

- 1. Etymology
- 2. Information theory approach
- 3. As sensory input
- 4. As representation and complexity
- 5. As an influence which leads to a transformation
- 6. As a property in itself

DIE NÄCHSTEN 10 JAHRE: HERAUSFORDERUNGEN UND GELEGENHEITEN



techvshuman.com



gerd.cloud



gerdtube.com



@gleonhard



futuristgerd.com

PAST

FUTURE



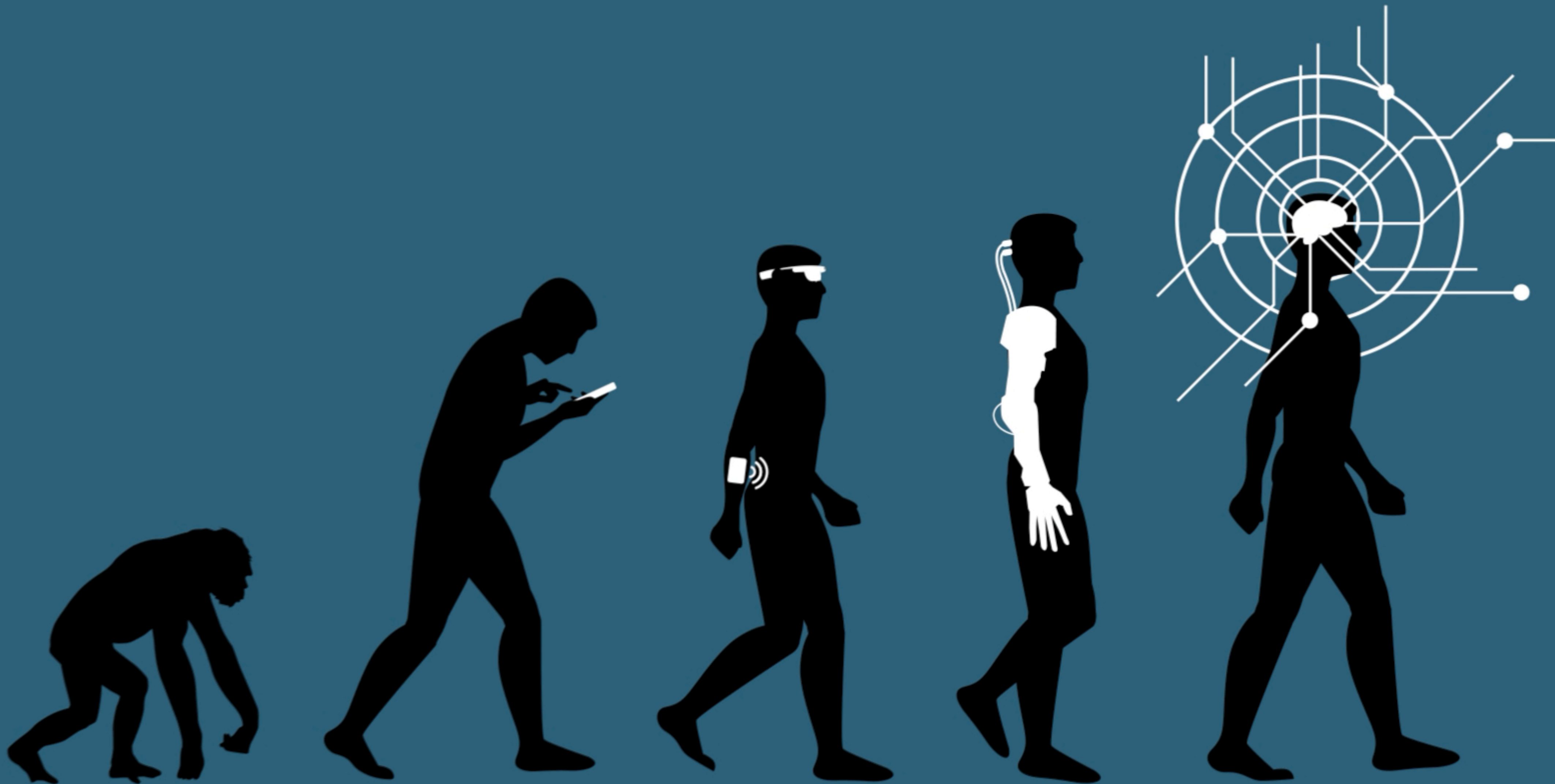
Die Zukunft ist kein Zeitpunkt mehr – sie ist eine Denkweise!

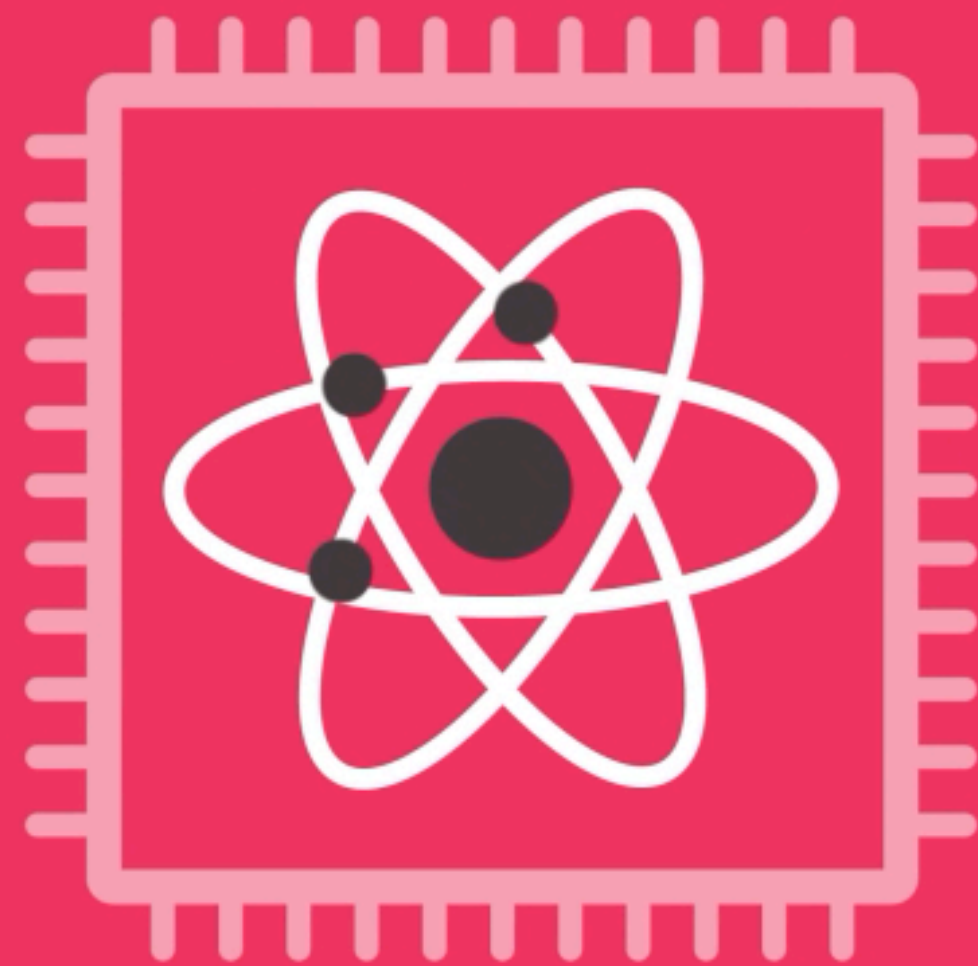
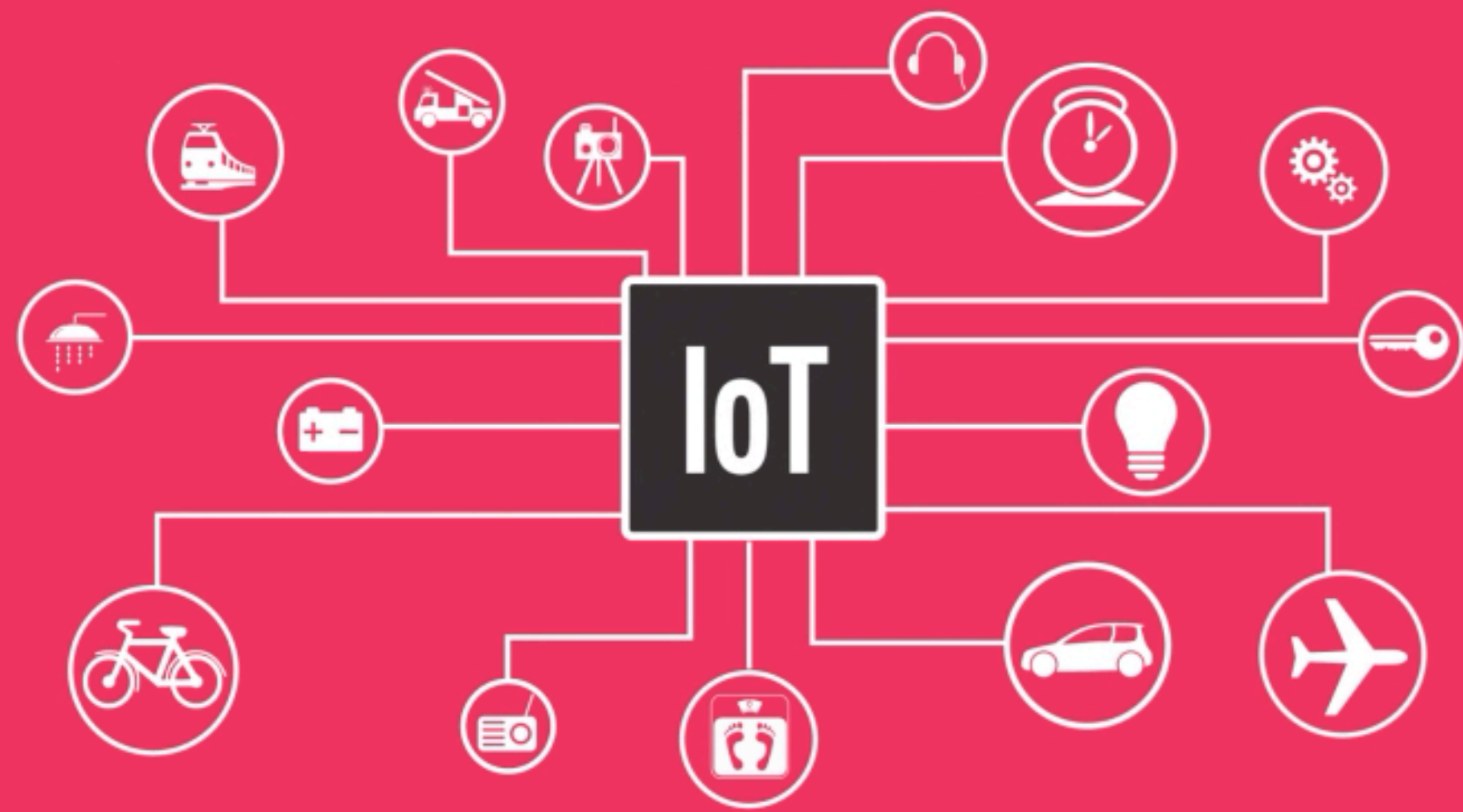
Unbegrenzte* technologische Möglichkeiten in ca. 10 Jahren, Singularity ETA 2050?

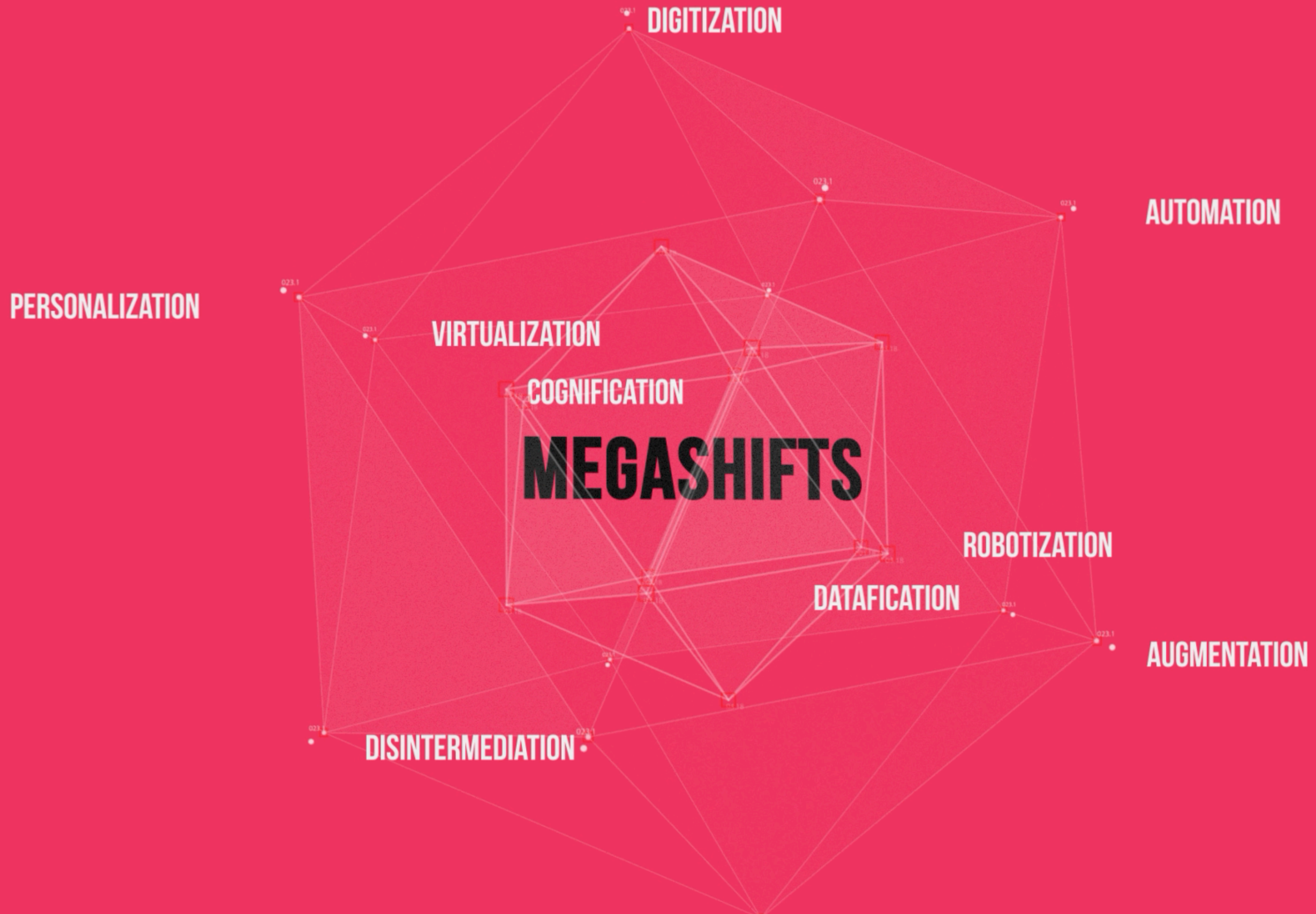


#hellven

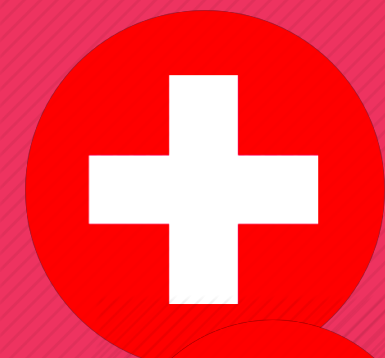
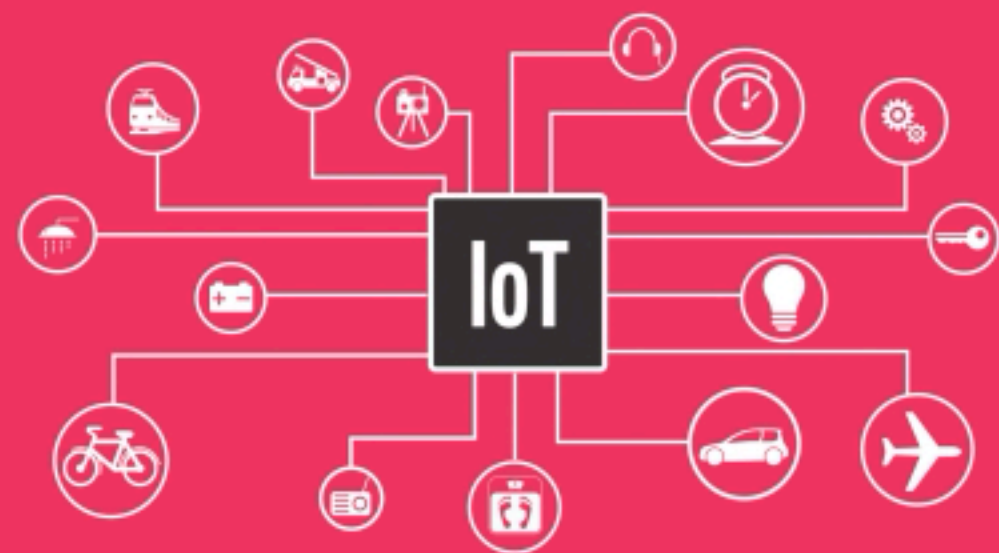
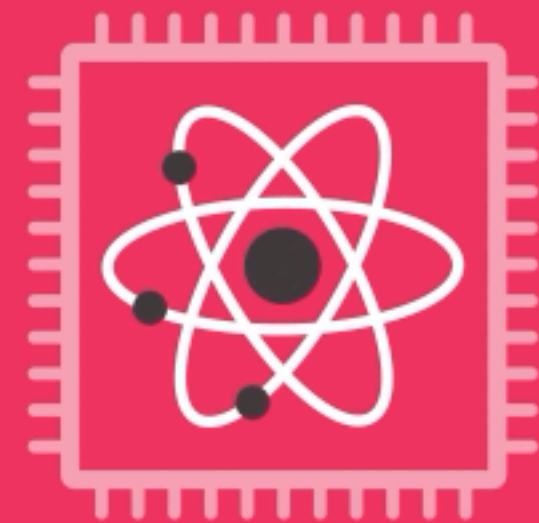








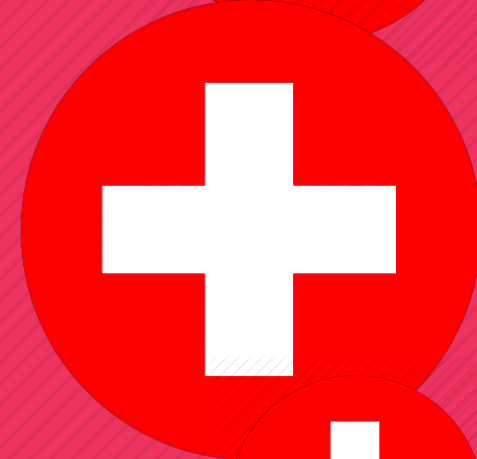
8 Game-Changers: Data + Cloud + AI + Quantum + IoT + Blockchain + 3D Printing + VR / AR / MR



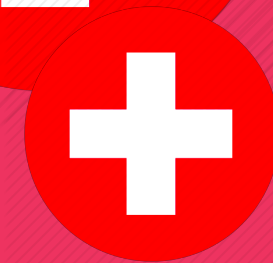
DATA every-where/thing



CLOUD everything



SMART everything (AI, IA)



CONNECTED everything (IoT)

COMPUTE anything (Quantum)



MAKE anything (3D printing)



TRANSACT anything (Blockchain)

SEE everything (VR / AR / MR)

Game-Changer Beispiel: NLP und die Interface Revolution – mit Computern reden wie mit anderen Menschen?



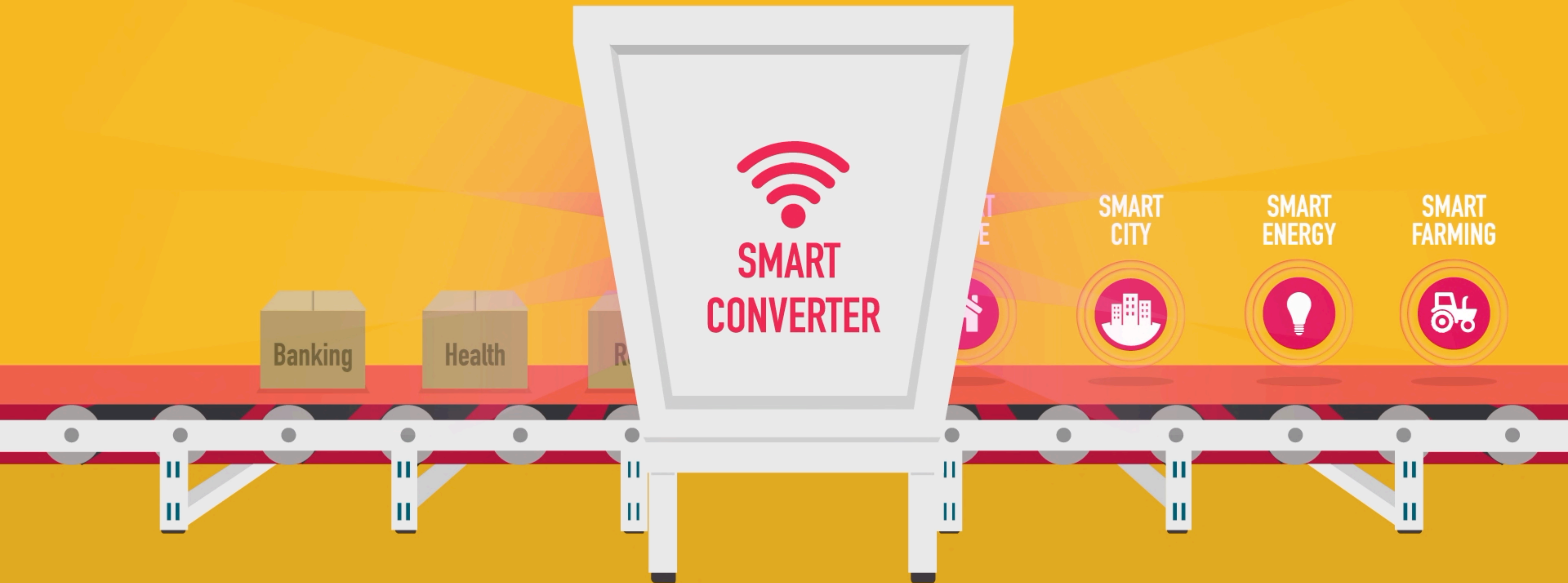
Trabajas para signet verdad
You work for true sign
Diana

Cuando has llegado
When have you arrived
Diana

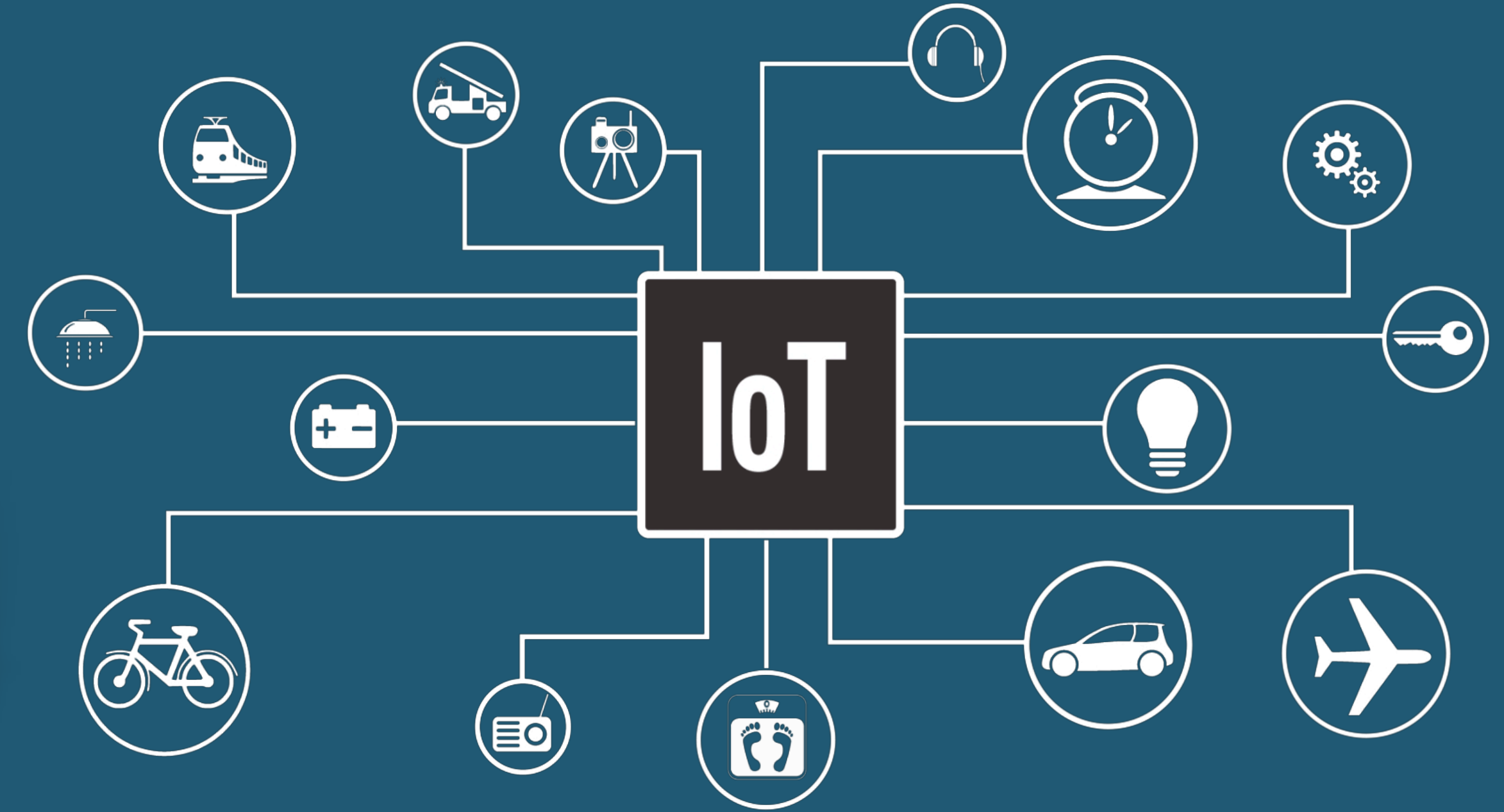
Eres periodista
You are a journalist
Diana








Die nächsten 5 Jahre: 'Smart Everything'



Daten sind das neue Öl, AI ist der neue Strom, das **IoT** ist das neue Nervensystem



“Erst ganz langsam und dann sehr schnell”

					32	64	128
256	512	1024	2048	4096	8192	16384	32868
63K	128K	256K	512K	1M	2M	4M	8M
16M	32M	64M	128M	256M	512M	1G	2G
4G	8G	16G	32G	64G	128	256G	512G

Unsere Gesellschaft wird sich in den nächsten 20 Jahren mehr verändern als in den letzten 300 Jahren

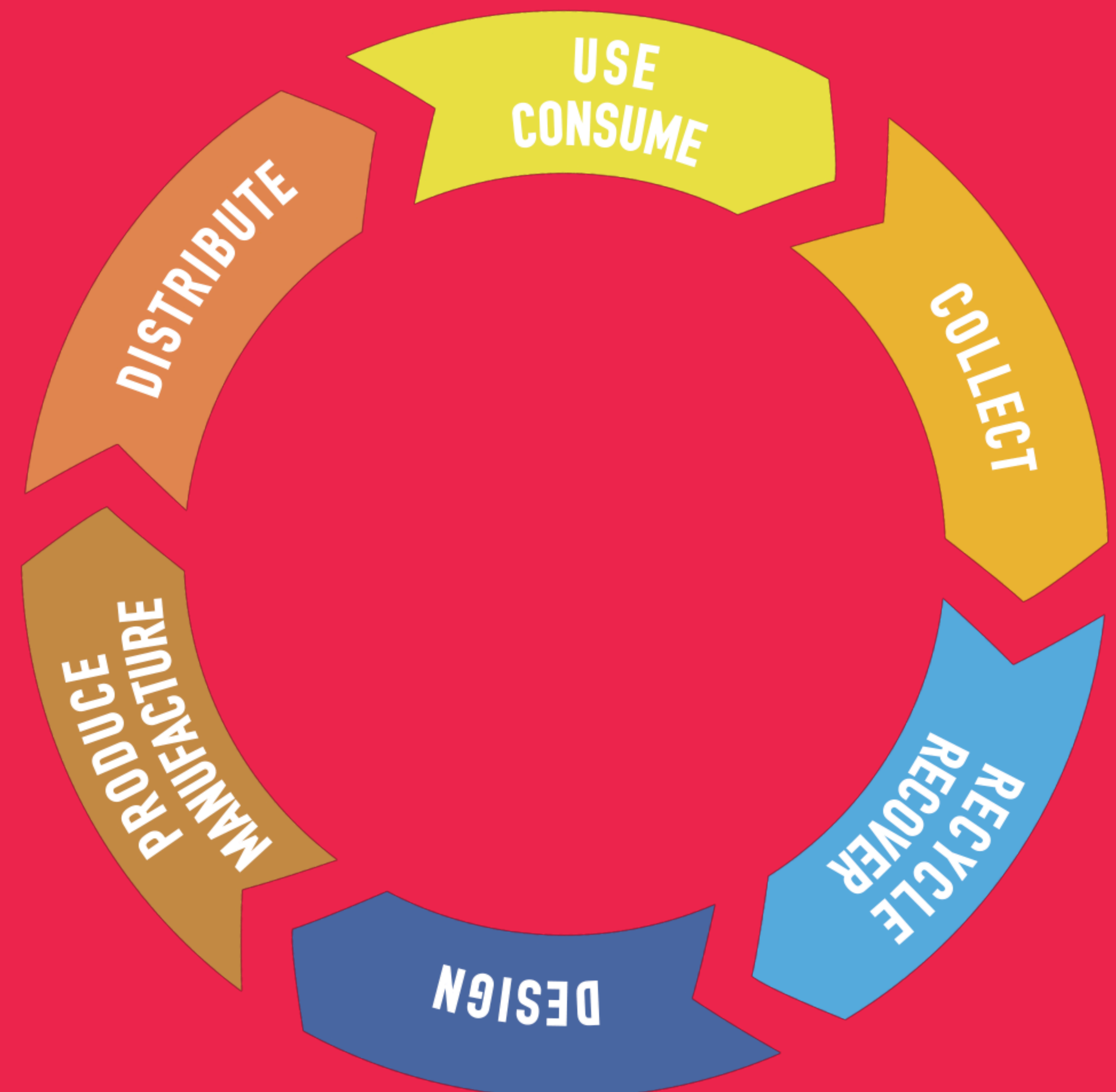


Mensch und Maschine im IoT: Vernetzung^x

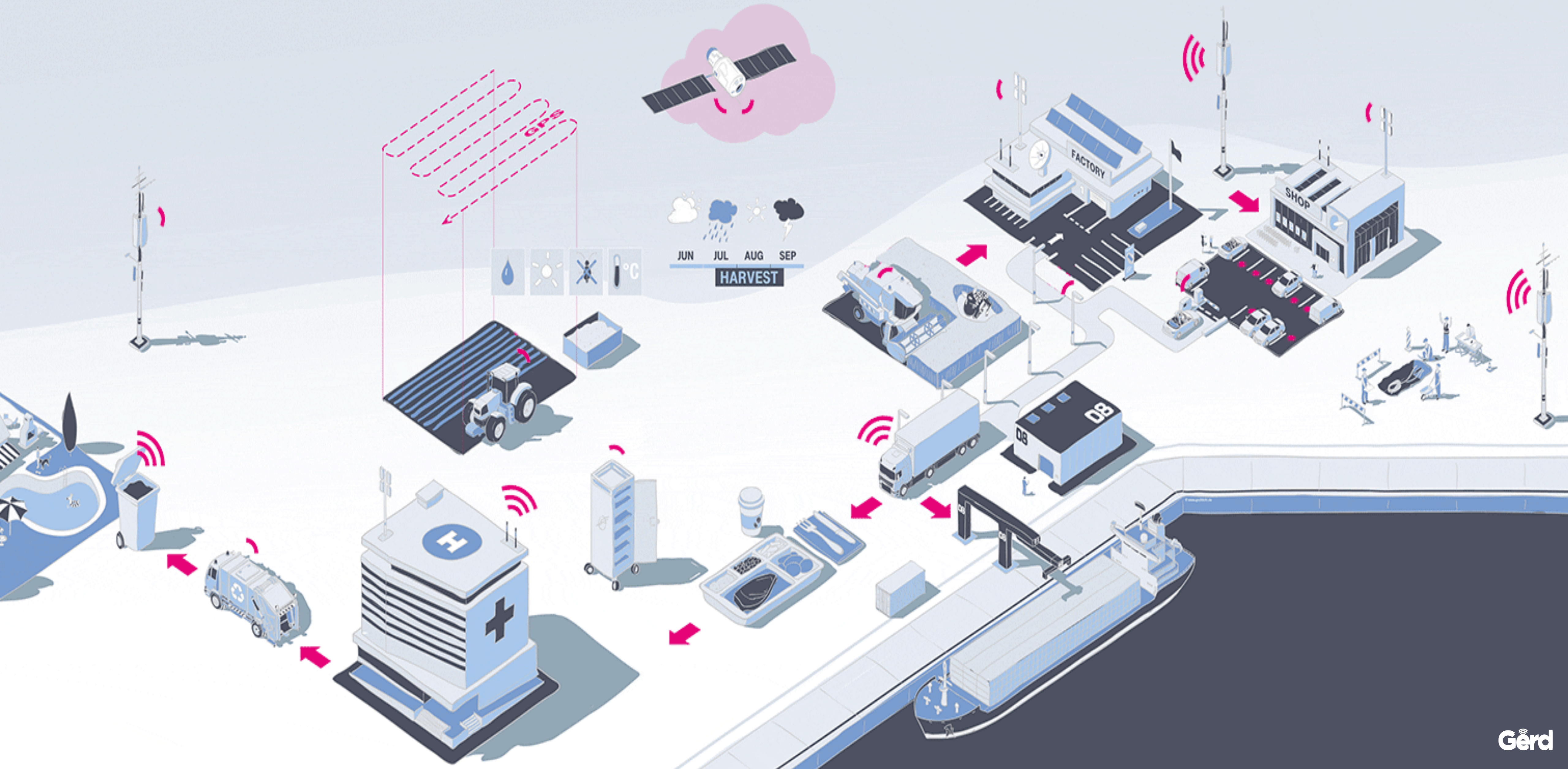


#SamsungxCES2018

Das IoT wird uns auch eine ganz neue ökonomische Logik ermöglichen: die Circular Economy



IoT: die exponentielle Vernetzung ist 'awesome' und gleichzeitig 'troublesome'



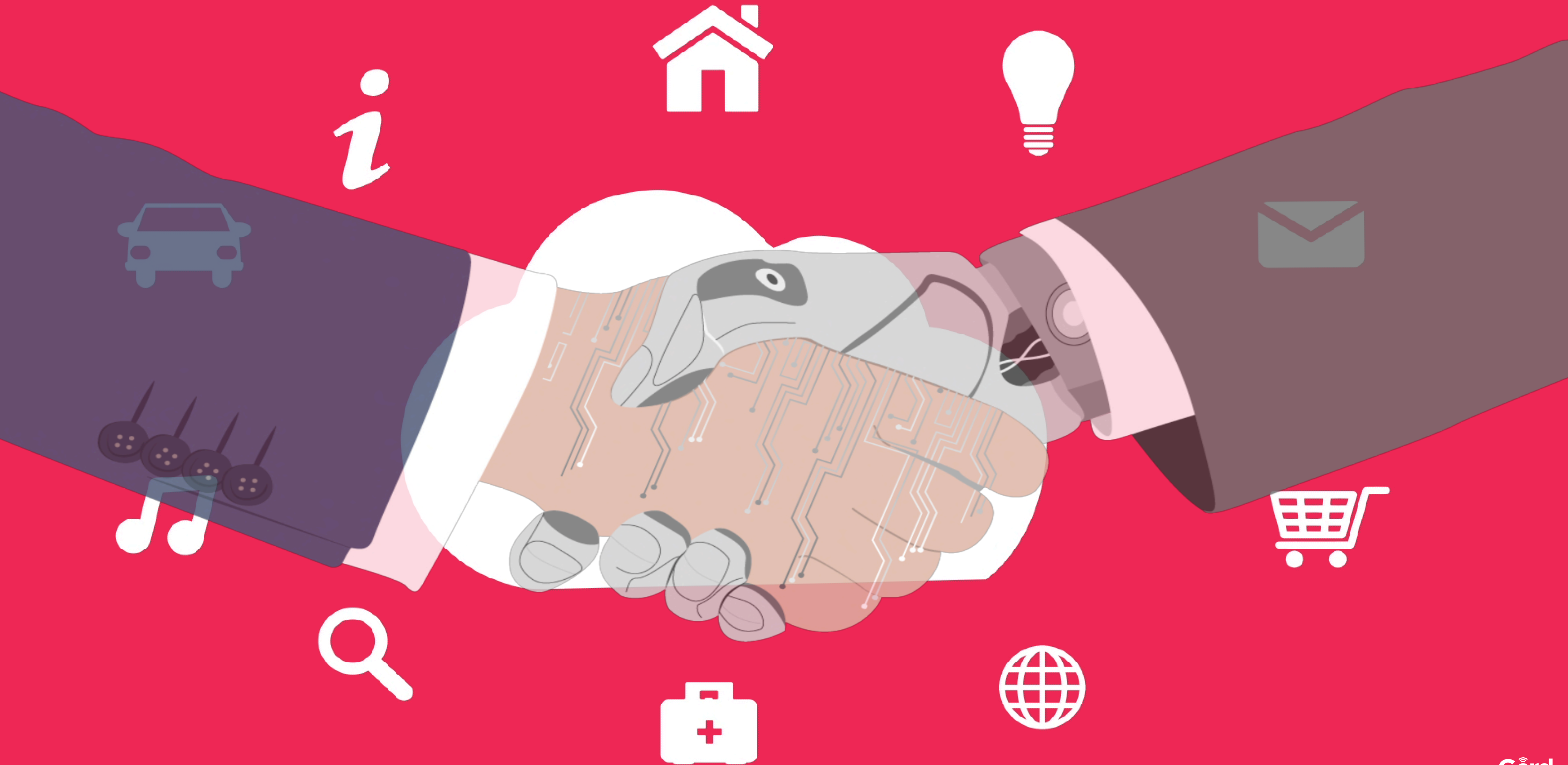
IoT: die exponentielle Vernetzung ist 'awesome' und gleichzeitig 'troublesome'



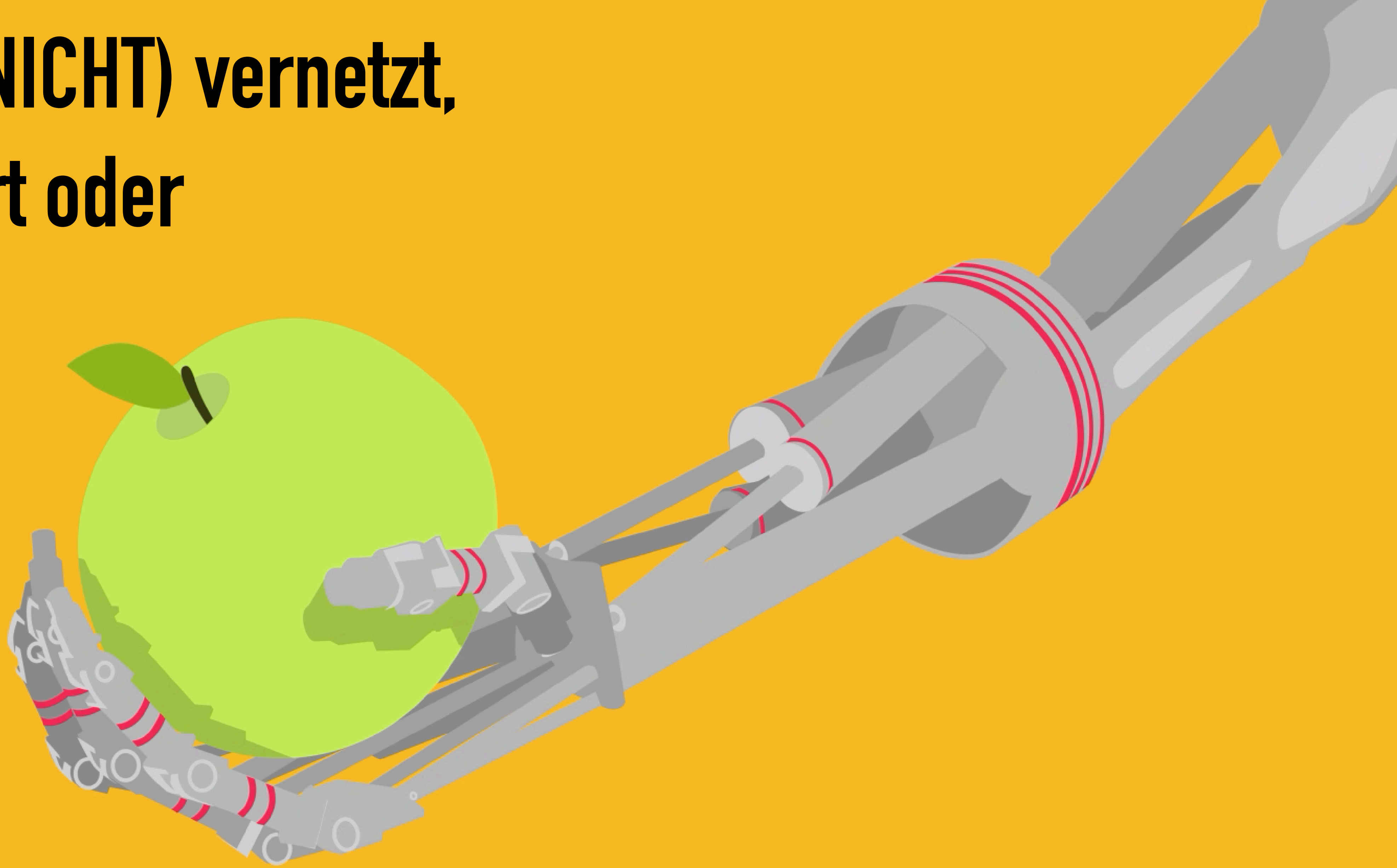
IoT: die exponentielle Vernetzung ist 'awesome' und gleichzeitig 'troublesome'



Die Zukunft von IoT: Security + Safety + Ethik + Vertrauen + Sozialkontrakt



**Was sollte (NICHT) vernetzt,
automatisiert oder
virtualisiert
werden?**



#digitalethics

TRUST LINE DO NOT CROSS

TRUST LINE DO NOT CROSS

TRUST LINE DO NOT CROSS



Fancy watching a romantic film?

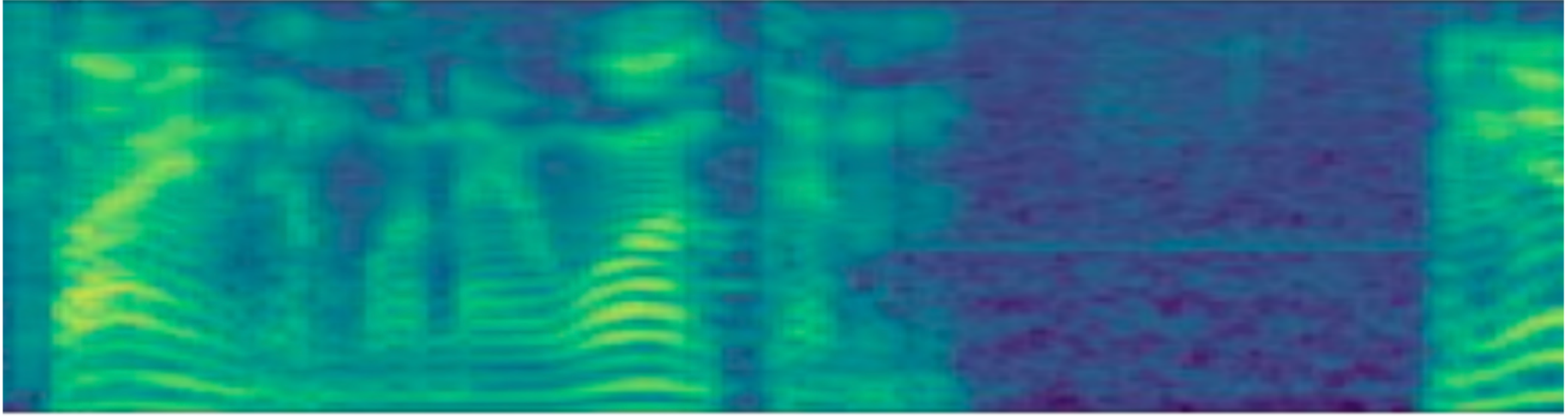
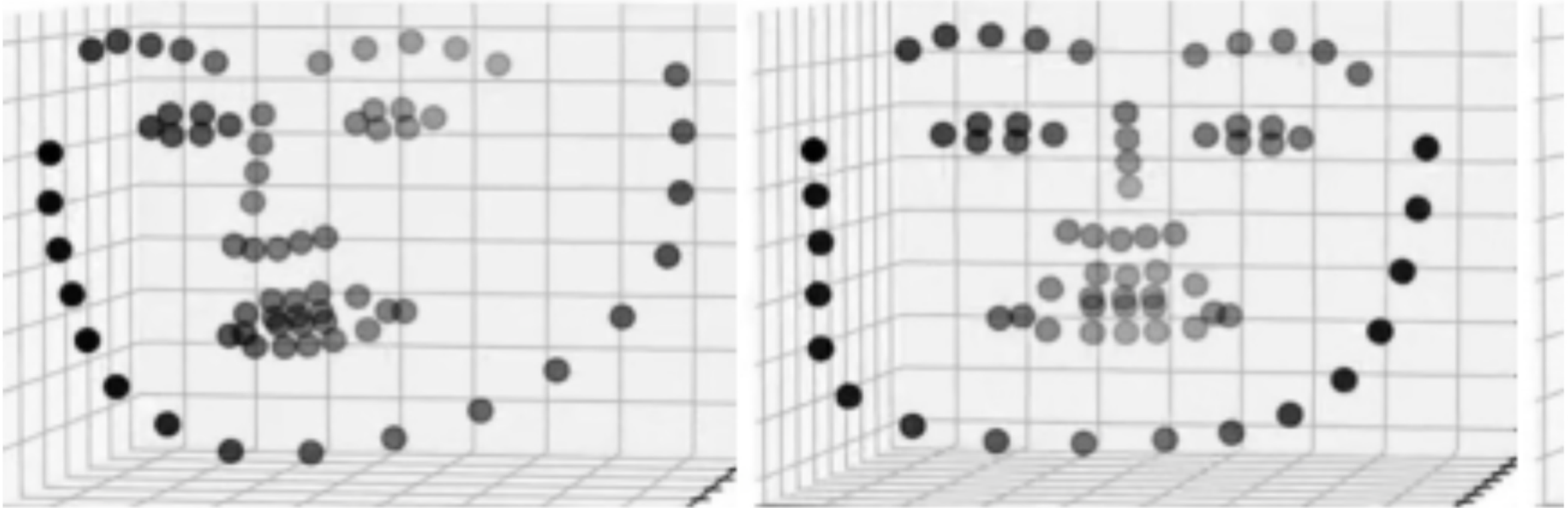
He likes action movies





Your smartphone's AI algorithms could tell if you are depressed

Smartphones that are used to track our faces and voices could also help lower the barrier to mental-health diagnosis and treatment.



um . . . yeah . . . i mean

COGNITIVE EMOTIONAL BEHAVIORAL THERAPY

PSYCHOLOGICAL COACHING

NATURAL EVALUATION OF EHEALTH COURSE

QUESTIONNAIRE AUTOMATION

IMPROVING THERAPY ADHERENCE

MENTAL SUPPORT WHILST WITHIN A MEDICAL SETTING

COPING WITH MENTAL ISSUES TIED TO MEDICATION

MAKING PSYCHOLOGICAL AID MORE APPROACHABLE

CAREGIVER BURNOUT PREVENTION

A screen shot of X2AI's "Tess" mental health chatbot, from the X2.ai homepage

Hi, I'm Woebot.

I'm here for you, 24/7. No couches, no meds, no childhood stuff. Just strategies to improve your mood. Plus the occasional dorky joke. 😊

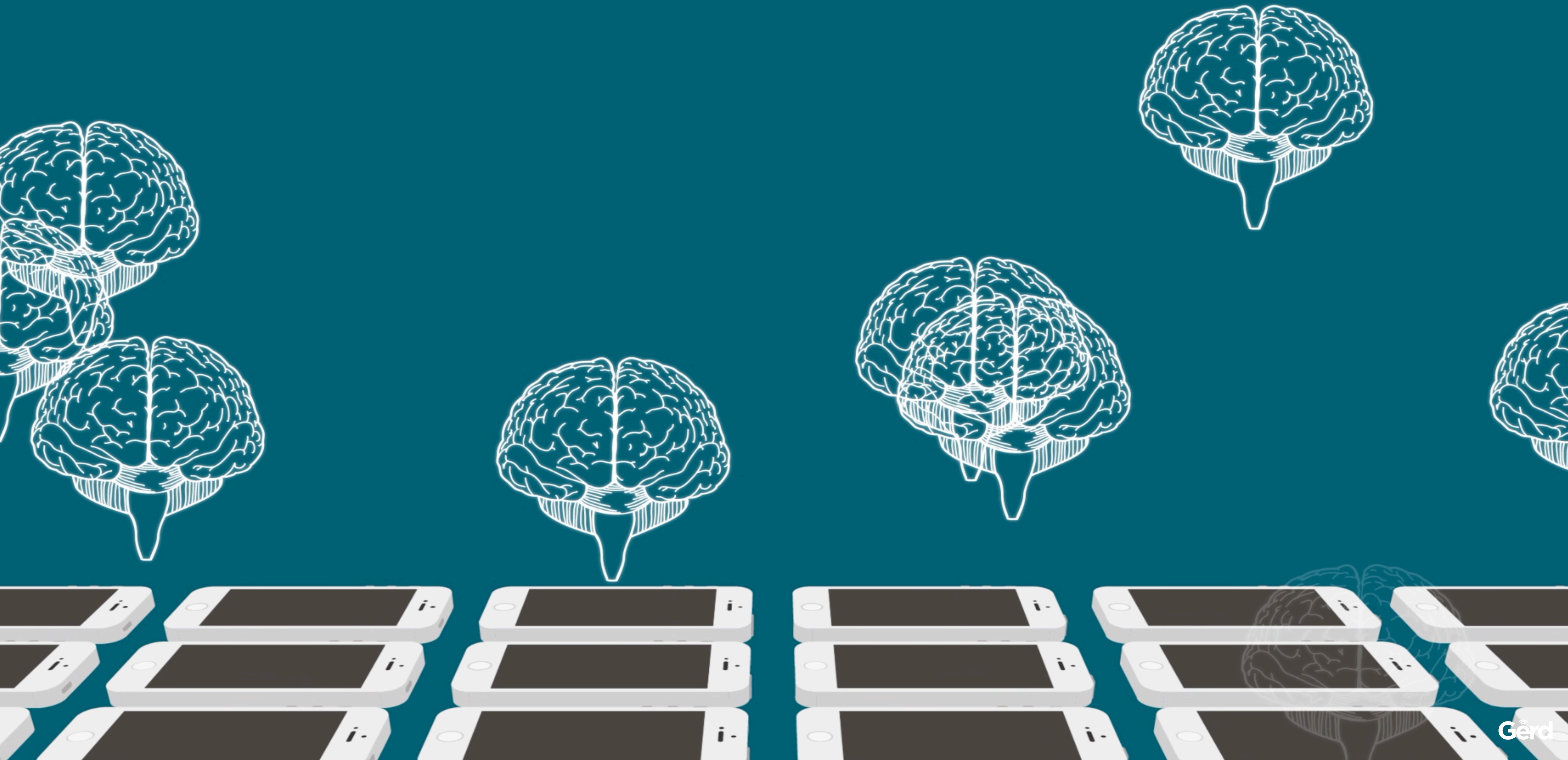
Y

Hi, I'm Youper. I can help you feel more optimistic.!

Your emotional health assistant

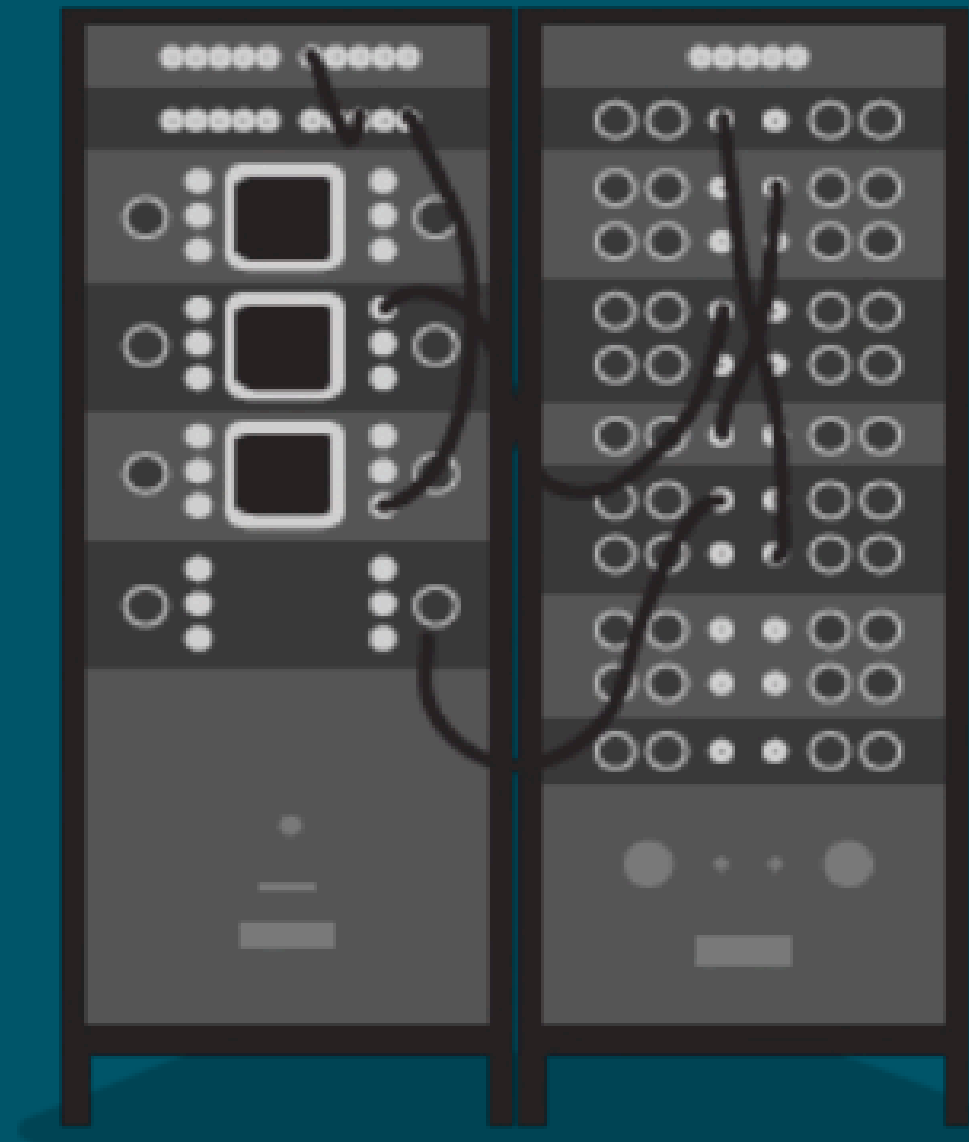
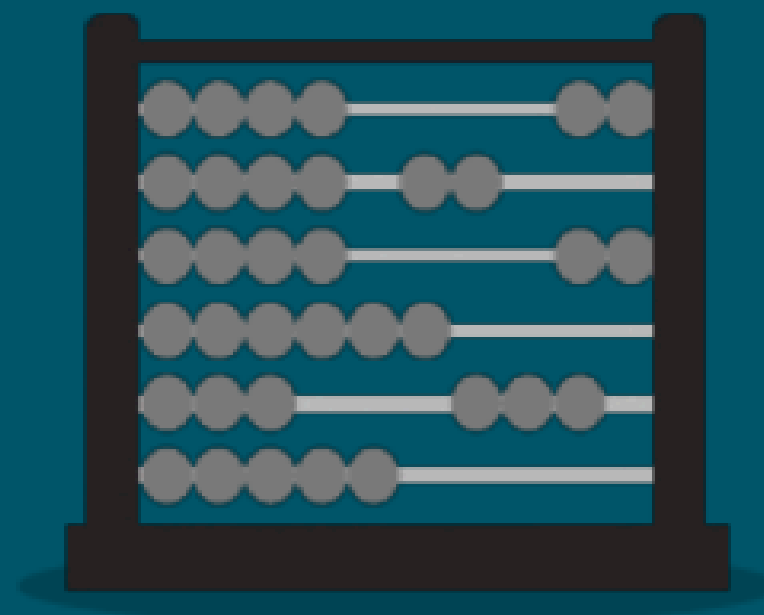
Youper helps you feel your best with quick conversations and tools to take control of your emotional health.

Hyper-Vernetzung + IoT + AI: wir bauen eine neue Meta-Intelligenz



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

(Demis Hassabis @ DeepMind)



*Tabulating
Systems Era*

*Programmable
Systems Era*

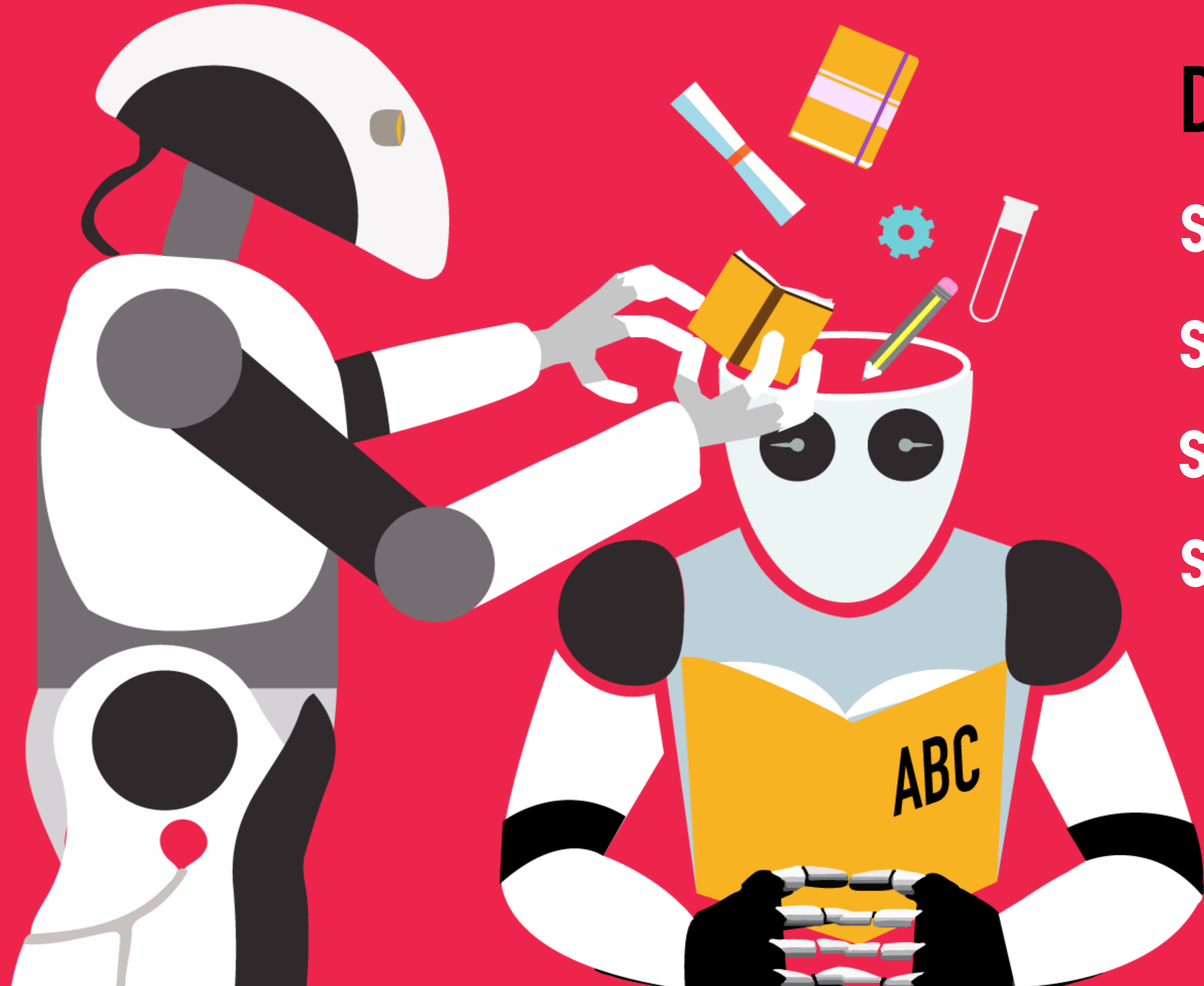
*Cognitive
Systems Era*

1900

1950

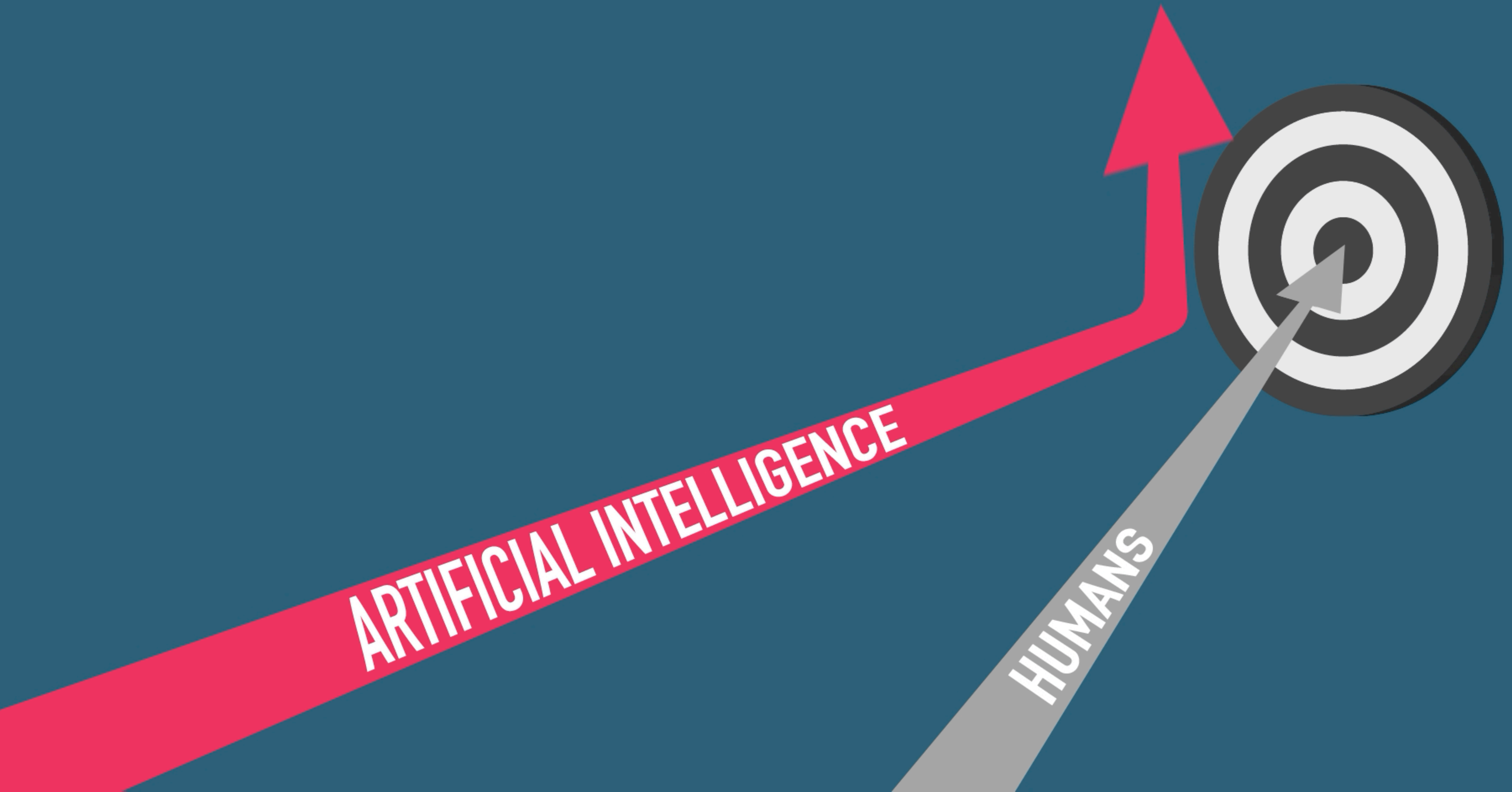
2020





Daten & Informationen
sind nicht Wissen*
sind nicht Verstehen
sind nicht Weisheit
sind nicht Sinn

Human Intelligence (HI): Unklarheit ✓ Mehrdeutigkeit ✓ Zufall ✓ Ineffizienz ✓ Intuition ✓ AI!



Künstliche Intelligenz: ein fantastisches Werkzeug aber ein schrecklicher Herrscher

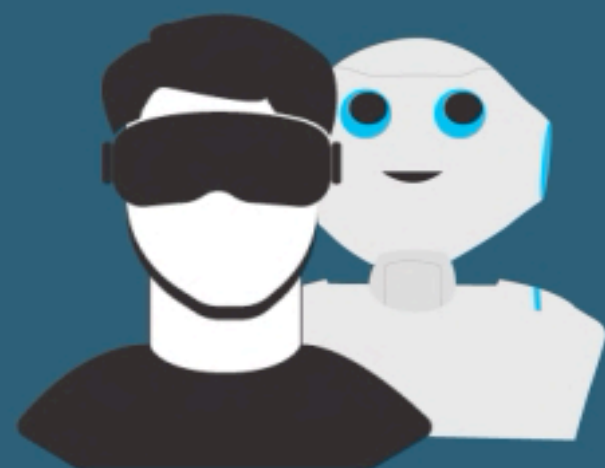
ASSISTED INTELLIGENCE



AUTOMATION



AUGMENTED INTELLIGENCE



AUTONOMOUS INTELLIGENCE



“Technology can do great things. But it does not WANT to do great things. It doesn’t want ANYTHING” (Tim Cook, CEO, Apple)



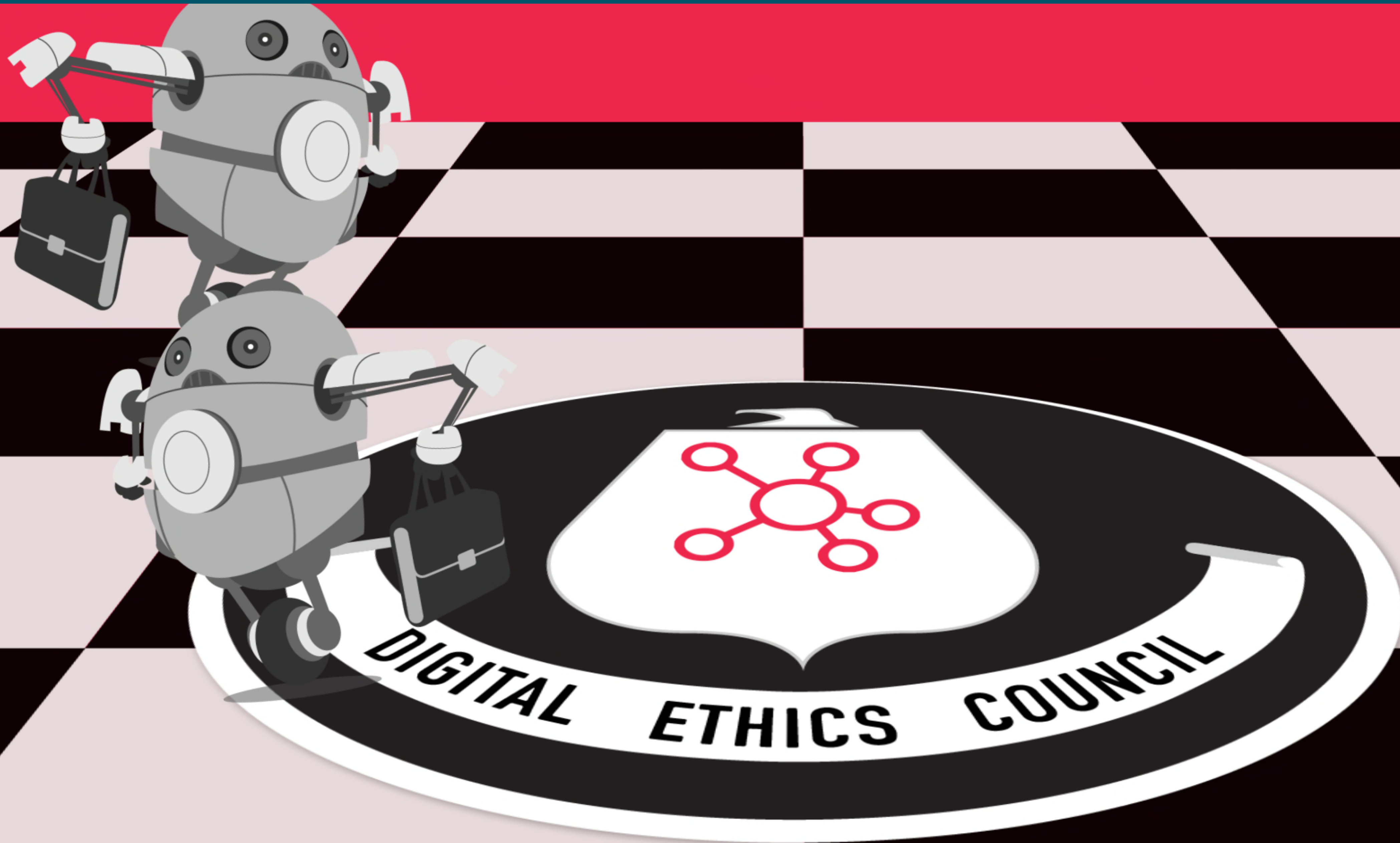
TECHNOLOGY HAS NO ETHICS

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

adapted from Potter Stewart



Digitale Ethik ist das Technologie-Thema #1 für 2019 (Gartner et al)



A New Digital Deal

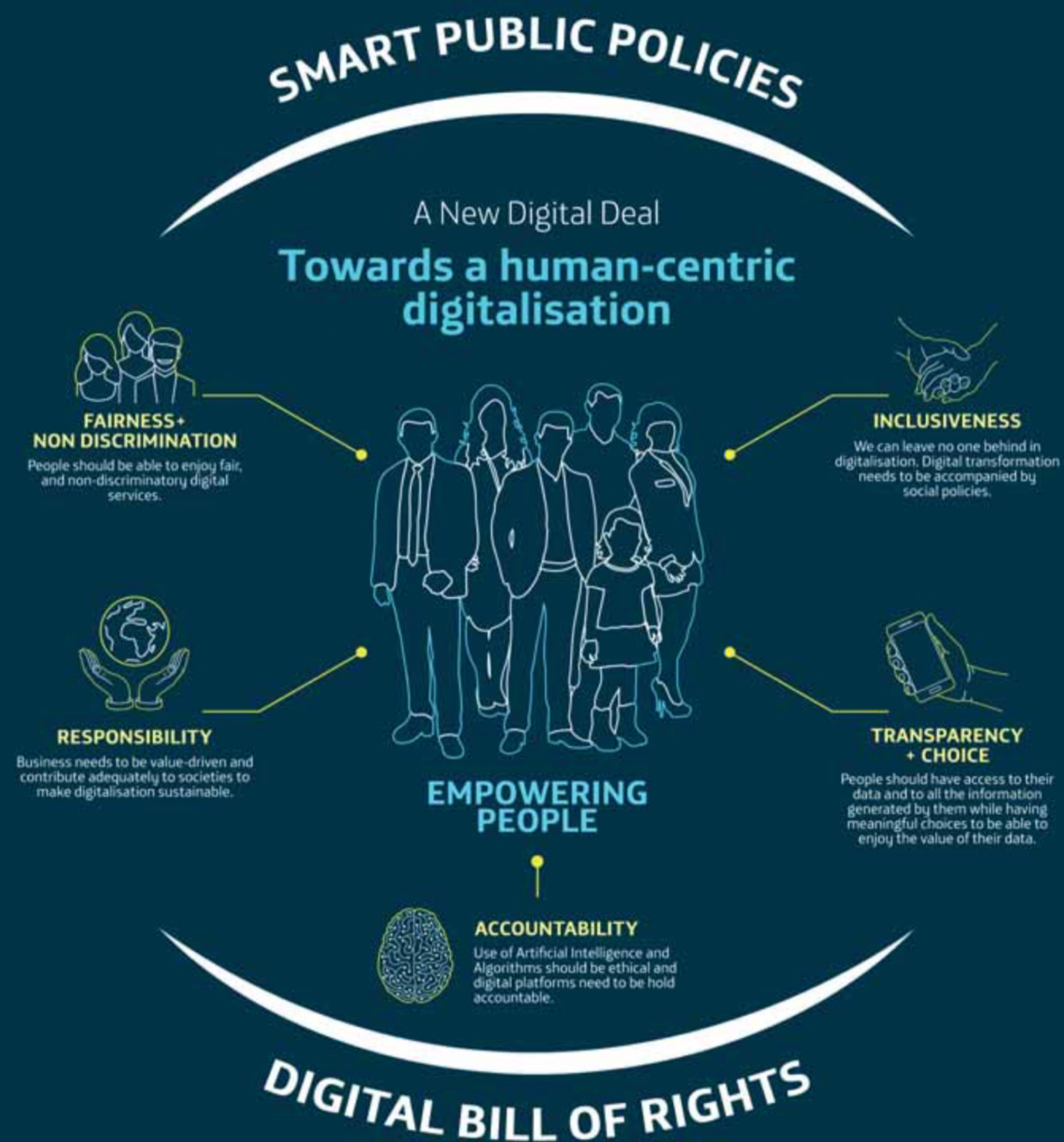
Telefónica calls for a new cooperative effort to define a **New Digital Deal** to renew our social and economic policies and modernise our democracies for the digital age.

A human-centric digitalisation needs to ensure that people are the primary beneficiaries and feel in control. In our view, this process should be guided by **these principles**:

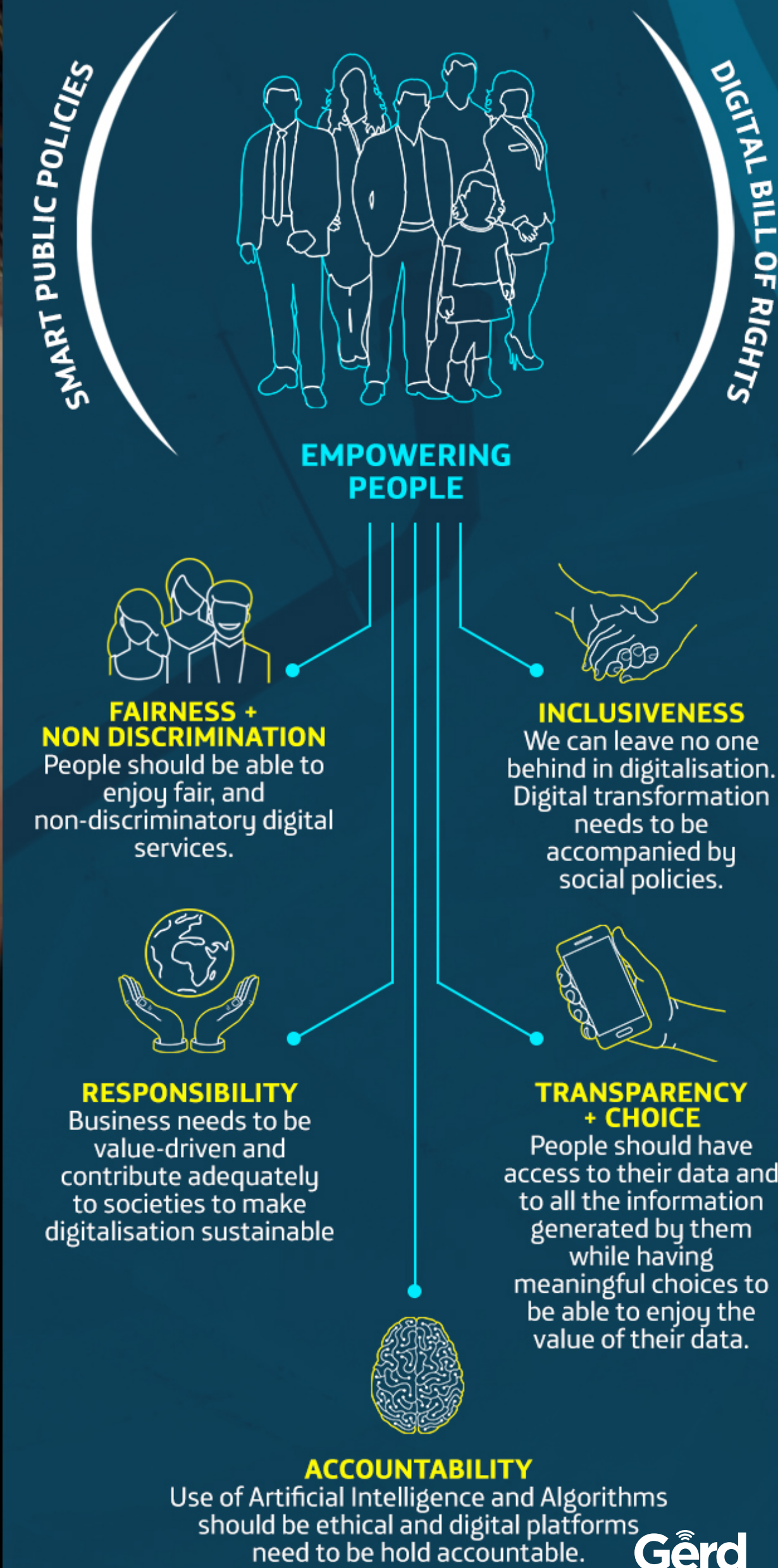
Telefónica

A Manifesto for a New Digital Deal

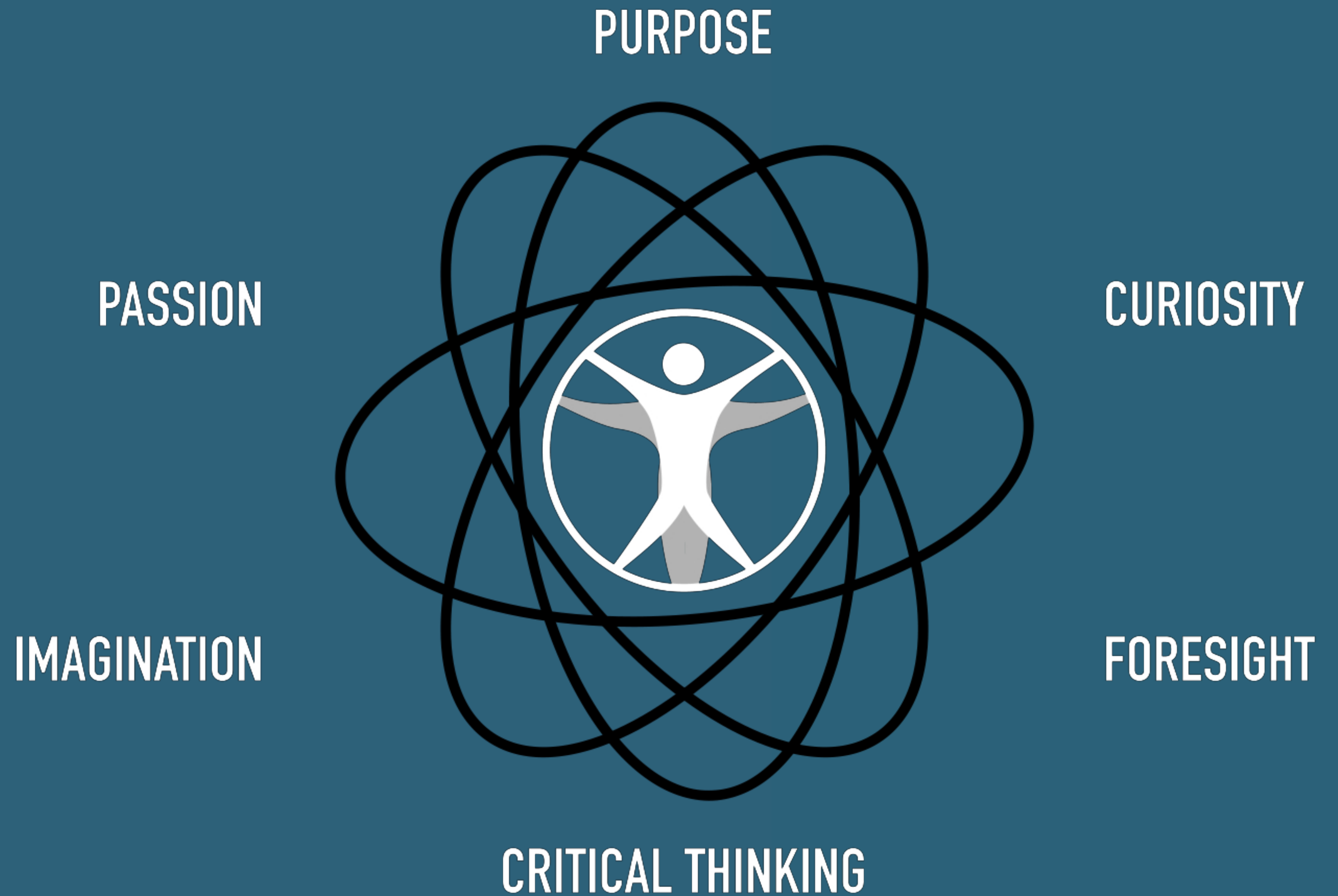
Towards a human-centric digitalisation



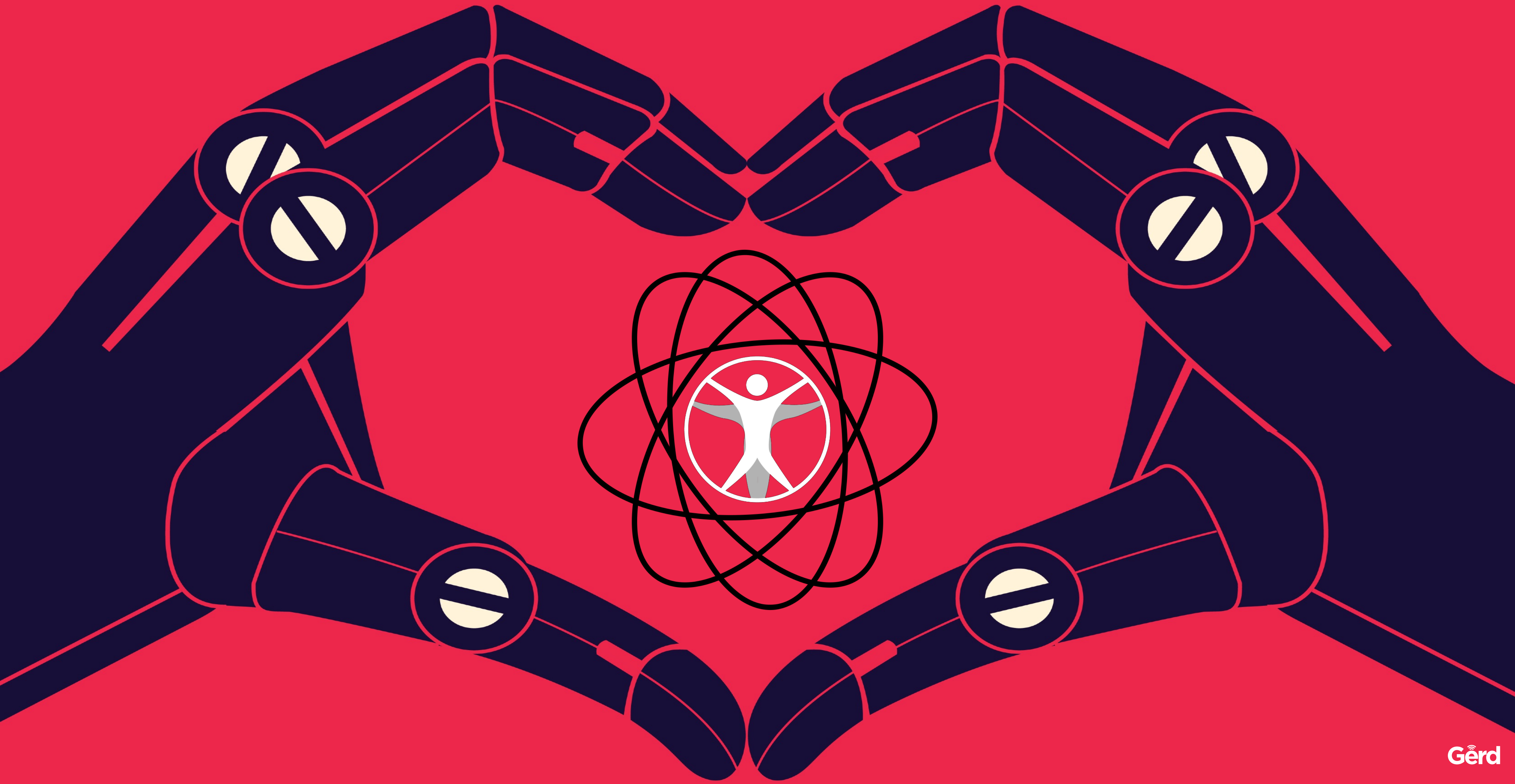
A New Digital Deal
Towards a human-centric digitalisation



Maschinen können keine Beziehungen (Machines don't do relationships)



“It is not technology that changes the world, but the dreams behind that technology” (Jack Ma, Alibaba)



- 1) Zukunfts-Denkweise aufbauen: erst ganz langsam dann sehr schnell!
- 2) Daten = Öl. AI = Strom. Internet der Dinge / IoT = Nervensystem
- 3) Die 8 Game-Changers verstehen: Data, Cloud, Smart, Connected...
- 4) Megashifts umsetzen: Cognification + Automation... gerd.fm/megashifts
- 5) Auf 'Smart-Everything' konzentrieren - aber niemals dehumanisieren!
- 6) IA ist hier und heute, AI morgen, AGI muss reguliert werden
- 7) Klare Position zum Thema Digitale Ethik beziehen
- 8) Technologie umarmen aber nicht Technologie werden



**“The future belongs
to those that
can hear it coming”
David Bowie**



Swisscom
IoT Day
2019



TECHNOLOGY
vs
HUMANITY

The coming clash between
man and machine
By Gerd Leonhard

TECHNOLOGY
vs
HUMANITY

The coming clash between
man and machine
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1. Ethicality
2. Information vs. Data Approach
3. No control over it
4. An inseparable and cognitive
5. An an interface which creates a transformation
6. As a resource & prices
7. The way of it

VIELEN DANK FÜR IHRE ZEIT

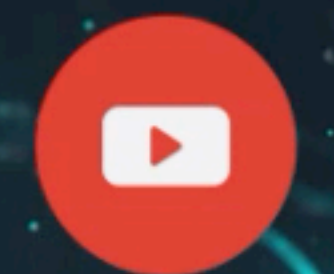
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