

# The 10 things you should know about the future and what they mean for your industry



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



[gerd.cloud](http://gerd.cloud)



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



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



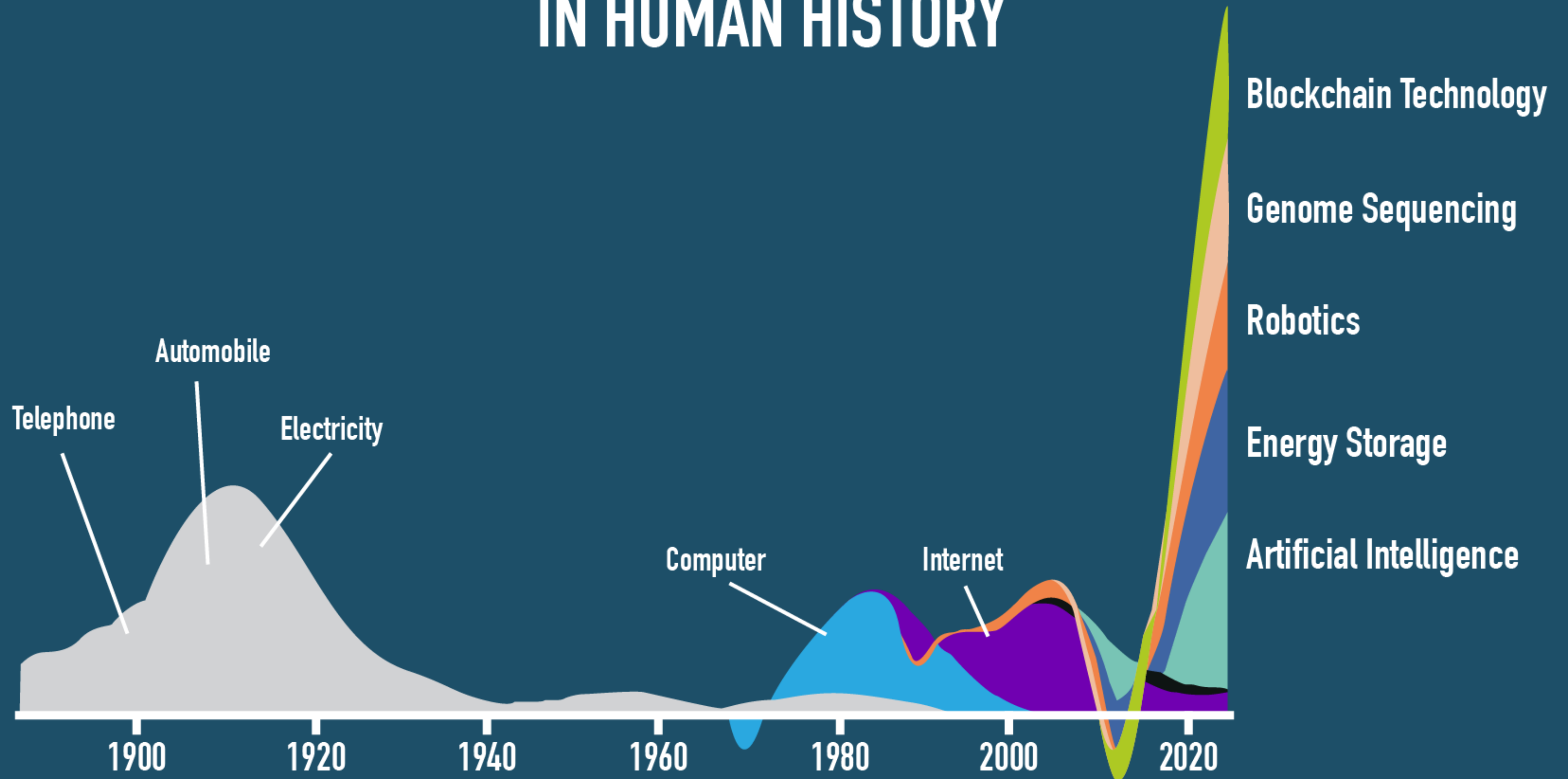
[futuristgerd.com](http://futuristgerd.com)



Our world is going to change more in the next 20 years than in the previous 300 years



# THE BIGGEST TECHNOLOGICAL TRANSFORMATION IN HUMAN HISTORY





# Transcend EFFICIENCY – go beyond faster, better, cheaper!







Loop

Tide  
pick clean



# PORSCHE<sup>®</sup>

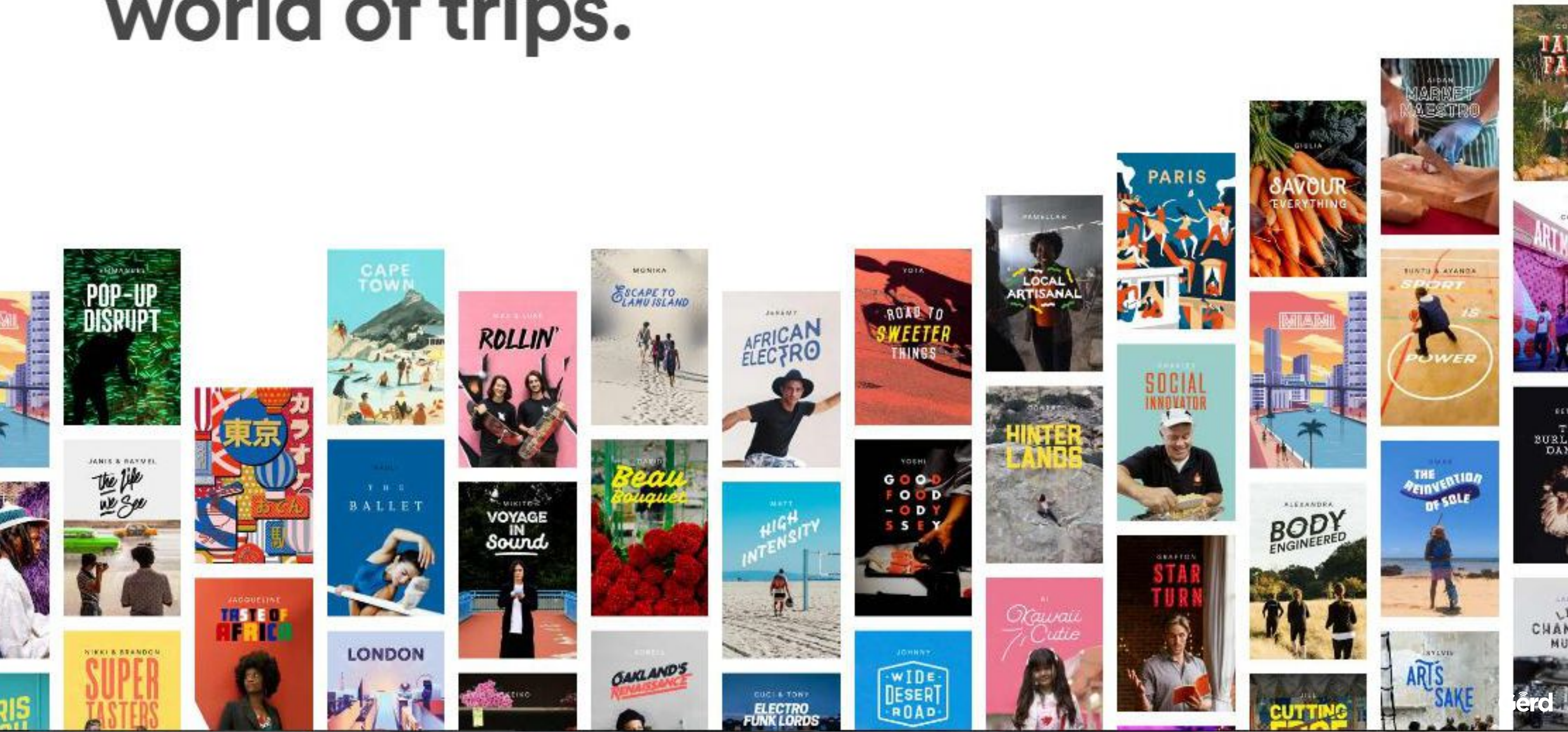
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# PASSPORT





# Welcome to the world of trips.





1

**Procurement  
as we know  
it today will  
fade away**

An illustration of a smartphone screen. The screen has a red background. At the top, there are two grey robotic arms with circular joints. Below them, the word "ROUTINE" is written in large, white, bold, sans-serif capital letters. At the bottom of the screen, there are four white icons: a square with a smaller square inside, a house, a magnifying glass, and a curved arrow pointing left.

**R O U T I N E**



1

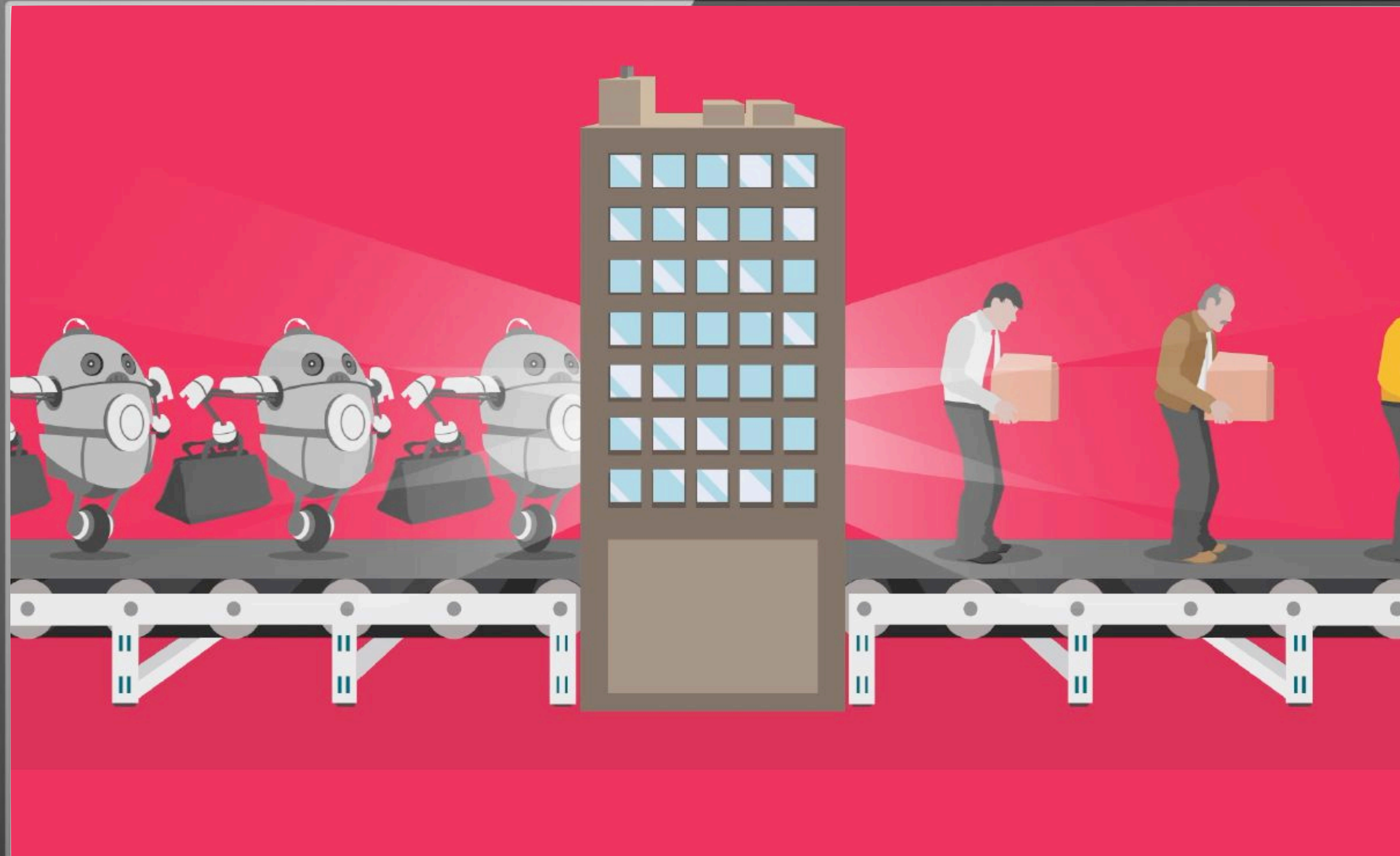
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1

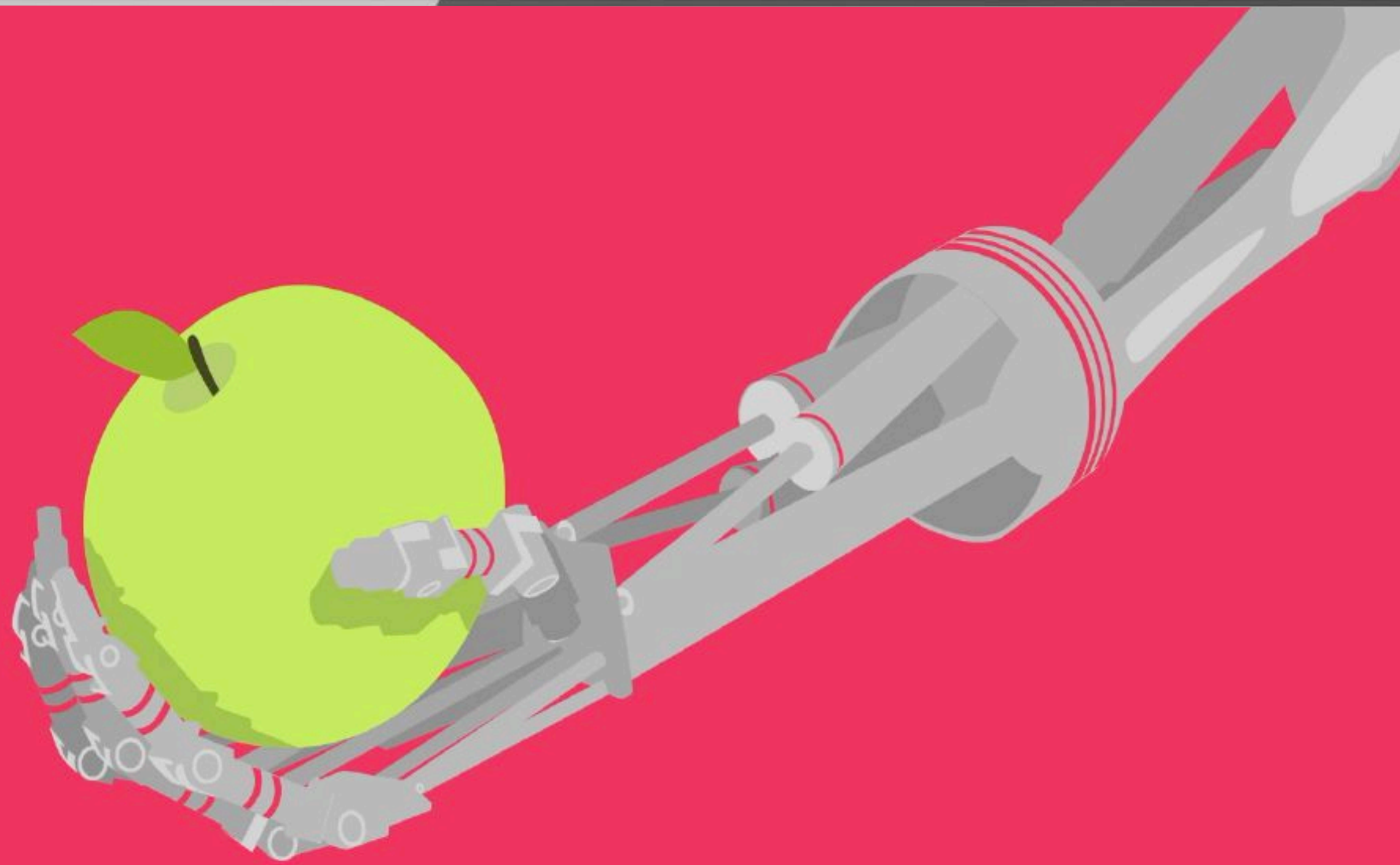
Procurement  
as we know  
it today will  
fade away





1

**Procurement  
as we know  
it today will  
fade away**





# Data



# Intelligence\*



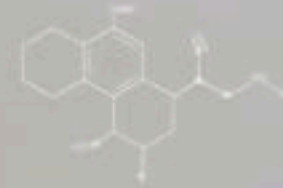




### DNA SEQUENCE DATA

Genetic information is stored in DNA, a long molecule of genetic material that contains the instructions for making proteins, which are the building blocks of the body. DNA is organized into chromosomes, which are passed from parents to offspring.

100%



### MICROBIOME & METABOLOMICS

The microbiome is the collection of microorganisms that live in and on the human body. Metabolomics is the study of the chemical processes and products of metabolism.

100%



### PHYSICAL SCANS

Physical scans are medical imaging techniques that use X-rays, ultrasound, or magnetic resonance to create detailed images of the body's internal structures.

86%



92%

**HEALTH  
NUCLEUS**

**HEALTH  
NUCLEUS**

Gerd

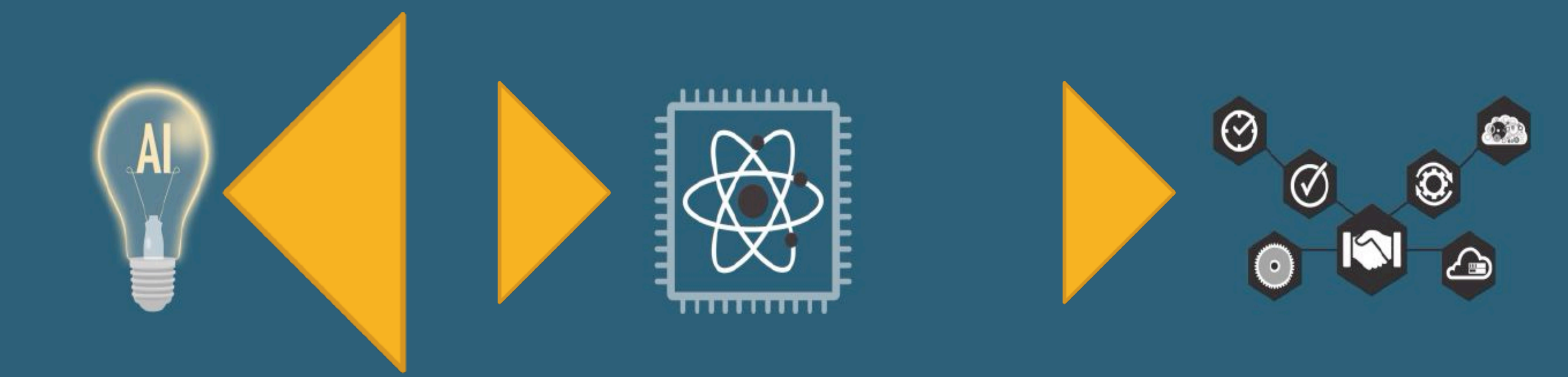




**DATA EVERYWHERE**

**CONNECTED EVERYTHING**

**CLOUD EVERYTHING**



**COMPUTE ANYTHING**

**SMART EVERYTHING**



**TRANSACT ANYTHING**

**SEE EVERYTHING**

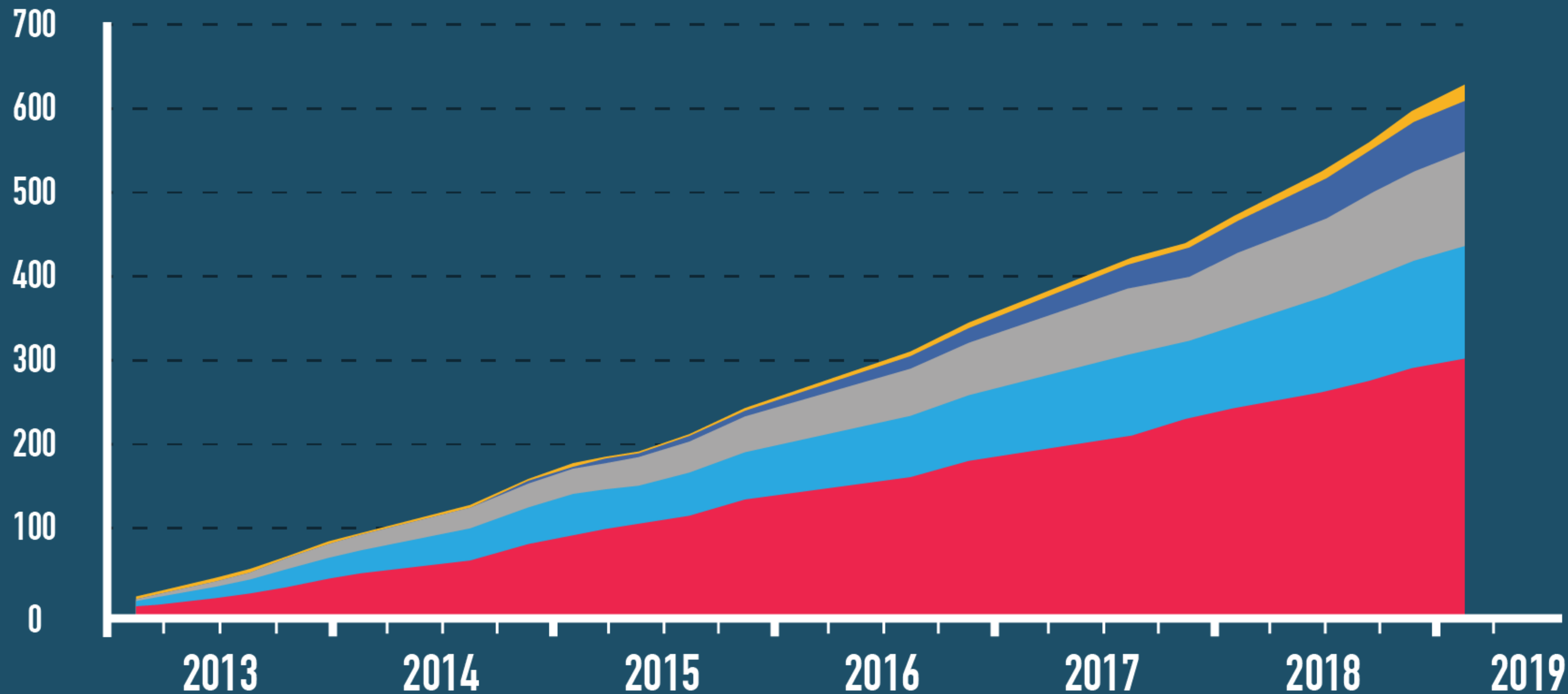
**MAKE (BE) ANYTHING**



# REALLY BIG TECH

## CUMULATIVE PROFITS SINCE Q1 2013, \$bn

Apple Microsoft Alphabet Facebook Amazon





**MEDIA  
ENTERTAINMENT**

**TELECOM**

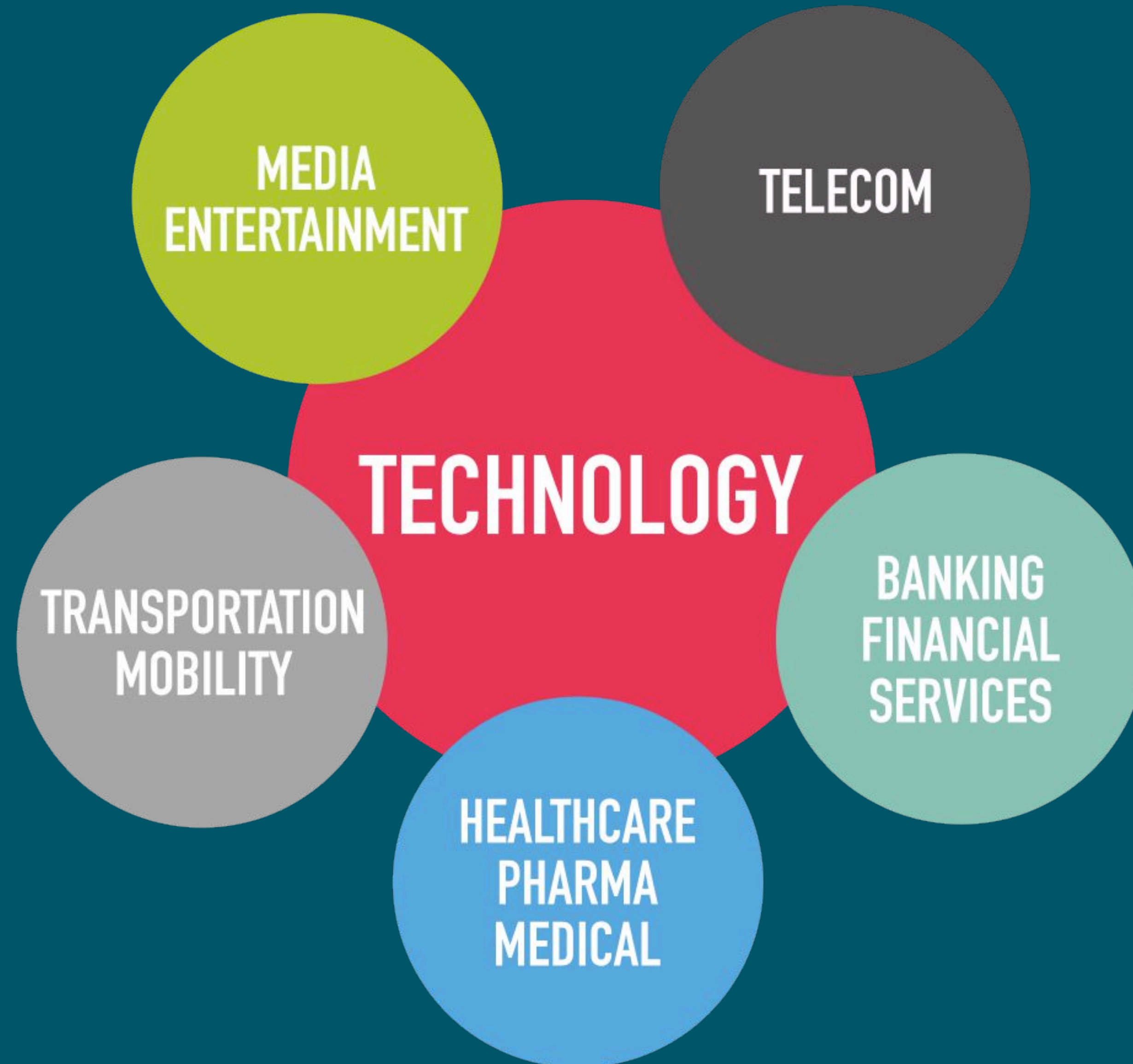
**TECHNOLOGY**

**BANKING  
FINANCIAL  
SERVICES**

**TRANSPORTATION  
MOBILITY**

**HEALTHCARE  
PHARMA  
MEDICAL**





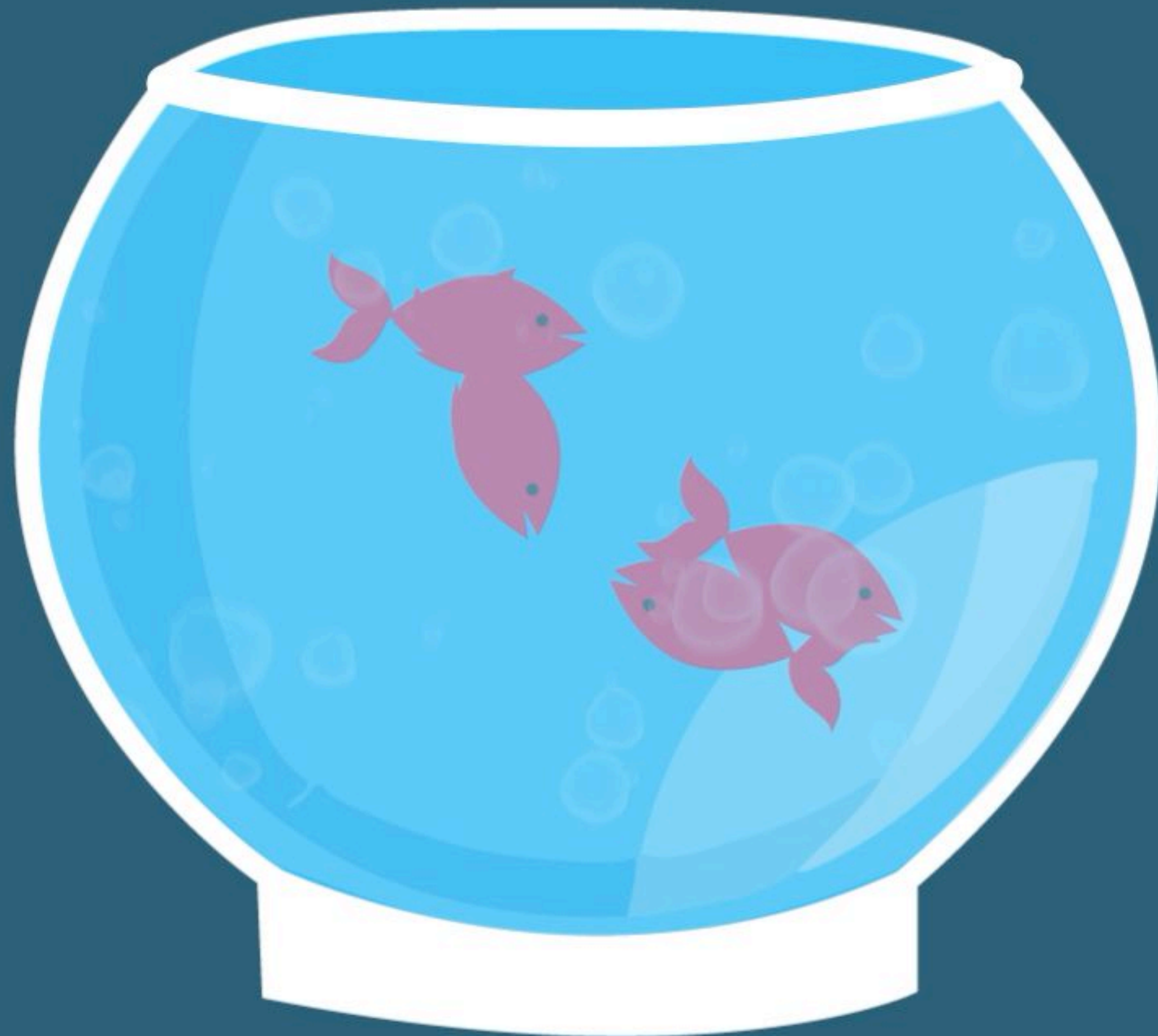


The Future is better than we think...





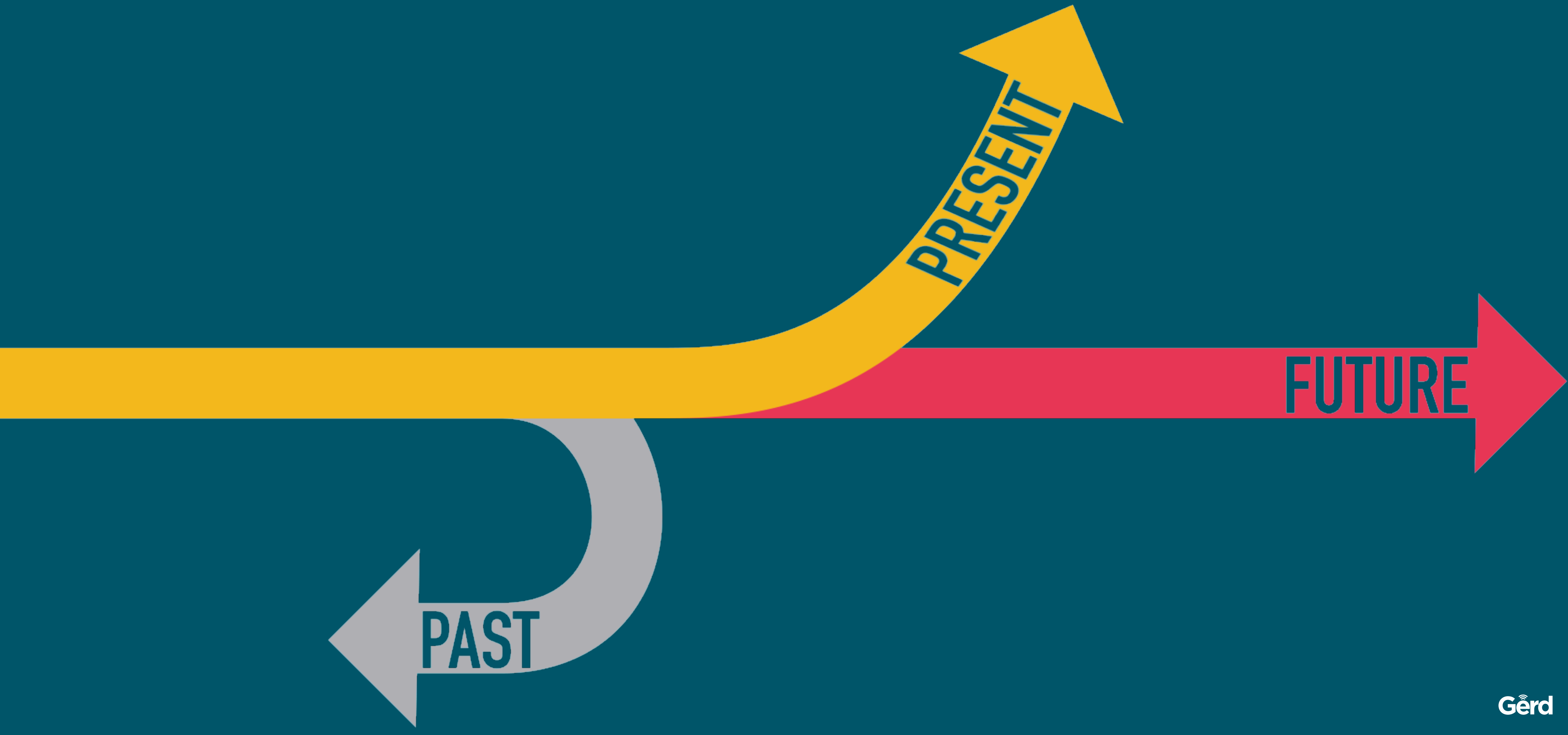
... if you can make the leap into a new fishbowl!





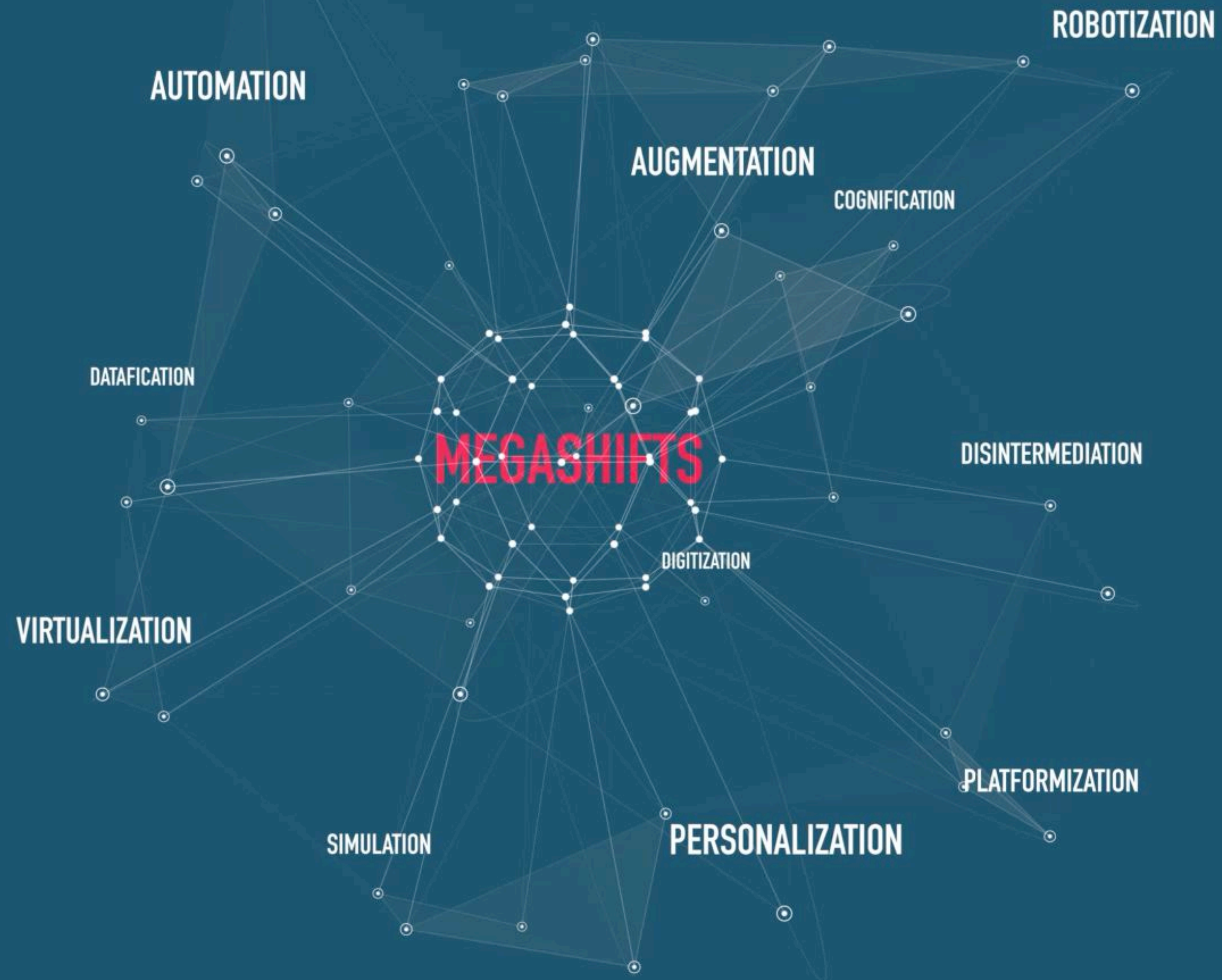
# Move from hindsights to insights to FORESIGHTS

2





# Understand and embrace the **Megashifts**





# SIEMENS eHIGHWAY





# Immerse in the 3 “Future Principles”

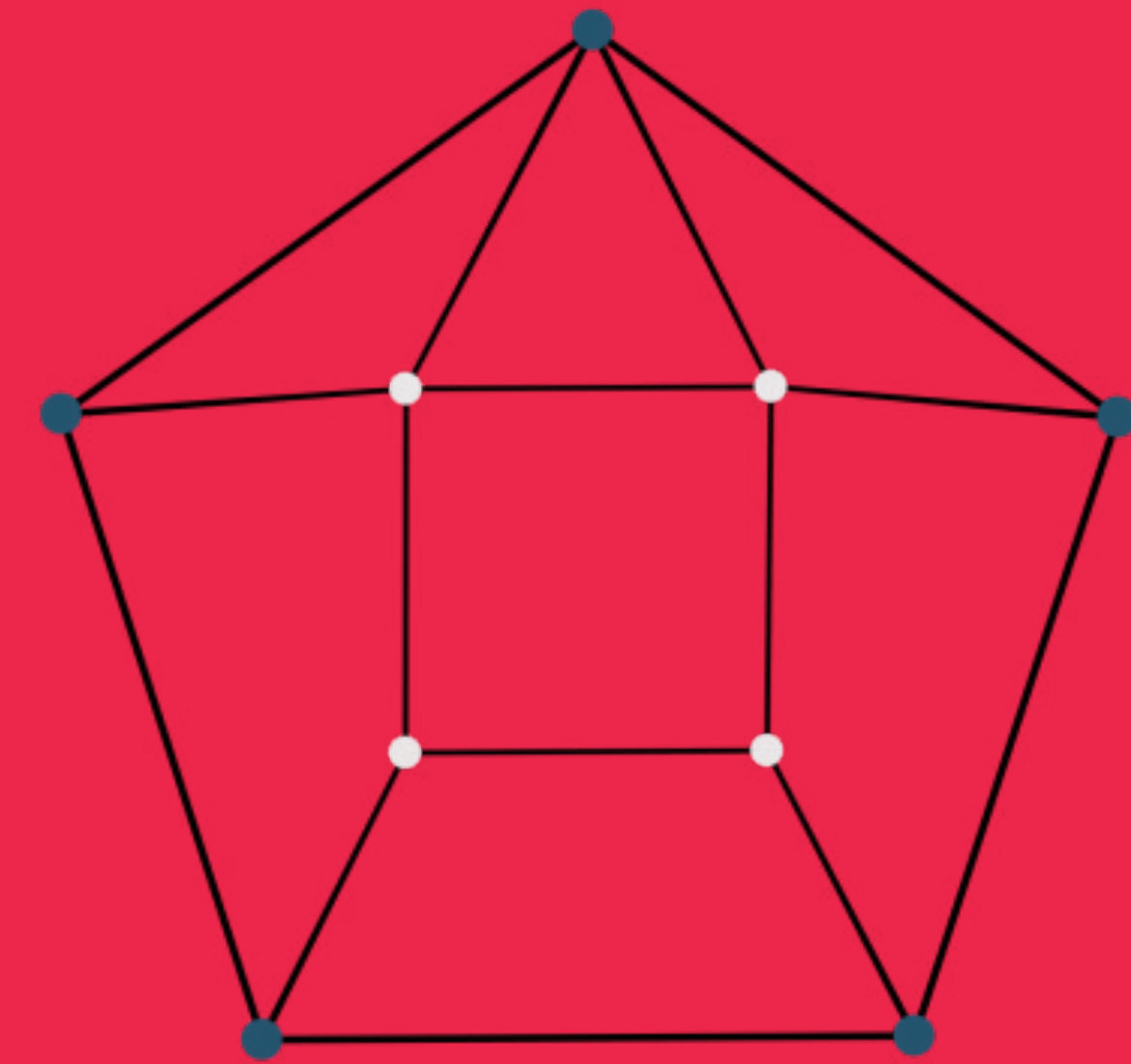
3

$e^x$

EXPONENTIAL



CONVERGENT



COMBINATORIAL



# TECHNOLOGY Logistics, Supply Chain, Procurement

CUMULATIVE POLLUTION



AVERAGE DELAY PER CAR

## AUTONOMOUS INTERSECTION

CUMULATIVE POLLUTION



AVERAGE DELAY PER CAR

## TRADITIONAL INTERSECTION

OPTIMAL SPEED

0% 50% 100%



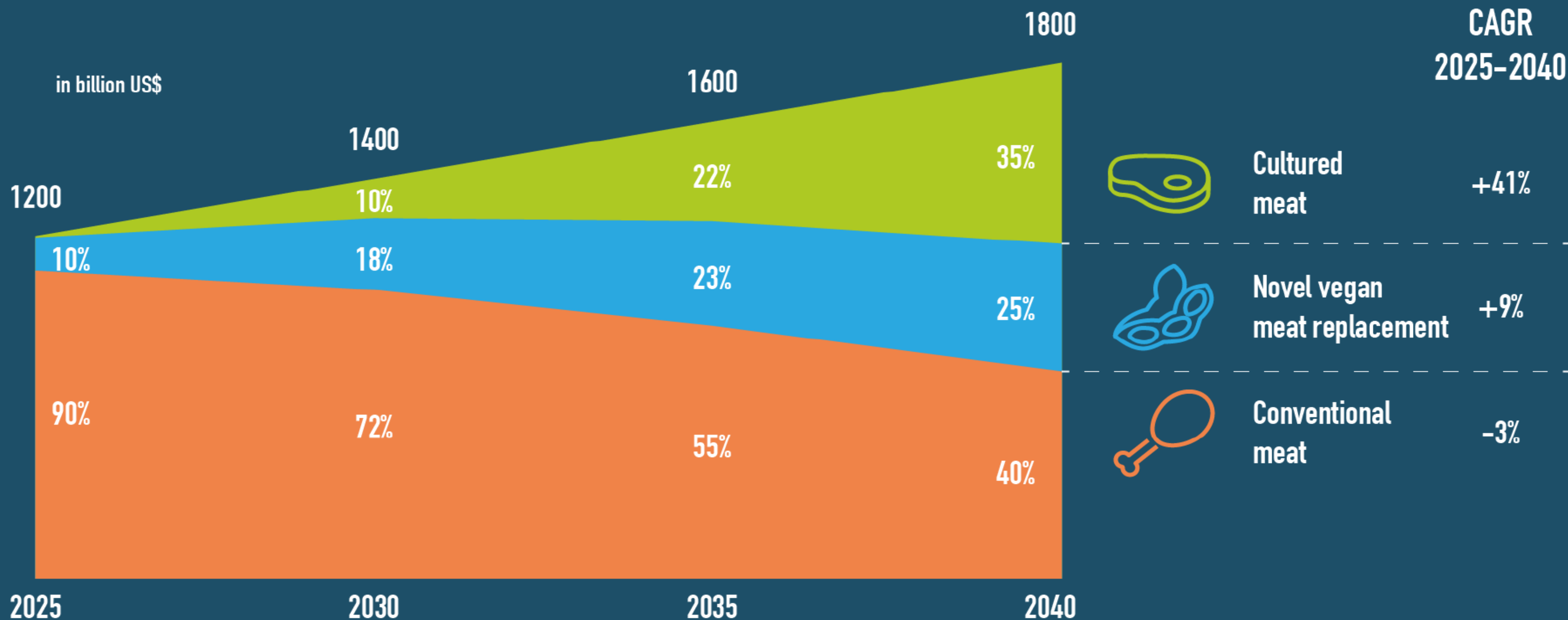
**Science fiction is becoming science fact: FORESIGHT IS CRITICAL**





# Science fiction is becoming science fact: FORESIGHT IS CRITICAL

## GLOBAL MEAT CONSUMPTION







**“We are least aware of what our minds do best. The most difficult things for machines to emulate are those that are unconscious” (Moravec, Minsky et al)**

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



**“Never mistake a  
clear view for a  
short distance”**

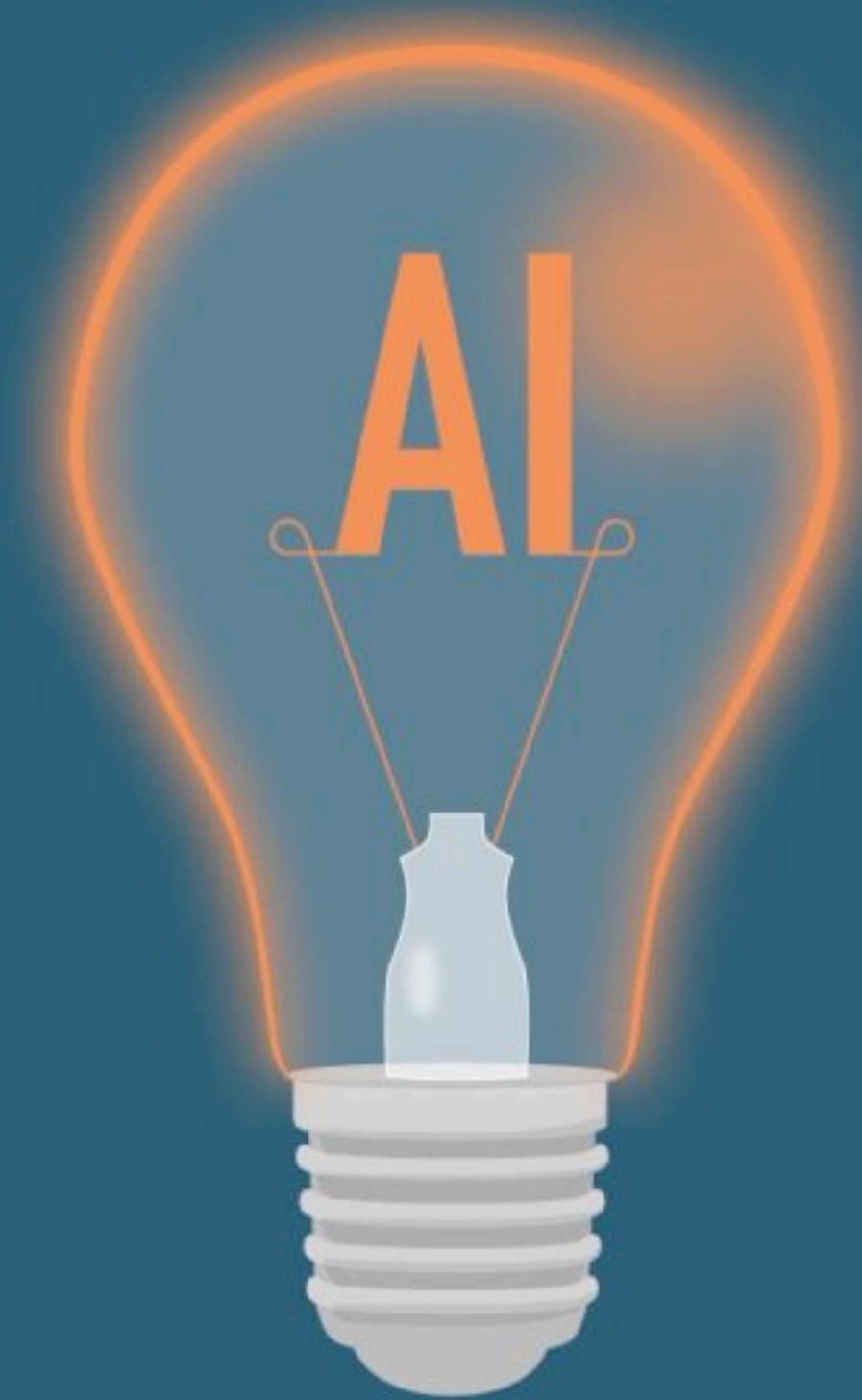
**Paul Saffo**



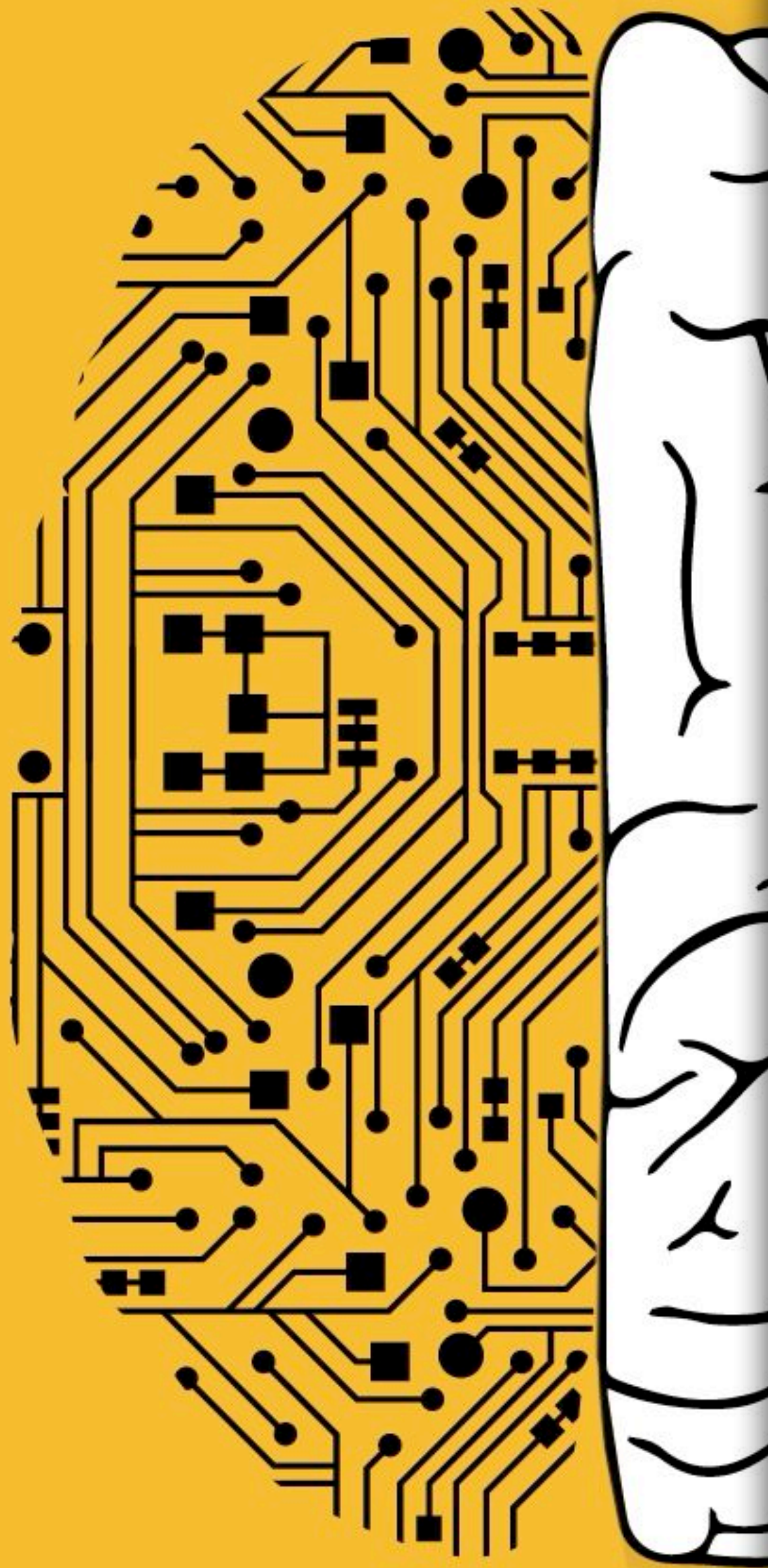


# Right now, it's all about Intelligent Assistance (IA), not AI

4







# ARTIFICIAL INTELLIGENCE UPTAKE IN SUPPLY CHAIN MANAGEMENT

PERCENTAGE OF COMPANIES IN THE FOLLOWING SECTORS THAT HAVE ADOPTED AI



Source: McKinsey 2018



AI in procurement: humans need to stay in the loop where it REALLY MATTERS (the black box challenge)



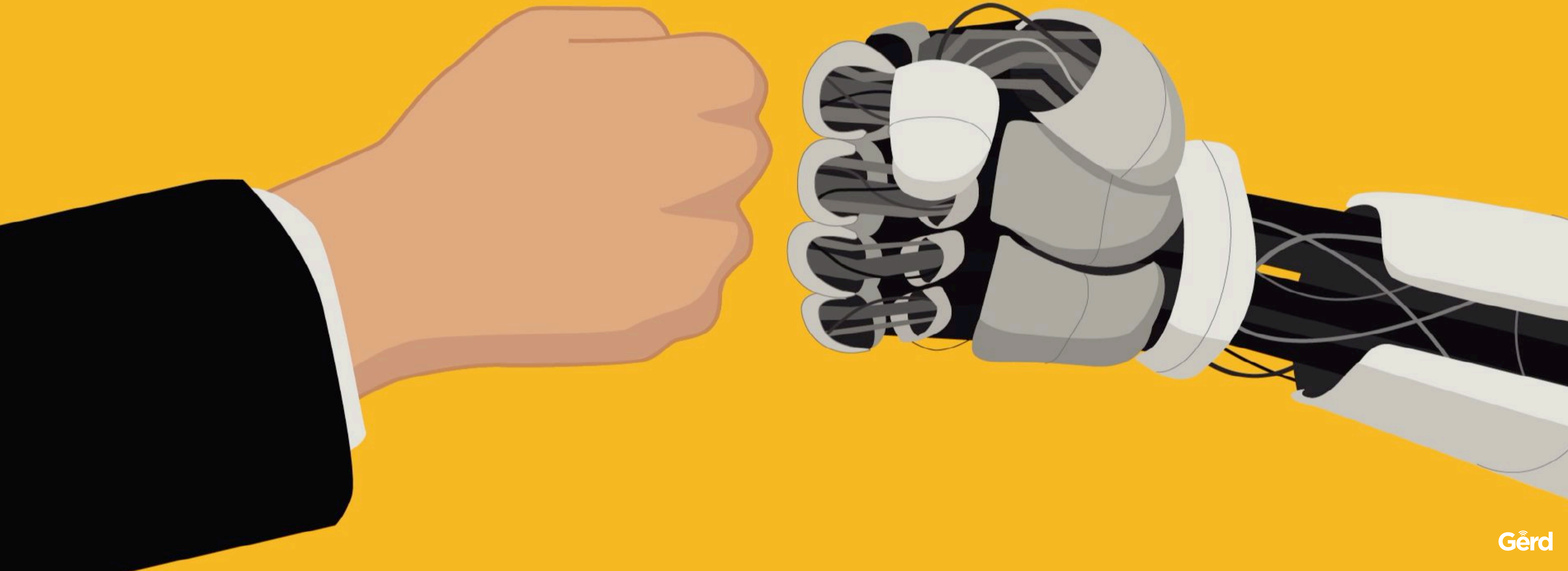


# Humans and/or with/versus machines: Striking the right BALANCE is crucial





# Humans and/or with/versus machines: Striking the right BALANCE is crucial







Alright, I'll call to book under your name and phone number, and I'll update you in the next fifteen minutes. Is that okay?

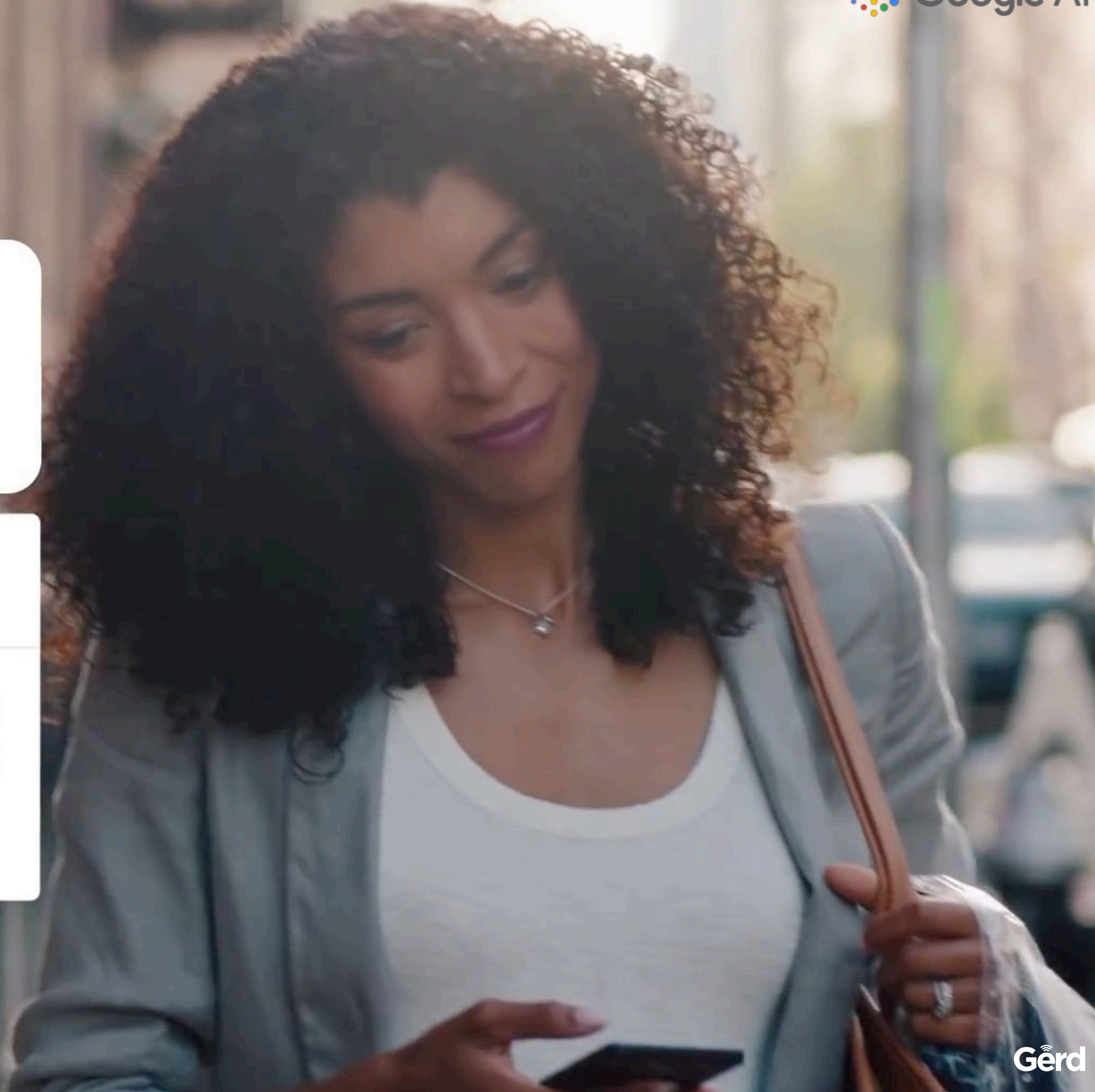
El Cocotero  
Reservation details

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June 12, 7:00 PM (or 7:00 to 8:00 PM)  
2 People  
228 W 18th St #1, New York, NY 10011



Under Anna Davis  
tel: (650) 273-7808

The reservation details card is a white rounded rectangle. It features the restaurant name 'El Cocotero' and 'Reservation details' at the top. Below a horizontal line, it lists the date and time 'June 12, 7:00 PM (or 7:00 to 8:00 PM)', the number of people '2 People', and the address '228 W 18th St #1, New York, NY 10011'. To the right of the address is a small square image showing the interior of a restaurant with red tables and white chairs. At the bottom, it lists the name 'Under Anna Davis' and the phone number 'tel: (650) 273-7808'.

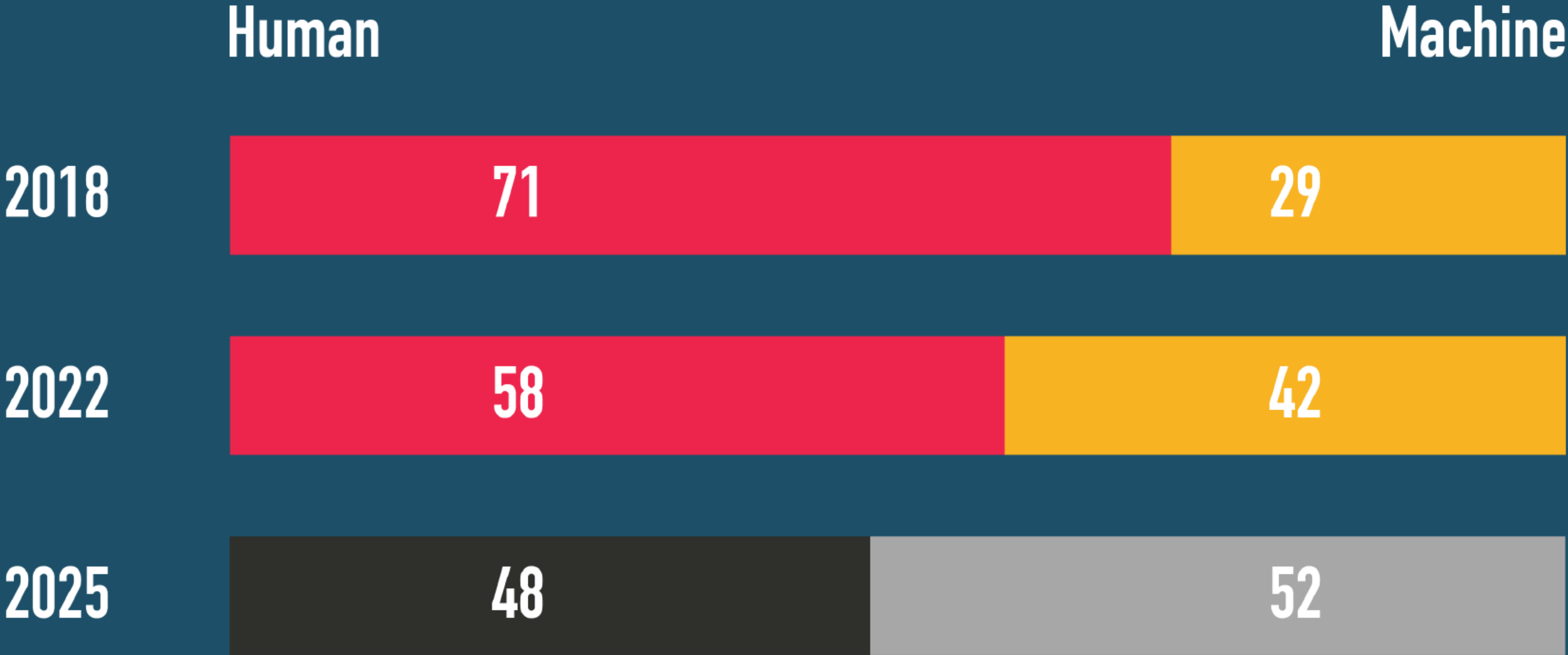


...so who is going to build the first 'Procure-Bot'?

SEQUENCES SHORTENED AND SIMULATED



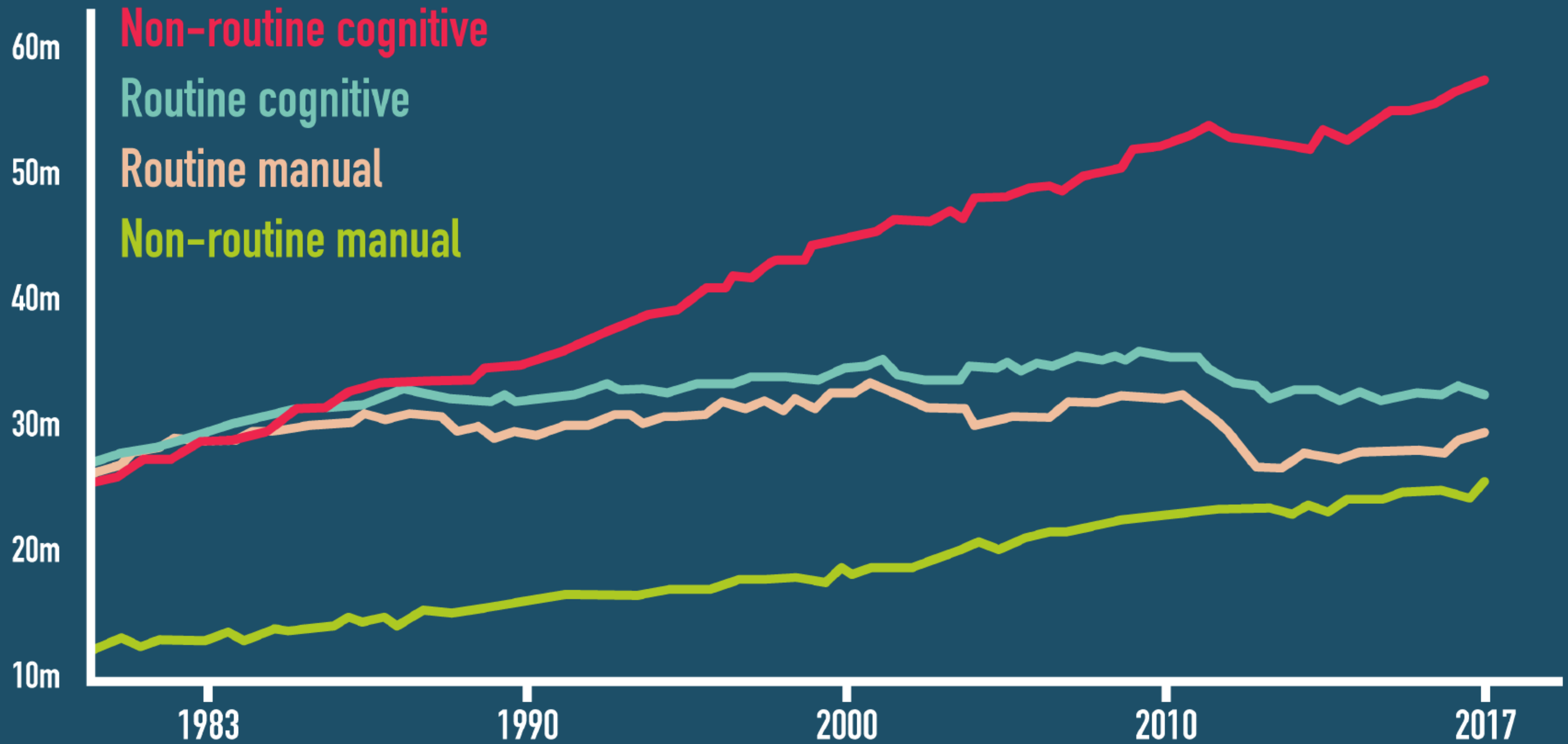
# MACHINES WILL INCREASINGLY DO THE ROUTINE WORK



Source: World Economic Forum



# NON-ROUTINE WORK IS THE FUTURE!





**PURPOSE**

**PASSION**

**CURIOSITY**



**IMAGINATION**

**FORESIGHT**

**CRITICAL THINKING**





**S**cience  
**T**echnology  
**E**ngineering  
**M**athematics



**H**umanity  
**E**thics  
**C**reativity  
**I**magination



The end of Routine is nearing, but it's NOT the end of Human Work !

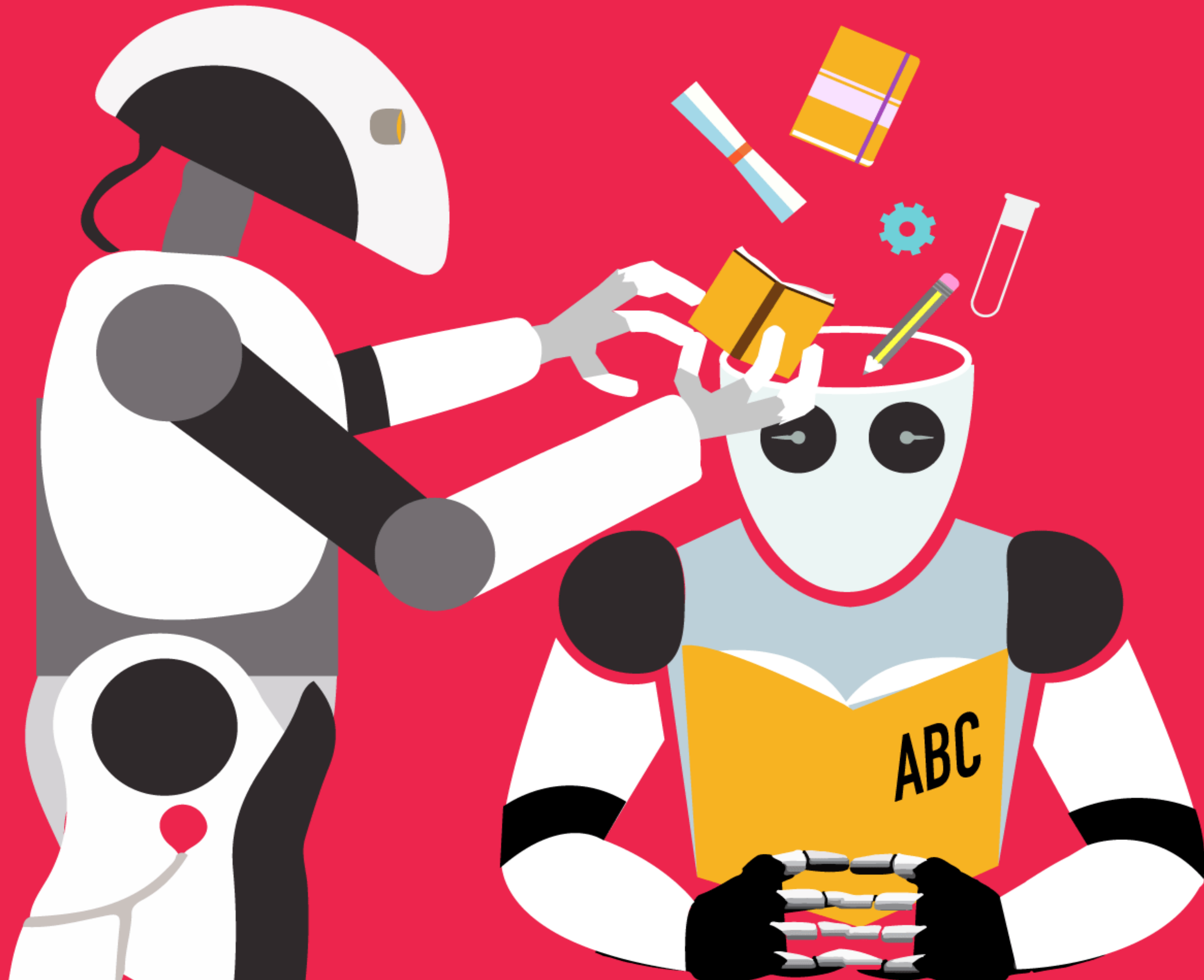


R O U T I N E



Information and (some) knowledge\* will be commoditised: move up the food-chain!

6

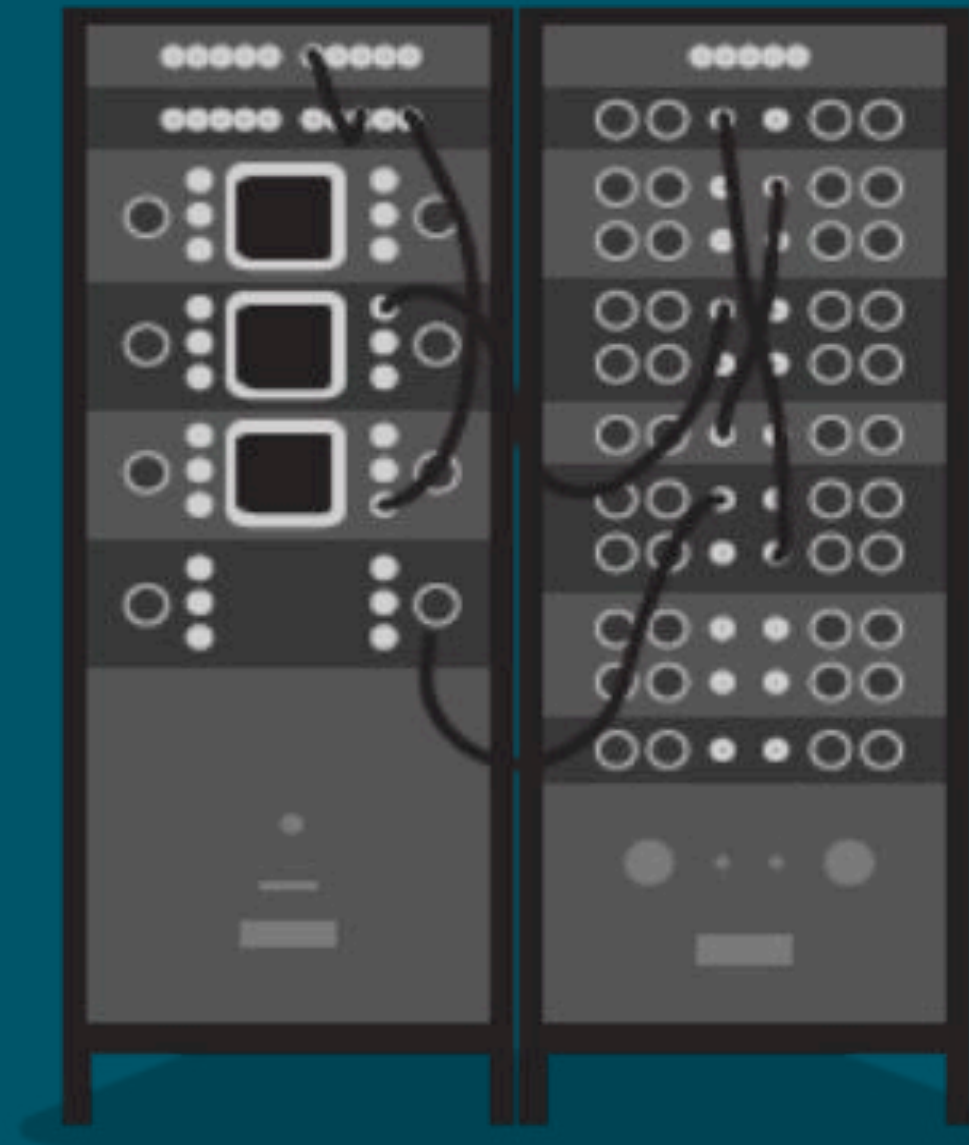
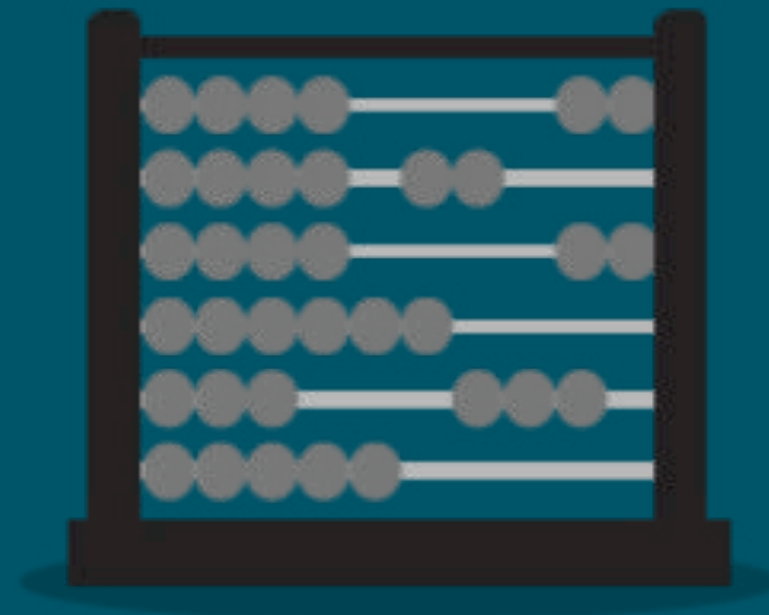


**Data and Information**  
is not Knowledge\*  
is not Understanding  
is not Wisdom  
is not Purpose



# Artificial Intelligence: Computer systems that turn information and data into KNOWLEDGE

(Demis Hassabis @ DeepMind)



*Tabulating  
Systems Era*

*Programmable  
Systems Era*

*Cognitive  
Systems Era*

1900

1950

2020



**Tacit Knowledge?**  
**Implicit Knowledge?**  
**Intuition & Imagination ?**  
**Consciousness/Agency ?**  
**Mistakes?**



*Cognitive  
Systems Era*

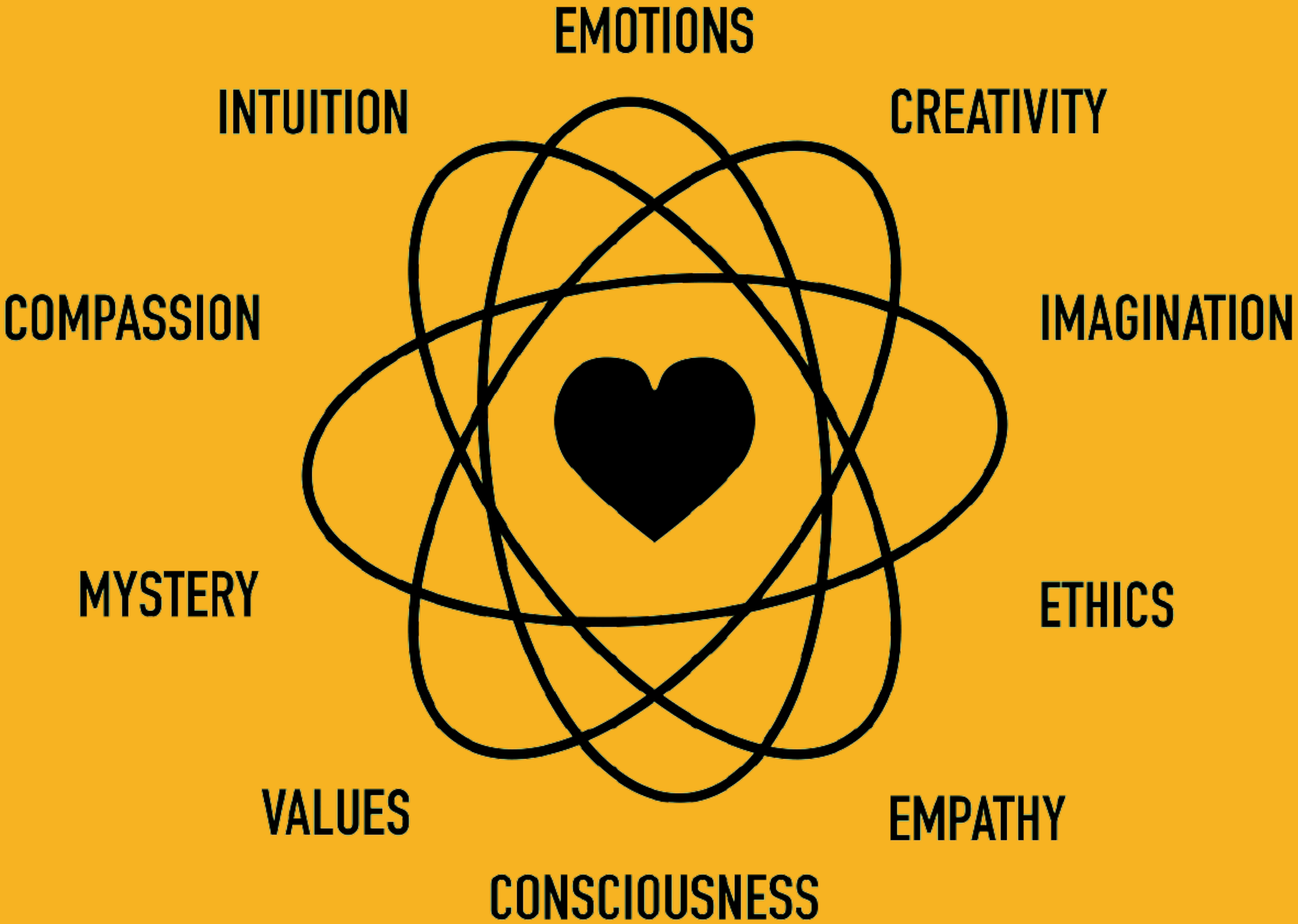
1900

1950

2020

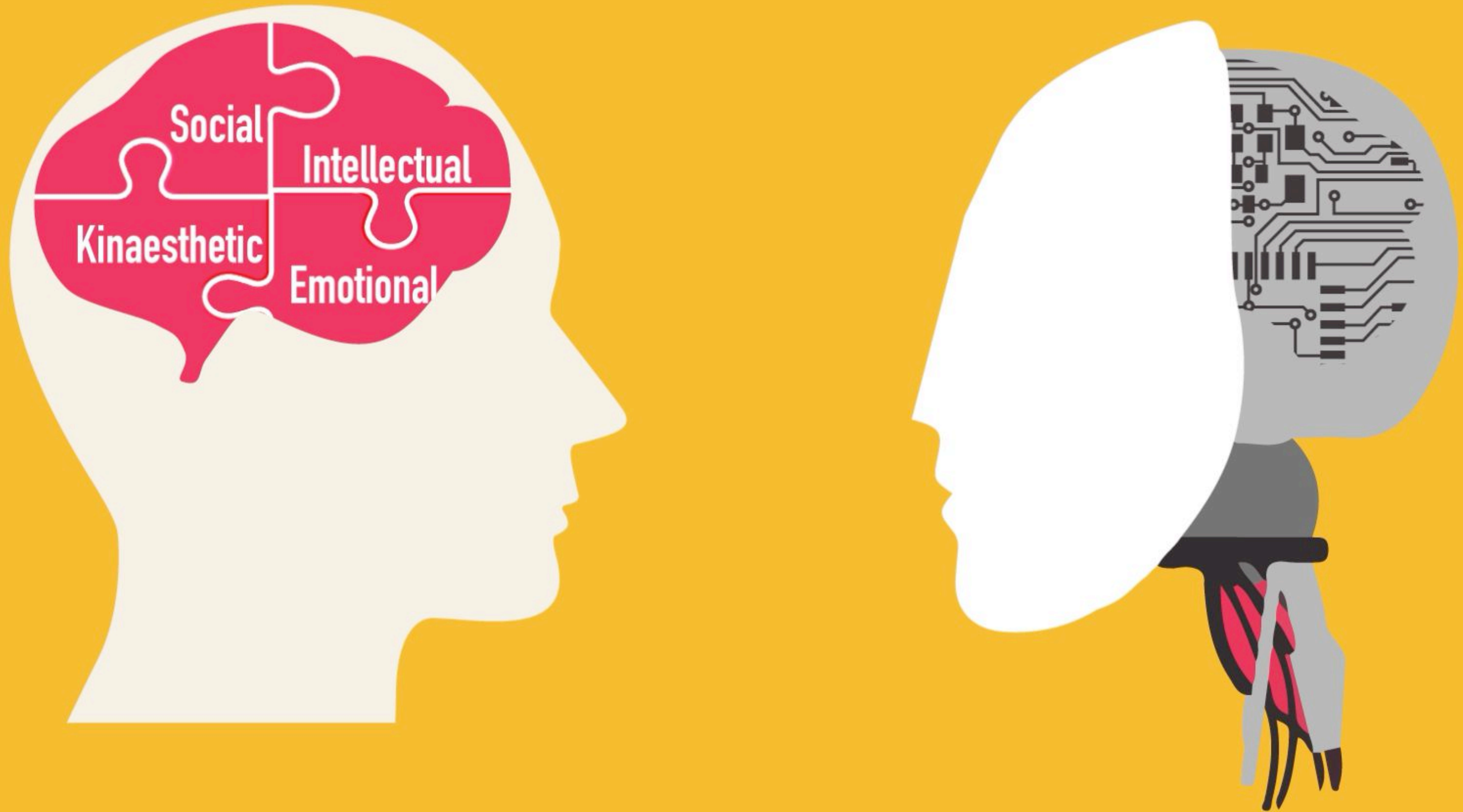


# Anything that CANNOT be digitised, or automated, becomes extremely valuable





# Being truly HUMAN is your ultimate career move





As our world goes totally digital, it will be our humanity and our purpose that defines us, not our technology

7

human  
inside





# Expect dramatic, global and mandatory environmental adaptation and mitigation requirements





# Outmoded and unsustainable 'industrial society' economic logic: procurement needs to lead the change

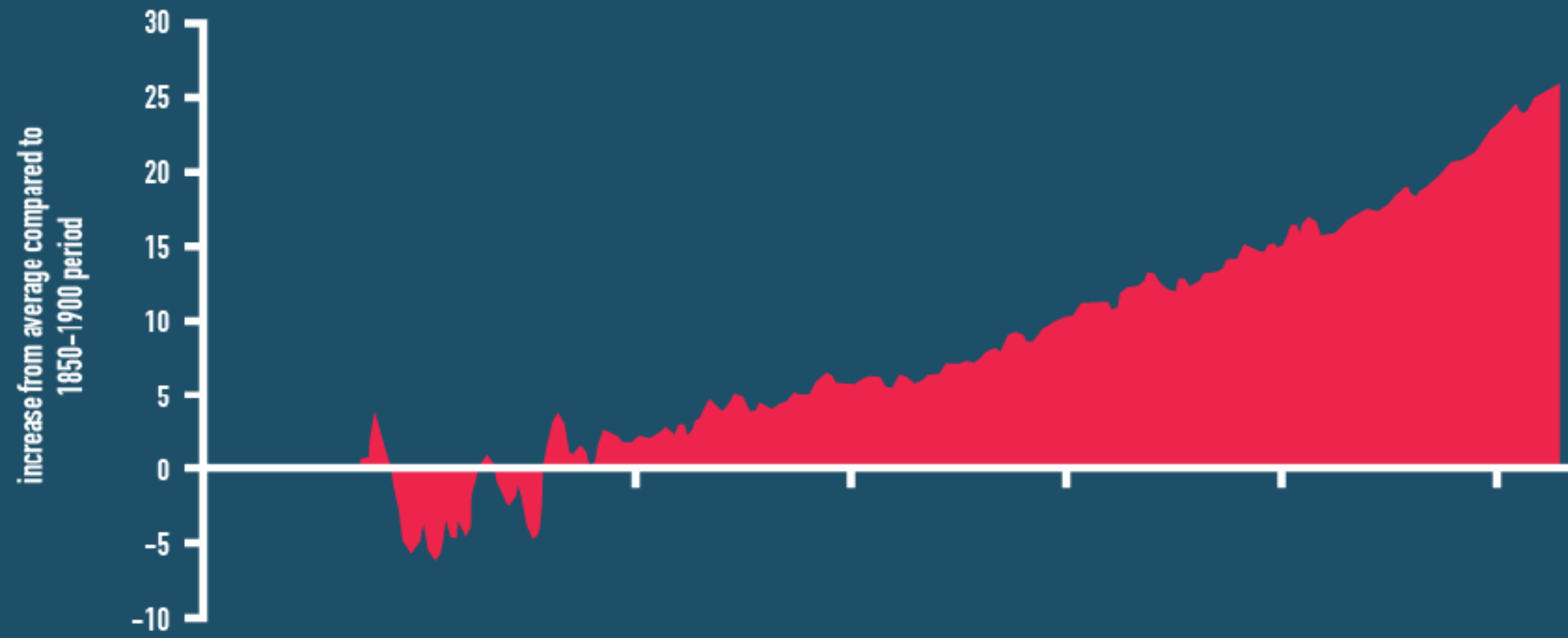
### GLOBAL ENERGY USE A TWENTY-FOLD INCREASE



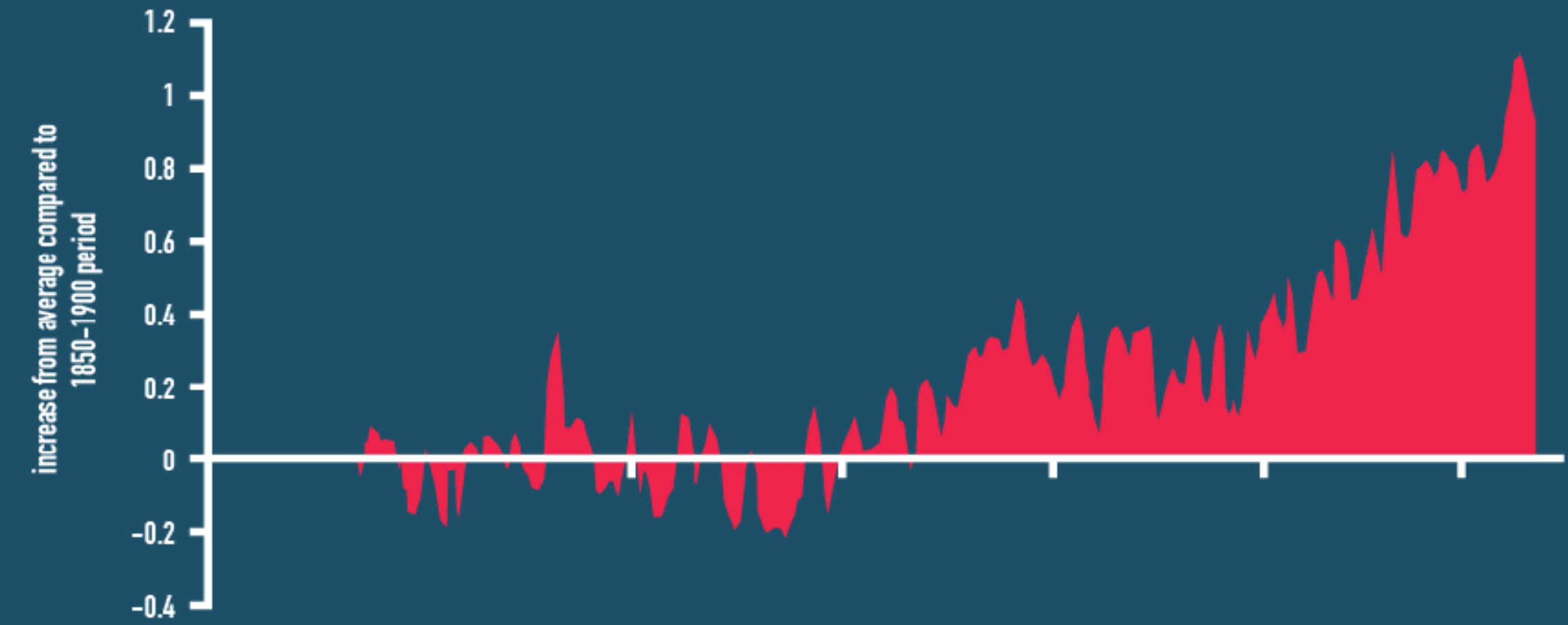
### GLOBAL GDP A HUNDRED-FOLD INCREASE



### GLOBAL SEA LEVEL A 25CM INCREASE



### GLOBAL SURFACE TEMPERATURE A 1°C INCREASE





# Sustainable Capitalism



**“GNP (GDP) measures everything except that which makes life worthwhile”**

**Senator Robert F. Kennedy**

**March 18 1968**



# The 3 principles of SUSTAINABLE PROCUREMENT

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**HOLISTIC**



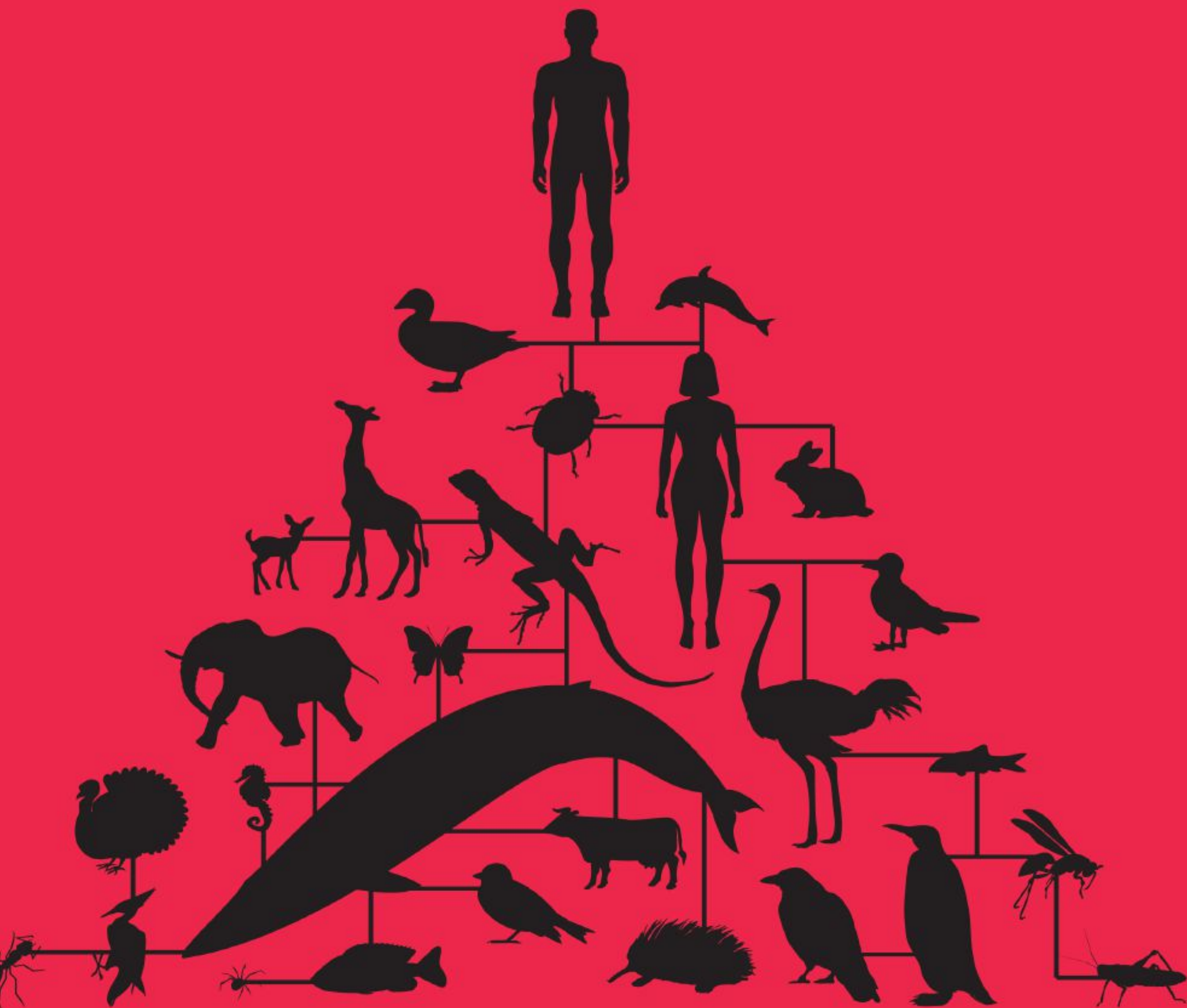
**CIRCULAR**



**HUMAN**



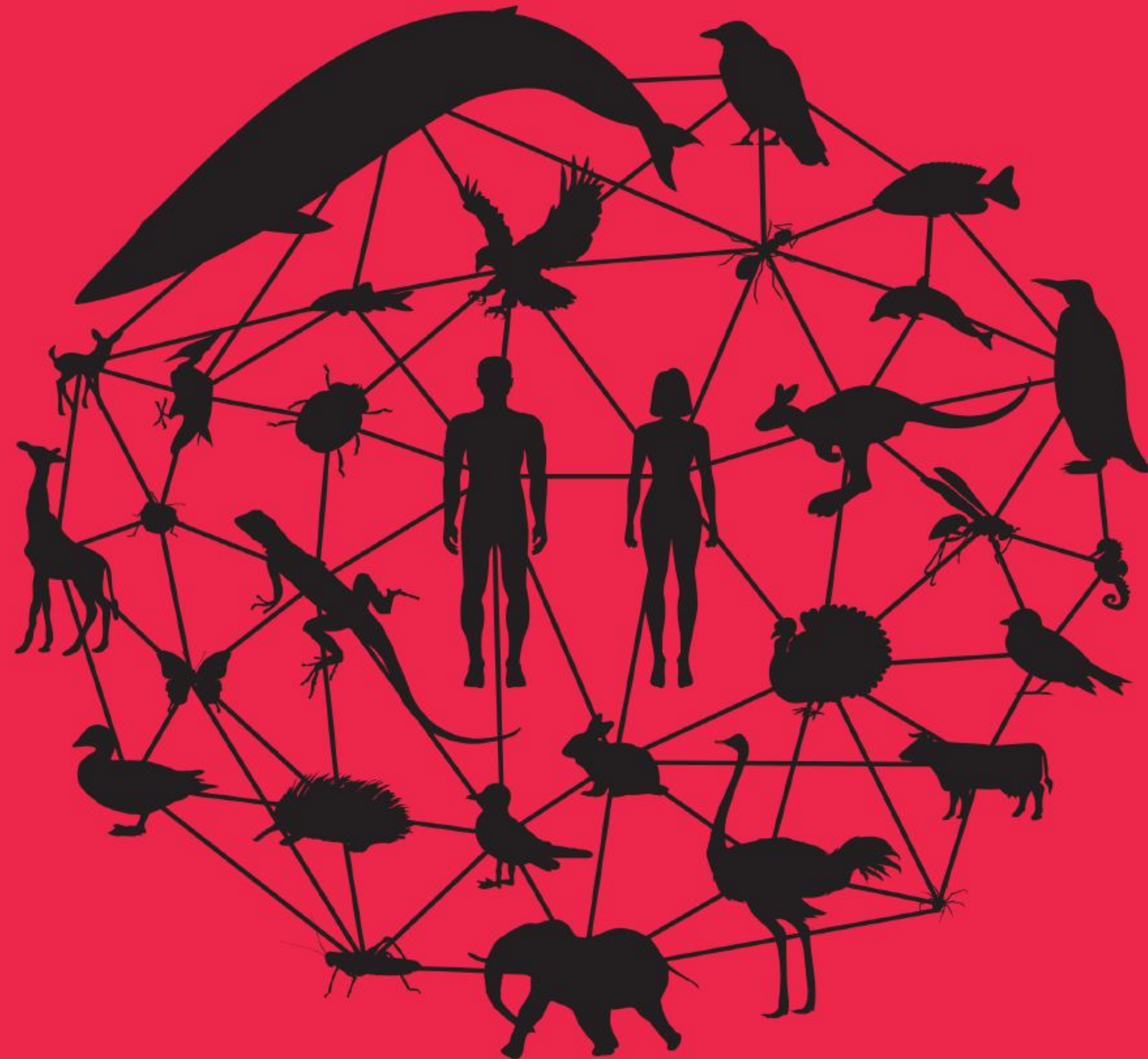
# From EGOsystems . . . . . to ECOsystems





# BUILD FUTURE-READY ECOSYSTEMS!

9



**Hyper-Collaborative & Networked**

**Open APIs**

**3rd party applications**

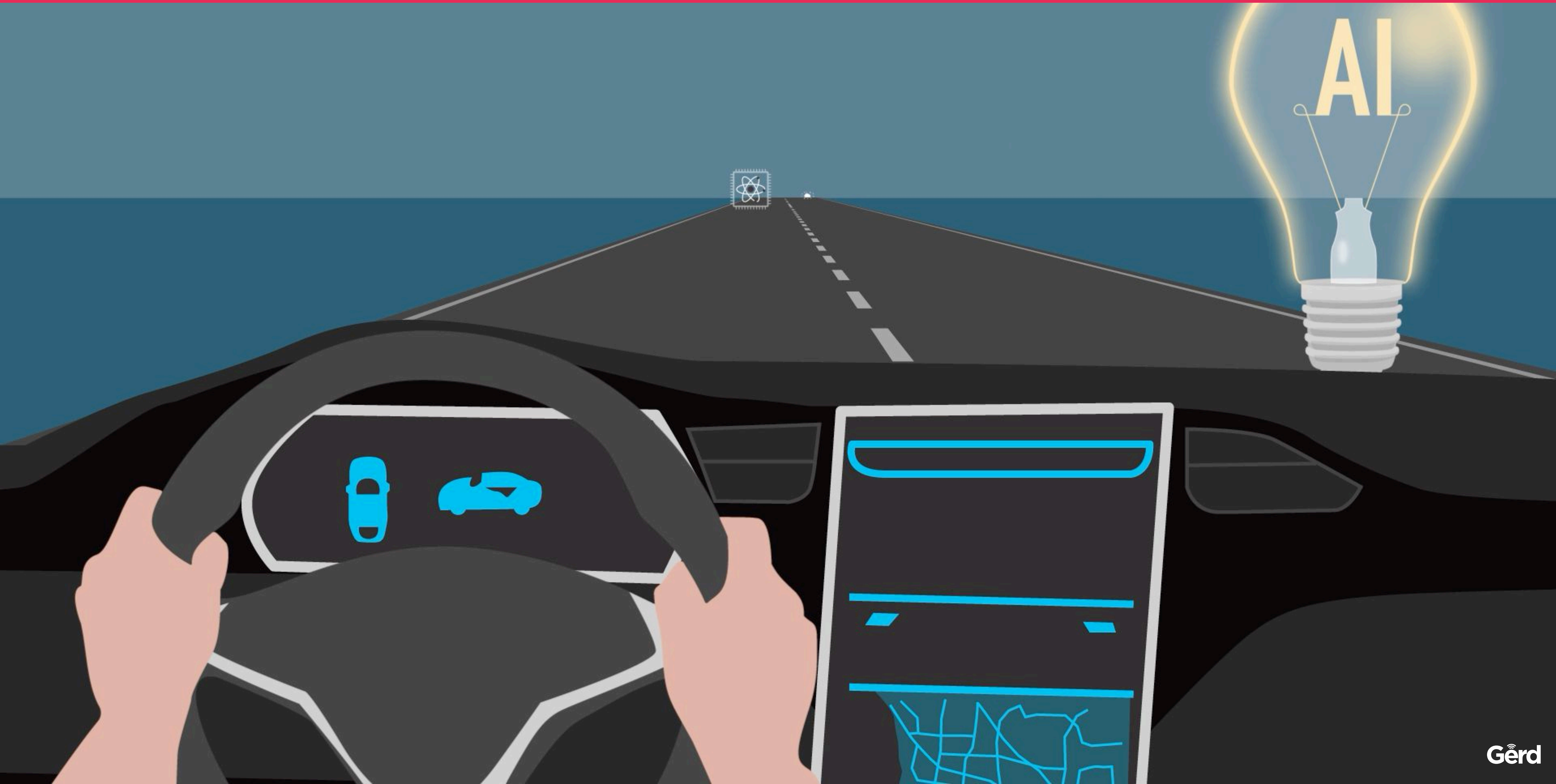
**Freelancers / Gig Economy**

**Unprecedented Transparency**

**Supplier 'Panopticon'**



Start navigating the Game-Changers: take care of what is, AND imagine WHAT MIGHT BE!





10

# PROCRUREMENT

TRANSFORMATIONS  
GUIDE

EXPERIENCES  
STAGE

SERVICES  
DELIVER

GOODS  
MAKE

COMMODITIES  
EXTRACT

# PROCRUREMENT



**DPW** DIGITAL  
PROCUREMENT  
WORLD  
18-19 SEPTEMBER, 2019 **AMSTERDAM**



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