



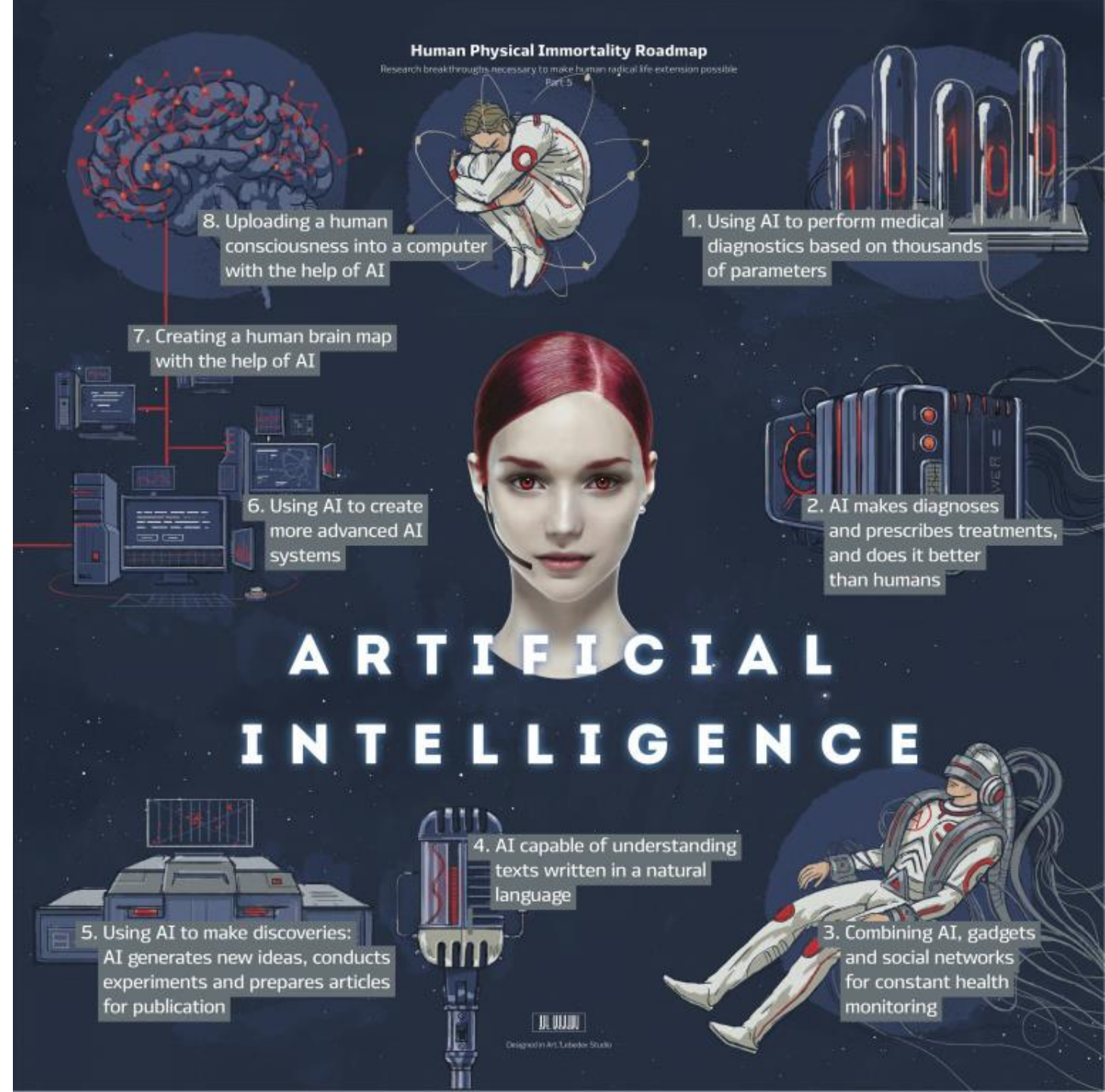
What type of education do we need to prepare future-proof Health Professionals?

EIT HEALTH

Bad Gastein, October 2019

We are entering the
4th industrial
revolution

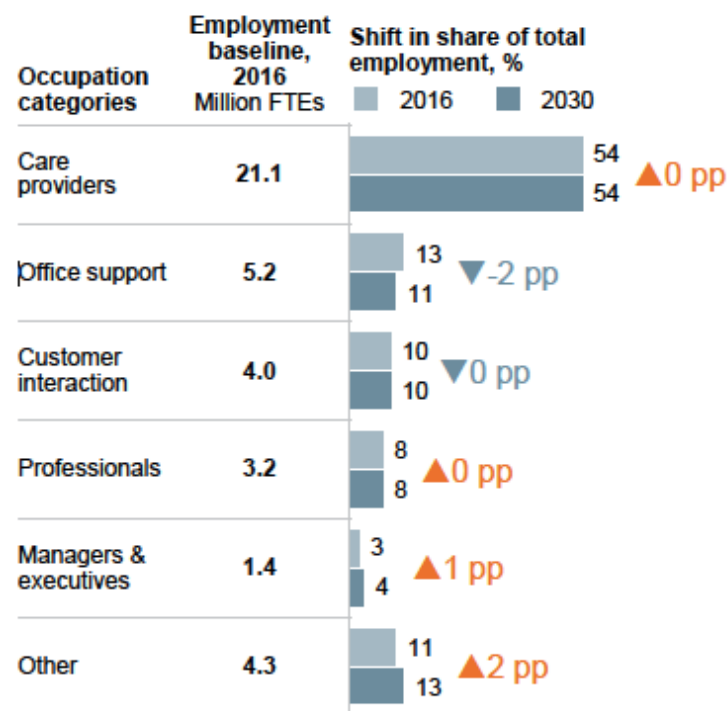
What does this
mean for future of
work in new
organizational
settings?



With AI and automation we will see sector job shifts within the next 10 years

Health Sector Job Shifts by 2030

Sector job shift by 2030



Top occupations growing and declining

Top growing

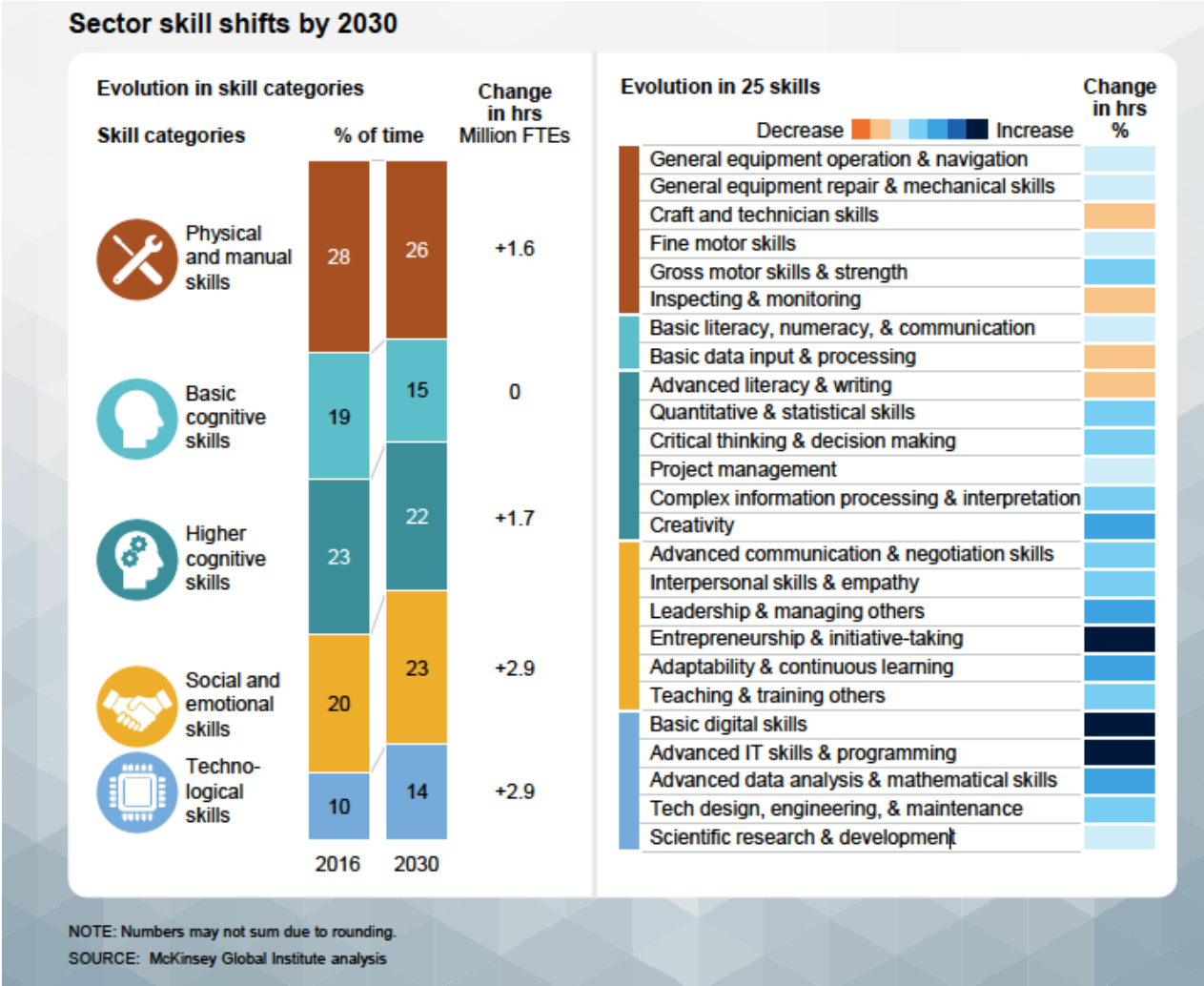
- Registered nurses
- Personal care aides
- Home health aides
- Software developers (app, web, computer)
- Childcare workers
- Dental hygienists
- Maids and cleaners
- Physical therapists
- Medical and health services managers
- Customer service representatives

Top declining

- Food preparation workers
- Medical secretaries
- Pharmacy technicians
- Telephone operators
- Data entry keyers
- Medical transcriptionists
- Medical and clinical laboratory technicians
- Word processors and typists
- Medical equipment repairers
- Office clerks (billing, accounting, reception, etc)

...that will demand new skill-sets!

Health Sector Skill Shifts by 2030



The potential of AI and robotics (findings from the Topol Review)

„One of the game-changing uses of AI will be the automation of administrative processes. Currently, between 15 and 70 per cent of a clinician’s working time is spent on administrative tasks.“

For clinicians to benefit fully from AI and robotics technologies, four conditions have to be met:

1. time and willingness to adopt new technology;
2. an understanding of the technology;
3. well-designed technology meeting user need;
4. workplace support to maximise the potential of the technology.

„Clinicians and healthcare scientists who are passionate about progressing the adoption of digital healthcare technologies and keen to develop a specialist interest should be valued and supported to do so“

Panel Members

- **KRISTAPS KRAFTE**, CEO, Vigobot
- **ANTANAS MONTVILA**, Junior Doctor & Board Member, European Junior Doctors Association
- **ZINEB NOUNS**, Managing Director Helios Education Center Berlin, Germany
- **PETIA RADEVA**, Professor, Faculty of Mathematics and Computer Science, ICREA Academia, Universitat de Barcelona

Outline and choreography of the session

AGENDA

Outline

Skills needed by (current and future) HCPs working in new organisational formats, consider how the medical curriculum should evolve to train the HCPs of the 21st century and explore how AI might affect the patient-doctor relationship.

Panel Members

- **KRISTAPS KRAFTE** – Health Entrepreneurs' Perspective
- **ANTANAS MONTVILA** – Junior Doctors Perspective
- **ZINEB NOUNS** Healthcare Provider Perspective
- **PETIA RADEVA** – Educators Perspective

Session Start

Moderator (Ursula Mühle) will speak for a maximum of five minutes to introduce the landscape of new organizational settings and due to AI and automation and introduce the notion of the needs for new forms of education. This will draw upon three or four PowerPoint slides.

Panel Discussion

Moderator (Ursula) will facilitate the discussion by guiding the panel through the following 4 sets of questions:

Question – Set 1: How is technology & AI already changing / influencing your work?

Question – Set 2: What new skills or skill-sets do you see arising with the digital transformation in your work?

Question – Set 3: What education is needed

Question – Set 4: How shall this education be delivered

Conclusion & Outlook

Panel Members would be given one minute each to give final thoughts on 1 or 2 concrete action points.

Moderator will draw the session to a close with final reflections. (A final PowerPoint setting out learning points on patient engagement and small number of web references for information follow up)

1. How is AI changing / influencing your work and the patient-doctor relationship?

- **Q to Kristaps:**

- You are an entrepreneur: You developed an chatbot for the rehabilitation of stroke patients, tell us about your product and how it changes traditional care settings?
- Sub-questions: How is your product received, Is it only positive or do you also see the risk that Eric Topol points out, that „choice and the pace of change overwhelm patients and clinicians“?

- **Q to Antanas:**

- You are a radiologist:, tell us about your experience with AI in the UK?
- How is this already affecting your relationship to the patients?

- **Q to Zineb:**

- You work at one of the largest private HCP in Germany and develop : How do you see technology and AI influencing the provision of Care and how does it change your work?

- **Q to Petia:**

- You are a machine-learning expert and work a lot in the Health Sector. What are the most significant technological changes you see currently being implemented?

2. What new skill-sets do you see rising?

The McKinsey institute says that we see especially in HC a need for more **technological skills** (basic IT; advanced IT) but also for ***social emotional skills*** (e.g. Leadership, Critical Thinking, Managing others).

What skills do you see in the settings you work needed that have not been there 5 years ago? What do you expect in the next 5 years to come

- **Q to Antanas:**

- As an radiologist, what new skills do you need and how are they different then a generation ago?
- Do you feel you are adequately trained?

- **Q to Zineb:**

- You are also a medical doctors: what new skills do you see arising for the workforce in Helios that was different then when you studied?

- **Q to Kristaps:**

- You are an entrepreneur and went through an EIT Health Master Programmes that explicitly includes Innovation and Entrepreneurship into the Health Curriculum? What did you learn there and why did you chose this?

- **Q to Petia:**

- You have been working in the sector for 15 years, from a Computer Scientist perspective what is the most significant change in the Healths Sector?

3. What Education is needed

Eric Topol in the latest review differentiates between education for different target groups.

1. **Supporting the Educators**
2. **Supporting the whole workforce:** Staff and Specialists (genomics and digital skills / specialists also AI and robotics))
3. **Supporting the Future Workforce**

- **Q to Antanas:**

- From a doctors' perspective: where would you put the most focus? Whom should we educate with what?

- **Q to Zineb:**

- where do you see the most pressing need for new education from a provider perspective?

- **Q to Kristaps:**

- From an employer: are these three groups enough or do we need to go even further? train also other professions?

- **Q to Petia:**

- you are a professor and educator yourself? How important is the role of educating the educators?

4. How should this Education be delivered

In EIT Health we draw a lot of attention of innovating the delivery of education, moving away from traditional lectures to self-learning, cased-based learning up to virtual or distant learning.

- **Q to Petia:**
 - What is your experience and where is the trend going of new education delivery for AI?
- **Q to Zineb:**
 - You train 60000 Professionals in your organization. How do you make sure that everyone is up to speed with the latest knowledge and attitude
- **Q to Antanas:**
 - Is this enough to respond to your needs? Or do we need a more radical change?
- **Q to Kristaps:**
 - same to you, when you listen to the ladies:

Conclusion and Outlook

Moderator (Ursula): Summary of previous answers.

In EIT health we want to innovate education for better health and are for European citizens and patients. When you could pick a concrete recommendation for a new training, that we should build in deliver through partnership, what should that be:

Q to Panel (Ursula):

Panel Members would be given one minute each to give final thoughts on 1 or 2 concrete action points that

- KRISTAPS
- ANTANAS
- ZINEB
- PETIA