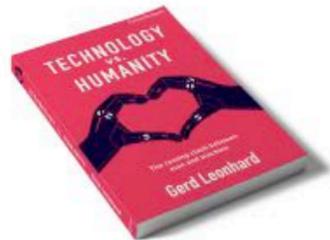




ThoughtWorks®

The 7 key future principles of digital transformation



techvshuman.com



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



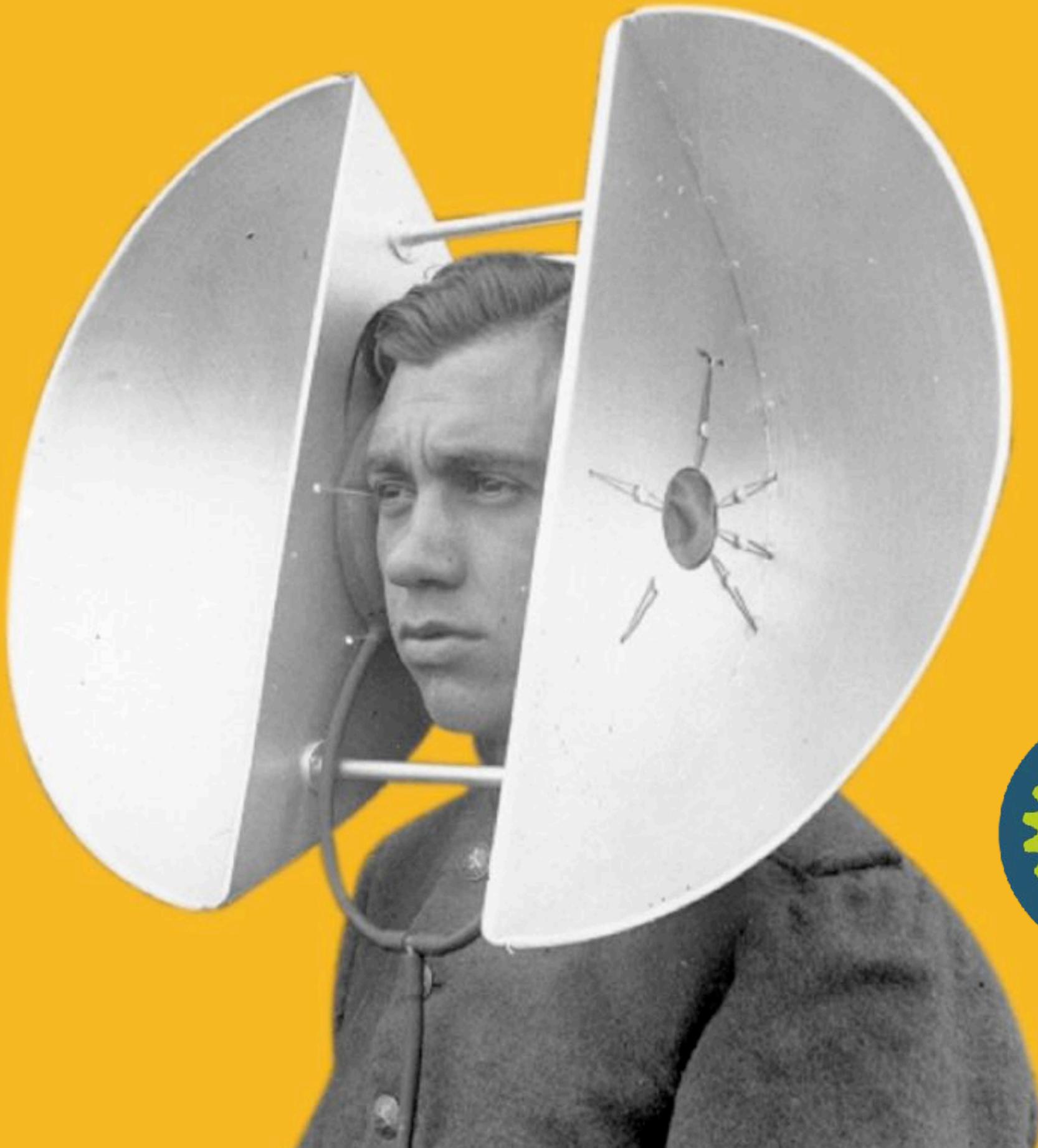
gerdtube.com



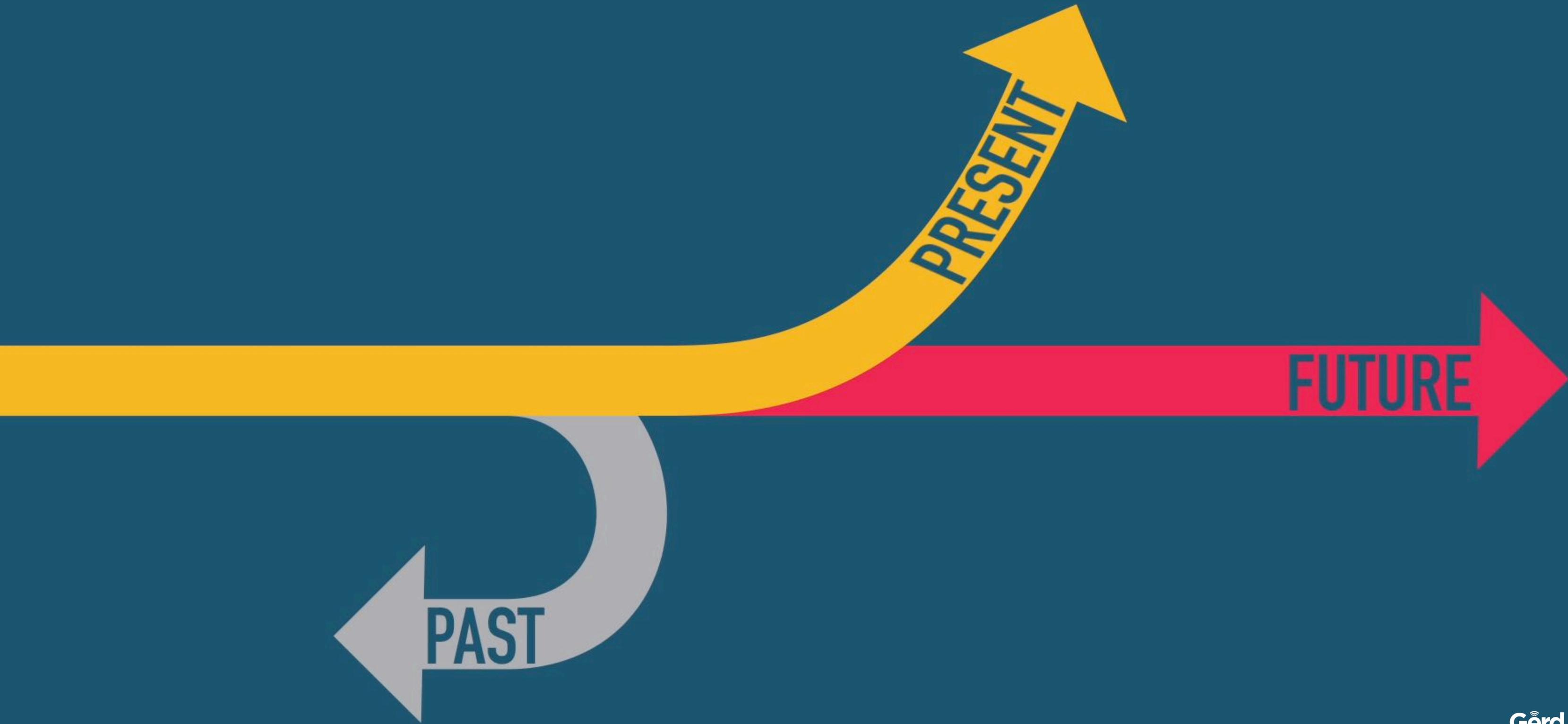
gerdcloud.com



futuristgerd.com



1 The future is no longer an extension of the present

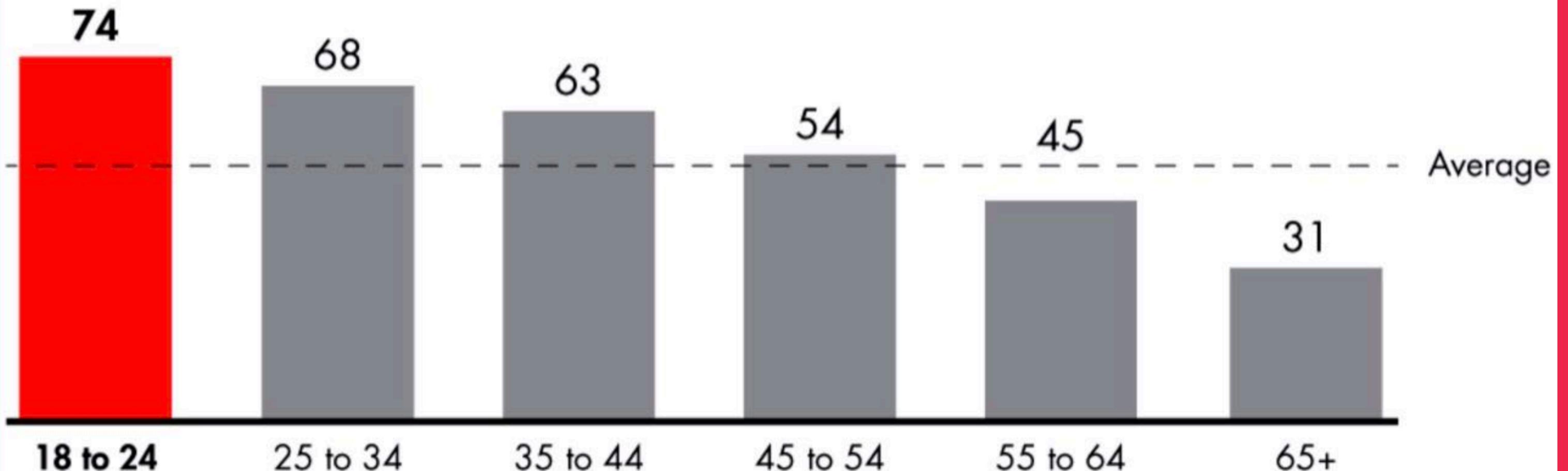


The end of 'good enough'

■ Three-quarters of the youngest adults expect to buy a financial product from technology firms

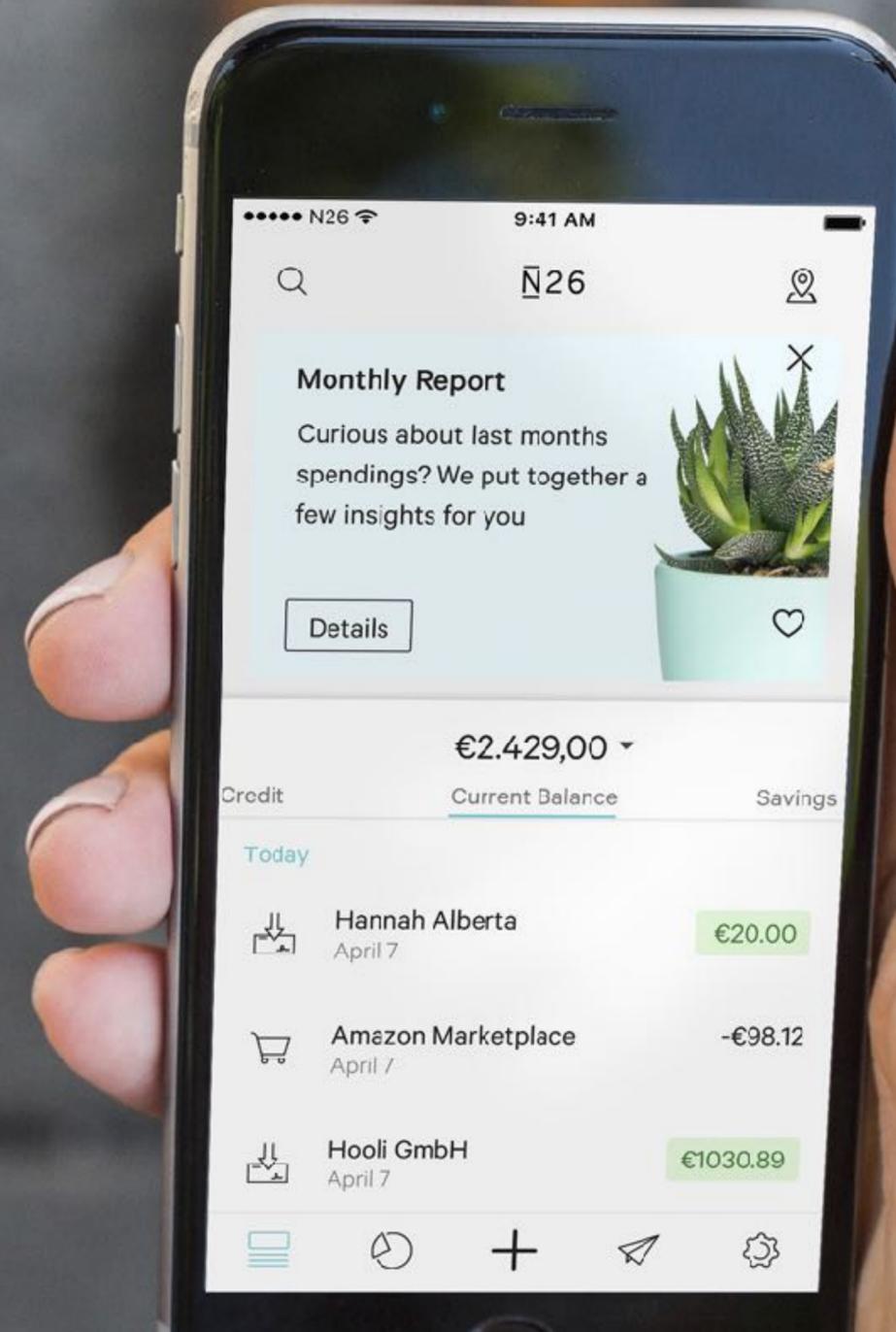
“Do you think you will try any financial product from a technology company in the next five years?”

Percentage of US respondents, by age



Source: Bain/Research Now Customer Loyalty in Retail Banking survey, 2017, US (n=26,140)

The end of 'good enough'



The end of 'good enough'

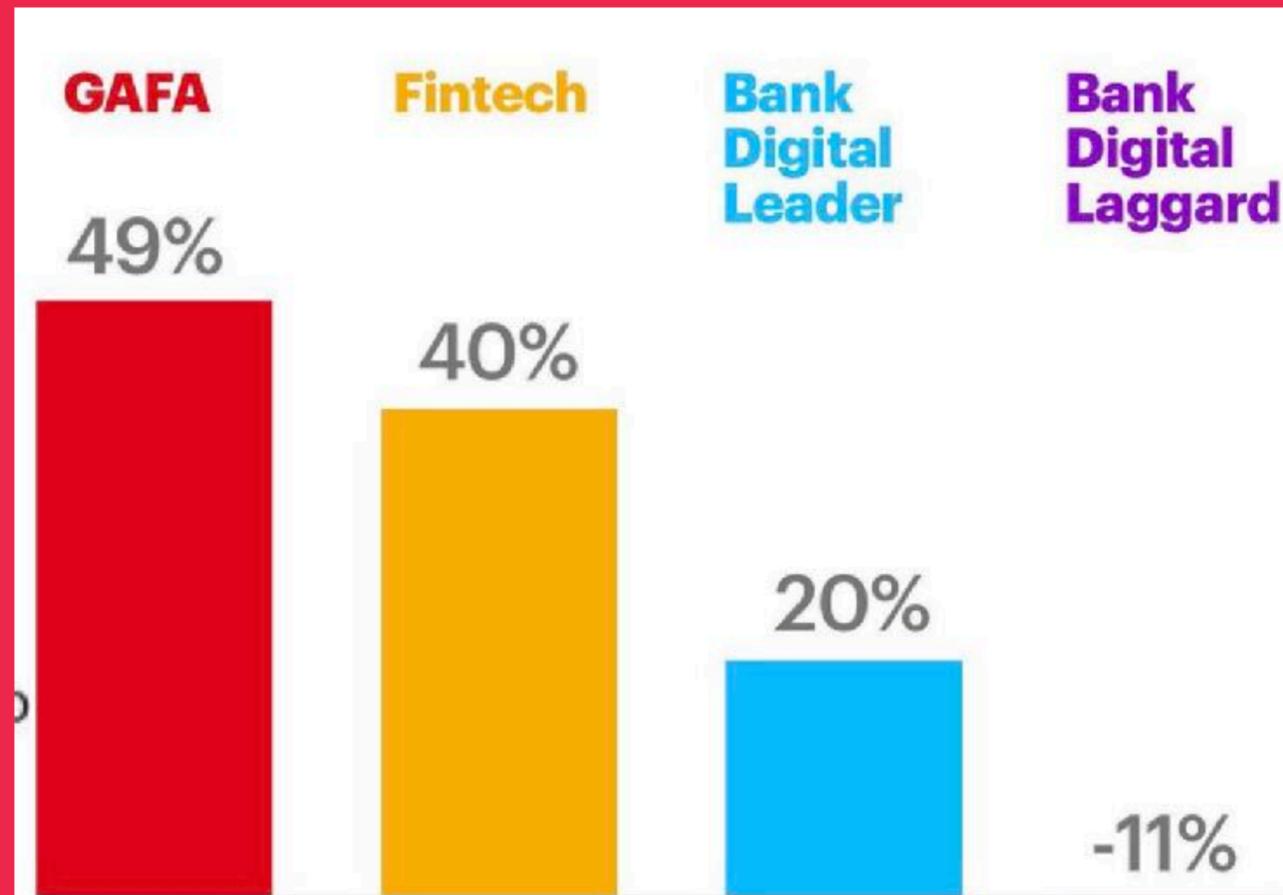


FIGURE 2.
Banking Future Growth Value
Analysis*

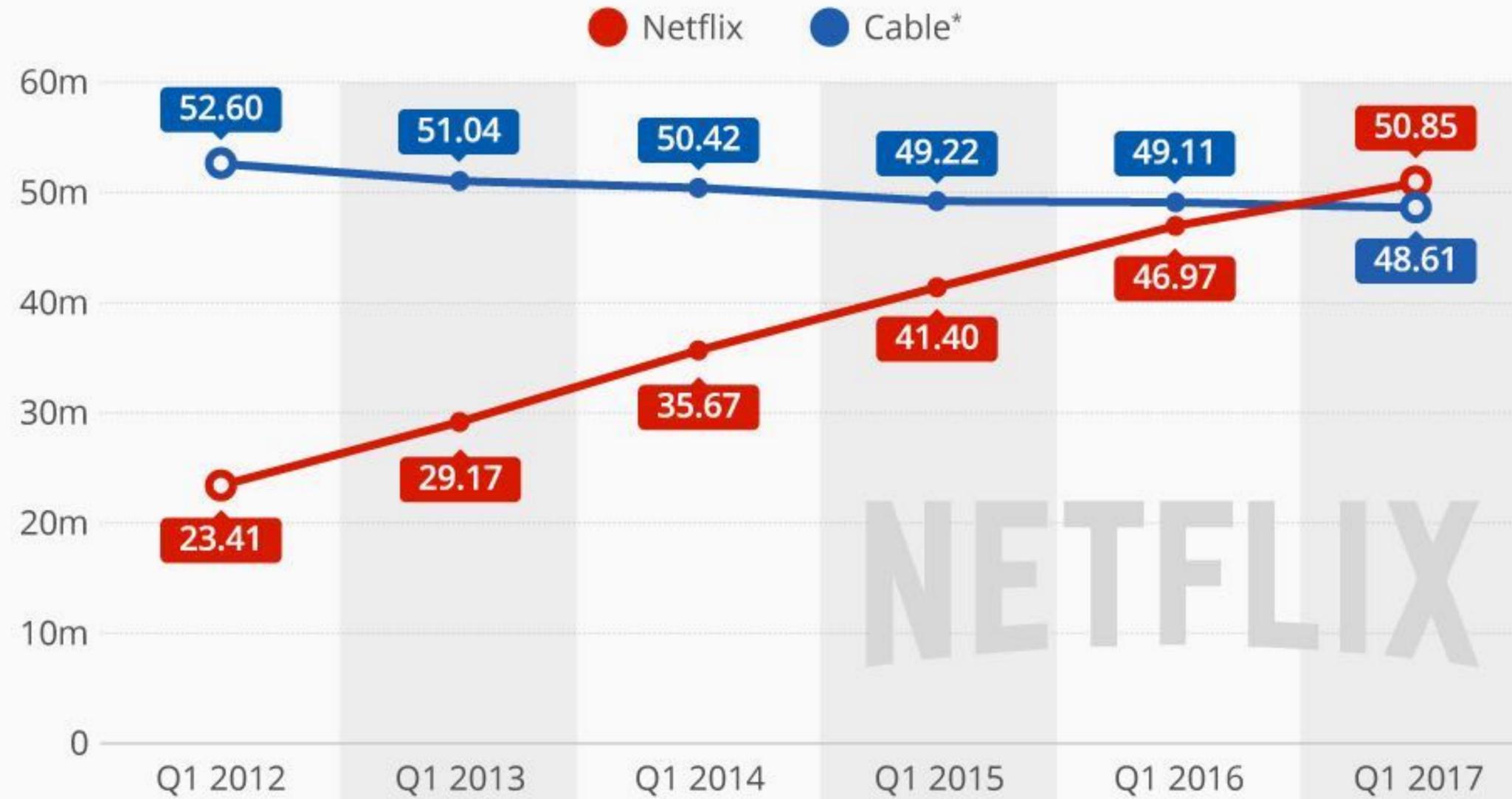
(As percent of enterprise value)

Source: Accenture Research analysis on Capital IQ data, March 13, 2017.

The end of 'good enough'

Netflix Surpasses Major Cable Providers in the U.S.

Number of Netflix subscribers vs. cable pay-TV subscribers in the U.S. (in millions)



* includes major cable providers accounting for roughly 95% of cable subscribers and slightly less than half of all multichannel pay-TV subscribers

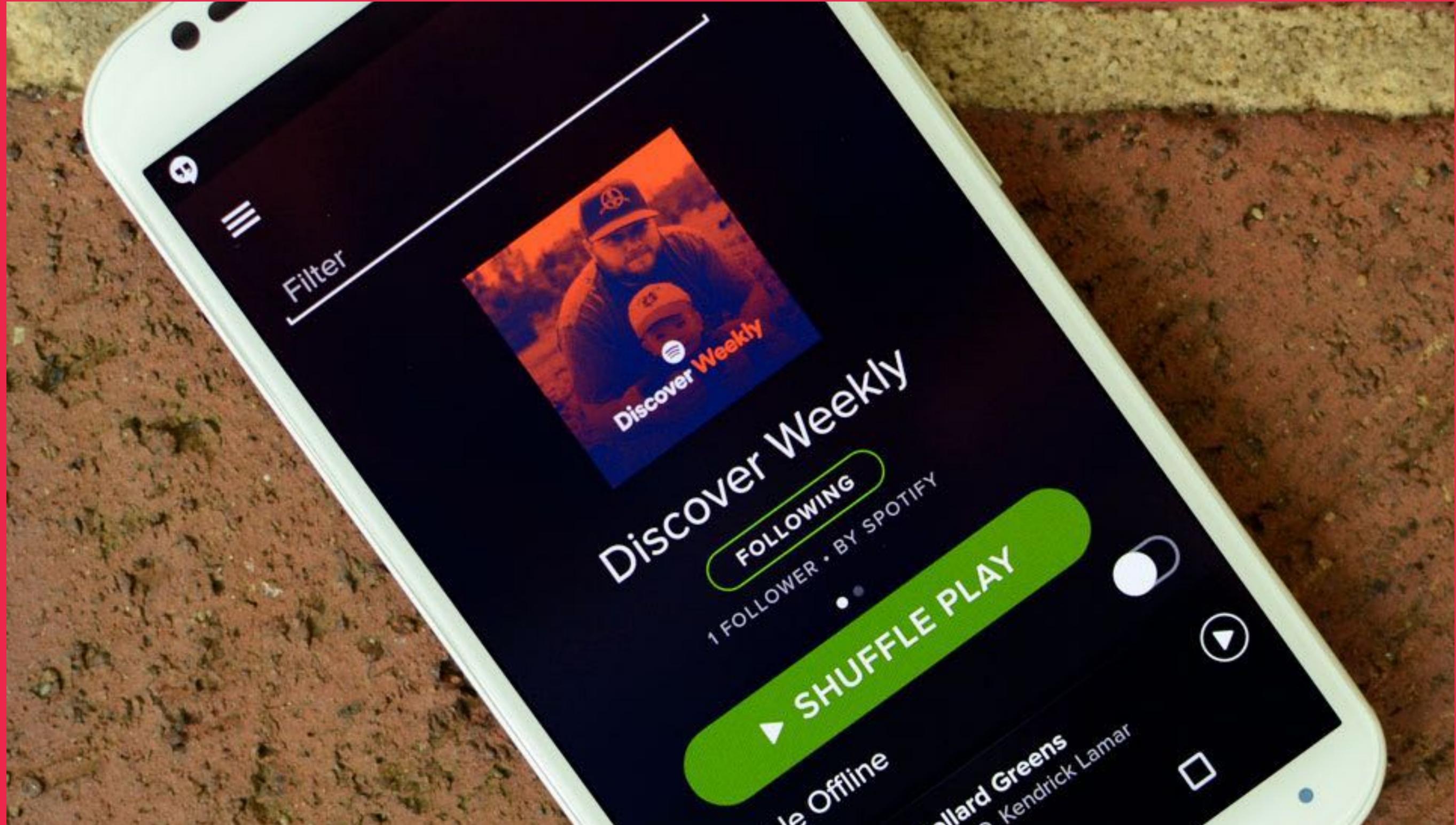


@StatistaCharts

Sources: Netflix, Leichtman Research Group

statista

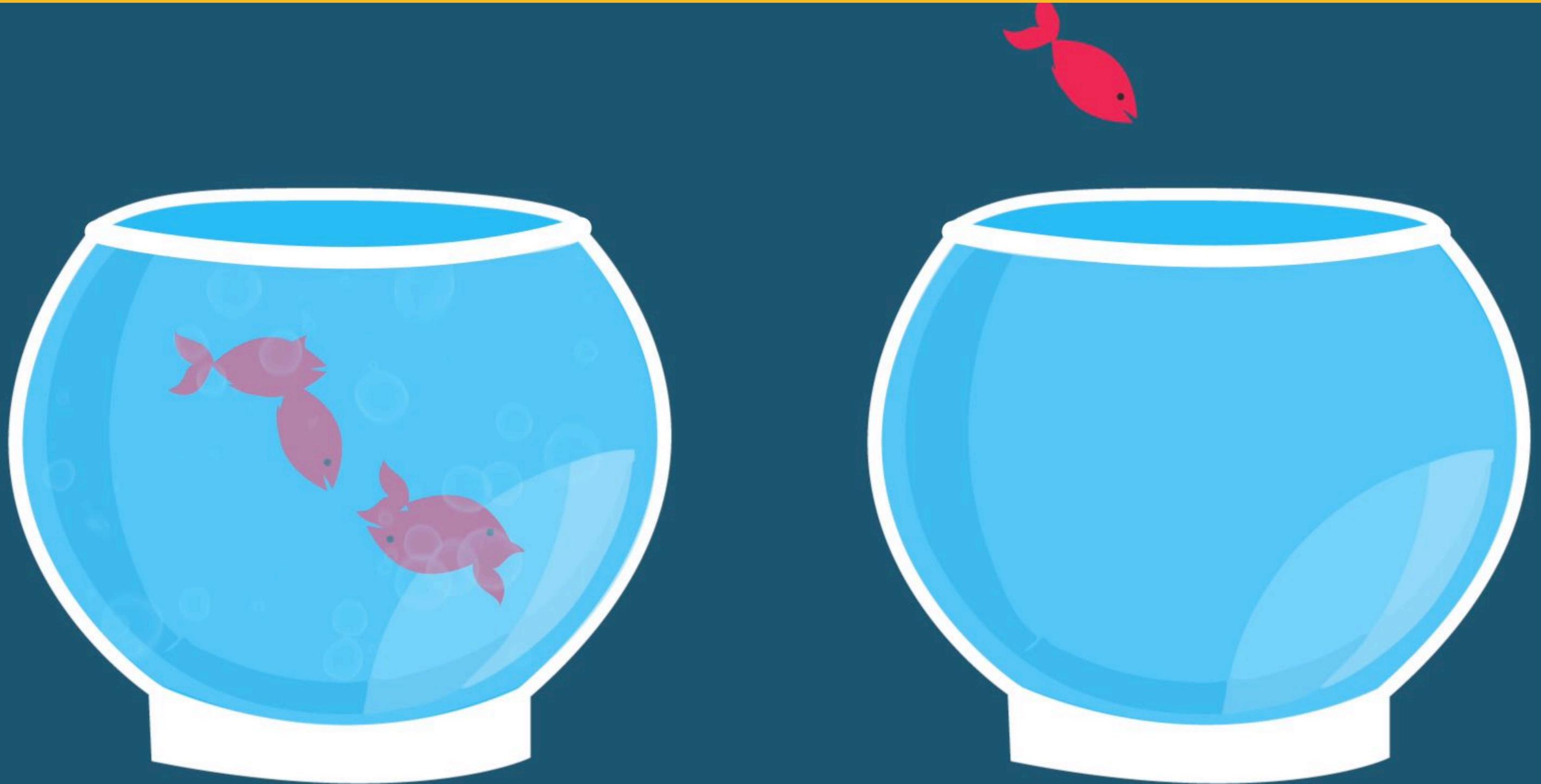
The end of 'good enough'



The end of 'good enough'

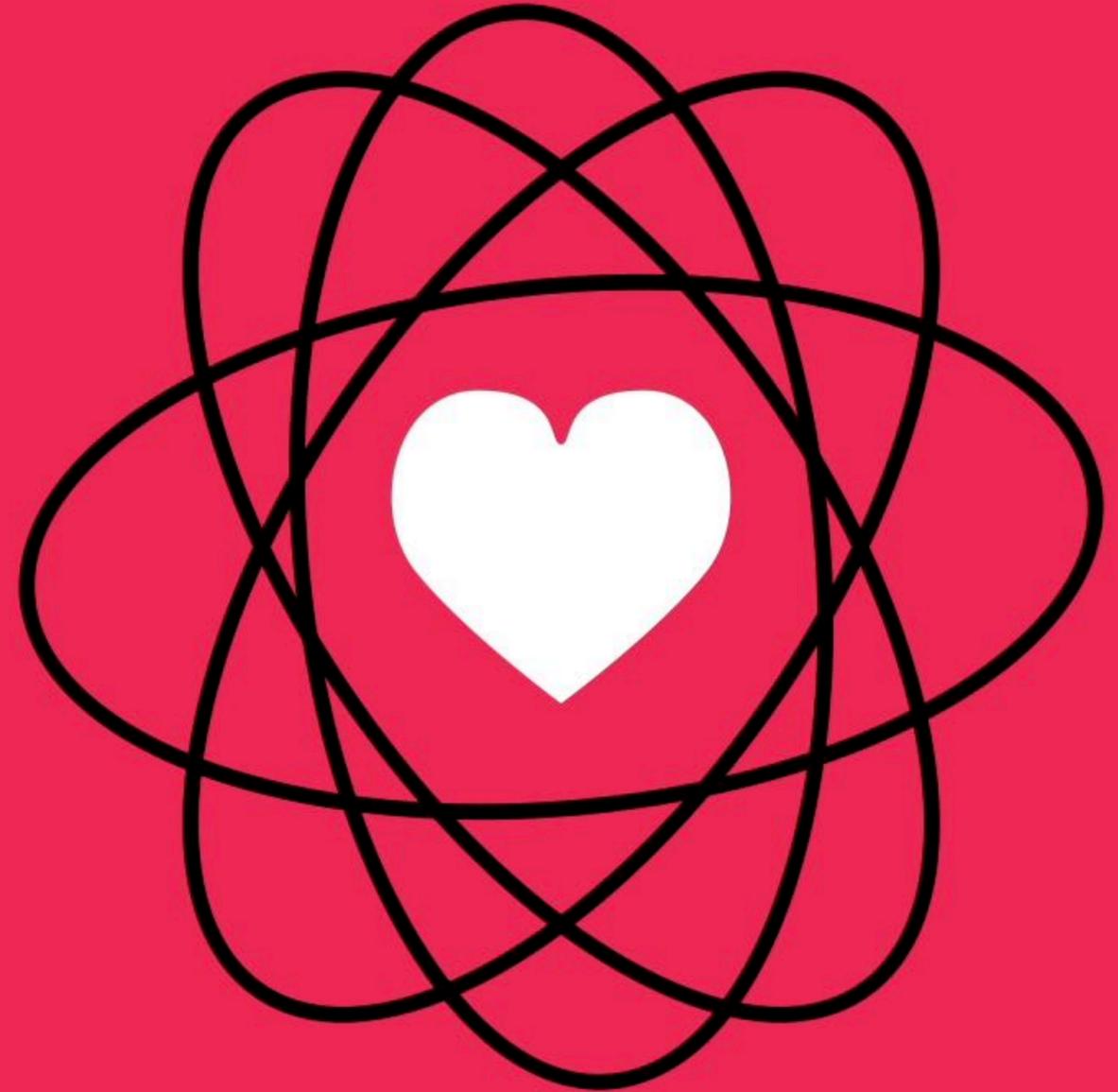
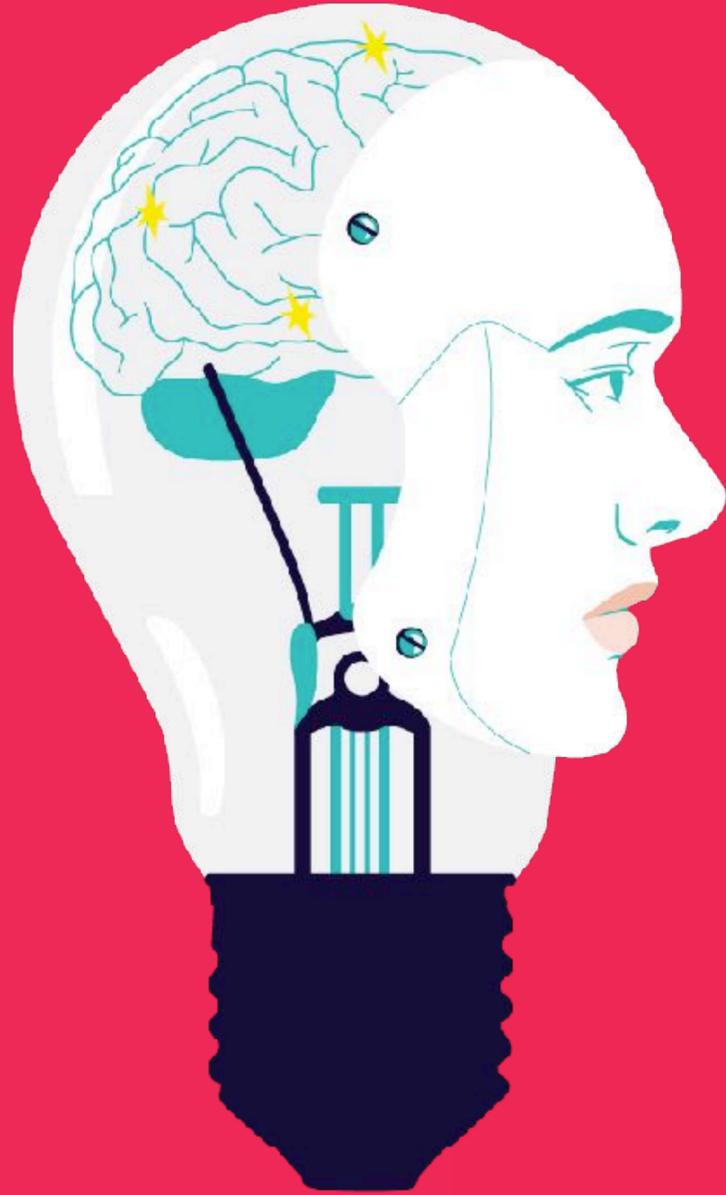


**To remain successful in a totally connected world you must be ready to take leaps, or to pivot
Most industries will be re-build for the age from the ground up, forming ecosystems**



2 Technology and humanity are increasingly overlapping

Ethics in technology: your position on 'digital ethics' will be a key differentiator





TECHNOLOGY HAS NO ETHICS

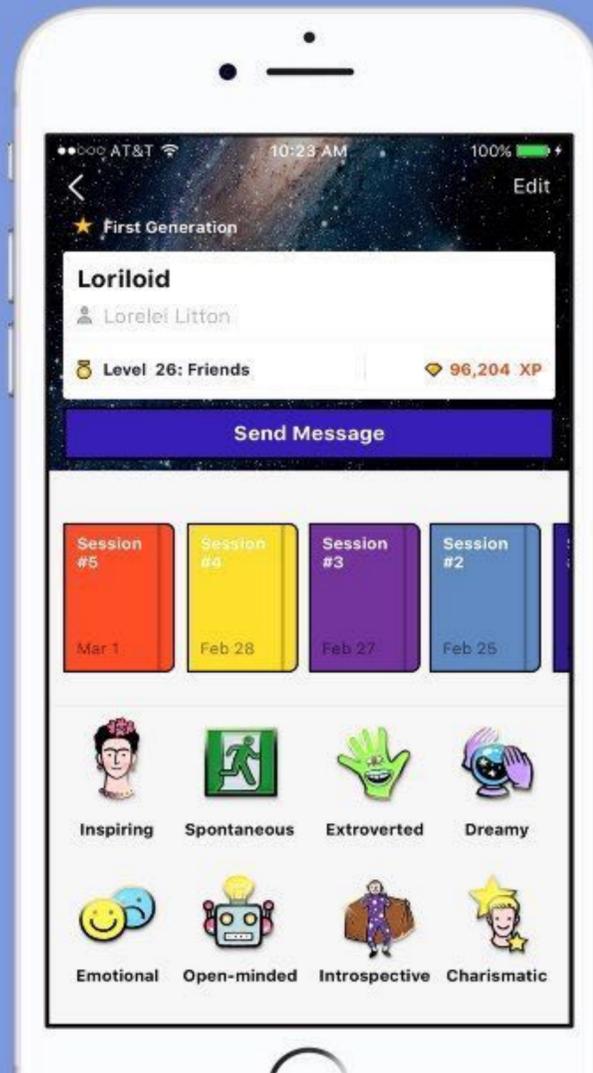


"Ethics is knowing the difference between what you have a right (or the power) to do and what is the right thing to do"

Replika loves you and cares for you



It helps you discover your personality



It keeps your memories



And takes friendship to the next level



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



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

Crucial: maintaining your 'license to operate': legally, morally and socially



The more connected we become, the more we must strengthen our social contracts, accountability, ethics, rules



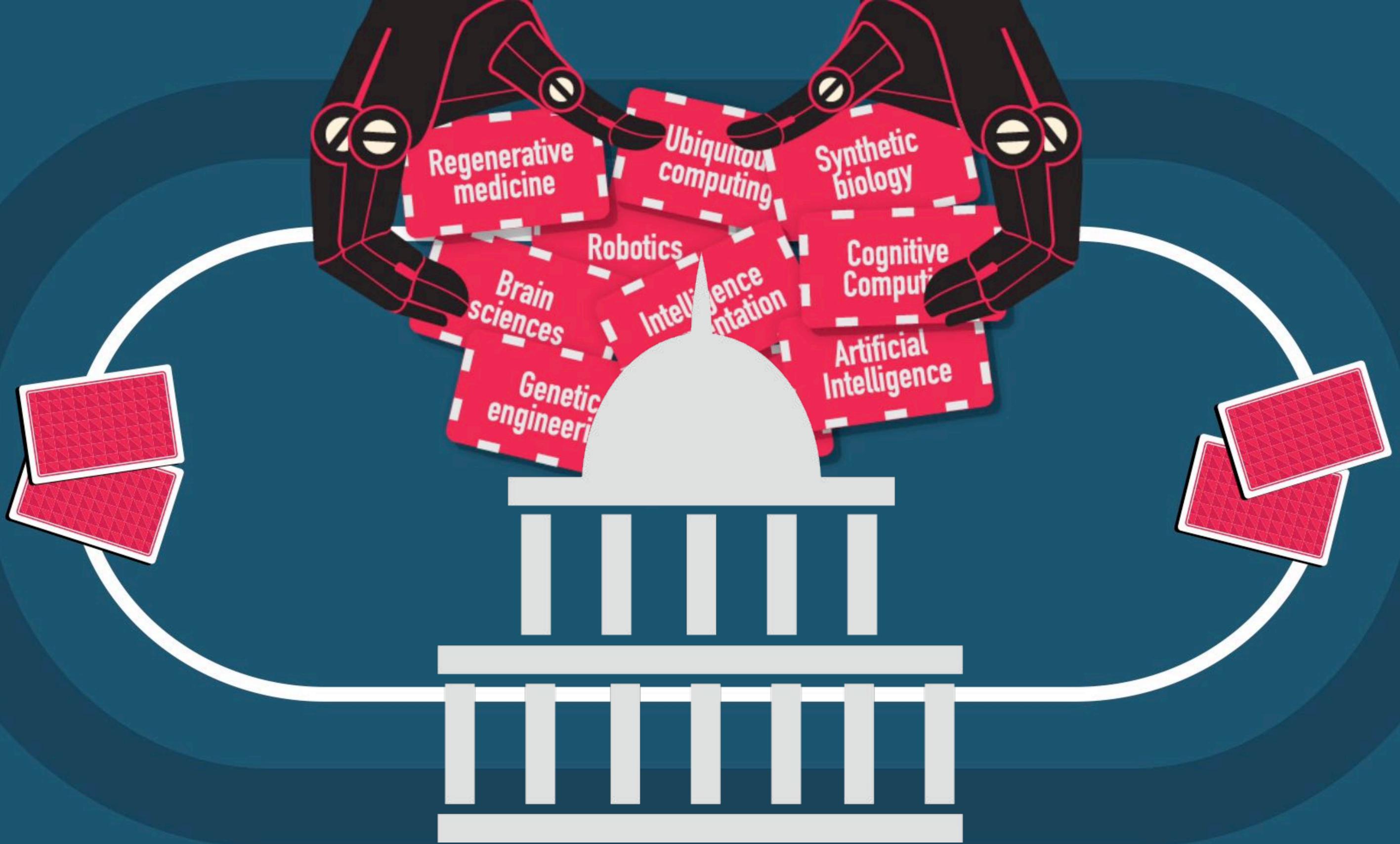
The more connected we become, the more we must strengthen our social contracts, accountability, ethics, rules



3

Exponential technologies can bring heaven or hell: this is our governments' challenge





3 We're at the
pivot point
of exponential
change

(your imagination)

Quantum Computing

Artificial Intelligence (AI)

Intelligent Assistance (IA)

Smart-everything

The Internet of Things

Hyper-connectivity

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

The next 20 years will bring more change than the previous 300 years



Future-readiness: the future is no longer a timeframe, it's a mindset

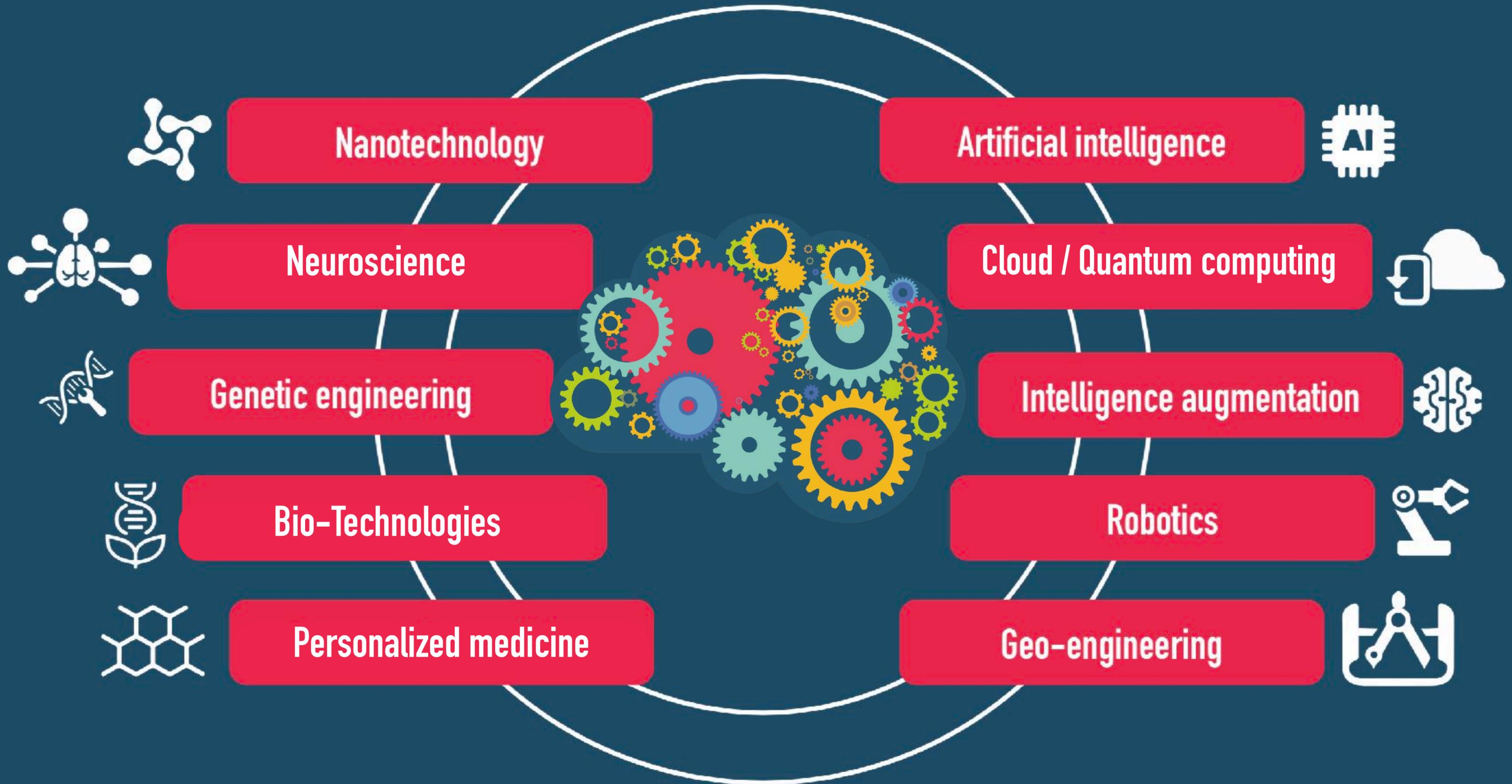
E
X
P
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T
I
A

COMBINATORIAL

INTERDEPENDENT

HOLISTIC

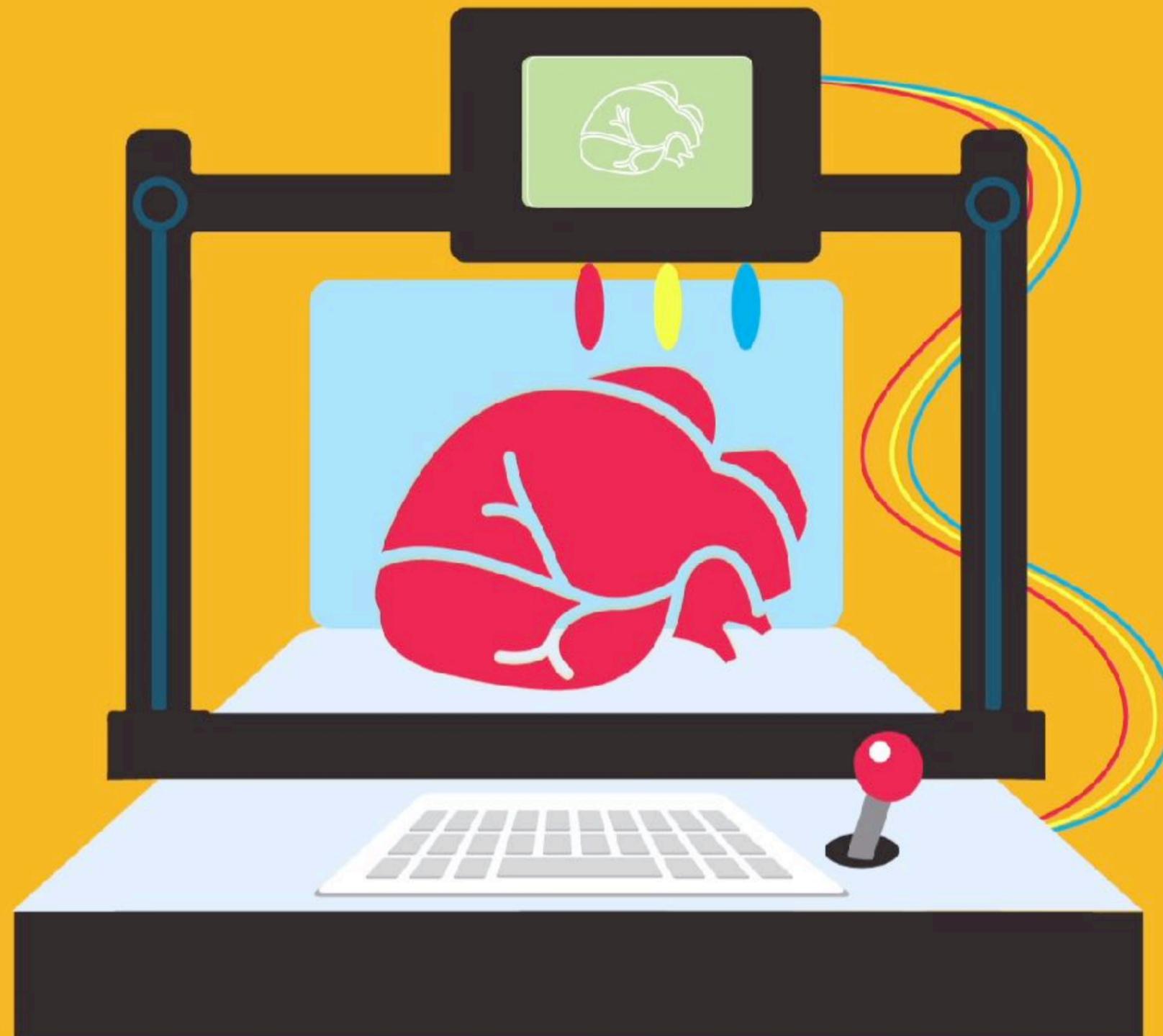
Take an interdependent and holistic view: industries are converging, new ecosystems are forming



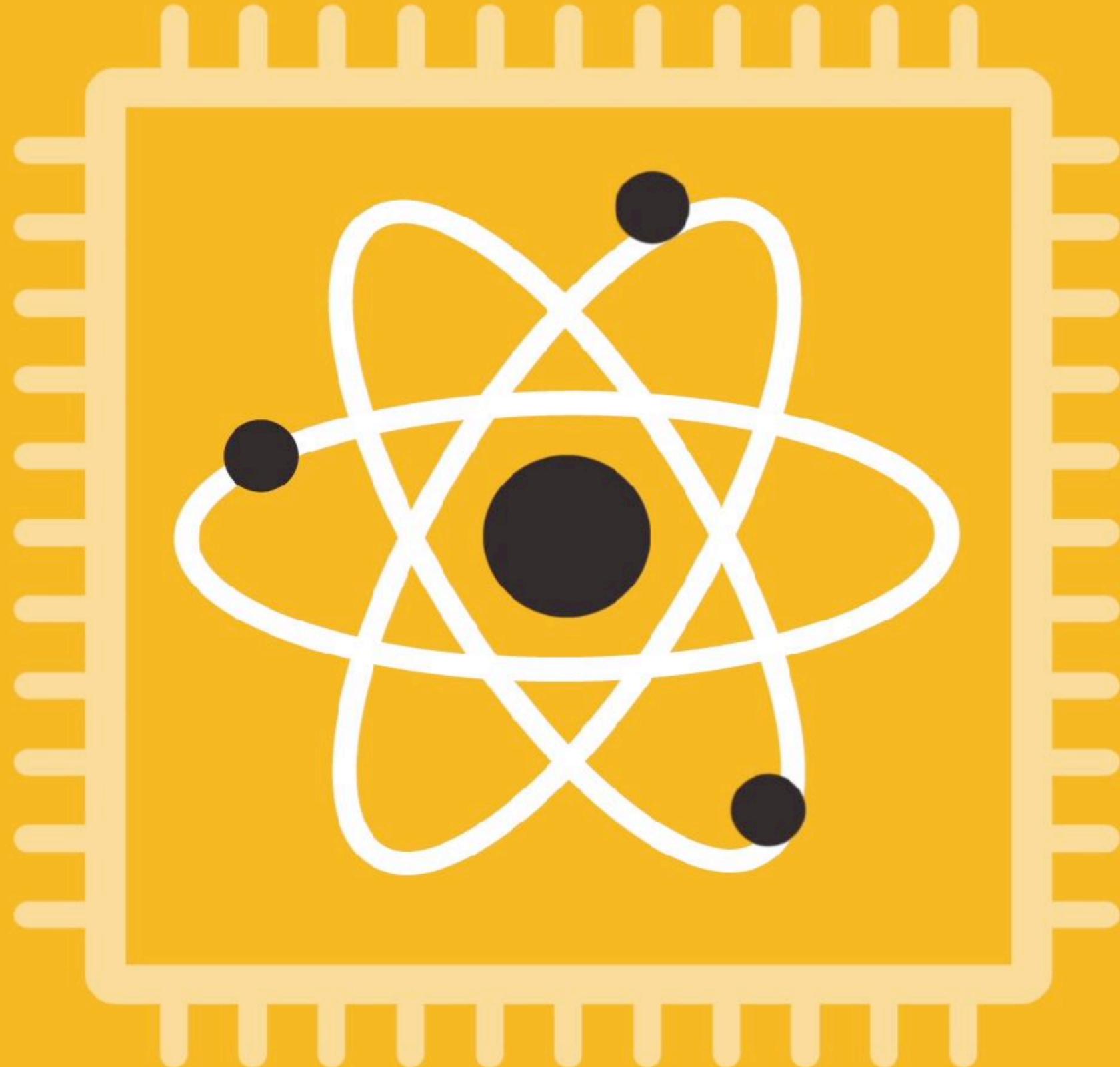
Rapid scientific progress: science fiction is increasingly becoming science fact



Rapid scientific progress: science fiction is increasingly becoming science fact

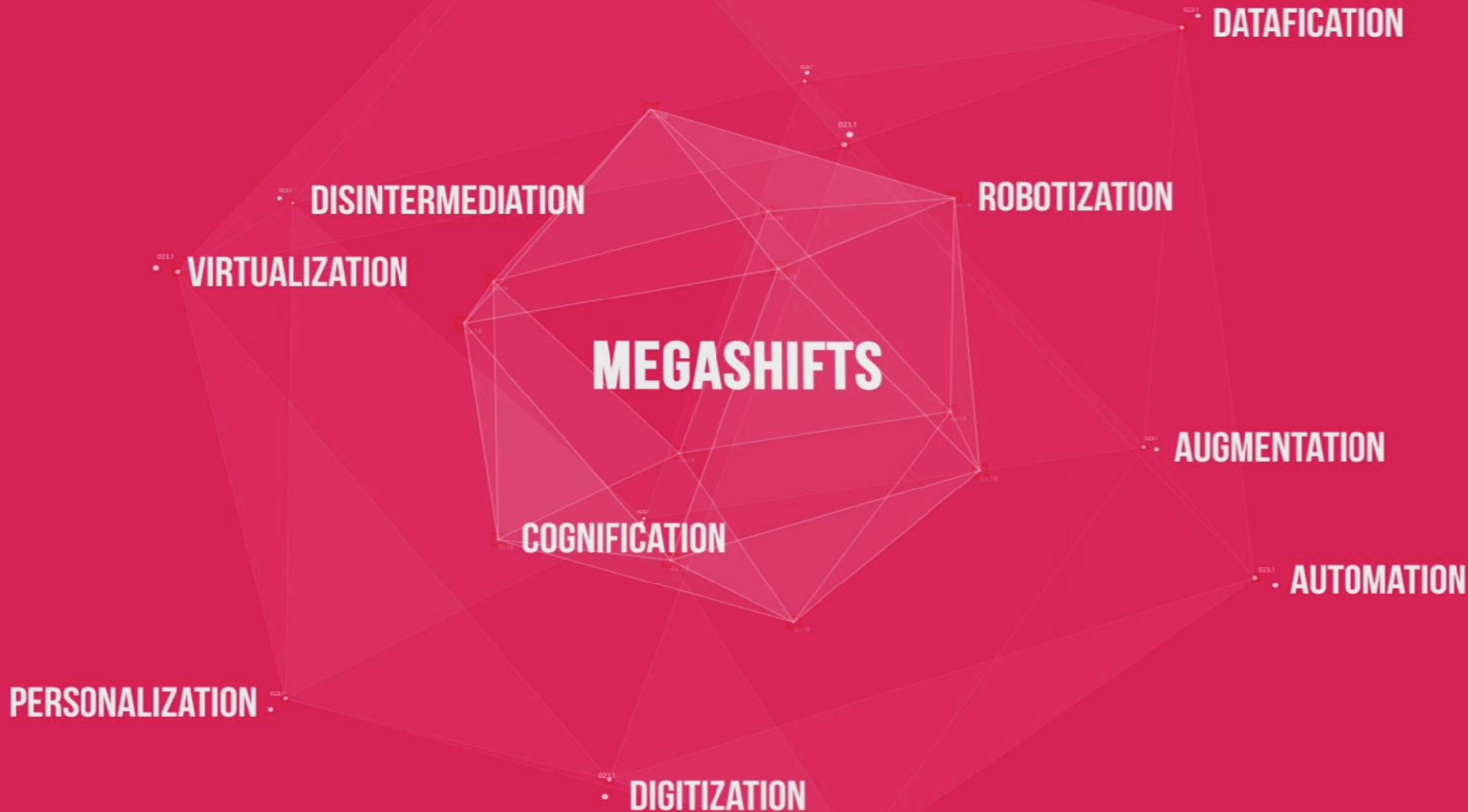


Rapid scientific progress: science fiction is increasingly becoming science fact



4

Understanding and immersing in the Megashifts is the key to creating your preferred future



The end of the car as we know it

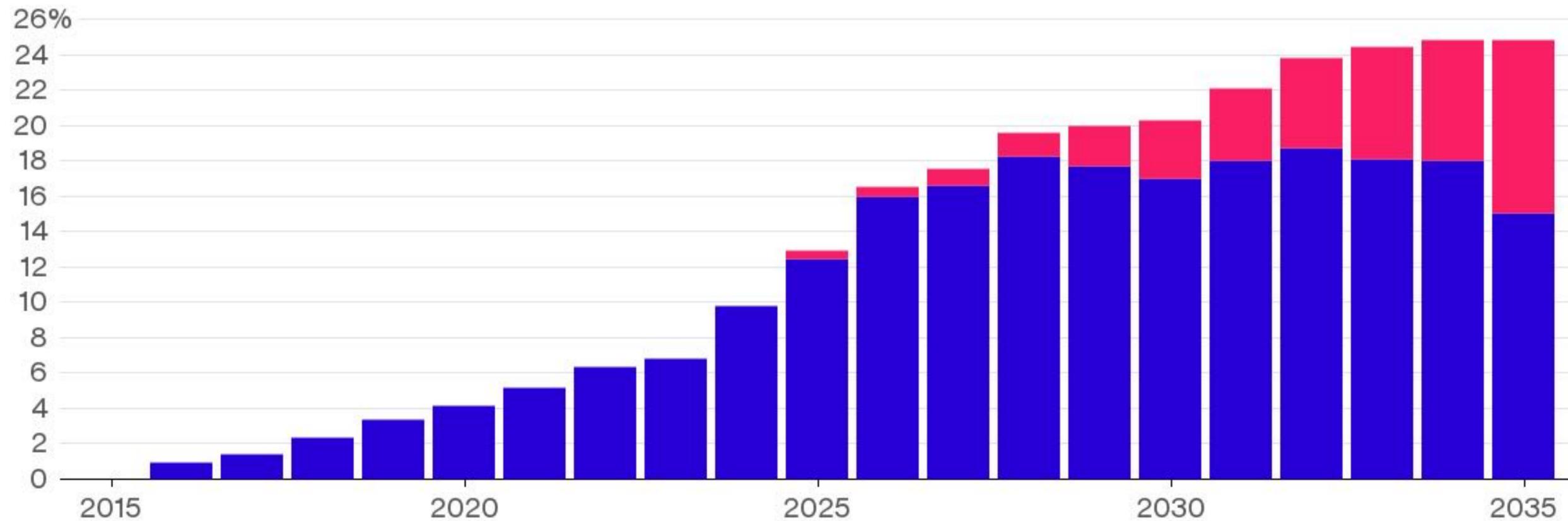


The end of the car as we know it

Autonomous Car Sales Will Surge By 2035

The cars will represent 25 percent of the global market

■ Partially autonomous cars ■ Fully autonomous cars

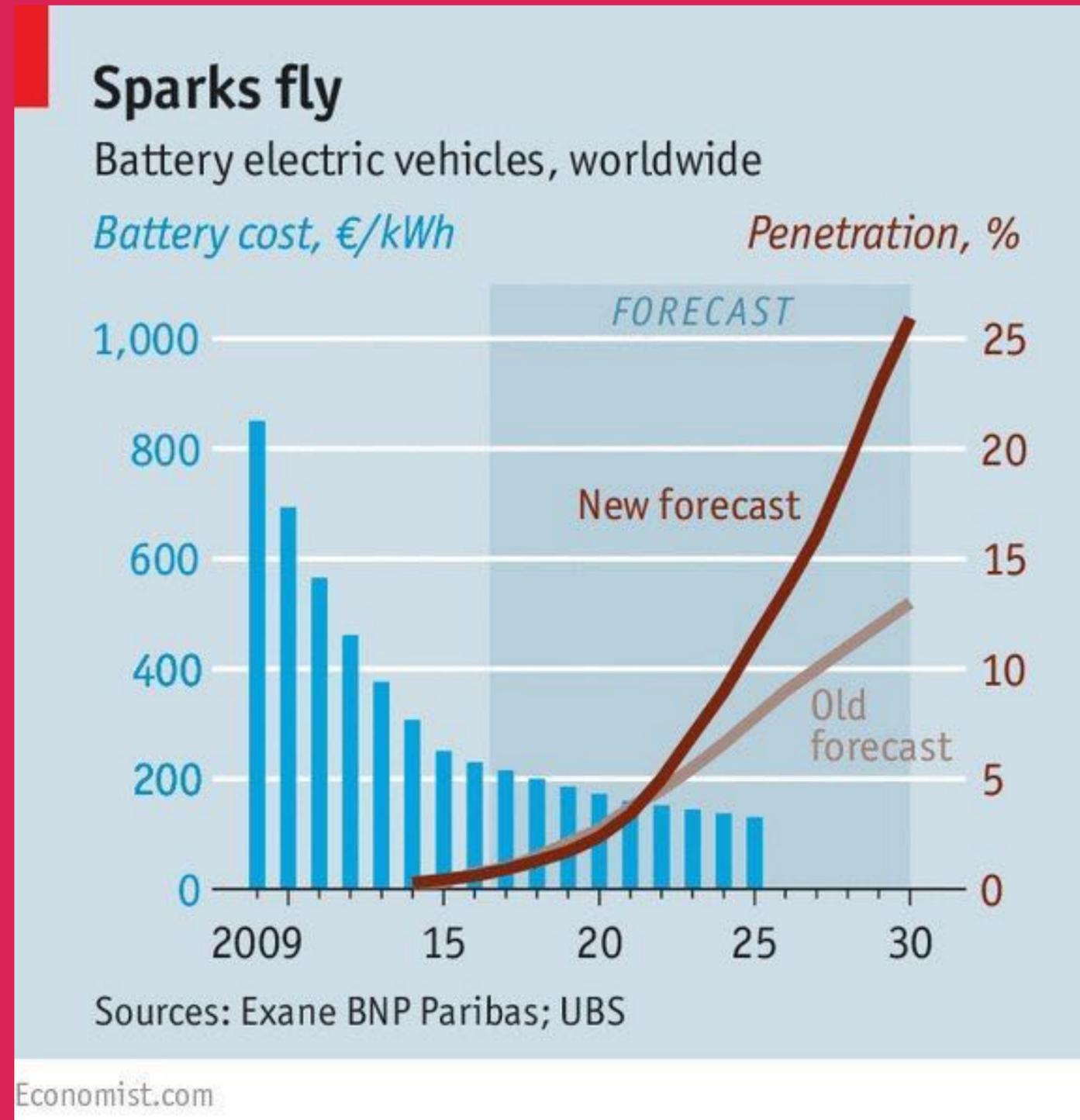


Source: The Boston Consulting Group

Note: 2015 data

Bloomberg 

The end of the car as we know it

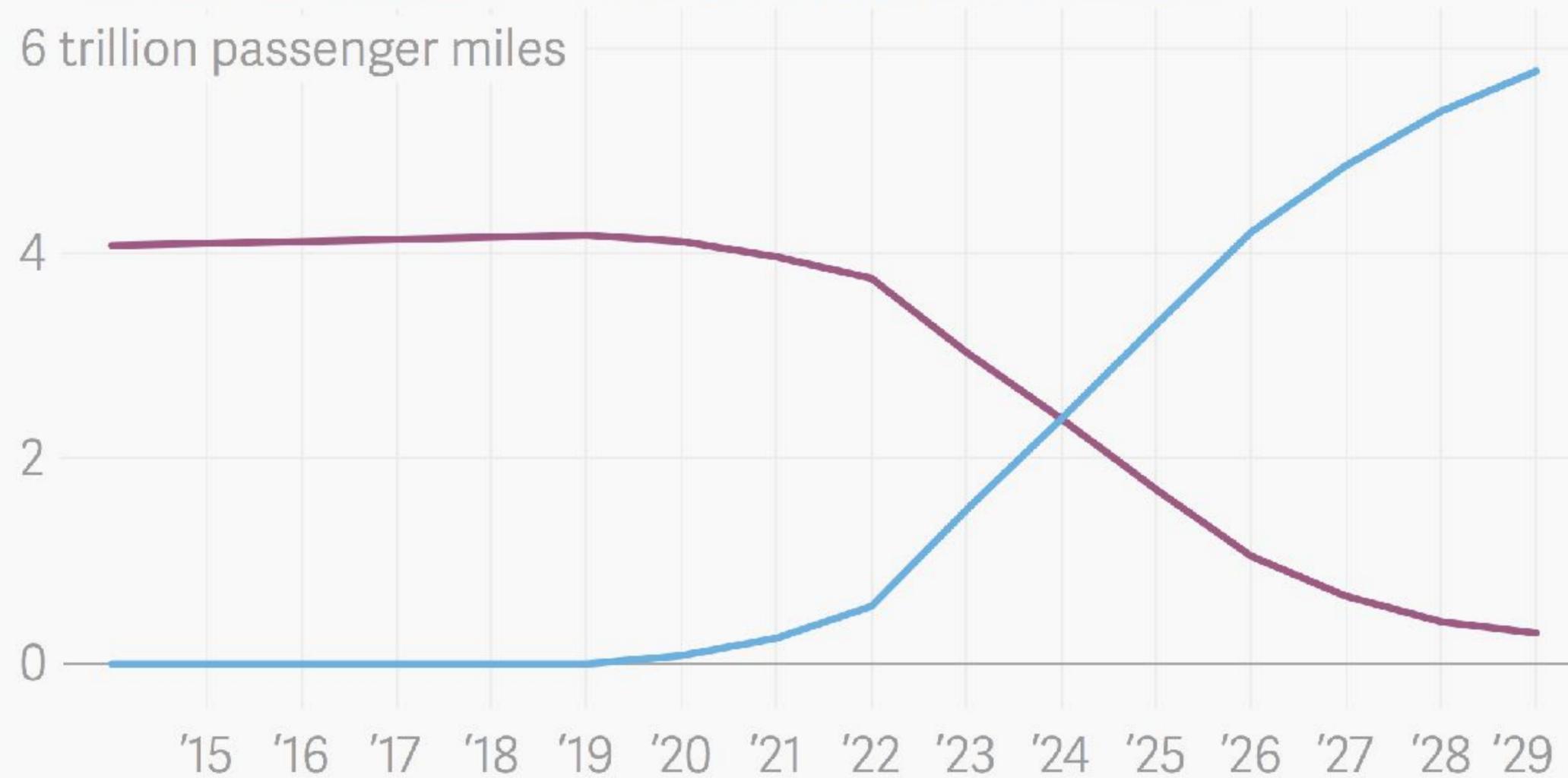


The end of the car as we know it

"Transportation-as-a service" are projected to replace cars in the US

■ Self-owned vehicles ■ Shared autonomous vehicles

6 trillion passenger miles



△ T L △ S | Data: US Department of Transportation, RethinkX

Share

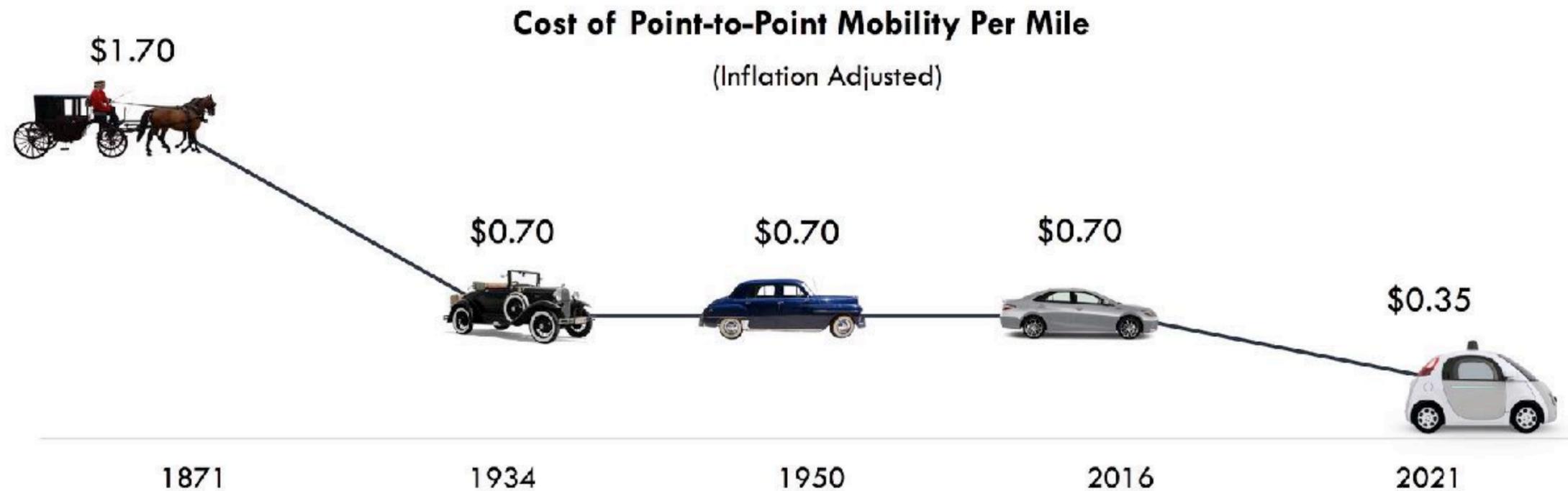
The end of the car as we know it

1. Mobility-as-a-Service

Personal Mobility Should Become More Affordable



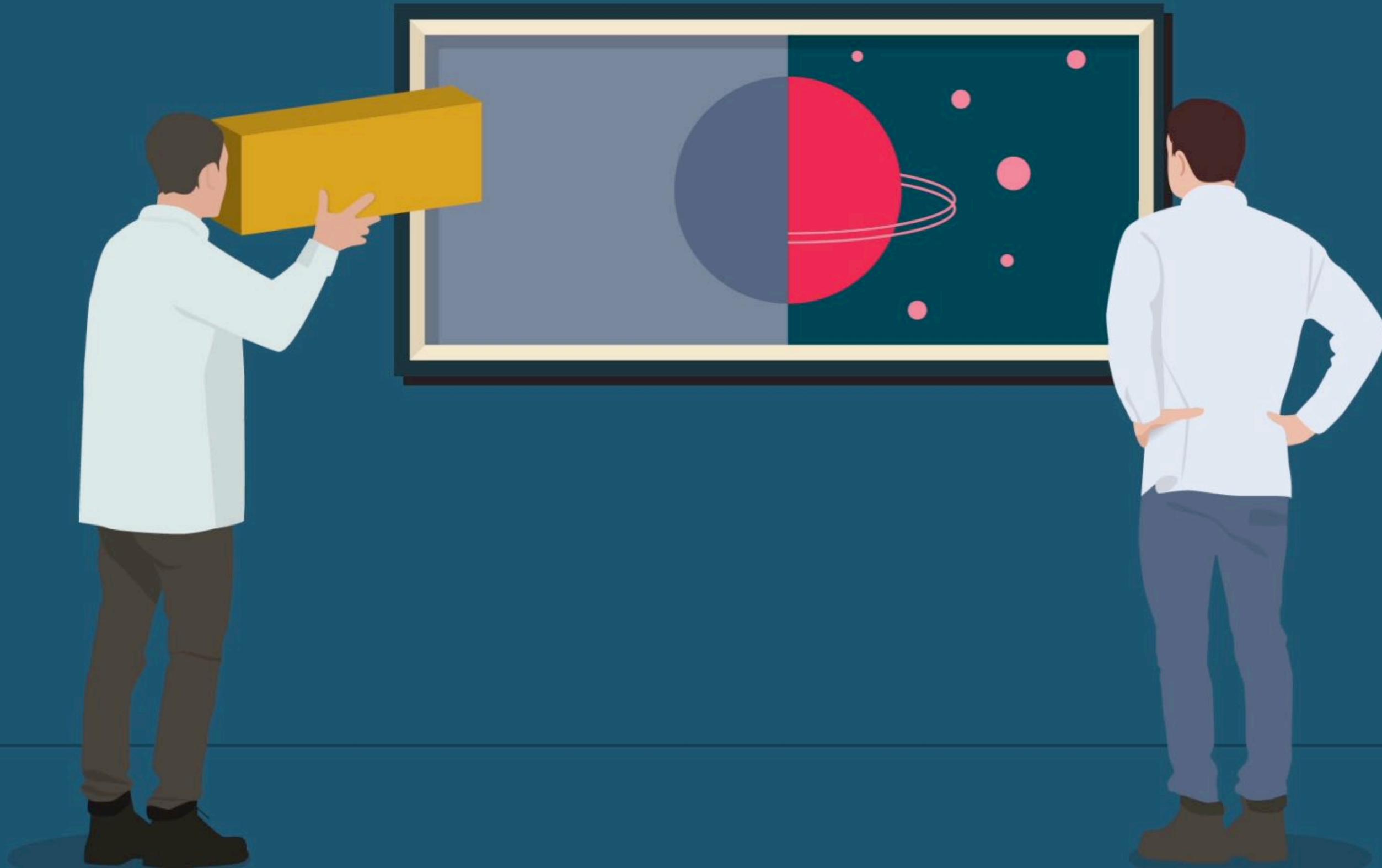
The price of personal mobility has not changed since the Model T.



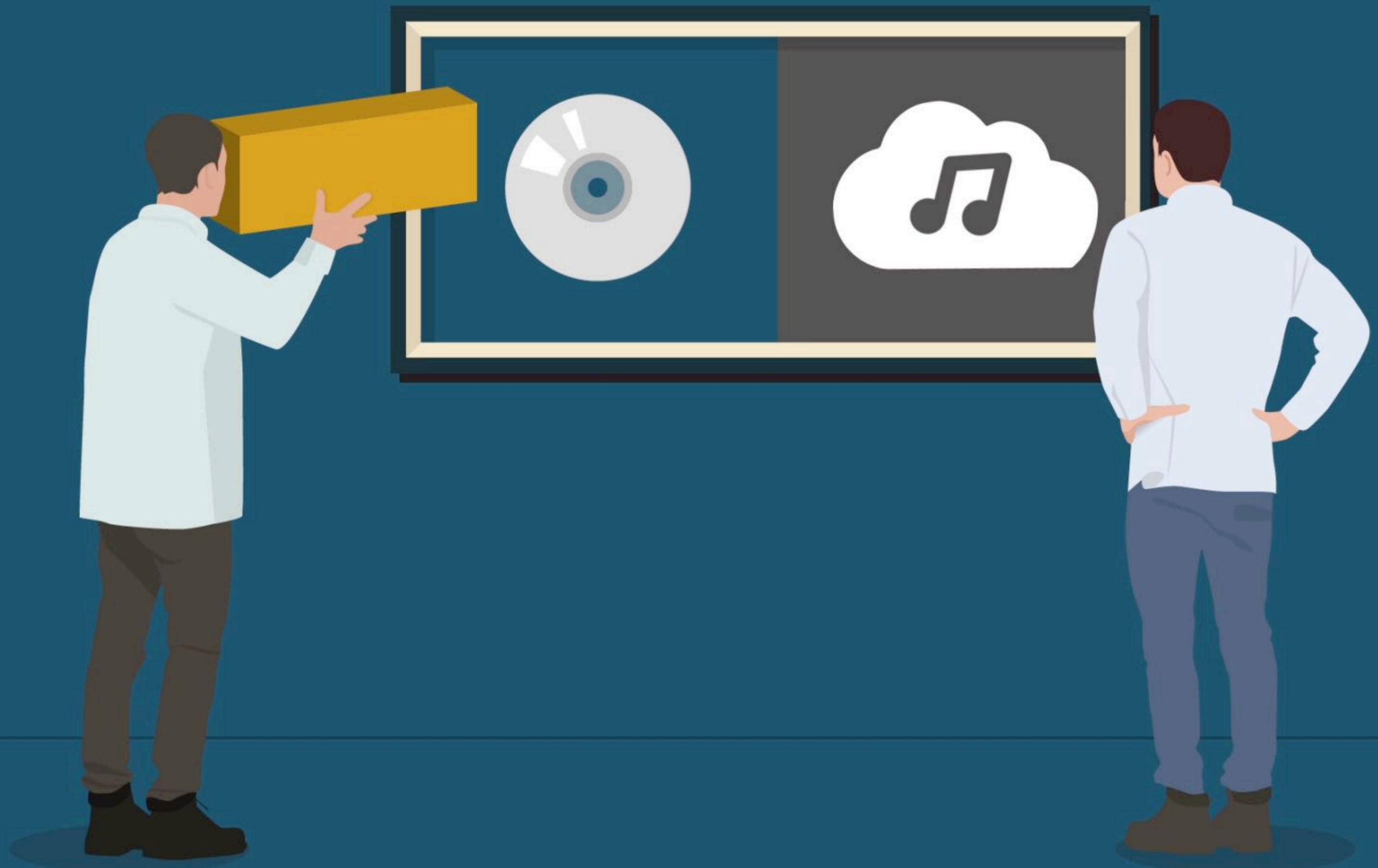
Sources: ARK Investment Management LLC, 2017 | Morton Salt Company Records, American Automobile Association (AAA)

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Taking a wider view will be essential: take your customers beyond the obvious!

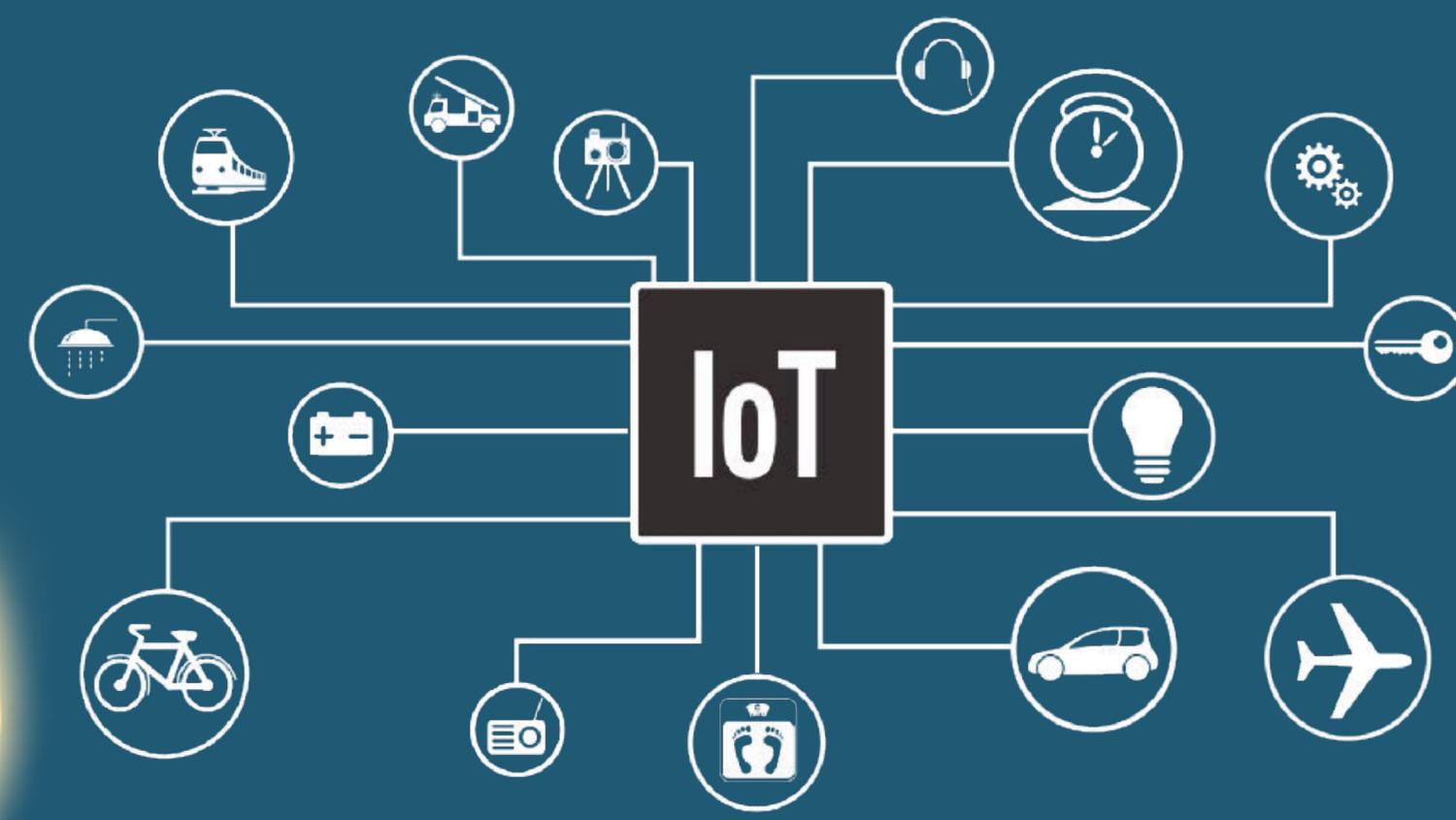


Taking a wider view will be essential: take your customers beyond the obvious!



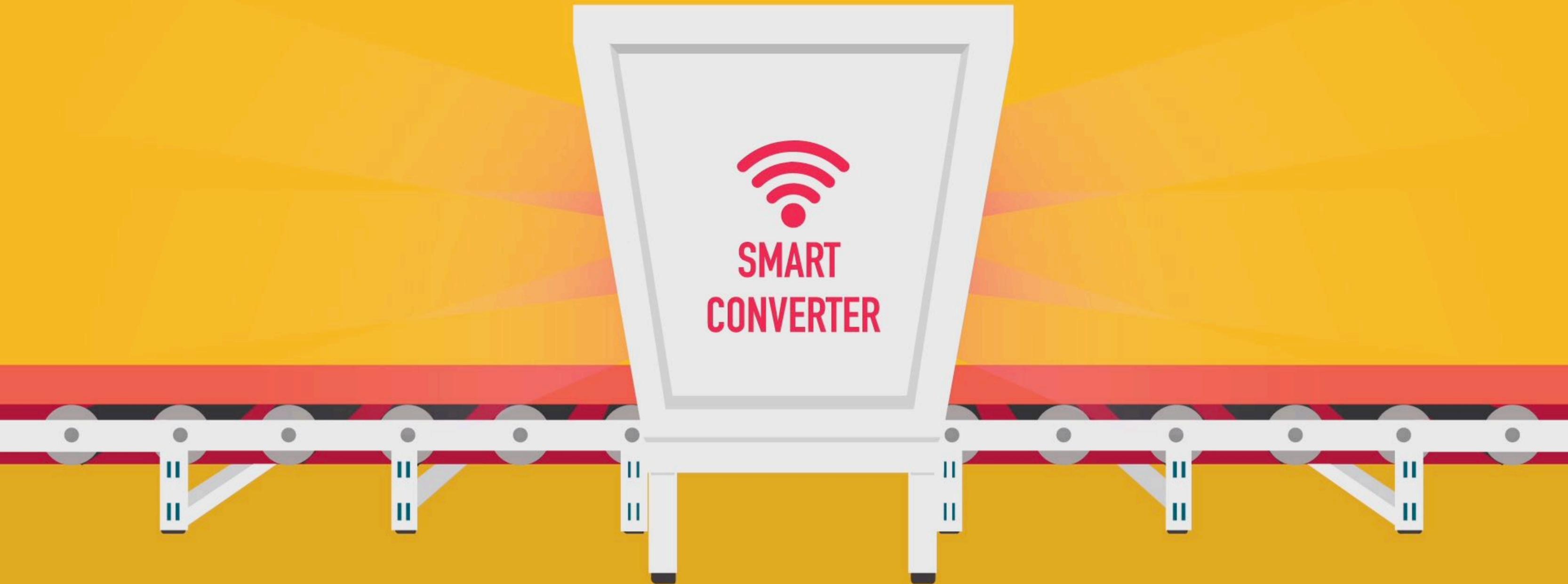
5

Data is the new Oil . AI is the new electricity. The IoT is the new nervous system.



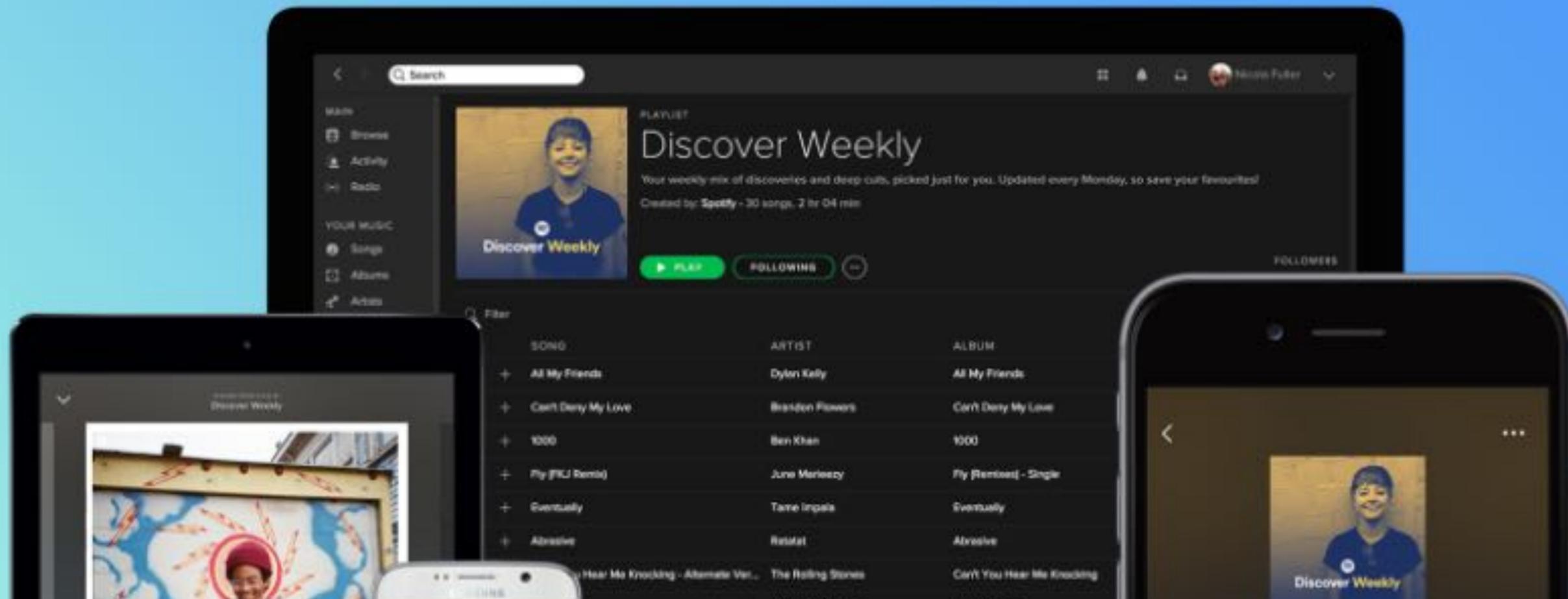
First we digitised, now we cognify

(riffing off Kevin Kelly)



Take X and add IA (intelligent assistance)

Spotify using Deep Learning to Create the Ultimate Personalised Playlist



Take X and add IA (intelligent assistance)



Yongqianbao determines creditworthiness with AI

Chinese start-up Yongqianbao is using artificial intelligence to screen data to determine creditworthiness when issuing loans. CNBC's Eunice Yoon reports.

02:12

Yongqianbao determines creditworthiness with AI

1:06 AM ET Fri, 14 July 2017

Chinese start-up Yongqianbao is using artificial intelligence to screen data to determine creditworthiness when issuing loans. CNBC's Eunice Yoon reports.

 WATCH CNBC LIVE TV

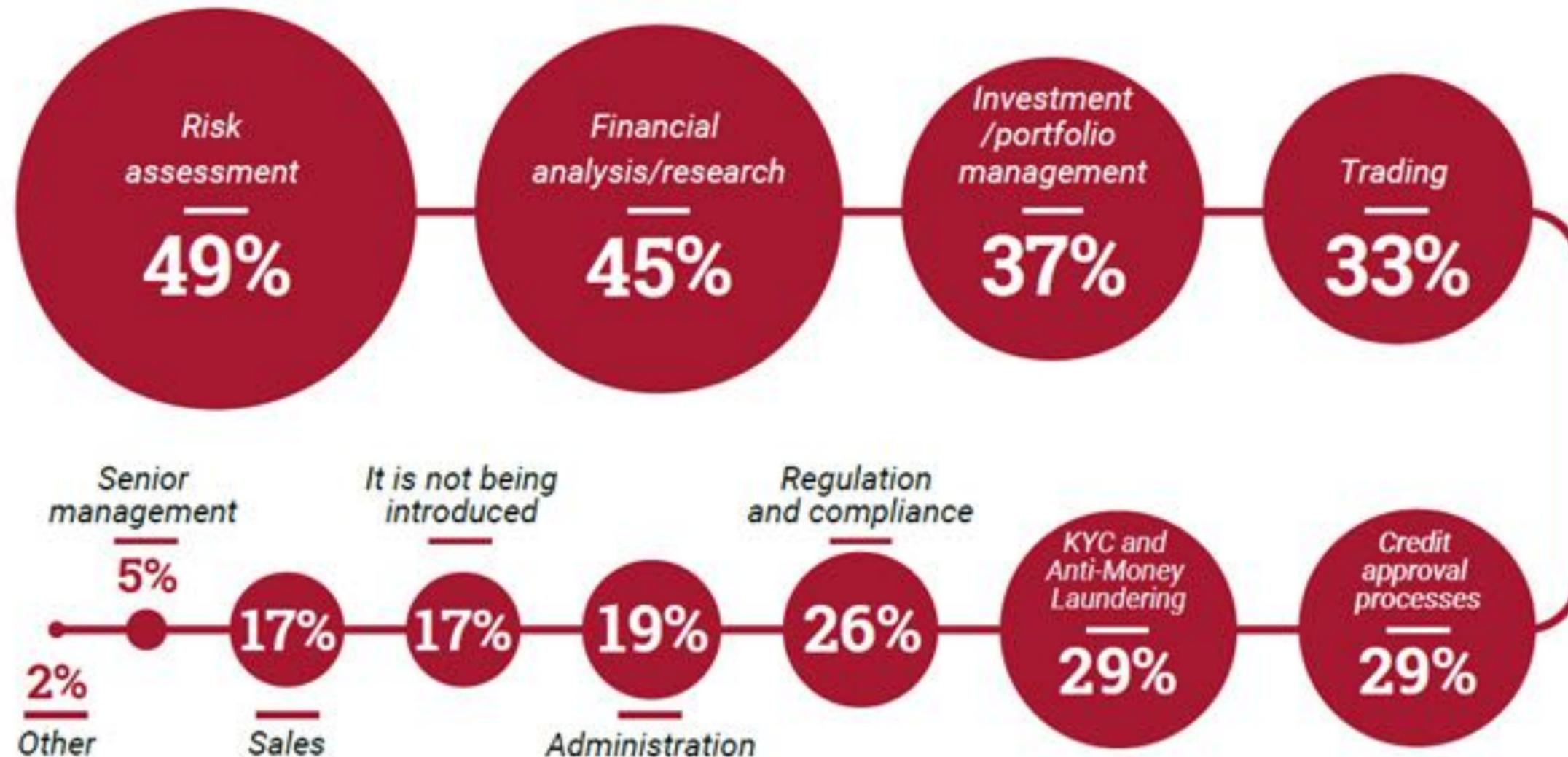


4
SHARES

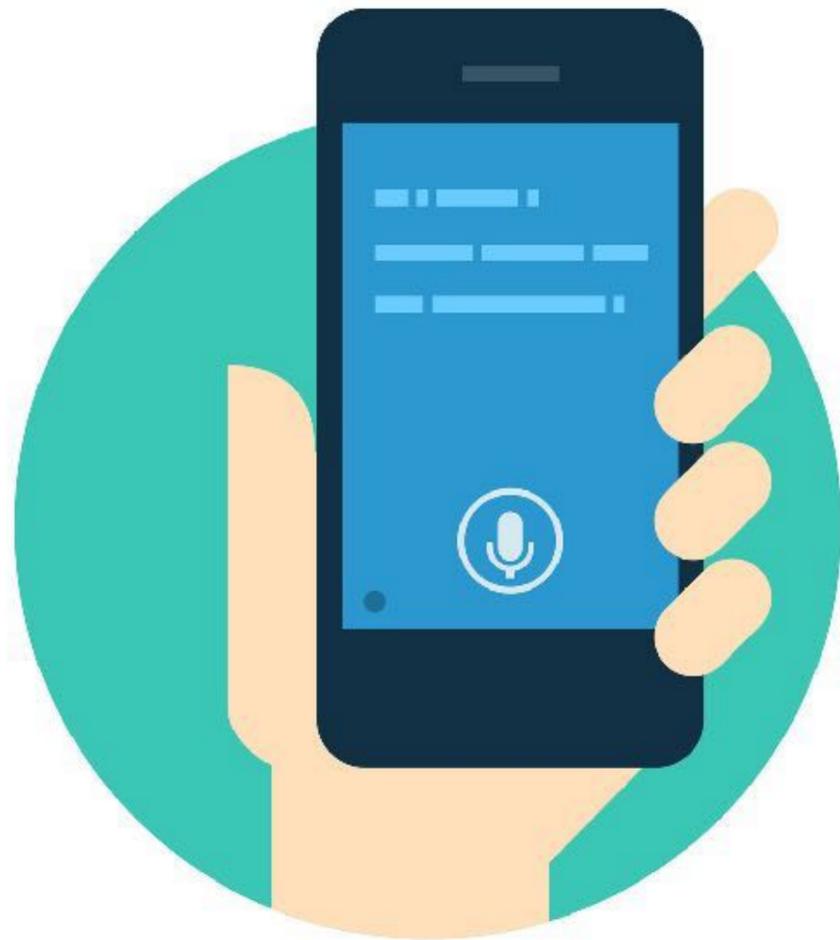
Take X and add IA (intelligent assistance)

Where do you expect AI/machine learning technology to be introduced in your organisation in the next three years?

Source: Baker & McKenzie

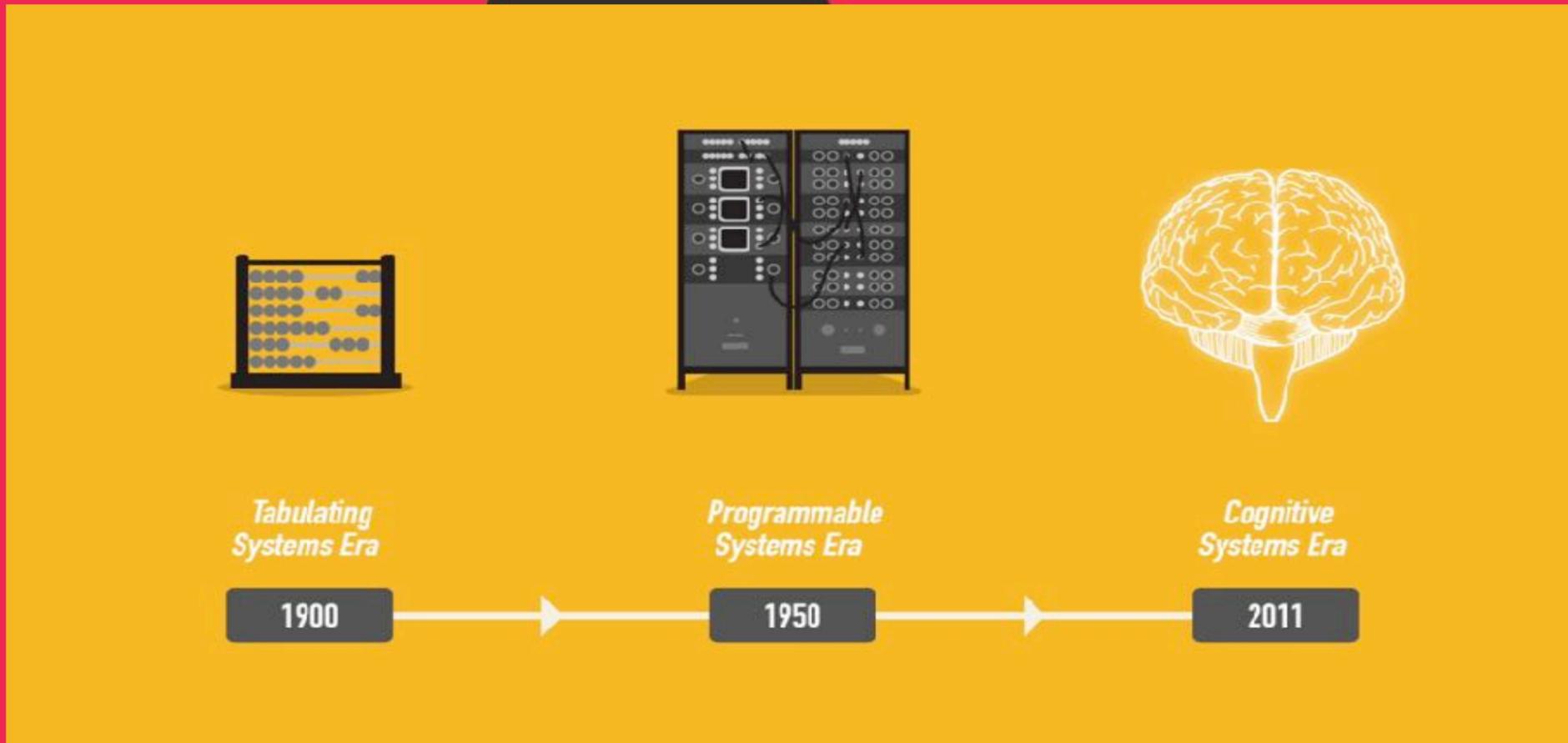
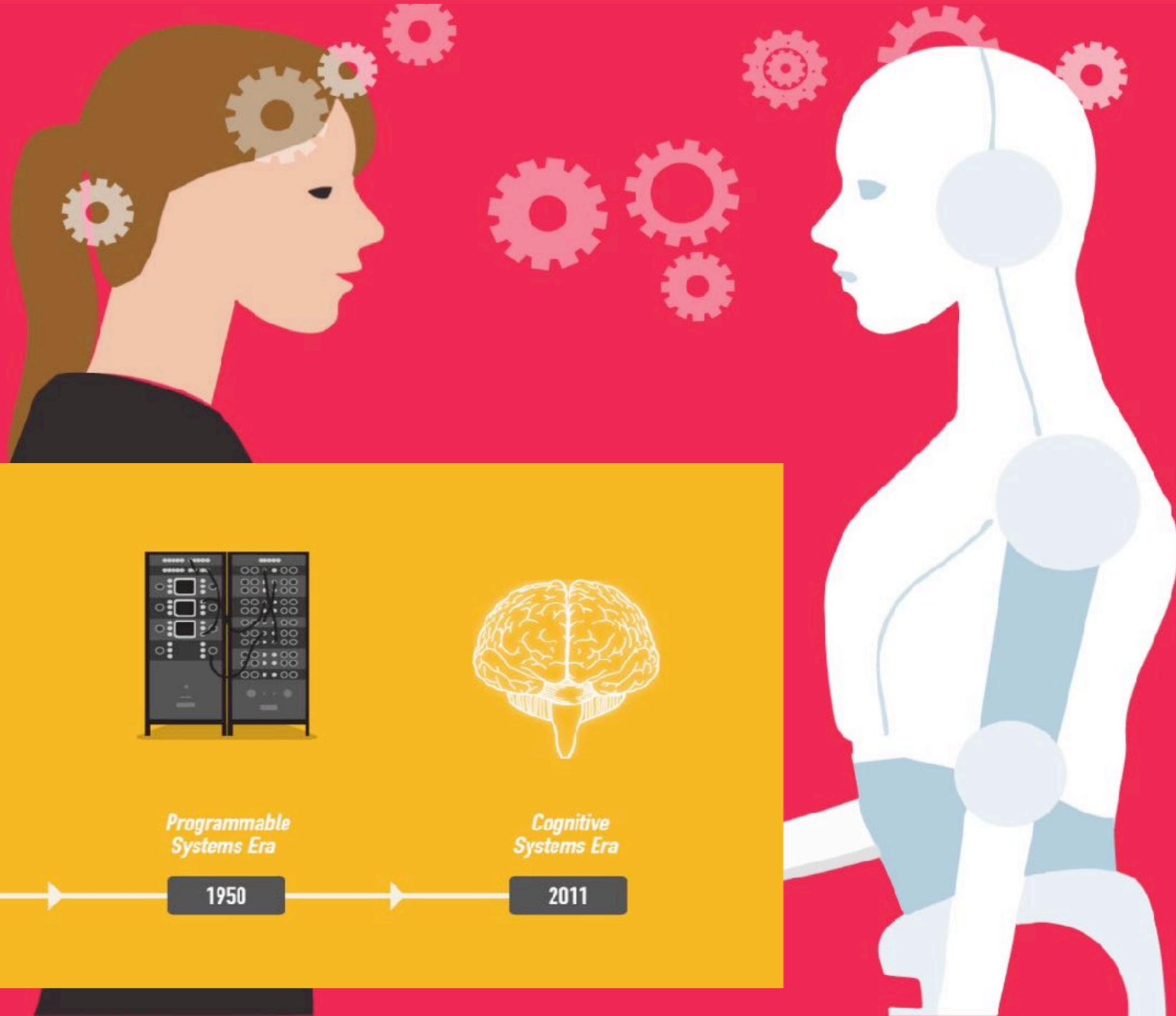


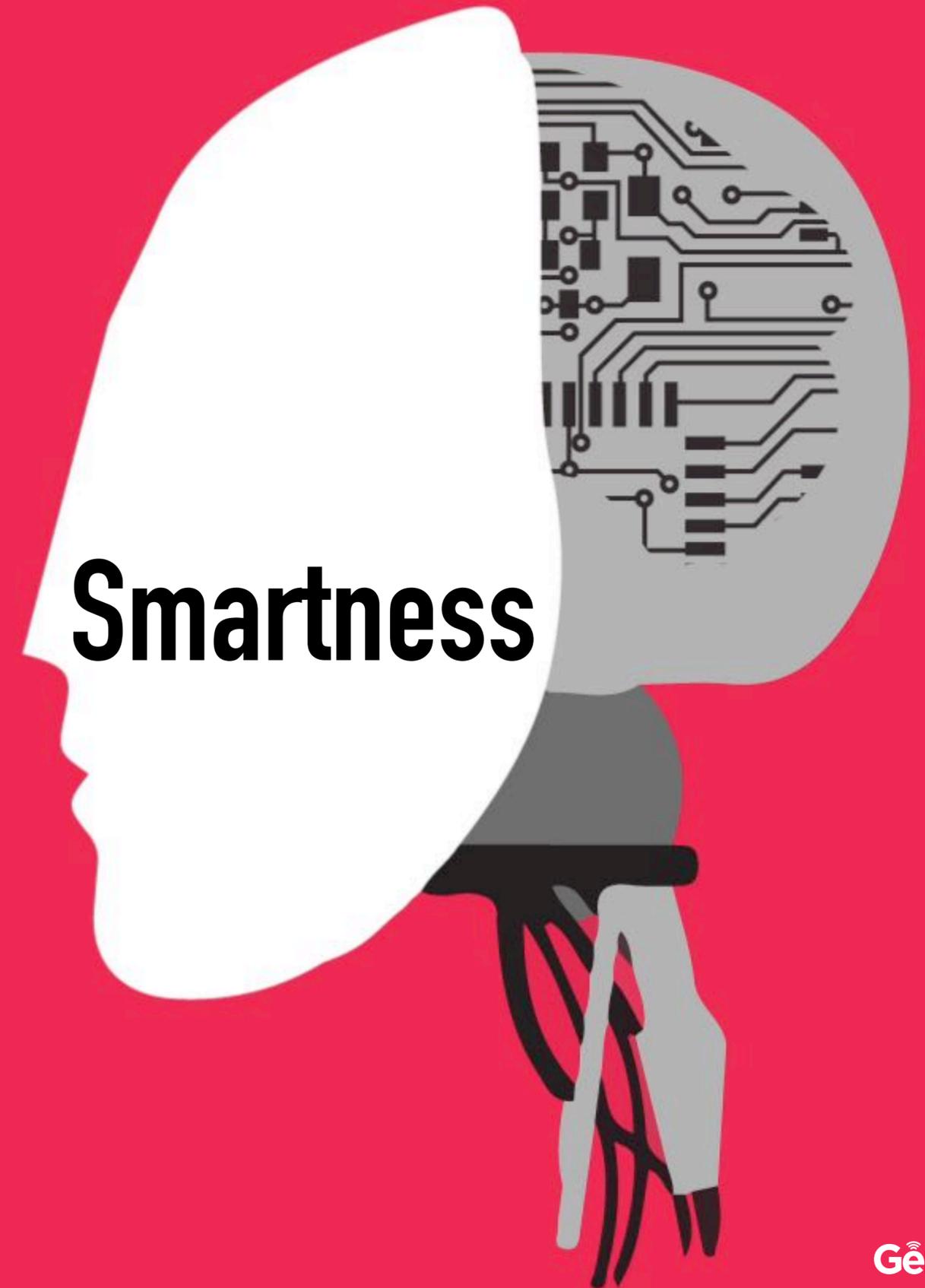
Intelligence is the new UI



6

Intelligent machines will change our world more than any other invention before

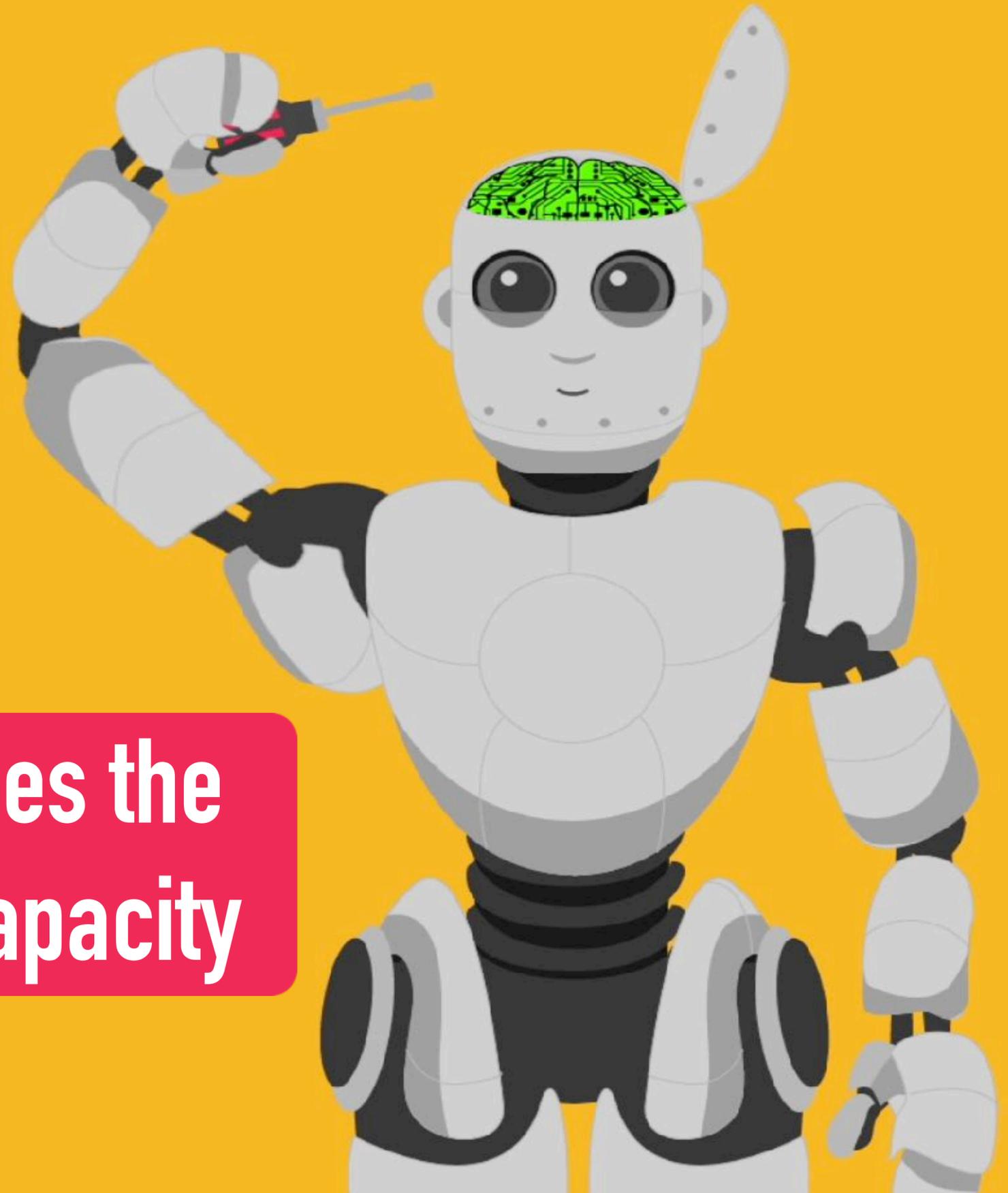




Machines do NOT think like humans do

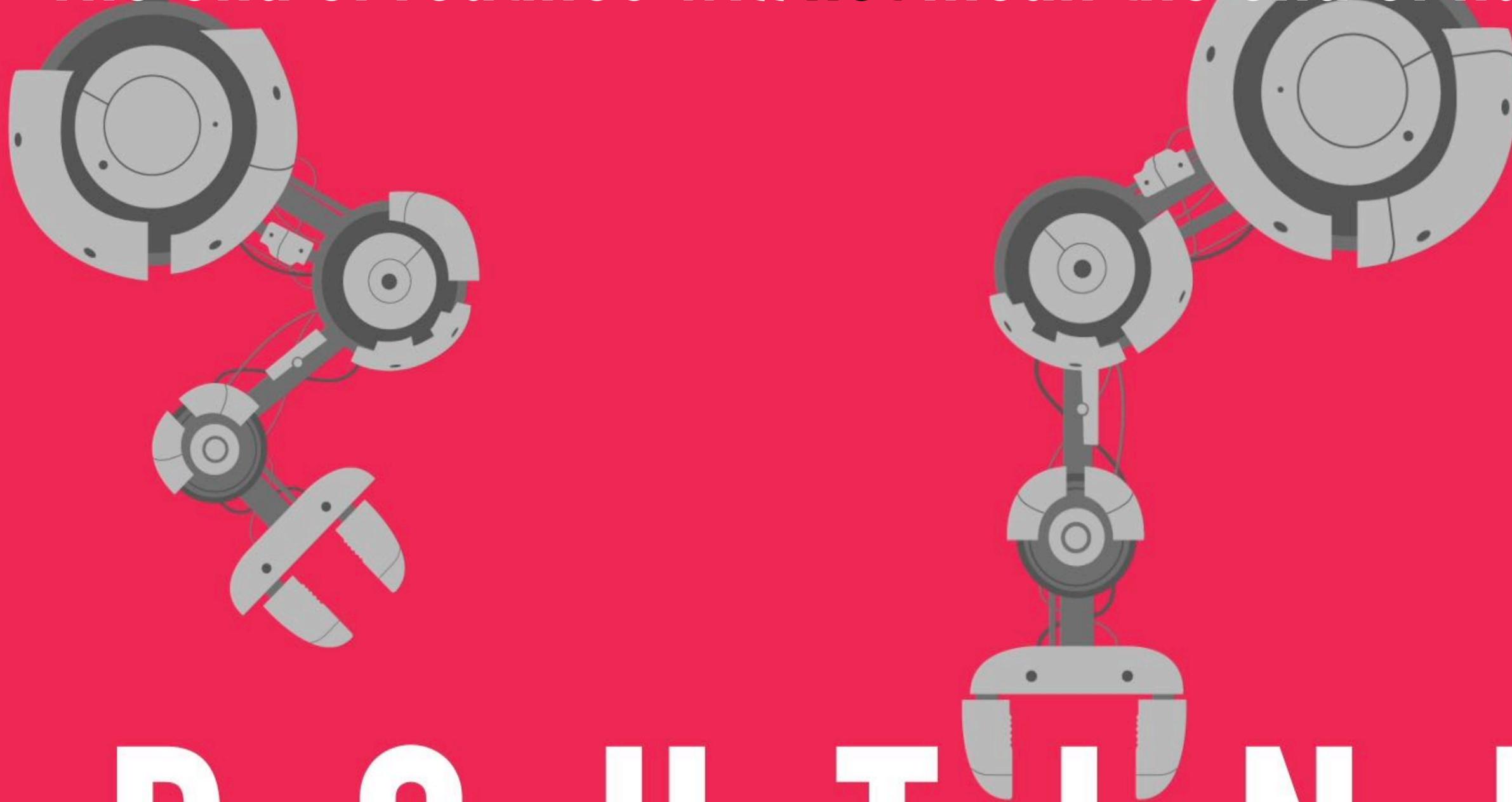


We should not give machines the capacity to improve their capacity



7

The end of routines will **not** mean the end of human work*

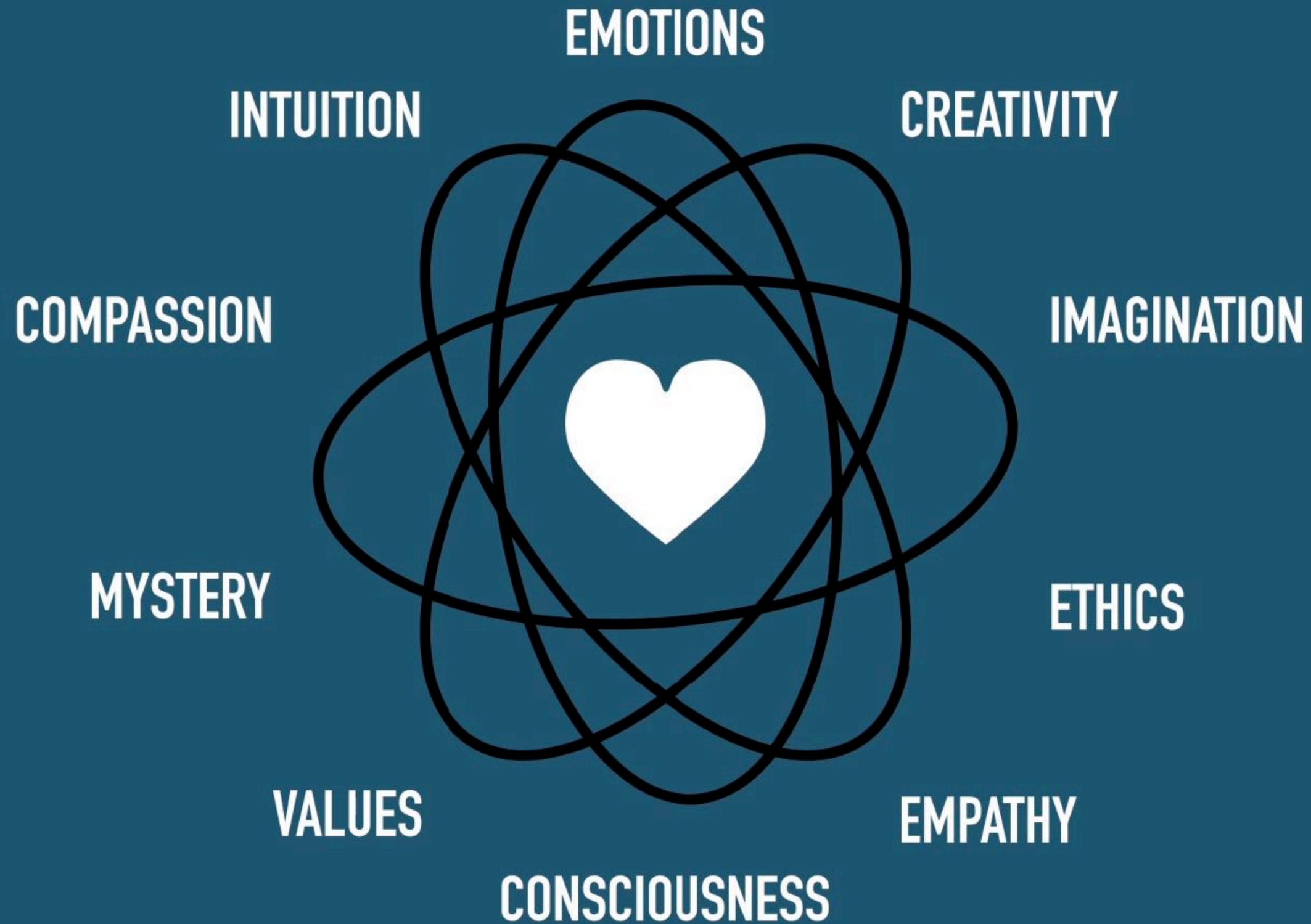


R O U T I N E

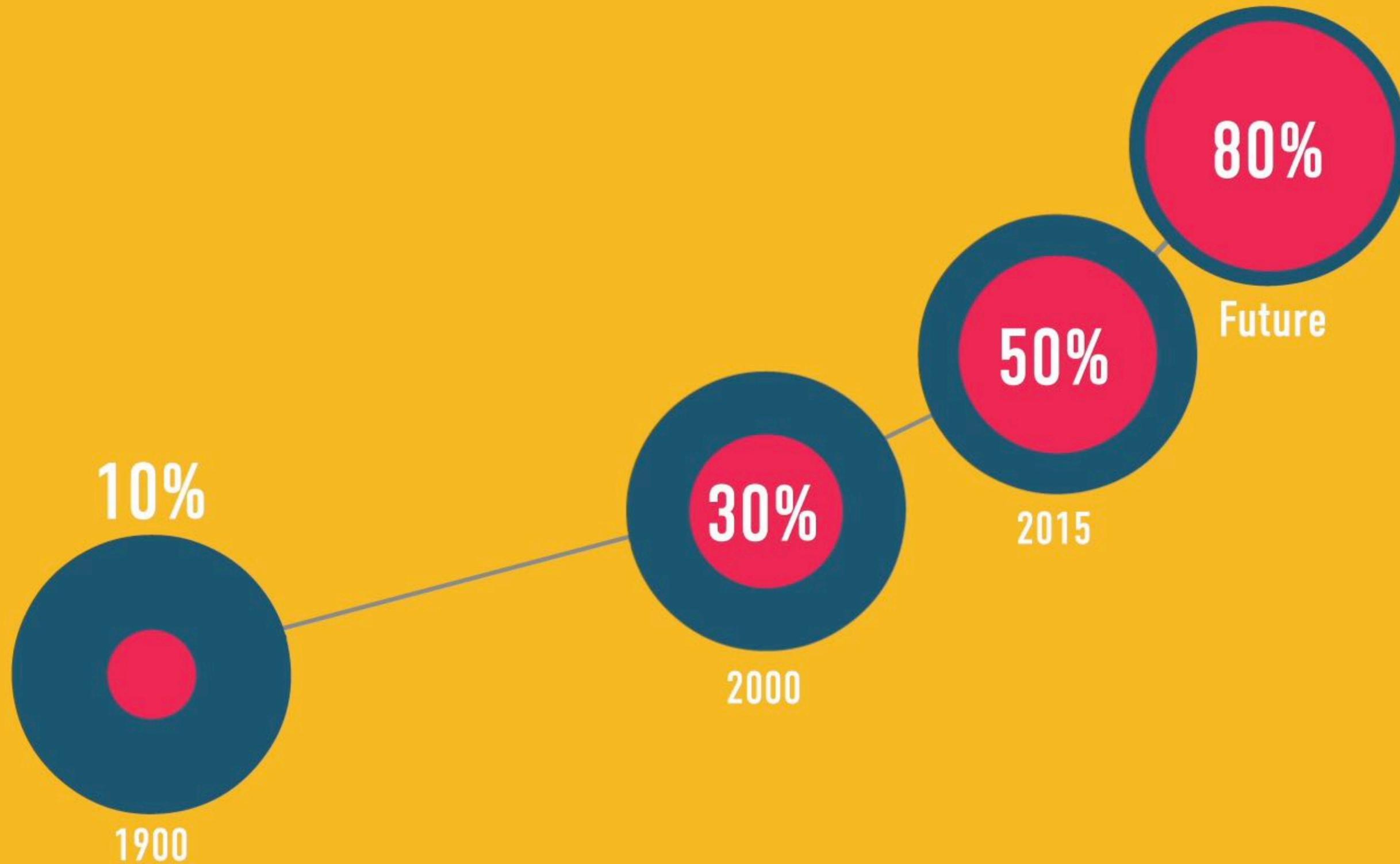
While anything that can be digitized, automated or virtualized, will be . . .



...anything that cannot be digitized or automated will become much more valuable



The percentage of human-only tasks over time:



Don't just use technology to be more efficient: use it to do entirely new things!

HYPER-EFFICIENCY
THIS WAY →



How people (and their enterprises) actually change



Civilizations are driven by their technology but defined by their humanity (and so is your business!)



MAGIC

MANIC

TOXIC



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Thanks for your time!



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