



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



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



[@gleonhard](https://twitter.com/gleonhard)



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

Our world will  
change more in  
the next 20 years

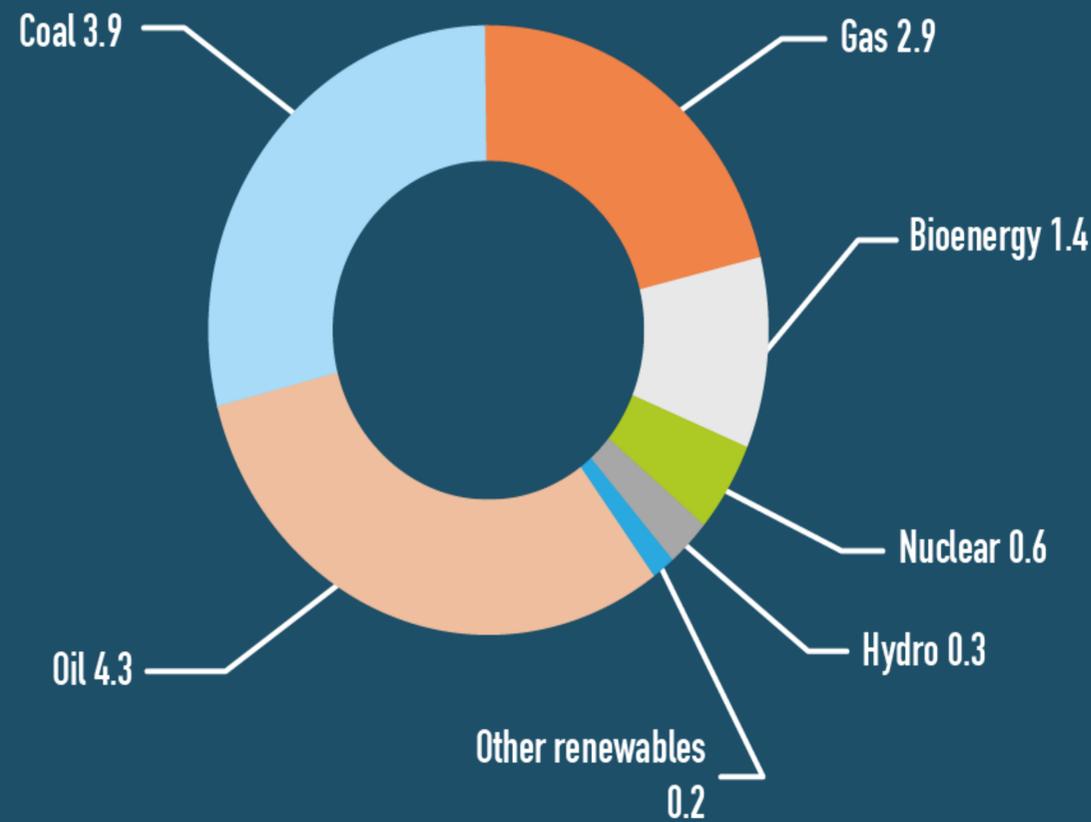
**PHRONESIS**

...than in the  
previous  
300 years!

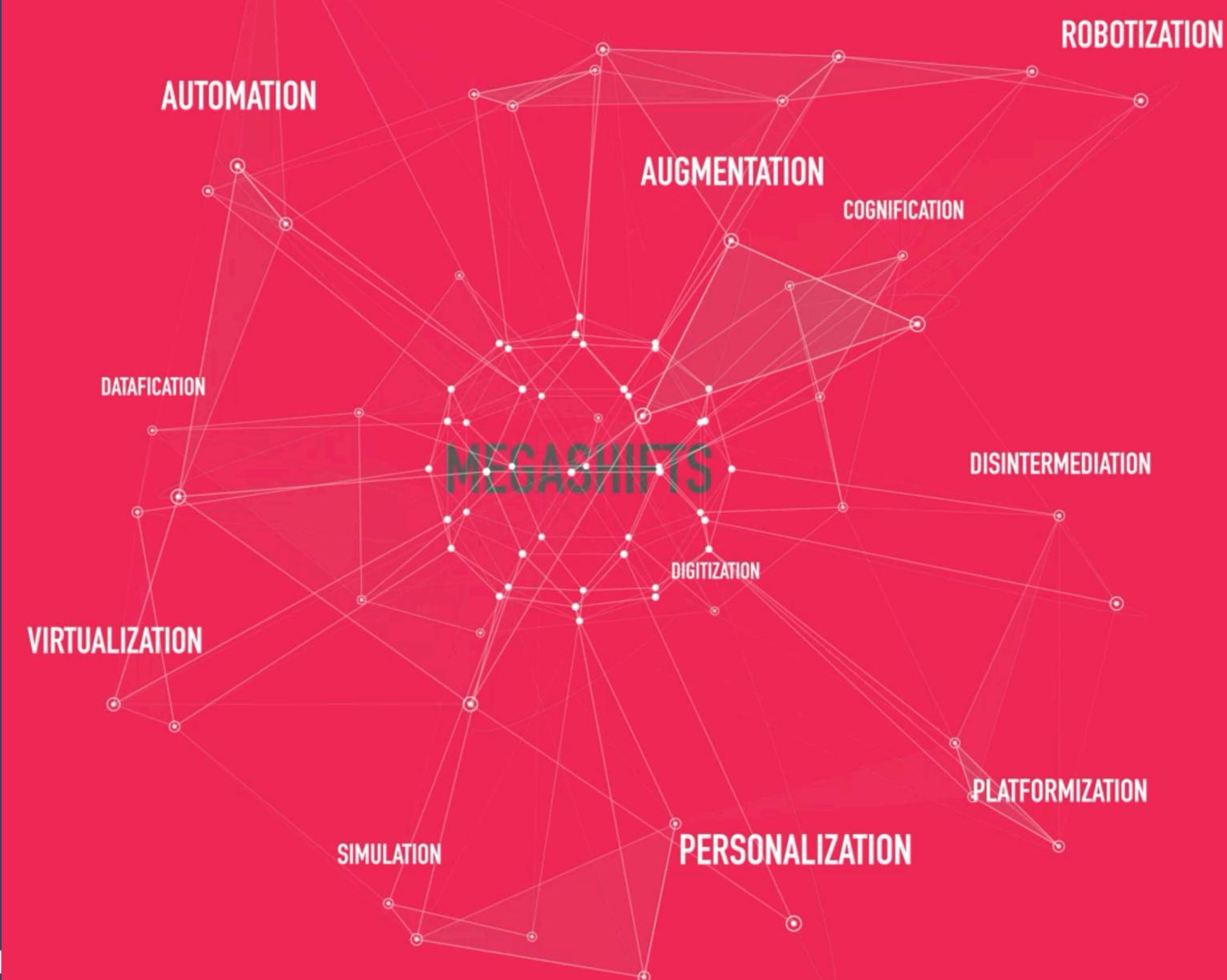
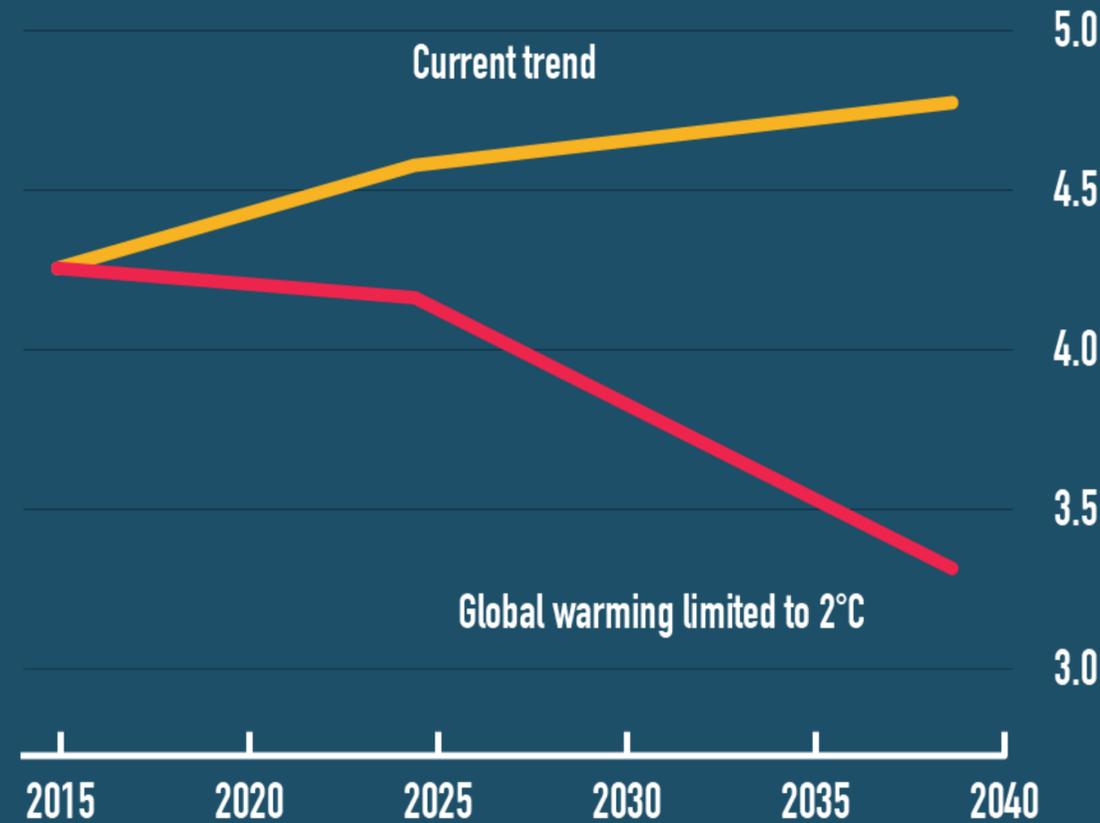


# THE BIG PICTURE

### Global primary-energy demand 2014, bn tonnes of oil equivalent



### Oil-demand forecasts Bn tonnes of oil equivalent



Source: International Energy Agency



**8 out of the 10 technological GAME-CHANGERS will greatly impact airports**

**Big Data**

**Cloud**

**Internet of Things**

(Quantum Computing)

**Voice Control  
& IDAs**

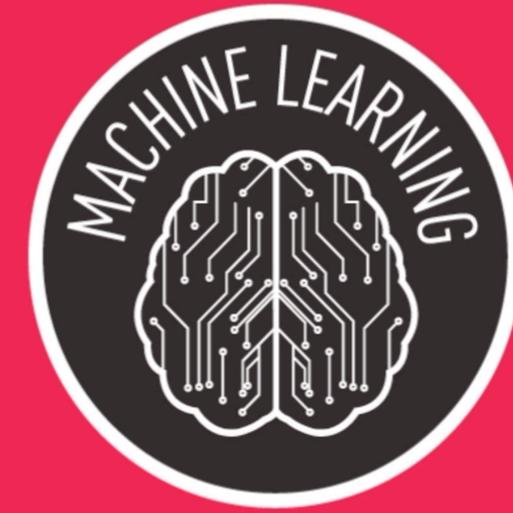
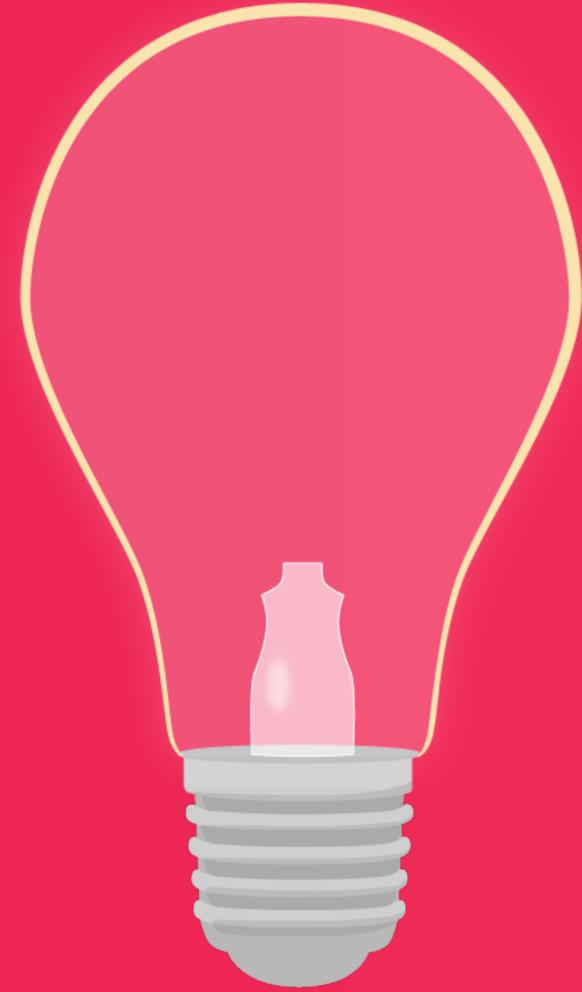
**AI/IA**

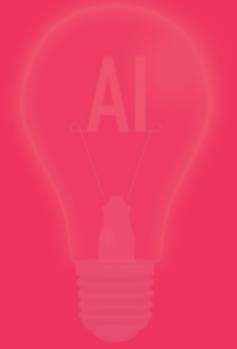
**Blockchain**

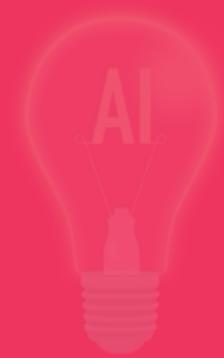
**3D Printing**

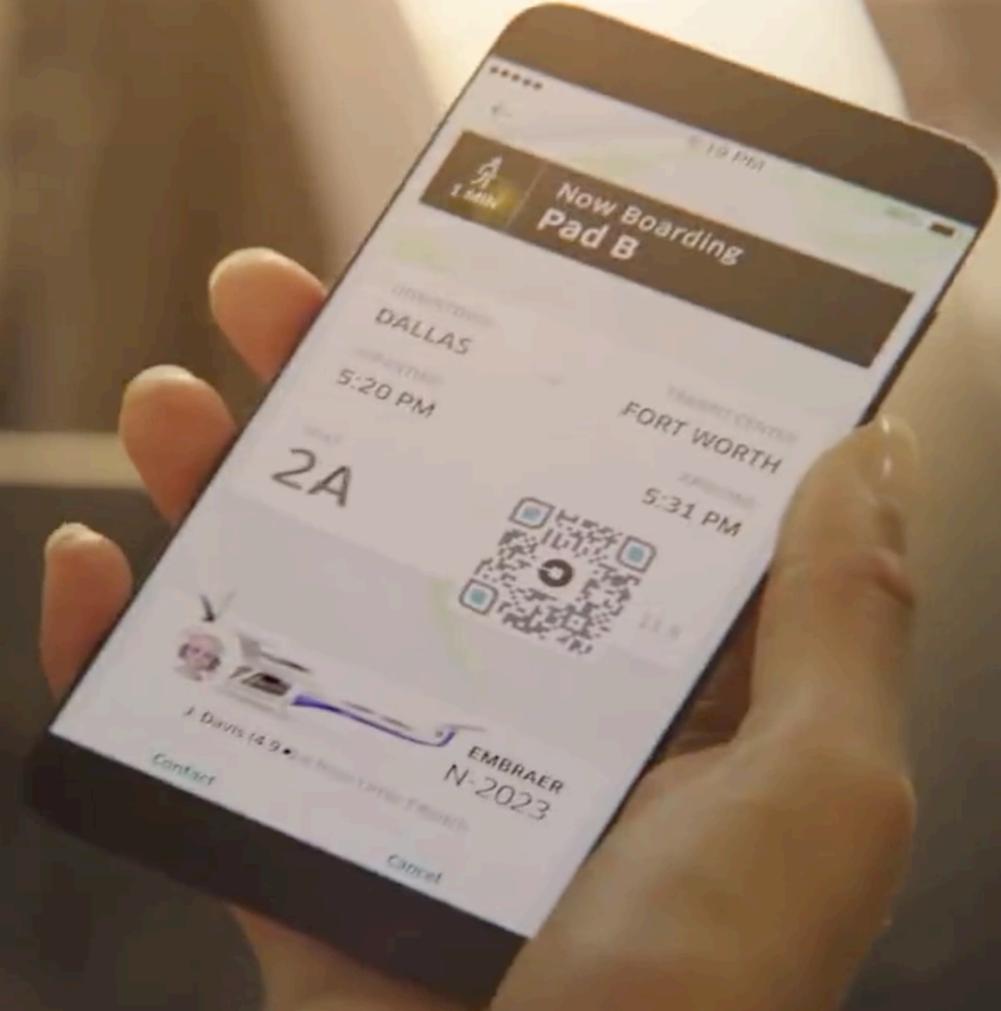
**AR/VR/MR**

(Genetic Engineering)

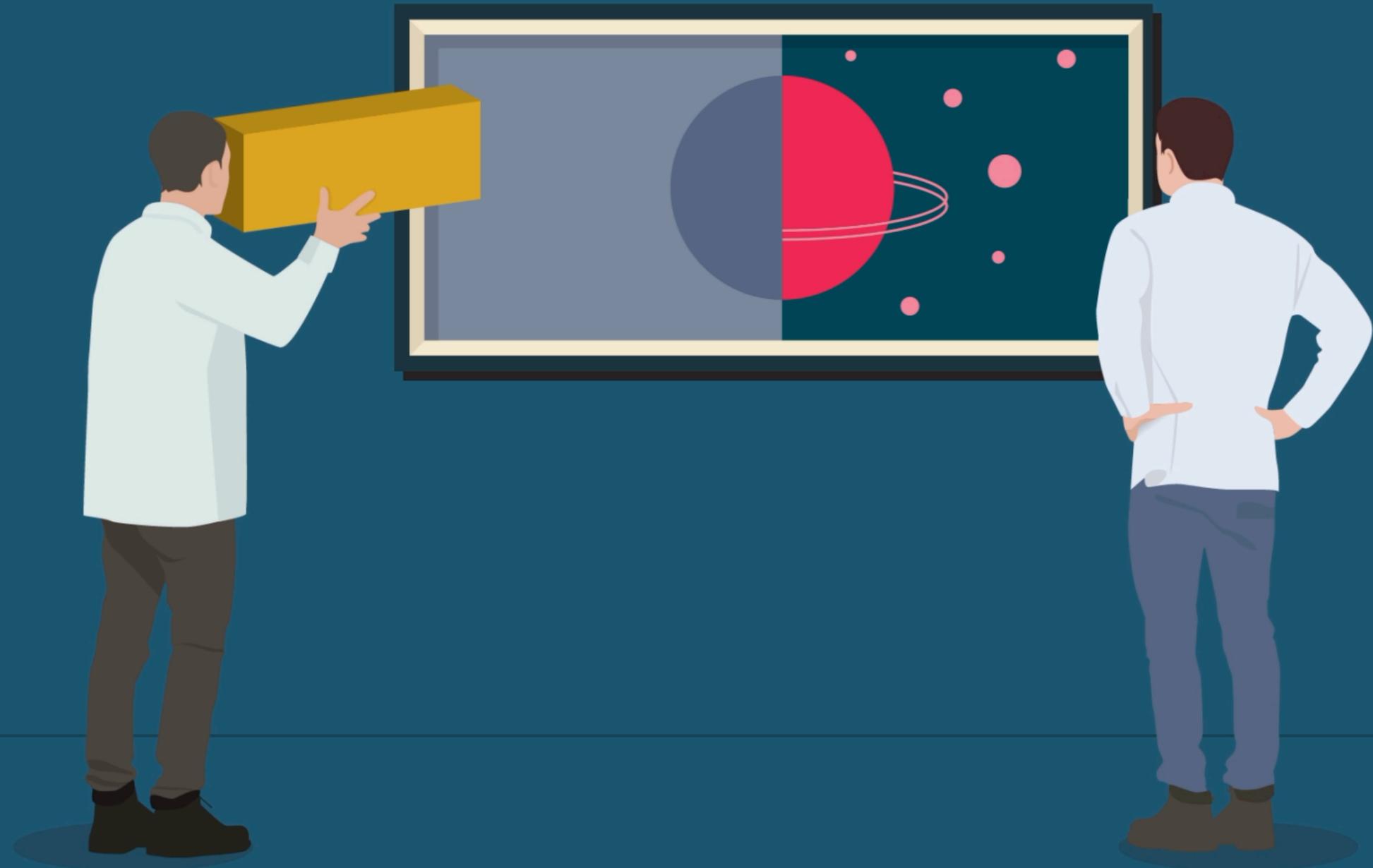








# The 3 Future Principles of Technology

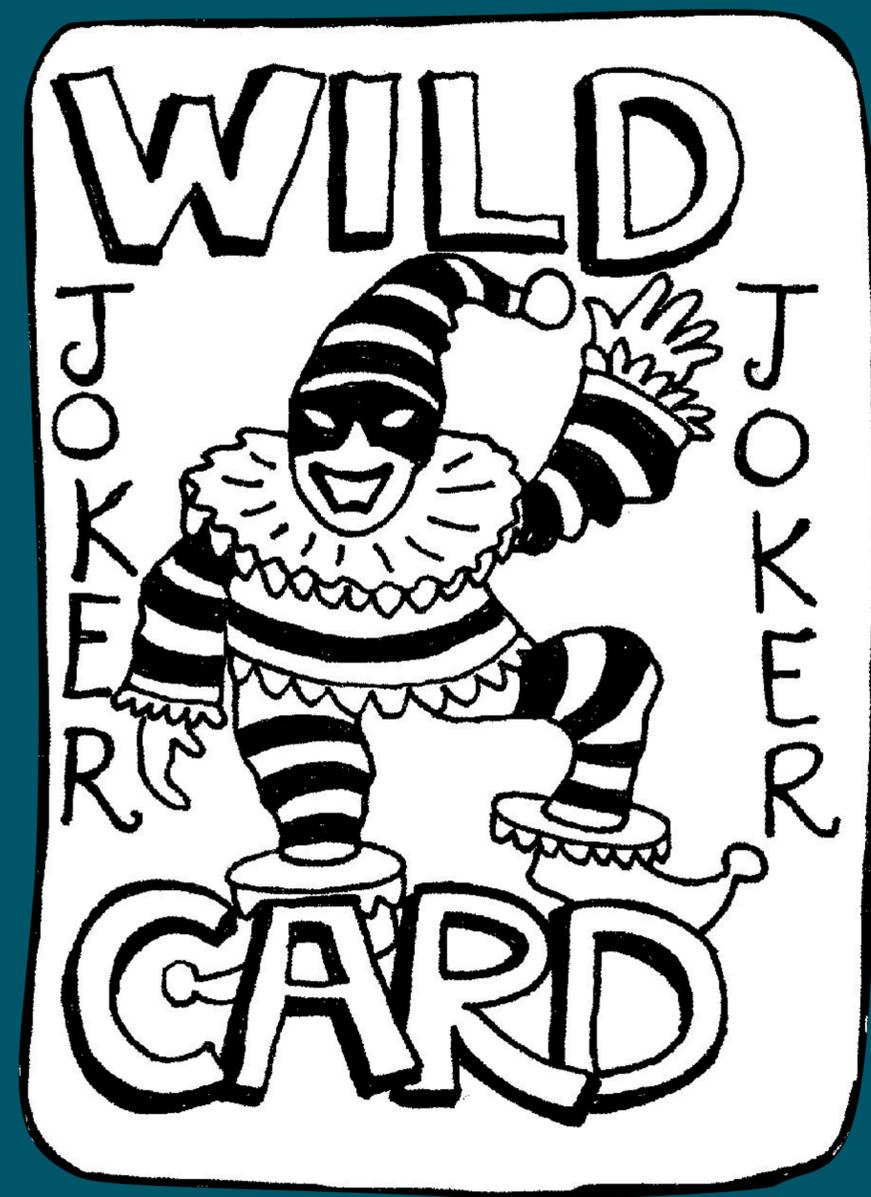


As Science Fiction is increasingly becoming Science Fact, we must take a **WIDER VIEW**



Выход Exit	Выход Exit
8	8 ←
8A	8A ←
	9-17 →
	9A-17A →

**What could your 'airport' look like in 10 years?**



Virtual (Holographic) Travel

Urban Living (The Circle)

Local and regional autonomous flying

Hyperloop stations

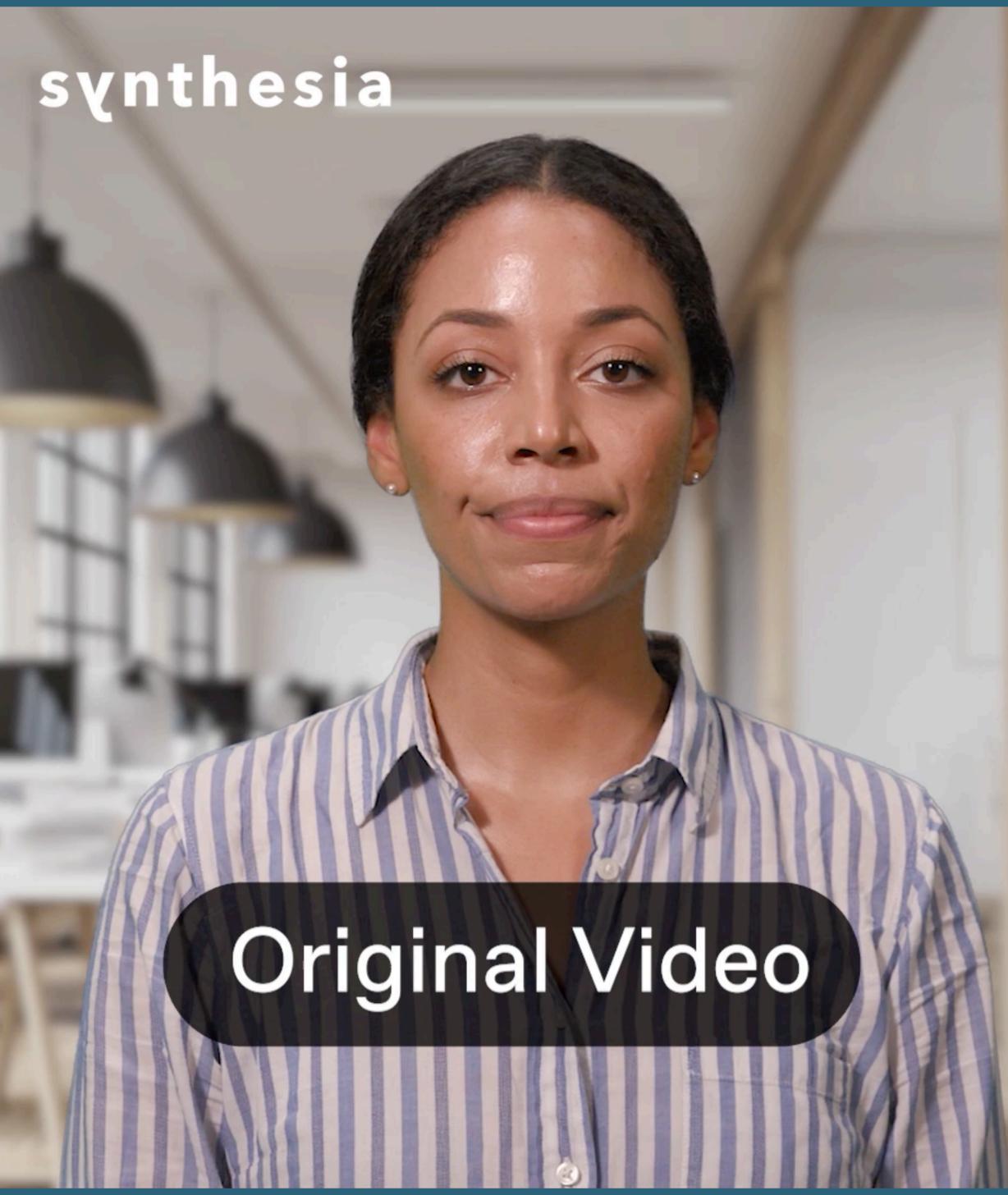
!! Detach from airplanes ??



# Humans & Machines

**Technology**  **Humanity**





synthesia

Original Video



CREDIT SUISSE

AMELIA

# Smart yet HUMAN airports: the low hanging fruit



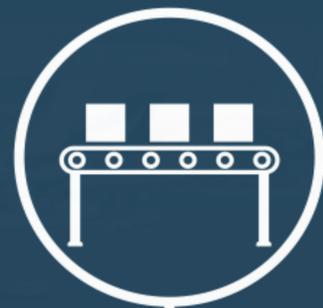
Industry 1.0



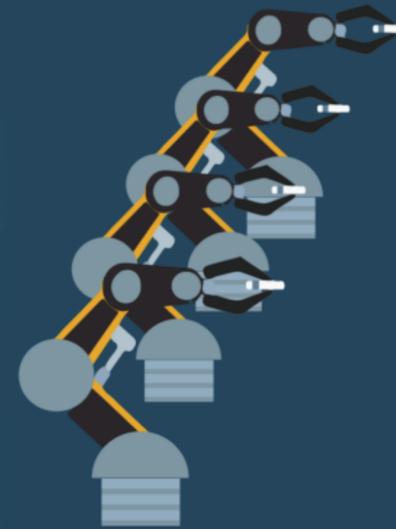
1784



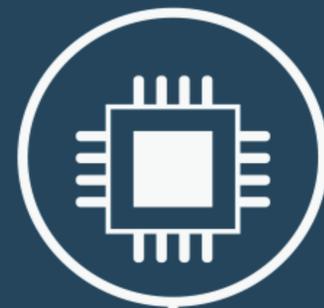
Industry 2.0



1870



Industry 3.0



1969



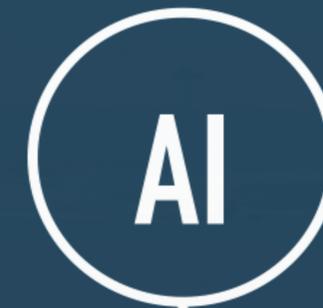
Industry 4.0



Today



Industry 5.0

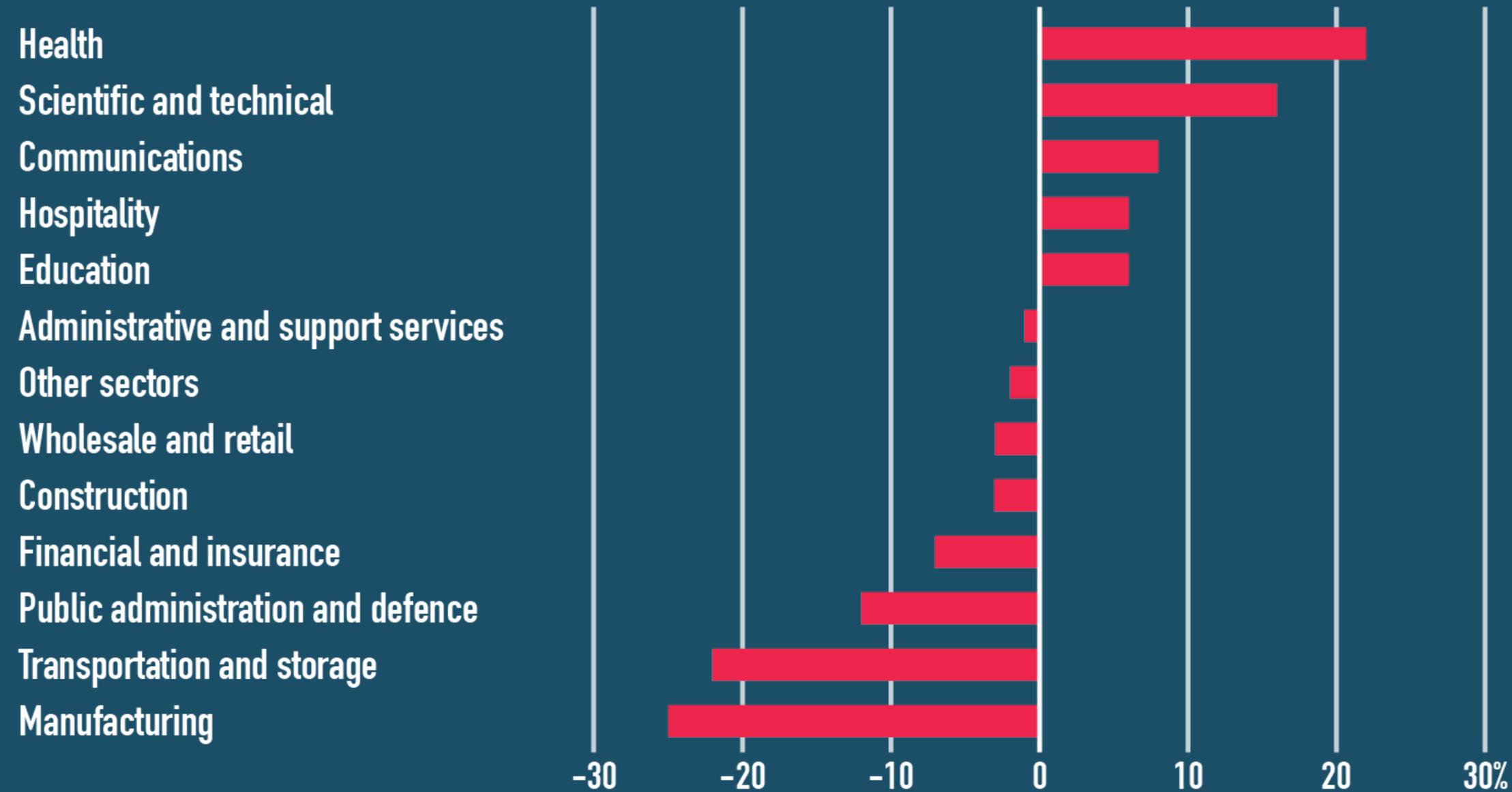


AI

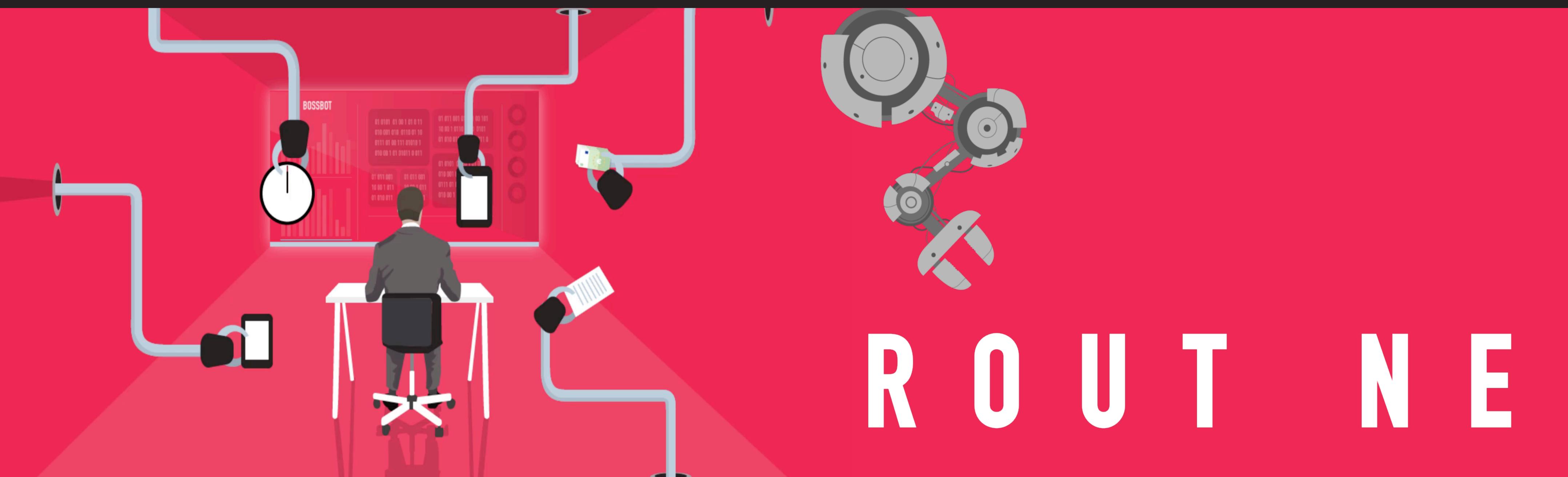


# HOW AI COULD CHANGE THE JOB MARKET

## ESTIMATED NET JOB CREATION BY INDUSTRY SECTOR, 2017-2037



Anything that can be digitised and automated, will be – but anything that CANNOT will become extremely valuable!



**R O U T I N E**

# ANDRORITHMS

PURPOSE



PASSION

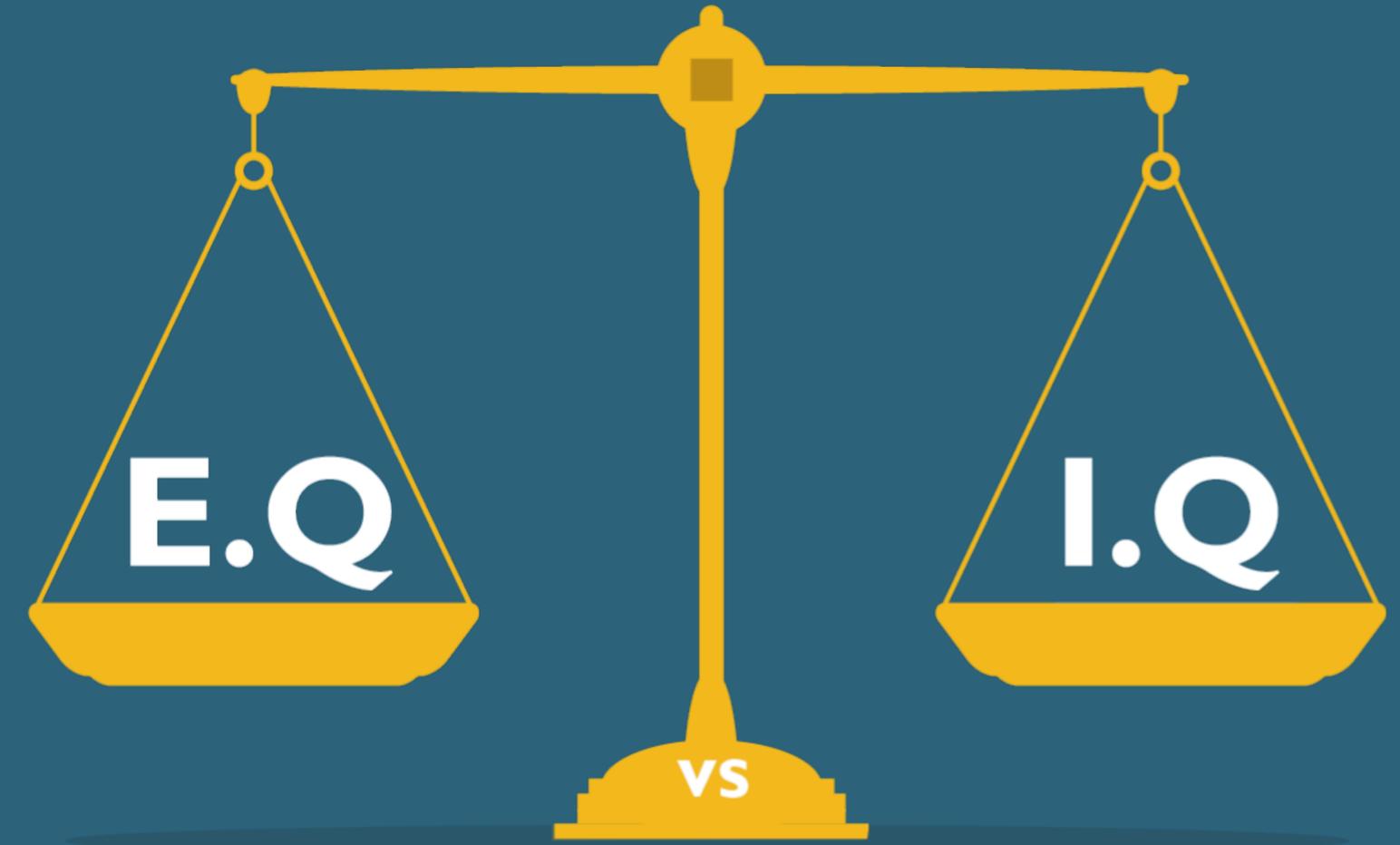
CURIOSITY

IMAGINATION

FORESIGHT

CRITICAL THINKING

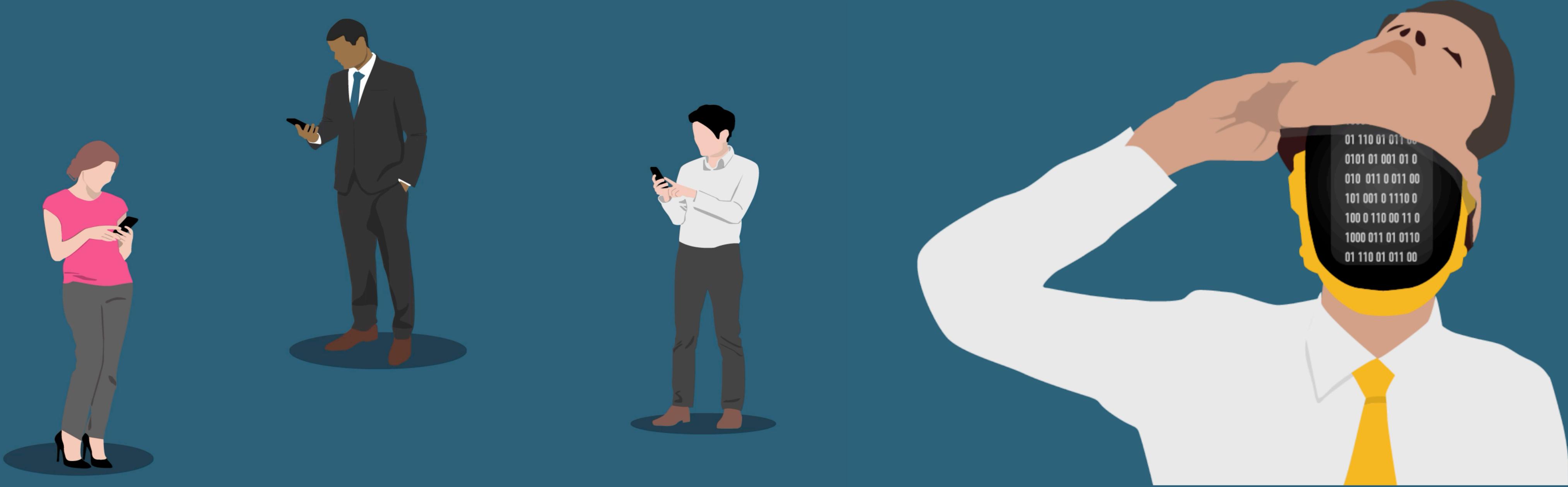
2015



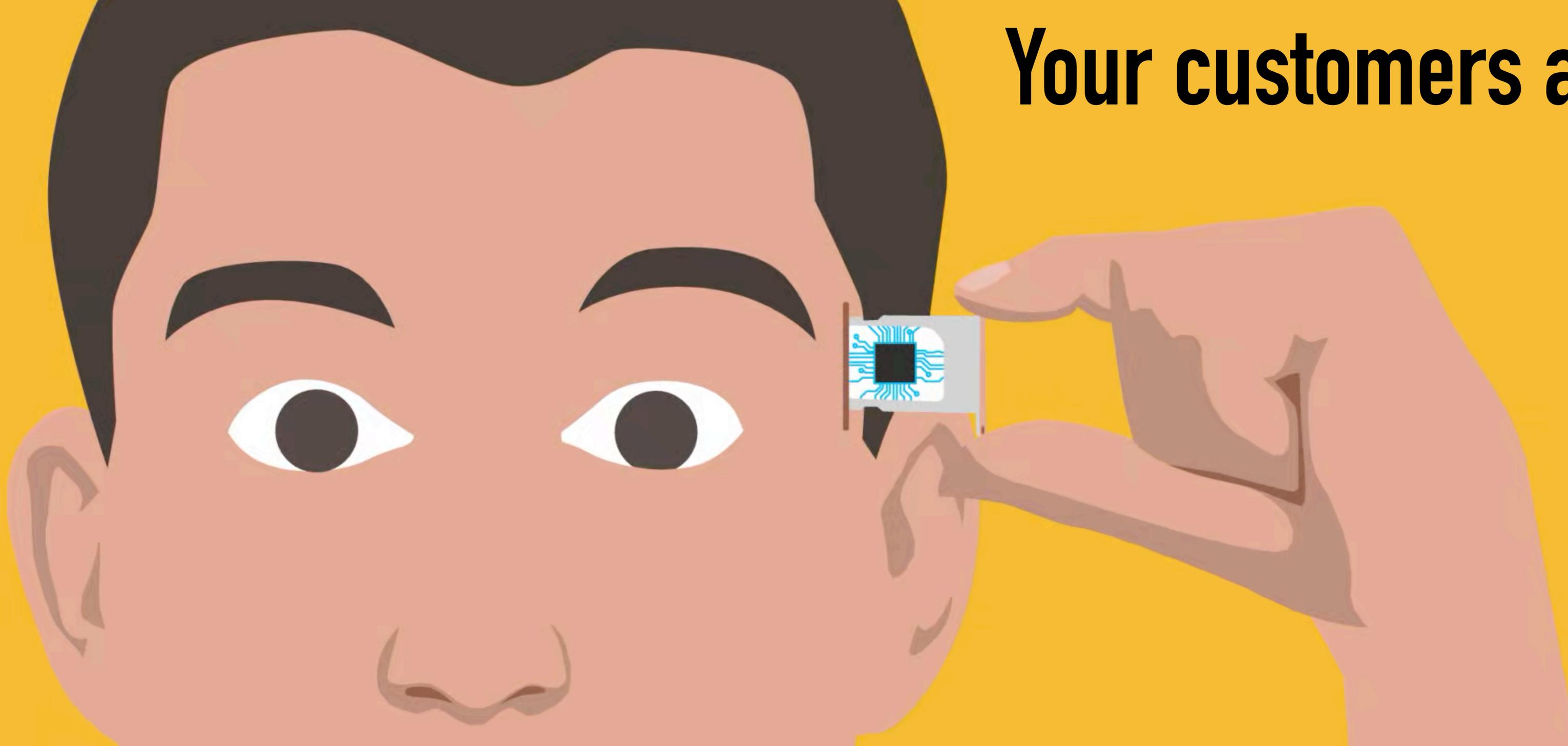
# 2020: Welcome to the NEW RENAISSANCE



Our biggest challenge is not (yet) the machines will take over but **THAT WE BECOME TOO MUCH LIKE THEM!**



**Your customers are not algorithms!**





# ETHICS and PRIVACY are becoming crucial BRAND DIFFERENTIATORS

Ethics is knowing the difference  
between doing what you have the  
right (or the power) to do and what  
is the **RIGHT THING TO DO**



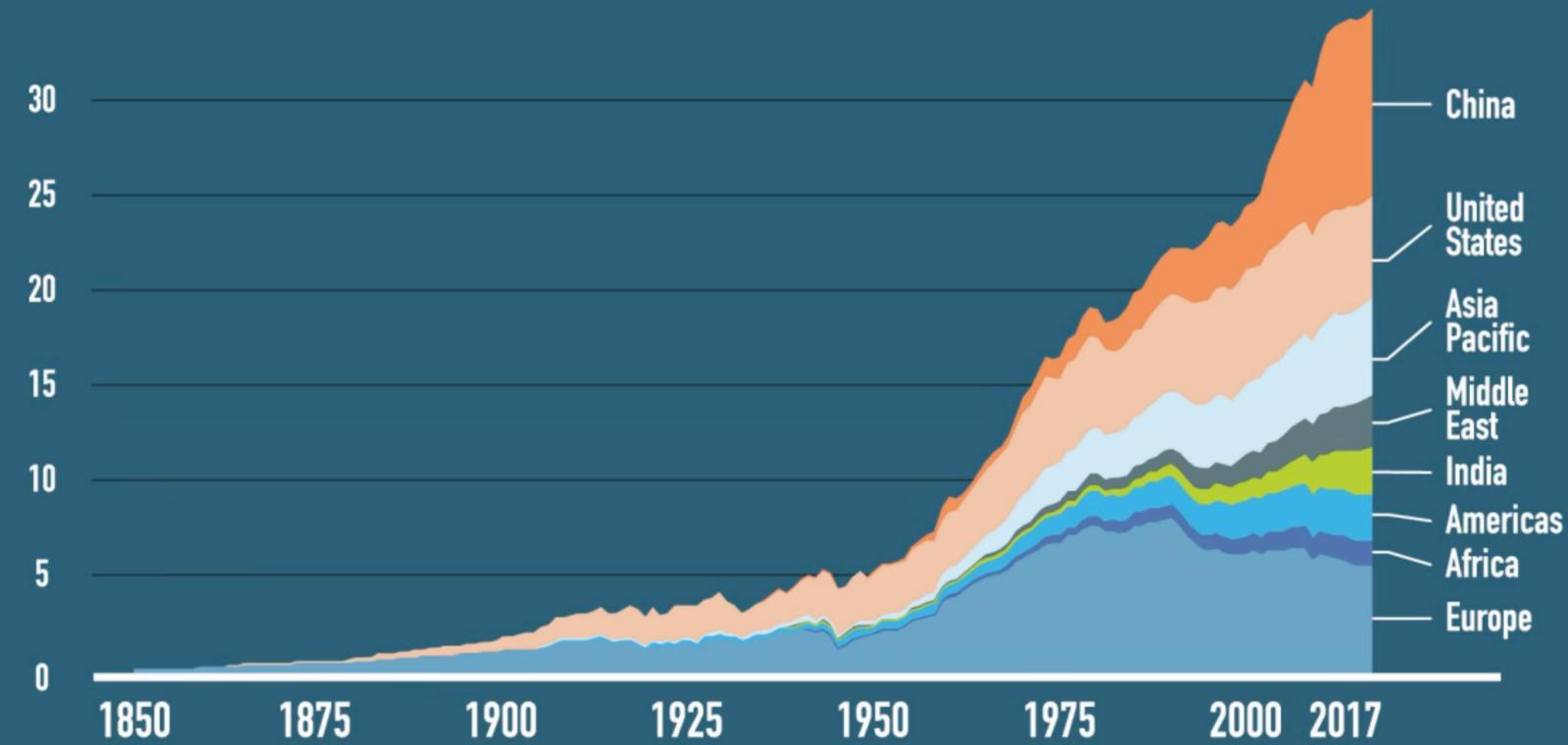
**Sustainability is now THE DOMINANT NARRATIVE**

These are the **5 biggest global risks** in 2020



Source: The Global Risks Report 2020

## CO2 EMISSIONS - IN GIGATONES



Source: The Economist

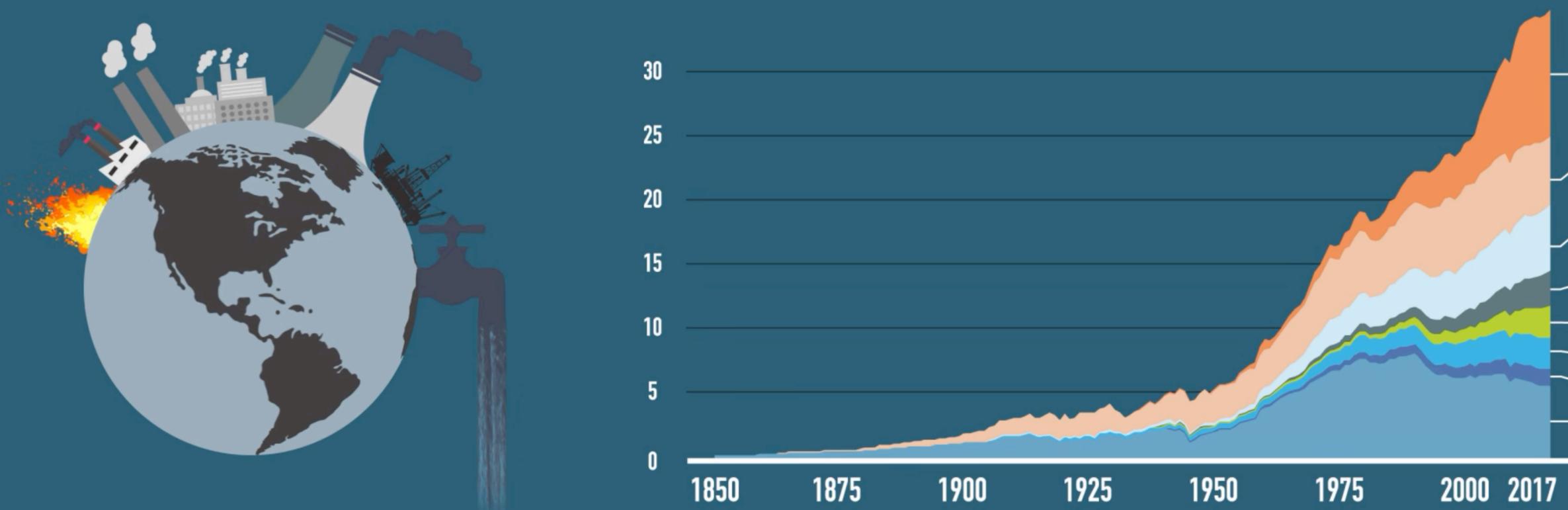
Gerd

# There Are Now Nine Countries Asking For An EU Aviation Carbon Tax

The Ministers of Finance of the Netherlands, Germany, France, Sweden, Italy, Belgium, Luxembourg, Denmark and Bulgaria want a tax to neutralize the environmental damages of aviation.



## CO2 EMISSIONS - IN GIGATONES



Source: The Economist

## Planned tax will make public more aware of climate harm caused by flying, ministers hope



▲ Funds raised by the 'carbon charge' could be used on eco-projects. Photograph: Peter Hulse/Getty Images/iStockphoto



mes

The New York

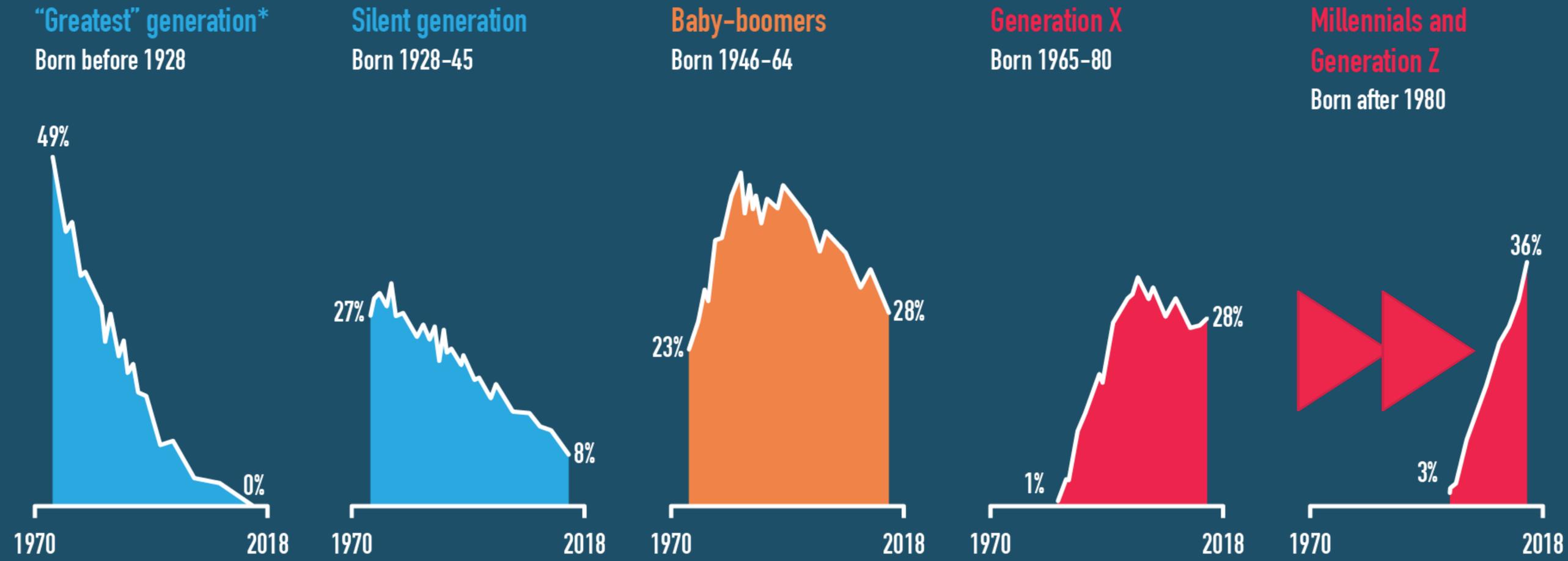
The Guardian

WORLD ECONOMIC FORUM Annual Meeting 2020 WORLD ECONOMIC FORUM

INSERT

COIN

# SHARE OF POPULATION PER GENERATION

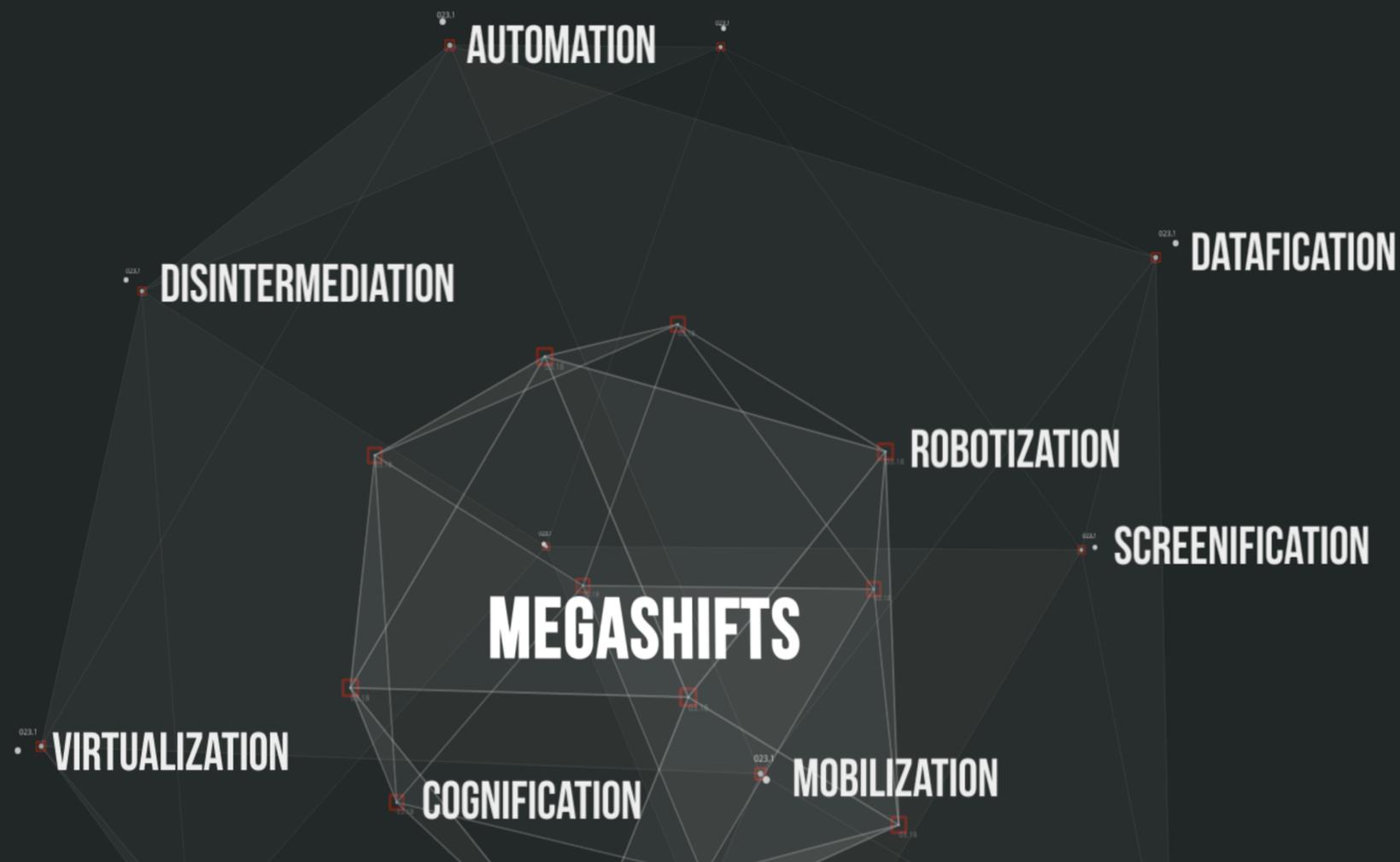


## The End of 'Business as Usual'

"A globally rising tide of protest about failure to tackle climate change, the strong reference of younger workers and customers to purpose-led businesses (and their dislike of those companies that fall short), and conflicts over the fact that wages continue to lag overall economic growth"  
(via the FT)



# How to DO the Future

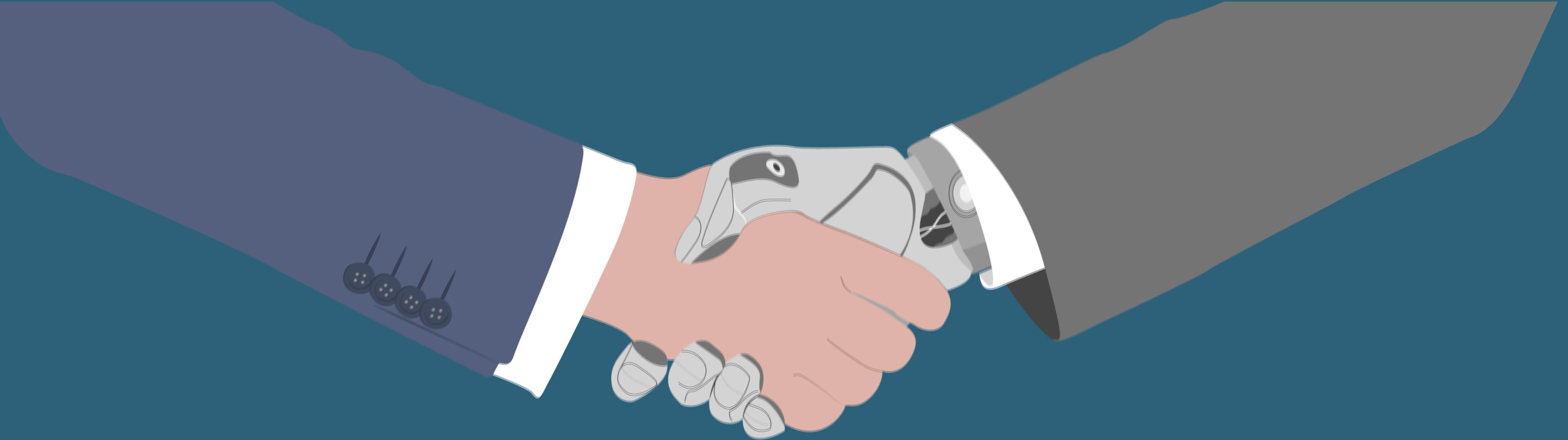


**Immerse but keep asking tough questions!**

Technology ☯ Humanity: Experiences & Relationships will matter more than ever before



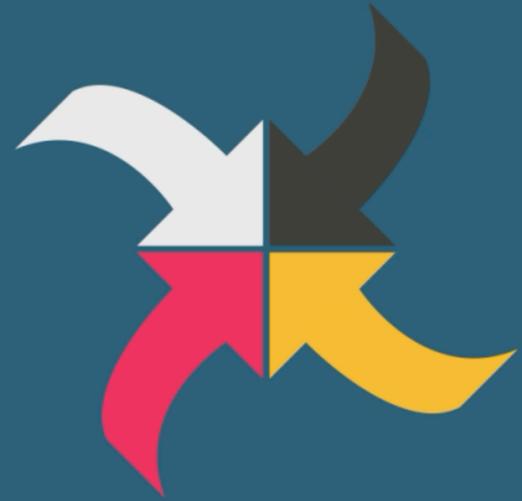
**Never put efficiency over humanity. Remember: Technology is not WHAT we seek but HOW we seek!**



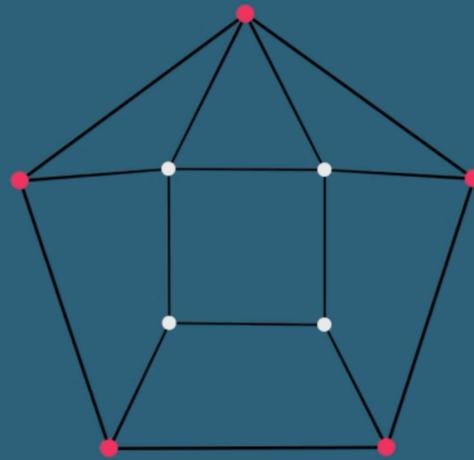
# Future Principles: Technology

$e^x$

EXPONENTIAL



CONVERGENT



COMBINATORIAL

# Future Principles: Humanity and Society



**Future-Readiness**





[amazon.com](https://www.amazon.com)



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



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



[@gleonhard](https://twitter.com/gleonhard)



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