

**Prof. Dr. Ulf-Daniel Ehlers**

Open Education Week

March 2021



# The Future of Higher Education



# Professor Dr. Ulf-Daniel Ehlers



- Professor for Educational Management and Lifelong Learning  
**Baden-Württemberg**
- 6 years Vicepresident Academic Affairs DHBW
- Serial Entrepreneur
- Vicepresident European Association for Institutions of Higher Education
- Member of the Executive Council European Distance and E-Learning Network
- Chair Bologna Advisory Group for Teaching & Learning
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- [www.ulf-ehlers.net](http://www.ulf-ehlers.net) – [www.next-education.org](http://www.next-education.org) – [www.nextskills.org](http://www.nextskills.org)
- [www.next-normal.eu](http://www.next-normal.eu)

# BADEN-WUERTTEMBERG

## Germany

**DHBW**  
Duale Hochschule  
Baden-Württemberg  
Karlsruhe







## The COVID Experience



# Studium im Shutdown – Der Podcast

#WirStudierenZuHause

Interview mit den Machern  
des Podcasts:

[Download als PDF]

Studium im Shutdown



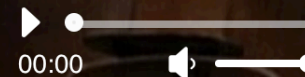
#WirStudierenZuHause

NEXT  
NORMAL

#WeStudyAtHome

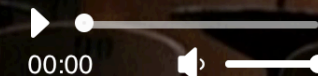
## Trailer

von **Studium im  
Shutdown** |  
#WirStudierenZu  
Hause



## Teaser Next- Normal

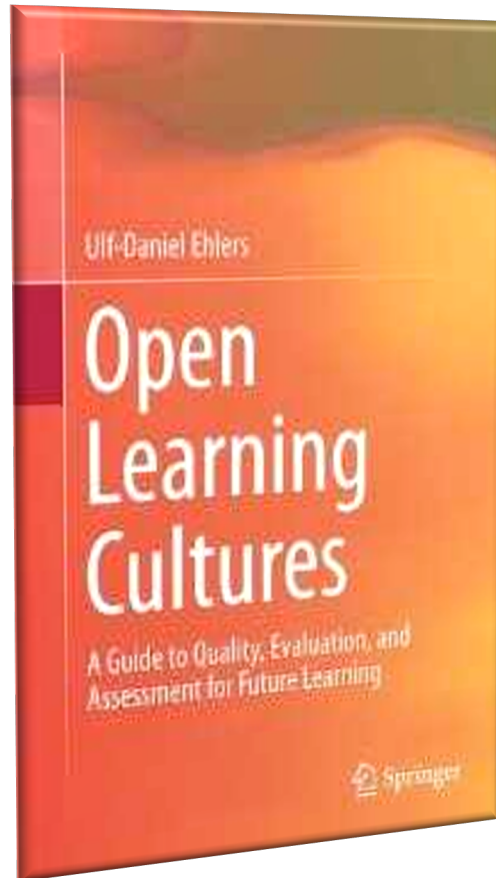
von **Next-Normal** |  
#WeStudyAtHome



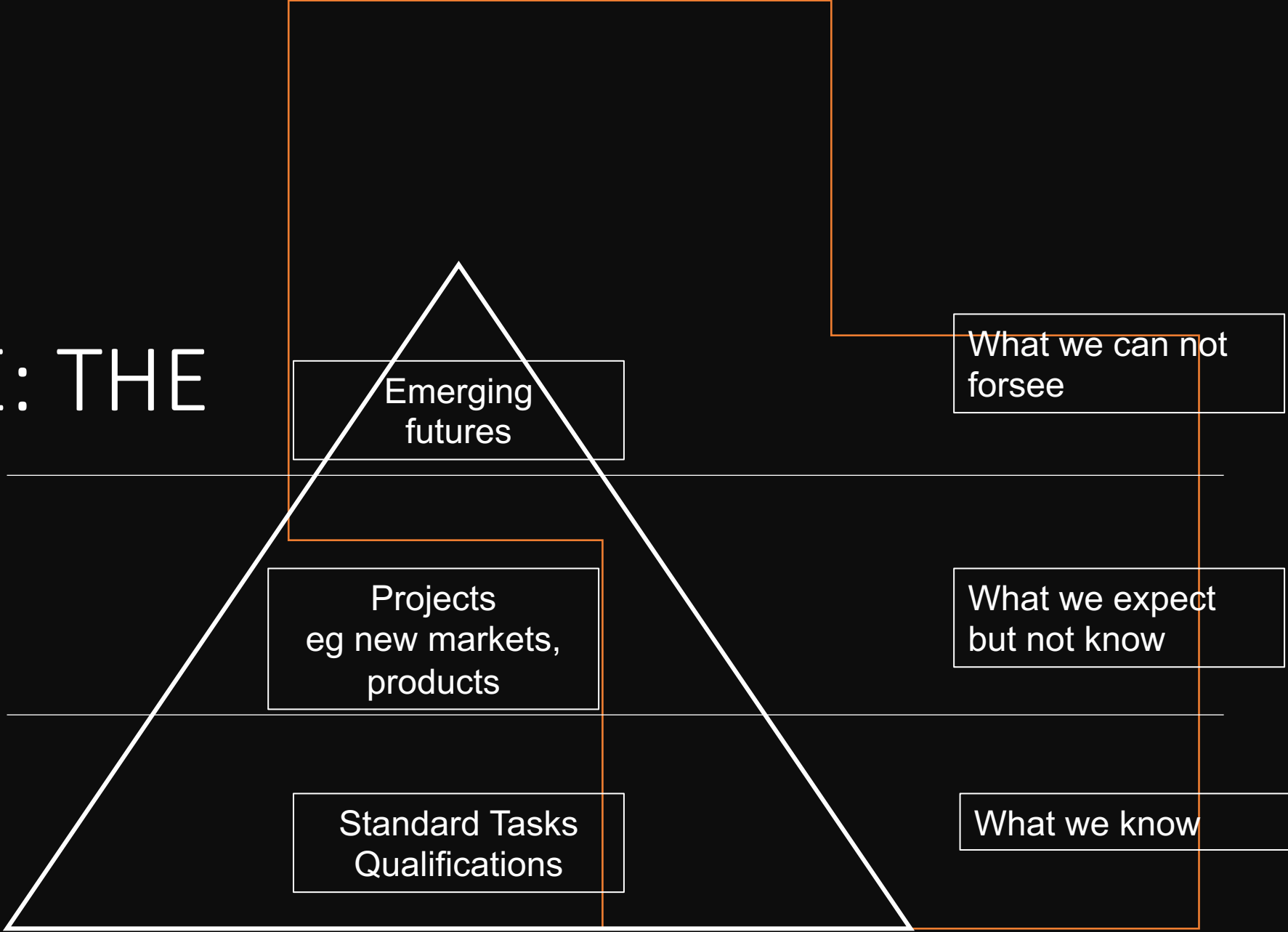
Zur aktuellen Folge

# INFLUENCE: THE DIGITAL

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# INFLUENCE: THE EMERGING







# Megatrends are changing skill needs in OECD countries



14% of jobs could be fully automated in the coming years, and an additional 32% of jobs can see significant changes due to automation.



The share of highly skilled jobs has increased by 25% in the past two decades, and today 50% of employment is in digital-intensive sectors. However, six out of ten adults lack basic ICT skills or have no computer experience



Populations are ageing, and in more than two-thirds of OECD countries at least one quarter of the population will be over 65 years of age by 2050.



The green transition implies a the adoption of greener technologies by employers, and a shift to clean and sustainable consumption.

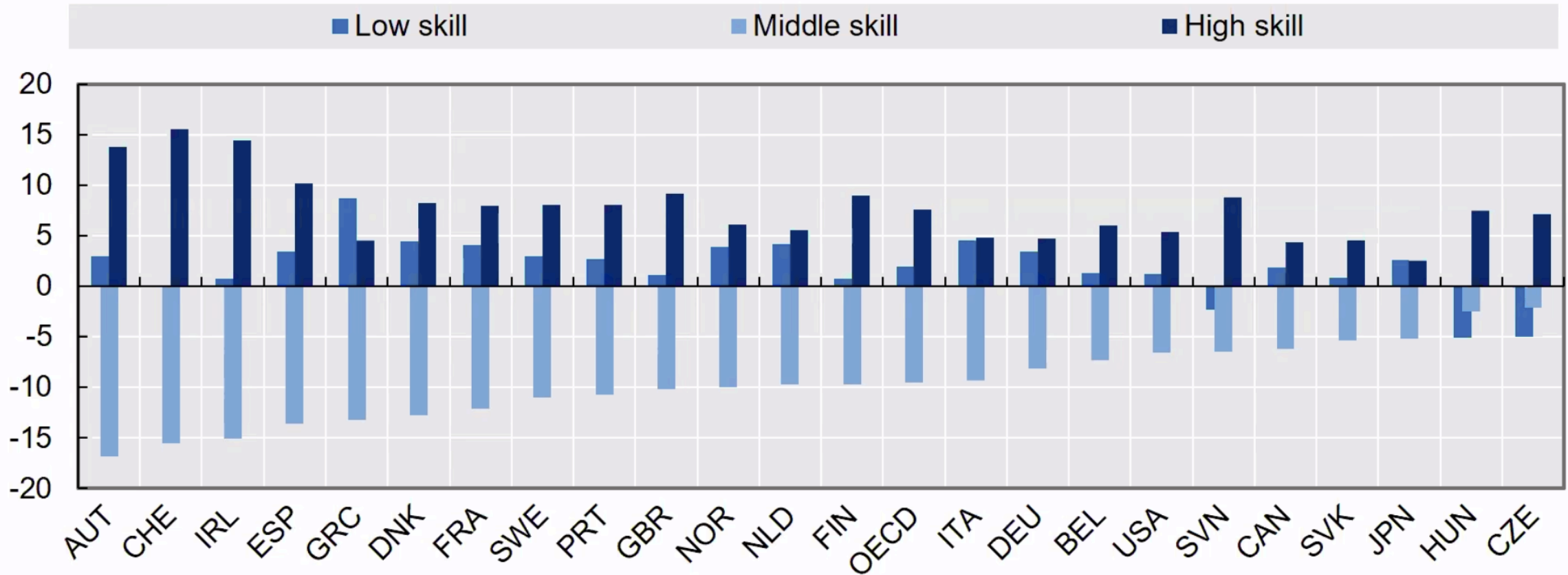
COVID-19 crisis is accelerating some of these trends

(OECD 2020)



# Labour markets are polarising

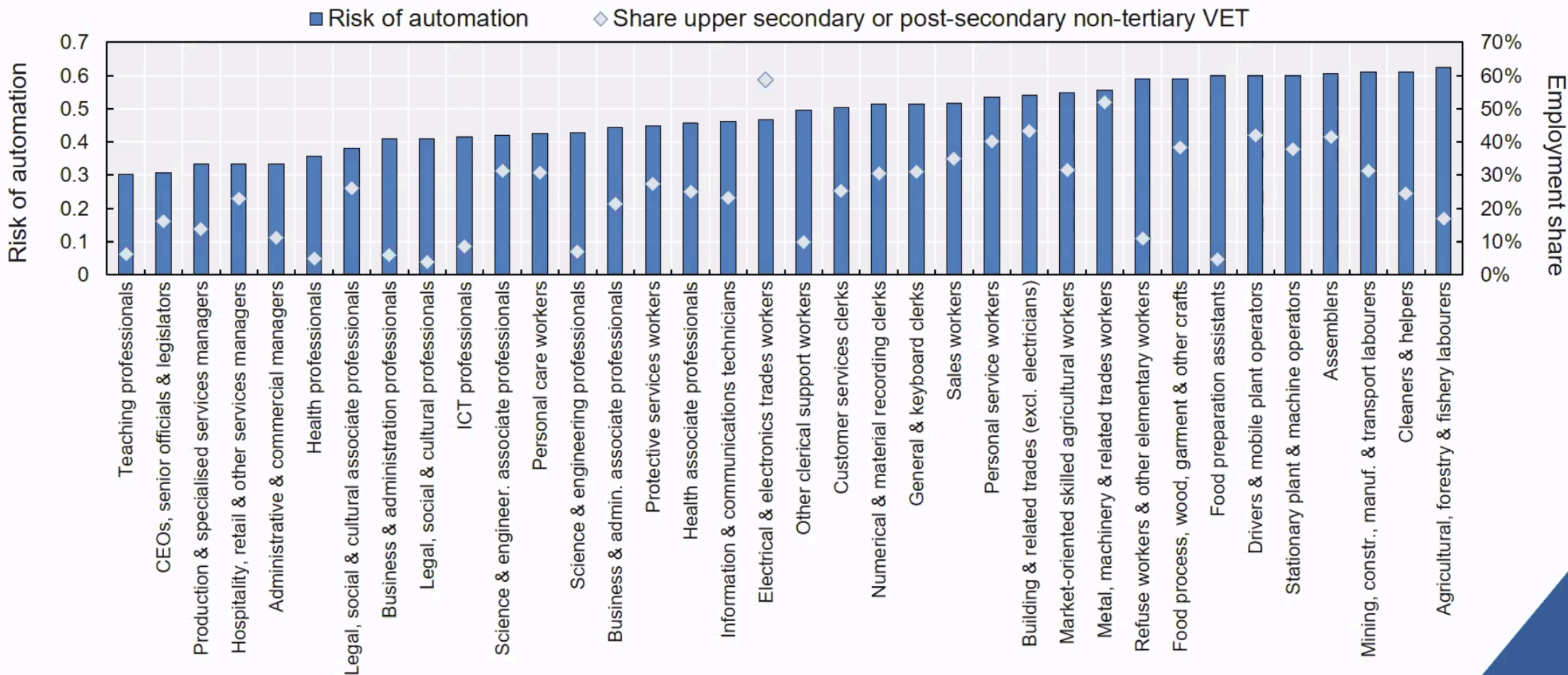
Percentage point change in share of total employment, 1995 to 2015





# And some typical VET jobs are at risk of automation

Risk of automation and share of VET graduates in employment (aged 15-34), by occupation





# Research on Future Forefront

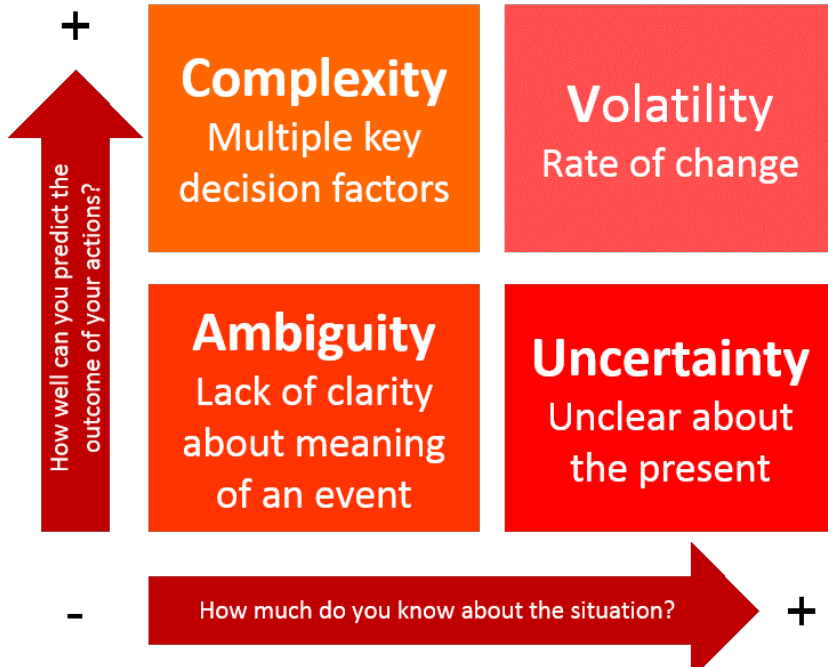
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Emergence

# VUCA



# & Emergence

- The idea behind VUCA is to conceptualise emergence
- The idea of emergence is selforganisation
- From which position do we look at the challenge to design higher education...?
  - To cope...?
  - To react...?
  - To design...?
  - To prepare...?



*We can't rely on procedures to make decisions in complex situations.*  
Gary Klein in *Streetlights and Shadows*, 2011

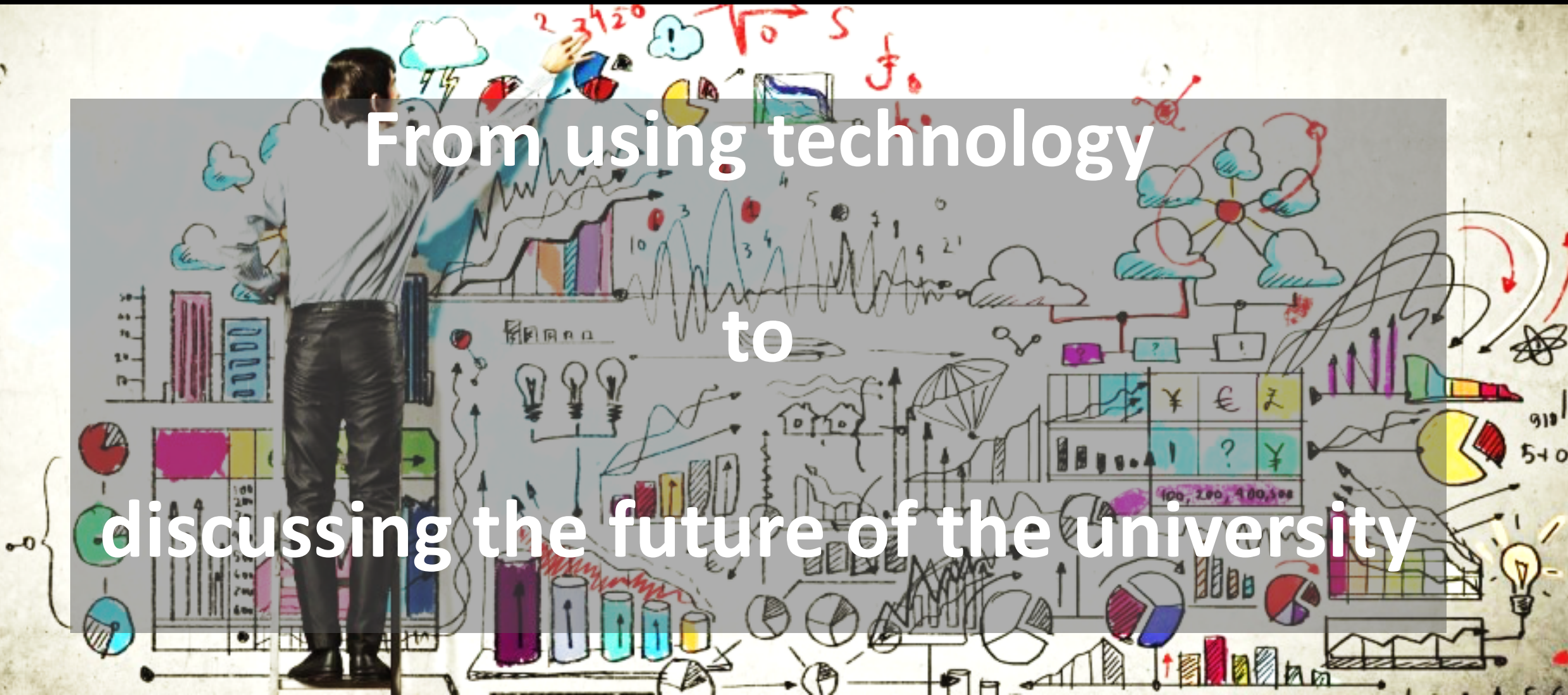


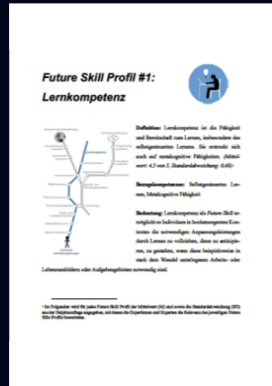
# *A changing Masternarrative*

From using technology

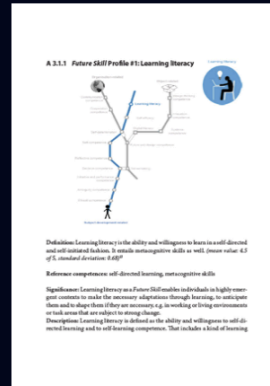
to

discussing the future of the university

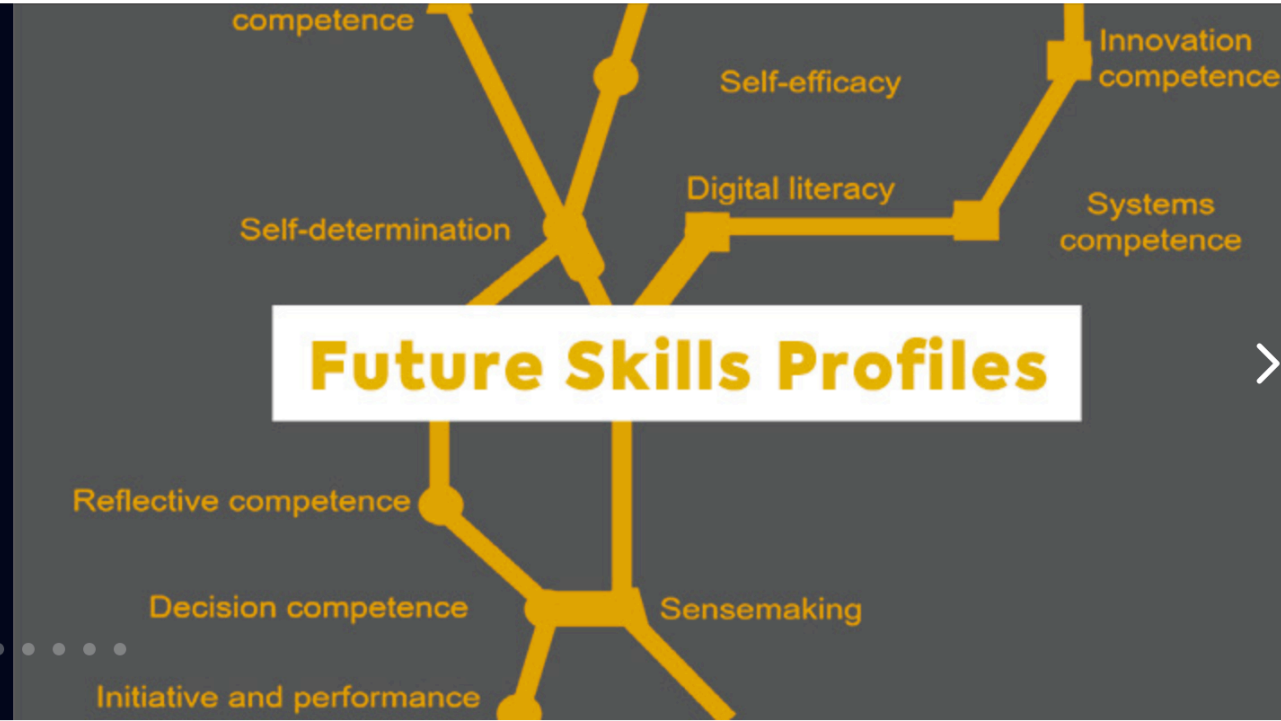




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Explore the Future Skills Universe

**Future Skills**

Explore Future Skills

The NextSkills Studies suggest a new framework for Future Skills which consists of 17 clearly defined Future Skills Profiles. In addition, the Future Skills Triple

[www.nextskills.org](http://www.nextskills.org)

**FutureSkills  
Universities**

Explore Future Universities

The NextSkills Studies call for rethinking higher education and propose clear-cut drivers for the development of the University of



### Future Skills Book: Overview

In this Open Access book, Ulf-Daniel Ehlers analyses changed basic coordinates of higher education worldwide and asks how higher education must evolve to meet in a world of global challenges, social changes and innovation-driven, agile fields of work.

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### Future Skills Introduction

Can graduates really be prepared for the future by predominantly acquiring knowledge? Do we already have adequate concepts for competence development in higher education? Or do we need something new, something radical? Learn more about the definition of Future Skills and our study.

[More](#)

### The Future Skills Turn

It's like having to replace the pilot in a car race, right in the middle of a steep turn and during a risky overtaking manoeuvre. The old institution of higher education is faced with the challenge of having to reinvent itself. Learn more about challenges and opportunities.

[More](#)

[www.nextskills.org](http://www.nextskills.org)







# Future Skills Approaches

- Often focused on digital literacy or special literacies
- Often strong alignment with employability
- No empirical validation
- Not rooted in education theory or competence concepts

(Ehlers 2019)

Consolidated Skill Inventory	Nr. of matches	The OECD Future Skill Framework	PISA Key Competence Framework	European Commission Future Learning Framework	OECD Key Competencies	OECD Global Competencies	WEF 21st Century Skills	P21 Partnership for 21st century learning	Tuning Transversal Skill Model	AEGEE Transversal Skills and Competencies Policy Paper	21st century stem model	National Research Council Model Work and Life	21st skills envision experiences	Harvard Global Citizenship education	Graduate Employability 2.0	Social and Emotional Learning Model	The future of Skills. Employment in the 21st century	Future Skills Model NextSkills	
																			Subject oriented skills
Analytical and critical thinking	10				1	1	1	1			1	1	1			1	1	1	1
Creativity	11	1	1	1			1	1	1				1		1	1	1	1	1
Learning skills	6								1	1	1	1						1	1
Action & Initiative	6	1		1				1		1							1		1
Health Literacy	4				1	1											1		1
Intercultural knowledge and understanding	9		1		1		1	1	1	1			1				1		1
Taking Responsibility	5	1		1		1		1											1
Persistence/grit	4					1	1										1		1
Ability to reflect	3	1								1									1
Curiosity	3						1										1		1
Entrepreneurship Skills	5				1				1	1		1						1	1
Flexibility	3					1		1					1						
Global-mindedness	2				1	1													
Anticipation	2	1								1									
Deal w. ambiguity and uncertainty	2			1															1
Empathy	2			1		1													
Form & conduct life plans, personal projects	2		1							1									
Resilience	2			1					1										
Compassion	1			1															
Failing Forward	1			1															
Reconciling Tensions & Dilemmas	1	1																	
Risk Taking	1			1															
Object related skills																			
Digital & Data Literacy	9	1			1	1	1	1				1	1			1		1	1
STEM skills, complex problem solving	7				1		1	1			1	1	1					1	1
Financial Literacy	5					1	1	1		1							1		1
Organisation related skills																			
Communication skills (language, symbols, texts)	14		1		1	1	1	1	1	1	1	1	1	1	1			1	1
teamwork	8		1	1	1				1				1	1			1		1

# Future Skill Profiles

- 17 Profiles through qualitative analysis
- Each profile contains several competences



Learning literacy



Self-efficacy



Self-determination



Self-competence



Reflective competence



Decision competence



Initiative and performance competence



Ambiguity competence



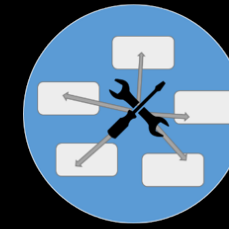
Ethical competence



Design-thinking competence



Innovation competence



Systems competence



Digital literacy



Sense-making



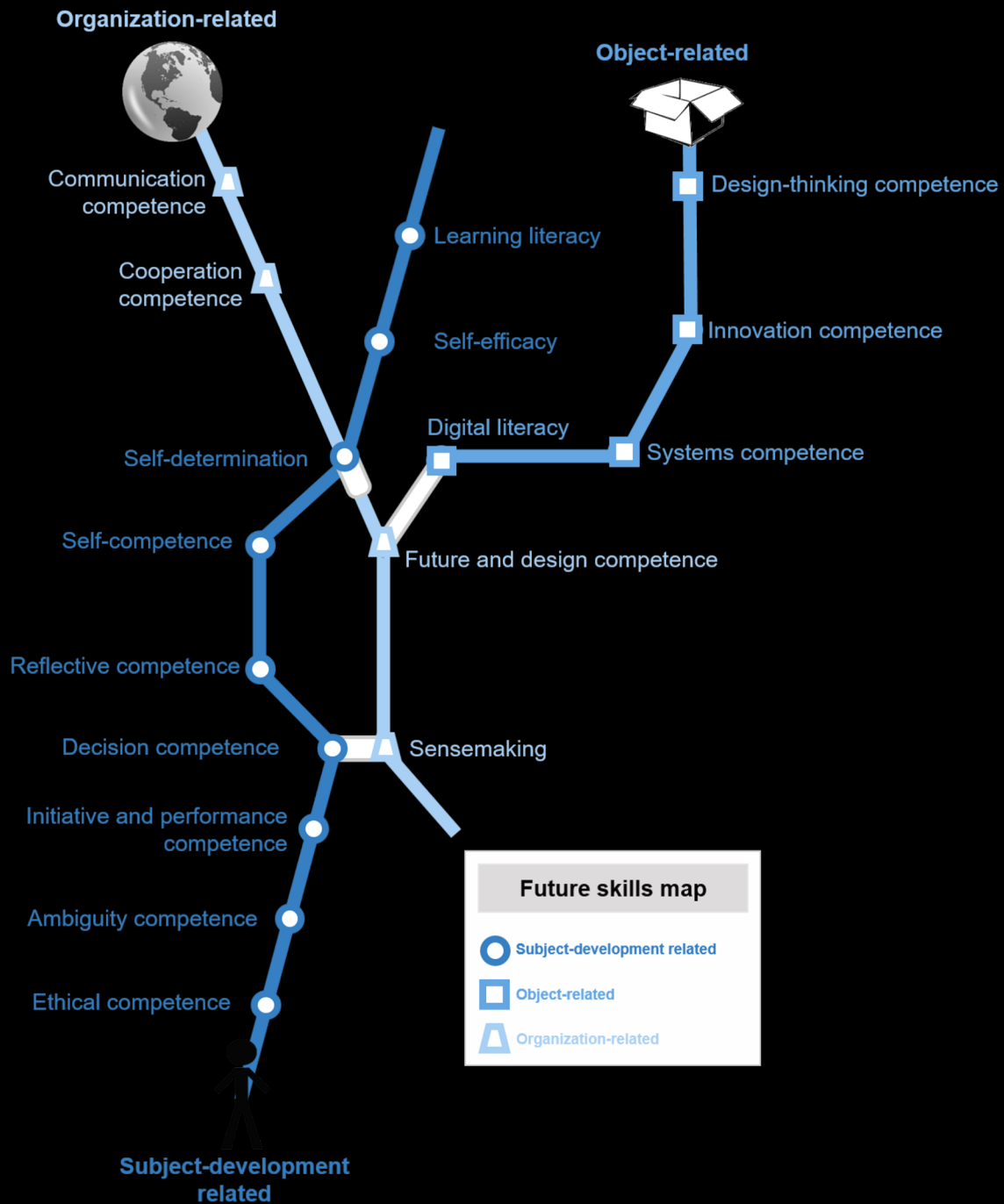
Future and design competence



Cooperation competence



Communication competence



# Skillmap & Skillfinder

- (in planning)
- To find definitions and descriptions at [Nextskills.org](https://nextskills.org)

## Self-determination



## Decision competence





## Initiative and performance competence



## Self-competence



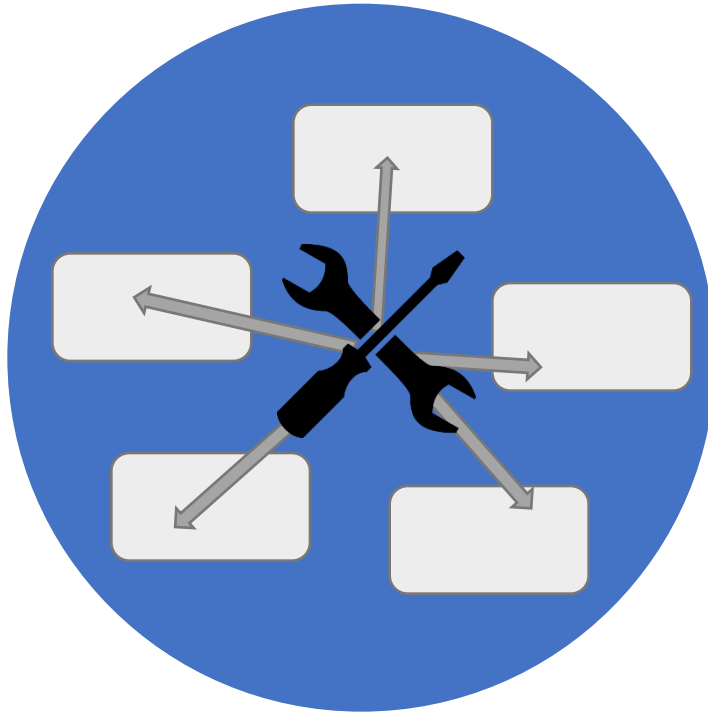
## Learning literacy



**Self-efficacy**



**Systems competence**



**Innovation competence**



## Ambiguity competence



## Digital literacy



## Reflective competence



## Sense-making



## Future and design competence



## Cooperation skills





## Communication competence



## Design-thinking competence



## Ethical competence



# Future Skill Profiles

- 17 Profiles through qualitative analysis
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Learning literacy



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Self-competence



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Initiative and performance competence



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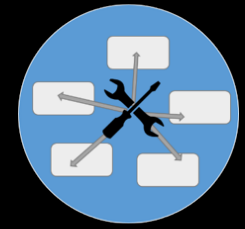
Ethical competence



Design-thinking competence



Innovation competence



Systems competence



Digital literacy



Sense-making



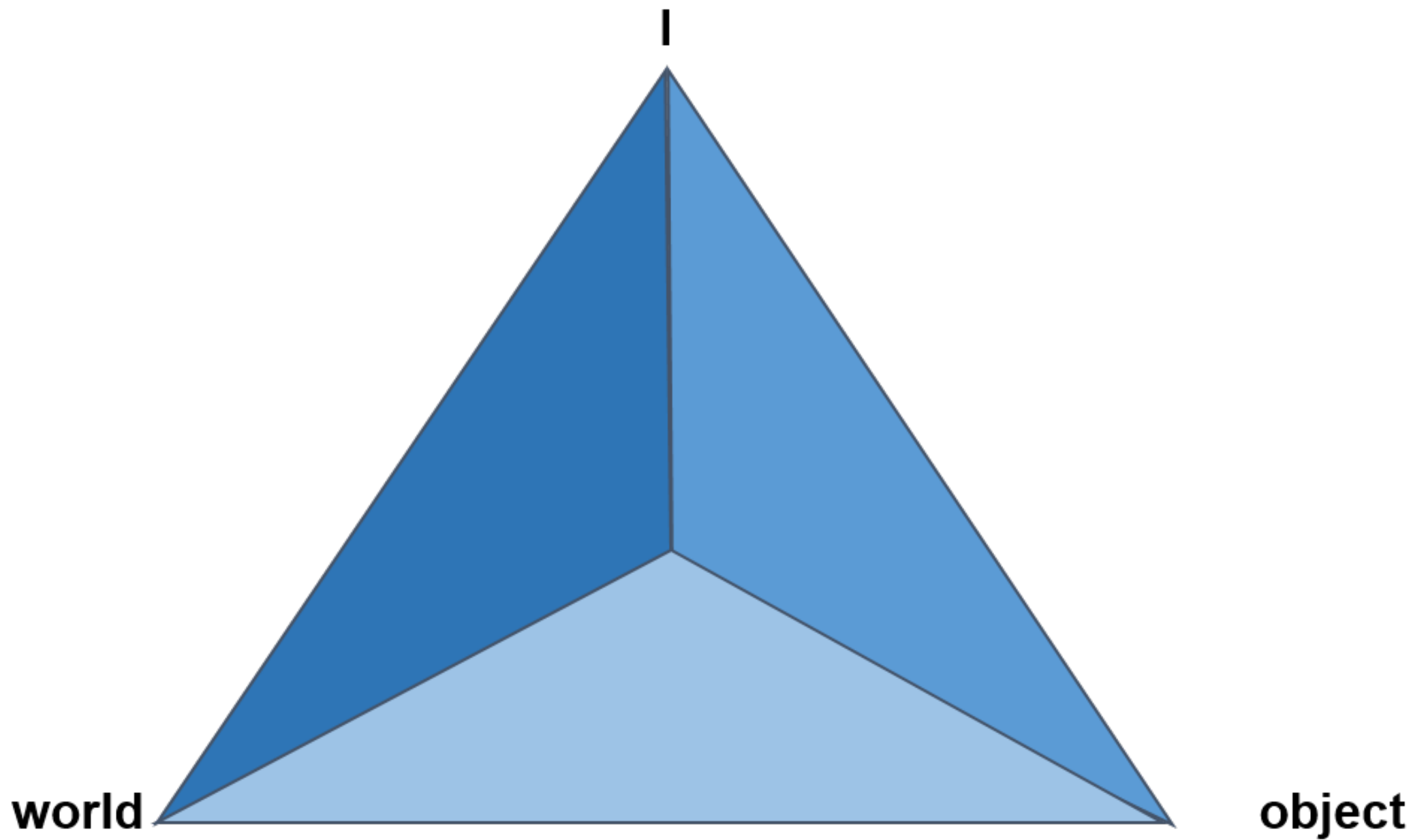
Future and design competence

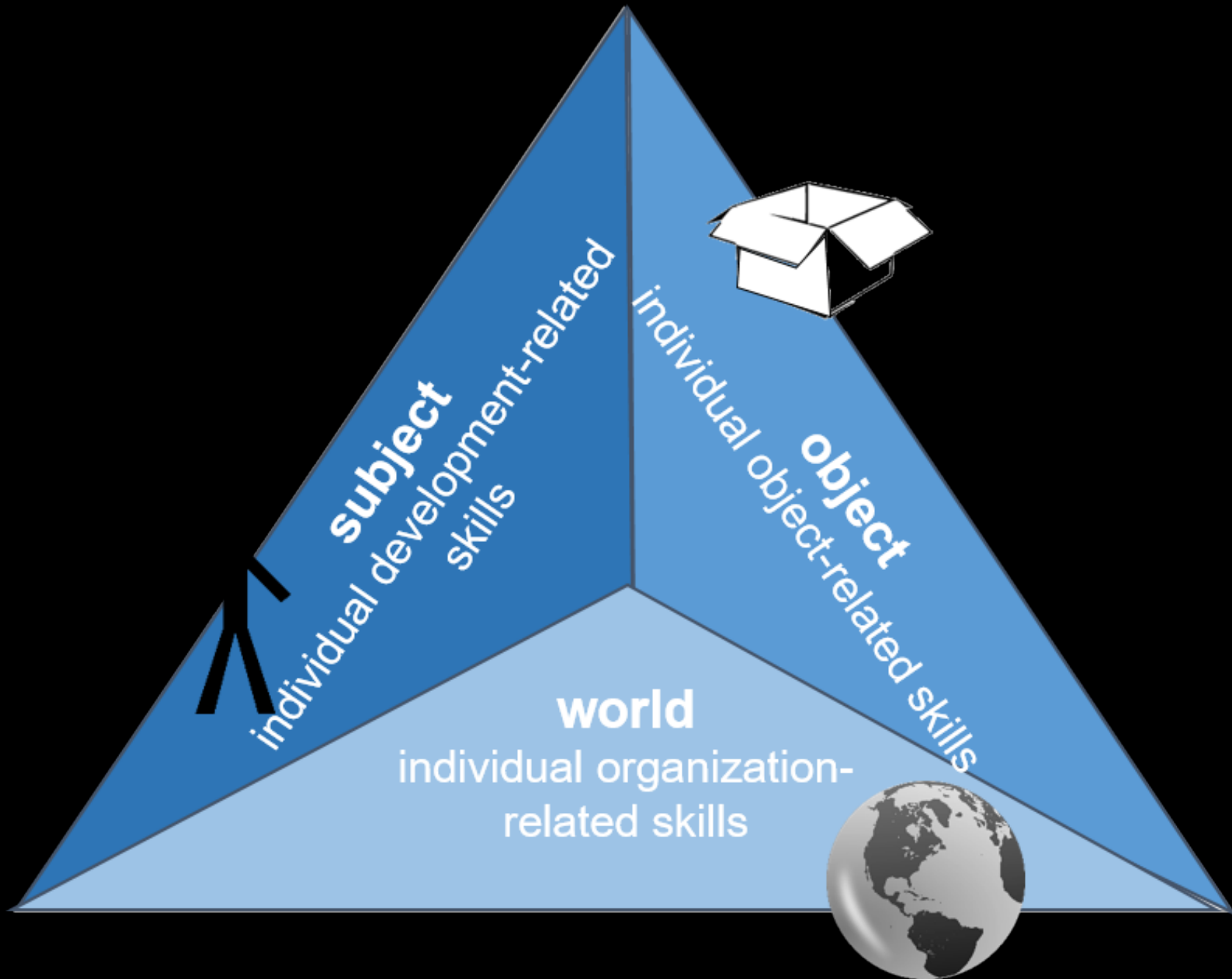


Cooperation competence

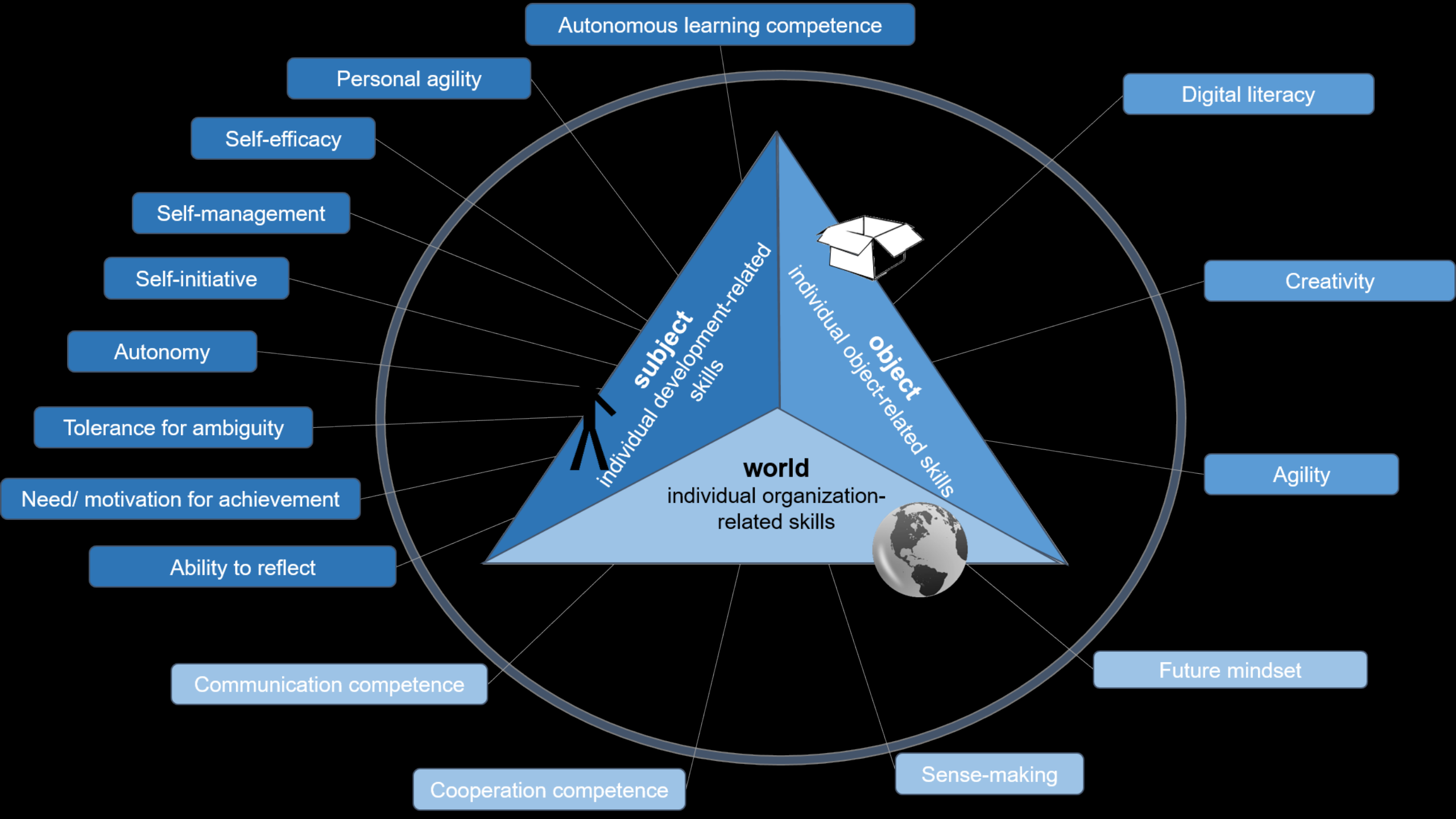


Communication competence



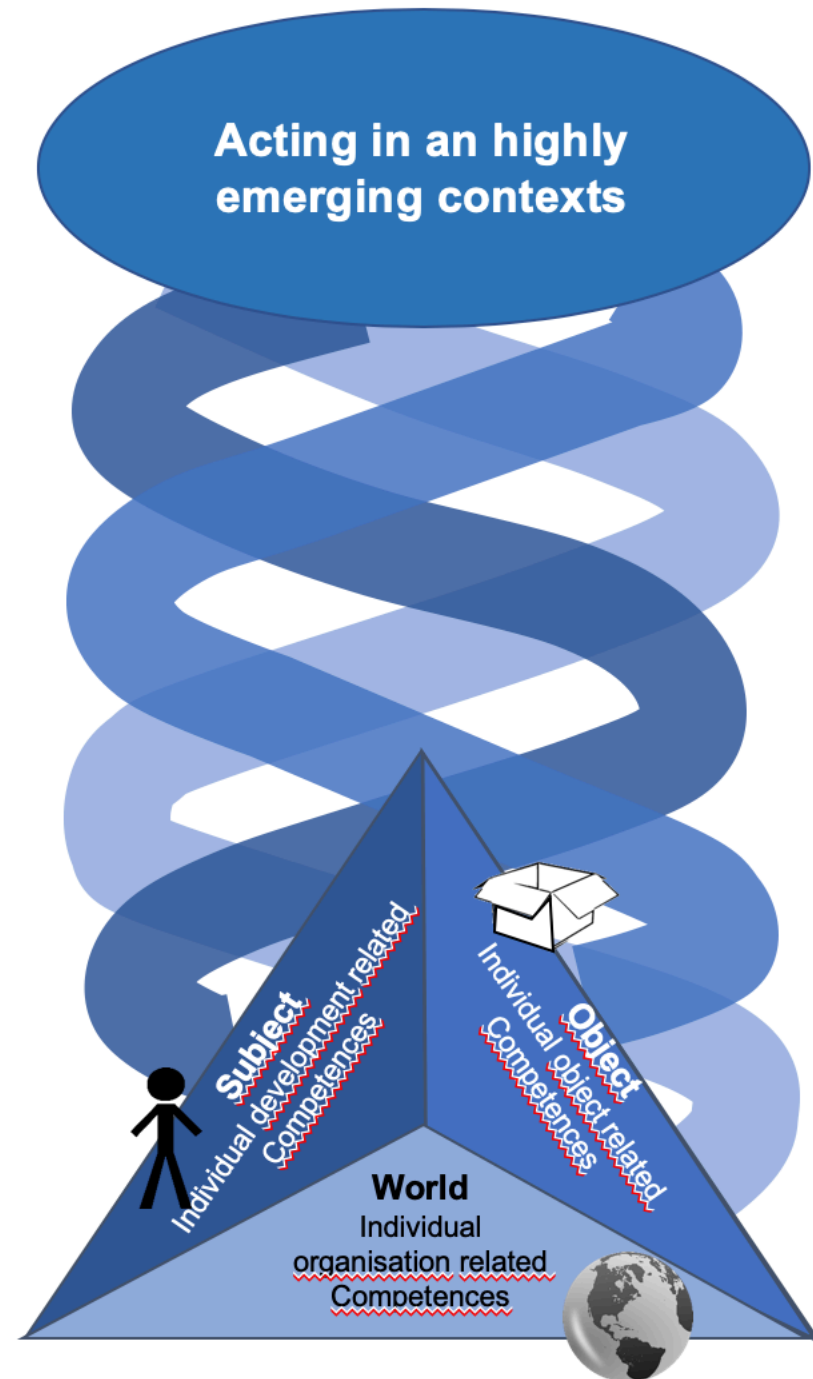






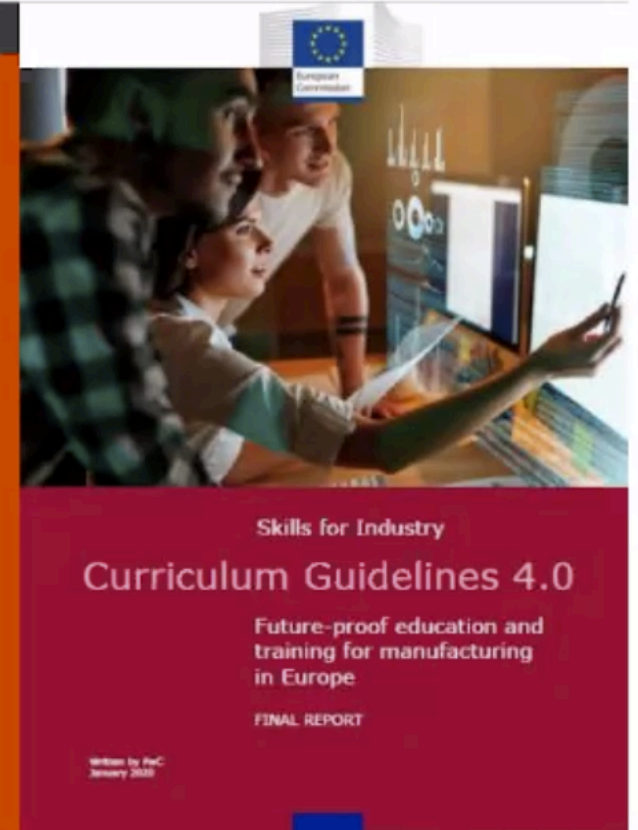
# Triple Helix

Competence to act in future unknown and highly emergent professional and private contexts is a result of combining interdependent skills in three areas.



# Curriculum Guidelines 4.0

- Conducted a detailed analysis of **key needs in terms of skills, education and training** for the manufacturing domain.
- Developed **extensive guidelines** for education & training providers on the future-proof curriculum development for manufacturing.
- Focussed on **Vocational Education and Training (VET), Higher Education and on-the-job training**.
- Implied delivering 3 analytical reports, conducting 60 in-depth interviews, 2 pan-European online surveys, organising 6 pan-European expert workshops and the final conference in Brussels.



**Contracting authority:** EASME / DG GROW of the European Commission

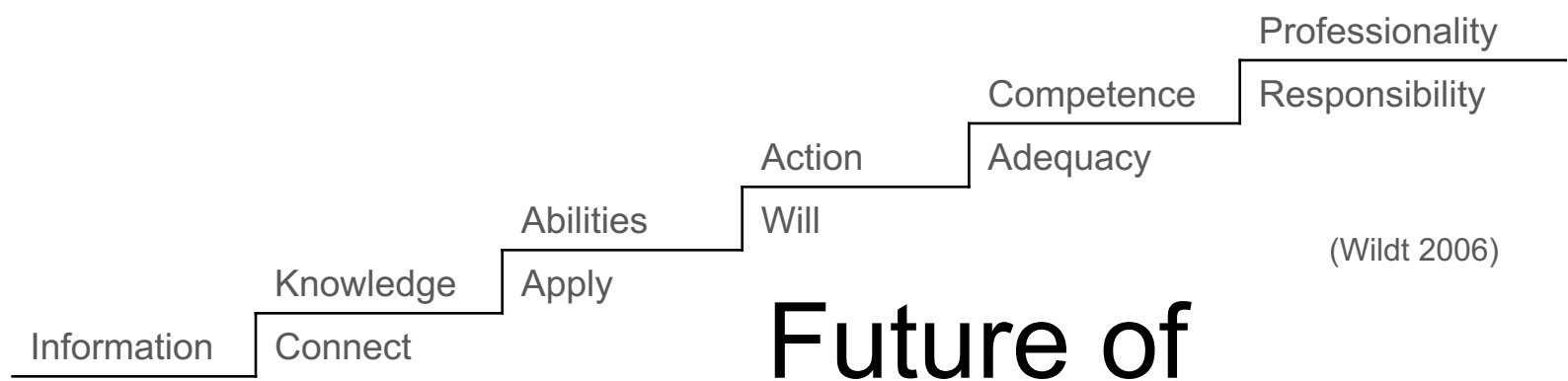
**Contractor:** PwC, with support of ESN

**Duration:** 2 years (January 2018 – March 2020)



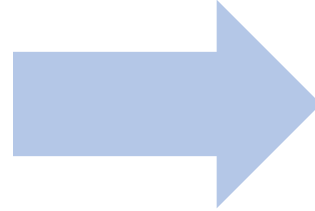
# Response of Higher Education

*Add-on*



# Future of Higher Education

*Integration*



# Scenarios for Future Higher Education



## The 'future skill' university scenario

An emerging focus on future skills radically changes the current definition of graduate attributes in higher education.



## The "My-University" Scenario

Students build their own personalized curriculum

**Baseline Scenario Today: Business as usual** HE institutionally bound – students enroll in the institution in which they later also graduate from, usually directly after leaving high school. Pre-defined curricula and content for study in order to achieve pre-described learning outcomes, which are related to/ derived from a system of fixed professions. Study programs rooted in academic disciplines and schools.



Higher education increasingly becomes a multi-institutional study experience.



Higher education institutions turn towards providing offerings for lifelong higher learning services.

## The Networked multi-institutional scenario

## The Lifelong Higher Learning Scenario

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Ulf-Daniel Ehlers  
The future of learning and higher education

**Zukunft der Hochschulbildung  
Future Higher Education**

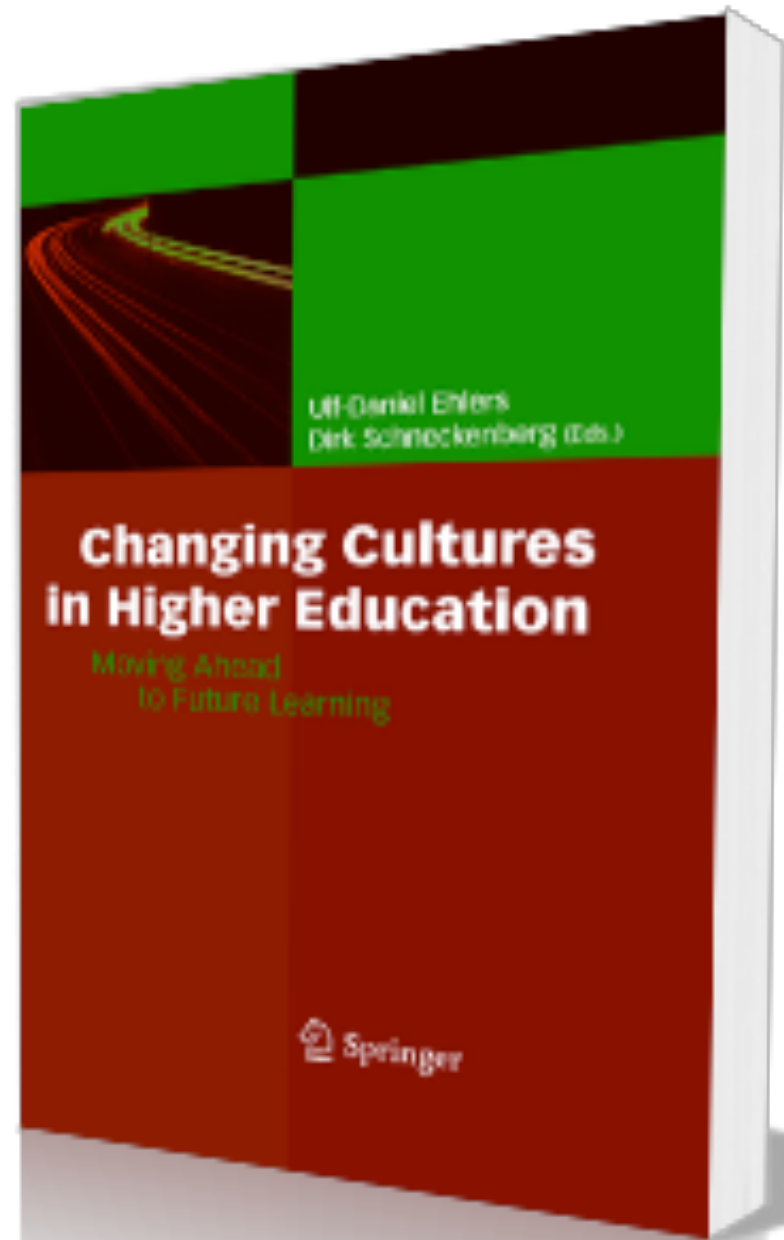
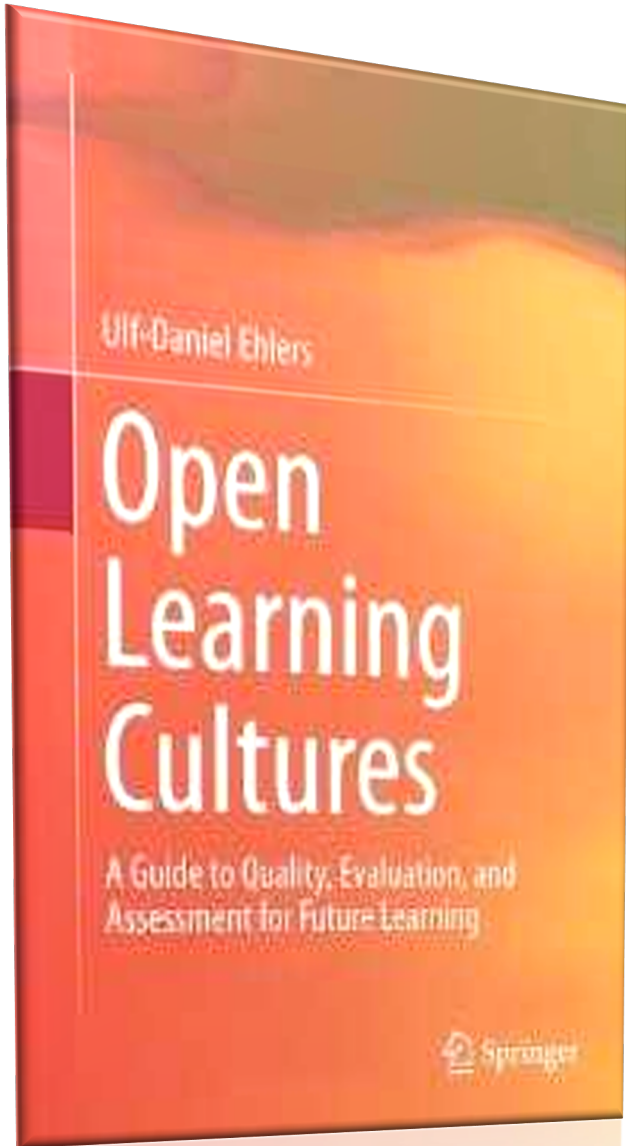
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Ulf-Daniel Ehlers  
Lernen der Zukunft – Hochschule der Zukunft


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