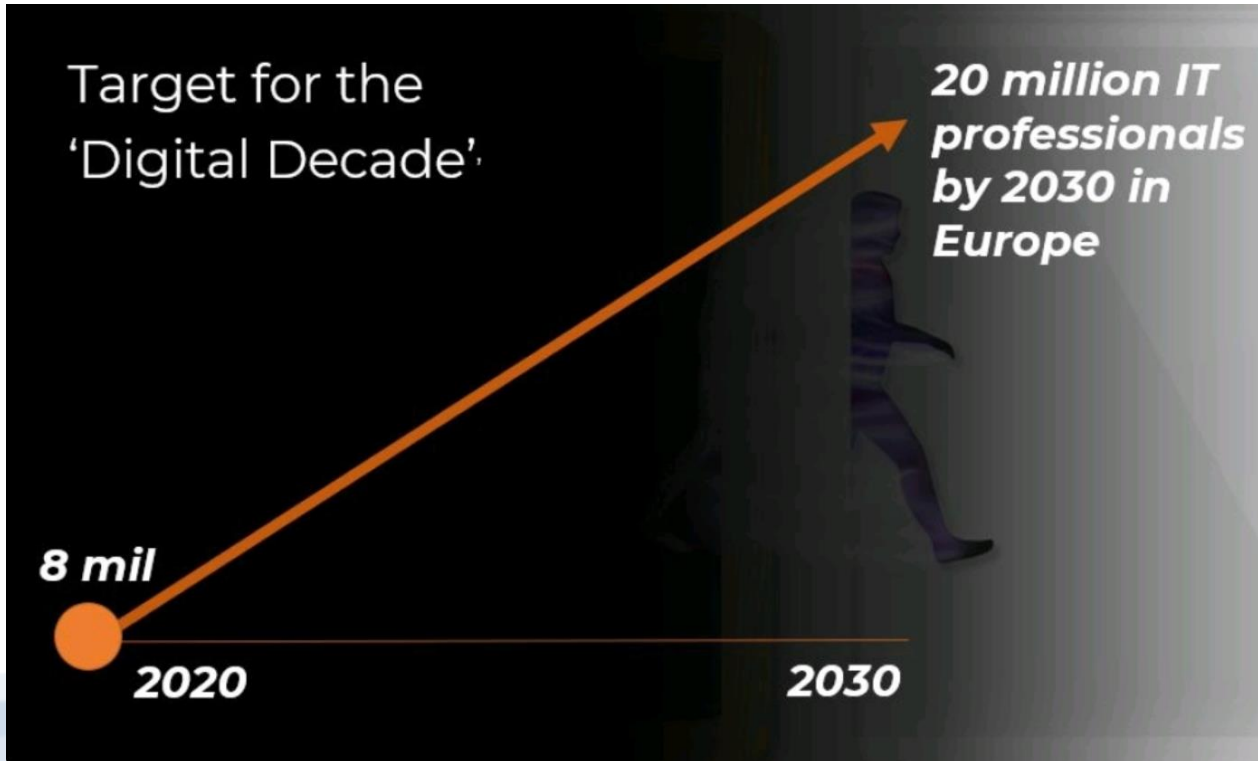


#### Digitalisation of public services

**Key Public Services:** 100% online  
**e-Health:** 100% availability medical records  
**Digital Identity:** 80% citizens using digital ID



# The Digital Decade



Europe needs a competent, respected, mature IT Profession to drive recovery and resilience

We need 20m IT professionals by 2030 – we have 8m in 2021

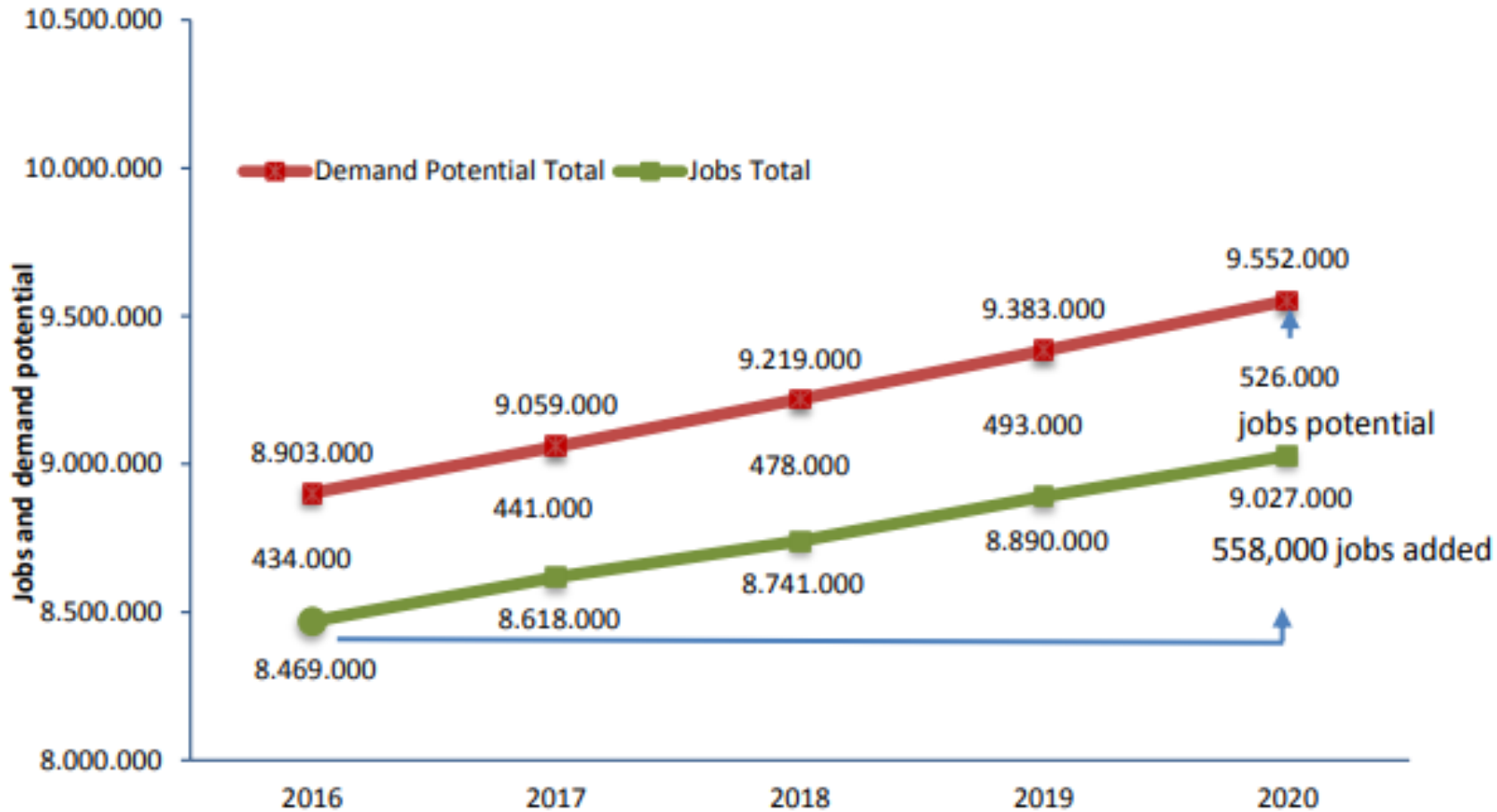
We can't allow urgency to let quantity trump quality

# Professional Workforce

- **Digital Transformation** – the buzzword of current state of industry an the economy globally
  - Not any new technology adoption
  - Must transform the business, not just the technology
  - Better term – **Digital Business Transformation** (Capgemini, 2018)
  - Priority for more than 80% of European companies surveyed
  - Business and tech skills both needed
- Appropriate professional workforce is key
  - Efficiency, productivity
  - Improved operations, reduced risk
  - Career advancement, morale



# The Skills Gap Continues to Widen



Supply growing but outperformed by demand

- Education/training
- Conversion
- Novel schemes
- Immigration

Capgemini 2018

# The ICT Profession

- Many investigations of the cause of the skills shortage
- Many initiatives to address it
- Critical factor might be the notion of professionalism

Collaboration between EC, CEN, Digital Skills and Jobs Coalition to address this

In the absence of tradition and a professional regulatory body, these agreed pillars must be standardised and assimilated into the realisation of IT professionalism



Bodies of  
Knowledge

Professional  
Ethics

Education and  
Training

Competences

# Awareness before Action

The skills deficit in the ICT sector, from the broad workforce, through highly skilled professionals right up to digital business transformation leaders, is now well rehearsed

The next step is to use this knowledge to generate solutions

- Focus on ICT as a fully fledged profession, with the required supporting standards and quality assurance underpinning it is a wise approach
- CEN and TC 428, with the support of the European Commission have steered a path
- The Digital Skills and Jobs Coalition is a mass movement that squares the circle

# Digital Skills and Jobs Coalition

- EU initiative
  - Brings together Member States, companies, social partners, non-profit organisations and education providers, who work to address the lack of digital skills in Europe.
- Irish DSJC
  - Established by ICS, launched by EC, MMO'C 2016
  - 50 partners



**MINISTER MARY MITCHELL O'CONNOR  
LAUNCHES NATIONAL DIGITAL SKILLS &  
JOBS COALITION**

RONAN LEONARD × APRIL 27, 2017

# Common Partner Goals

- **Educate and train** more young people for digital professions, as young digital professionals, with increased female participation
- **Up-skill and re-skill** the European labour force with the digital skills for productivity
- Modernise our **education and training systems** for the digital age,
- Improve the **digital skills of all citizens** strengthening social inclusion.

# Digital Skills and Jobs Platform

- Digital Skills Infrastructure (DSI) Core Services <https://digital-skills-jobs.europa.eu/en>
  - Single point of access
  - Share resources, services among coalitions
  - Stimulate networking
- DSI Generic Services <https://www.digitalcoalition.ie/>
  - National website to provide connection to the core platform
  - Interoperable links to core
  - 3 year commitment
- Next steps – content gathering

# Questions?



Thank you

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