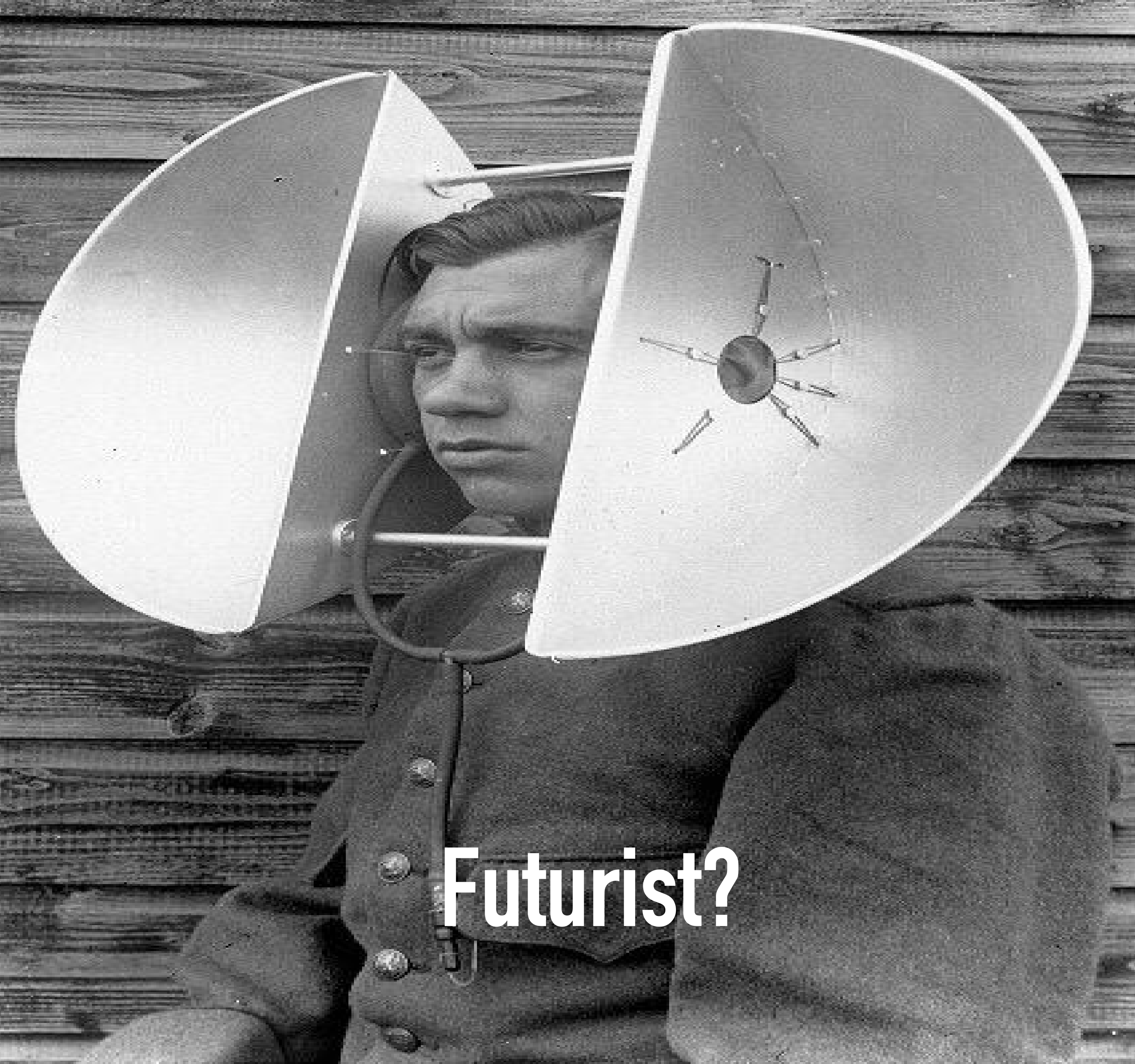




# The key future issues impacting corporate innovation by 2020



**Futurist?**

# TECHNOLOGY VS. HUMANITY

The coming clash between man and machine



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

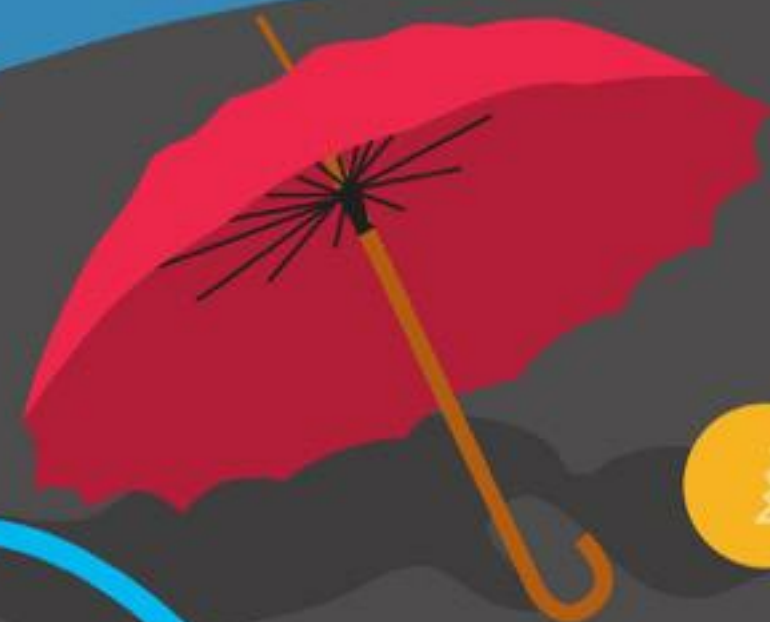
By Gerd Leonhard

# Global Transformation to a digitally-native society



" Any company designed for success in the 20th century is doomed to failure in the 21st"

-David Rose -  
Author of the best selling book "Angel Investing"



# Data is now the most important global currency (not oil / fossil fuels)

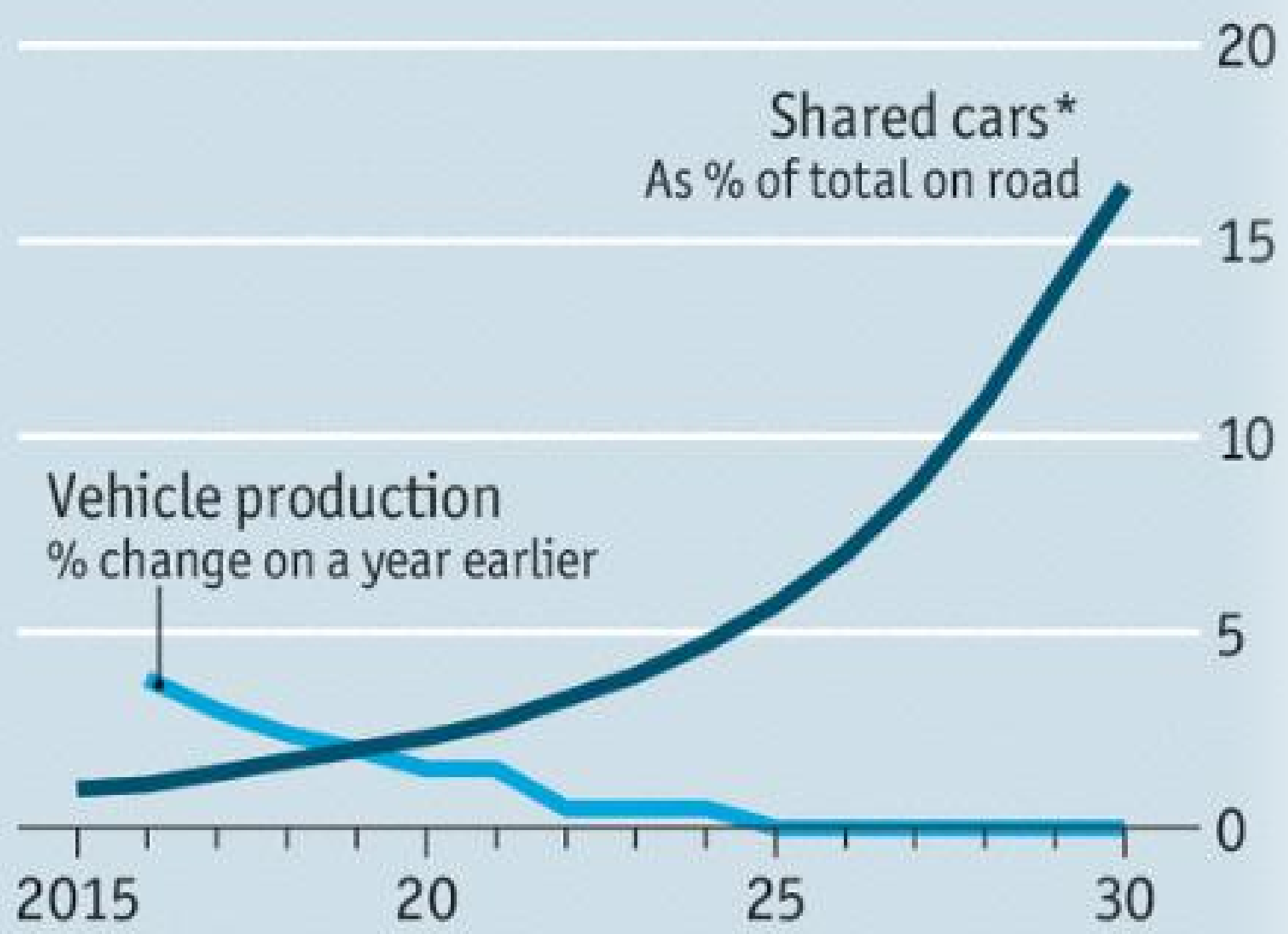


Satoshi Kambayashi

# Innovation: the future is no longer just an extension of the past

## Sharing, not growing

Worldwide forecast



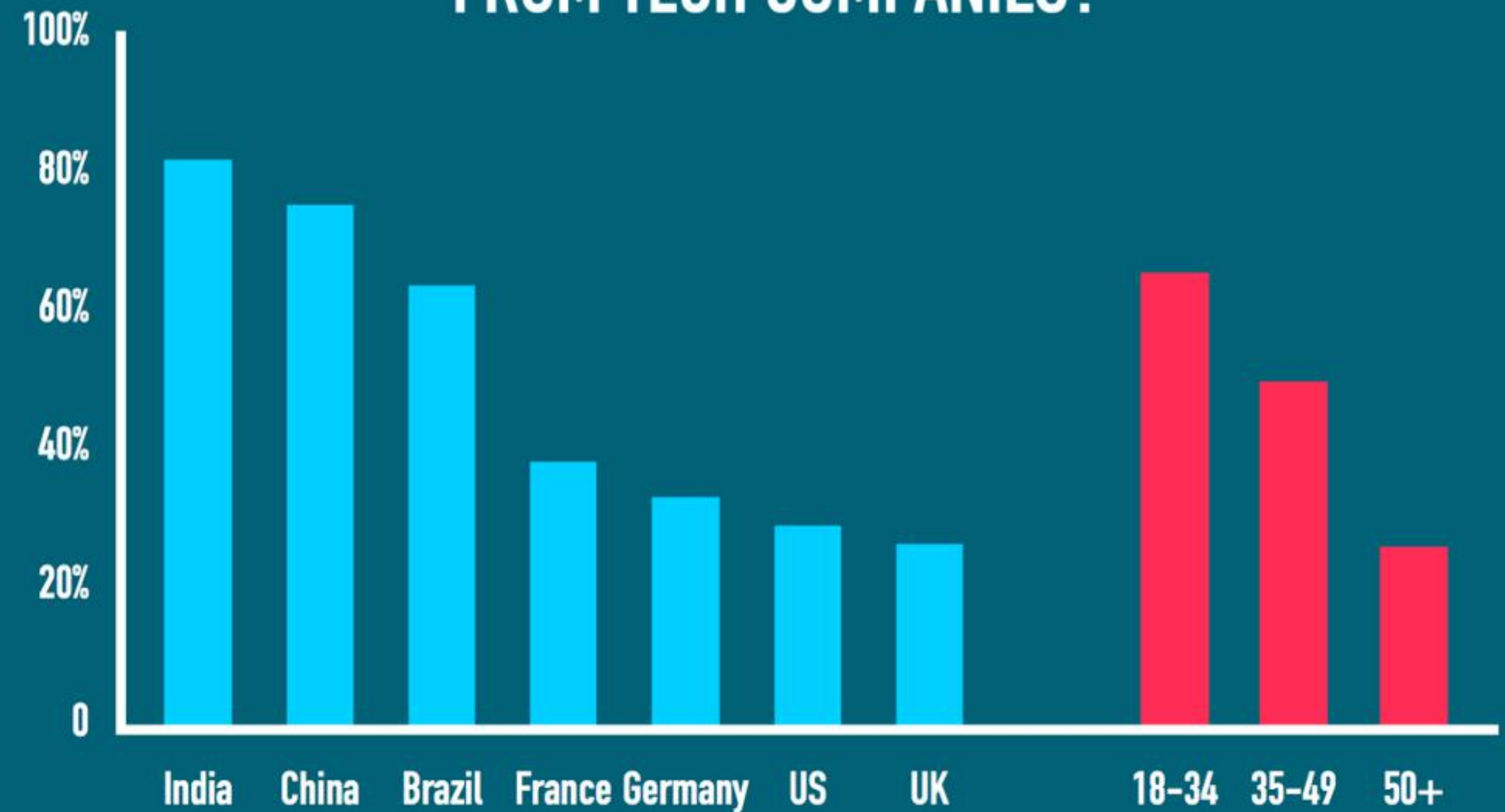
Shared cars\*  
As % of total on road

Vehicle production  
% change on a year earlier

Source: Morgan Stanley

\*Including taxis, excluding car rental

## WOULD CONSUMERS BE WILLING TO BUY CARS FROM TECH COMPANIES?



Base: 7,553 consumers from 7 countries planning to buy or lease a car in the next 12 months (June 2015) Source: Capgemini

1. Information / Content

2. Music, Media, Films & TV

3. Books / Print

4. Retail and Commerce

5. Banking / Financial Services

6. Transportation, Mobility, Logistics

7. Pharma / Medical

8. Energy / Utilities

9. Water / Food

**disruption**

**opportunity** • n. (plural -ties)

- a situation or condition favorable for attainment of a goal.
- a good position, chance or prospect, as for advancement or success.
- an appropriate or favorable time or occasion.

# From physical to digital, **exponentially** . . .

**Media**

**Money & Financial**

**Manufacturing**

**Pharma & Health**

**Transportation & Mobility**

**Security & Military**

**Government**

**Energy**





**‘Software is eating the world’: Distributed manufacturing / 3D printing.  
Education in the Cloud. Self-driving cars. An Energy Intergrid. The IoT.**



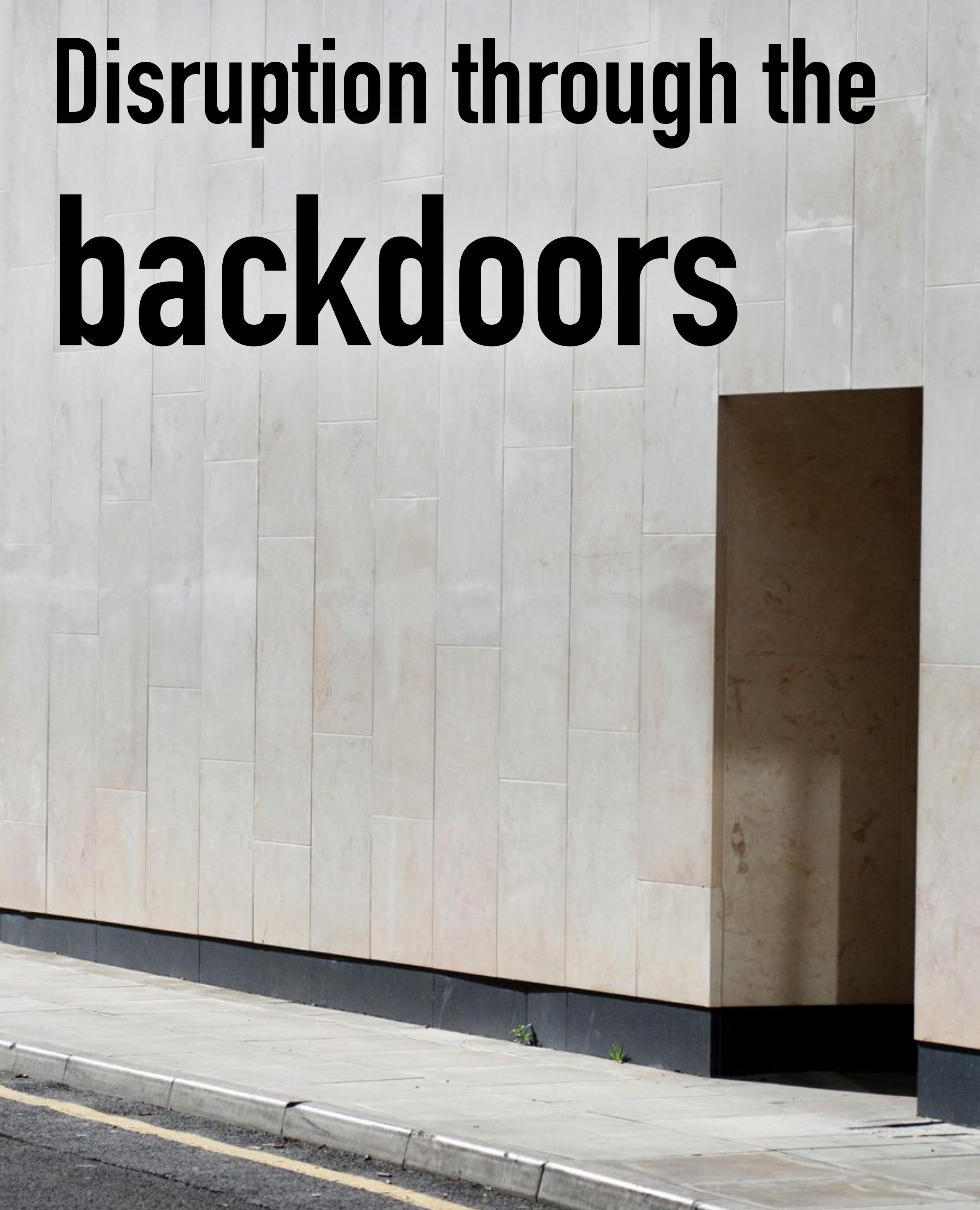
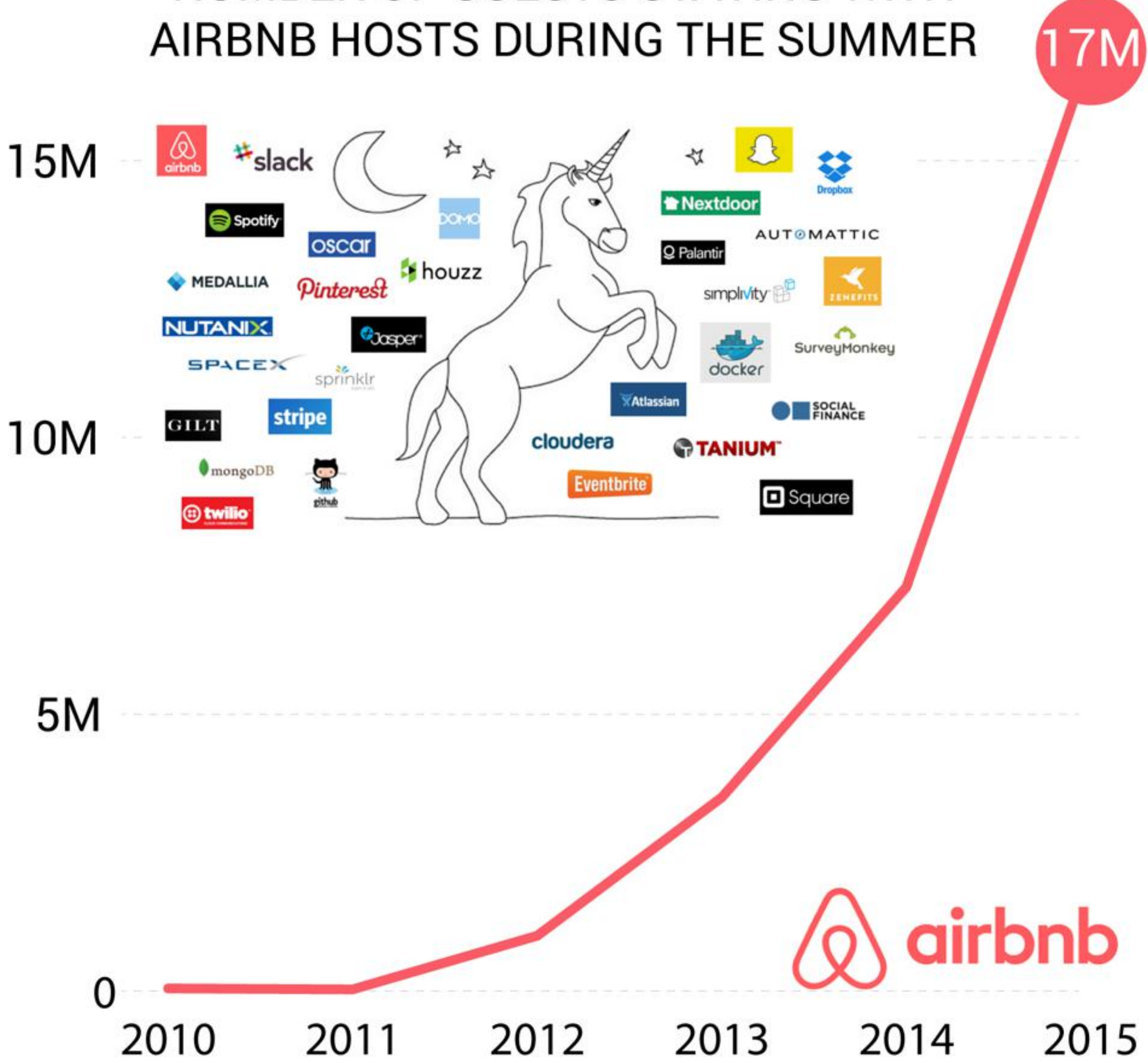
**Mark Andreessen**

founder of Netscape,  
renowned Venture Capitalist  
Andreessen-Horowitz

**Software is eating the  
world, in all sectors**

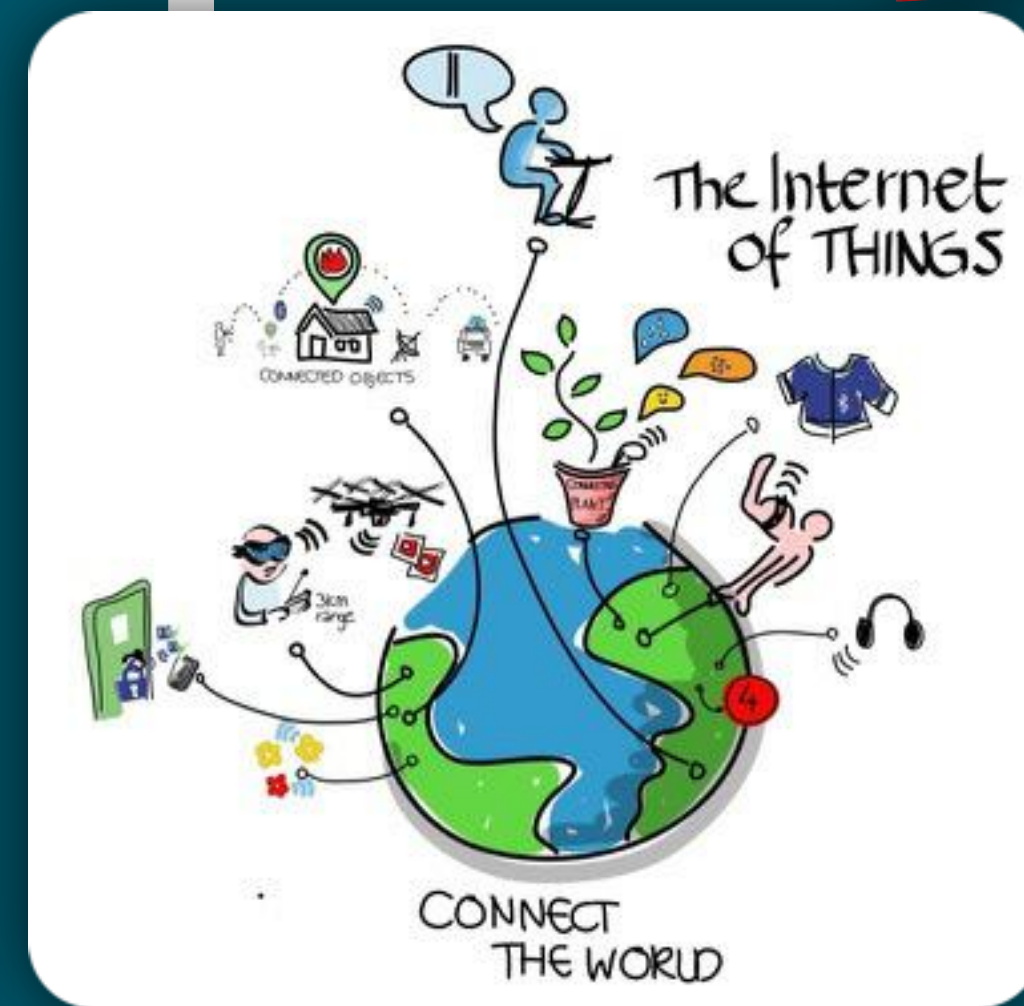
In the future every  
company will become a  
**software** company

# NUMBER OF GUESTS STAYING WITH AIRBNB HOSTS DURING THE SUMMER



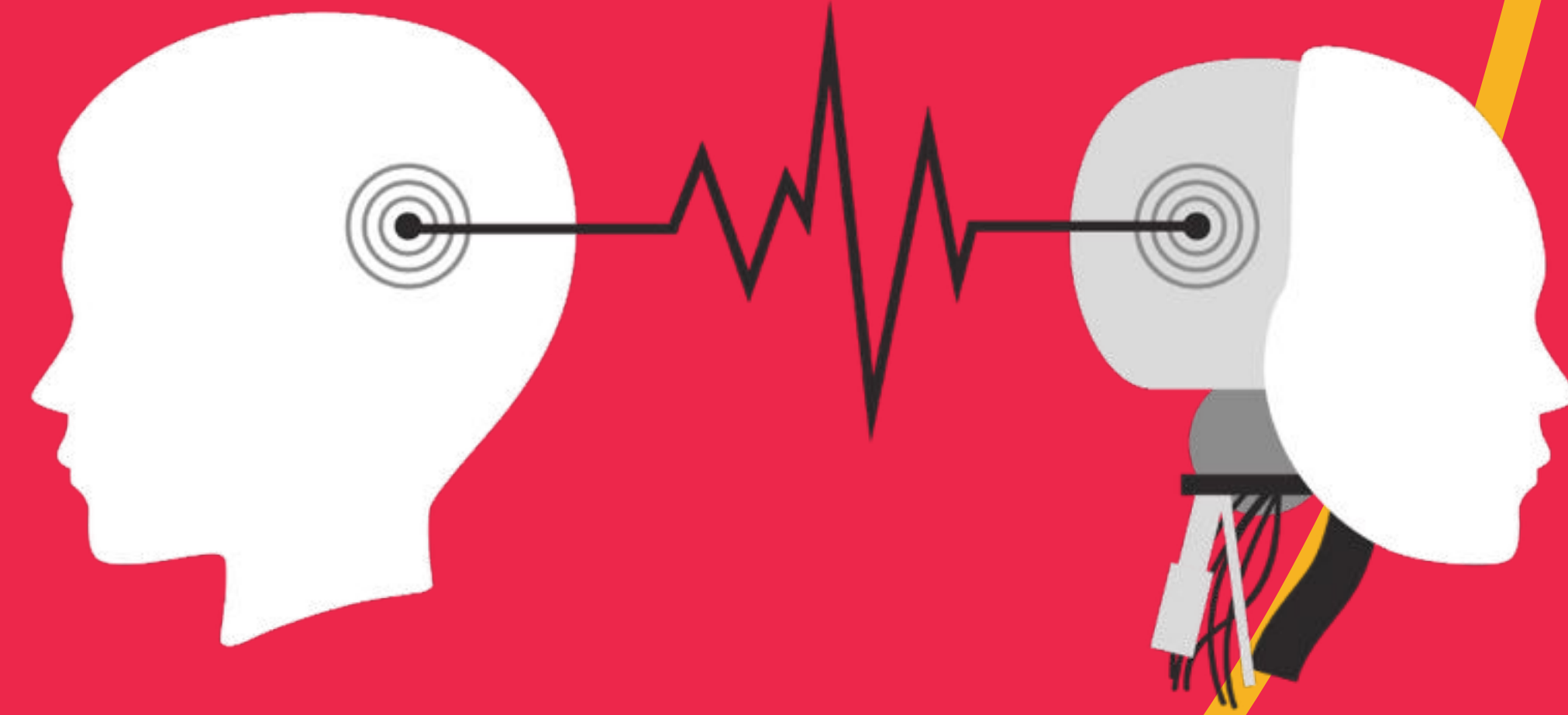
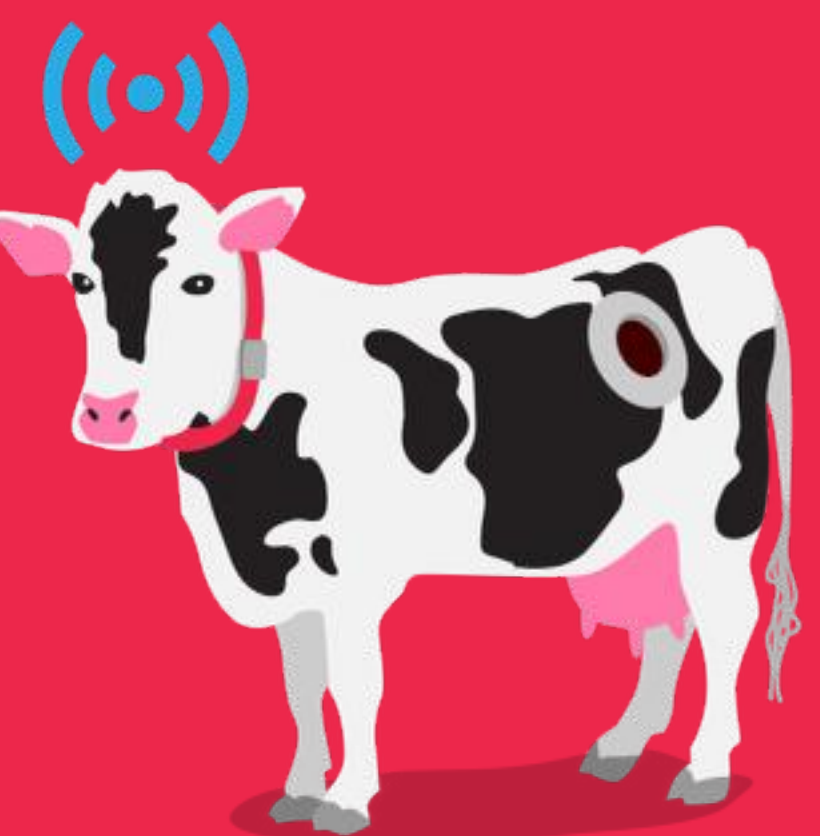
# We're at the pivot point of exponential change

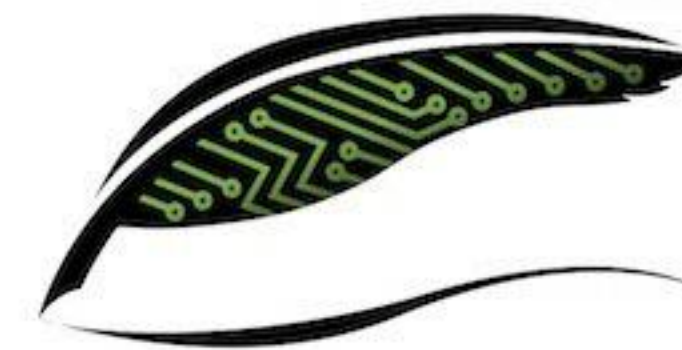
**ARTIFICIAL INTELLIGENCE**



1 2 4 8 16 32 64 128

# Exponential connectivity, data, intelligence, man-machine convergence





Narrative Science®

Our technology application generates news stories, industry reports, headlines and more — at scale and without human authoring or editing



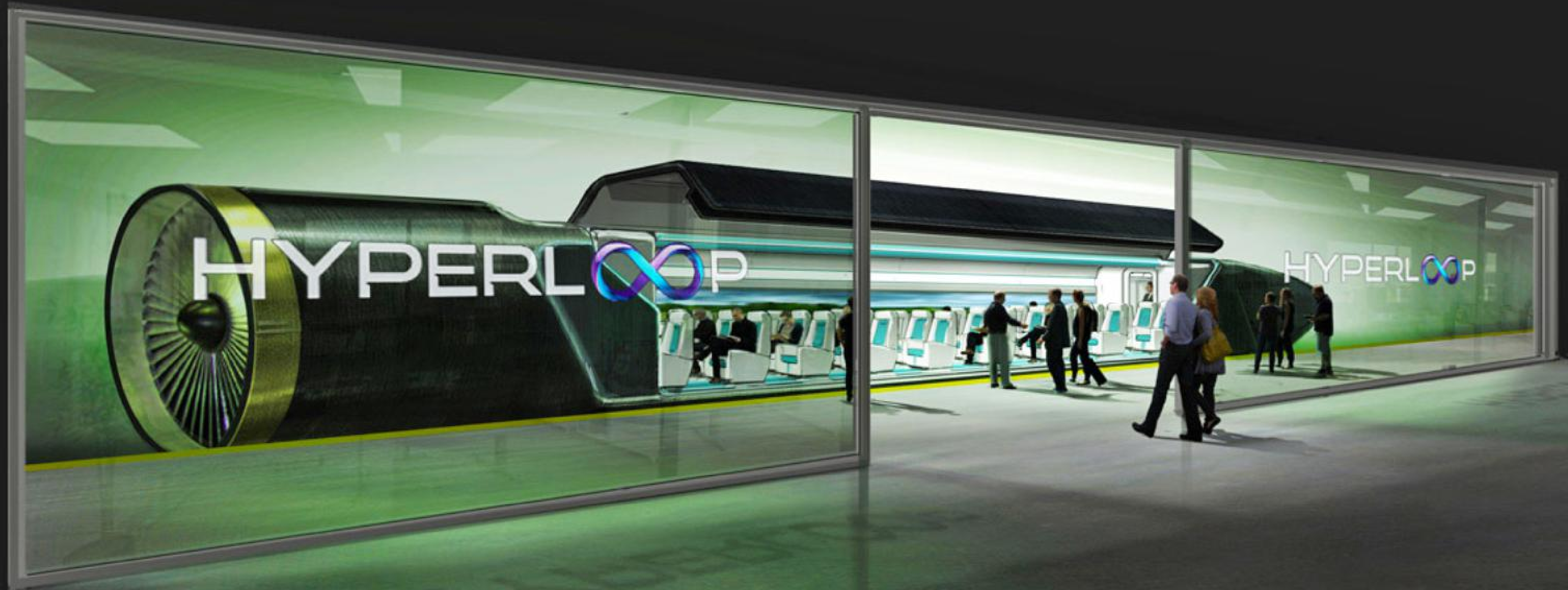
**Beyond innovation: total transformation of what we do!**



- Dubai >> Abu Dhabi in 15 minutes
- London >> Paris in 15 minutes

Source: Peter Diamandis

- L.A. >> San Francisco in 35 minutes
- Montreal >> Toronto in 30 minutes
- L.A. >> Vegas in 20 minutes



HYPERLOOP

# You can now ask Alexa to order millions of products on Amazon

KHARI JOHNSON JULY 1, 2016 4:35 PM

TAGS: ALEXA, AMAZON, AMAZON CHOICE, TOP-STORIES



Image Credit: Carlos Delgado's Echo review on YouTube

We are at  
the pivot point





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



# Food chain conflicts are inevitable - Hyper-Collaboration wins

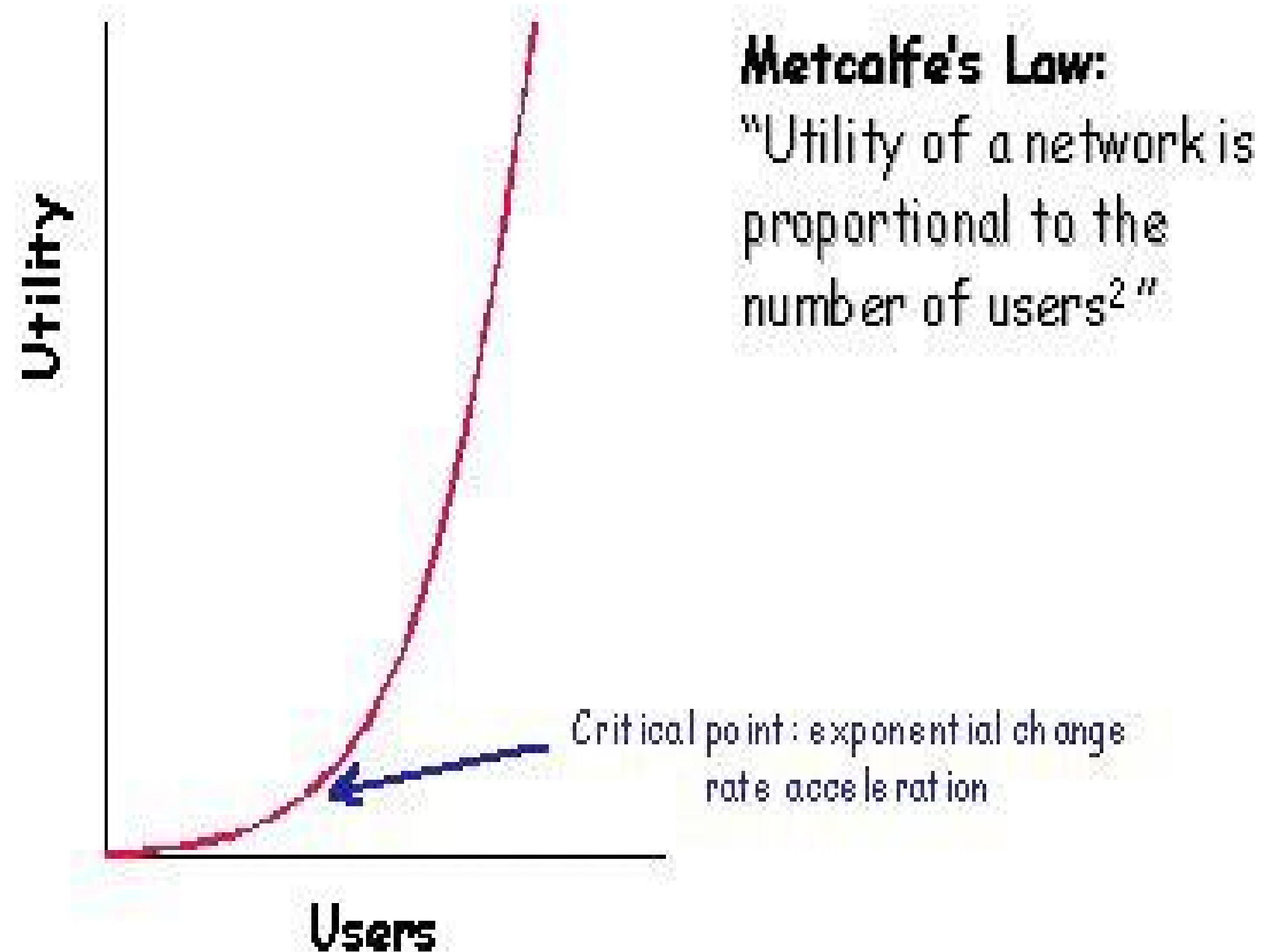
Global Internet Market Leaders = Apple / Google / Amazon / Facebook / Tencent / Alibaba...Flush with Cash...Private Companies Well Represented

Rank	Company	Region	Current Market Value (\$B)	Q1:16 Cash (\$B)	2015 Revenue (\$B)
1	Apple	USA	\$547	\$233	\$235
2	Google / Alphabet	USA	510	79	75
3	Amazon	USA	341	16	107
4	Facebook	USA	340	21	18
5	Tencent	China	206	14	16
6	Alibaba	China	205	18	15
7	Priceline	USA	63	11	9
8	Uber	USA	63	--	--
9	Baidu	China	62	11	10
10	Ant Financial	China	60	--	--
11	Salesforce.com	USA	57	4	7
12	Xiaomi	China	46	--	--
13	Paypal	USA	46	6	9
14	Netflix	USA	44	2	7
15	Yahoo!	USA	36	10	5
16	JD.com	China	34	5	28
17	eBay	USA	28	11	9
18	Airbnb	USA	26	--	--
19	Yahoo! Japan	Japan	26	5	5
20	Didi Kuaidi	China	25	--	--
<b>Total</b>			<b>\$2,752</b>	<b>\$447*</b>	<b>\$554*</b>

# 2 key realisations about future economic logic

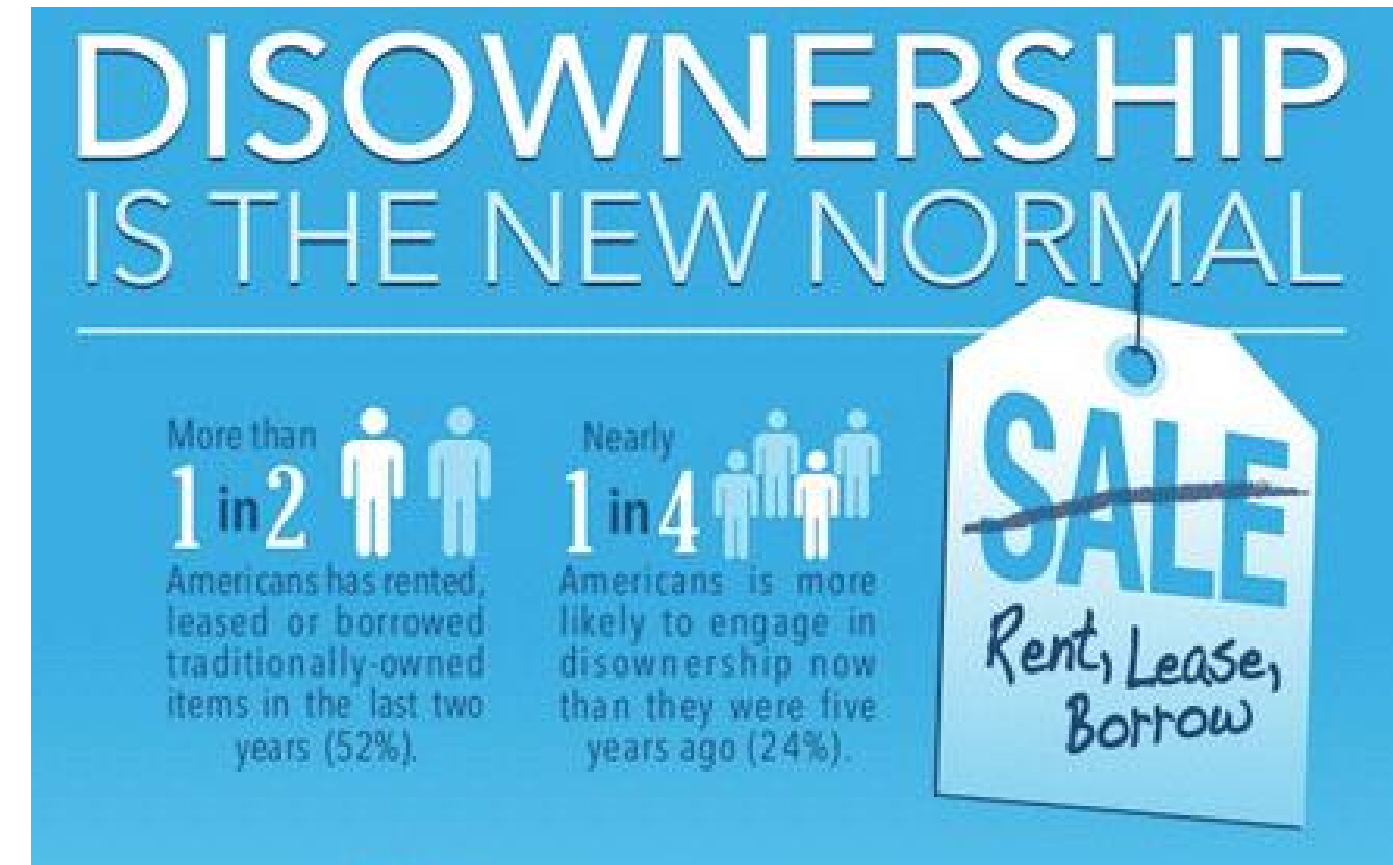
Importance of scale and network effects

Inevitable interdependence

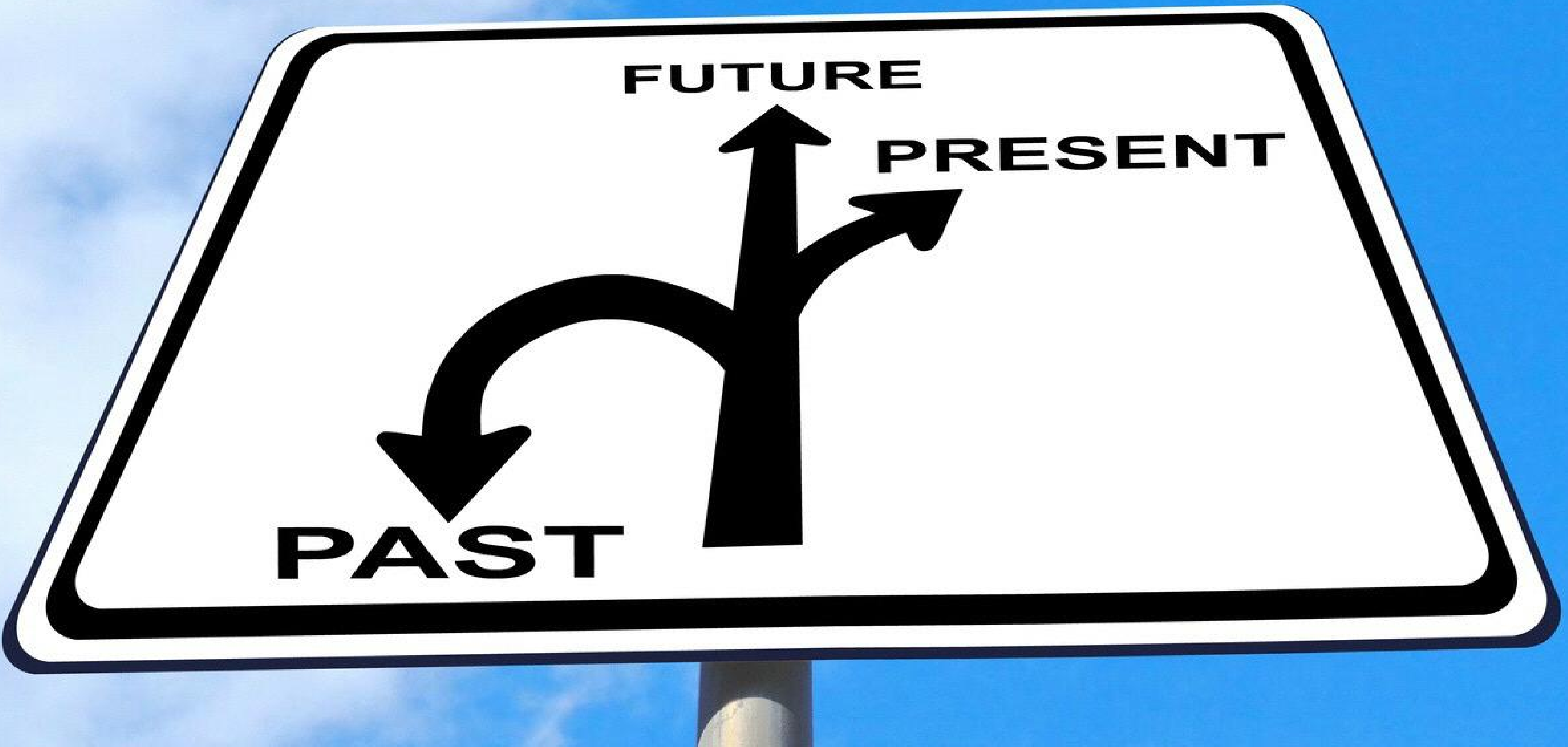


# At the dawn of 4 new 'economies'

1. **Maker-Economy**: distributed manufacturing and 3D printing
2. **On-Demand / Sharing Economy**: own less, access more; even... disownership?
3. **Circular Economy**: people, planet, profit – and a kind of sustainable capitalism ?
4. **Experience Economy**: immersive, embodied, focus on lifetime memories instead of purchases



**The future is no longer just an extension of the past or present**



# The hybrid default: thinking about what is, and what **might be**



# These 10 mega-shifts are driving corporate innovation and transformation

Digitization

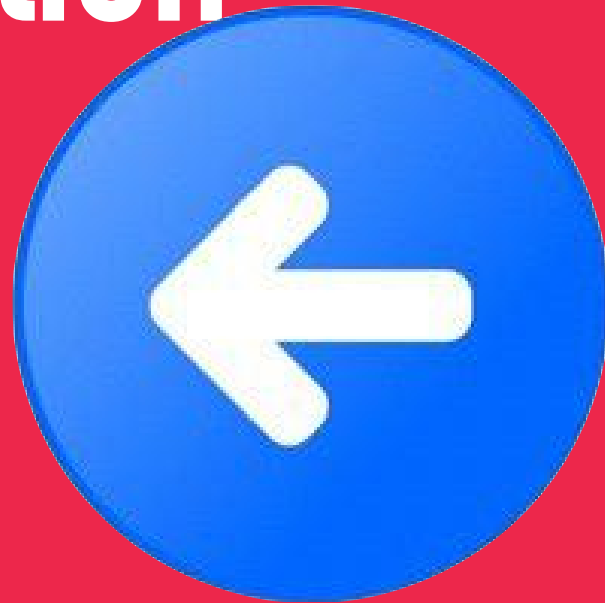


Mobilisation

Screenification

Disintermediation

Automation



Intelligization

Personalisation



Anticipation

Virtualization

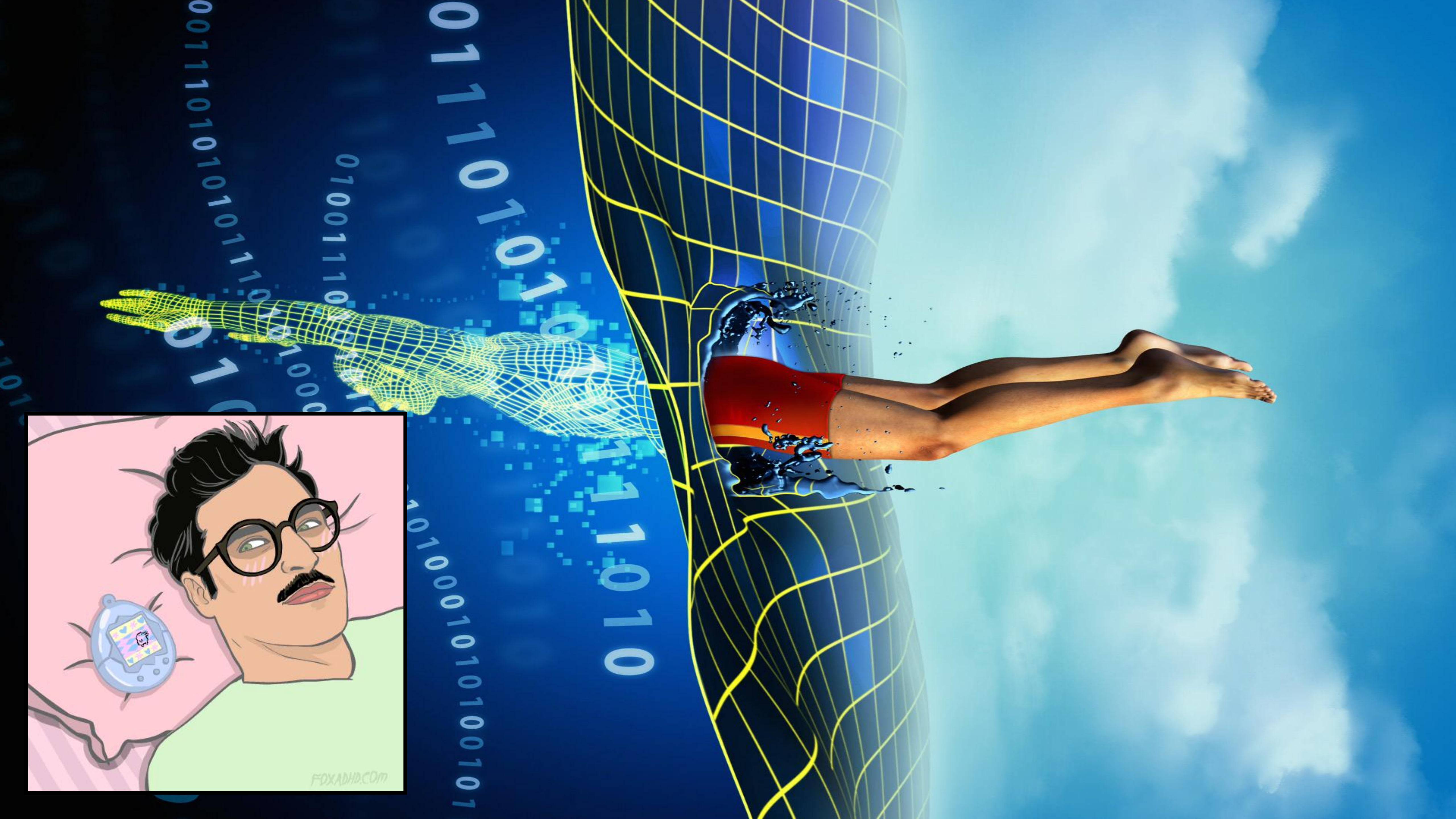
Robotization

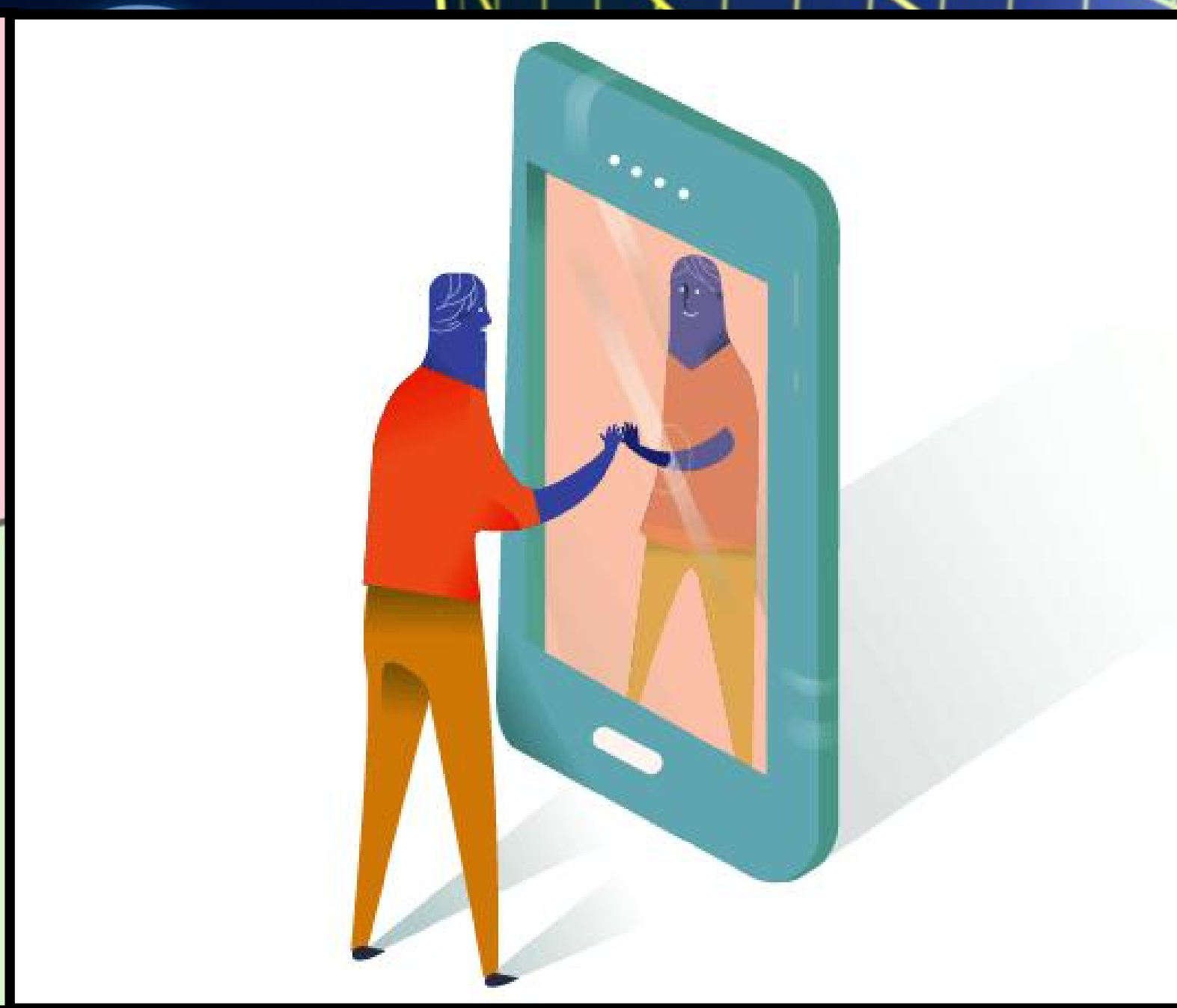


10% challenge ... and growing!



90% opportunity!

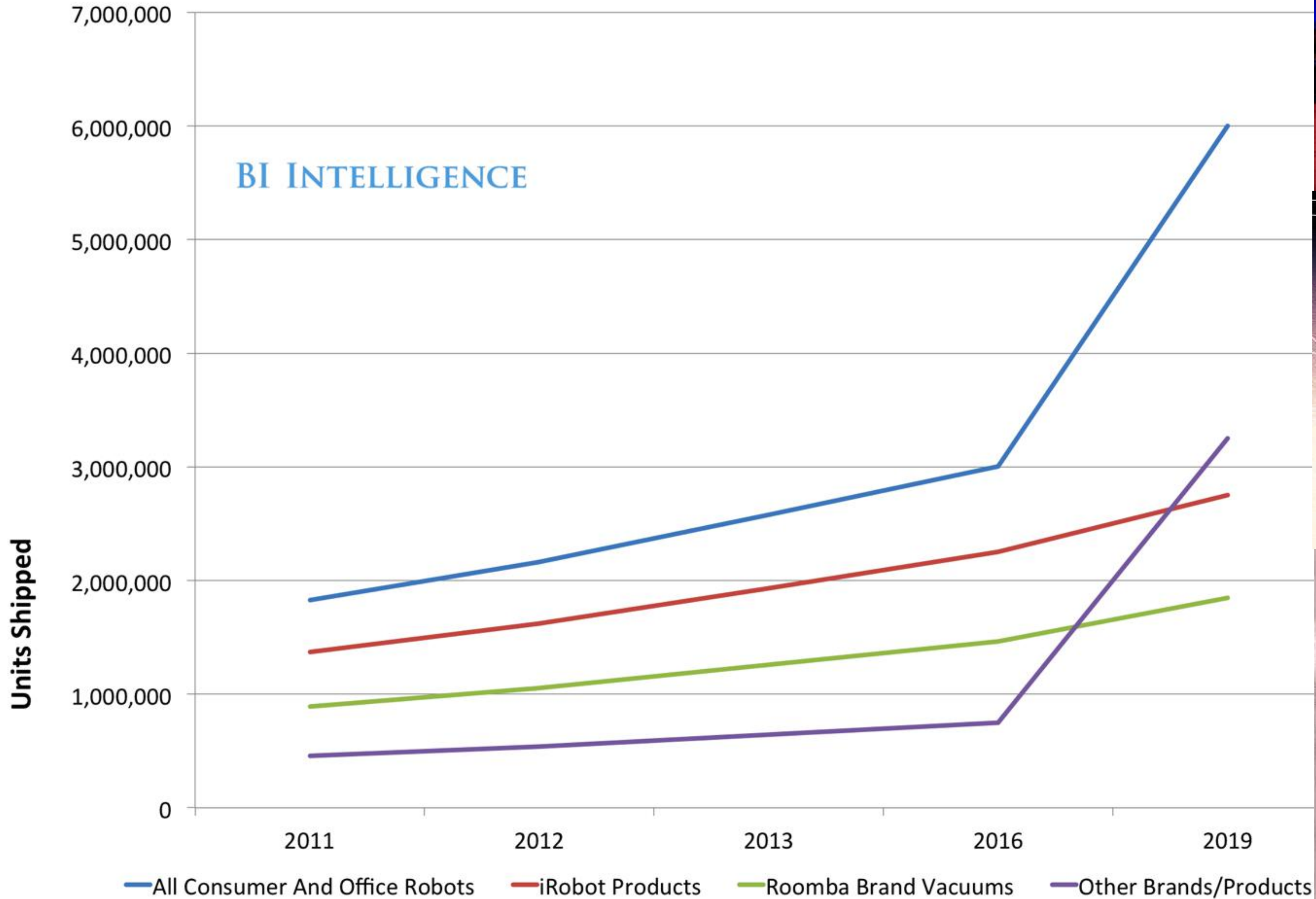






# Consumer And Office Robot Unit Shipments\*

Global



Source: iRobot, News Reports, BI Intelligence Estimates. \*Consumer/office exclude kids' toys, logistical, & security robots.

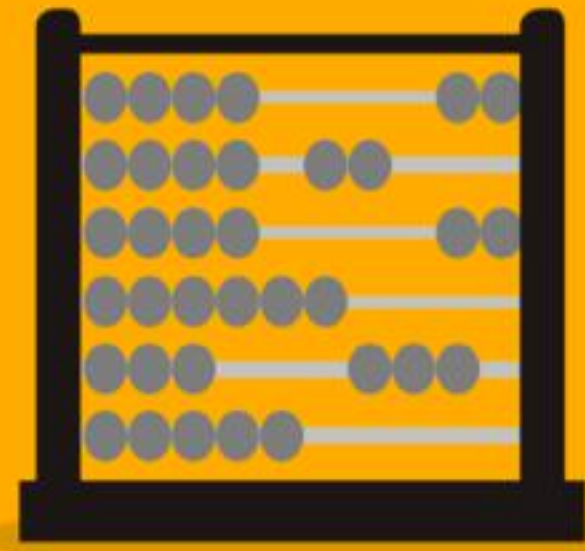


# Robotic cars, ships, planes, pets... friends...?



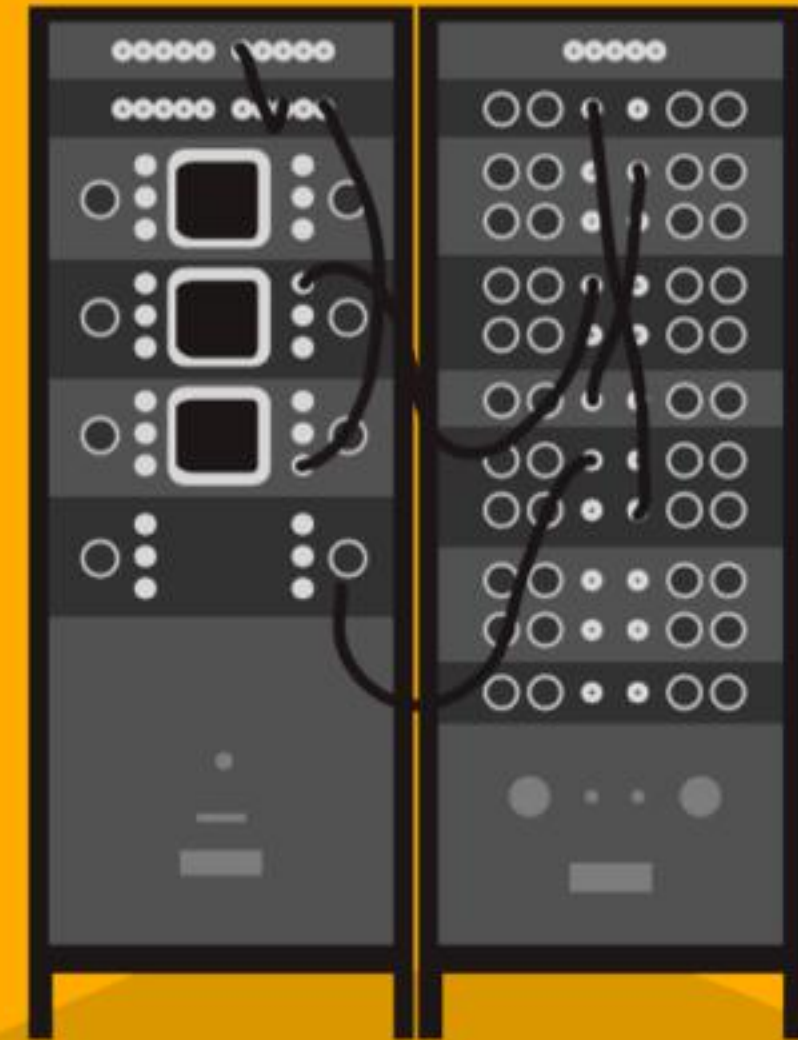
container ship, reimagined *Nick Kaloterakis*

# COMPUTING IS GOING FROM TABULATING TO PROGRAMMING TO COGNITIVE



*Tabulating  
Systems Era*

1900



*Programmable  
Systems Era*

1950



*Cognitive  
Systems Era*

2011

# IBM Watson

Welcome  
to the  
Cognitive  
Era.

A new era of technology.  
A new era of business.  
A new era of thinking.

## Machines that can...think?



Bloomberg  
Business

**ARTIFICIAL  
INTELLIGENCE**



## THE GLOBAL BRAIN

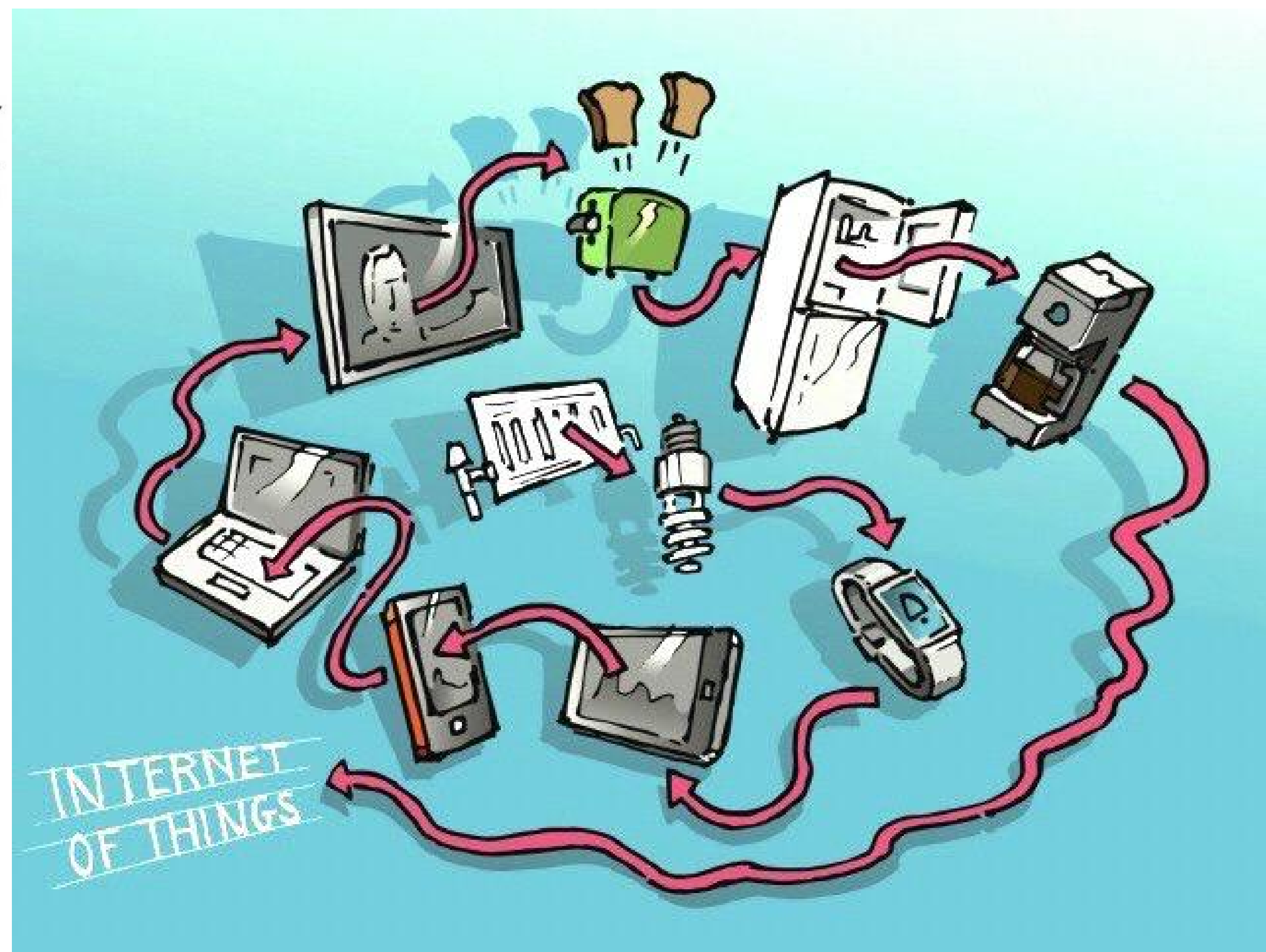
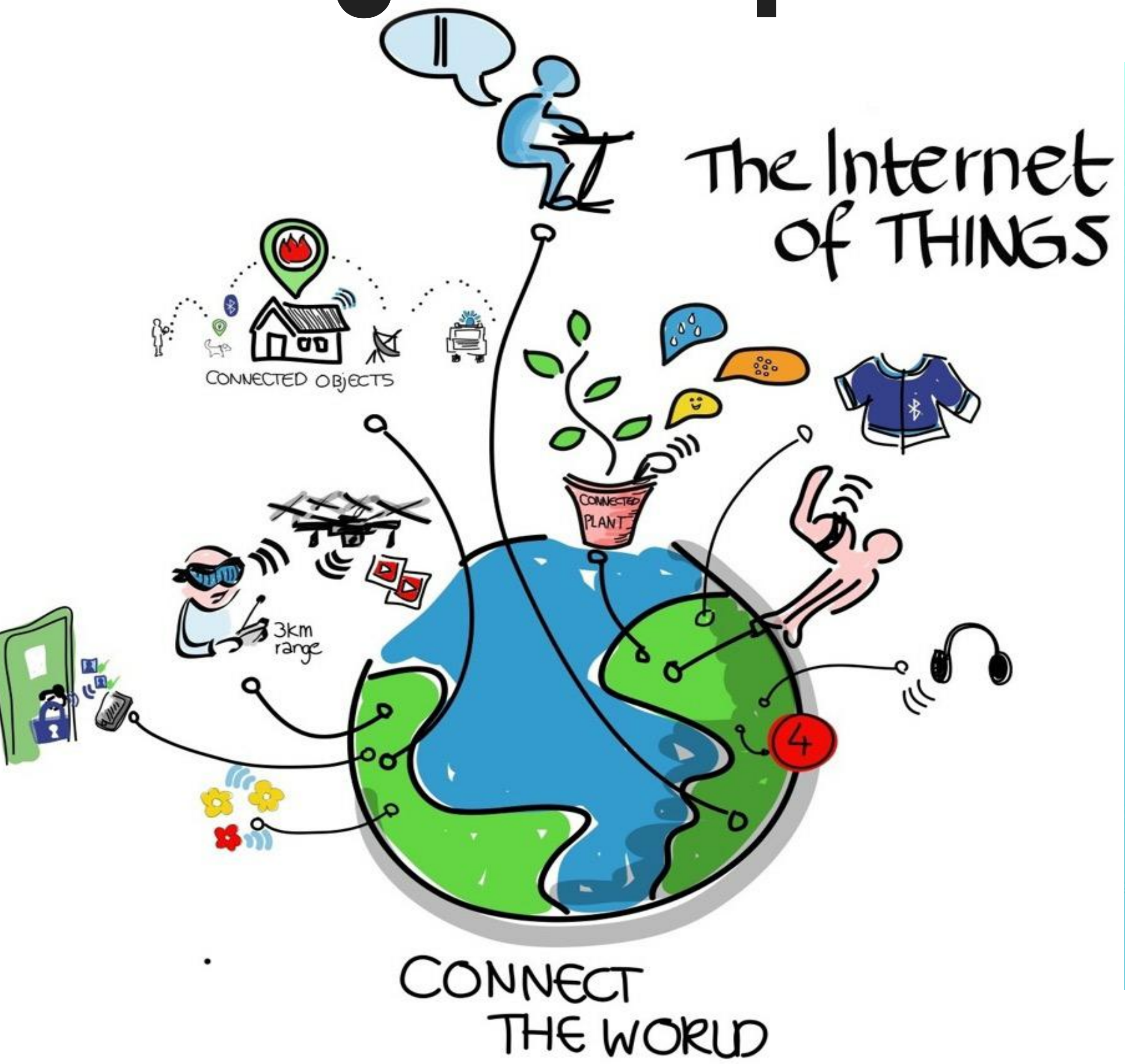
Viv radically simplifies the world by providing  
an intelligent interface to everything.

**ARTIFICIAL  
INTELLIGENCE**



**INTELLIGENCE BECOMES A UTILITY**

# “Things and processes made intelligent”

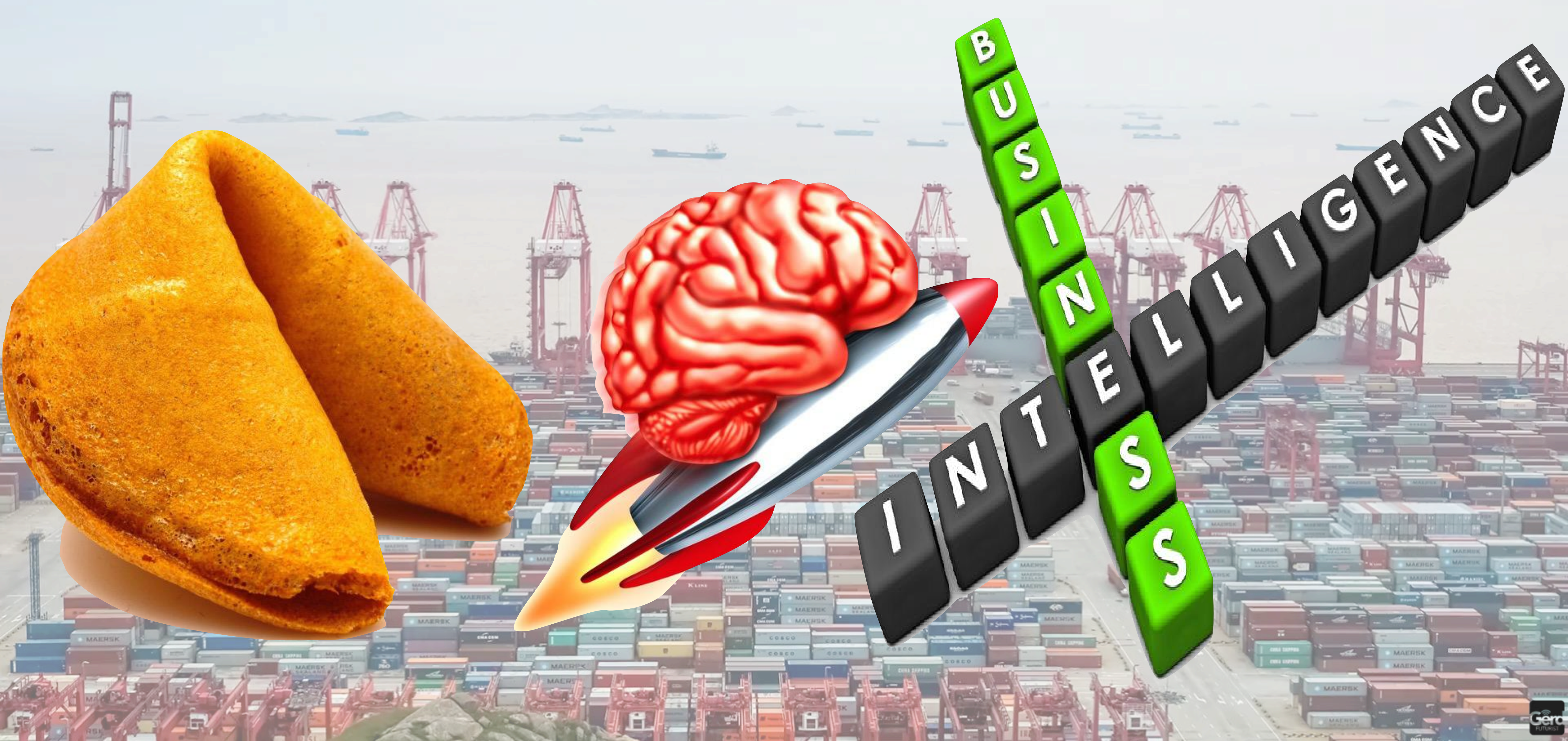


**Imagine what this will do to (for) your business**

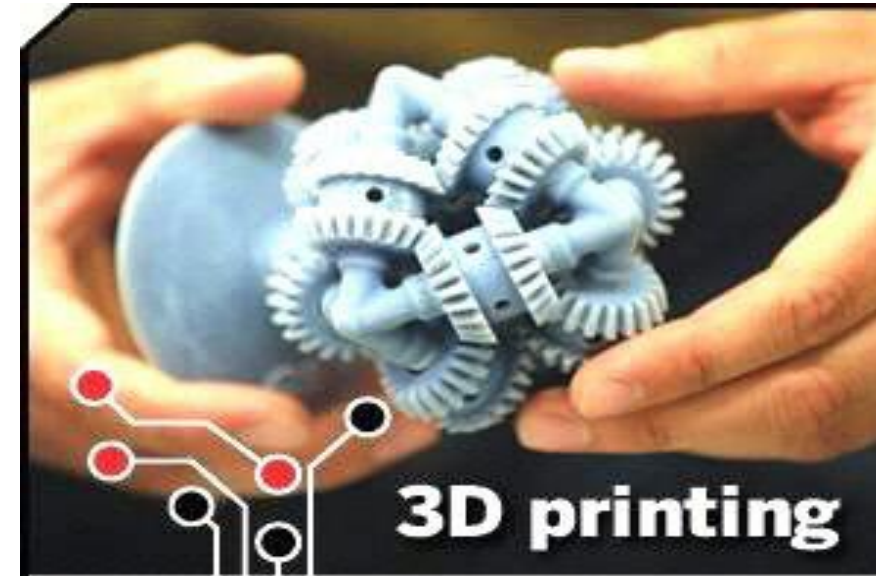
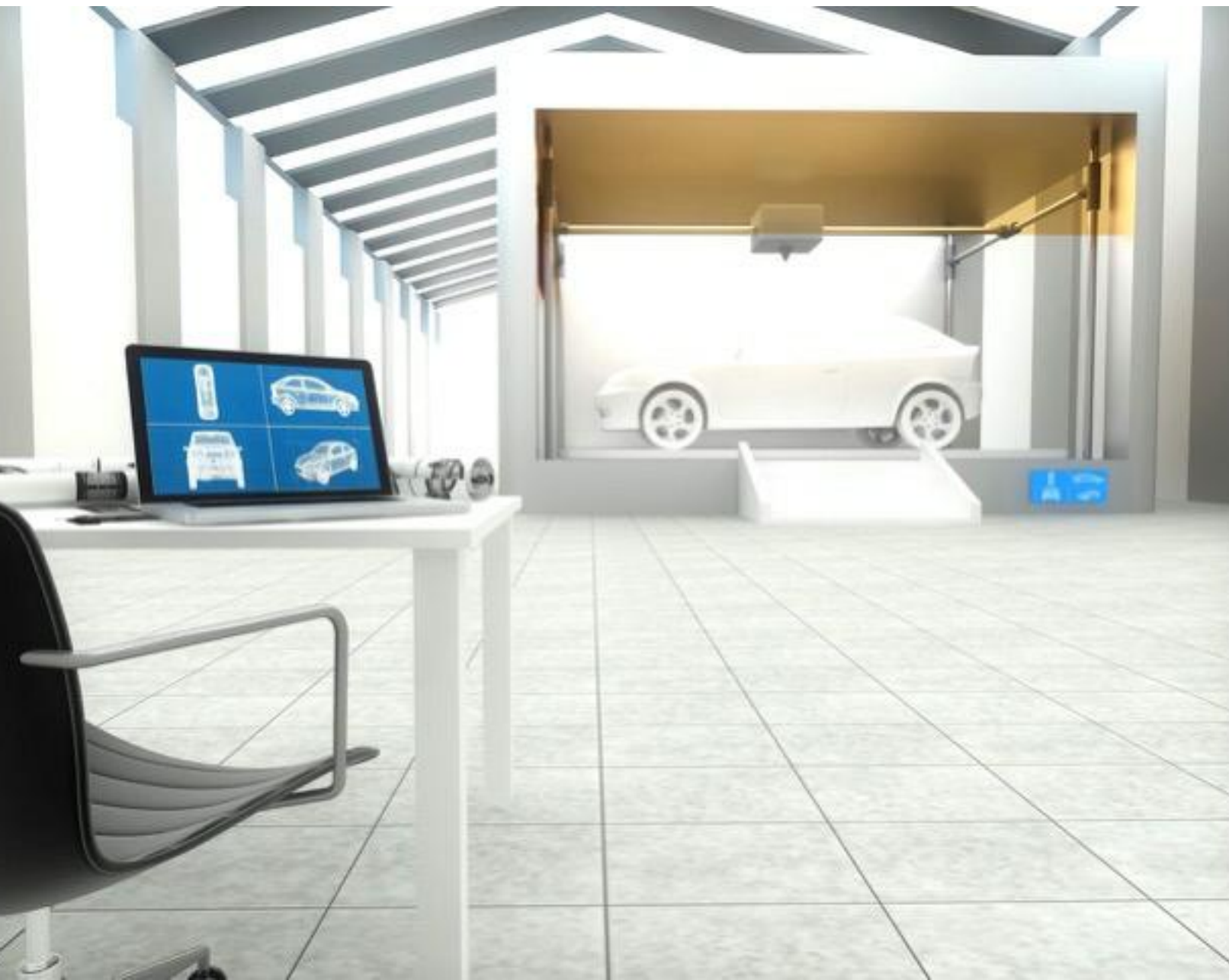




# Ambient Computing - Predictive Analytics - Business 'Super Intelligence'



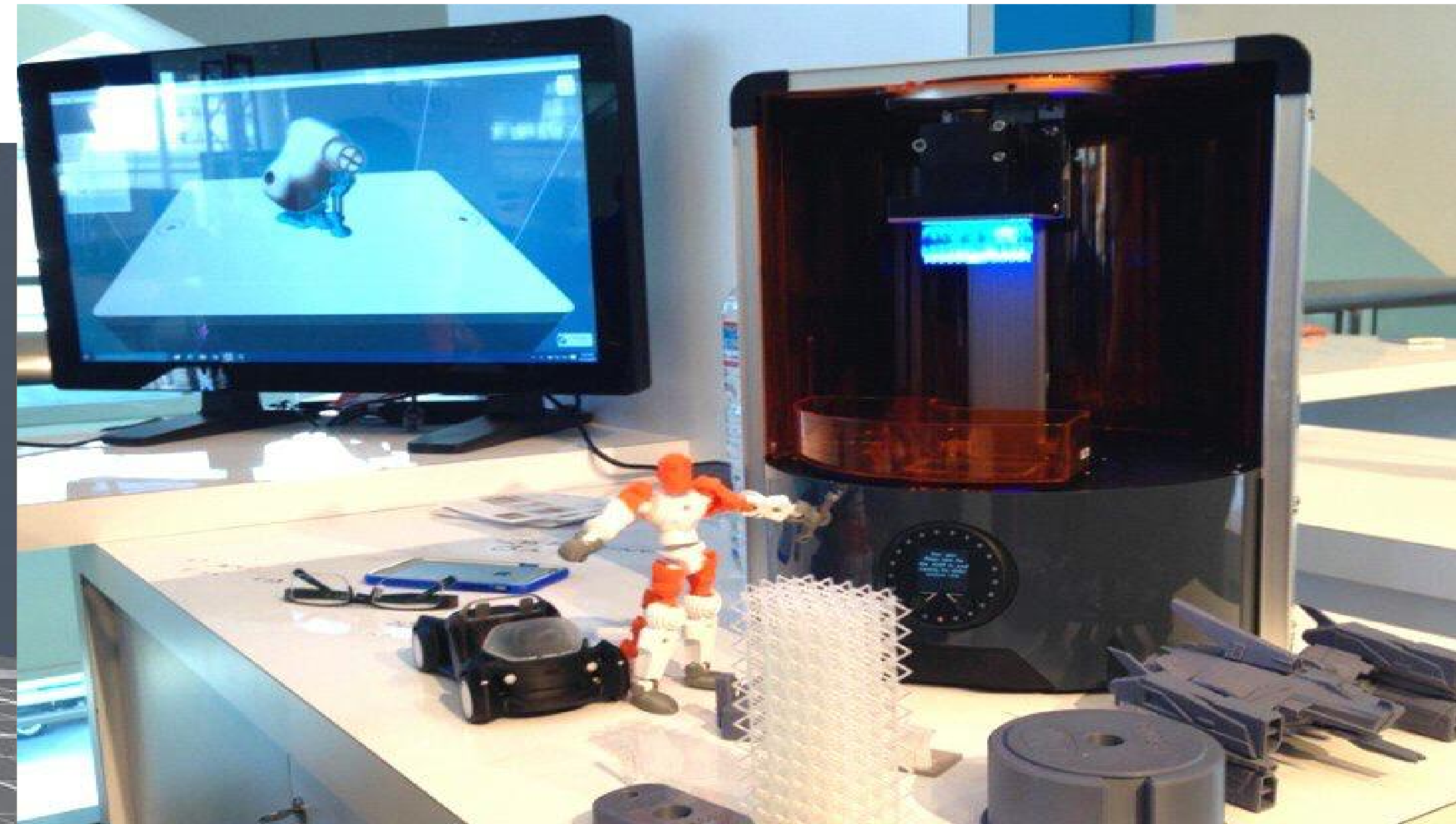
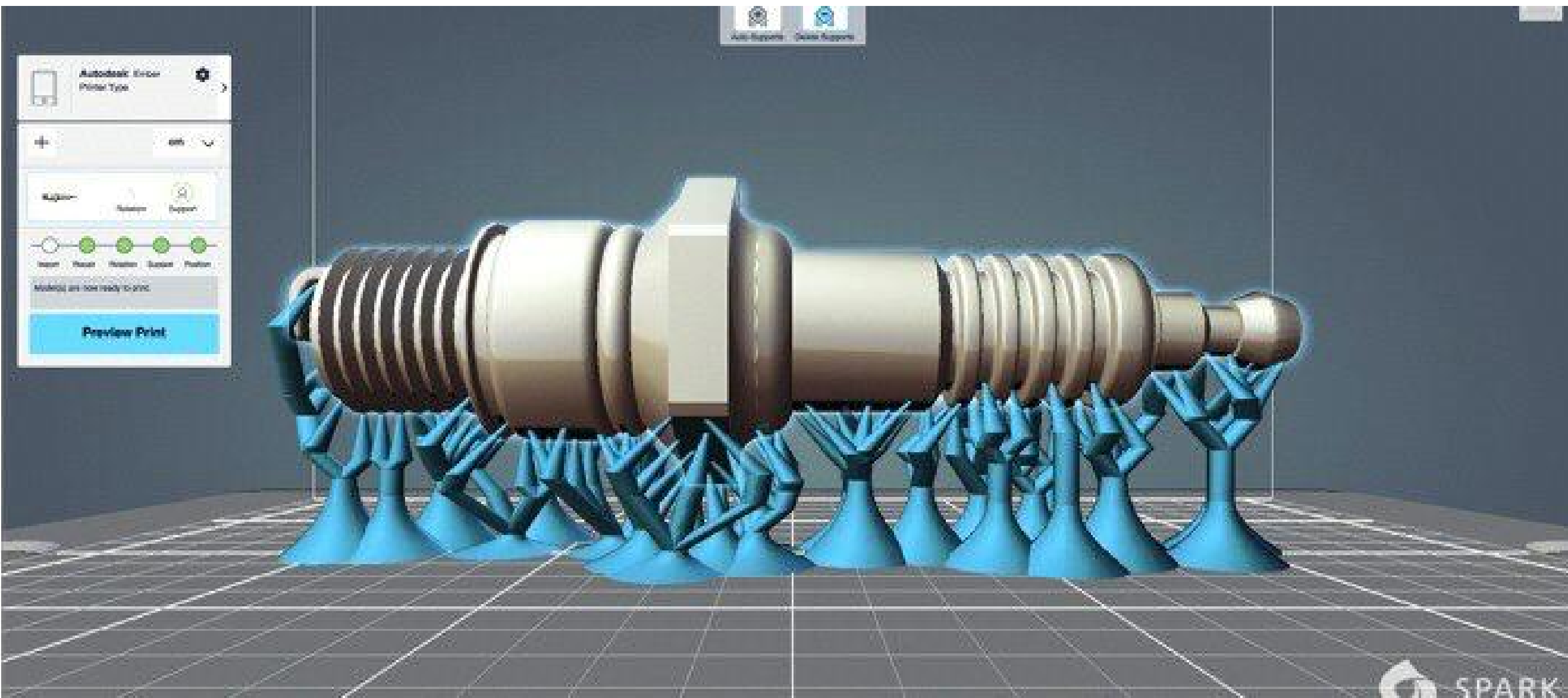
# An imminent paradigm shift: distributed manufacturing / 3D printing



Items could be printed on demand – from spare parts in factories to shoes on the high street. Human organs could be 'bioprinted'



3D printing  
maker movement/ DIY (DIYbio, DIYdrone)  
industry 4.0



# The way we will see the world is about to change, as well

Microsoft Hololens

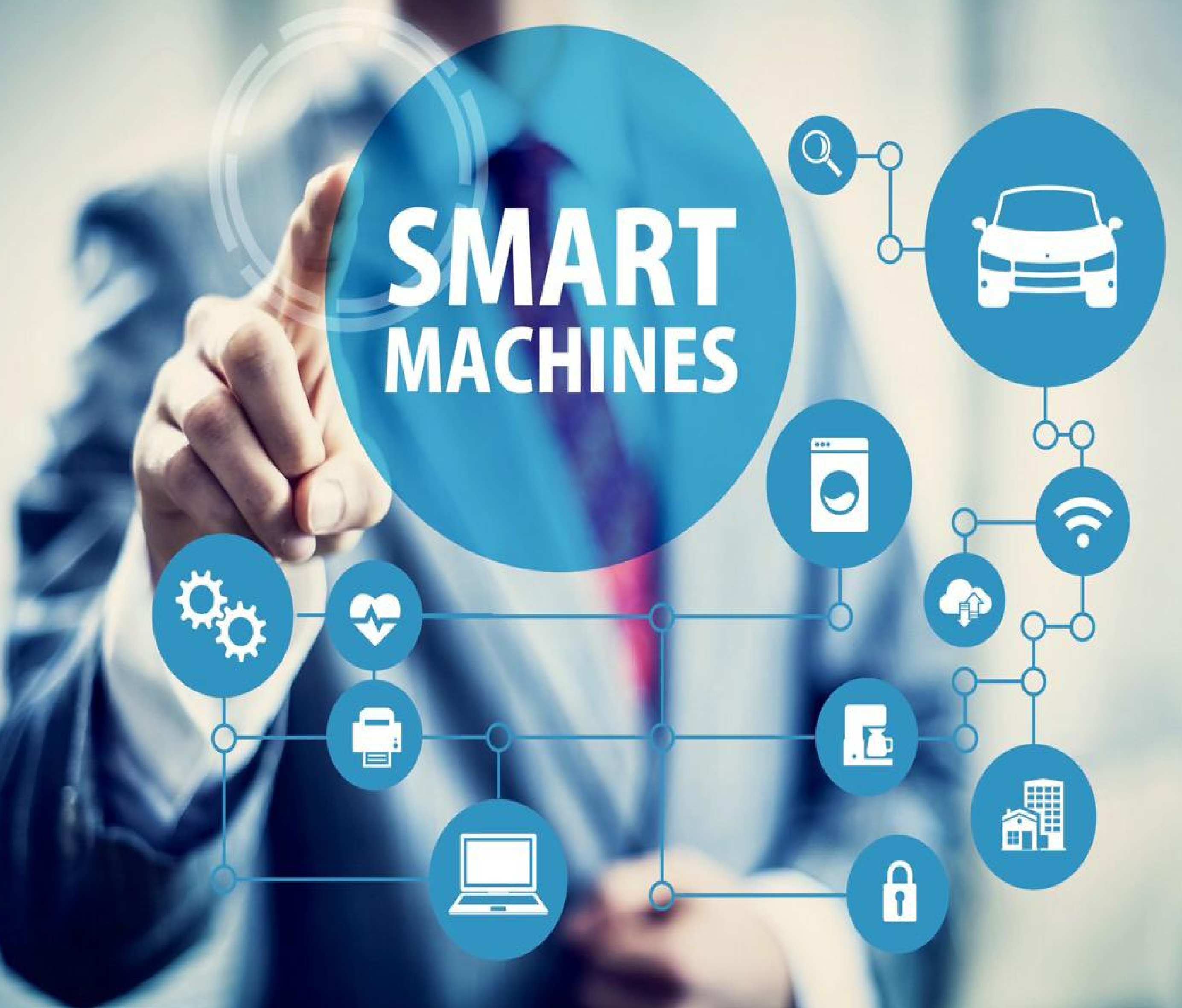


**Purpose**



**Services – Experiences – Platforms**

**Abundant products, infrastructure  
– and technology**



**Anything that can be digitised + automated, will be . . .**



... but anything that cannot be digitized or automated will dramatically increase in value

# Future skills required: technology and humanity

## in 2020

---

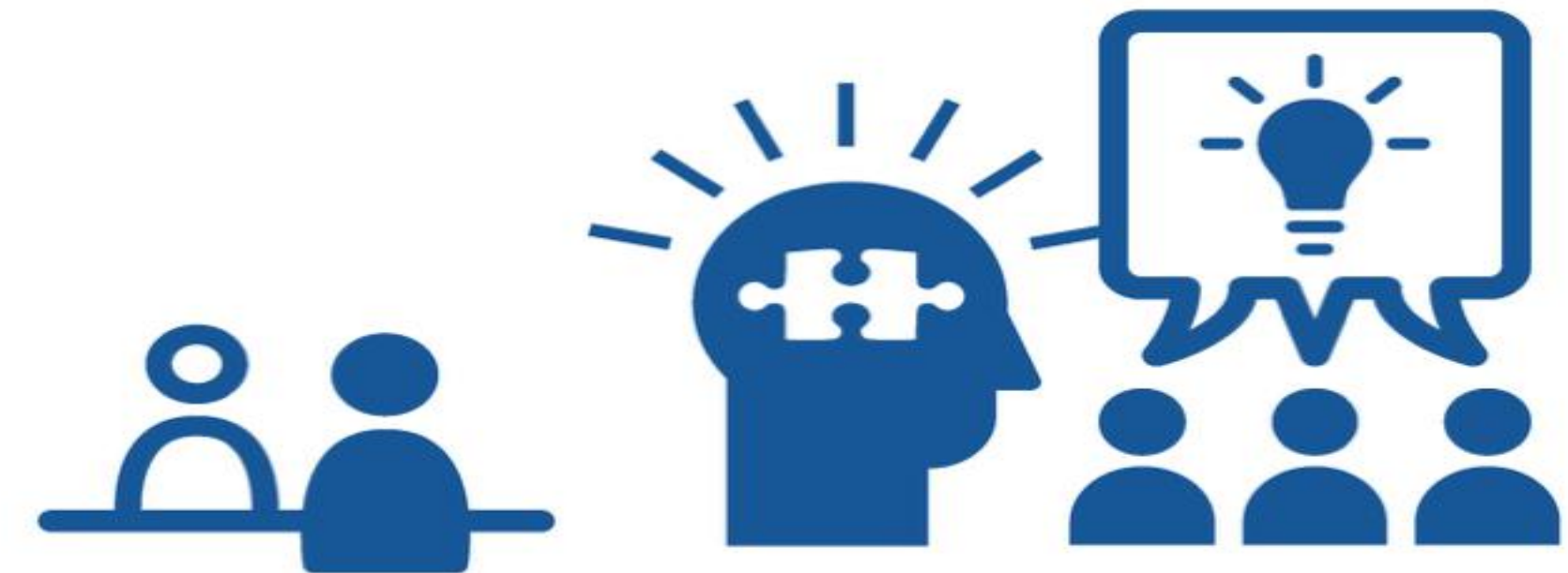
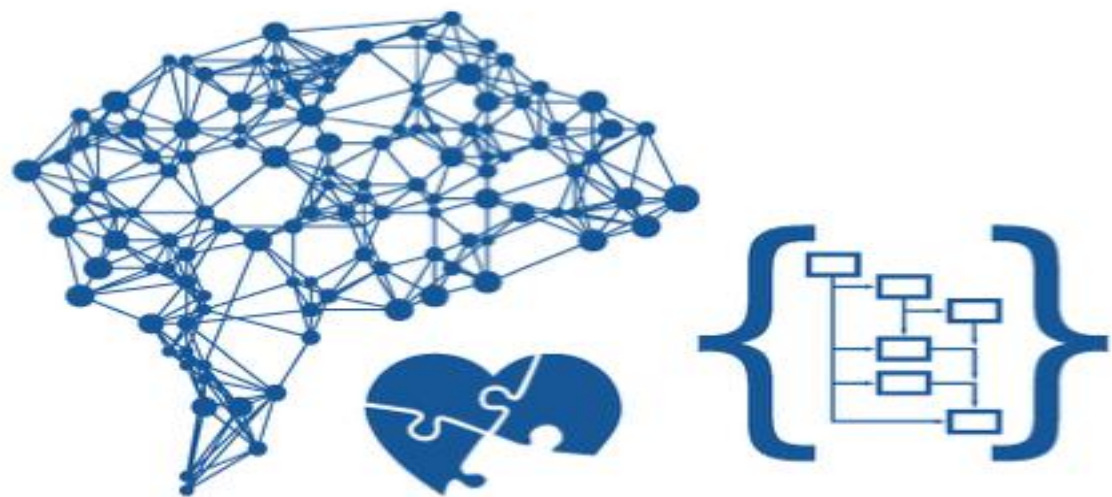


1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

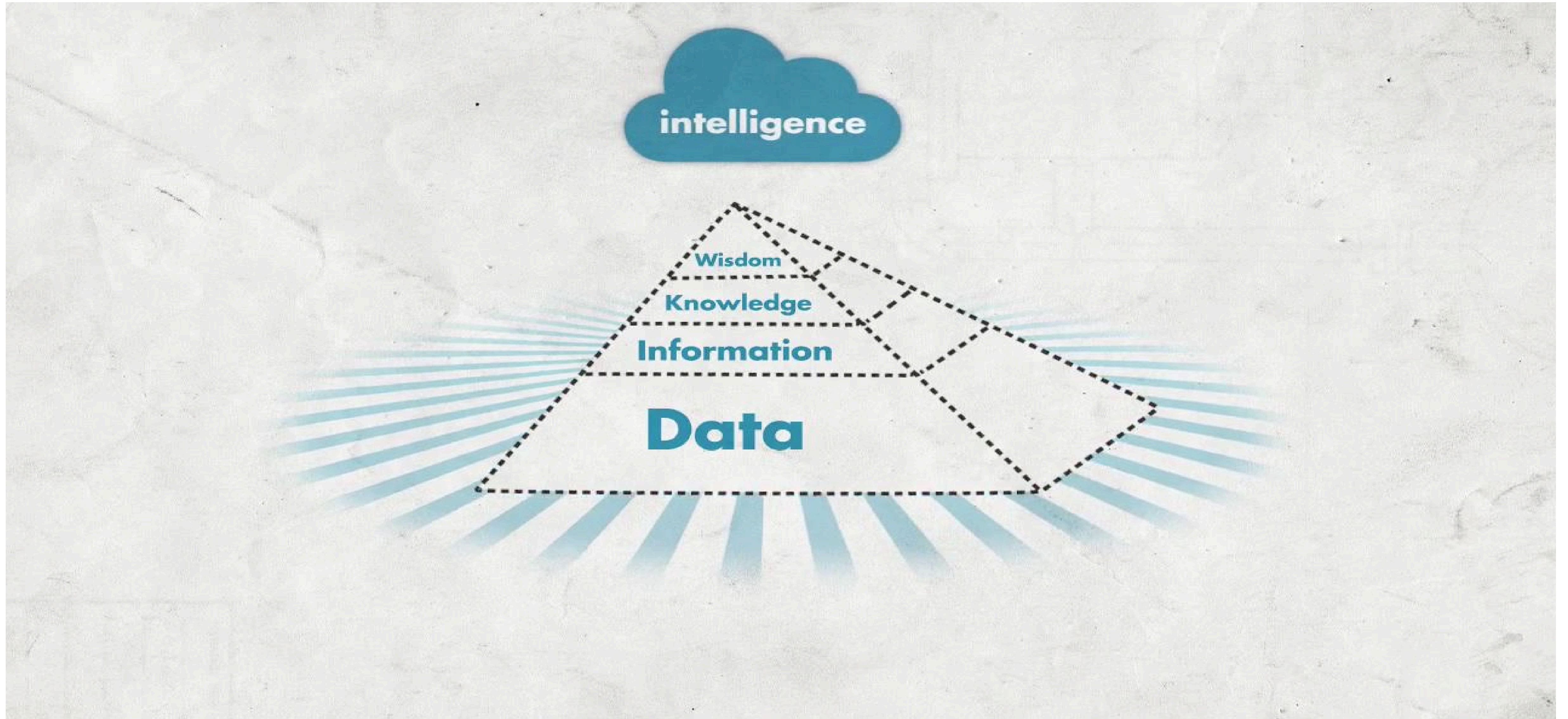
## in 2015

---

1. Complex Problem Solving
2. Coordinating with Others
3. People Management
4. Critical Thinking
5. Negotiation
6. Quality Control
7. Service Orientation
8. Judgment and Decision Making
9. Active Listening
10. Creativity



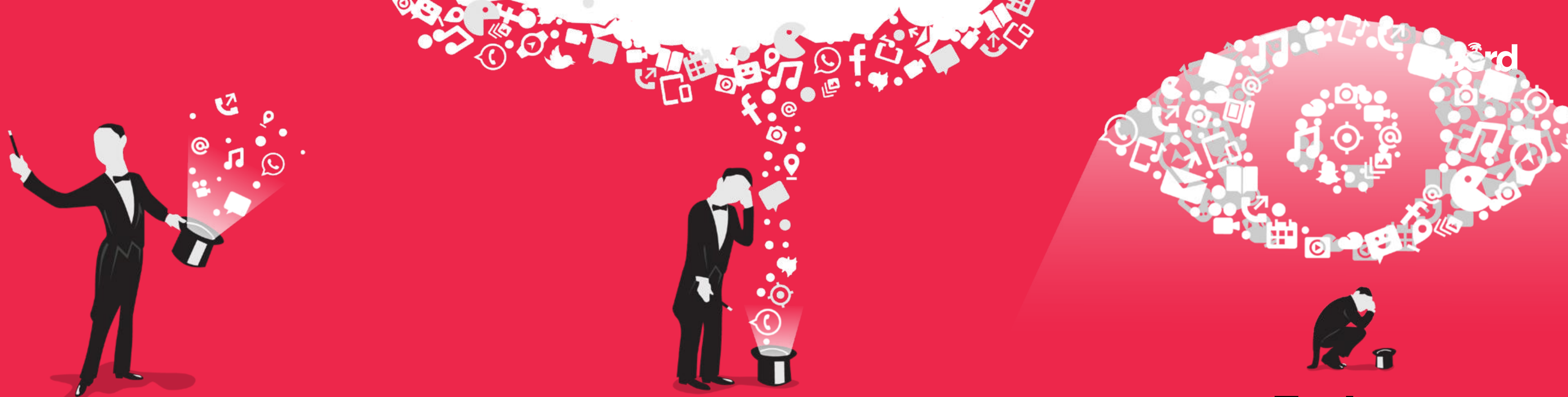
# Wisdom in leadership: knowledge + social + emotional intelligence





# 'HellVen'





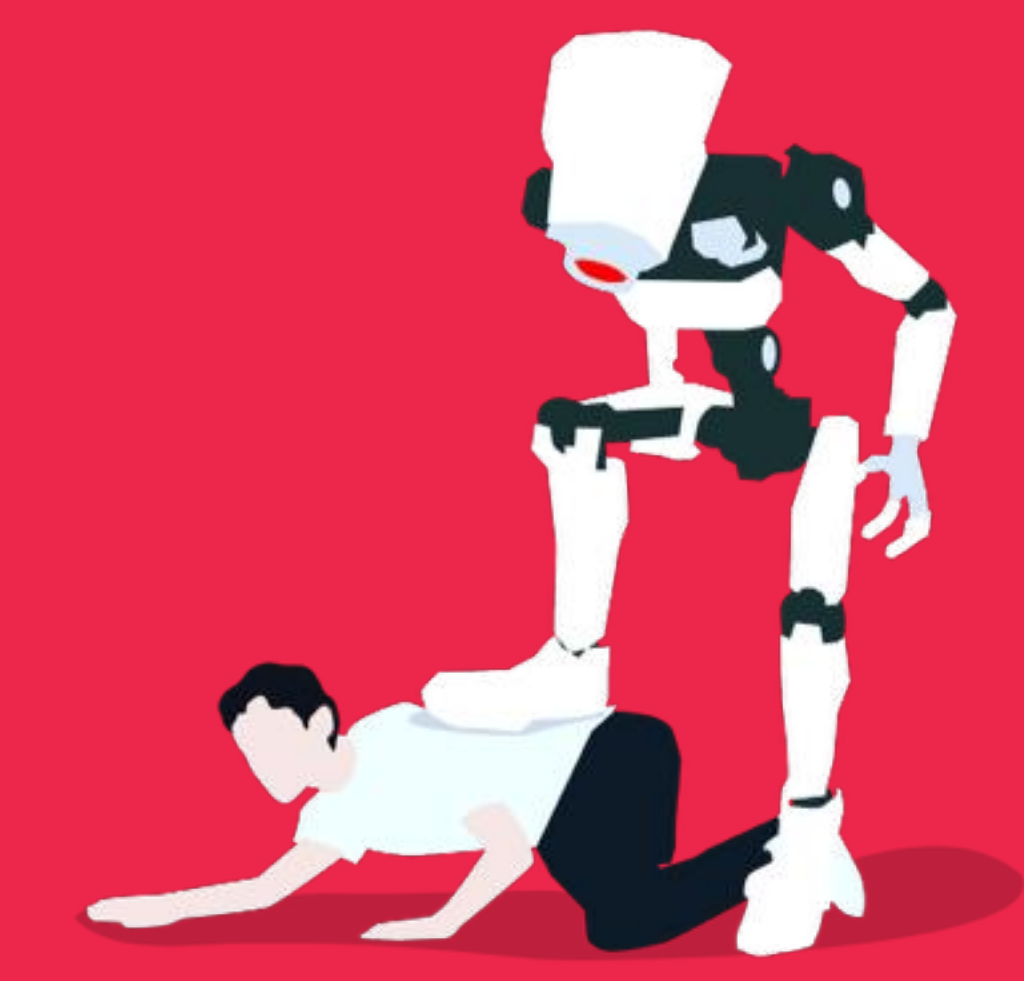
**Magic**



**Manic**



**Toxic**



**Reminder: technology is a useful servant but a dangerous master**

**Technology and humanity are increasingly overlapping: digital ethics become essential**



# 'Sustainable' will become the new 'Profitable'



# The most successful brands will be on 'Team Human'

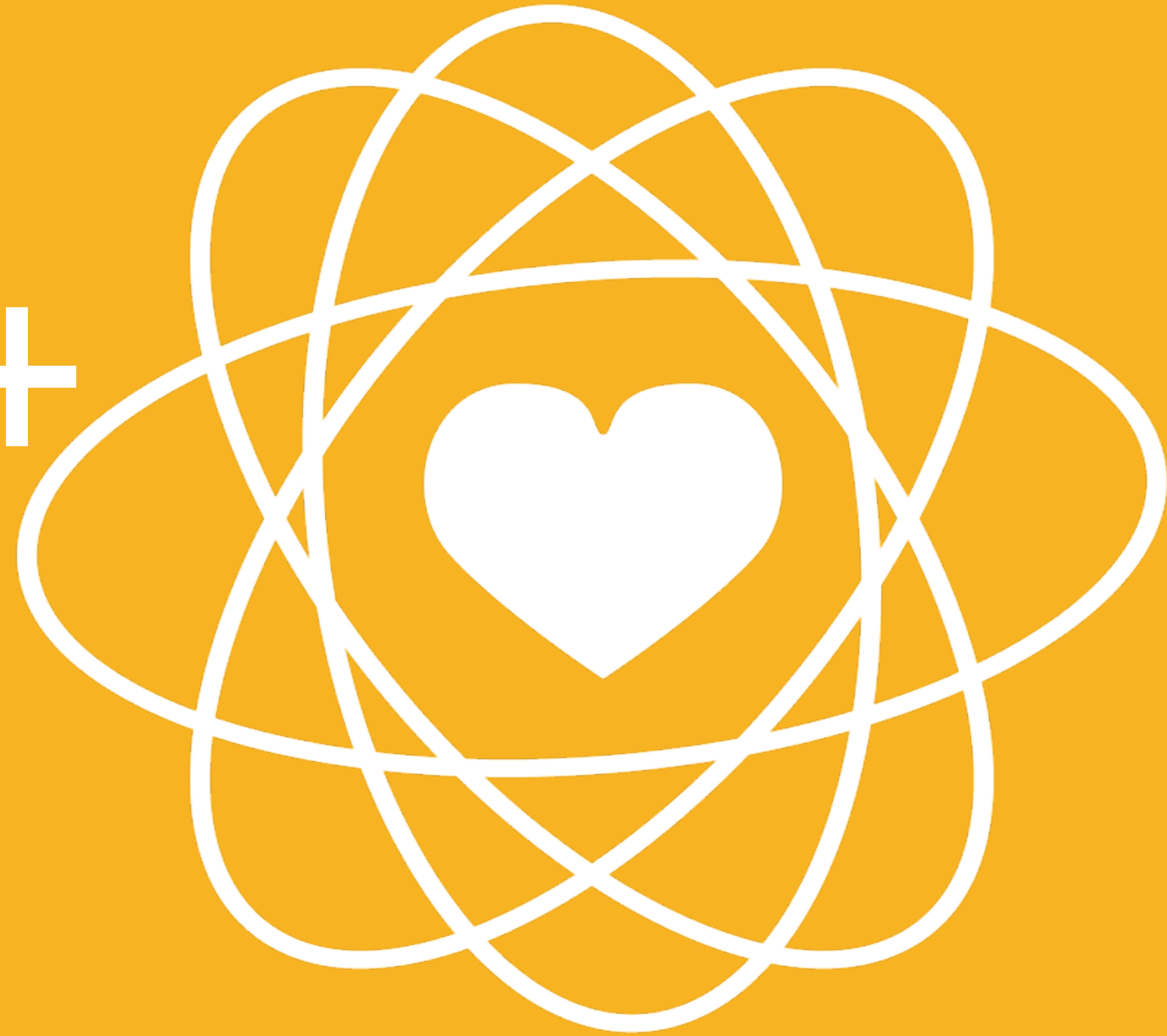
**ARTIFICIAL  
INTELLIGENCE**



+

Welcome  
to the  
Cognitive  
Era.  
A new era of technology.  
A new era of business.  
A new era of thinking.

+



**“Tomorrow  
belongs to  
those who  
can hear it  
coming”  
David Bowie**





FUNDAÇÃO DOM CABRAL

**FDC**

DESENVOLVIMENTO DE EXECUTIVOS E EMPRESAS



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[www.gerdtube.com](http://www.gerdtube.com)  
@gleonhard on Twitter

**Thanks for your time and attention!**