



# The MedTech Forum

bringing HealthTech stakeholders together

**14-16 MAY**  
**2019**  
—  
Paris  
**FRANCE**

## Digital Healthcare Transformation. How to drive on a bumpy road.

Joan Cornet Prat. Director of the Digital Health Observatory.  
ECHAlliance. Barcelona Hub.



*Anatomy Lesson Dr. Willem van der Meer , 1617*

We know a lot about  
technologies, but we know  
little about humans...

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# Projected world population until 2100

1990



5.3  
billion

2015



7.3  
billion

2030



8.5  
billion

2050



9.7  
billion

2100



11.2  
billion

Source: United Nations Department of Economic and Social Affairs,  
Population Division, *World Population Prospects: The 2015 Revision*  
Produced by: United Nations Department of Public Information



2015  
TIME FOR  
GLOBAL ACTION

## Making the case for smarter investing in health:

highlights of "Health at a Glance: Europe 2018"



Health spending  
accounts for  
**9.6% of GDP**



**Up to one-fifth of  
health spending is  
inefficient** and could  
be used for other care  
needs



**1 in 6 people  
has a mental  
health issue**



Low income  
households have  
**5 times higher  
unmet** care needs  
than high income

Unnecessary admissions consume  
over **37 million hospital bed  
days** each year

Direct and indirect costs  
adding up to more than  
**4% of the GDP**  
(over EUR 600 billion)

## PREVENTION REMAINS A PRIORITY

MORE THAN 790 000 DEATHS PER YEAR DUE TO BEHAVIOURAL RISK FACTORS



**20%**  
ADULT EU  
CITIZENS  
ARE SMOKERS



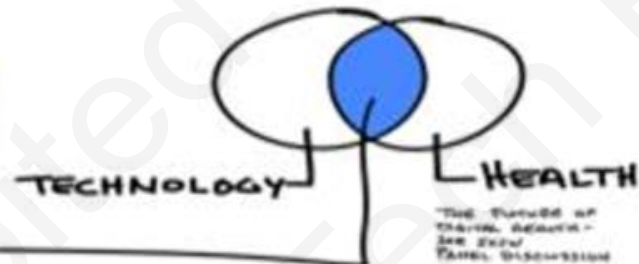
**38%**  
ADOLESCENTS  
REPORTED  
BINGE-DRINKING



**1 IN 6**  
ADULT EU  
CITIZENS  
ARE OBESE



# DIGITAL HEALTH



## REVOLUTION

MEDICINE WILL BE REVOLUTIONIZED BY THE "INTERNET OF THINGS," A WORLD OF INTERCONNECTED SENSOR-LADEN DEVICES AND OBJECTS.

THE INTERNET OF THINGS IS REVOLUTIONIZING MEDICINE - DR. EUGENE NG

## INDIVIDUALIZED MEDICINE ENABLED BY DIGITIZING HUMANS

THE CREATIVE DESTRUCTION OF MEDICINE - DR. EUGENE NG

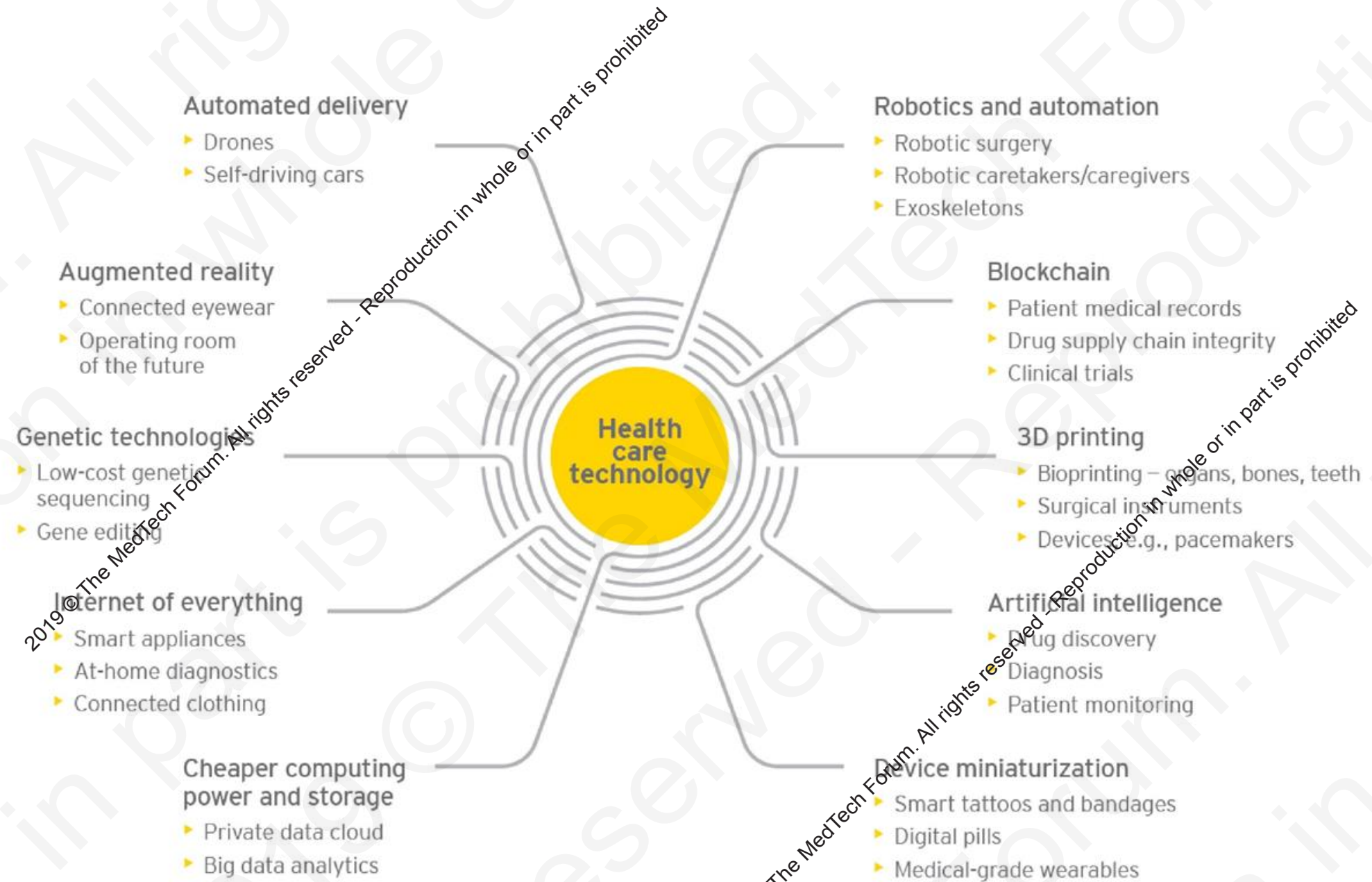
JEFF BENNETT  
DIGITAL SPLASH MEDIA.COM



We need a  
story of digital  
health ...

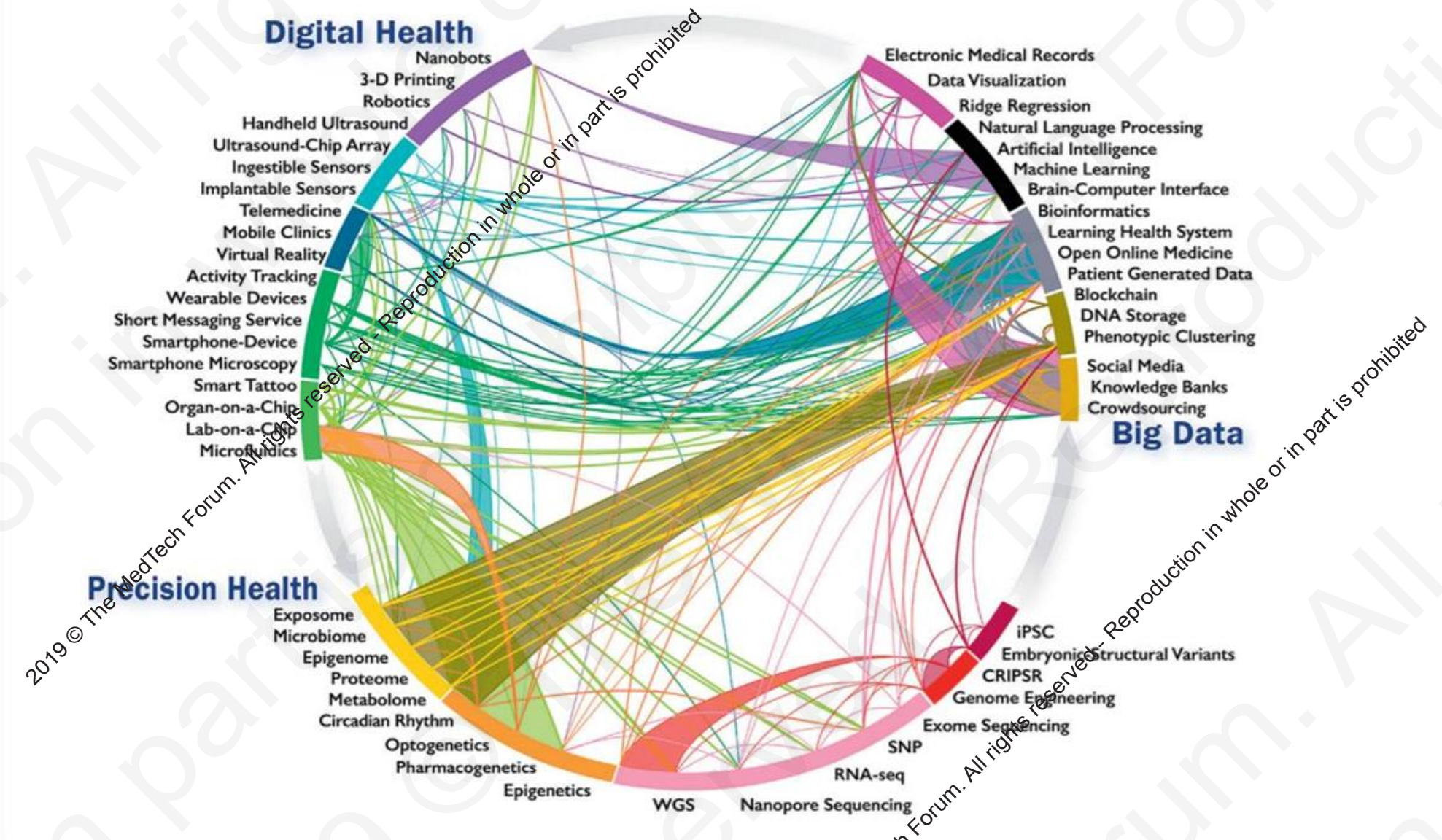
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Source: EY, World Economic Forum.





Infographic of emerging innovations and developments in digital health (14–32), big data (33–51), and precision health (52–78) and their intraconnections and interconnections. 3d indicates 3-dimensional; CRISPR, clustered regularly interspaced short palindromic repeats; DNA, deoxyribonucleic acid; iPSC, induced pluripotent stem cells; RNA, ribonucleic acid; SNP, single nucleotide polymorphism; WGS, whole genome sequencing.



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## DIGITAL HEALTH TRANSFORMATION TRENDS

1. **Telemedicine is Fast Becoming a Necessity**
2. **Internet of Medical Things (IoMT) Irruption in the market**
3. **Chatbots Serving as Digital Assistants to Physicians**
4. **Growing role of Artificial Intelligence (AI) in Healthcare**
5. **Rapid Acceleration in Adoption of Cloud Services**
6. **Big Data Analytics is Redefining the Dynamics of Digital Healthcare Industry**
7. **Healthcare Robotics**

## Digital Transformation in healthcare: 6 key challenges

**Fear of change**

**The cost factor**

**Security of data**

**The silo effect**

**Missing the big picture**

**Ethical dimension**

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**NEW SKILLS**

# HEALTH SKILLS OF THE FUTURE

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# 2022 Skills Outlook

## Growing

- 1 Analytical thinking and innovation
- 2 Active learning and learning strategies
- 3 Creativity, originality and initiative
- 4 Technology design and programming
- 5 Critical thinking and analysis
- 6 Complex problem-solving
- 7 Leadership and social influence
- 8 Emotional intelligence
- 9 Reasoning, problem-solving and ideation
- 10 Systems analysis and evaluation

Source: Future of Jobs Report 2018, World Economic Forum



COMMITTED TO  
IMPROVING THE STATE  
OF THE WORLD

## Declining

- 1 Manual dexterity, endurance and precision
- 2 Memory, verbal, auditory and spatial abilities
- 3 Management of financial, material resources
- 4 Technology installation and maintenance
- 5 Reading, writing, math and active listening
- 6 Management of personnel
- 7 Quality control and safety awareness
- 8 Coordination and time management
- 9 Visual, auditory and speech abilities
- 10 Technology use, monitoring and control





# Health Skills of the Future: the EIT Health Education Needs Analysis

EIT Health Campus

Discussion Paper, December 2016



EIT Health is supported by the EIT,  
a body of the European Union



To understand how the health profession will change we need to understand seven ongoing trends which are driving the 4<sup>th</sup> industrial revolution and how they are affecting the skill needs.

### DISRUPTIVE Trends

Trends that are beyond our control in reshaping healthcare

(1) Aging society

(2) Digitalization

(3) Personalisation

(4) Patient Empowerment



### REACTIVE Trends

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

(5) Prevention & Prediction

(6) Managing chronic diseases

(7) Remote Healthcare



Based on our three-step approach, we identified 8 skill categories that meet the skill demands of the market and contribute to strengthen our strategic ambitions.







WE NEED  
COMMUNITIES OF  
KNOWLEDGE AND  
PRACTICE...

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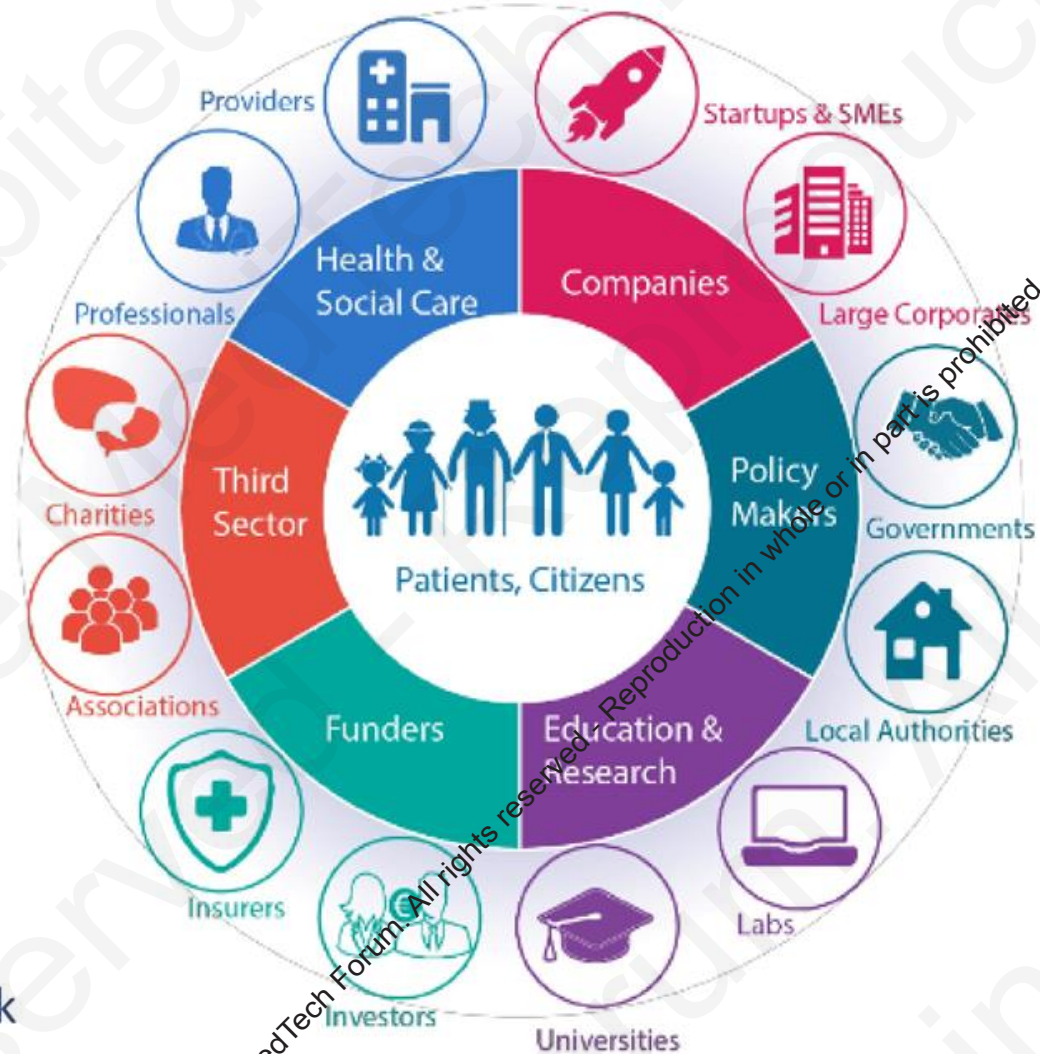
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# ECHAlliance Ecosystems: Basic Principles

## Ecosystem Principles:

- Based on a geographic area
- Multi-sector stakeholders gathering
- Accessible to all (no barriers)
- Permanent, with regular gatherings
- Light governance via working group
- Shared strategy & action plan
- Lead with a need
- Member of an International network
- **Patients / Citizens at the centre**





CATEGORY: KNOWLEDGE



INDUSTRY AND START-UPS

INNOVATION & RESEARCH

11 March, 2019 | No Comments

## DIGITAL THERAPEUTICS: LOOKING FOR THEIR PLACE IN HEALTHCARE

Health care:  
the cross-currents  
of convergence deliver  
participatory health

A second paper in the  
Health Reimagined series

INDUSTRY AND START-UPS

KNOWLEDGE

19 February, 2019 | No Comments

## HEALTHCARE: THE CROSS- CURRENTS OF CONVERGENCE DELIVER PARTICIPATORY HEALTH

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AT THE END OF THE DAY, WE CARE ABOUT PEOPLE. TECHNOLOGY IS ONLY A TOOL...

THANK YOU !!!



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