"The crisis of our time isn't just a crisis of a single leader, organization, country, or conflict. The crisis of our time reveals the dying of an old social structure and way of thinking, an old way of institutionalizing and enacting collective social forms."
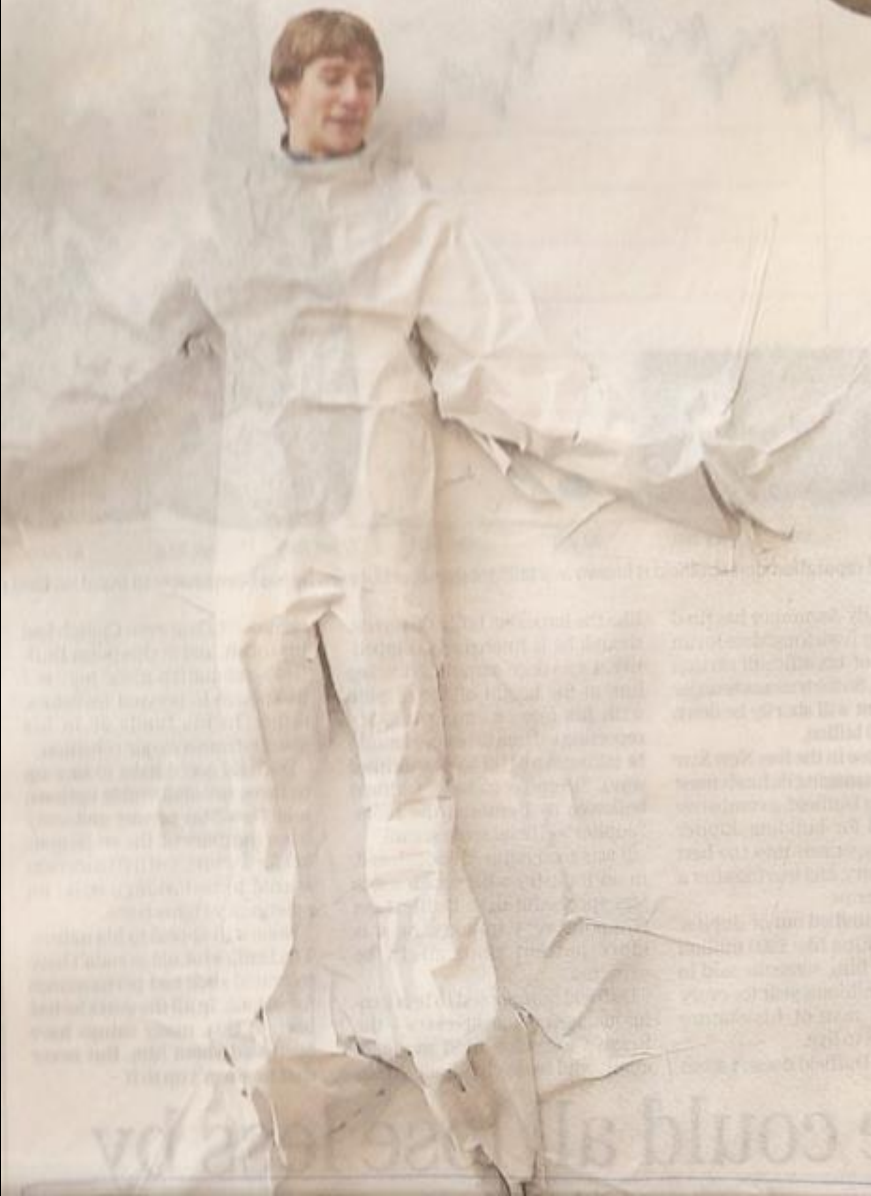*C. Otto Scharmer, Theory U: Learning from the Future as It Emerges*

Future Skills

Ulf-Daniel Ehlers

March 2020

STUCK

In the light of the magnitude of changes we rather stand still

Changing the Mindset

ARE WE READY TO PREPARE OUR STUDENTS FOR A DIFFERENT FUTURE?

WE ARE PREPARING OUR STUDENTS FOR A VERY DIFFERENT FUTURE!

(NOW THINK ABOUT YOUR OWN CONTEXT – IS THIS BECOMING APPARENT ANYWHERE?)
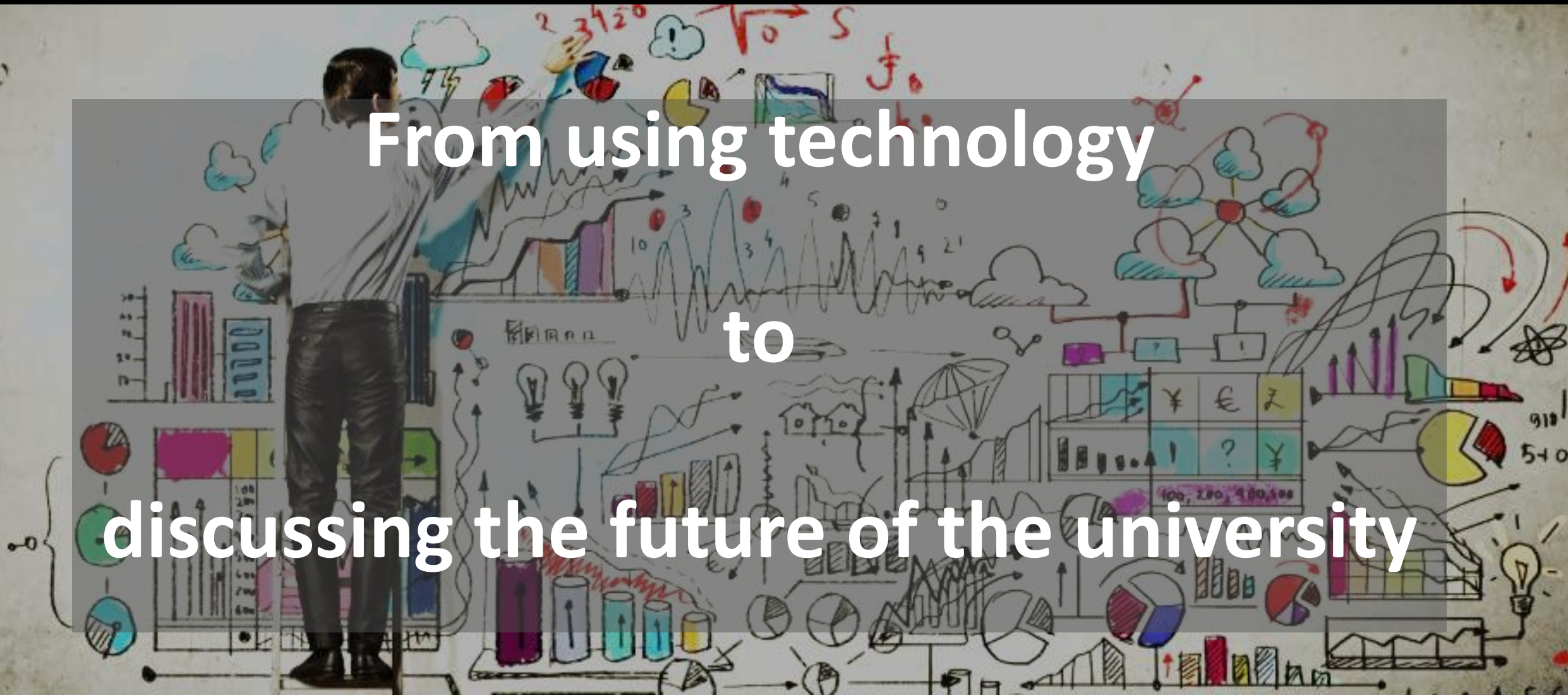
The Context

A changing Masternarrative
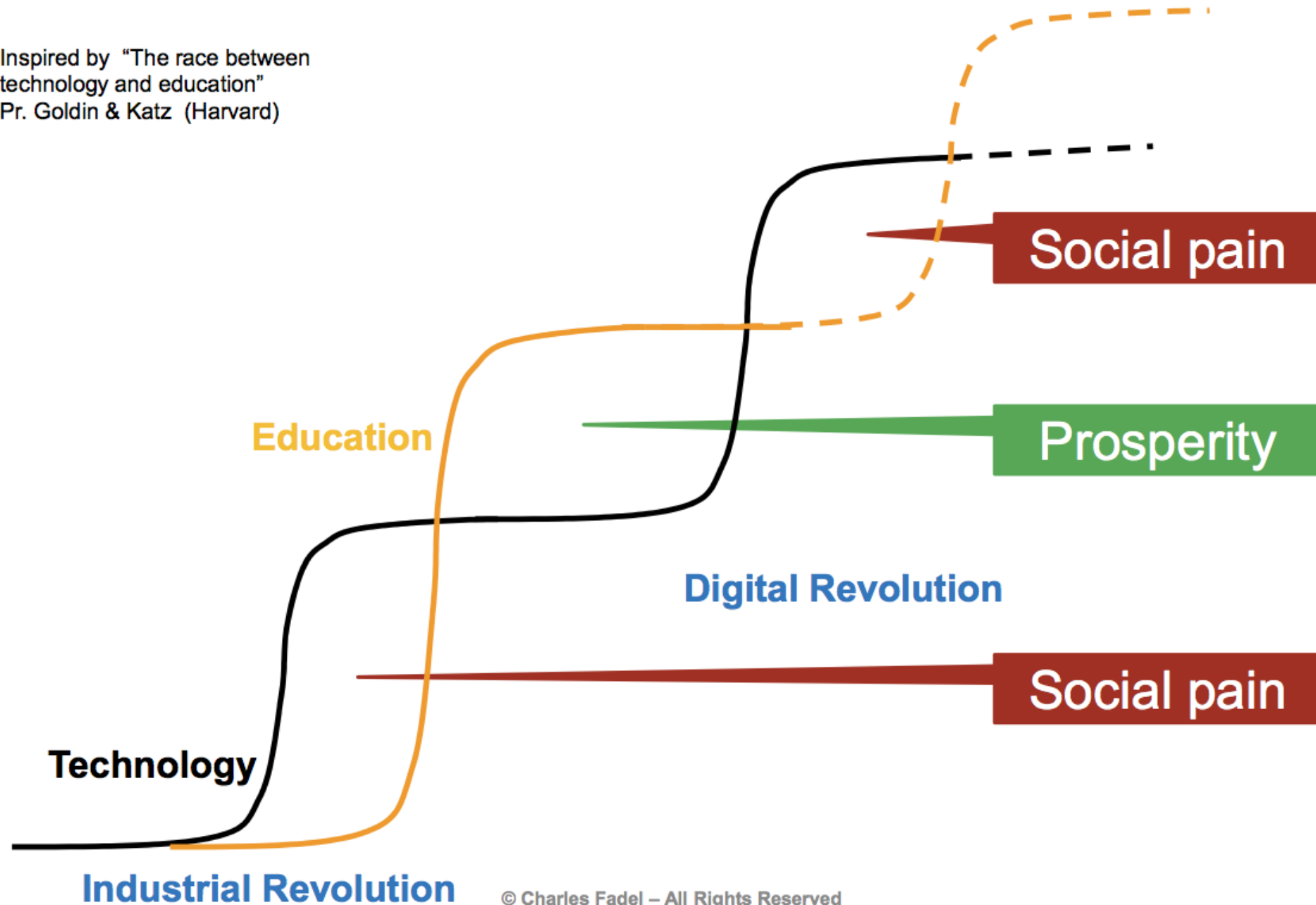
From using technology

to

discussing the future of the university

The Race between Technology and Education

Social pain

Prosperity

Education

Digital Revolution

Social pain

Technology

Industrial Revolution

Next Society
- NextSkills

(Dirk Becker 2011)

Next
Society

Modern
Society

Antique
Society

Tribal
Society
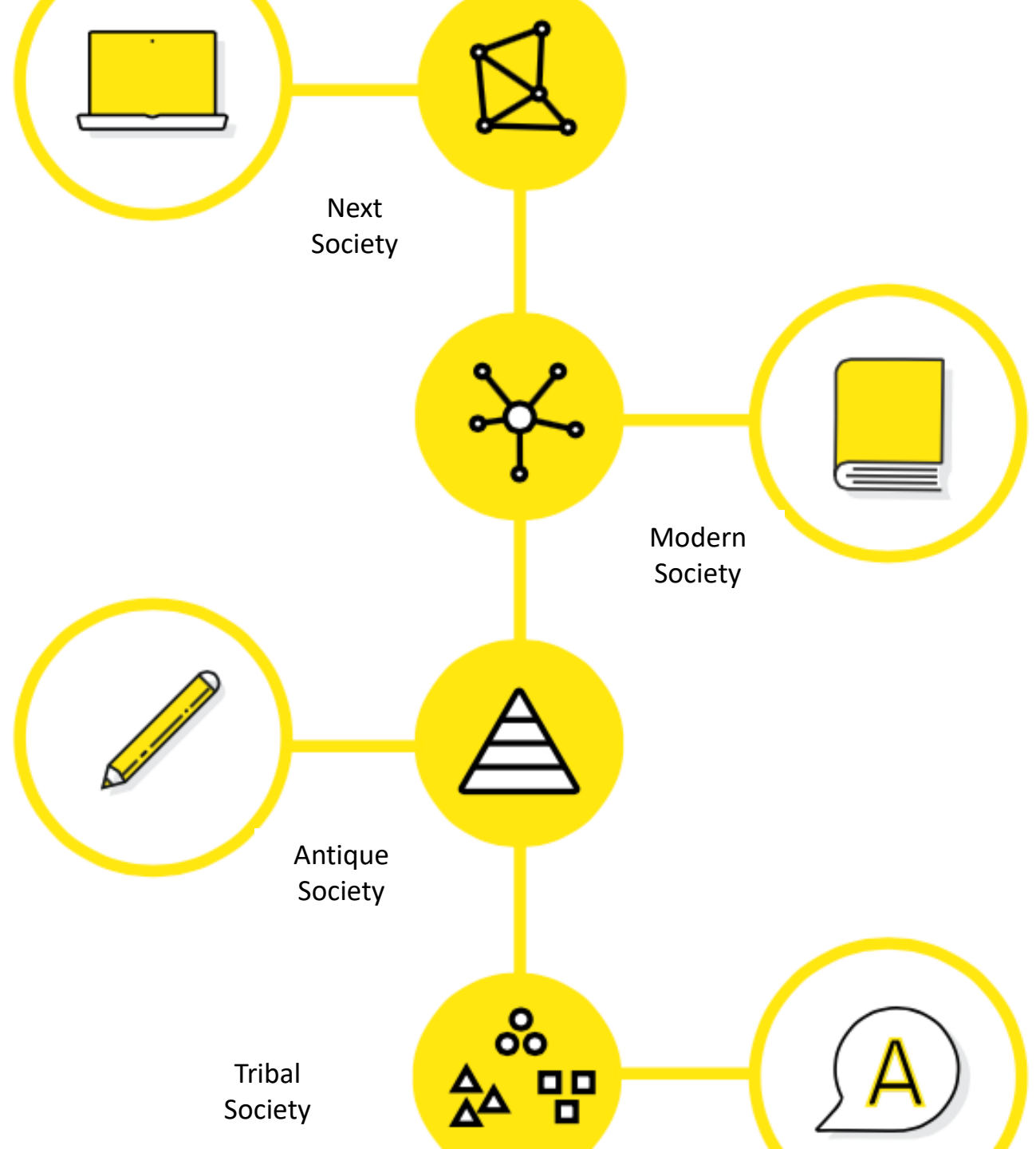
Emergence

VUCA   &   Emergence

Complexity Multiple key decision factors	**Volatility** Rate of change
Ambiguity Lack of clarity about meaning of an event	**Uncertainty** Unclear about the present

How well can you predict the outcome of your actions?

How much do you know about the situation?
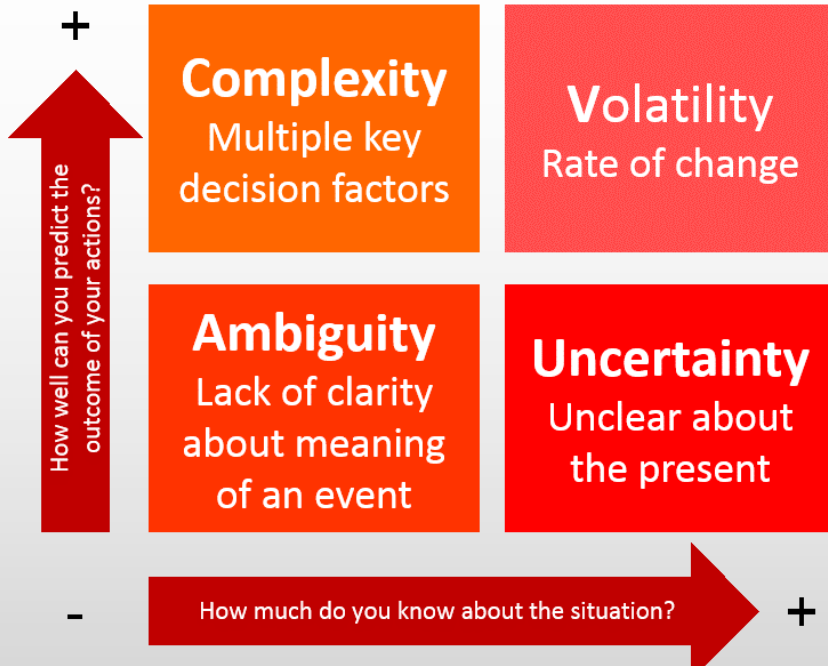
- The idea behind VUCA is to conceptualise emergence
- The idea of emergence is selforganisation
- From which position do we look at the challenge to design higher education…?
  - To cope…?
  - To react…?
  - To design…?
  - To prepare…?

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

Imagine trying to blow up an air raft while it is still in the box it came in...

Even in today's exponentially changing and shifting world, we still have this ingrained tendency to approach the very 'idea' of the future as this static and preordained process that we accept as an inevitable consequence of our past and present.

The Nextskills Study

Download report at Nextskills.org
(open access)

New Book „Future Skills – Future Higher Education"
to be published Dec 2019 (german), February 2020 (english)

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	OECD Key Competencies	OECD Global Competencies	WEF 21st Century Skills	P21 Partnership for 21st century le	Tuning Transversal Skill Model	AEGEE Transversal Skills and Co Policy Paper	21st century stem model	National Research Council Model Work and Life	21st skills envision experiences	Harvard Global Citizenship educa	Graduate Employability 2.0	Social and Emotional Learning Me	The future of Skills. Employment in	Future Skills Model NextSkills
Subject oriented skills																		
Analytical and critical thinking	10					1	1	1	1		1	1	1			1	1	1
Creativity	11	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	
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
STEM skills, complex problem solving	7				1		1	1			1	1	1				1	
Financial Literacy	5				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

Nextskills: Exploration so far…

Future Organisations: Next Skills organisational Screening

Next Skills Interview Study

Next Skills Delphi

Future Skills Delphi Report

Future Skills Book (Engl. in January)

nextskills.org Website (Skillfinder)

Publications

Future Skills Workshop in DEC 2019 with Gilly Salmon @Online Educa Berlin 2019

Methodological set-up

Delphi study I

Future scenarios for HE
Future Skills

Adaption speed predicitions

Delphi study II

Qualitative interview study

17 in-depth interviews

Comparative analysis of future skills models & state of the art literature analysis

Expert-based screening and analysis of competence concepts from 120 organizations

Study Design Nextskills.org

- Multi-method
- Qualitative
- Quantitative

part I: Scenarios for the Future of Higher Education

- ➢ **Step 1: Drivers**
  - Consequence 1
  - Consequence 2
  - Consequence 3
  - Consequence 4

- ➢ **Step 2: Scenarios for the Future of Higher Education**
  - Scenario 1
  - Scenario 2
  - Scenario 3
  - Scenario 4

Level of agreement

Drivers for the future of higher education

Possible scenarios for the development of higher education institutions

part I: Scenarios for the Future of Higher Education

- ➢ **Step 1: Drivers**
  - Consequence 1
  - Consequence 2
  - Consequence 3
  - Consequence 4

- ➢ **Step 2: Scenarios for the future of higher education**
  - Scenario 1
  - Scenario 2
  - Scenario 3
  - Scenario 4

Readiness

part II: Future Skills and Future Learning

- ➢ **Topic 1: Individual learning experience and skill development**
  - StaStatement 1
  - tement 2

Level of agreement

- ➢ **Topic 2: Future Skills**
  - Subject-development related skills
  - Object-related skills
  - Organization-related skills

Importance and readiness

- ➢ **Topic 3: Institutional level and development of the study process**
  - Statement 1
  - Statement 2
  - Statement 3
  - …
  - Statement 11

Level of agreement

Possible concepts for the future of learning and Future Skills

part II: Future Skills and Future Learning

- ➢ **Topic 1: Individual learning experience and skill development**
  - Statement 1
  - Statement 2

Readiness

- ➢ **Topic 2: Future Skills**
  - Importance versus readiness of higher education institutions to support the development of Future Skills

Steps towards a focus on Future Skills in higher education institutions

- ➢ **Topic 3: Institutional level and development of the study process**
  - Statement 1
  - Statement 2
  - Statement 3
  - …
  - Statement 10

Readiness

Concept clarification and probability assessment

Time estimates on higher education institution's readiness

Future Skill Profiles

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

Future skills map
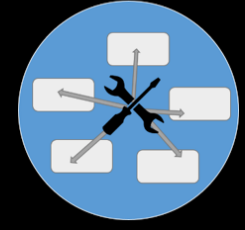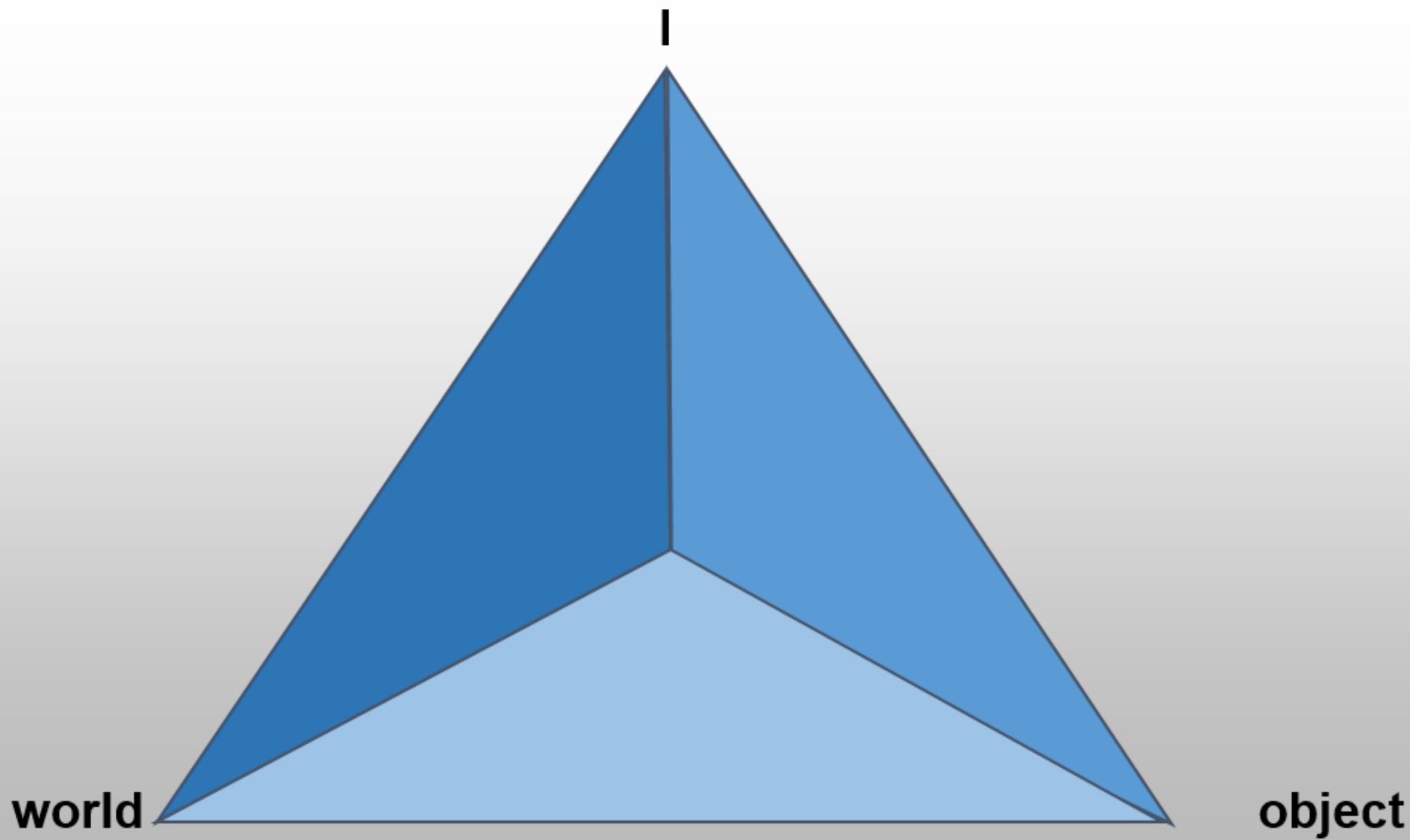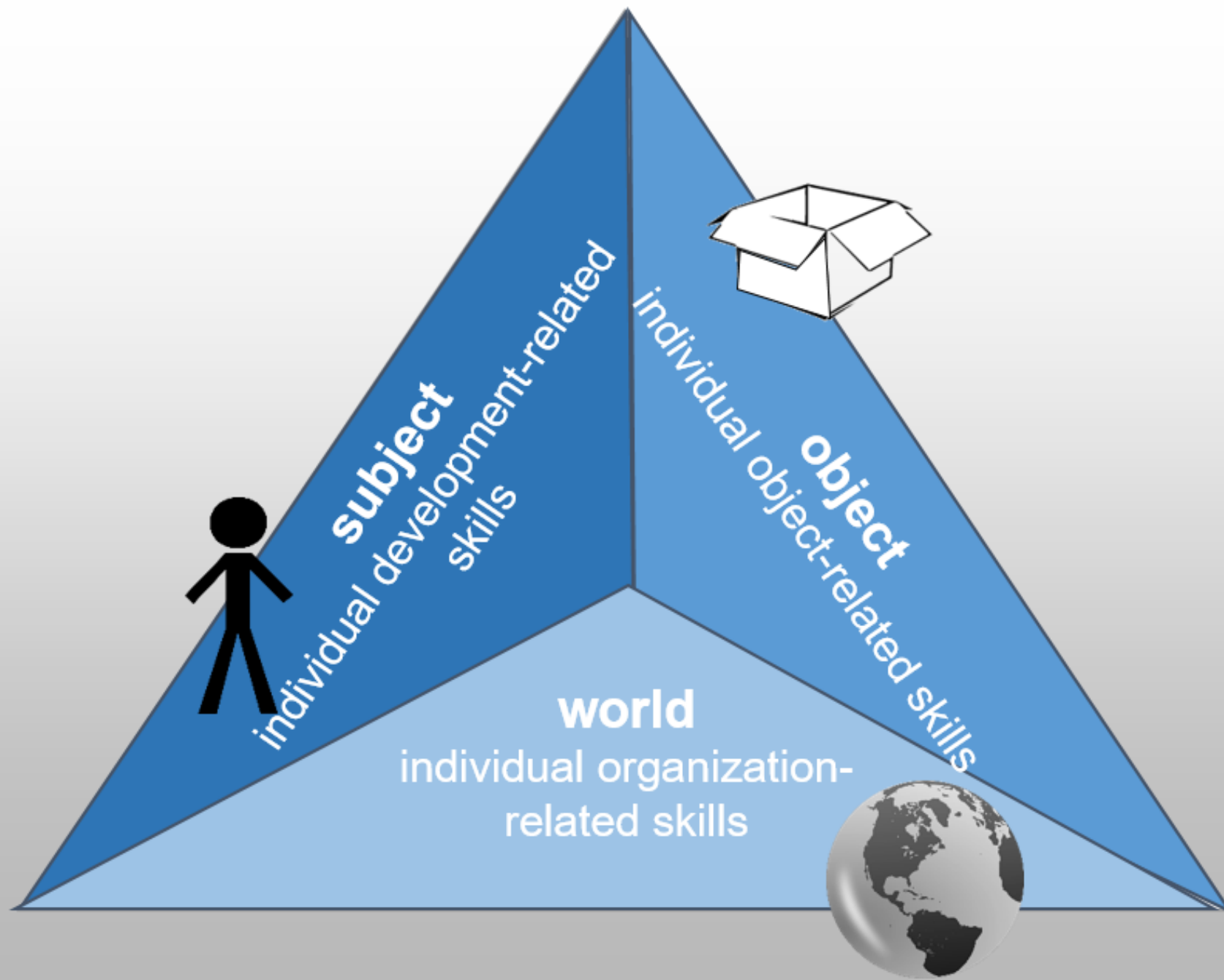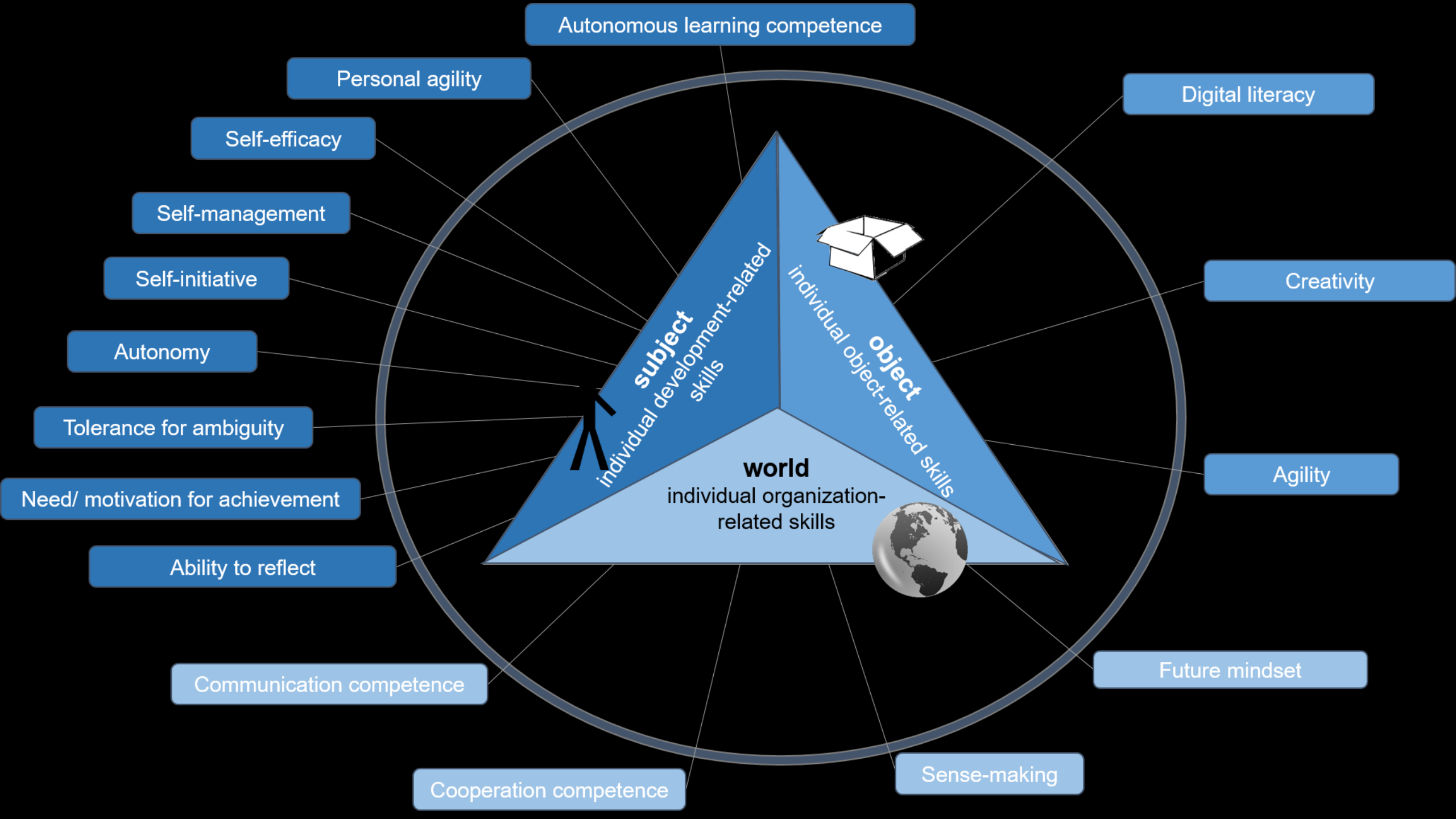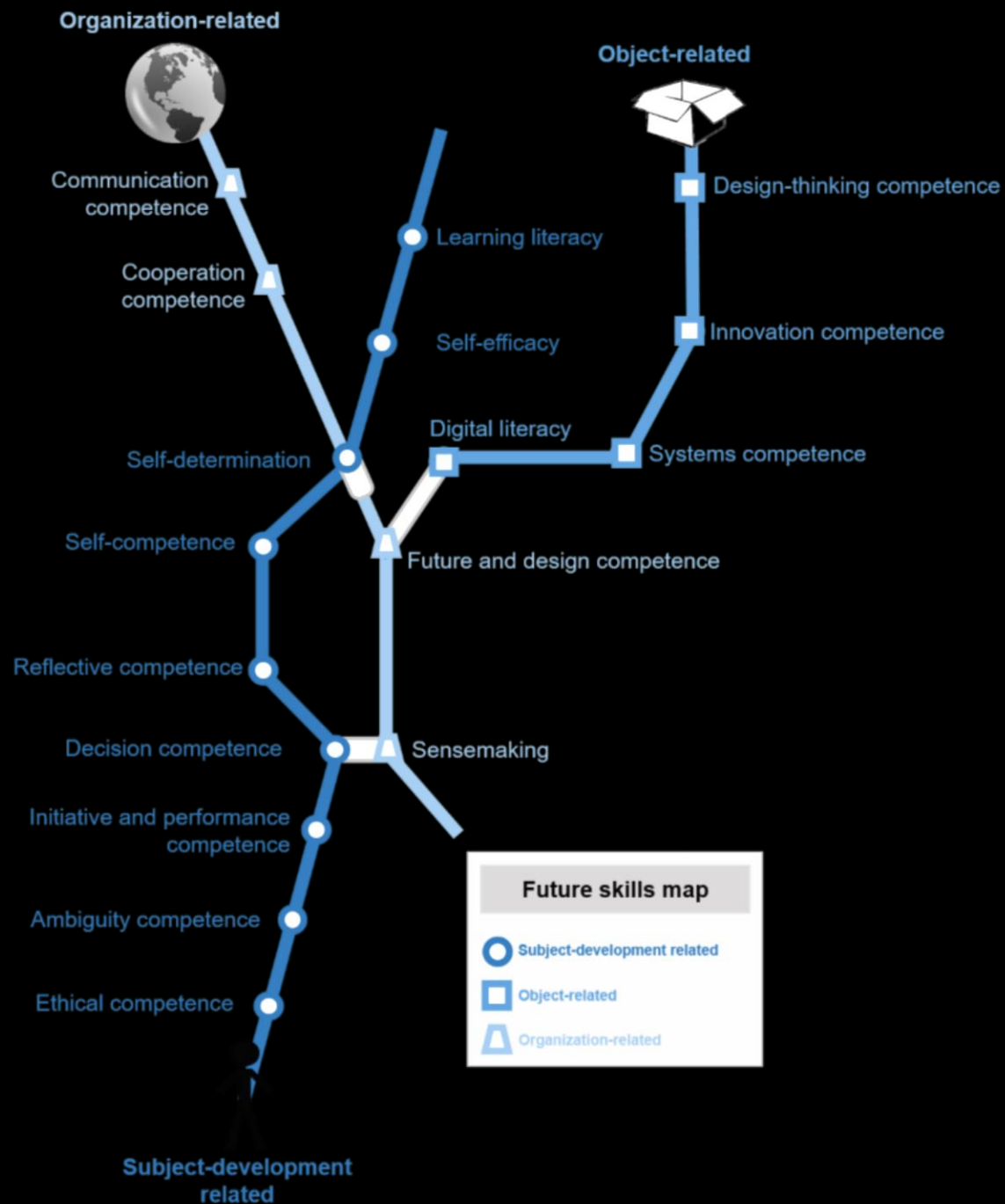
Skillmap & Skillfinder

- (in planning)
- To find definitions and describptions at Nextskills.org

Finding
structures behind

subject
individual development-related skills

I → **myself**

Areas with high degrees of change

1	skills dimensions
2	relational structure
3	areas of action

Requirements → Self-organization

Application → Development

Knowledge

Design

Application

Criticism/ Reflection

1

2

3

Organization/ environment
individual organization-related skills

I → **world**

Management of Structures→ Enabling Culture

I → **object**

object
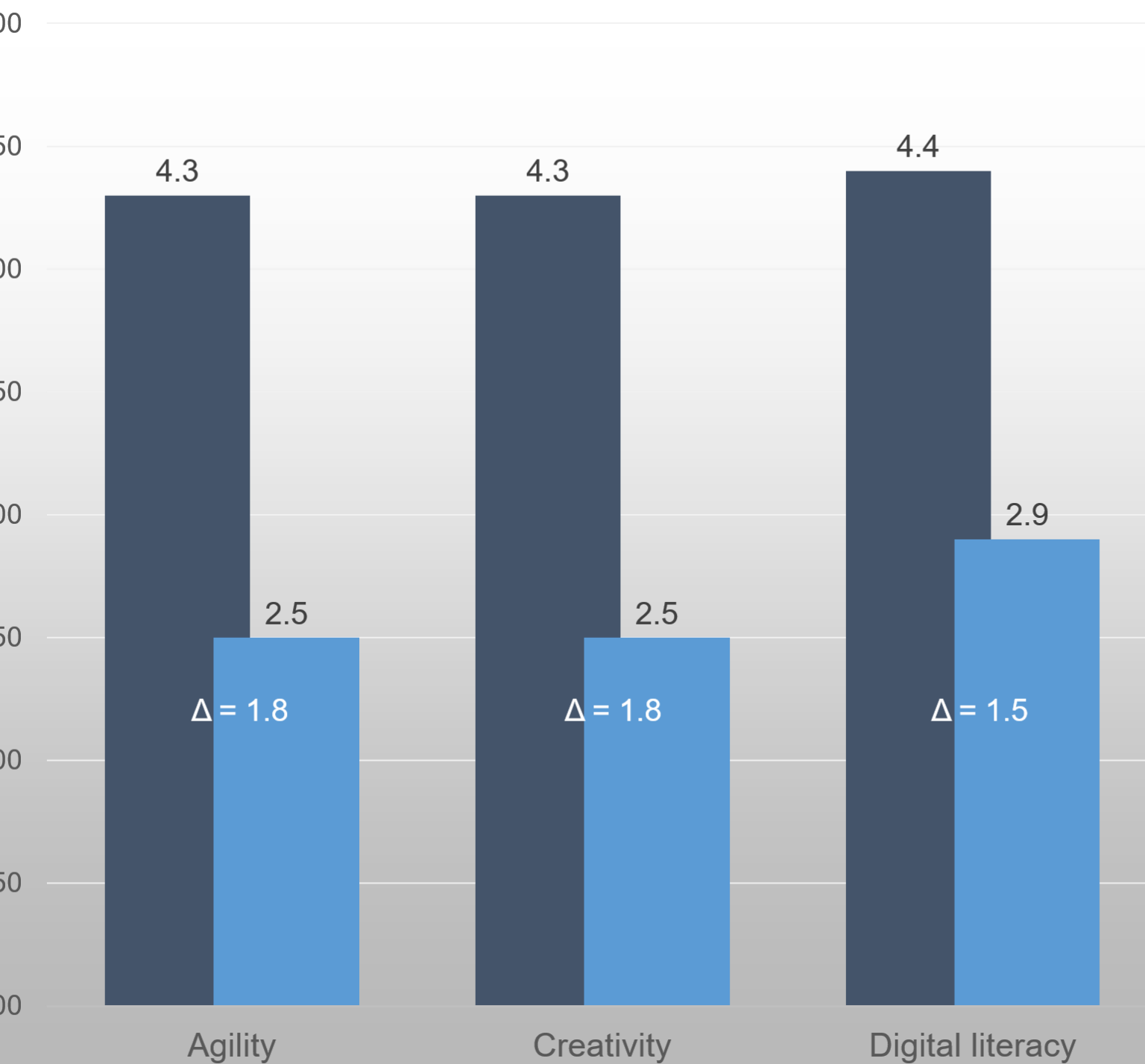individual object-related skills

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.
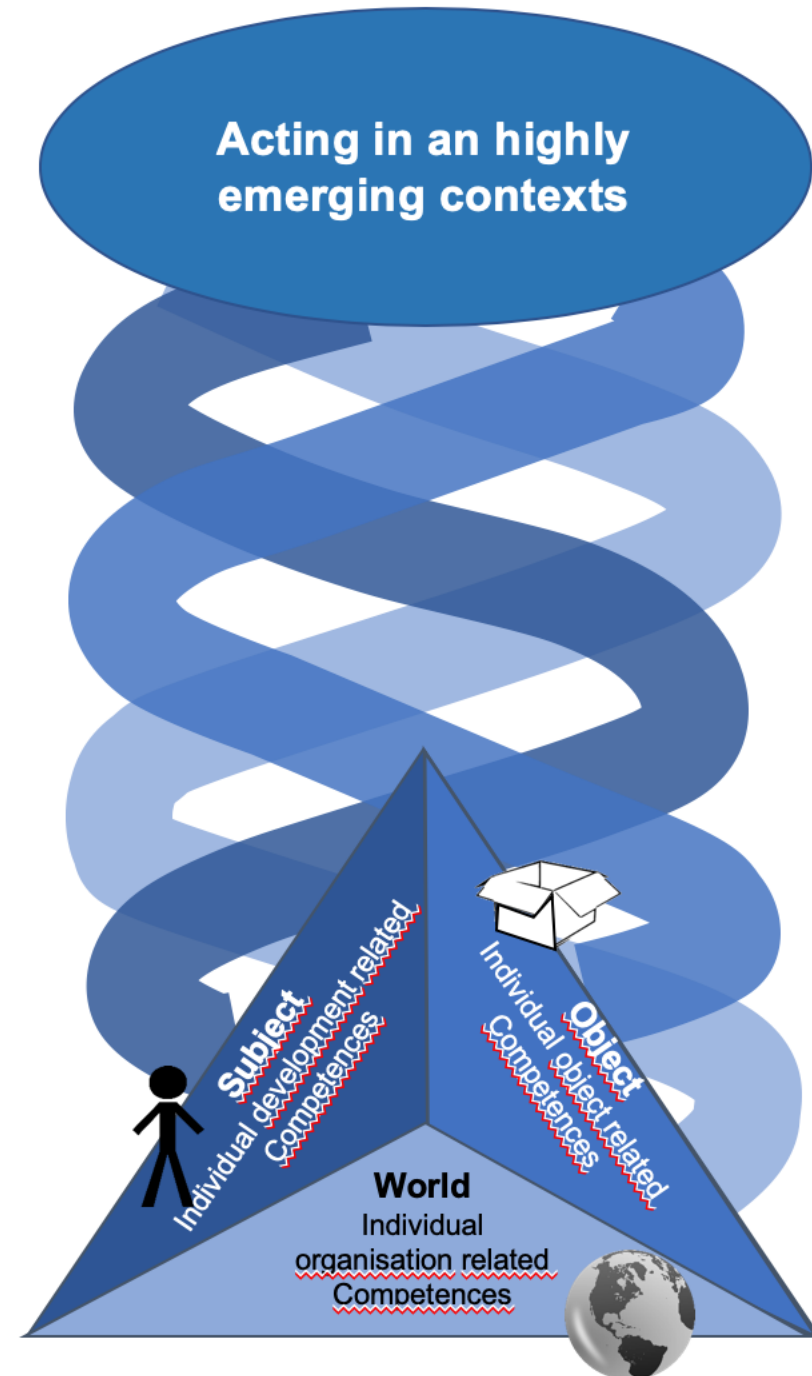
Turning Towards Higher Education
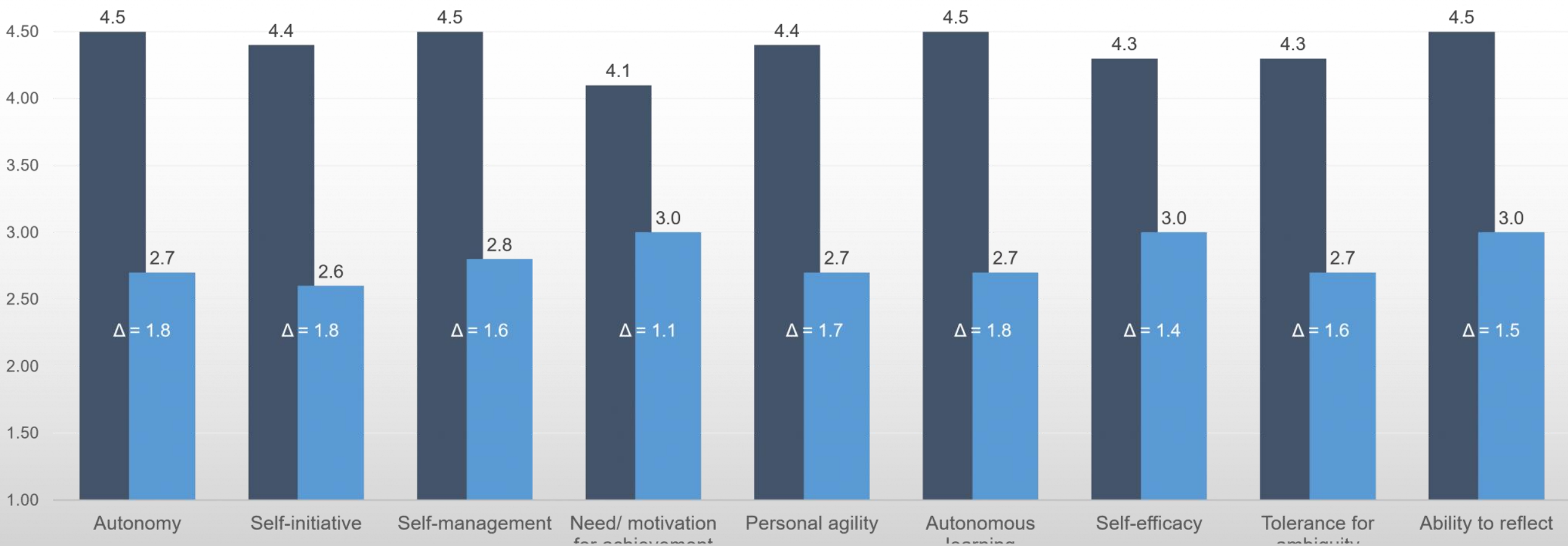
Higher Education readiness
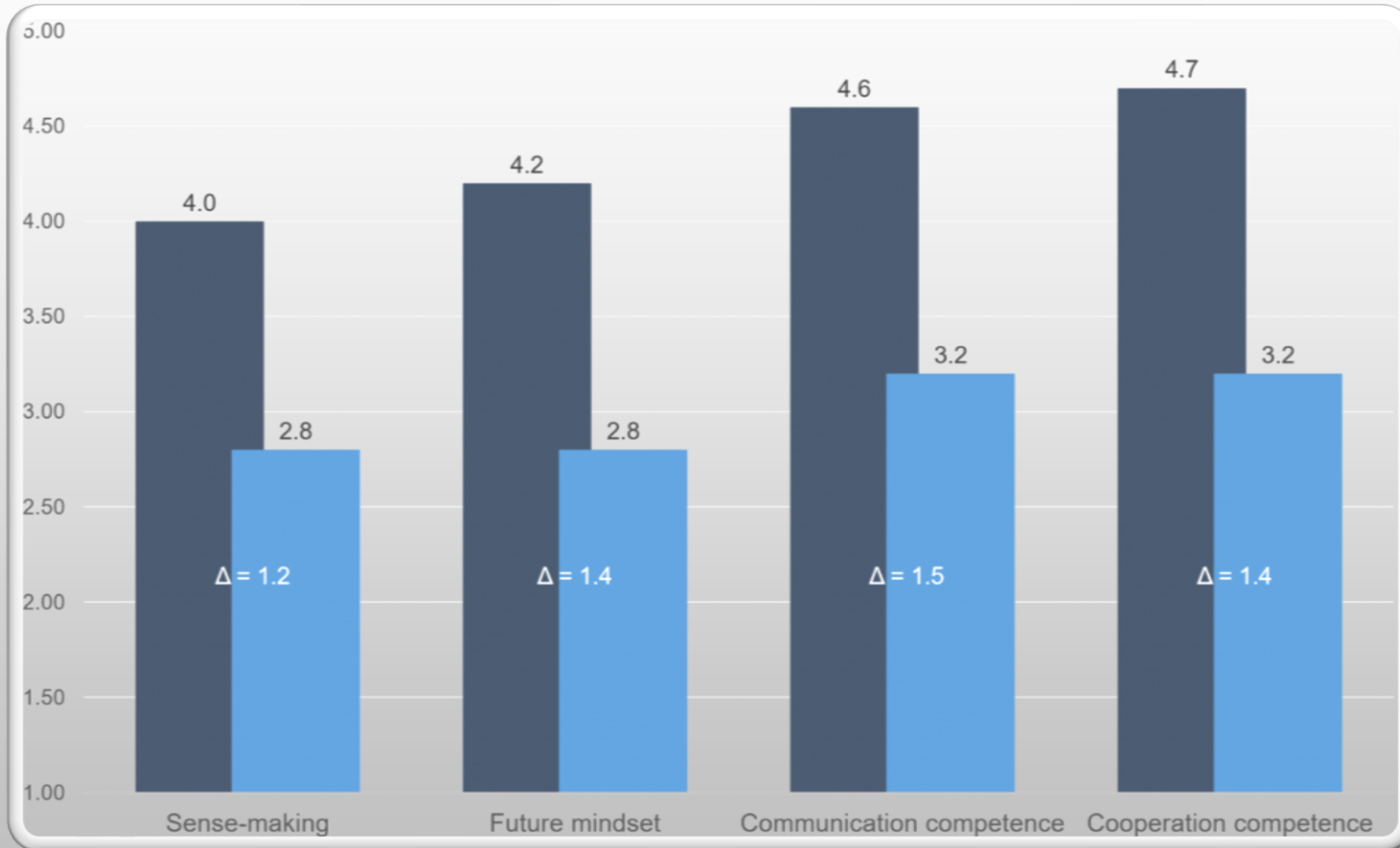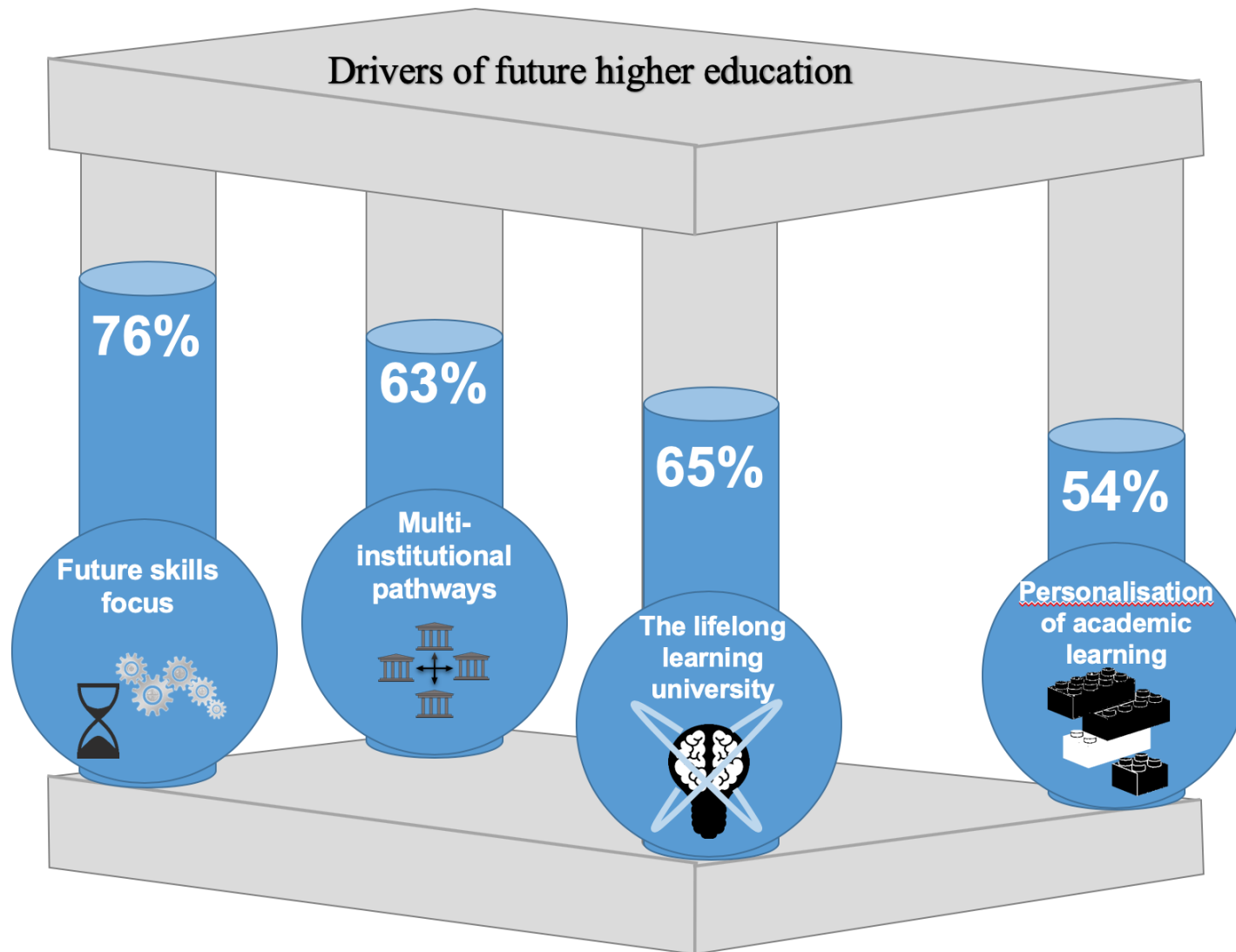## Subject-related Future Skills

Higher Education readiness

Object-Related Future Skills
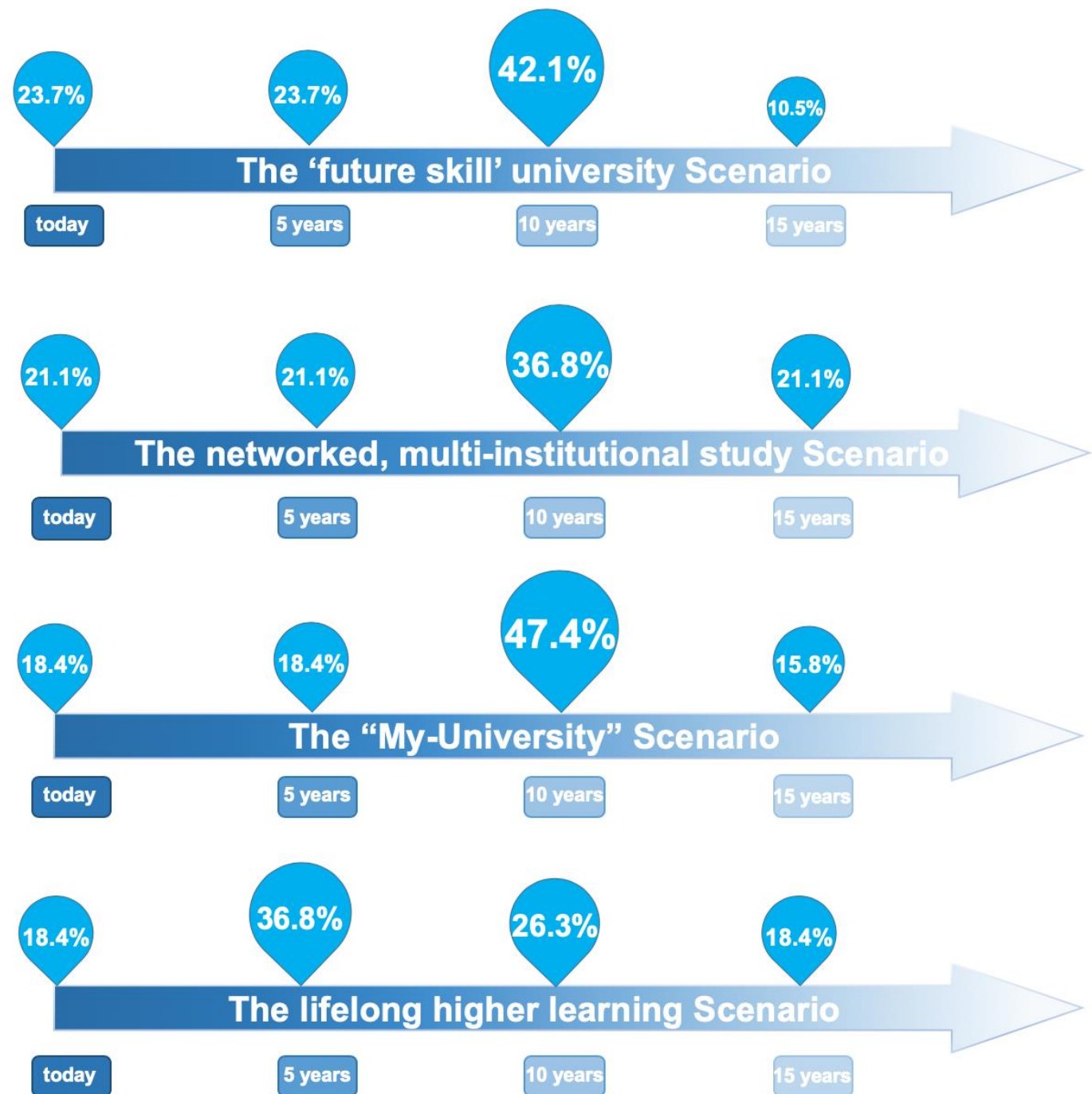
Higher Education readiness

Organisation-Related Future Skills

Scenarios for Future Higher Education

Drivers of future higher education

76% — Future skills focus

63% — Multi-institutional pathways

65% — The lifelong learning university

54% — Personalisation of academic learning
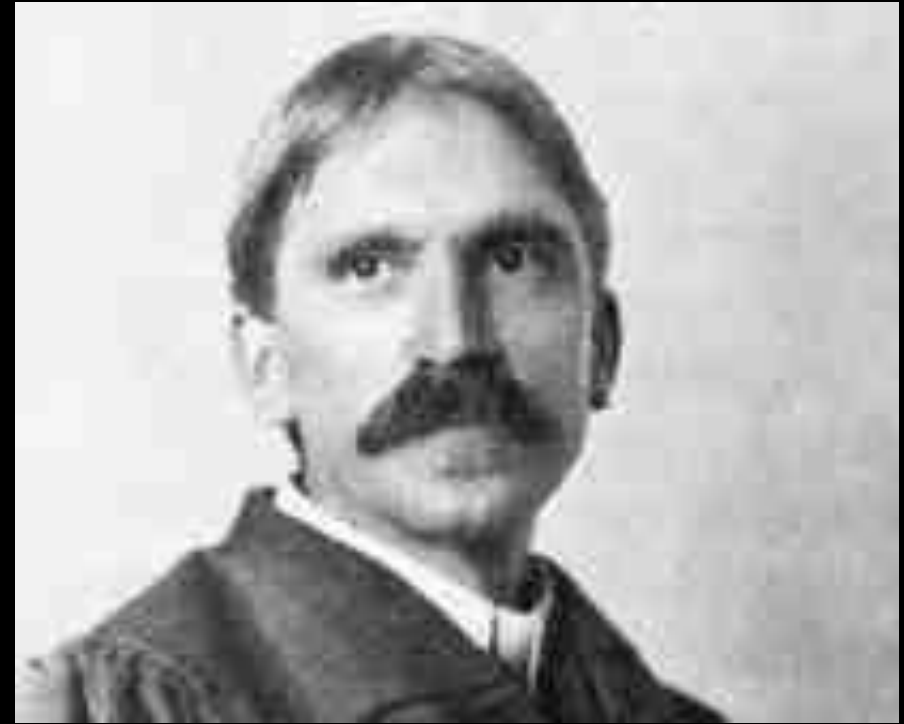
4 Scenarios for Future Higher Education

Rethinking Higher Education

'The path of least resistance and least trouble is a mental rut already made.

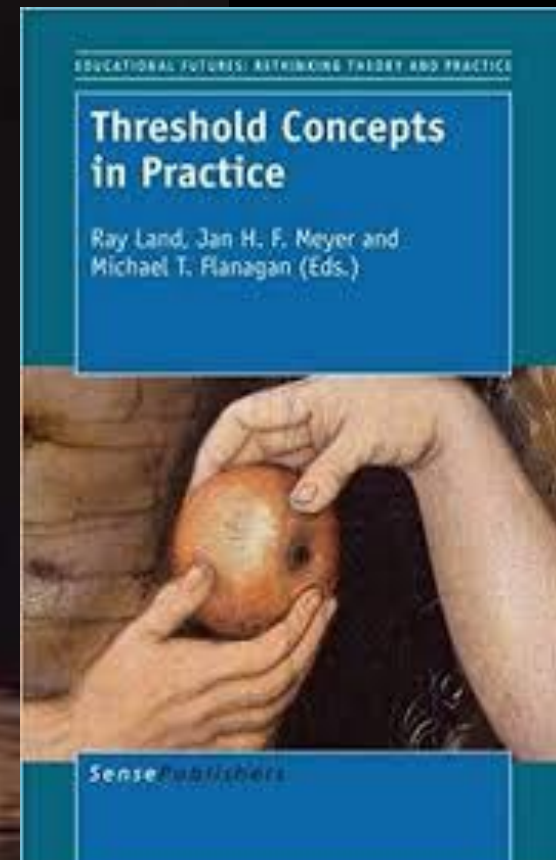It requires troublesome work to undertake the alteration of old beliefs.'
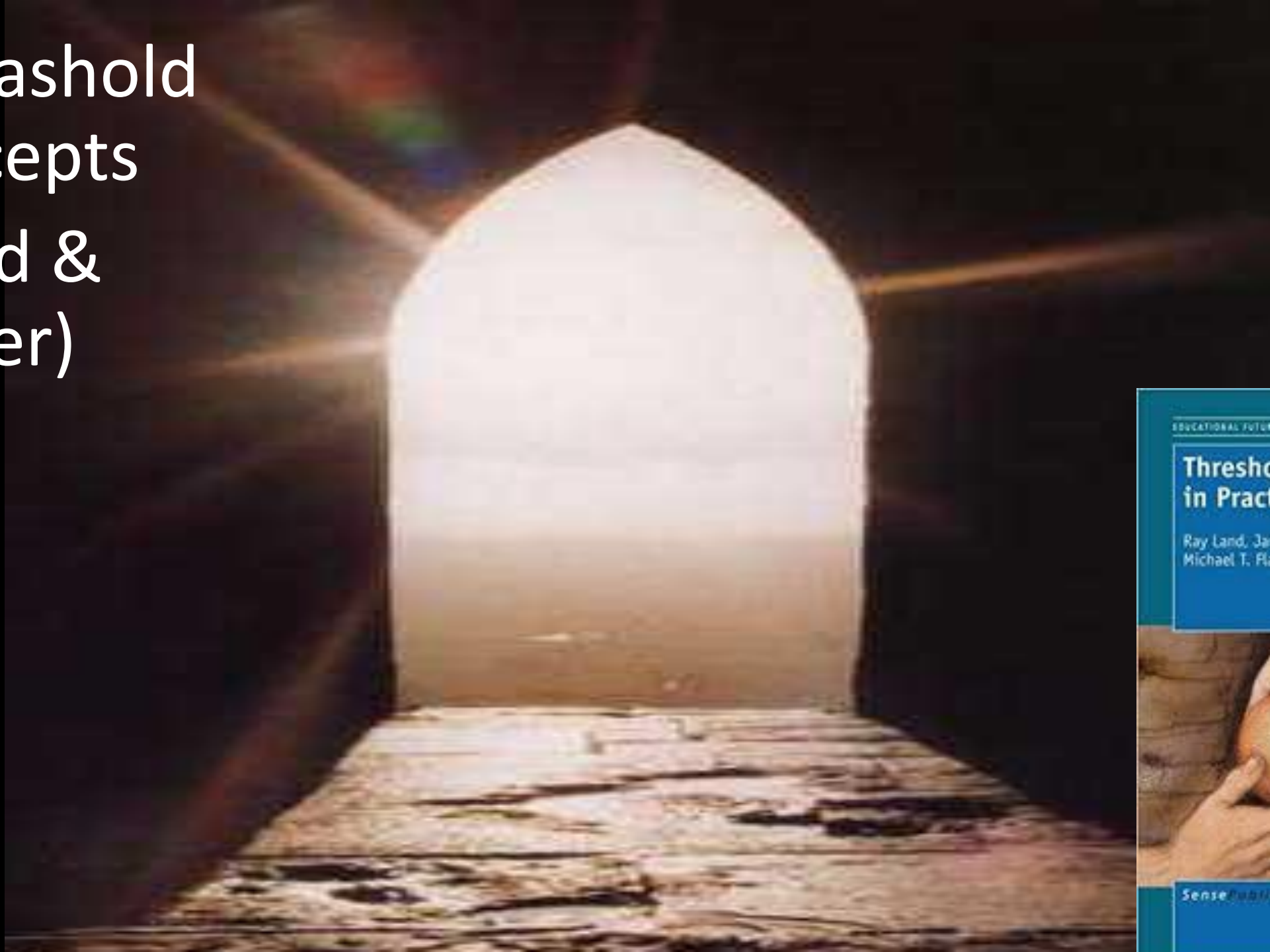
John Dewey 1933

Real learning requires stepping into the unknown, which initiates a rupture in knowing…

By definition, all TC scholarship is concerned (directly or indirectly) with encountering the unknown.

Schwartzman 2010 p.38

Threashold Concepts (Rand & Meyer)

Thank you for your Attention!

Ulf-Daniel Ehlers, Germnany

www.ulf-ehlers.net / www.nextskills.org /www.next-education.org

"In a time of exploding change – with personal lives being torn apart, the existing social order crumbling, and a fantastic new way of life emerging on the horizon – asking the very largest of questions about our future is not merely a matter of intellectual curiosity. It is a matter of survival." -Alvin Toffler

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