

Qualification Frameworks and Qualifications: Expectations, achievements and a new paradigm in an age of artificial intelligence.

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Vilnius 20th November 2023

QUALIFICATIONS FRAMEWORKS

- What are qualifications frameworks?
- Do they address ALL qualifications?
- Are qualifications frameworks applicable only to education institutions?
- What is the added value of having qualifications frameworks?
- What qualifications QUALIFY to be part of a national qualifications' framework?
- If qualifications frameworks are not the same, how do they relate to each other?
- Who are the stakeholders interested in qualifications frameworks?

QUALIFICATIONS ARE:

- **Statements** of a person's knowledge, skills and competence.
- A **tool** for transparency and better understanding of standards in applied learning.
- A **measure** of capacity and lifelong learning.
- A **profile** of a person's future career prospect.
- A mutually recognised education **report**.
- A **mirror** of a country's manner of learning and working.
- A wage **device**

QUALIFICATIONS (FRAME)WORKS

(NOT THE REAL PICTURE)

- Qualifications: knowledge + skills + competences + mindsets
- Qualifications are recognised currencies
- Qualifications transcend geo-political boundaries
- Qualifications define a person's vocational/professional profile
- Qualifications serve to acquire new knowledge, new skills, new competences and change mindsets.

AT THE HEART OF ANY QUALIFICATION

- **A learning outcomes approach**

What a person knows (knowledge) and is able (skills) to do (competence).

At any level of qualification – including micro credentials.

- **The acquisition of autonomy and responsibility**

Two values linked to employment – a person's capacity to work on his/her own and achieving results in line with occupational/professional standards (including regulated professions).

SYSTEMS OF EDUCATION, CULTURE, TRADITION AND ECONOMICS DICTATE PROFILES OF QUALIFICATIONS

Although the Bologna (1999) and the Copenhagen (2002) processes and the EQF have brought changes to the dynamics of qualifications, individual States continue to **enjoy the autonomy of valuing national qualifications** within specific labour market needs. There is no such thing as a

European qualification!

Qualifications are national tools in defined social, economic and cultural frameworks.

ARTIFICIAL INTELLIGENCE

- In an age of technology, education and practically all other sectors are increasingly relying on artificial intelligence as a tool for faster interactions: learning, working, travelling, banking, production, services...
- The structure and duration of periods of education and training prior to qualifications will be drastically reduced – learners are smarter, knowledge is at anyone's fingertips, formal education can take place anywhere, informal learning is widely recognised by employers, work-based learning is in demand.
- Research and innovation have been grouped as AI has become a catalyst for new inventions, new knowledge and new competences.

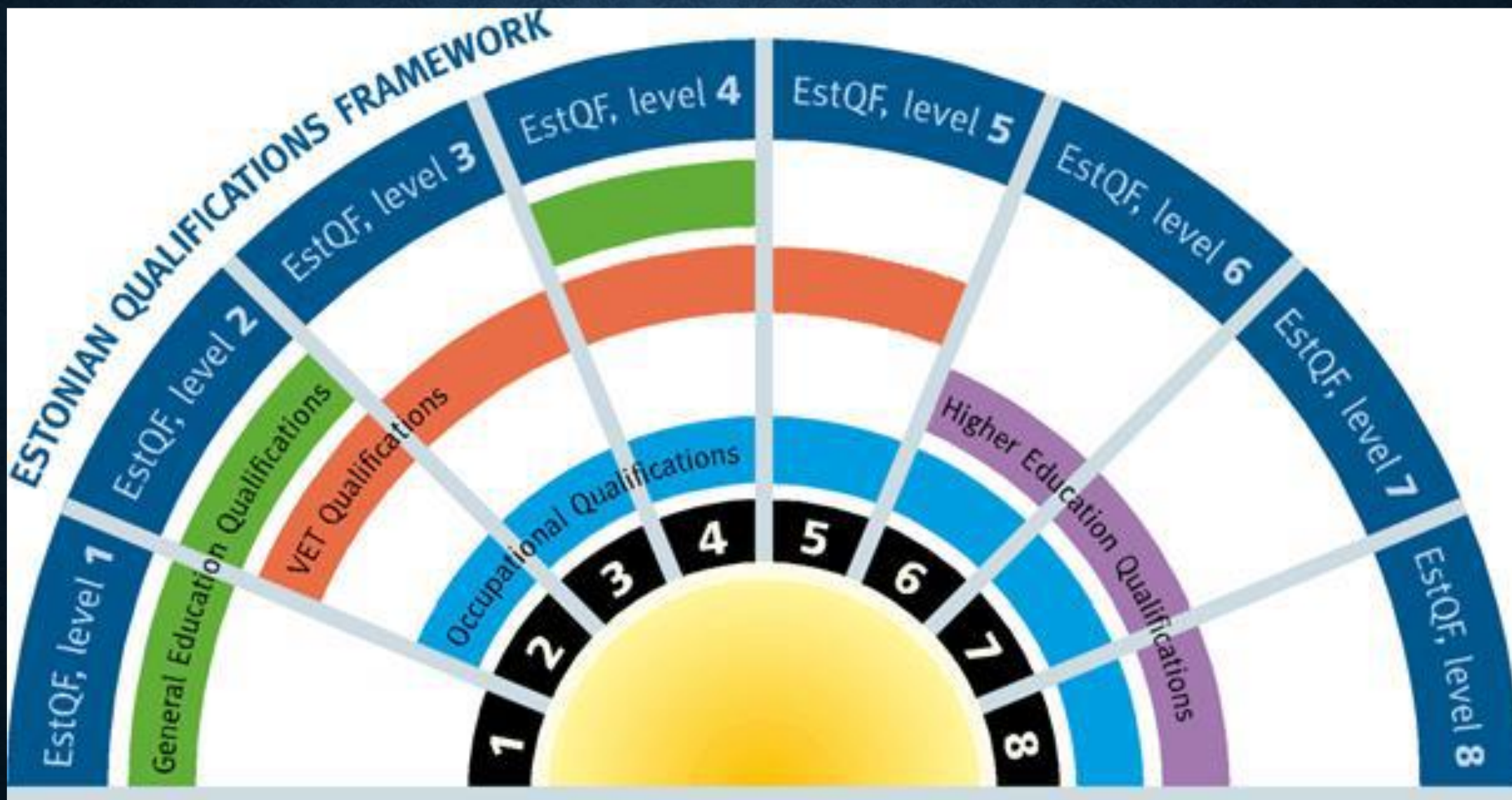
WILL ARTIFICIAL INTELLIGENCE HAVE A DIRECT IMPACT ON QUALIFICATIONS AND LIFE?

YES – levels of qualifications may become levels of competences (autonomy + responsibility), computer learning will replace teachers (in their current role), individual and remote learning will replace lecture/classrooms, project and oral based assessments will determine a person's warrant to exercise a profession, teachers will become Learning Companions. AI will send back parents back home to care for their children while earning a living.

LEVELS OF QUALIFICATIONS

- Today's measure is in levels from 0 to 10, 12 or more
- Is 0 or the highest number a fair assessment of a person's competences?
- Qualifications frameworks – a one size fits all approach which is outdated itself
- New systems are required to measure a person's capacity to work and live independently
- The blue and white collar divide will stop determining classified learners/workers
- Salaries and social esteem will become a uniform approach to fairer societies
- Trades will regain their place among other highly esteemed professions...losing human capital (craftmanship) will not be a option anymore

Estonian Qualifications Framework



Dutch Qualifications Framework

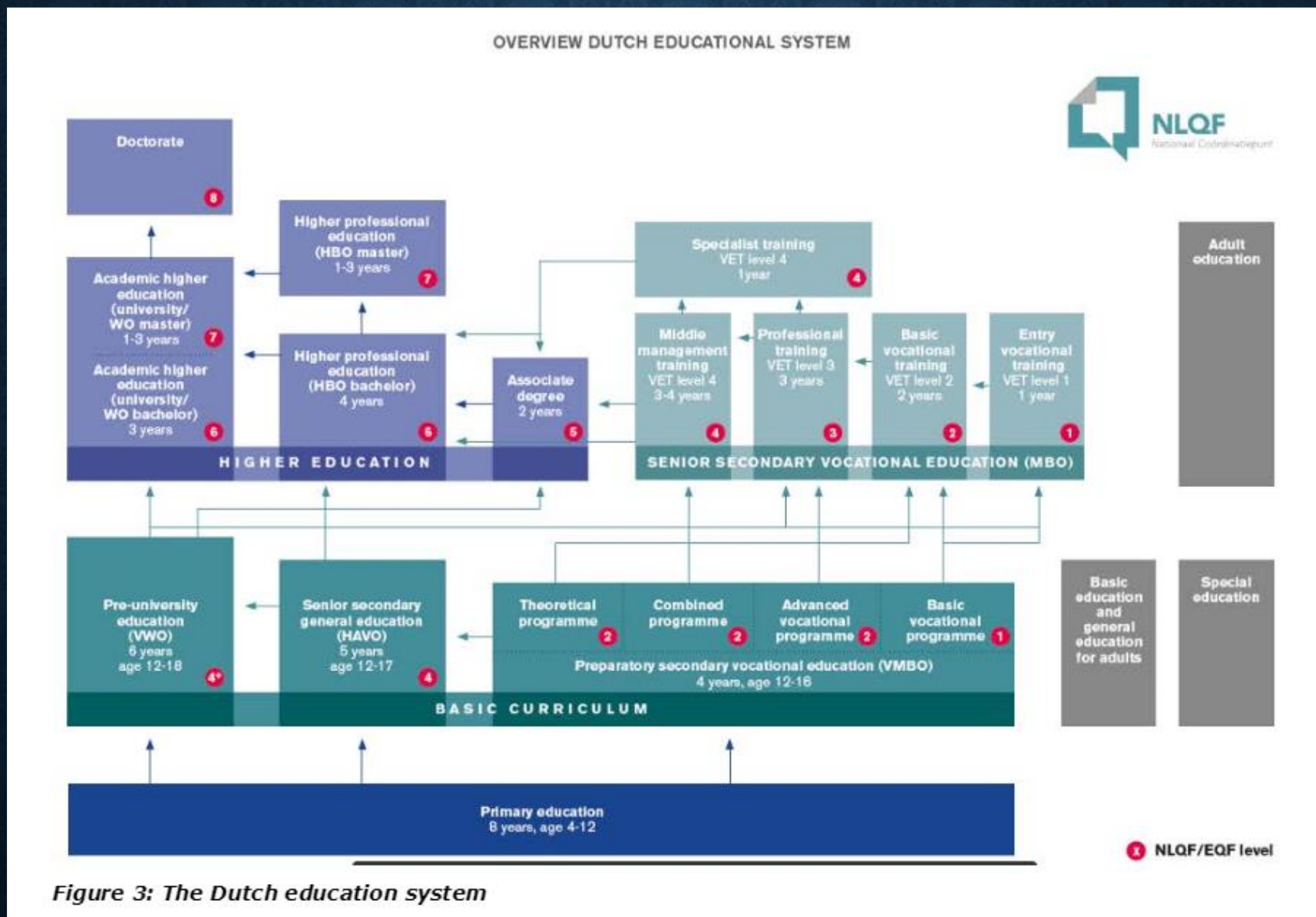


Figure 3: The Dutch education system

Finnish Qualifications Framework

Qualifications and syllabi placed at FiNQF levels

1	
2	Basic education certificate / syllabus
3	
4	General upper secondary education certificate / syllabus Matriculation examination Upper secondary vocational qualifications Further vocational qualifications Basic Examination in Prison Services Fire Fighter Qualification Emergency Response Centre Operator Qualification
5	Specialist vocational qualifications Sub-Officer Qualification (Fire and Rescue Services) Vocational Qualification in Air Traffic Control
6	Bachelor's degrees (universities of applied sciences) Bachelor's degrees (universities)
7	Master's degrees (universities of applied sciences) Master's degrees (universities)
8	Universities' and the National Defence University's scientific and artistic postgraduate degrees (licentiate and doctor degrees) the General Staff Officer's Degree Specialist Degree in Veterinary Medicine Specialist training in medicine Specialist training in dentistry

Table 1. Qualifications and syllabi referenced to the Finnish National Framework for Qualifications and Other Competence Modules.

Irish Qualifications Framework

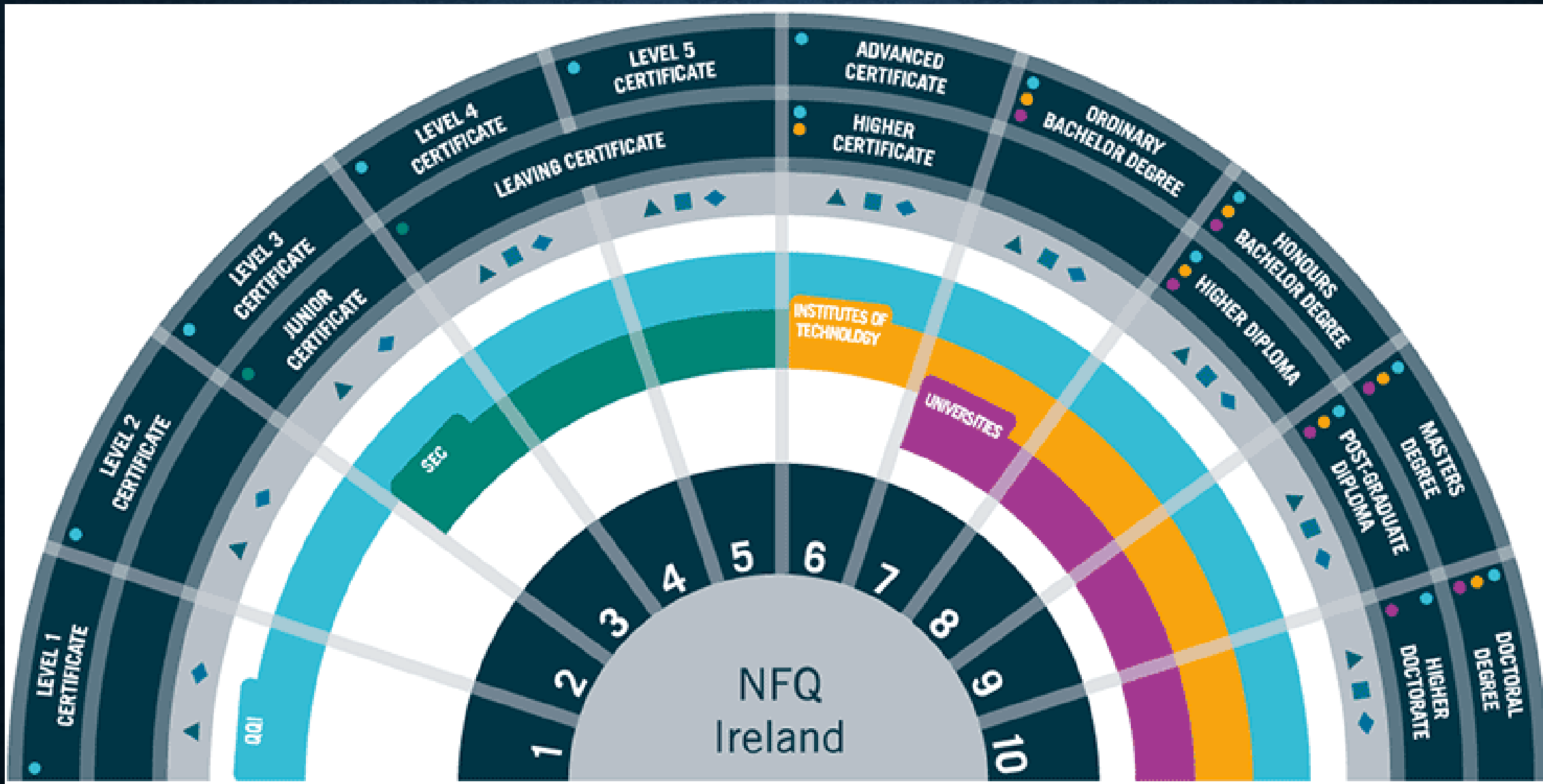


Table 1. Latvian formal education qualifications and LQF/EQF levels

LQF/ EQF level	Latvian education documents (qualifications)
1	Certificate of general basic education (special education programmes for learners with (severe) mental development disorders or several severe development disorders)
2	Certificate of general basic education Certificate of vocational basic education Certificate of professional qualification
3	Certificate of vocational education (<i>arodizglitiba</i> – without rights to enter higher education) Certificate of professional qualification
4	Certificate of general secondary education Diploma of vocational secondary education Certificate of professional qualification (without rights to enter higher education)
5	Diploma of first level professional higher education (first level professional higher (college) education; length of full-time studies two to three years)
6	Bachelor's diploma Professional bachelor's diploma Diploma of professional higher education, diploma of higher professional qualification (second level professional higher education, length of full-time studies – at least four years)
7	Master's diploma Professional master's diploma Diploma of professional higher education, diploma of higher education, diploma of higher professional qualification (second level professional higher education, total length of full-time studies – at least five years).
8	Doctor's diploma Professional doctor's diploma in arts

Source: Cabinet of Ministers, 2017.

Lithuanian Qualifications Framework

Qualifications awarded at present in the LTQF:

LTQF	Qualifications
8	Doctoral diploma
7	Master diploma Certificate of residency
6	Bachelor diploma Professional bachelor diploma
5	Study certificate VET diploma*
4	VET diploma Matura diploma** (on completion of the upper-secondary education programme and passing matura examinations)
3	VET diploma Lower-secondary education certificate** (completion of lower-secondary education programme and testing learning outcomes) (grades 5 to 10)
2	VET diploma
1	VET diploma

Malta Qualifications Framework

MQF Levels

8	Doctoral Degree	
7	Master's Degree Post-graduate Diploma Post-graduate Certificate	
6	Bachelor's Degree	
5	Undergraduate Diploma Undergraduate Certificate	VET Higher Diploma Foundation Degree
4	Matriculation Certificate Advanced Level Intermediate Level	VET Diploma (iv)
3	General Education SEC Grade 1-5	VET Level 3 (iii)
2	General Education Level 2 SEC Grade 6-7	VET Level 2 (ii)
1	General Education Level 1 School Leaving Certificate	VET Level 1 (i)
B	Introductory Level B*	
A	Introductory Level A*	

THE SCOTTISH CREDIT AND QUALIFICATIONS FRAMEWORK

This Framework diagram has been produced to show the mainstream Scottish qualifications already credit rated by SQA and HEIs. However, there are a diverse number of learning programmes on the Framework, which, due to the limitations of this format, cannot be represented here. For more information, please visit the SCQF website at www.sccf.org.uk to view the interactive version of the Framework or search the Database.



SCQF Levels	SQA Qualifications		Qualifications of Higher Education Institutions	SVQs/MAs
12			Doctoral Degree	Professional Apprenticeship
11			Masters Degree, Integrated Masters Degree, Post Graduate Diploma, Post Graduate Certificate	Professional Apprenticeship SVQ 5
10			Honours Degree, Graduate Diploma, Graduate Certificate	Professional Apprenticeship
9		Professional Development Award	Bachelors / Ordinary Degree, Graduate Diploma, Graduate Certificate	Technical Apprenticeship SVQ 4
8		Higher National Diploma	Diploma Of Higher Education	Technical Apprenticeship SVQ 4
7	Advanced Higher, Awards, Scottish Baccalaureate	Higher National Certificate	Certificate Of Higher Education	
6	Higher, Awards, Skills for Work Higher			SVQ 3
5	National 5, Awards, Skills for Work National 5			Modern Apprenticeship SVQ 2
4	National 4, Awards, Skills for Work National 4	National Certificate	National Progression Award	SVQ 1
3	National 3, Awards, Skills for Work National 3			
2	National 2, Awards			
1	National 1, Awards			

The Diploma of Higher Education is allocated 240 SCQF Credit Points or Level 8 or above.

QUALIFICATIONS FRAMEWORKS: A PROFILE

- Levels – from one to 10, 12 or more...normally 8 levels
- Learning outcomes: for each level and for each qualification/unit...
- Nomenclature: a title eg Master, Bachelor, diploma
- Systematic: a system in relating one qualification to another
- Readable: can be understood!
- IT friendly!

COMPUTER LEARNING

- Electronic devices are determining our quality of life
- The internet of things has become the internet of ALL things!
- Connectivity is allowing us to be disconnected if we cram our schedule beyond respectable human capacity
- Yet we are almost connected at all times
- Learning is becoming a computer-based sociological constant
- Computer-based learning is faster, attractive, reliable, interest neutral and personal.

THE NEW LEARNING ENVIRONMENT(S)

- Learning is taking place everywhere
- Learners interact in schools because it is obligatory
- In further and higher education students are spending less time in higher education institutions
- More work-based learning is keeping learners in education
- Alumni associations are consequently dying – institutions struggle to keep links with past students (Data Protection laws)
- Rethinking schools, colleges and HEIs is a must if we are to sustain E&T as a social meeting place for team-building

TEAMWORK AND THE WORD OF MOUTH

- Artificial intelligence is challenging human interaction
- Qualifications require proof *what a person knows and is able to do!*
- Qualifications can serve to regain the lost connectivity of our generation – old or young
- A new meaningful role for qualifications: **teamwork and oral assessments**
- Working together and working for common goals – a new qualified competence
- Teamwork and oral assessments: time consuming, costly and transparent

LEARNING COMPANIONS

- **Google, You Tube, Tik Tok, ChatGPT** + many more platforms – offer solutions, wrong values, methods of learning, information (fake or true)
- Teachers are challenged in formal education (especially through apprenticeship progs)
- Attention span is reduced dramatically
- Speed is frustrating young minds having to sit and listen for hours/years
- Young learners are searching everywhere for solutions to their private lives
- Working and learning is in increasing demand by young students and employers
- Teachers role must change to learning companions...no one can stop learning!

MORE TIME FOR YOUNG LEARNERS

- Childcare away from home may increase income at the expense of a reduction in the quality time at home, less face-to-face interaction, the unnatural growth of children away from their parents
- AI can bring back parents to work from home – at least for some professions and for some careers...not for the driver, the builder, the plumber, the bus driver, the surgeon, the taxi driver, the chef, the conserige and several other jobs.
- But childminding can be shared– work/life balance can be augmented through AI
- Qualifications are also determined by a child's upbringing – AI can make or break this bond!

WHAT IMPACT ON QUALIFICATIONS FRAMEWORKS AS WE KNOW THEM TODAY?

- We are at the dawn of a new paradigm in qualifications frameworks – **from levels to stages**
- What stage is my qualification? Pre- OR post-higher education?
- Stages can be determined by clusters – basic, intermediate, technical, professional.
- Basic stage: finishing compulsory education; Intermediate stage: immediate post-compulsory education; Technical stage: vocational/trades person; Professional stage: Higher education (University/HVET).
 - **HOW WILL THIS PARADIGM SHIFT EMBRACE THE EUROPEAN PATH OF QFs?**

DEVELOPMENTS AT EU LEVEL

- **Copenhagen (2002) process:** raised the visibility and profile of VET at the European level
- **Maastricht Communiqué 2004:** increasing public/private investment in VET; developing VET systems to cater for the needs of disadvantaged people and groups; developing learning-conducive environments both in educational institutions and in the workplace; promoting VET teachers' and trainers' continuous competence development.
- **The Bruges Communiqué (December 2010)** set out long-term strategic objectives for European cooperation in VET for the period 2011-2020 as a package of objectives and actions to increase the quality of vocational training in Europe by making it more accessible and relevant to the needs of the labour market.
- **Riga Conclusions (2015)** set out a list of new deliverables for the period 2015-2020 based on a review of the results of the deliverables for the period 2011-2014: promote work-based learning in all its forms; further develop quality assurance mechanisms; enhance access to VET through more flexible and permeable systems; further strengthen key competences in VET curricula; introduce systematic approaches to initial and CPD of VET teachers and mentors in both school- and work-based settings.

OSNABRÜCK DECLARATION 2020

Council Recommendation on vocational education and training (VET) for sustainable competitiveness, social fairness and resilience - seeks to ensure that VET equips the workforce

Finally, the recent Osnabrück declaration on VET (2020) as an enabler of recovery and just transitions to digital and green economies highlights the vital need to empower VET teaching and training staff to be proactive lifelong learners in a context of rapidly changing technology and skill requirements.

THE EUROPEAN QUALIFICATIONS FRAMEWORK (EQF)

- a European-wide qualifications framework which joins the qualifications of different EU members together
- a translation of different national qualifications which makes qualifications in different EU countries easier to understand.
- The EQF aims to **facilitate mobility of students and workers within the EU** in order to encourage development mobile and flexible workforce throughout Europe and to help develop lifelong learning.

EUROPEAN HIGHER EDUCATION AREA (EHEA) AND BOLOGNA PROCESS

- The **Bologna Declaration** was signed in 1999 by ministers responsible for higher education from 29 European countries
- The **European Higher Education Area (EHEA)** was launched along with the Bologna Process' decade anniversary, in March 2010. 48 countries agreed to adopt reforms on higher education on the basis of common key values— such as freedom of expression, autonomy for institutions, independent student unions, academic freedom, free movement of students and staff.
- The EHEA is meant to ensure more comparable, compatible and coherent systems of higher education in Europe.



RIGA DELIVERABLES 2015-20

IS HISTORY STILL RELEVANT?

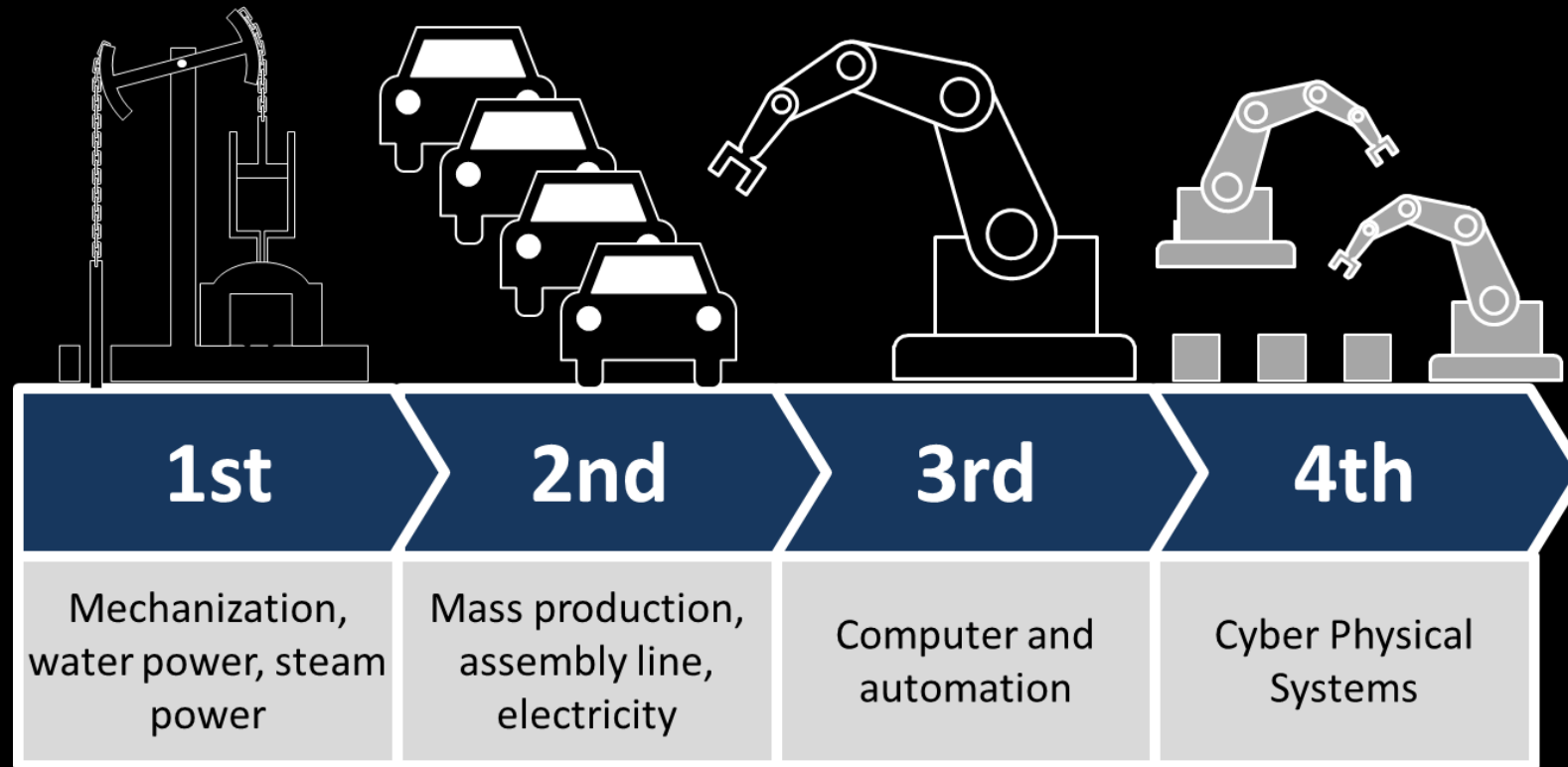
- promote **work-based learning** in all its forms
- further develop **quality assurance**
- enhance **access to VET and qualifications** for all through more flexible and **permeable systems**
- further **strengthen key competences in VET curricula** and provide more effective opportunities to acquire or develop those skills through **initial VET and continuing VET**;
- introduce systematic approaches to, and opportunities for, initial and **continuous professional development** of VET teachers, trainers and mentors in both school and **work-based** settings.

DYNAMICS OF QUALIFICATIONS



LEARNING OUTCOMES

CHANGES IN INDUSTRY



Industry 4.0 – impact on E&T and jobs

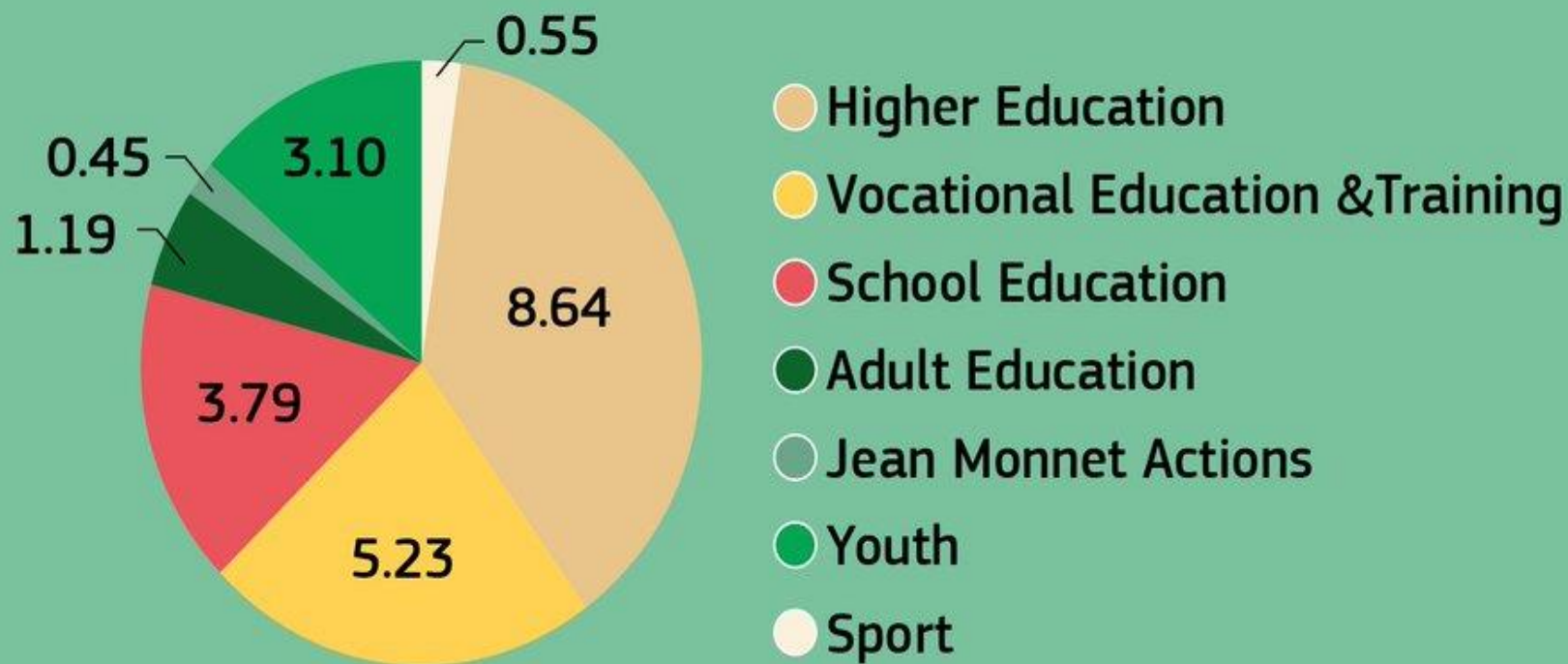
Humans are far better than robots... WHY?



- Humans triumph over robots is in their capability to make decisions.
- Humans can think and act more flexibly, they are often better problem solvers.
- Many industries rely on creativity, innovation and individual personalities, something that would be missed in a company run entirely by robots.

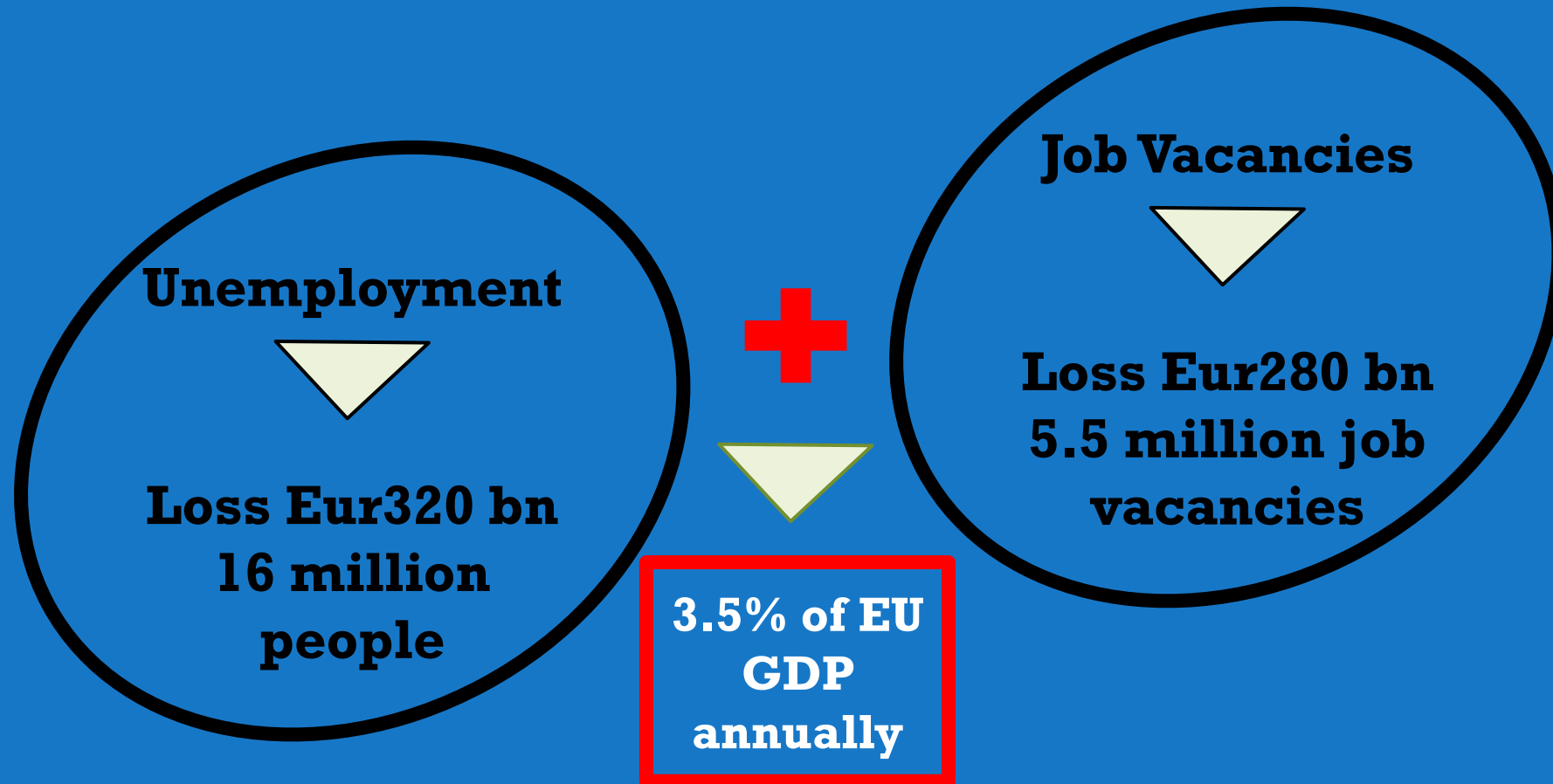
Erasmus will provide increased support to all education and training sectors as well as to the youth and sport sectors

Erasmus allocation to sectors in billion €*



Erasmus Budget Allocation 2021-2027

MISALIGNMENT OF RESOURCES – WHAT DOES IT COST?



Source: Eurostat April 2019 – PWC
Estimates

THE ROLE OF VOCATIONAL AND PROFESSIONAL EDUCATION AND TRAINING

- VET is industry-driven and therefore, in principle, qualifications must also be responding to the needs of industry and the socio-economic development of a country.
- VET is increasingly oriented towards work-based learning and this is an added value to what a person knows and is able to do after a learning process takes place.
- An added interest from employers and policy makers to uplift the investment and quality of VET and this is an encouraging process in many member states of the EU and beyond.

INTERACTION WORK-EDUCATION (1)

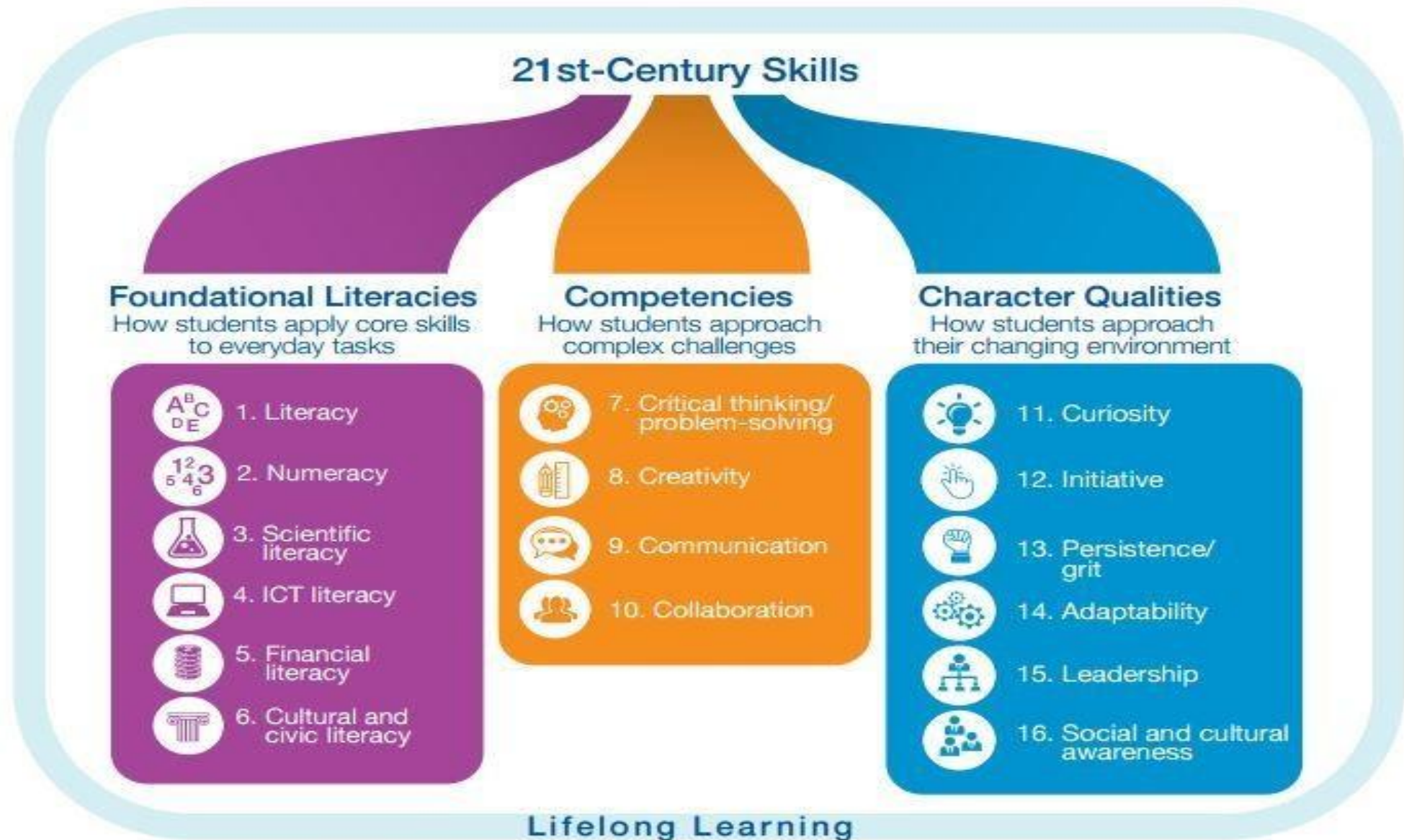
As **jobs** change rapidly, **humans need to be more human:**

- Decision-making skills.
- Think and act flexibly.
- Problem solving skills.
- Creativity and innovation.

Vocational Education and Training needs to create a balancing act between:

- Developing Technical skills and competences
- Focus on, what is referred to as 21st Century Skills
- Challenge for VET to remain relevant and up-to-date

Exhibit 1: Students require 16 skills for the 21st century



Note: ICT stands for information and communications technology.

INTERACTION WORK-EDUCATION (2)

- The two worlds need to be brought closer.
- The world of work needs to influence education and the world of education needs to influence work.
- The common denominator:
QUALIFICATIONS



INTERACTION WORK-EDUCATION (3)

- Different ways how this interaction can take place:
 - Policy dialogues between stakeholders
 - Within decision-making structures and processes
 - During programme design and review
 - Professionals contributing to the education process
 - Students engaged at the place of work (eg apprentices, interns, etc)
 - CPD of VET teaching professionals at the place of work
 - Workplaces need to become learning environments
 - More emphasis on lifelong learning and continuous professional development

WHY DO WE NEED TO LINK THE WORLD OF E&T WITH THE WORLD OF EMPLOYMENT AND QUALIFICATIONS?

Over the last two decades the world has produced a:

- Large amount of data
- Computer power doubled over the last ten years
- Internationalisation has become a national priority
- Algorithms are solving problems and reasoning tasks
- Competences are regularly measured
- More tasks are being regulated

**A Europe of
Qualifications**



Relevancy



**Work- Based
Learning**

Between 2016 and 2030, there will be in total more than 150 million job openings (for new jobs and for jobs replacing existing employees), many of them requiring a vocational qualification.

CEDEFOP (2018) Skills forecast. Trends and challenges up to 2030.

NQFS: EXPECTATIONS AND ACHIEVEMENTS

Achievements

- Transparency
- Comparability
- Mutual understanding/recognition

Expectations (1)

- Reduction in bureaucracy
- Flexibility for learners
- A better link with the labour market

KEY EXPECTATION

- A system for VET qualifications under three clusters:
 - INITIAL VET EQF Levels **1 2 3** (trades persons)
 - CONTINUING VET EQF Level **4** (technicians) **5** (higher technicians)
 - HIGHER VET EQF Level **5 6 7 8** (professional)

THANK YOU FOR YOUR ATTENTION