



Results of the EIT Health Skills Analysis

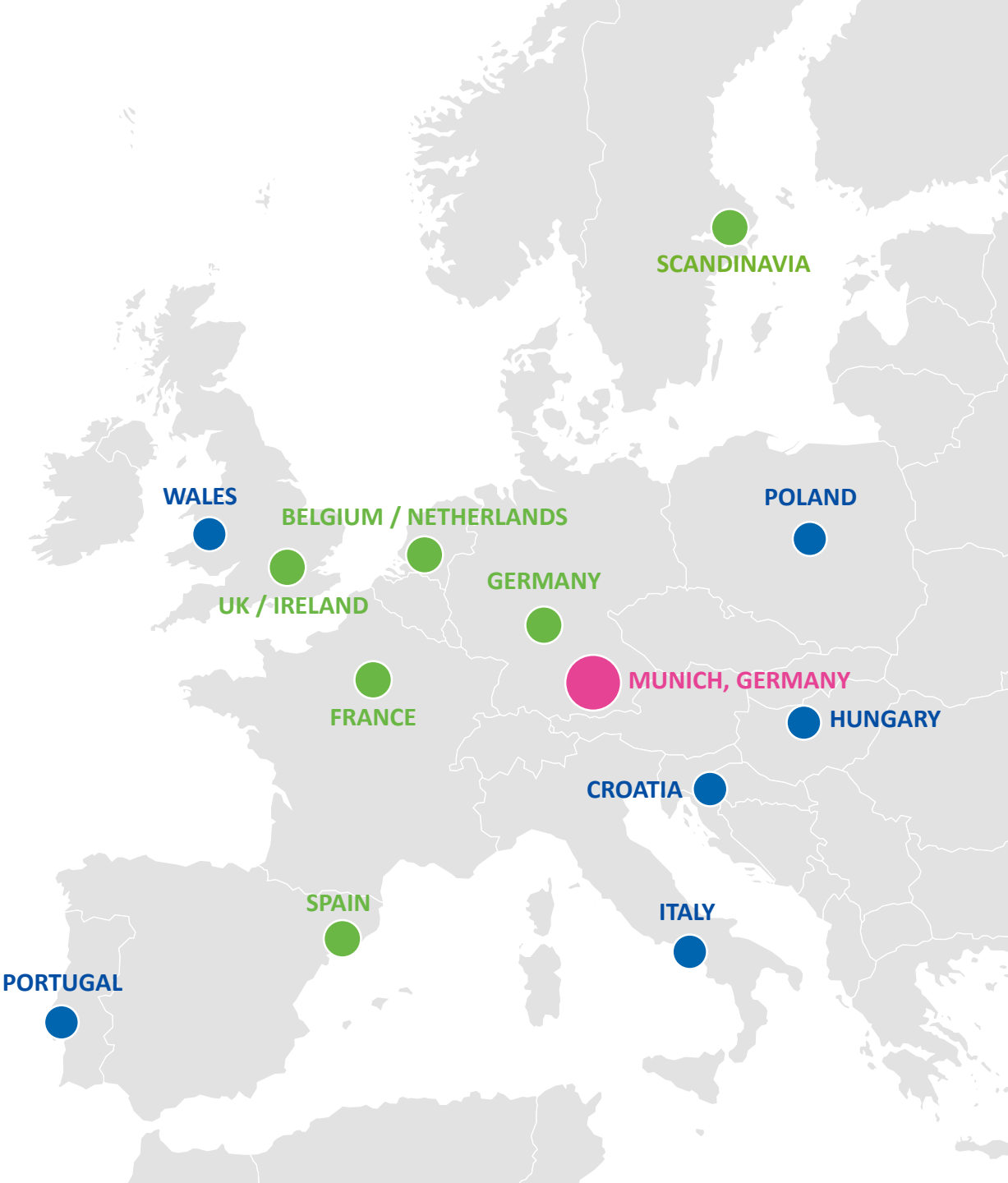
Annick Ducher, Education Programme Manager, EIT Health

Nicosia, 9 May 2019

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EIT Health is a network of **best-in-class health innovators** backed by the EU.

● Co-Location Centres ● InnoStars ● Headquarters



We bring partners together through three pillars: through highly impactful activities we transform Healthcare in Europe



EIT Health Innovation

build on
collaboration

- Innovation Projects
- Wildcards

EIT Health Accelerator

support
innovation and
business

- Incubate -> Bootcamps
- Validate -> Headstart
- Scale -> GoGlobal

EIT Health Campus

a brand for
excellence in
education

- Citizens
- Digital
- Student
- Professionals
- Entrepreneurs
- Strategic

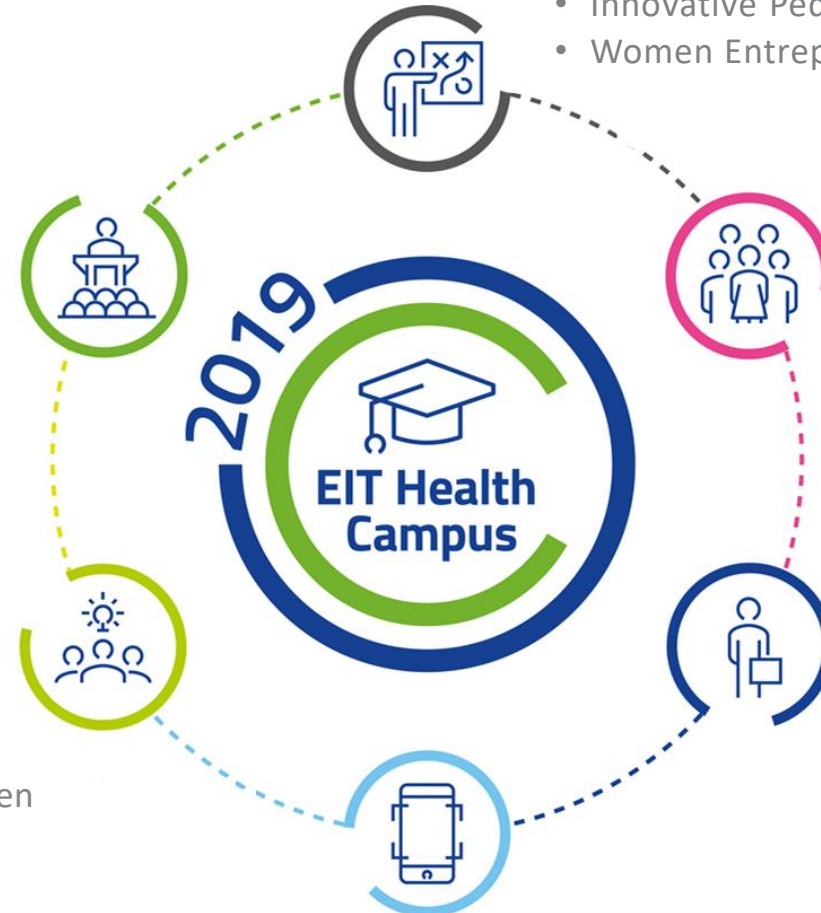
Our Portfolio: We educate for a better health

Students

- Doctoral programmes
- Master programmes
- Summer Schools
- Hackathons & Competitions

Entrepreneurs & Innovators

- Entrepreneurship Lab
- Fellowships: Needs-driven innovation



Digital

- Serious Games
- MOOCs

Strategic Campus Initiatives

- Alumni community
- Innovative Pedagogies
- Women Entrepreneurship

Citizens

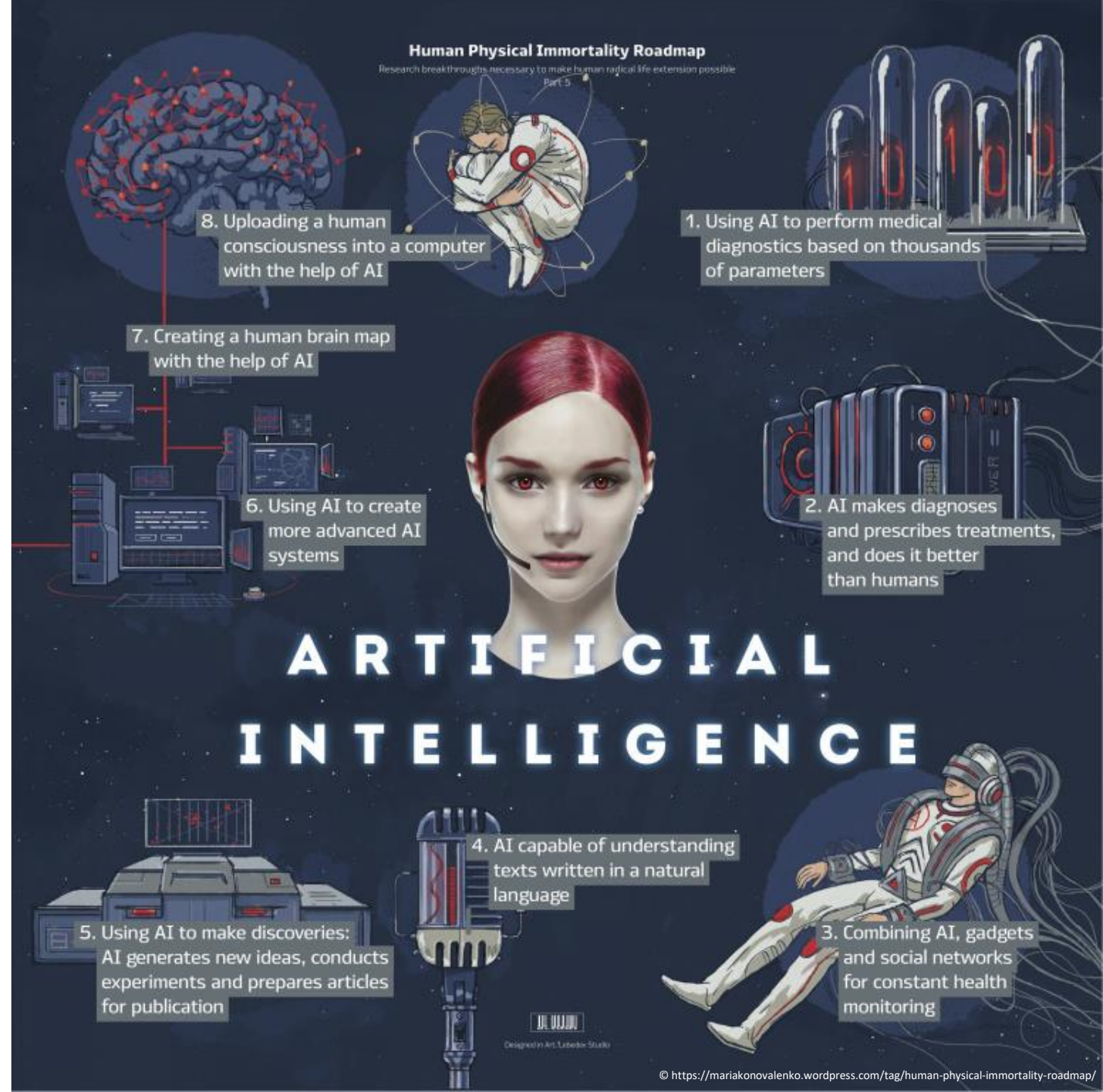
- Festivals & Public awareness
- Screenings & risk assessments
- Promotion of healthy lifestyles

Professionals Executives &

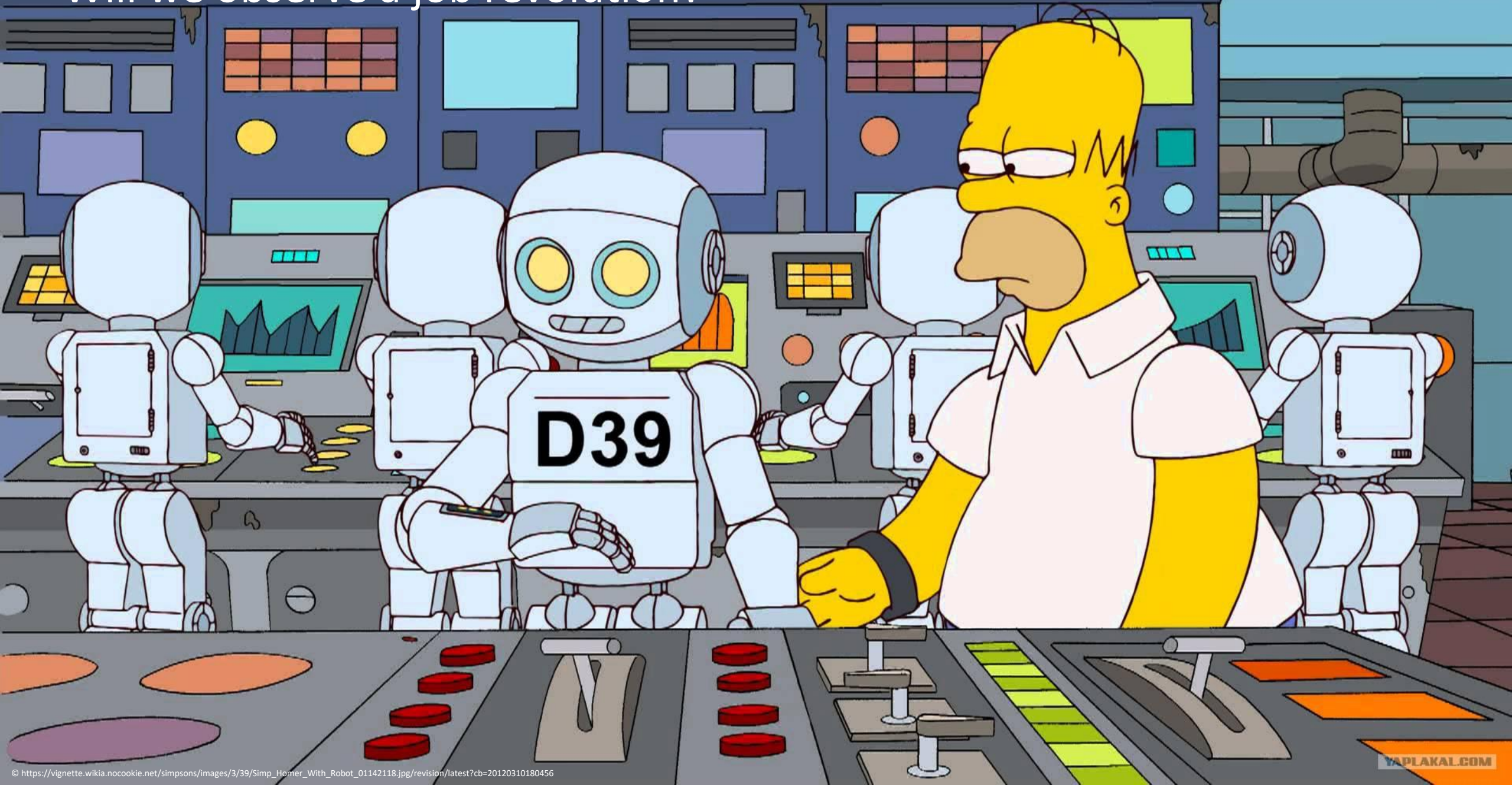
- Patient-Centred Solution
- Co-creation
- Innovation Management
- Capacity & network building

The 4th Industrial Revolution and the Promise of Physical Immortality

What does this mean for future professions?



Will we observe a job revolution?



Despite automation new jobs will be created... but the nature of jobs will change

Range of automation scenarios and additional labor demand from seven catalysts

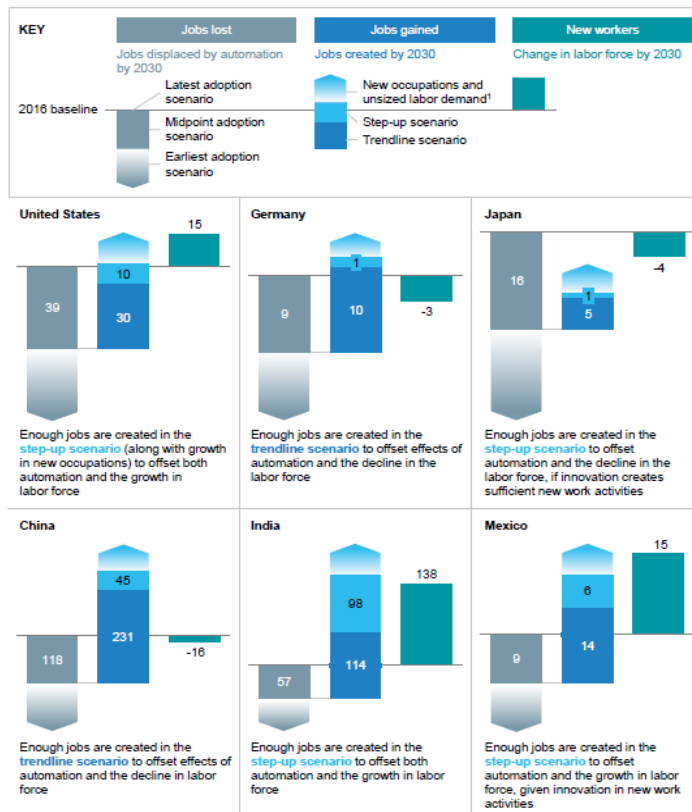
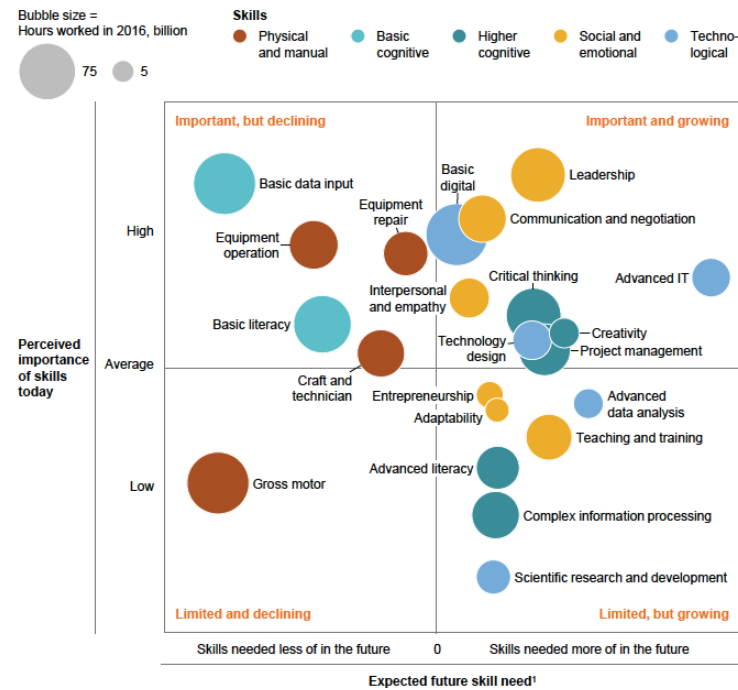


Exhibit 10

Skills of today vs skills of tomorrow: technological, social and emotional skills will become even more important.

Based on McKinsey Global Institute workforce skills executive survey, March 2018

Bubble size = Hours worked in 2016, billion
75 5

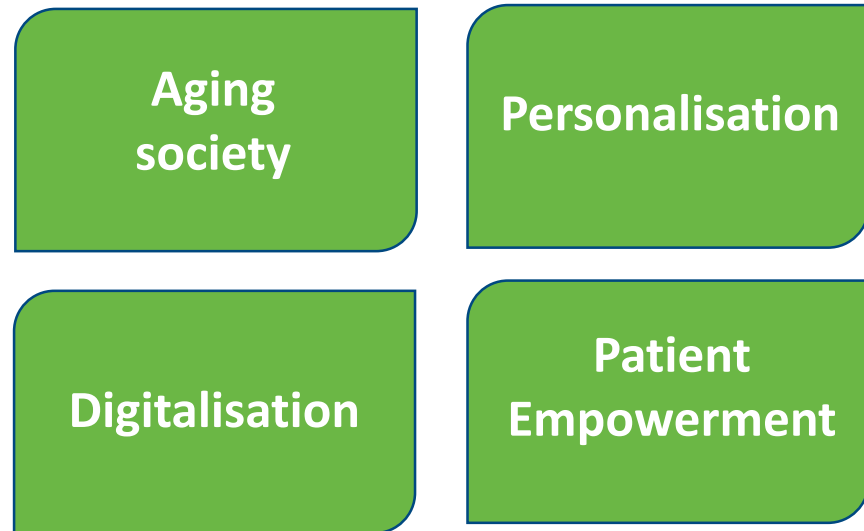


¹ Difference between % of survey respondents that expect to need a skill more and % of survey respondents that expect to need it less.
NOTE: Based on results of March 2018 survey of 3,031 business leaders in Canada, France, Germany, Italy, Spain, the United Kingdom, and the United States. Chart based on % of survey respondents. Skills descriptions were shortened. Chart does not include fine motor skills, inspecting and monitoring, and quantitative and statistical skills. Bubble sizes are based on number of hours worked.

To understand what **skill gaps** we need to address we need to understand how current **trends** are affecting the health system

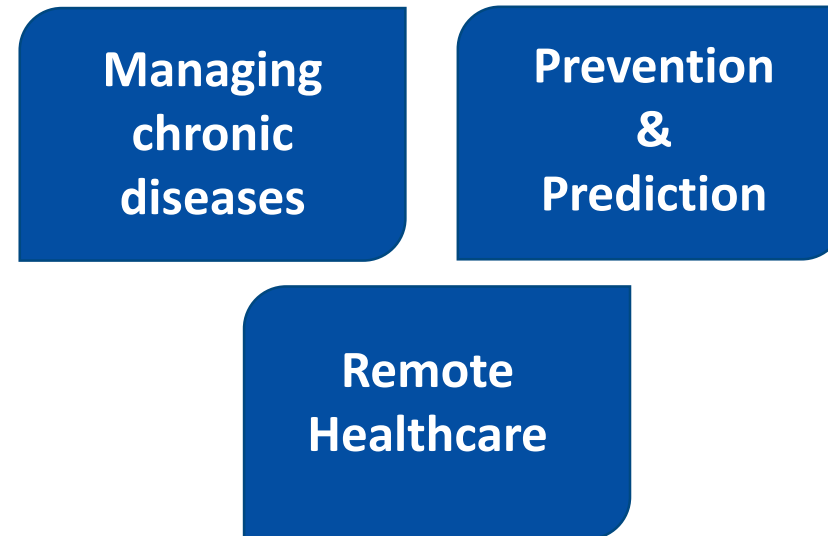
DISRUPTIVE Trends (4)

Trends that are beyond our control in reshaping healthcare



REACTIVE Trends (3)

are emerging as a result of the disruptive trends and must be acted upon



Four disruptive trends require **novel skills** to deal with

TREND 1 - Aging society

The increase of life expectancy goes along with more chronic disease, need for elderly care, that require new ways of care both in terms of complexity but also in terms of cost.

TREND 2 Digitalisation

The current worldwide rise in the volume and availability of data goes along with an increase of tools and means to analyse but also exchange data.

Copyright 2006 by Randy Glasbergen.
www.glasbergen.com



"More and more patients are going to the Internet for medical advice. To keep my practice going, I changed my name to Dr. Google."

TREND 3 Personalisation

Personalized healthcare looks at genetic biomarkers to gauge the risk of disease in individuals, instead of solely considering less complex variables such as age, blood pressure, and cholesterol levels.

TREND 4 - Patient Empowerment

There is a growing culture of "consumerism in healthcare". Patients want to be kept well informed and become active agents in the process of decision making.

Three REACTIVE Healthcare Trends follow the four other trends

TREND 5 - Managing chronic diseases

The quality of healthcare provision has now reached a point where diseases which previously had a very low life expectancy can now be managed in a chronic care setting.

TREND 6 - Prevention and Prediction

With the current transition towards longer lives and more chronic disorders, we need to move towards manage well-being.

TREND 7 - Remote Healthcare

Thanks to advances in healthcare technologies, treatments that previously required a 2-week stay in the hospital can now be provided at out-patient clinics.

CHRONIC DISEASES IN NUMBERS



49.8%

OF ADULTS HAVE 1 OR MORE CHRONIC DISEASES



7 of 10

DEATHS ARE CAUSED BY CHRONIC DISEASES



63.4%

OF DIABETES PATIENTS HAVE SOME MOBILITY LIMITATION

Figure 3: The evolution of wellness and prevention



Past

- Focus on treating illness



Present

- Focus on prevention (especially cancer, heart disease, diabetes)



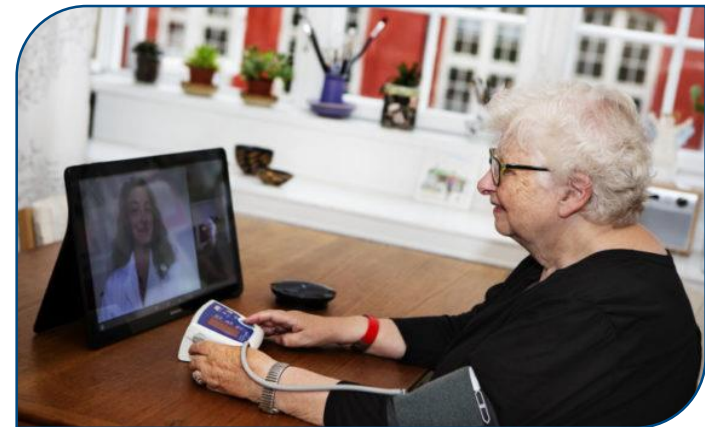
Future

- Focus on prevention and wellness

- Genomic profiling to target disease potential so it can be managed

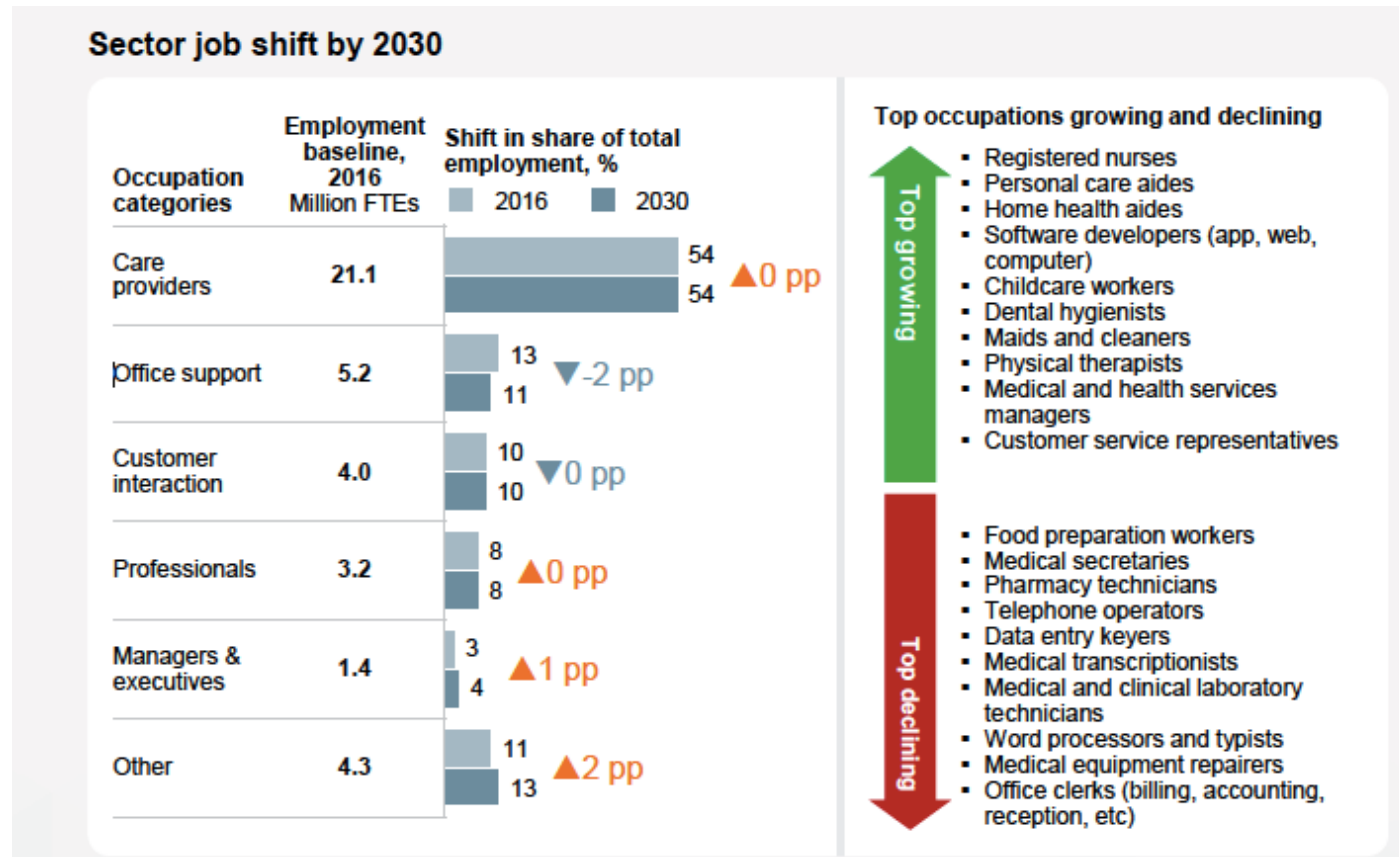
- Gene editing to enable the elimination of disease

- Health and wellness integrated into everyday life



The seven outlined trends will cause significant shifts that by 2030 will result in new occupations...

Health Sector Job Shifts by 2030



What skills will be needed in the next decades in the health sector?

Critical thinking & decision making

Digital & data literacy

Health system skills

Interpersonal & citizen-oriented skills

Inter-professional & multidisciplinary skills

Communication skills

Management skills

Entrepreneurship & innovation

We analysed the Skill Needs and Gaps for the next decades and identified 8 skill groups that we consider as relevant to enable the current and future talents to tackle the workforce transformation.

Conclusions

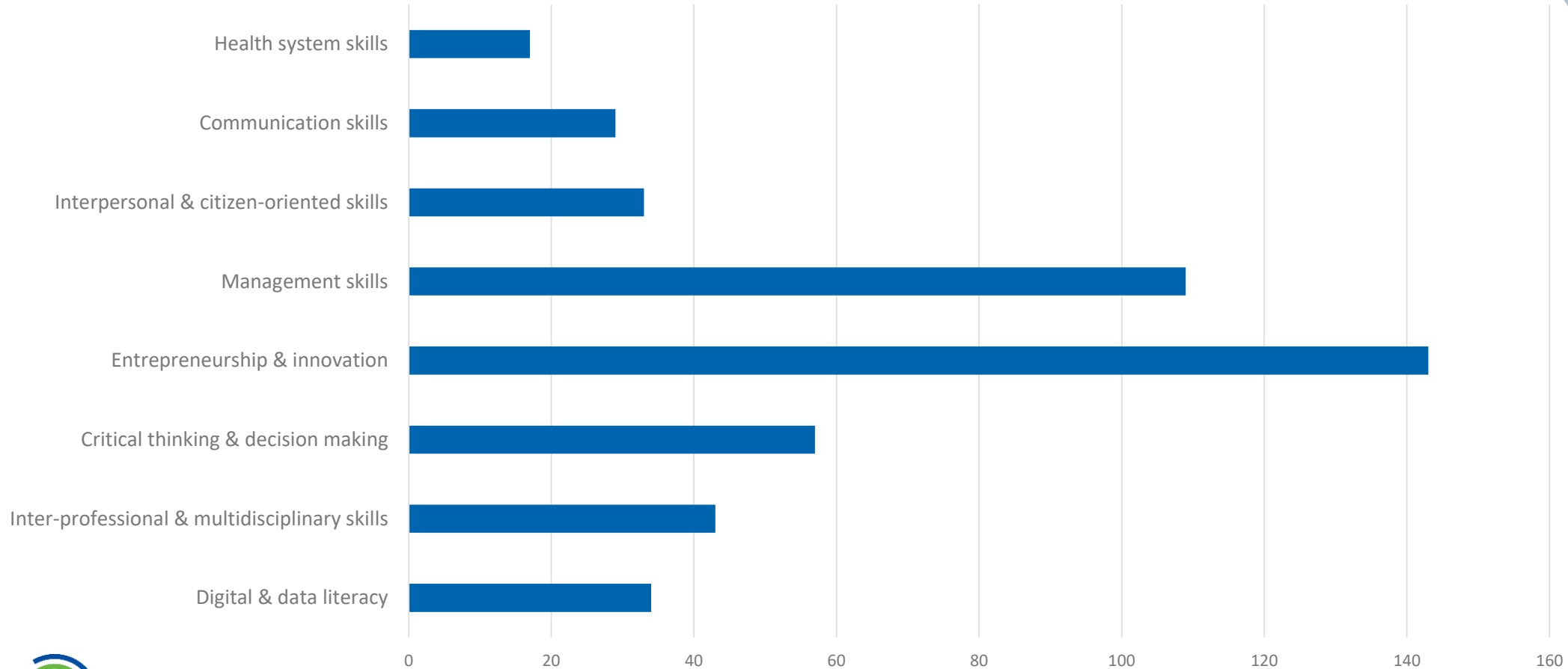
- 1) All these skills are transversal and do not belong to one discipline
- 2) All skill groups reach far beyond traditional soft skills (e.g. digital & data literacy for doctors or intraprofessional skills for the health work force)
- 3) There is a strong need for integrating them into the current curriculum

**IT IS TIME TO MODERNIZE
HIGHER EDUCATION**

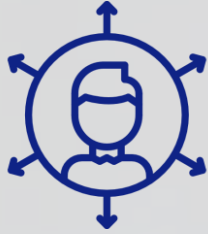


EIT Health integrates **transversal skills** into the curricula to overcome the skill gaps: We have already made a first step in our journey...

Skills offered by EIT Health activities between 2017 – 2019



DIGITAL & DATA LITERACY



SKILLS

- Basic digital skills
- Advanced data analysis & mathematical skills
- Quantitative and statistical skills
- Advanced IT & programming skills
- Complex information processing & interpretation skills
- Quantitative and statistical skills
- Machine Learning
- Data Mining
- Genomic knowledge & genetic interpretation skills
- Automation

DEFINITION

The competencies to develop and use digital tools with the purpose of accessing, managing, analyzing and interpreting data.



BEST PRACTICES EIT HEALTH

The Health Data and Analytics Massive Open Online Course

Teaching health professionals how to make use of data analytics in decision-making processes.

HelloAI Summer School

Prepare the upcoming generation for the wide-spread implementation of AI in Healthcare



BEST PRACTICES AROUND THE GLOBE

Exponential Medicine

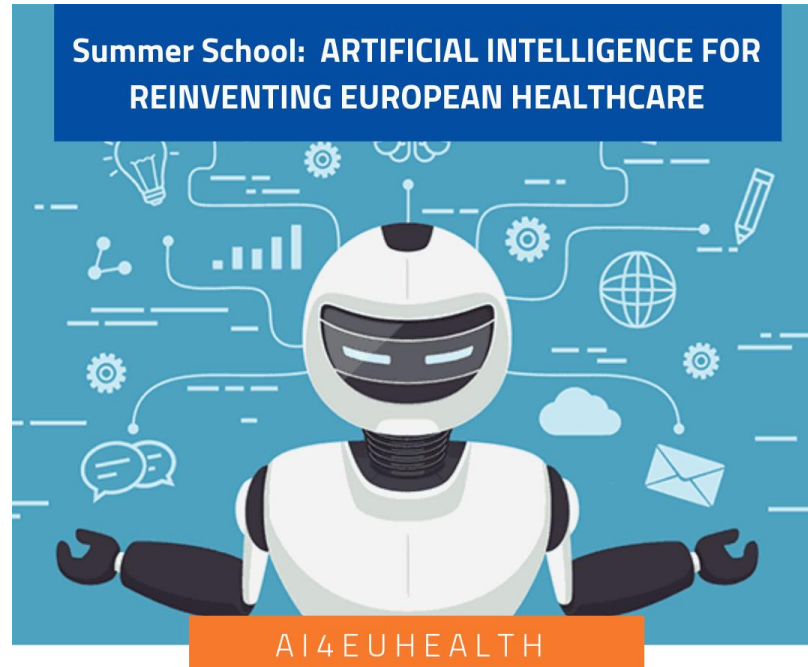
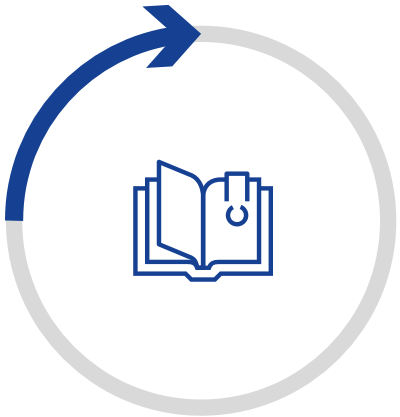
A unique and intensive four-day experience that gathers world-class faculty, innovators and organizations from across the biomedical and technology spectrum to explore and leverage the convergence of fast moving technologies in the reinvention of health and medicine.

<https://exponential.singularityu.org/medicine/>

Example in practice:

Ai4euhealth (Artificial Intelligence for Reinventing European Healthcare)

We educate.



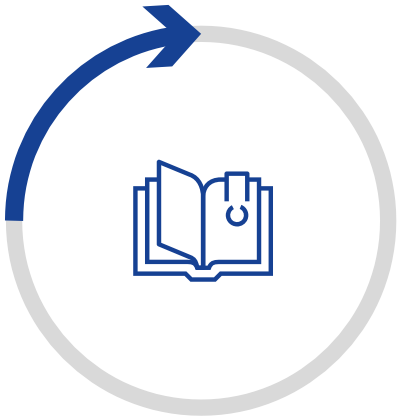
- The participants will explore the practical and theoretical implementation of AI and its challenge
- New ways to reinvent European healthcare in response to its future needs will be sought out
- Location: Archamps, France
- Run Dates: 1-12 July, 2019



Example in practice:

Digital Health Companions for Chronic Diseases Health Companions

We educate.



- This summer school explores ways to address the increasing number of chronic pain cases.
- With the help of the partners, the participants will have exposure to remote monitoring and healthcare companion software.
- Location: Munich, Germany
- Run Dates: 12 July, 2019

Thank you.

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Annex: Skill Groups defined

DIGITAL & DATA LITERACY



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INTERPERSONAL AND CITIZEN-ORIENTATED SKILLS



SKILLS

- Empathy
- Emotional intelligence
- Reflectivity & self-interrogation
- Adopting a non-confrontational approach
- Patient service & engagement skills
- Cultural sensitivity

DEFINITION

The skills necessary to allow for emotional connection and mutual understanding to emerge between individuals.



BEST PRACTICES EIT HEALTH

Co-cReating Innovative Solutions for Health (CRISH)

Teach professionals and citizens about co-creating together to bring together people's health.



BEST PRACTICES AROUND THE GLOBE

"Educating physician leaders": Teaching doctors how to provide feedback, communicate with their patients in a culturally appropriate manner, set goals and continually learn to keep themselves scientifically updated. ([Dell Medical School, Texas/US](#))

INTER-PROFESSIONAL & MULTIDISCIPLINARY SKILLS



SKILLS

- Coordinating skills
- Collaboration skills
- Interdisciplinary competence
- Team working skills
- Team building skills
- Virtual collaboration skills

DEFINITION

The capacities needed for common understanding to build knowledge bridges between distinct fields and foster collaboration with the purpose of co-creation.



BEST PRACTICES EIT HEALTH

CARE Campus

ensure improved quality of care for seniors in need, increase the numbers of new professional caregivers.



BEST PRACTICES AROUND THE GLOBE

Interprofessional Healthcare

The degree programme is aimed at prospective students who wish to acquire the basics of health care science, practical competences and critical judgement skills in interdisciplinary exchanges ([Uni Heidelberg](#)).

HEALTH SYSTEM SKILLS



SKILLS

- Knowledge of care systems
- Coordinating efficient primary care
- Health systems thinking
- Self-awareness
- Responsibility taking

DEFINITION

The skills needed to be able to understand one's role in the larger healthcare system and to understand direct & indirect implications of one's actions.



BEST PRACTICES EIT HEALTH

The Future Healthcare Manager
Improving the capabilities of healthcare managers and leaders.



BEST PRACTICES AROUND THE GLOBE

Executive Master in "Evaluation of Health Care Interventions and Outcomes" teaching healthcare professionals how to critically evaluate health programs and policies in the context of a globalized world.
(London School of Economics)

LEADERSHIP & MANAGEMENT SKILLS



SKILLS

- Prioritization skills
- Organization skills
- Tenacity
- Positive Mindset
- Leadership
- Up-Skilling Oneself
- Self-Management
- Project management
- Change management

DEFINITION

The skills required to successfully organize available resources to accomplish an ascertained goal.



BEST PRACTICES EIT HEALTH

Advanced Management Programme on Health Innovation

Empower executives have the skills to lead change and develop and implement new services and solutions. So that it can drive the kind of innovation that is key to future sustainability within healthcare.



BEST PRACTICES AROUND THE GLOBE

M.D./M.B.A. Programme

Training medical doctors in medicine and business administration through an innovative educational programme ([Johns Hopkins University, Baltimore/US](#))

The Innovative Health Care Leader

Training senior health policy makers and executives in design thinking, negotiation, leadership and dealing with uncertainty. ([Stanford Medicine, California/US](#))

ENTREPRENEURSHIP & INNOVATION



SKILLS

- Creativity
- Design Thinking
- Engineering skills
- Initiative taking
- Intrapreneurship
- Business knowledge/creation skills
- Commercialization skills
- Marketing skills

DEFINITION

The capacities to conceptualize new ideas and materialize them at the expense of potential risks.



BEST PRACTICES EIT HEALTH

EIT Health Innovation Fellowships

Training young professionals on how to identify needs by using the Biodesign methodology.



BEST PRACTICES AROUND THE GLOBE

MIT Delta v Summer Accelerator

fostering innovation and collaboration among students keen on launching their own start-ups. ([Massachusetts Institute of Technology, Massachusetts/US](#))

Biodesign Innovation Fellowship

preparing entrepreneurs to understand the needs in healthcare & to come up with and develop ideas meant to make the life of patients easier. ([Stanford Biodesign, California/US](#))

CRITICAL THINKING & DECISION MAKING



SKILLS

- Reasoning skills
- Problem solving skills
- Forecasting skills
- Logical thinking
- Research skills
- Risk Assessment skills
- Self-awareness

DEFINITION

The skills required to objectively assess facts and use evidence to identify the best course of action.



BEST PRACTICES EIT HEALTH

Silver!

Train seniors to start a new ventures, businesses and other new career paths in healthy living and active ageing. Provide individual learning pathway and learn essentials about entrepreneurship, career-development at *and advanced age*.



BEST PRACTICES AROUND THE GLOBE

National Institute of Health (NIH) training center

“In today's complex, data-driven world, professionals face many "gray" areas in which they need to think critically and exercise personal judgment. This course offers tools and techniques for sharpening the "gray cells" of the brain for clearer thinking and more effective decision-making.”

<https://hr.nih.gov/training-center/courses/critical-thinking-problem-solving-and-decision-making>

COMMUNICATION SKILLS



SKILLS

- Negotiation skills
- Teaching & training skills
- New-media literacy skills
- Social Media skills
- Smartphone-specific skills

DEFINITION

The skills concerned with explicit and implicit modes to deliver meaning between individuals.



BEST PRACTICES EIT HEALTH

Smart Teacher, Healthy Loneliness, ExCEL Network



BEST PRACTICES AROUND THE GLOBE

Providing future healthcare professionals with strong communication skills necessary for their navigation in the world of healthcare management and policy.

(Harvard T.H. Chan School of Public Health, Massachusetts/US)

Thank you.

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