



**bcsdh**

Magyarországi Üzleti Tanács a Fenntartható Fejlődésért  
Business Council for Sustainable Development in Hungary

**10 év**  
Vállalatok a  
fenntartható  
jövőért

# Technology and Humanity: the next 10 years



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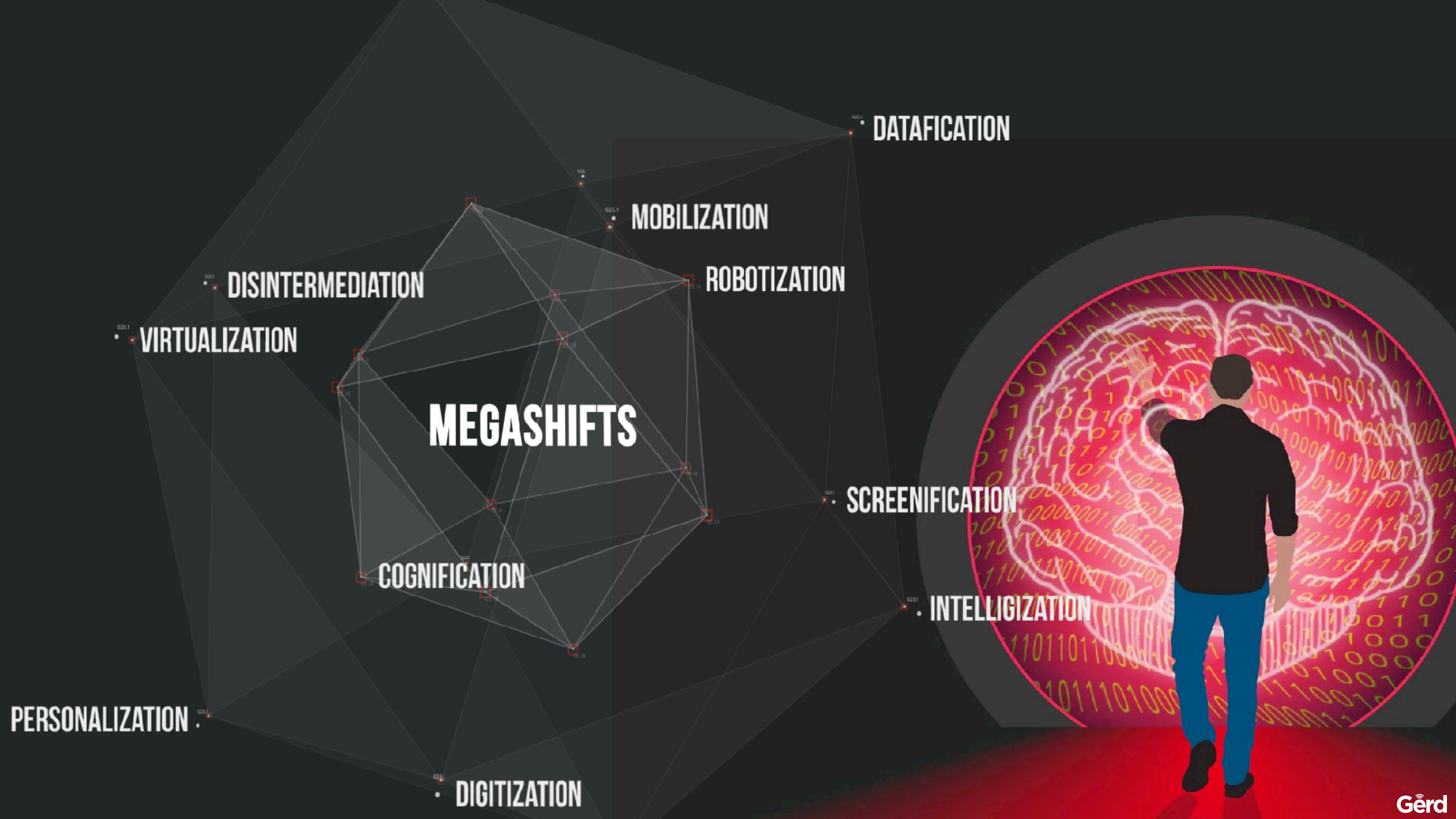


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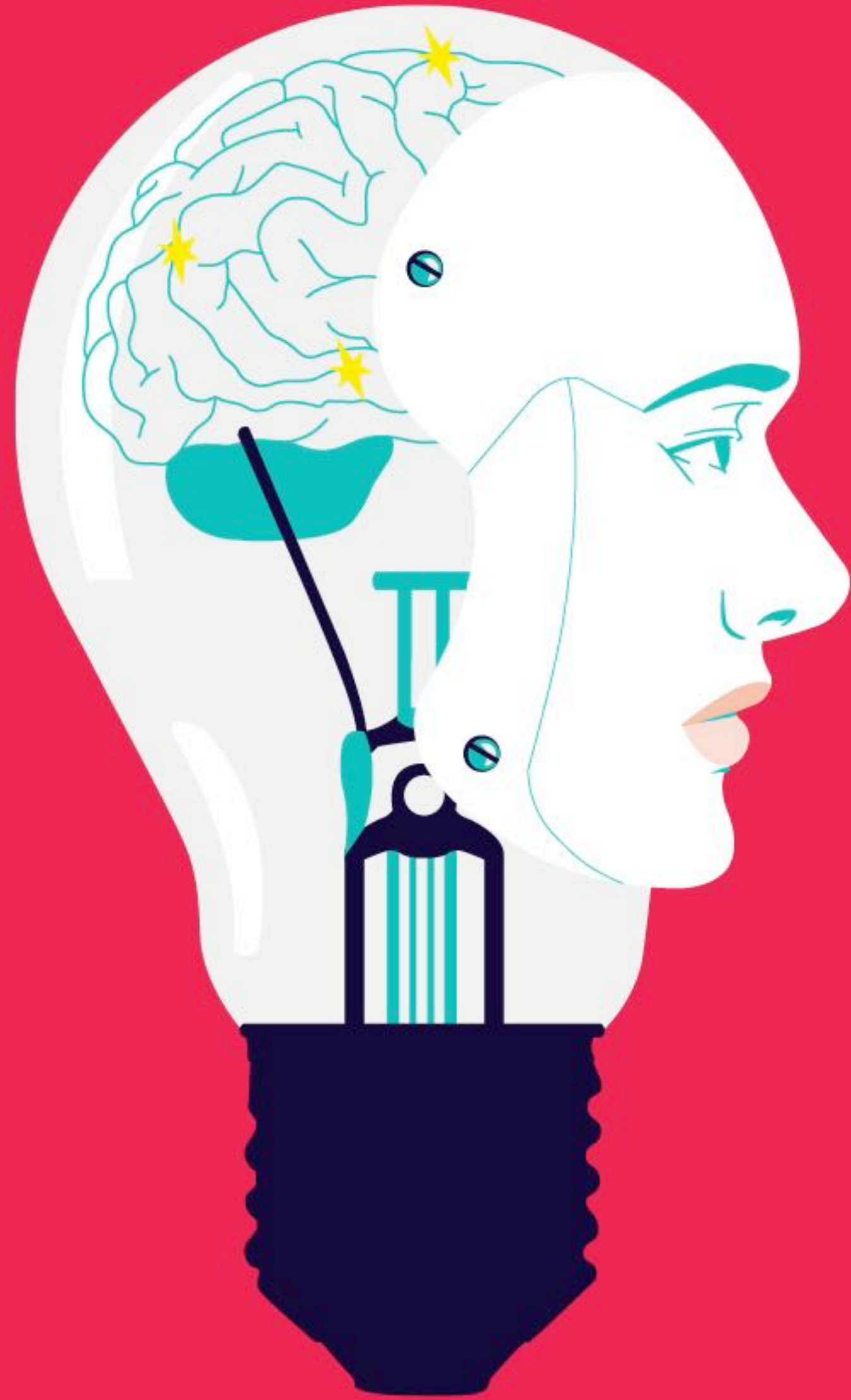


[futuristgerd.com](http://futuristgerd.com)

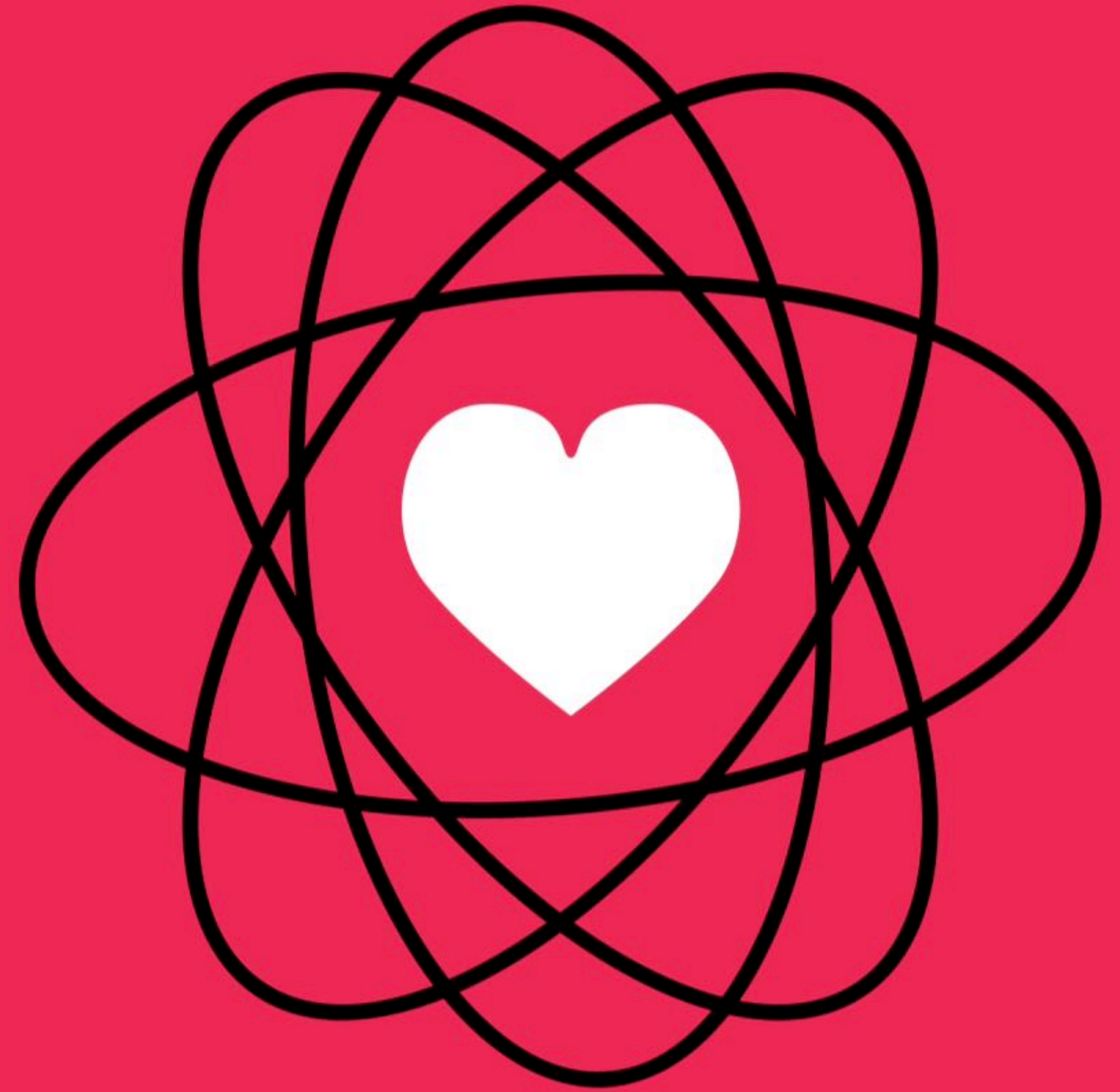








**Algorithms**



**Androrithms**



# Exponential technological change is the key driver of change, worldwide



**Intel engineers did a rough calculation of what would happen had a 1971 Volkswagen Beetle improved at the same rate as microchips did based on Moore's Law: Today, you would be able to go 300,000 miles per hour in this car. You would get two million miles per gallon of gas, for a cost of 4 cents.**



We're at the  
**take-off point**  
of exponential  
change

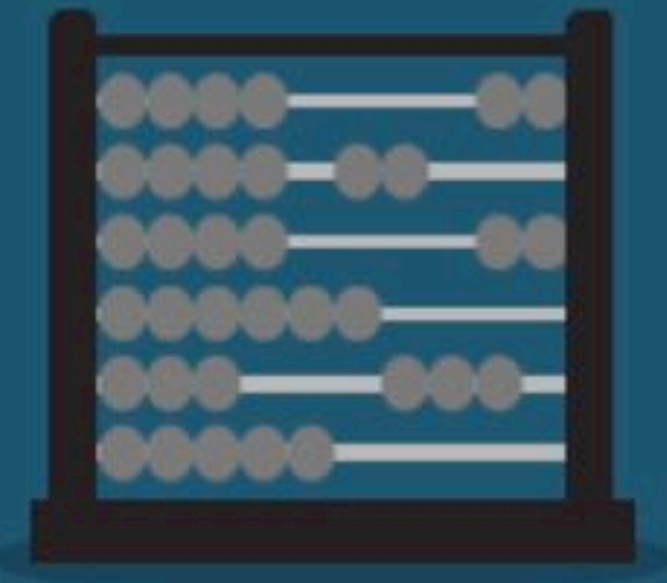
The end of oil  
Quantum computing  
Intelligent machines AI, ML  
AR, VR and Mixed Reality  
Smart-everything and data<sup>x</sup>  
Hyper-connectivity



1 2 **4** 8 16 32 64 128

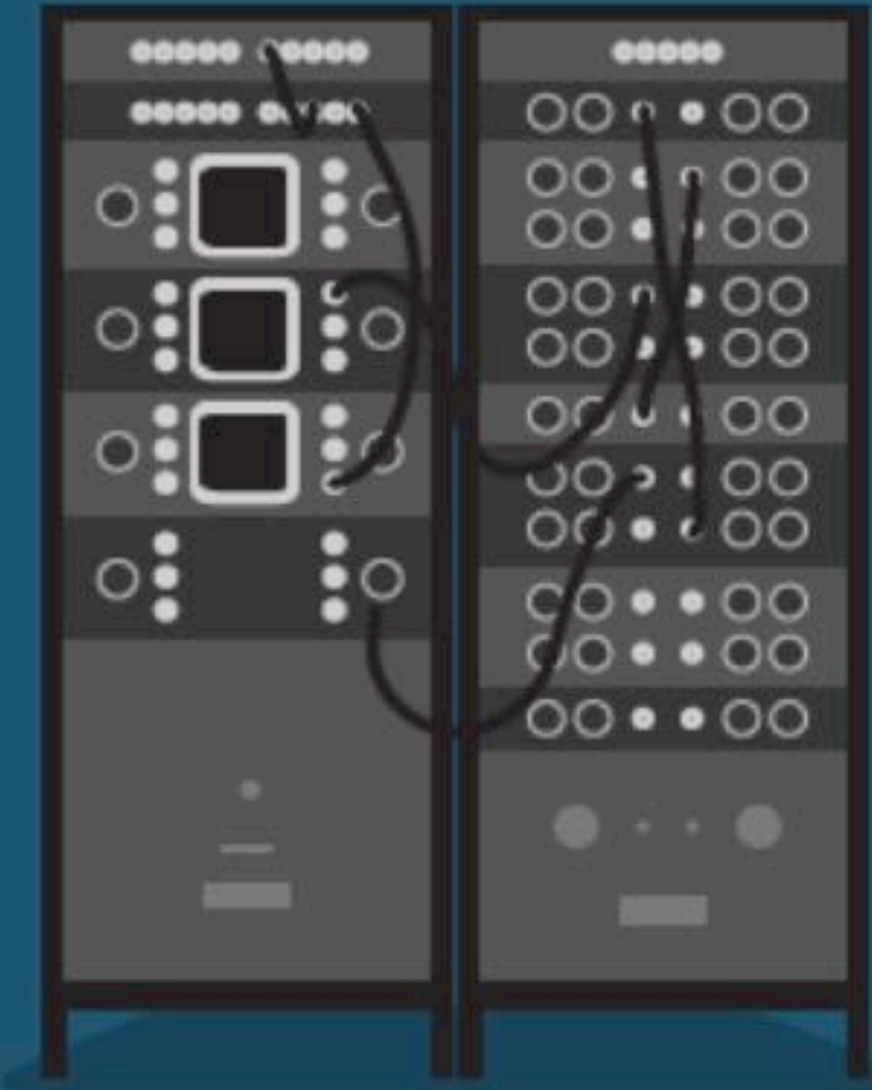


# Very soon, computers can hear us, see us, and understand us – and they won't be programmed but **taught!**



*Tabulating  
Systems Era*

1900



*Programmable  
Systems Era*

1950

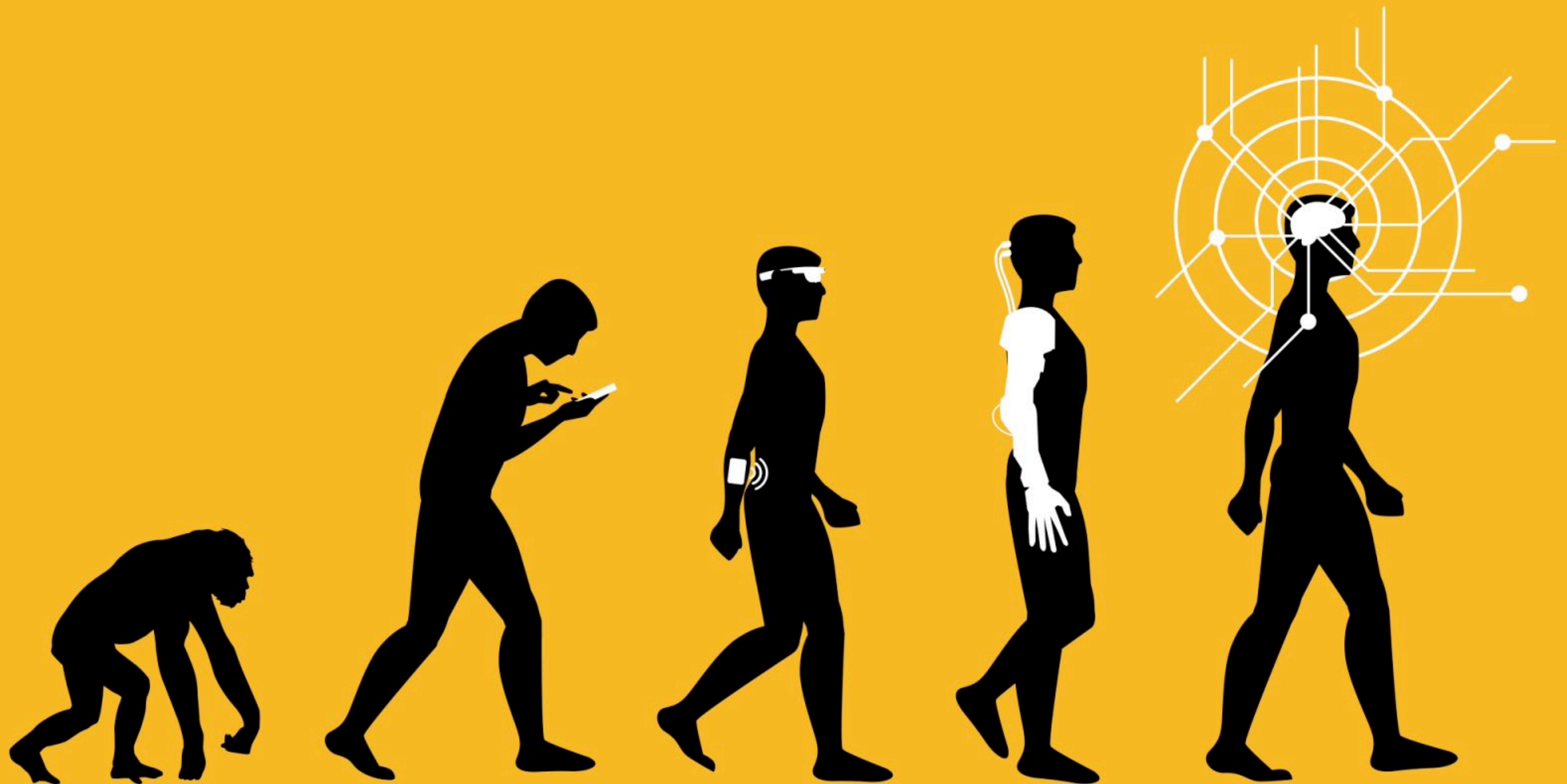


*Cognitive  
Systems Era*

2011



Humanity will change more in the next 20 years than the previous 300 years





Humanity will change more in the next 20 years than the previous 300 years





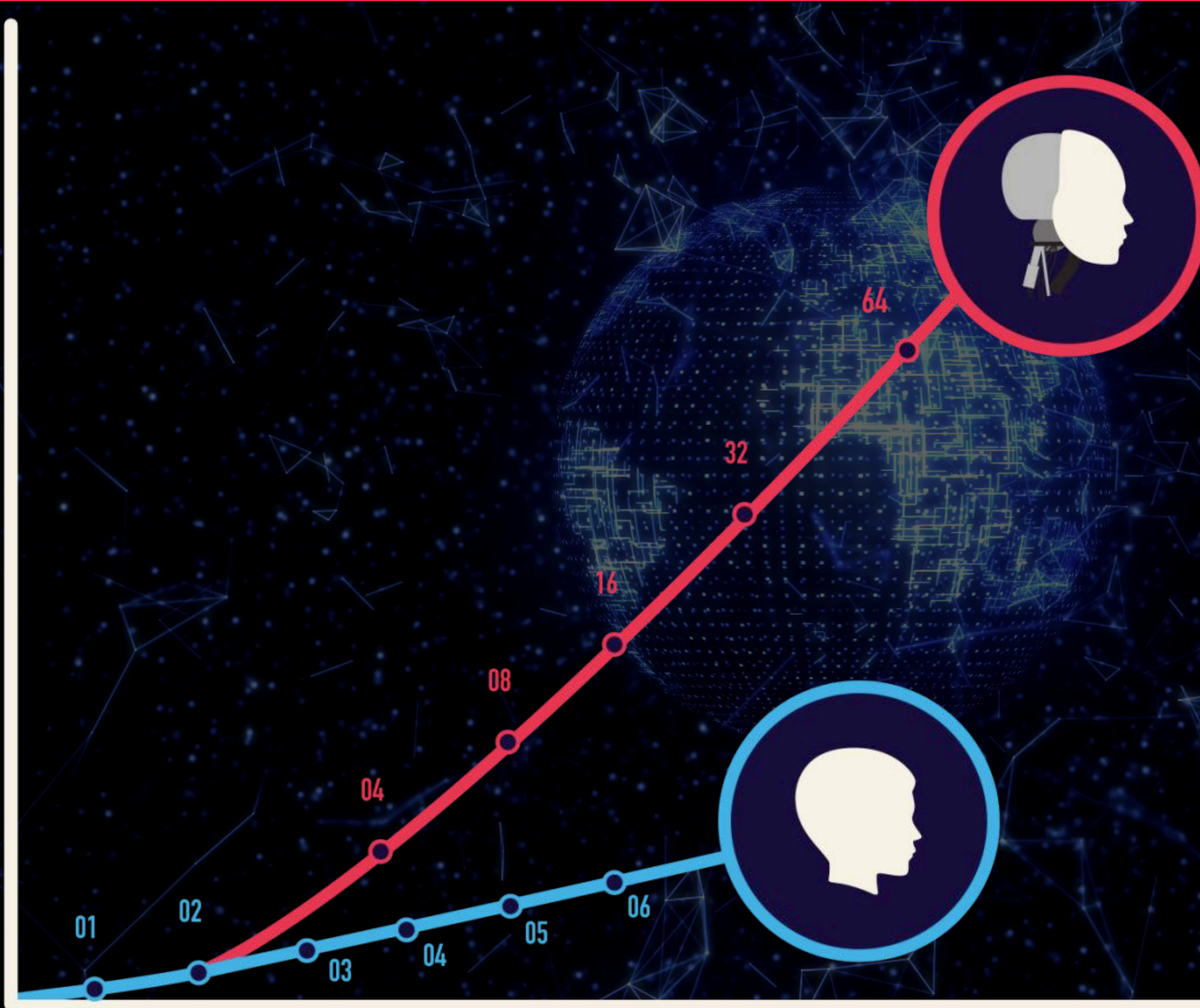
**"Ethics is knowing the difference between what you have a right  
(or the power) to do and what is the right thing to do"** adapted from Potter Stewart



**TECHNOLOGY HAS NO ETHICS**

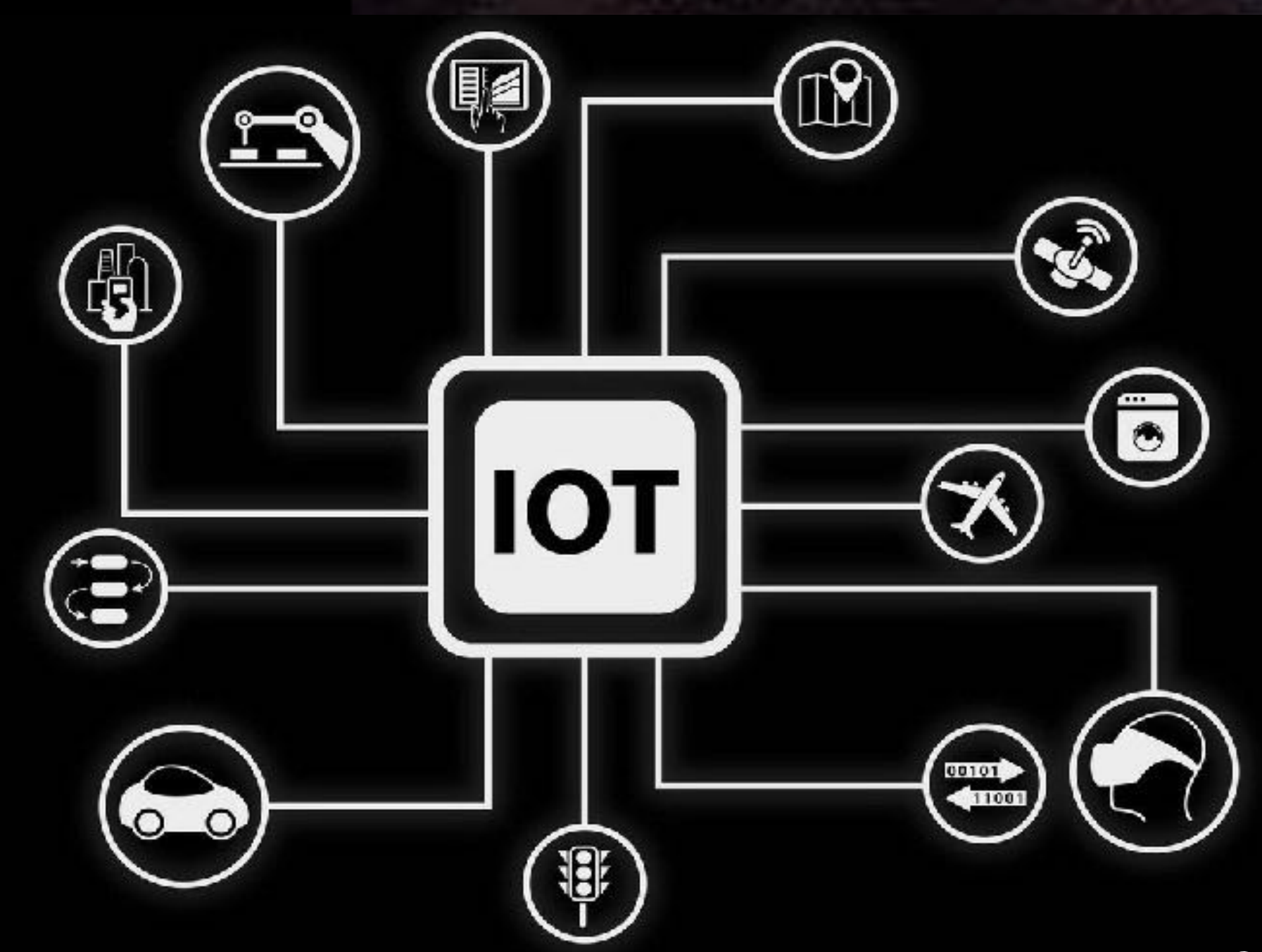
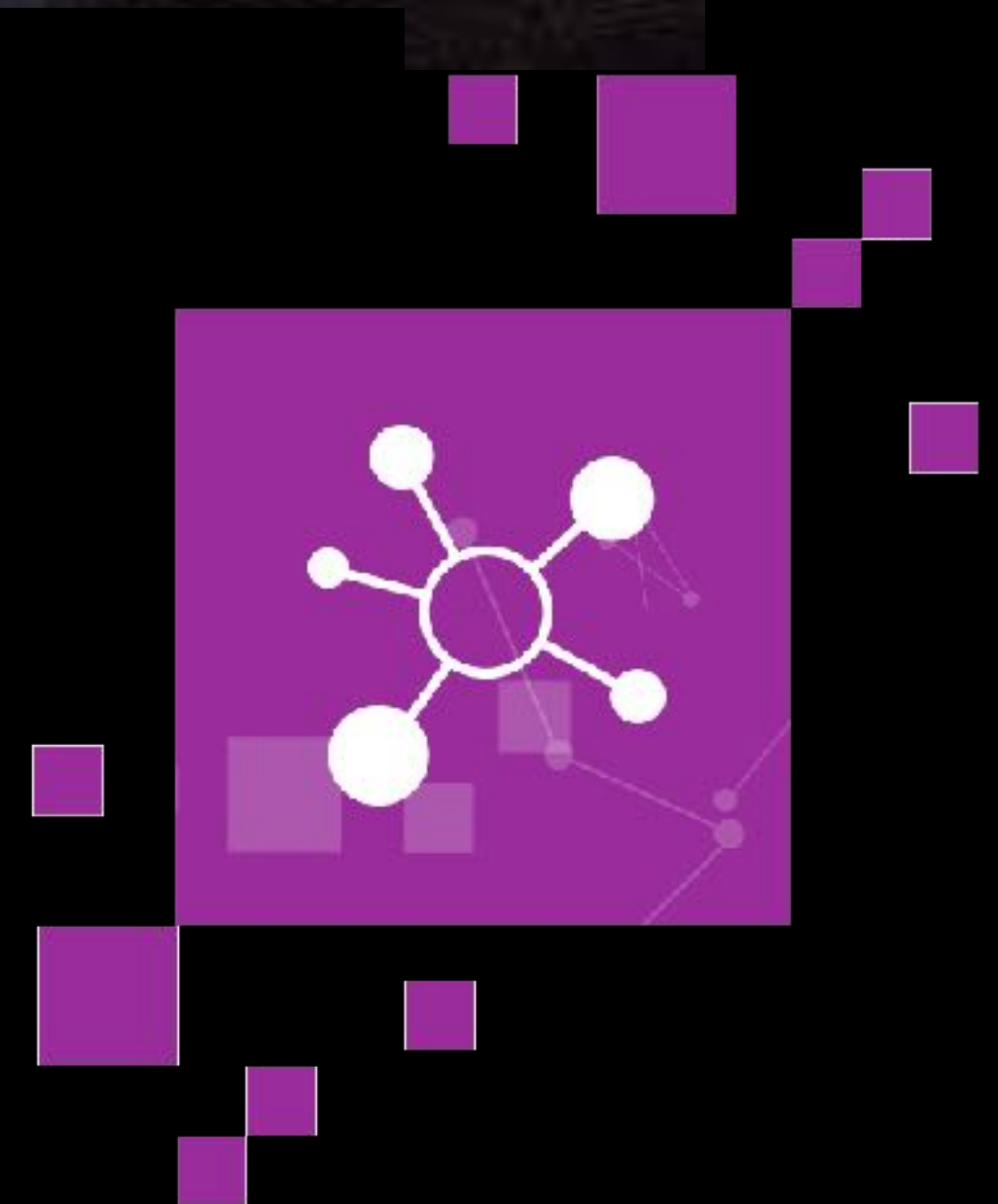


# Technology is exponential but humans are linear – sustaining humanity is the #1 challenge





# Game-changers: Big+Intelligent Data, Machine Intelligence, the IoT, Human Genome Editing





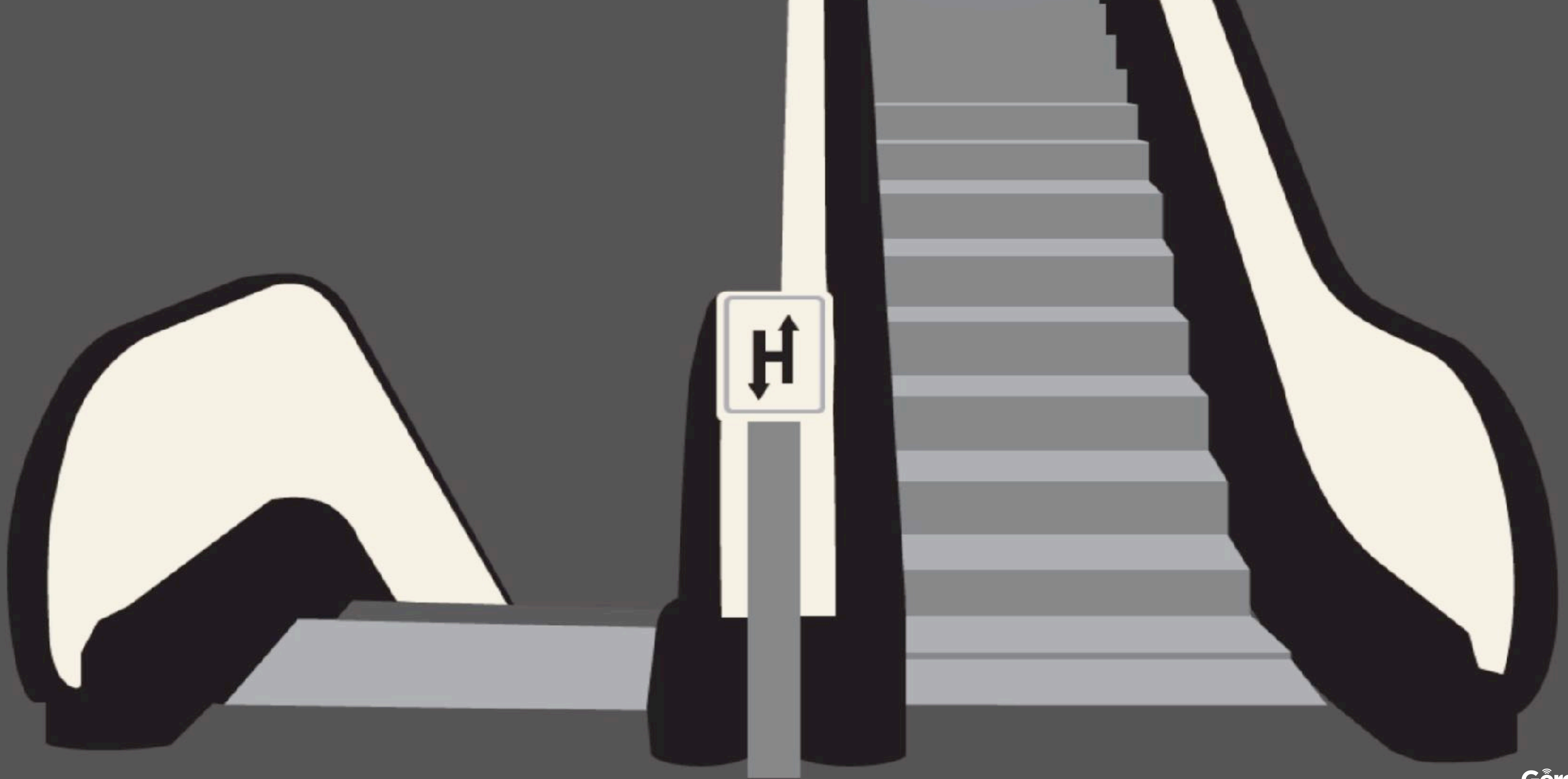
**90% opportunity – 10% issues \***

**But how much connectivity / technology is humanly sustainable?**

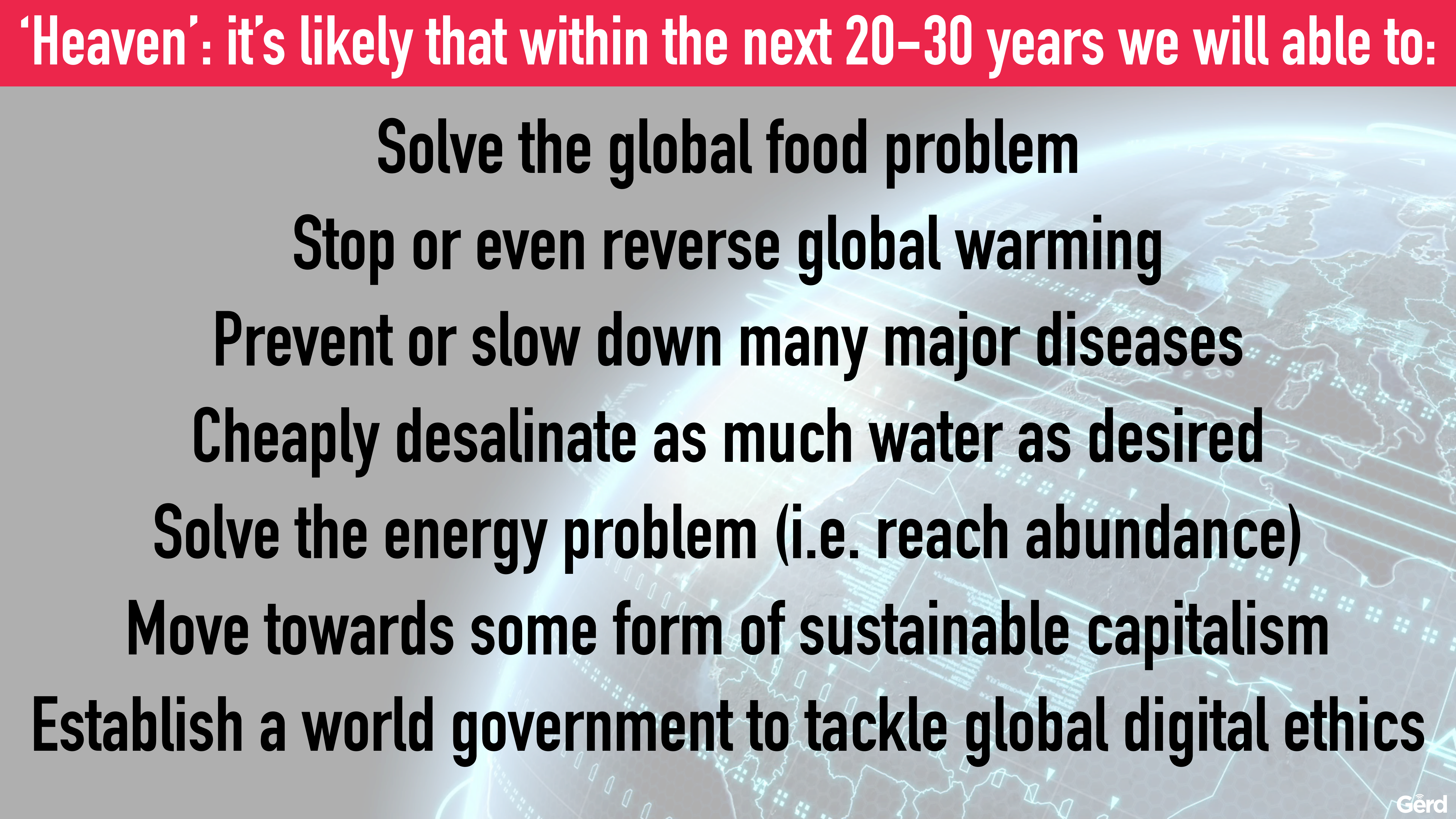




# Exponential technological progress is heaven+hell (#hellven)







**'Heaven': it's likely that within the next 20–30 years we will be able to:**

**Solve the global food problem**

**Stop or even reverse global warming**

**Prevent or slow down many major diseases**

**Cheaply desalinate as much water as desired**

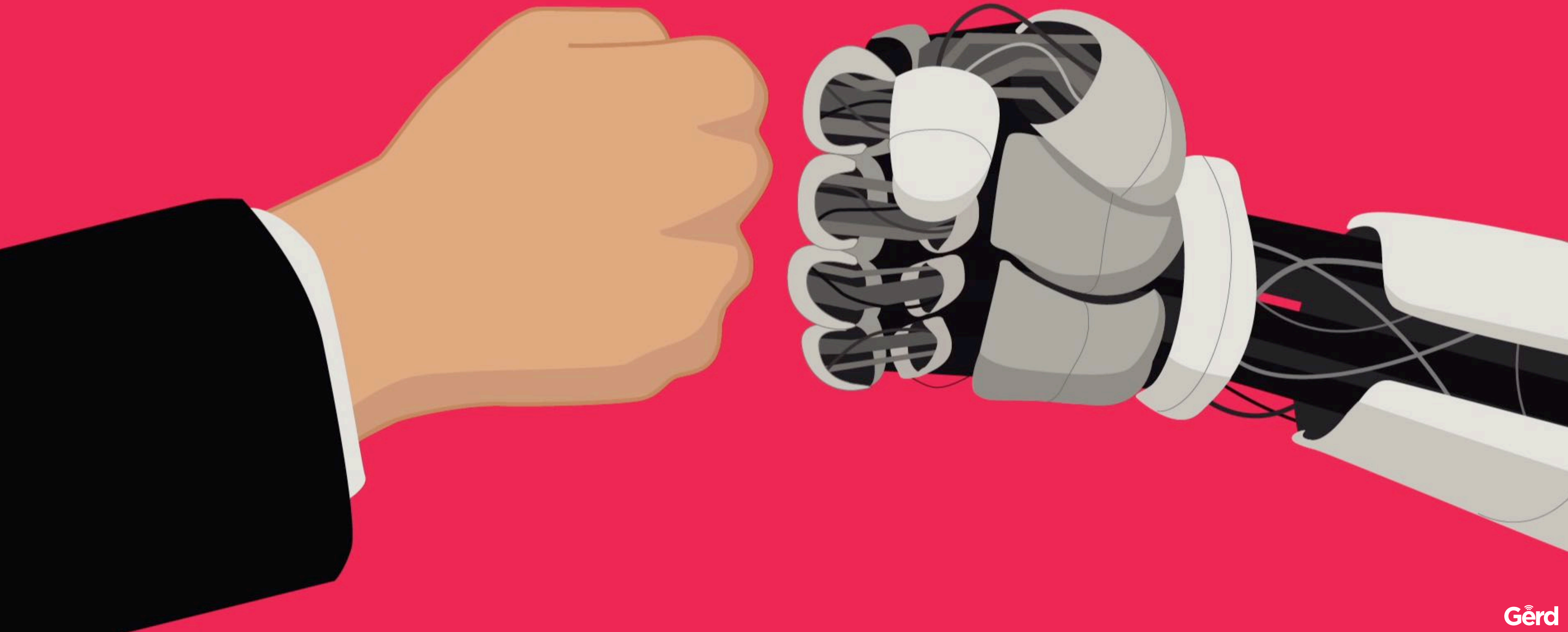
**Solve the energy problem (i.e. reach abundance)**

**Move towards some form of sustainable capitalism**

**Establish a world government to tackle global digital ethics**



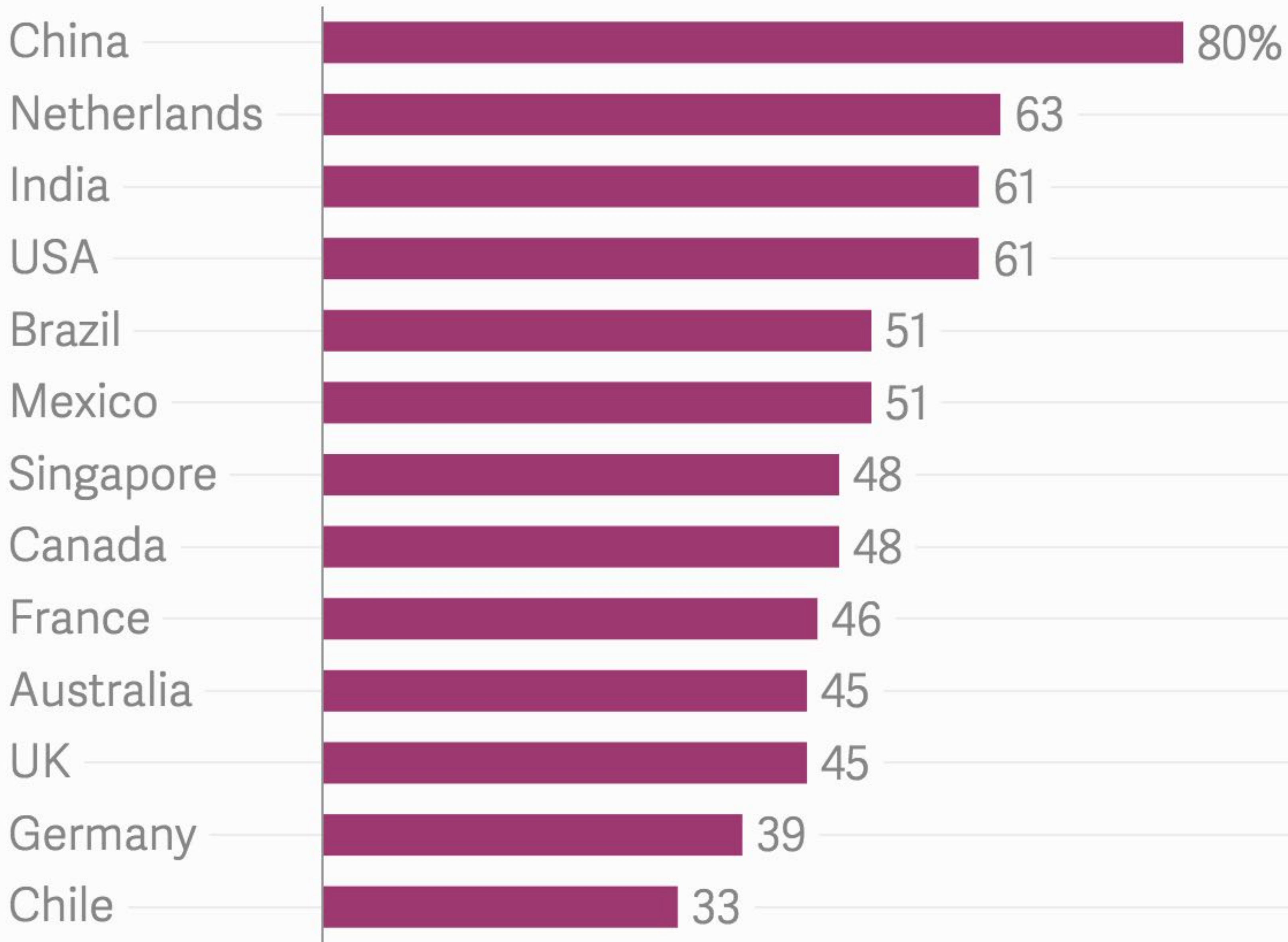
But increasing dehumanisation as a result of extremely powerful, cheap and omnipresent technology could also be **hell**





# AI and other tech will replace people for repetitive work

Respondents who agreed







Are humans the  
**horses** of the  
coming  
digital  
era?

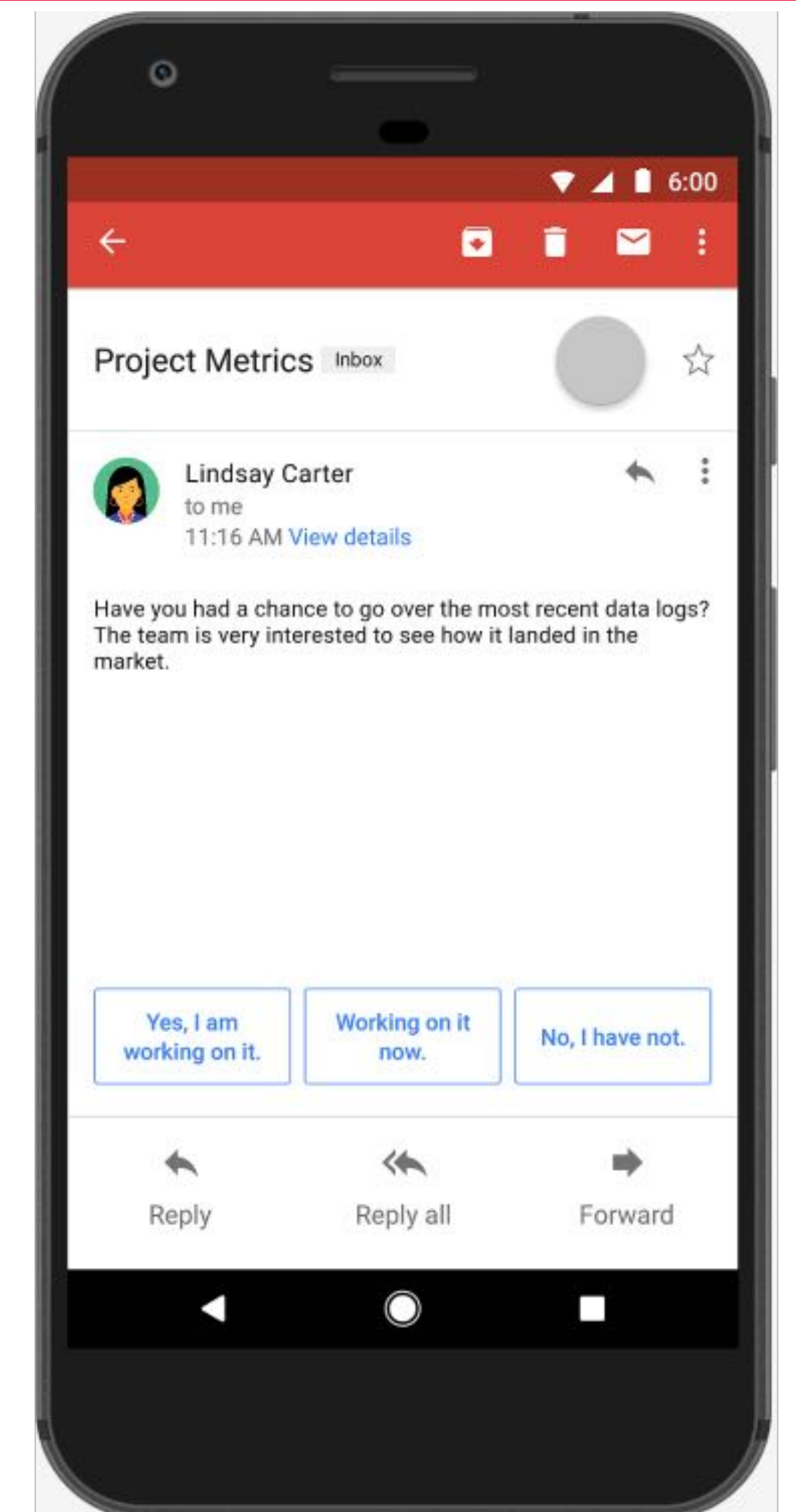


**Artificial Intelligence: “Computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages”**



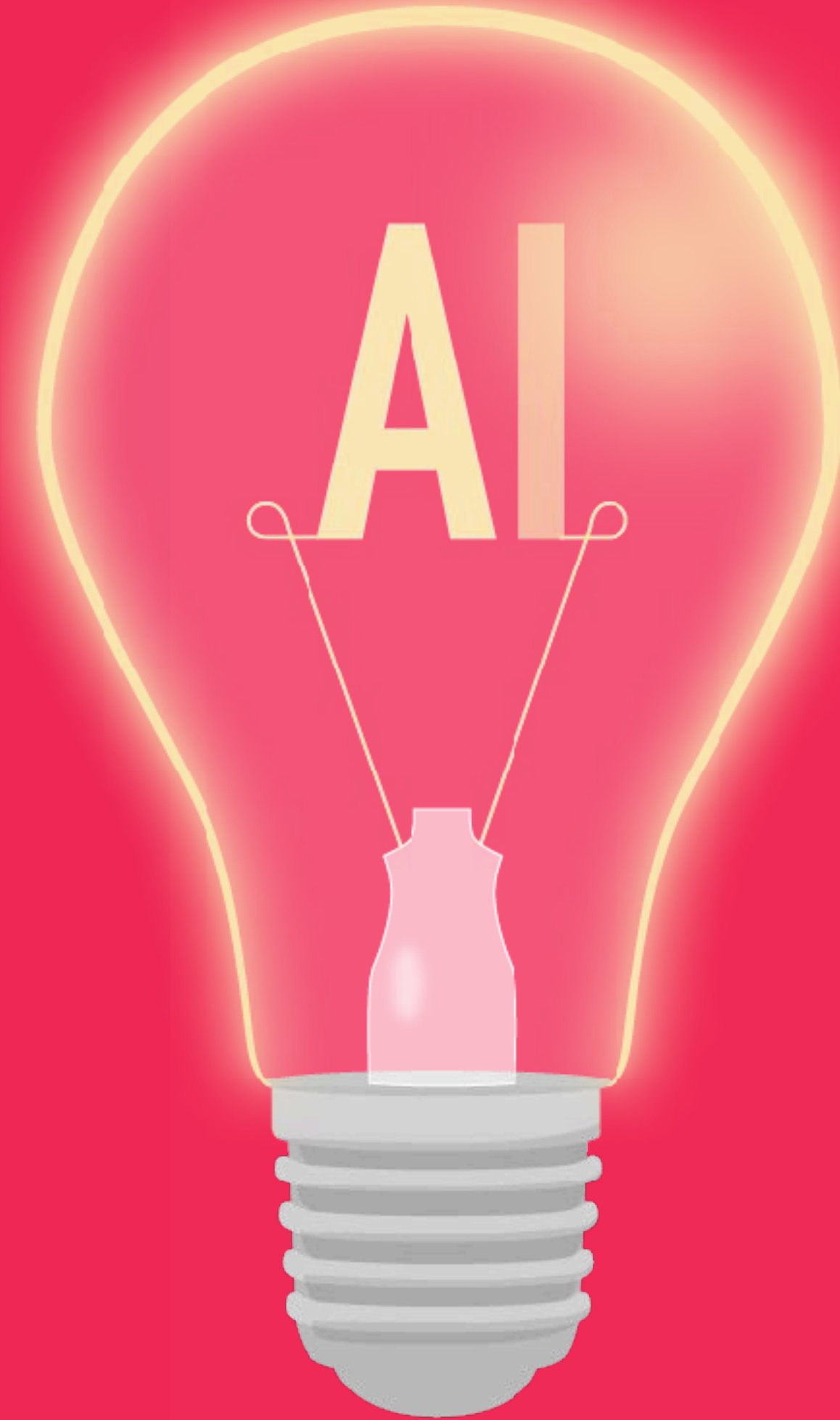


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# Data is the new oil, and AI is the new electricity: huge economic forces!

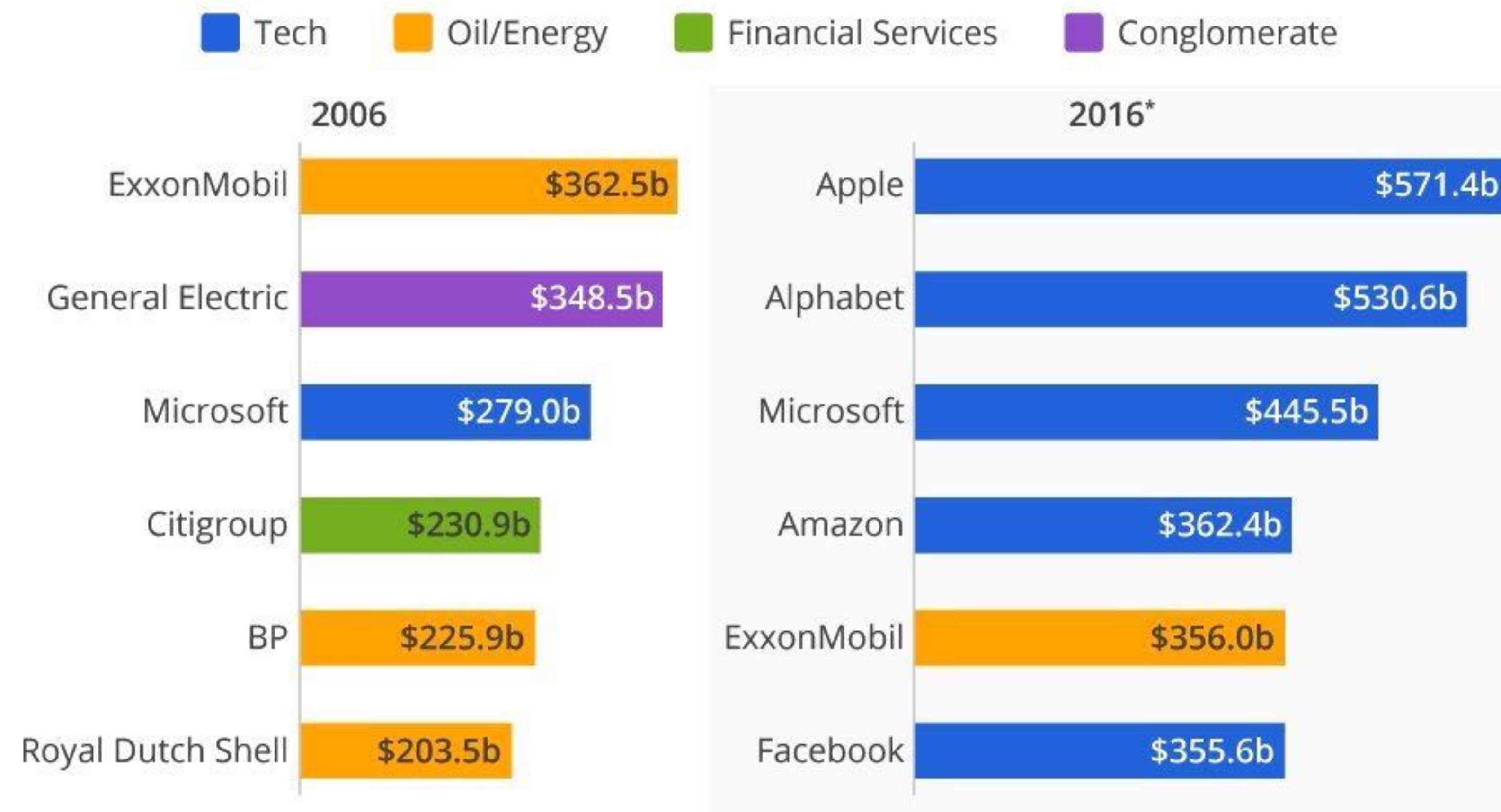




Technology now has more power than oil or banking ever did. Ethics? Regulation? Social contracts?

## The Age of Tech

Market capitalization of the world's most valuable public companies





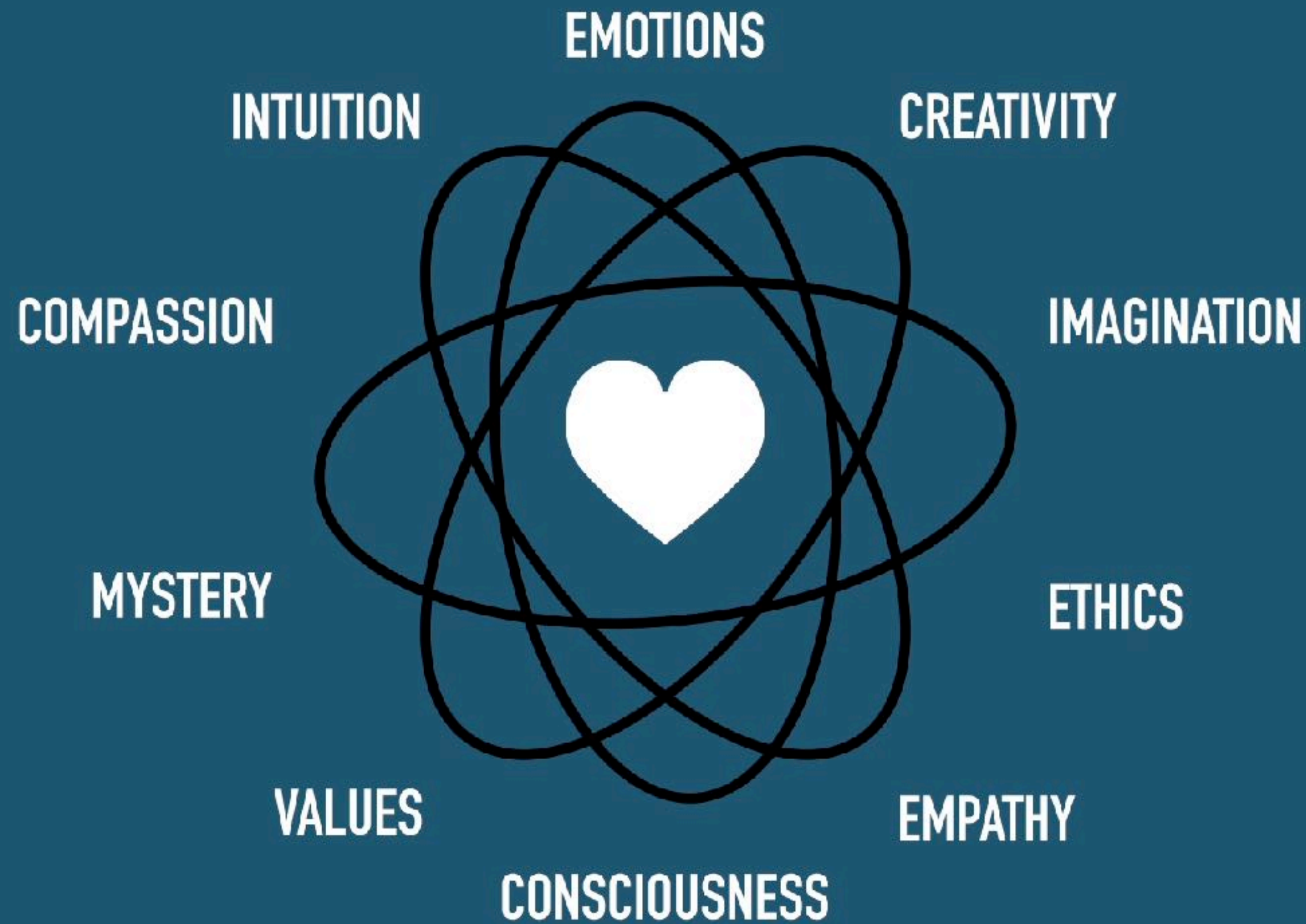
# Technology now has more power than oil or banking ever did. Ethics? Regulation? Social contracts?



Rank	Company	Region	Current Market Value (\$B)
1	Apple	USA	\$801
2	Google - Alphabet	USA	680
3	Amazon	USA	476
4	Facebook	USA	441
5	Tencent	China	335
6	Alibaba	China	314
7	Priceline	USA	92
8	Uber	USA	70
9	Netflix	USA	70
10	Baidu	China	66
11	Salesforce	USA	65
12	Paypal	USA	61
13	Ant Financial	China	60
14	JD.com	China	58
15	Didi Kuaidi	China	50
16	Yahoo!	USA	49
17	Xiaomi	China	46
18	eBay	USA	38
19	Airbnb	USA	31
20	Yahoo! Japan	Japan	26
Total			\$3,827



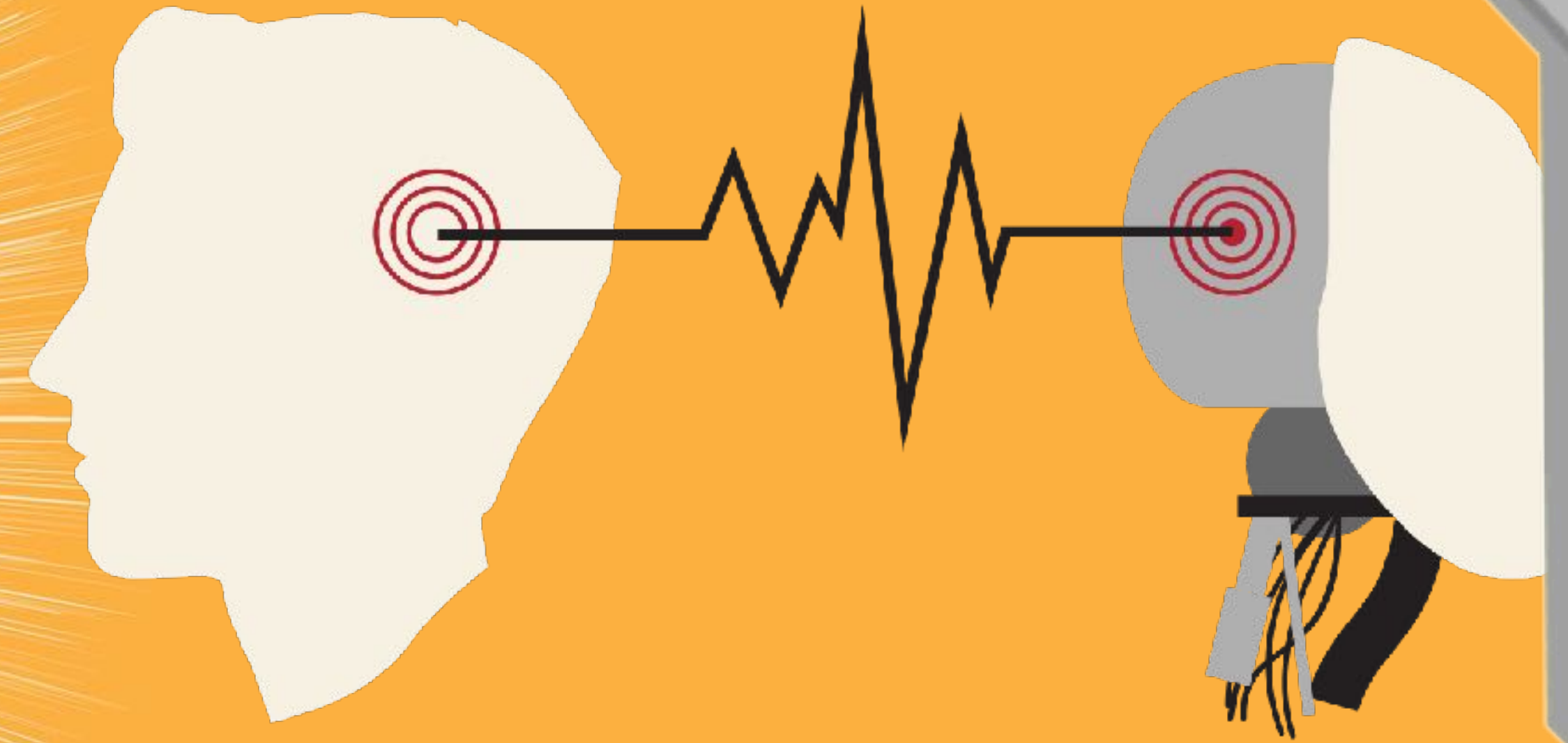
# Anything that can be digitized or automated, will be...



# Anything that cannot be digitized or automated will become much more valuable



# A new era for education



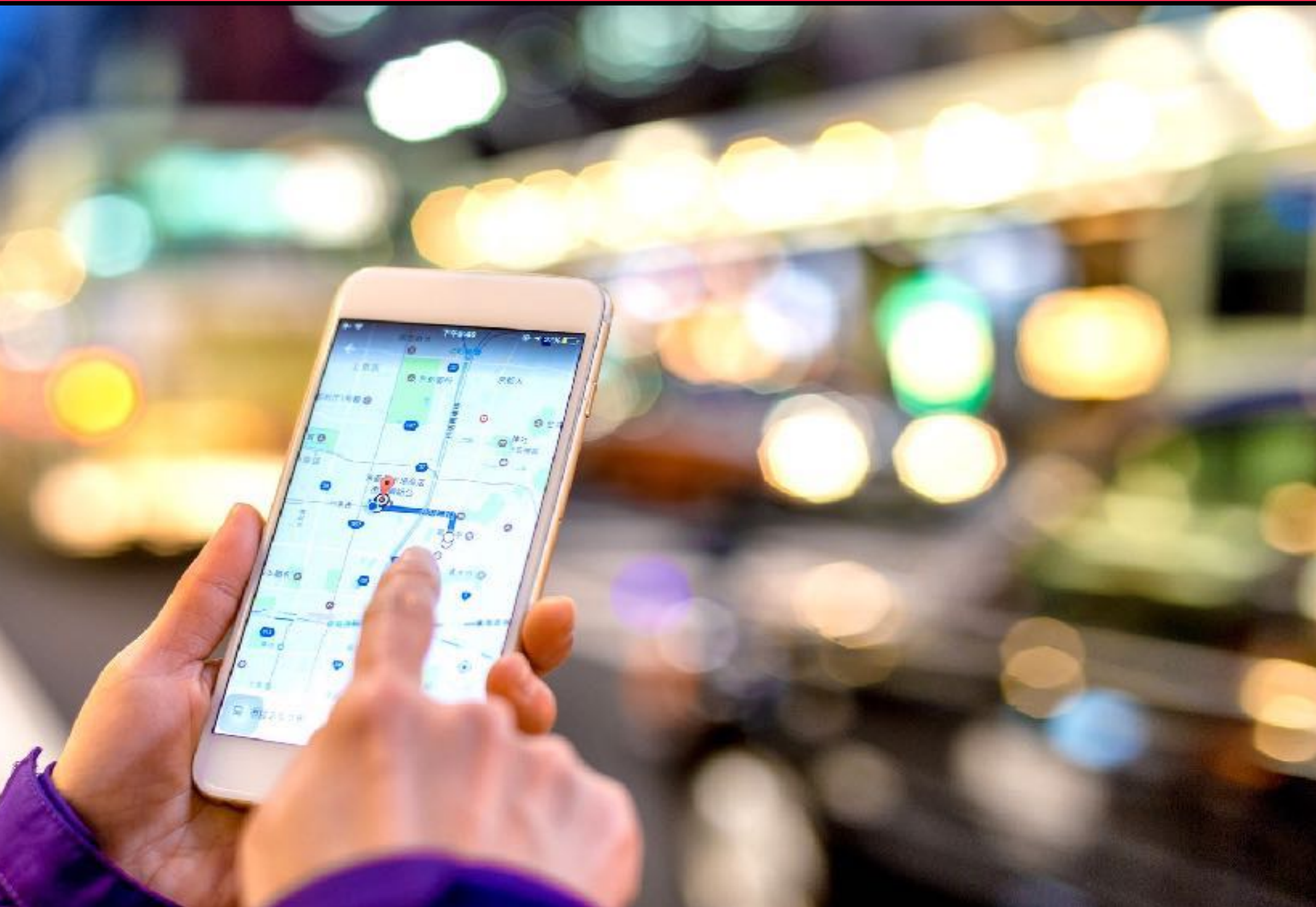


**The biggest challenge is not that machines will take over  
–but that we become too much like them!**



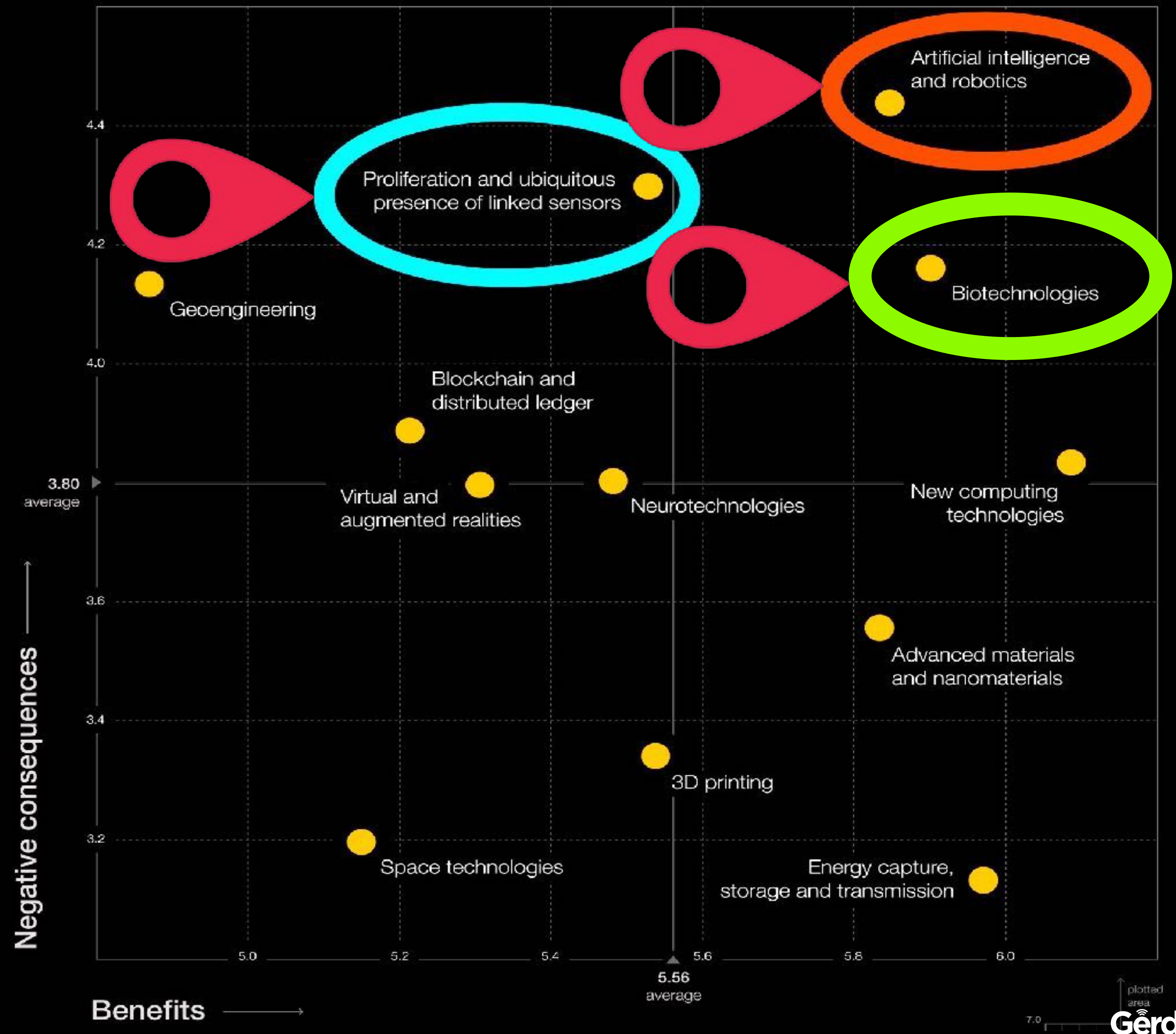


“Algorithms outperform human intelligence when it is **not** about understanding, mental or emotional states, intentions, interpretations, deep semantic skills, consciousness, self-awareness and flexible intelligence\* (via Luciano Floridi)





Do you agree that we have an  
**ethical imperative**  
to harness the power of  
exponential technologies for the  
**collective good of  
mankind?**





# The 2017 FutureOfLife **AI** principles: how exponential technological change could remain humanly sustainable

-  **Human values:** all systems should be designed and operated to be compatible with ideals of human dignity, rights, freedoms and cultural diversity
-  **Shared benefit and prosperity:** to benefit & empower as many people as possible
-  **Ecosystem thinking:** ethical, economical and societal issues need to be included
-  **Responsibility:** those that design, build or run these systems are moral stakeholders

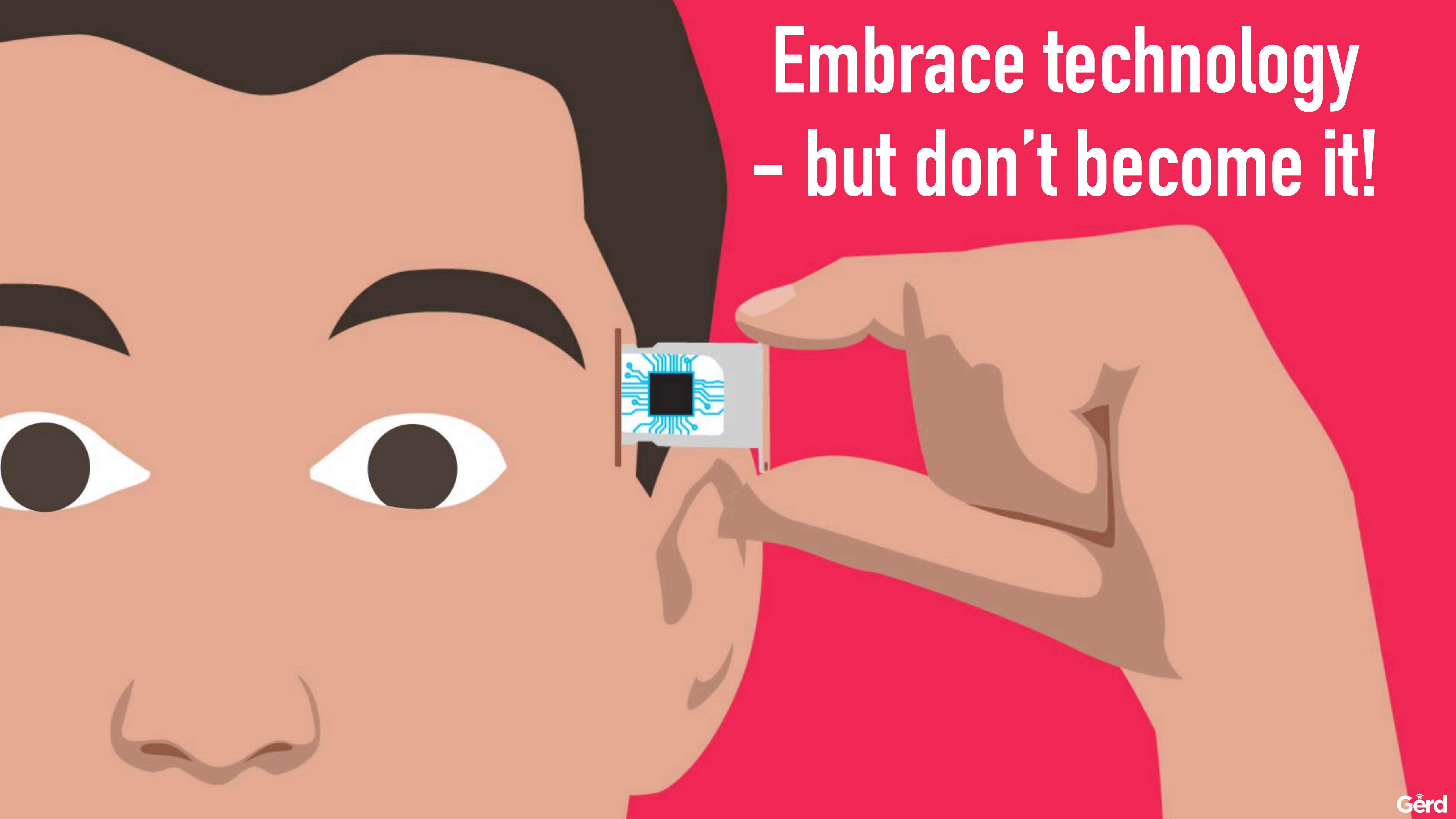




# Humanity on-top of technology!



**Embrace technology  
– but don't become it!**







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