The next 7 years in technology, business and society

techvshuman.com

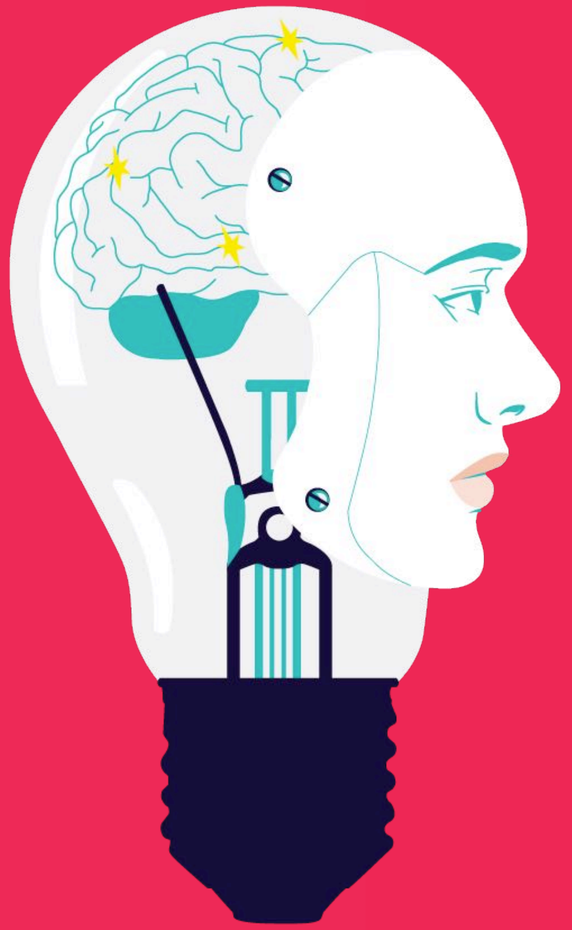
@gleonhard

gerdtube.com

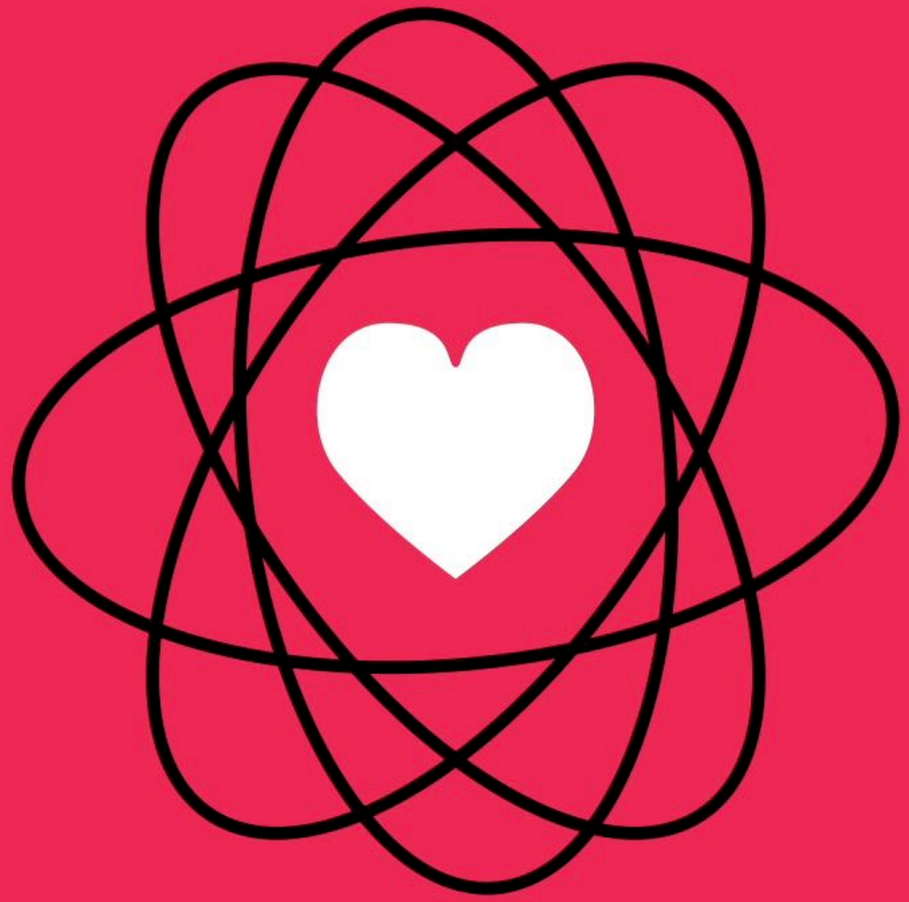
gerdcloud.com

futuristgerd.com

Technology



Humanity



#digitalethics

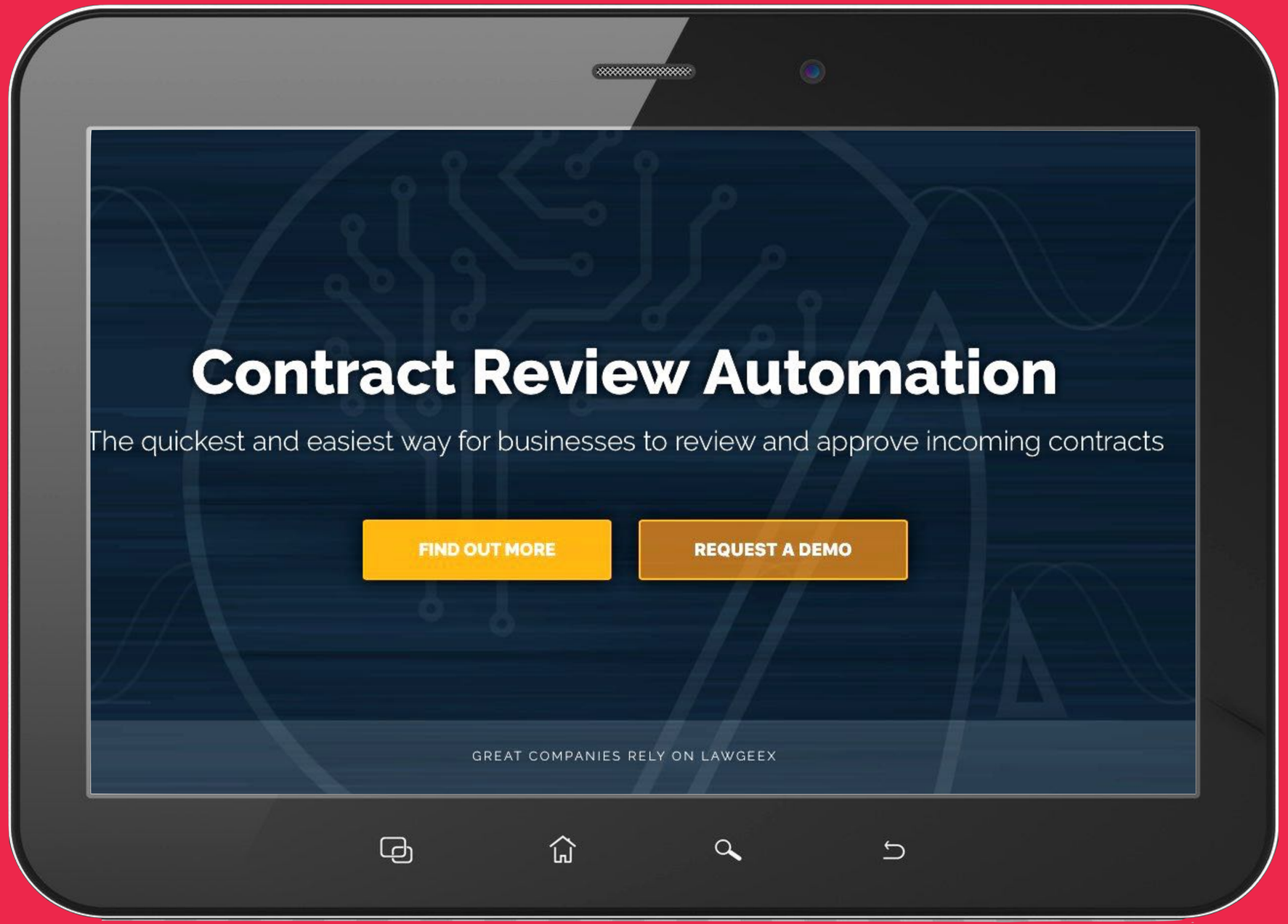
Gerd

Artificial intelligence predicts outcome of trials

An international research group has developed a computer program with artificial intelligence that uses machine learning to predict the outcome of trials at the European court of human rights with an accuracy of 79%. The program uses machine learning algorithms to analyse the legal evidence. According to the researchers, the aim is not to replace judges but to analyse evidence to find out in advance which cases are likely to be violations of the European convention on human rights.

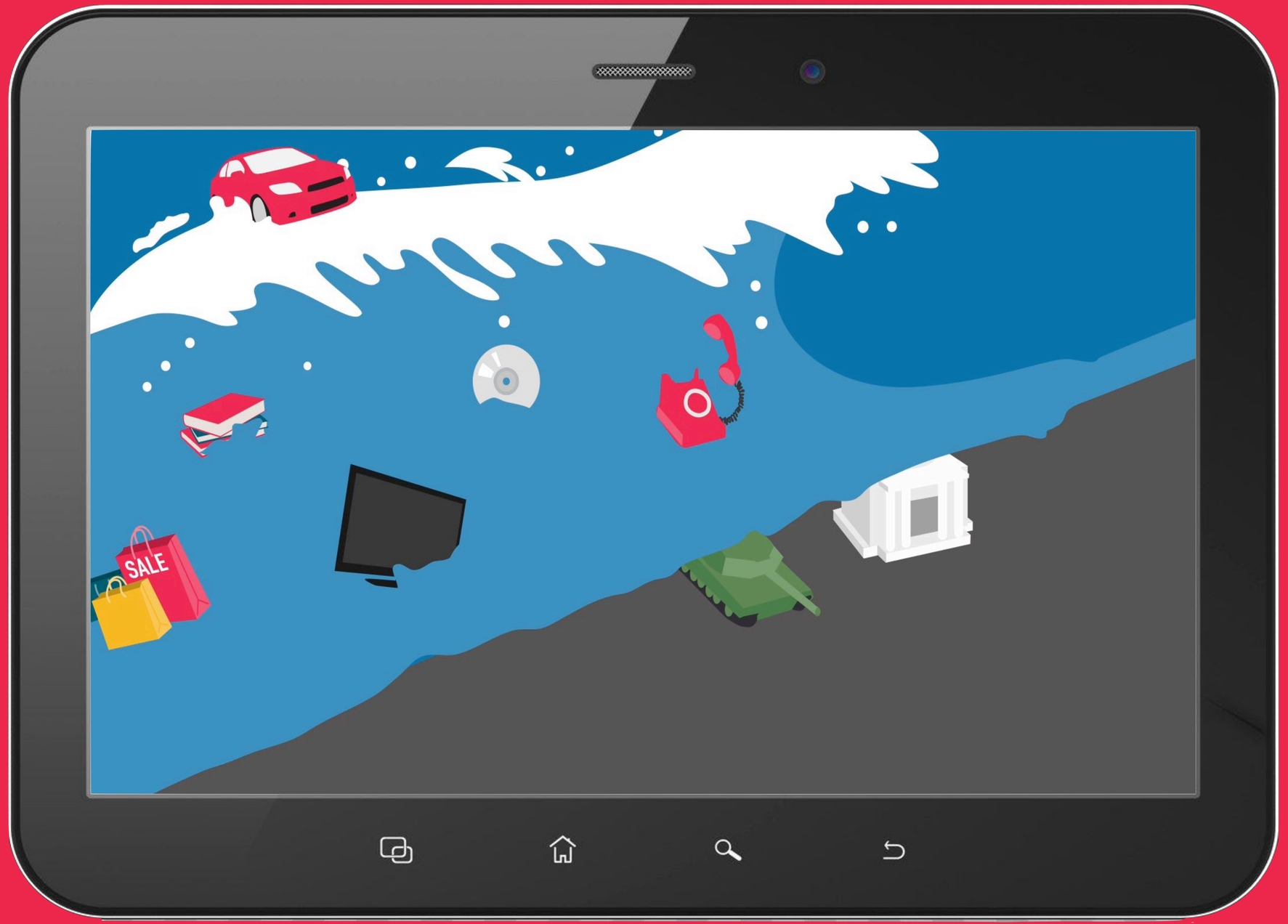
'Business as usual' is ending

Gerd



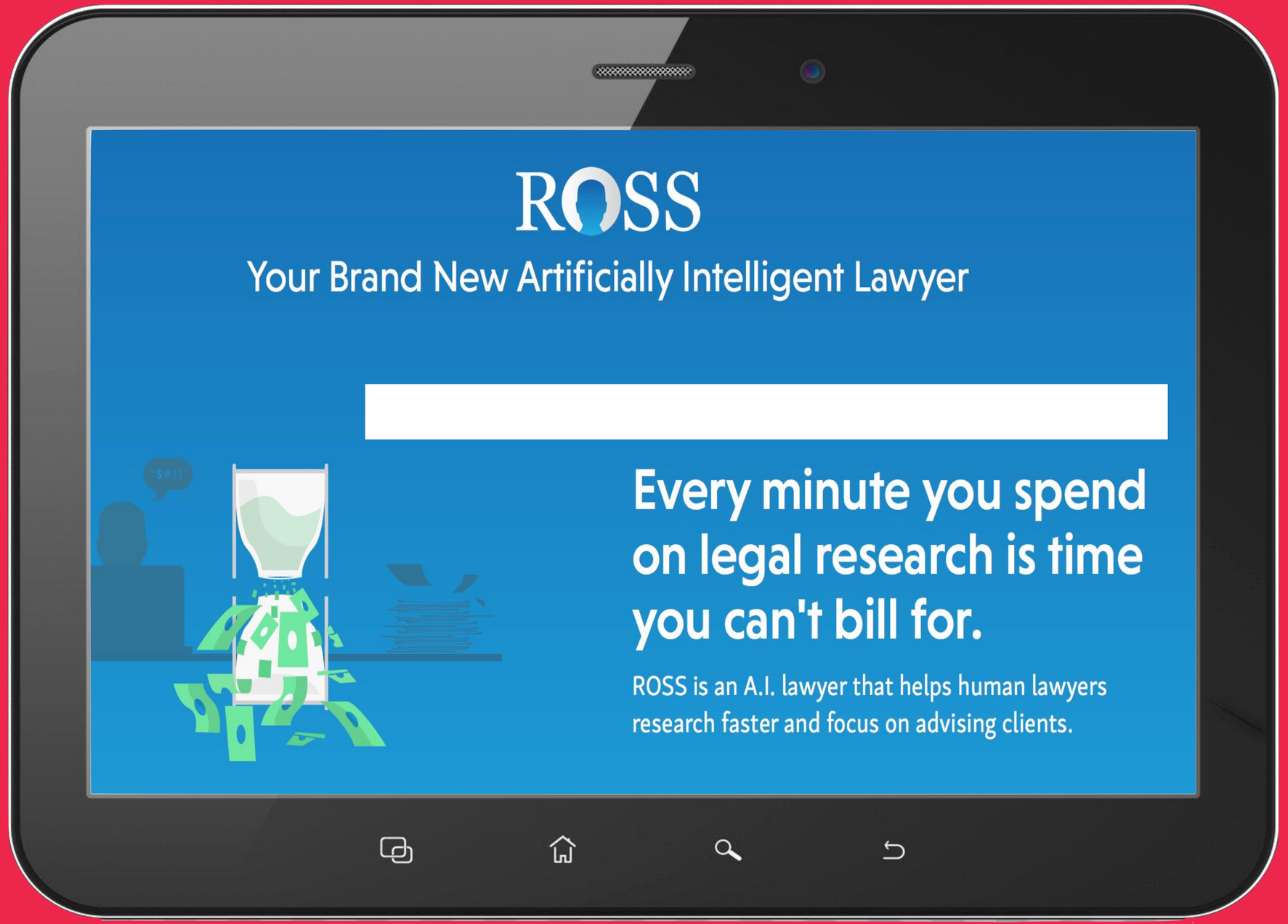
‘Business as usual’ is ending

Gerd



‘Business as usual’ is ending

Gerd



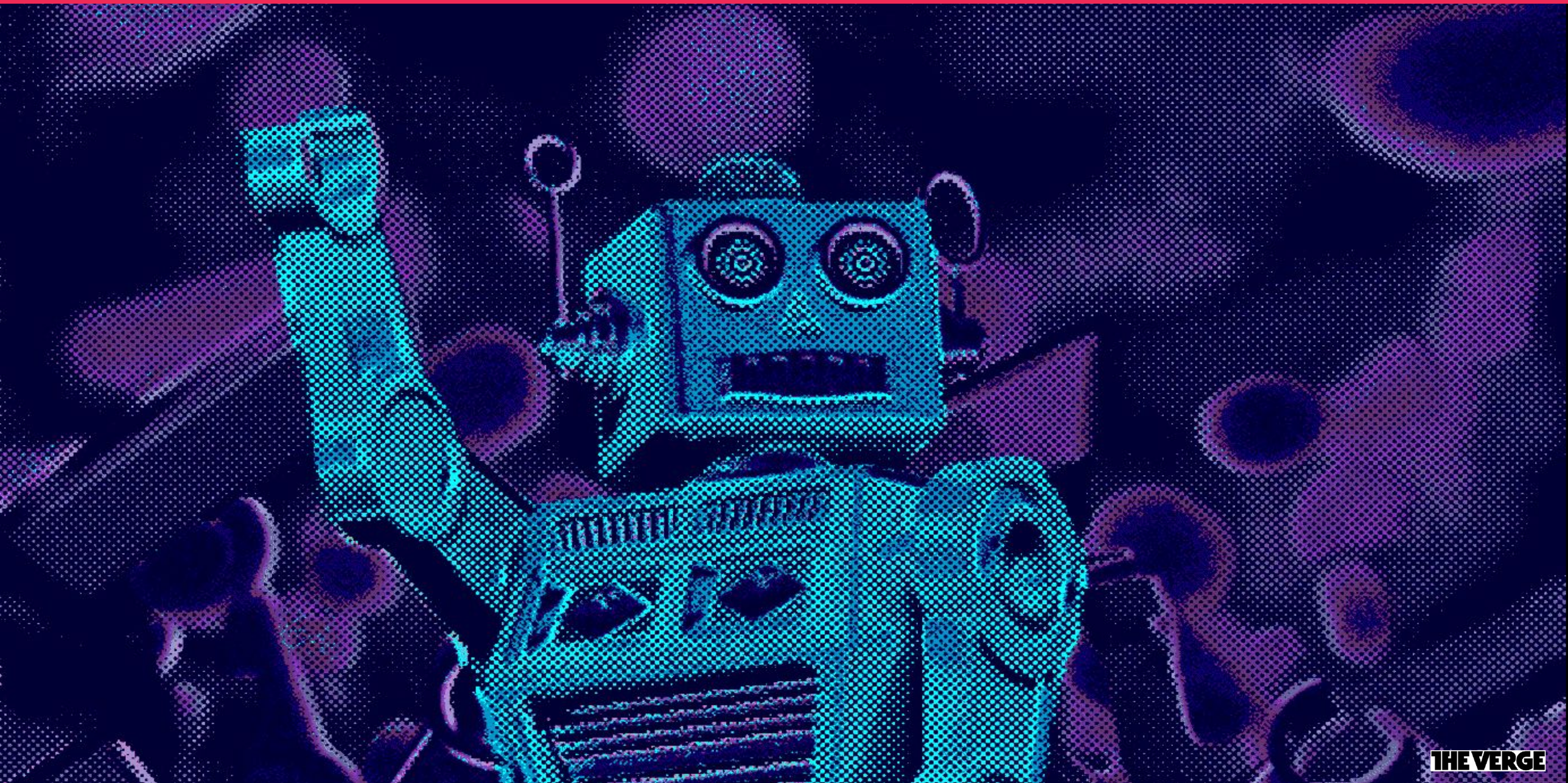
'Business as usual' is ending

Gerd

‘Business as usual’ is ending

Gerd

Humans and machines: new possibilities, new relationships



Humans and machines: new possibilities, new relationships

What can I help you with?

Gerd

Humans and machines: new possibilities, new relationships

Humans and machines: new possibilities, new relationships

Exponential and combinatorial change: ‘gradually then suddenly’ is the new normal

EXPONENTIAL

COMBINATORIAL

CONVERGENT

1 2 4 8 16 32 64 128

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

Gerd

Game-changers

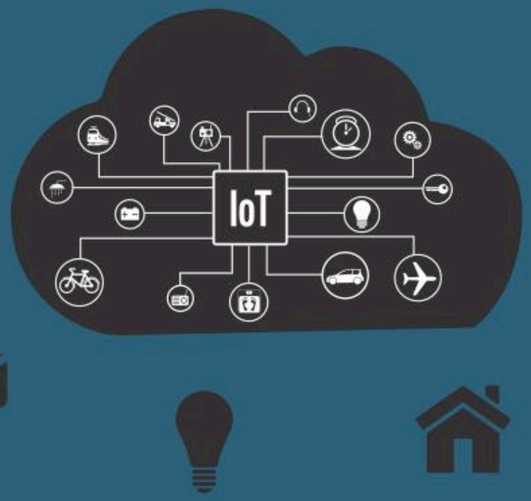
COMPUTE EVERYTHING

NETWORKED EVERYTHING

CLOUD EVERYTHING

SMART EVERYTHING

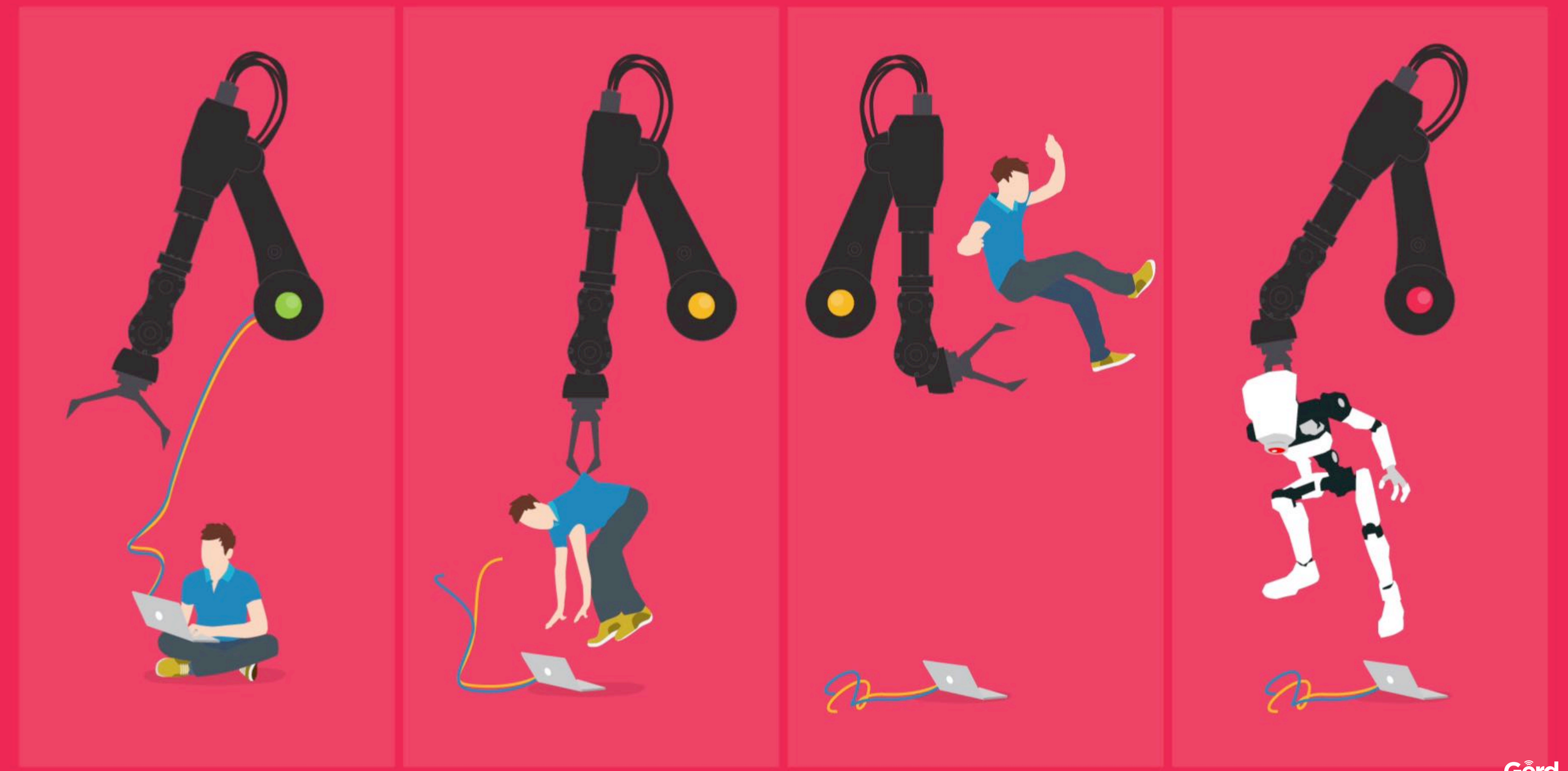
DATA EVERYTHING



Gerd

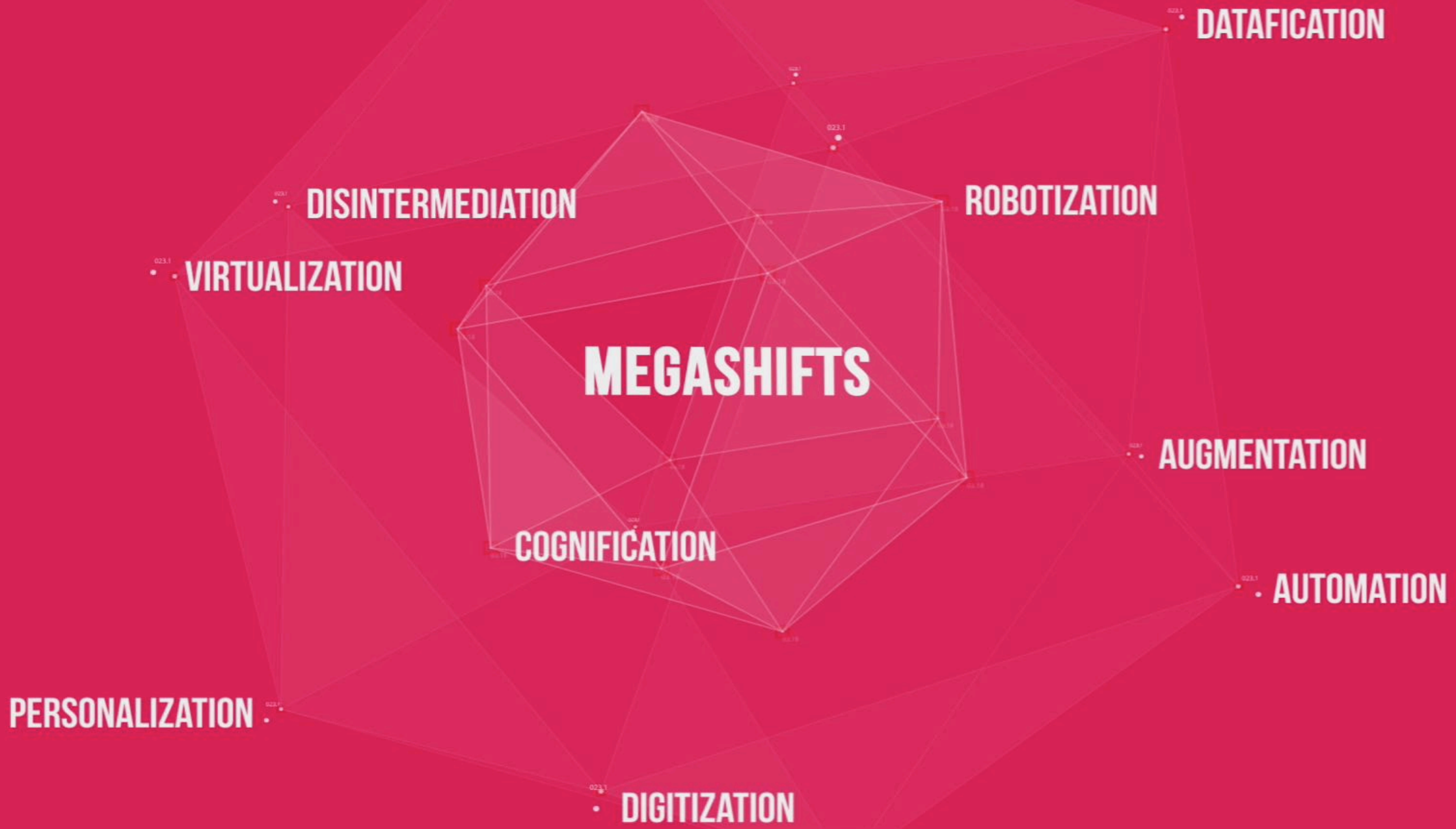
Are humans the horses of the digital era?

McKinsey estimates that 23 percent of a lawyer's job can be automated



Gerd

A tidal wave of transformative shifts, impacting professional series



Gerd

Digitization
Datafication
Cognification
Disintermediation
Personalization
Automation
Augmentation

Gerd

Digitization
Datafication
Cognification
Disintermediation
Personalization
Automation
Augmentation

Gerd

Digitization

Datafication

Cognification

Disintermediation

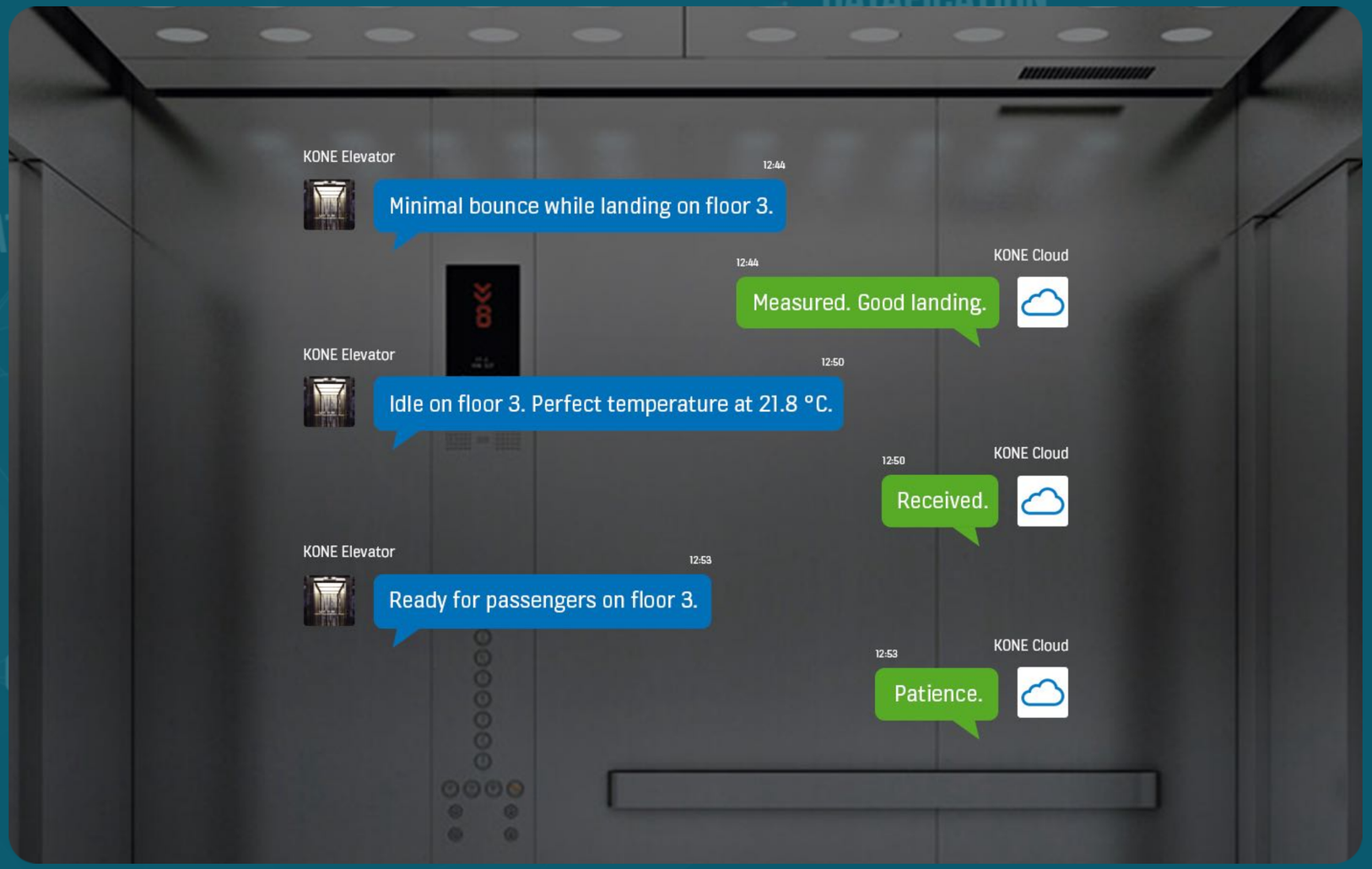
Personalization

Automation

Augmentation

Gerd

Digitization
Datafication
Cognification
Disintermediation
Personalization
Automation
Augmentation

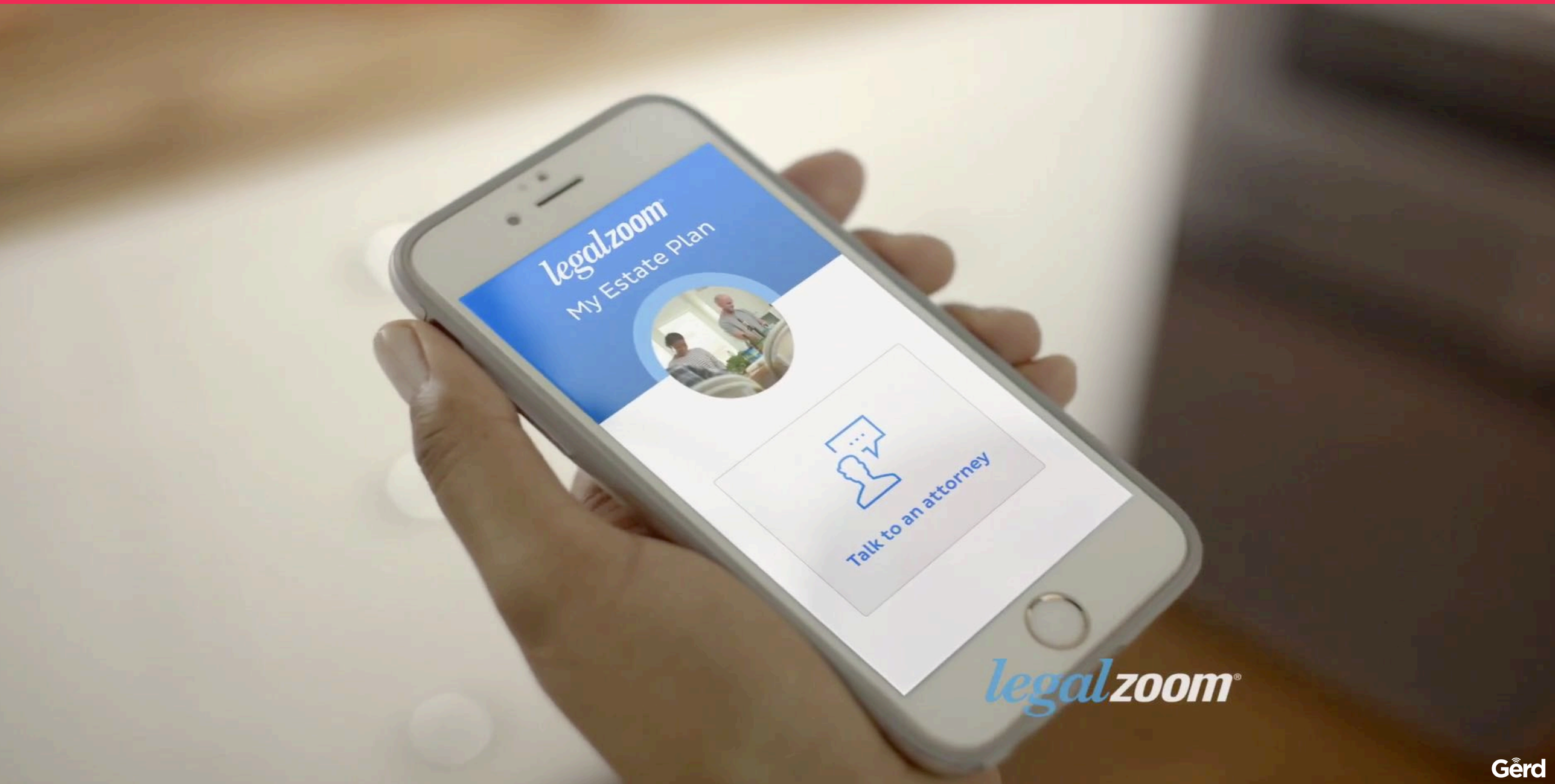


Gerd

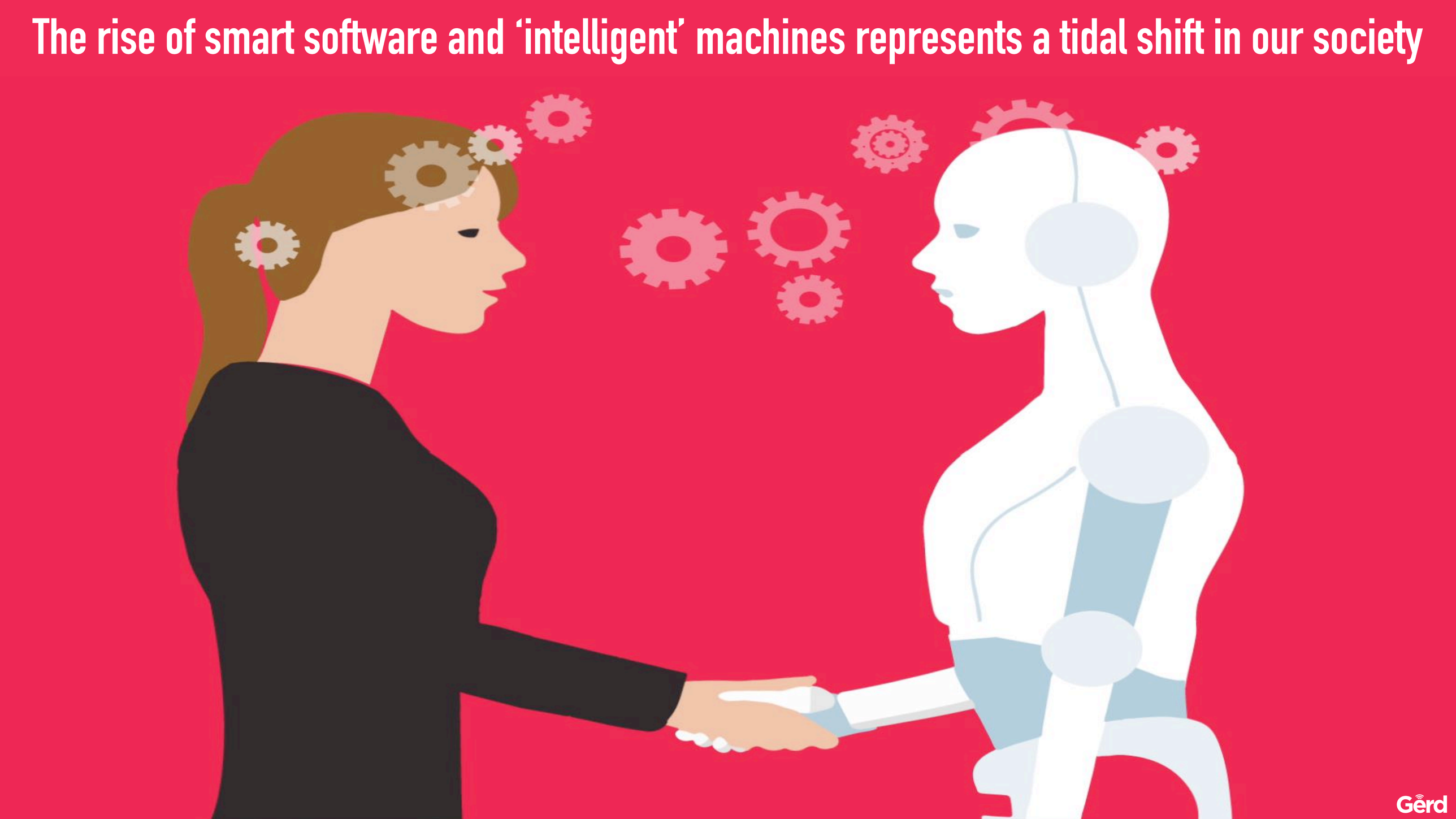
Digitization
Datafication
Cognification
Disintermediation
Personalization
Automation
Augmentation

Gerd

Digitization | Automation | Virtualisation | Mobilisation. . . LegalZoom example

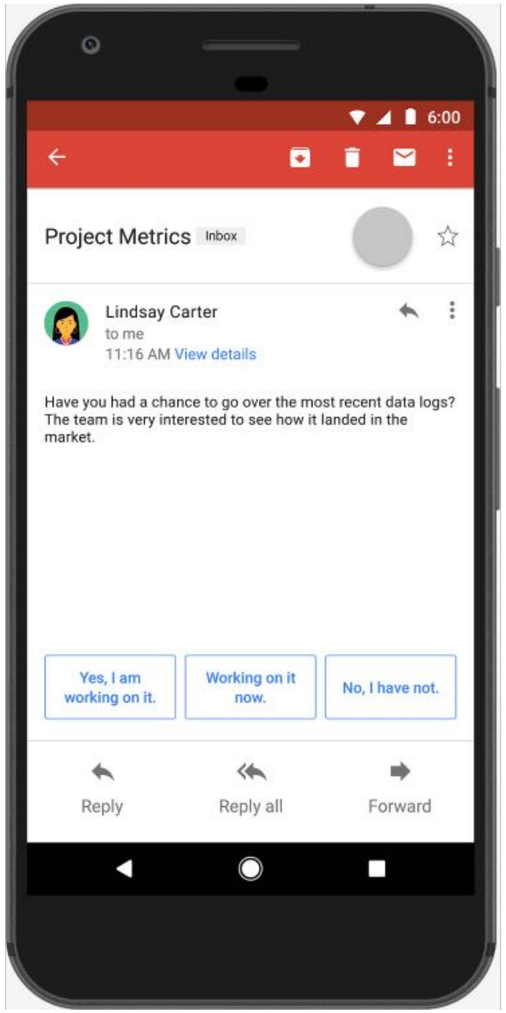


The rise of smart software and ‘intelligent’ machines represents a tidal shift in our society



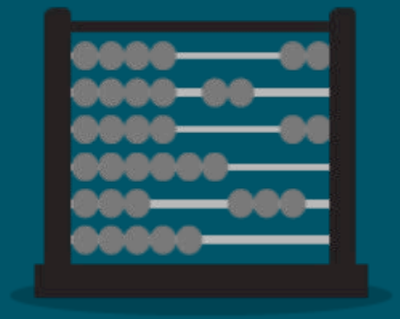
Gerd

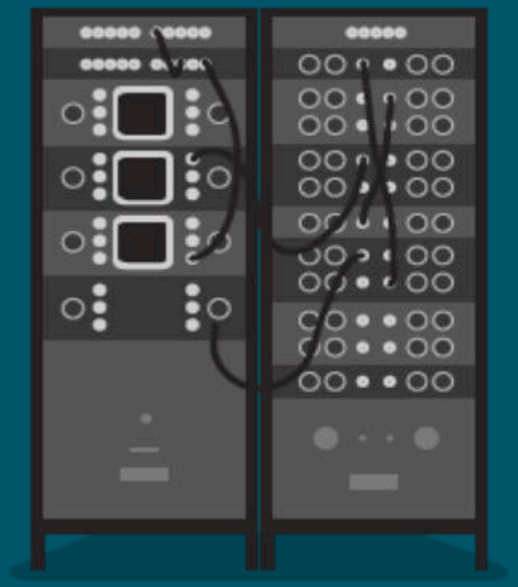
Artificial Intelligence: “Computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages”



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

(Demis Hassabis @ DeepMind)





Tabulating Systems Era

1900

Programmable Systems Era

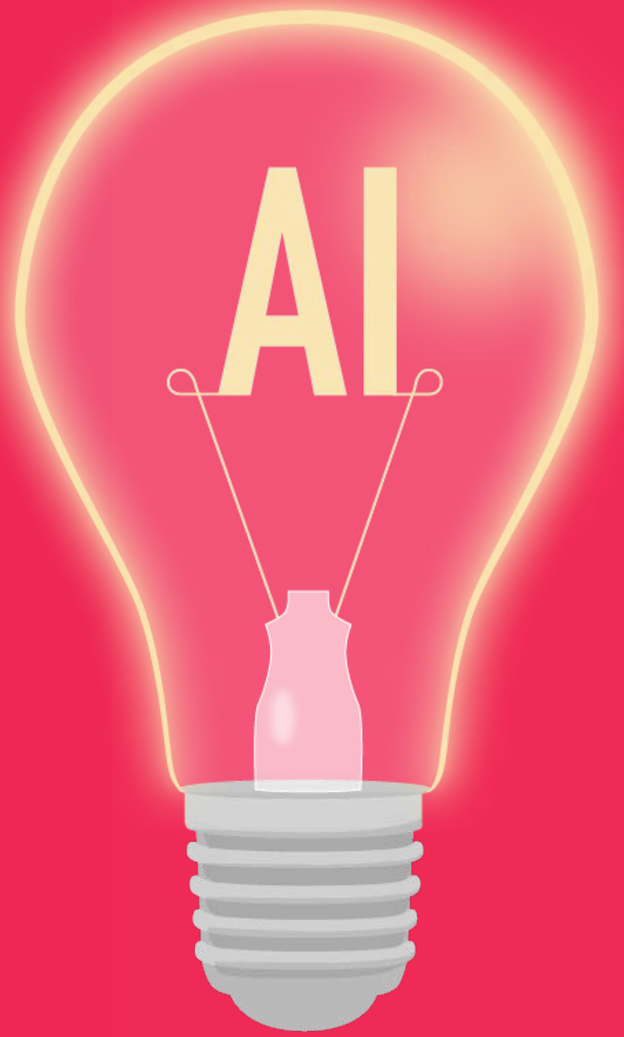
1950

Cognitive Systems Era

2020

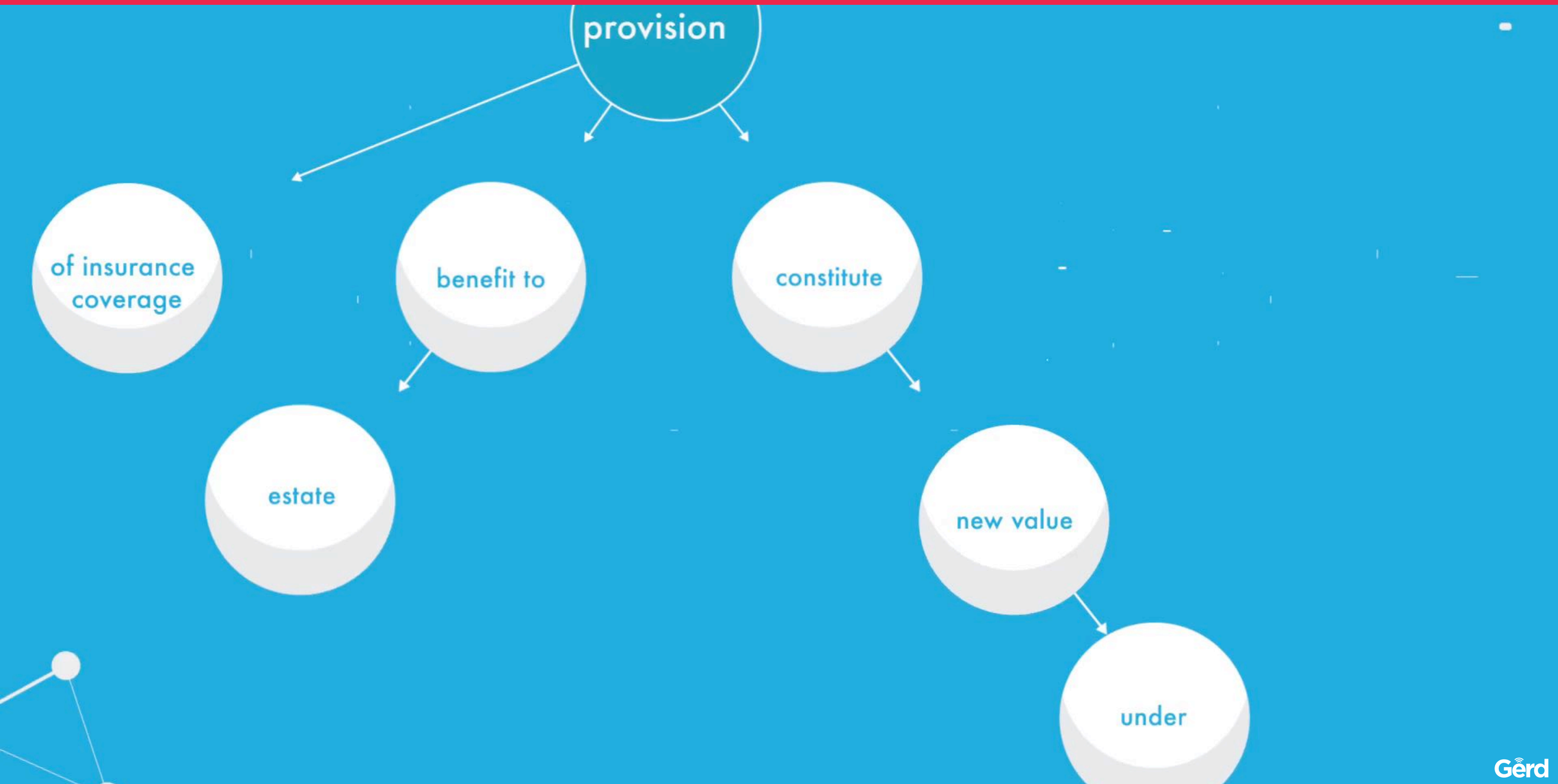
Gerd

Data is the new oil, and AI is the new electricity



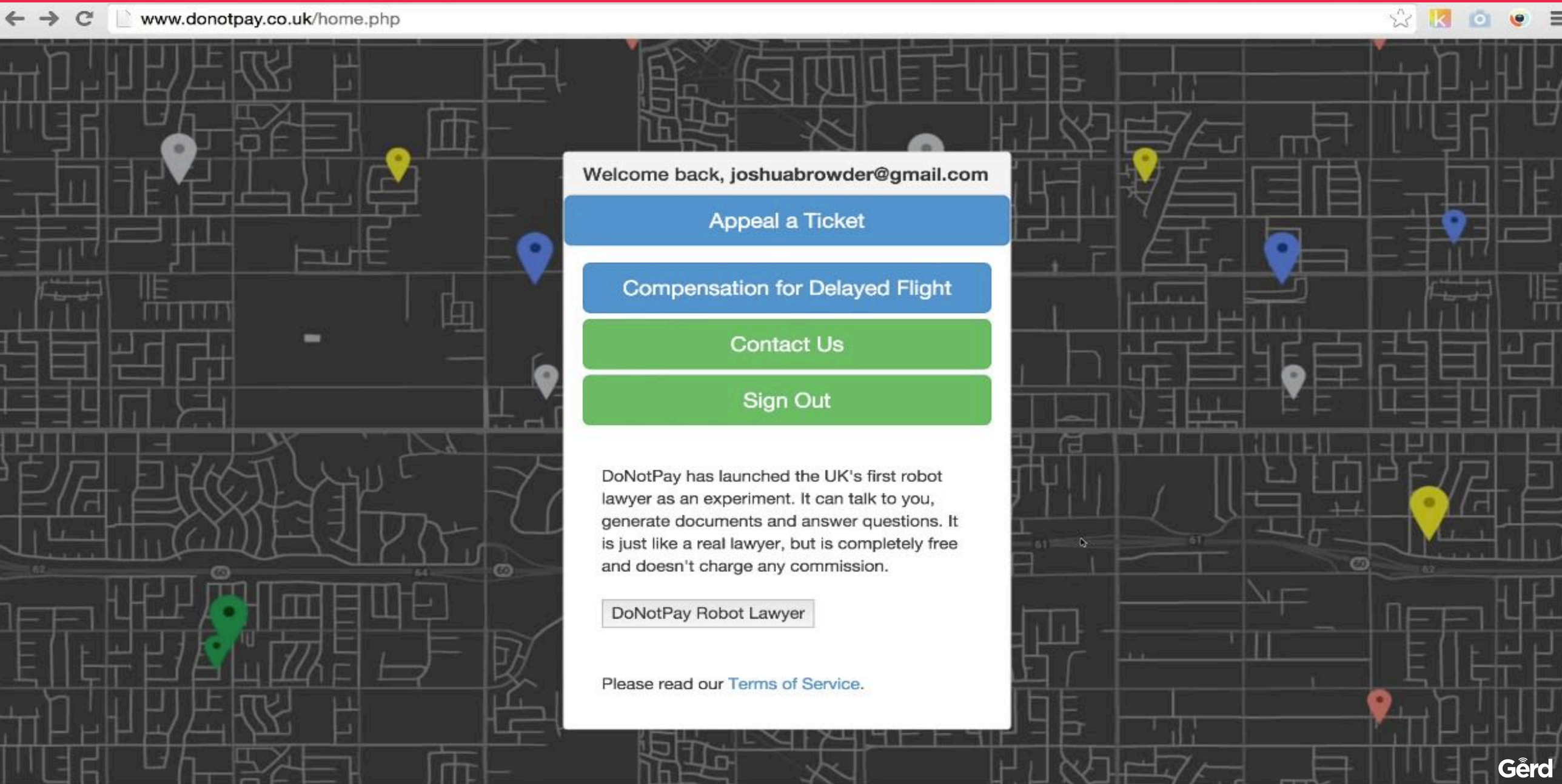
Gerd

“We will move from ‘mobile first’ to an AI-first world” (Sundar @ Google)



Gerd

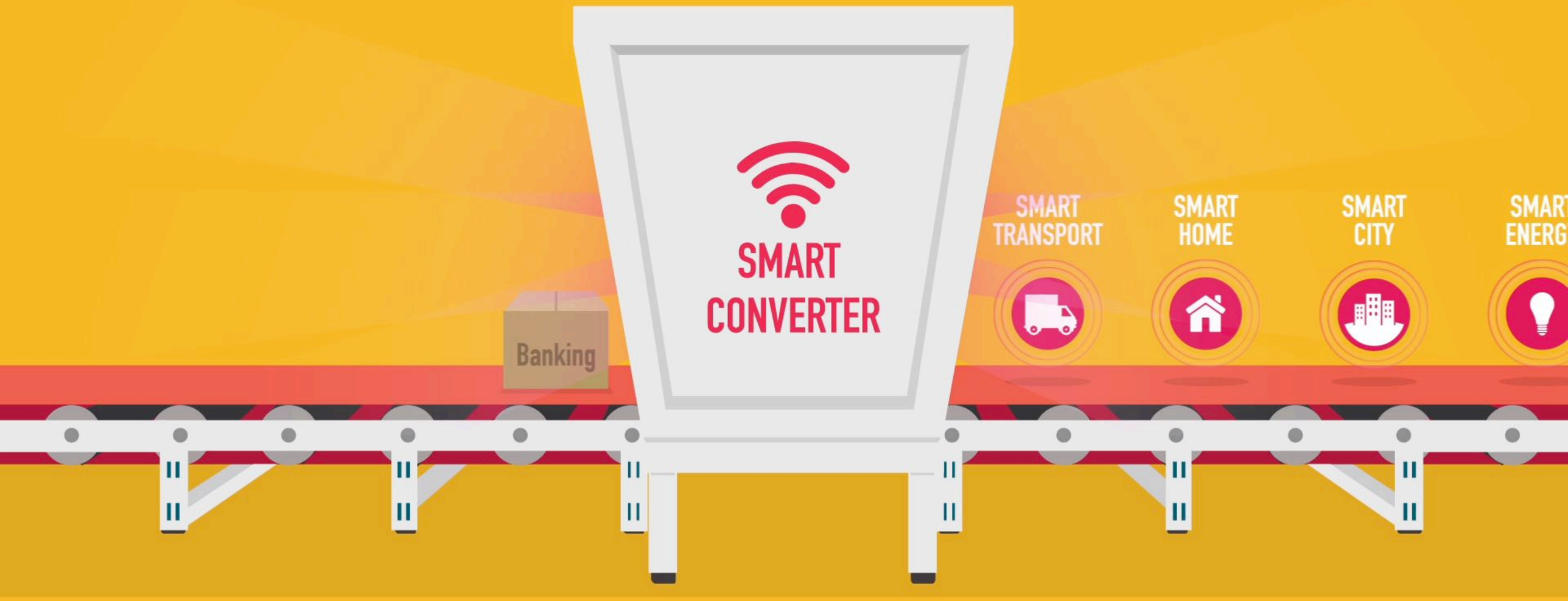
“We will move from ‘mobile first’ to an AI-first world” (Sundar @ Google)



Gerd

First we electrified, then we digitised, now we cognify

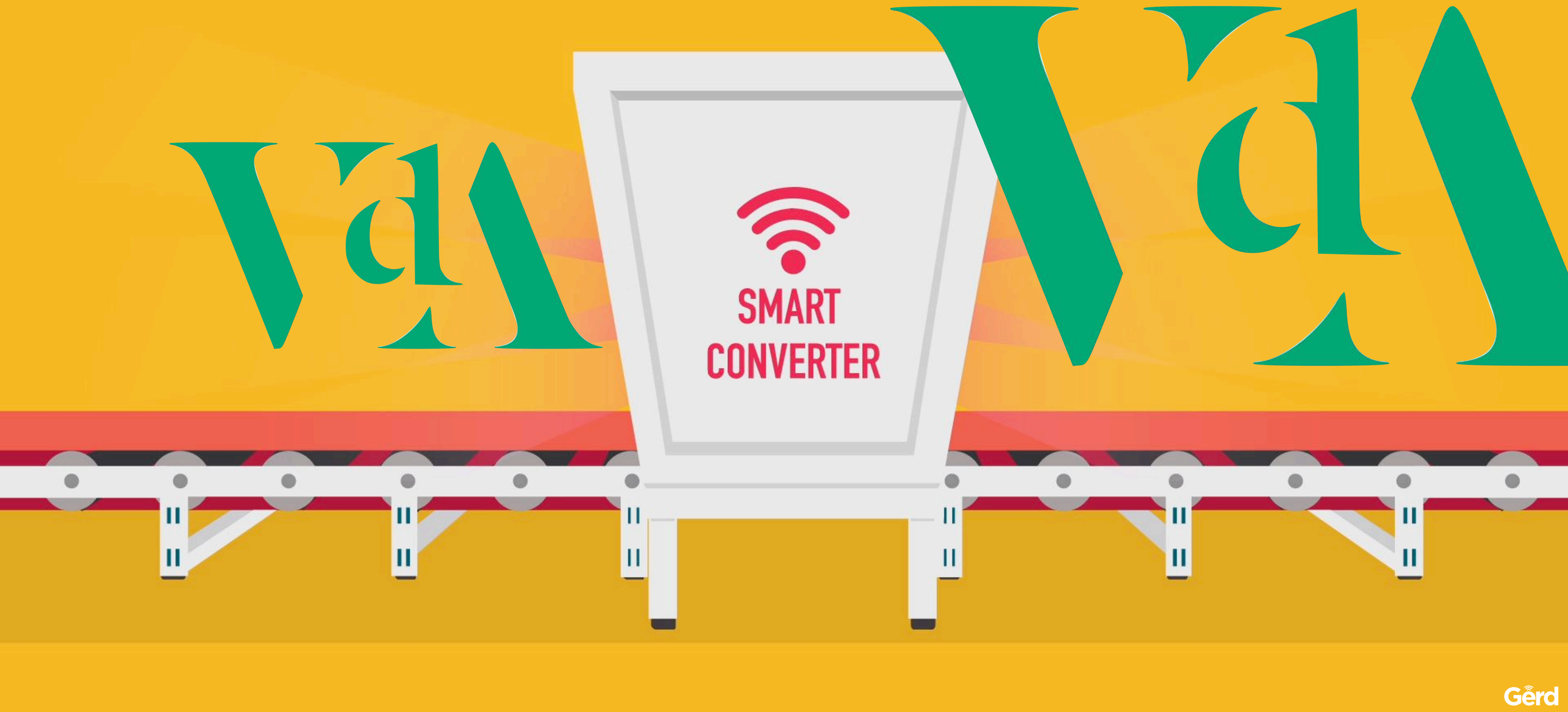
(riffing off Kevin Kelly)



Gerd

First we electrified, then we digitised, now we cognify

(riffing off Kevin Kelly)



Gerd

Speaking to machines ‘like speaking to a friend’

The Future Of A.I.

Forecasted cumulative global artificial intelligence revenue 2016-2025, by use case (U.S. dollars)

@StatistaCharts

* From geospatial images

Source: Tractica

statista

The immediate opportunity: Intelligent Assistance (IA – not AI)

Gerd

AI

The idea of a computer system that, by reproducing human cognition, allows that system to function autonomously and effectively in a given domain. An AI system demonstrates a kind of intentionality—it initiates action in its environment and pursues goals.

Source: Wikipedia: An Intelligence Augmentation tool

IA

The idea that a computer system supplements and supports human thinking, analysis, and planning, leaving the intentionality of a human actor at the heart of the human-computer interaction. Focusing on the interaction of humans and computers, rather than on computers alone.

Source: Wikipedia: An Intelligence Augmentation tool

@constant_garden #AugmentInt

Gerd

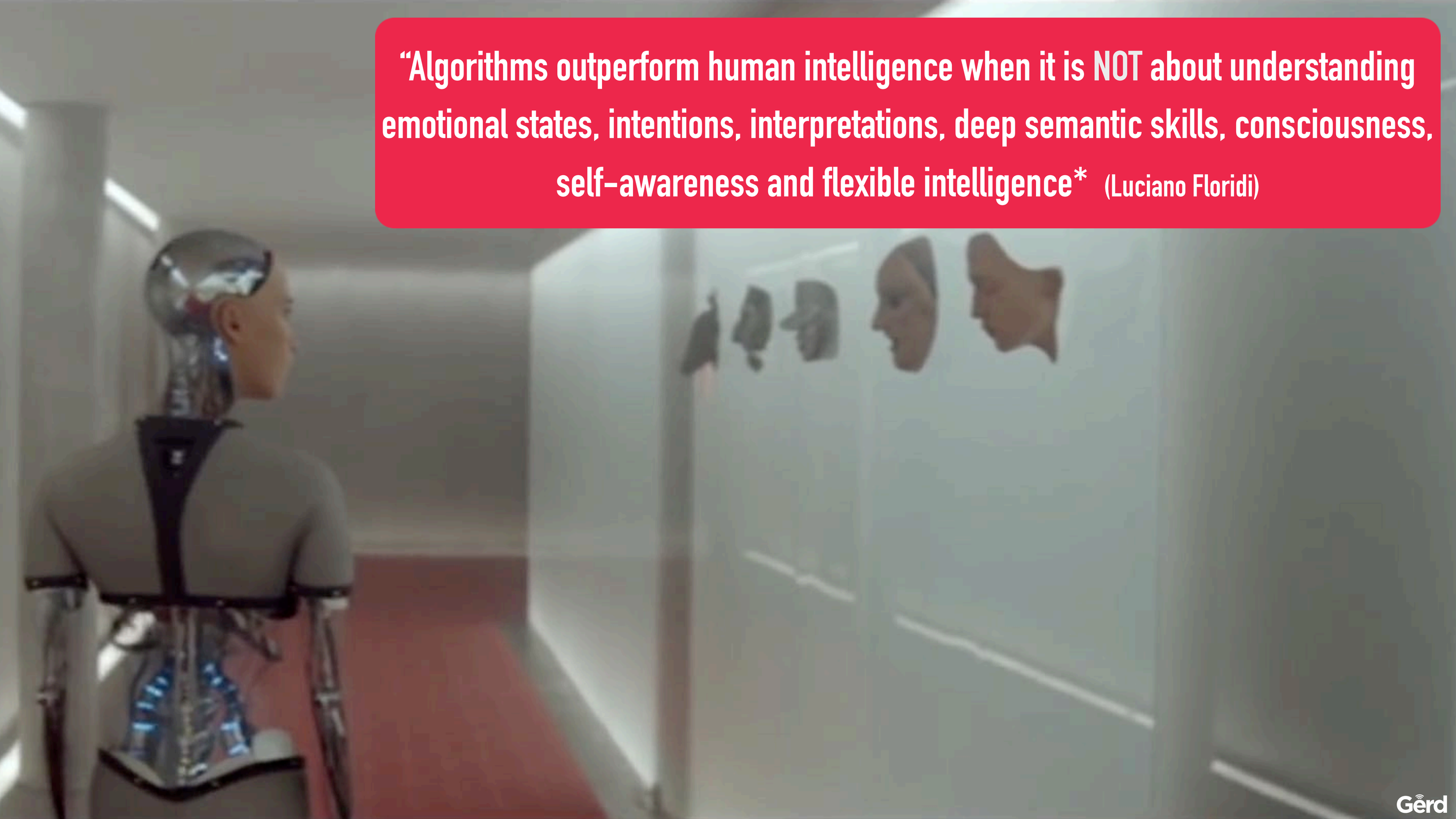
IA

The idea that a computer system supplements and supports human thinking, analysis, and planning, leaving the intentionality of a human actor at the heart of the human-computer interaction. Focusing on the interaction of humans and computers, rather than on computers alone.

Forget AI. The real revolution could be IA

'Combining machine learning with the existing power of the human brain means we get the best of both worlds' Image: REUTERS/Thomas Peter

Source: Wikipedia: An Intelligence Augmentation tool



"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)

Gerd

As machines are starting to acquire knowledge, humans can – and must – move up the food-chain towards understanding, imagination, wisdom. . .

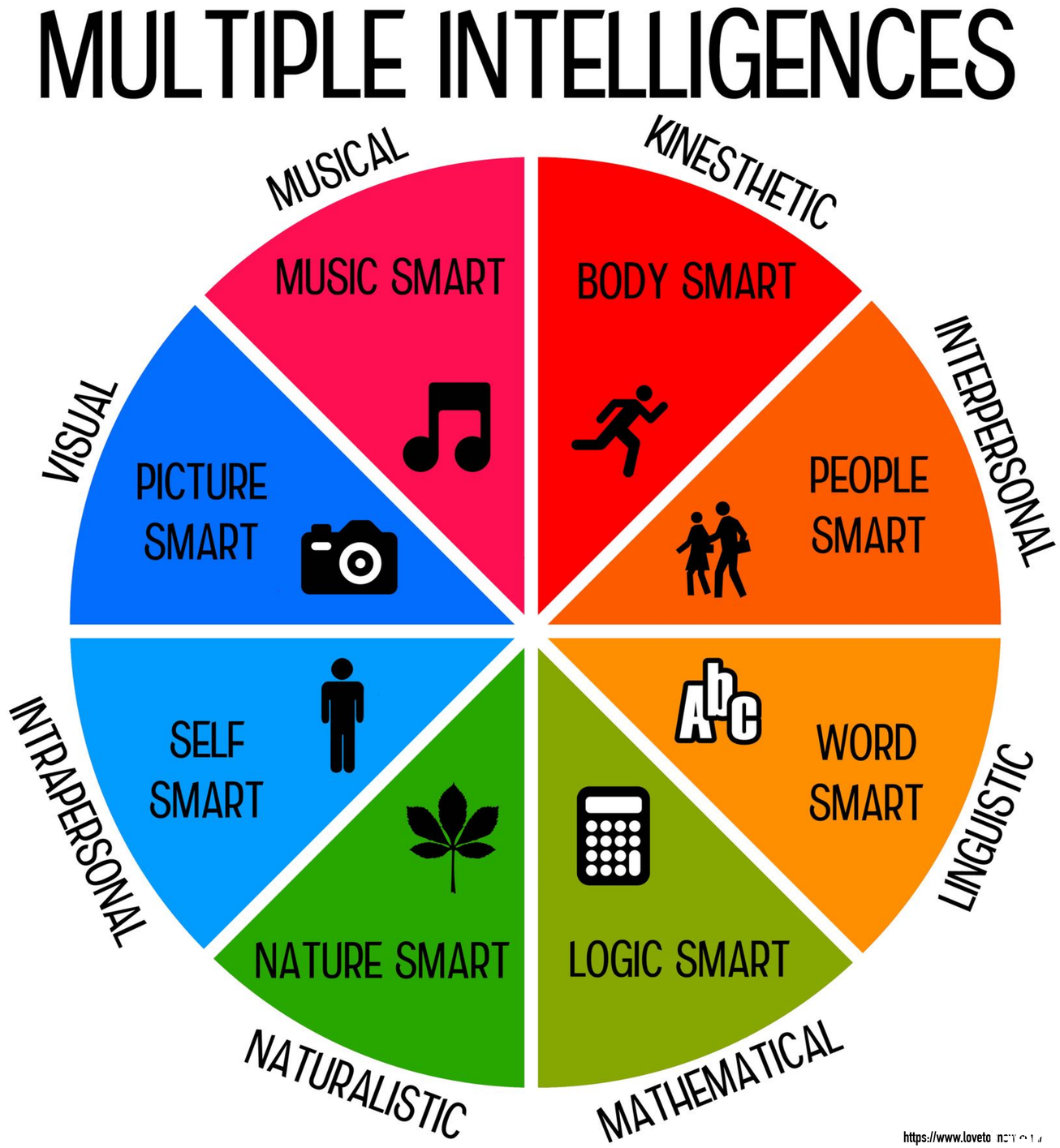
Gerd

. . . move up the food-chain towards understanding, imagination, wisdom . . .

POSITIVITY **E**NGAGEMENT **R**ELATIONSHIPS **M**EANING **A**CCOMPLISHMEN

Gerd

Human intelligence is not defined by a single dimension – “smarter than humans” is not a very useful concept



“Never mistake a clear view for a short distance”

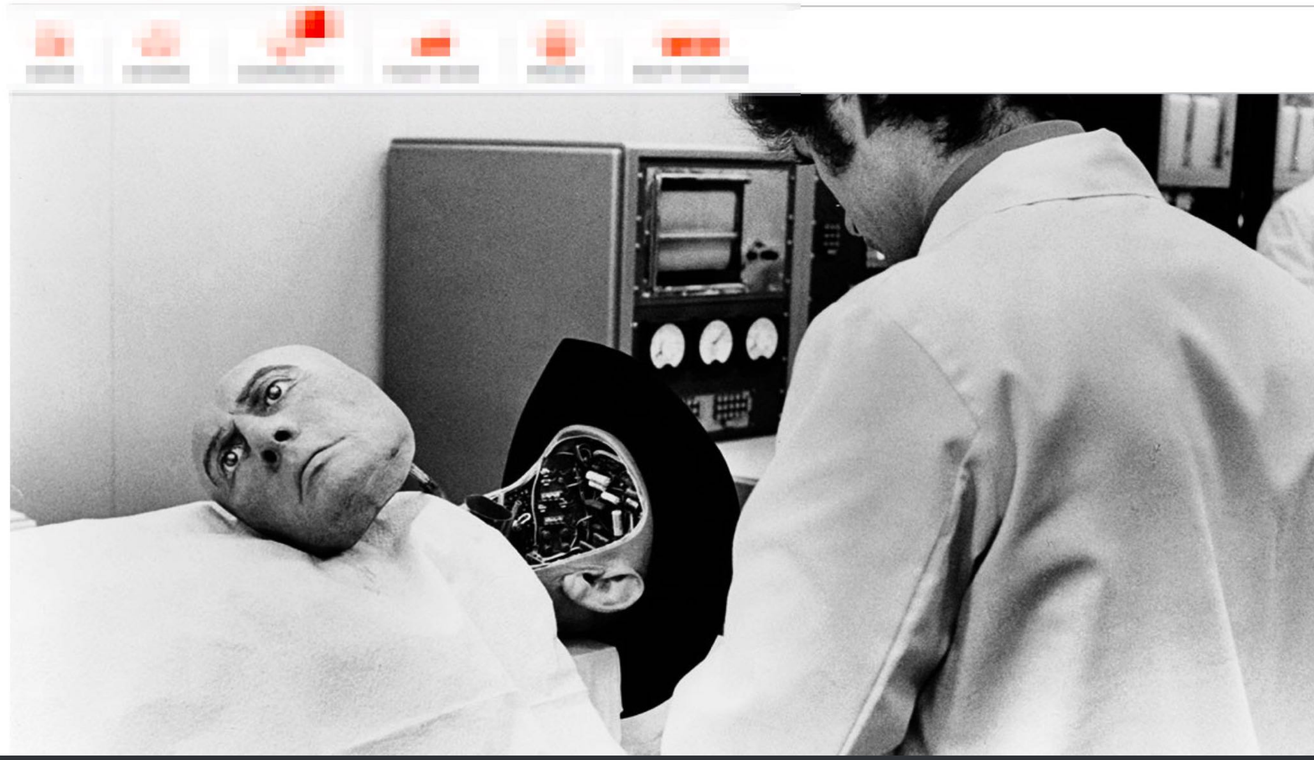
Paul Saffo

INFORMATION & TECHNOLOGY

Technology Will Replace Many Doctors, Lawyers, and Other Professionals

by Richard Susskind and Daniel Susskind

OCTOBER 11, 2016



-Frey and Osborne
Oxford University

Gerd

Machines don't do relationships!

Passion, persuasion, imagination and storytelling will remain key to your future success

Gerd

Thought-Leadership in the “Ethics of Technology” (Digital Ethics) is crucial

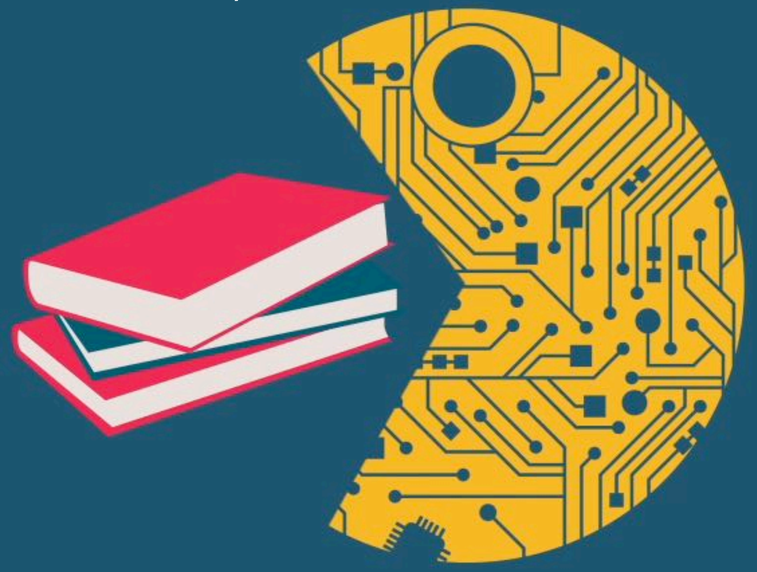
"Ethics is knowing the difference between what you have a right (or the power) to do and what is the right thing to do”

adapted from Potter Stewart

Gerd

SOFTWARE IS EATING THE WORLD

(Marc Andreessen)



Legal Tech Startups

$4.7M AVERAGE VALUATION

657 COMPANIES | 573 INVESTORS | 246 JOBS

Company	Joined	Followers	Signal
Lewis Wayne Holley Raleigh, NC Lewis Wayne Holley Raleigh, NC Raleigh · Legal Tech	Oct '17	1	-----
Cotobox Online trademark service Tokyo · Intellectual Property	Oct '17	0	
Legal Creatives Building an innovative legal career a… Dover · Events	Oct '17	1	-----
NEXAW Coming Soon NEXAW ™ The Start … London · Legal	Sep '17	1	-----
BDM-Corporate Sales & Alliances Online legal service platform Gurgaon · Legal Tech	Sep '17	1	-----
LegitQuest AI for making Legal Search Engine New Delhi · Information Services	Sep '17	1	-----
Crowdjury Buenos Aires Province · Blockchains	Sep '17	1	
Early Neutral Appraisals (ENAp) Predicting Litigation Outcomes Charlotte · Legal	Sep '17	1	-----
Lawply.com Fast and Easy Compliance due dilig… Bengaluru · Legal Tech	Sep '17	1	-----

Software is eating the law?

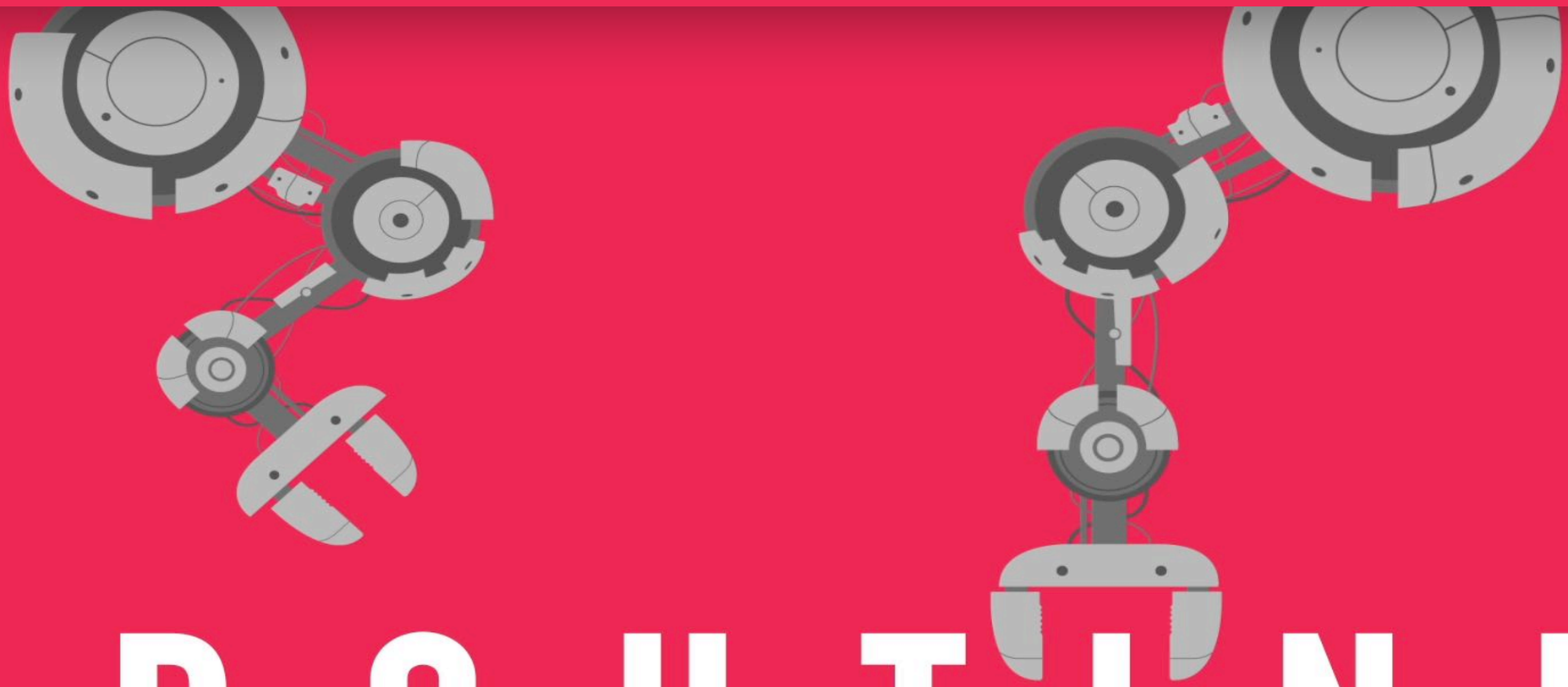
The Legal Tech Market Map

Gerd

Anything that can be digitized or automated, will be. . .

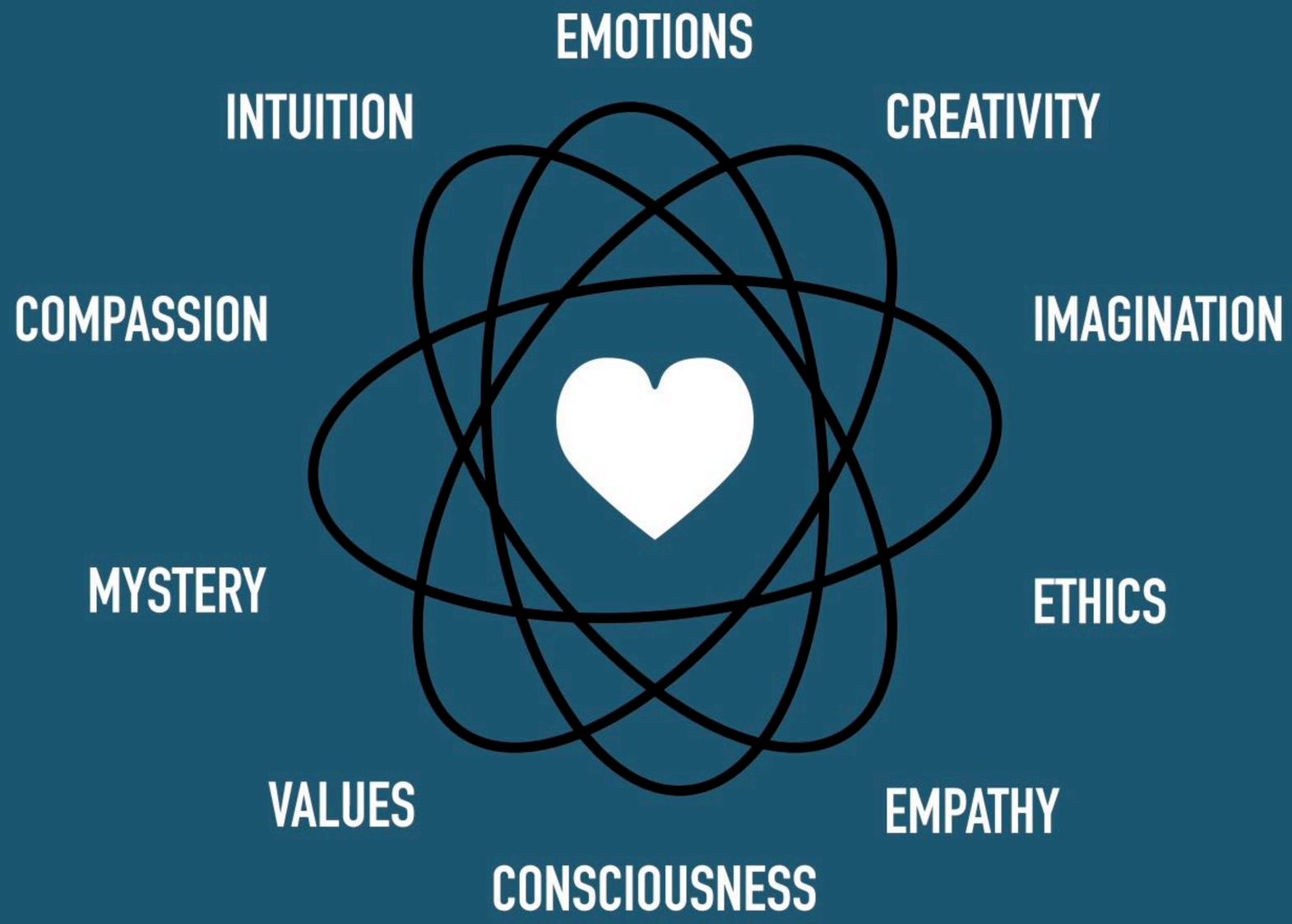
. . . and the End of Routine is coming

But the end of routine tasks does not mean the end of human work



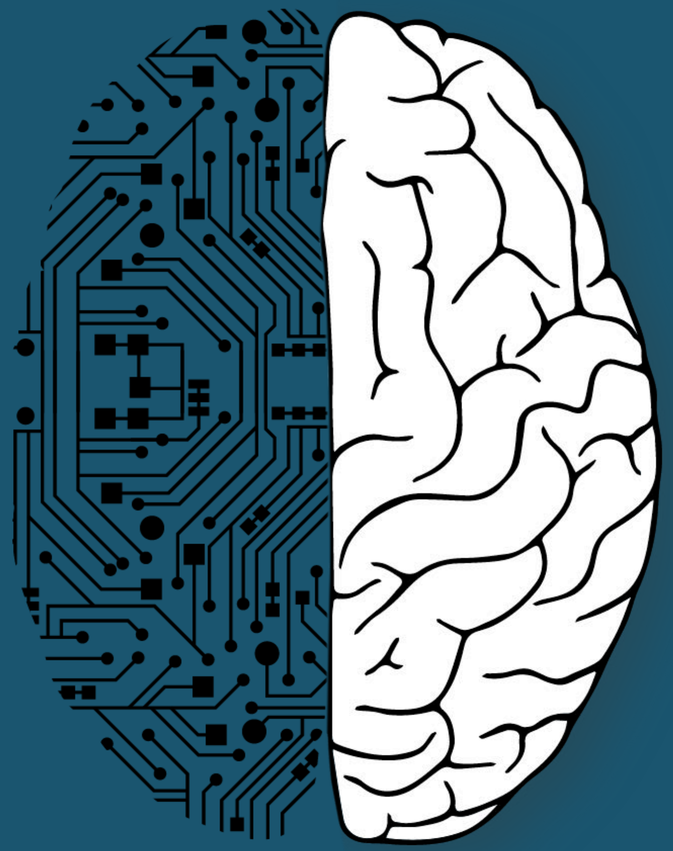
Gerd

Anything that cannot be digitized or automated will become much more valuable



Gerd

New skills, talents and mindsets that every legal professional needs to embrace



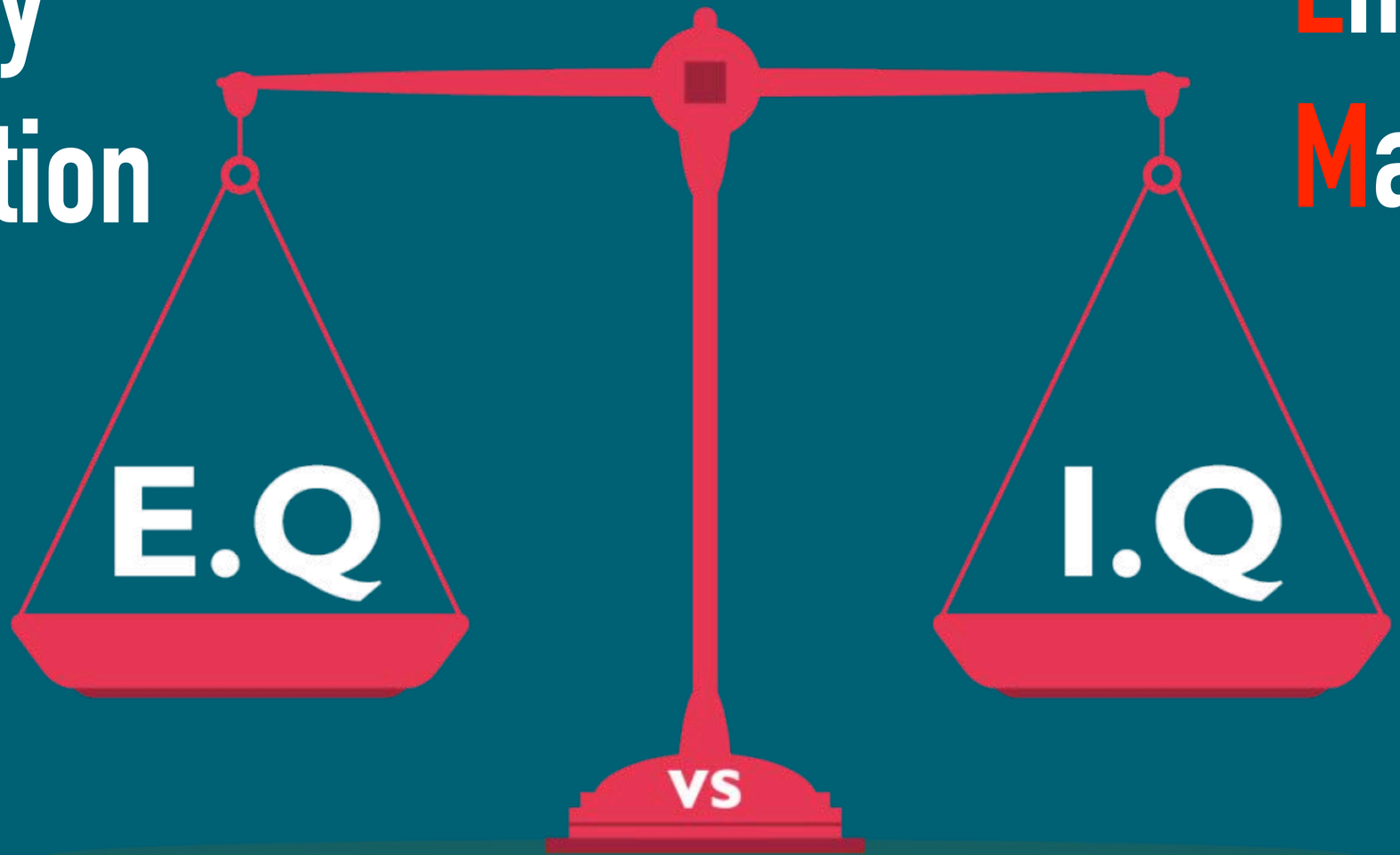
2020

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

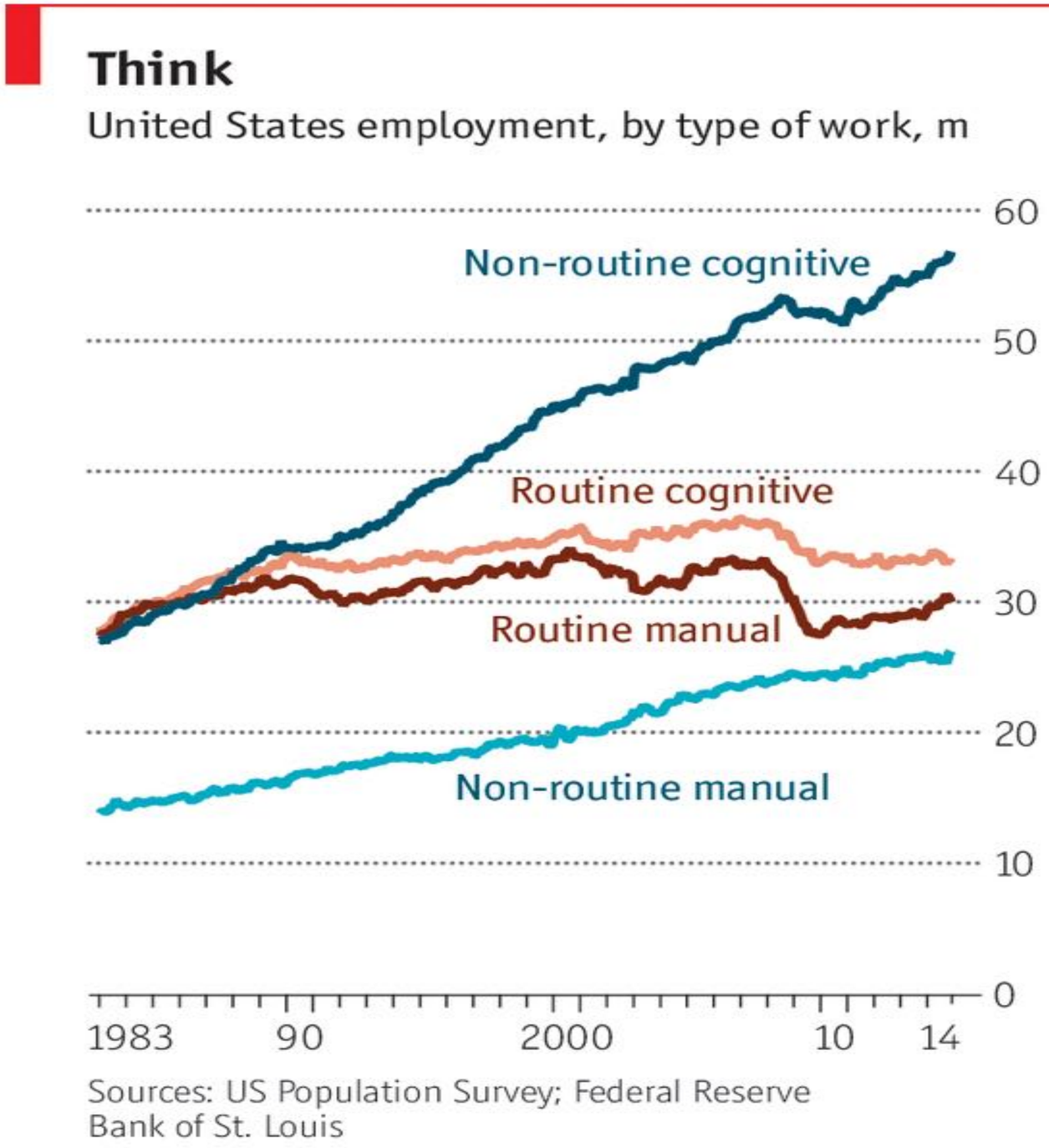
Gerd

Humanity
Ethics
Creativity
Imagination

Science
Technology
Engineering
Mathematics



Gerd



"For the time being, experience like mine is something people are willing to pay for.

What clients don't want to pay for is any routine work.

But the trouble is that technology makes more and more work routine"

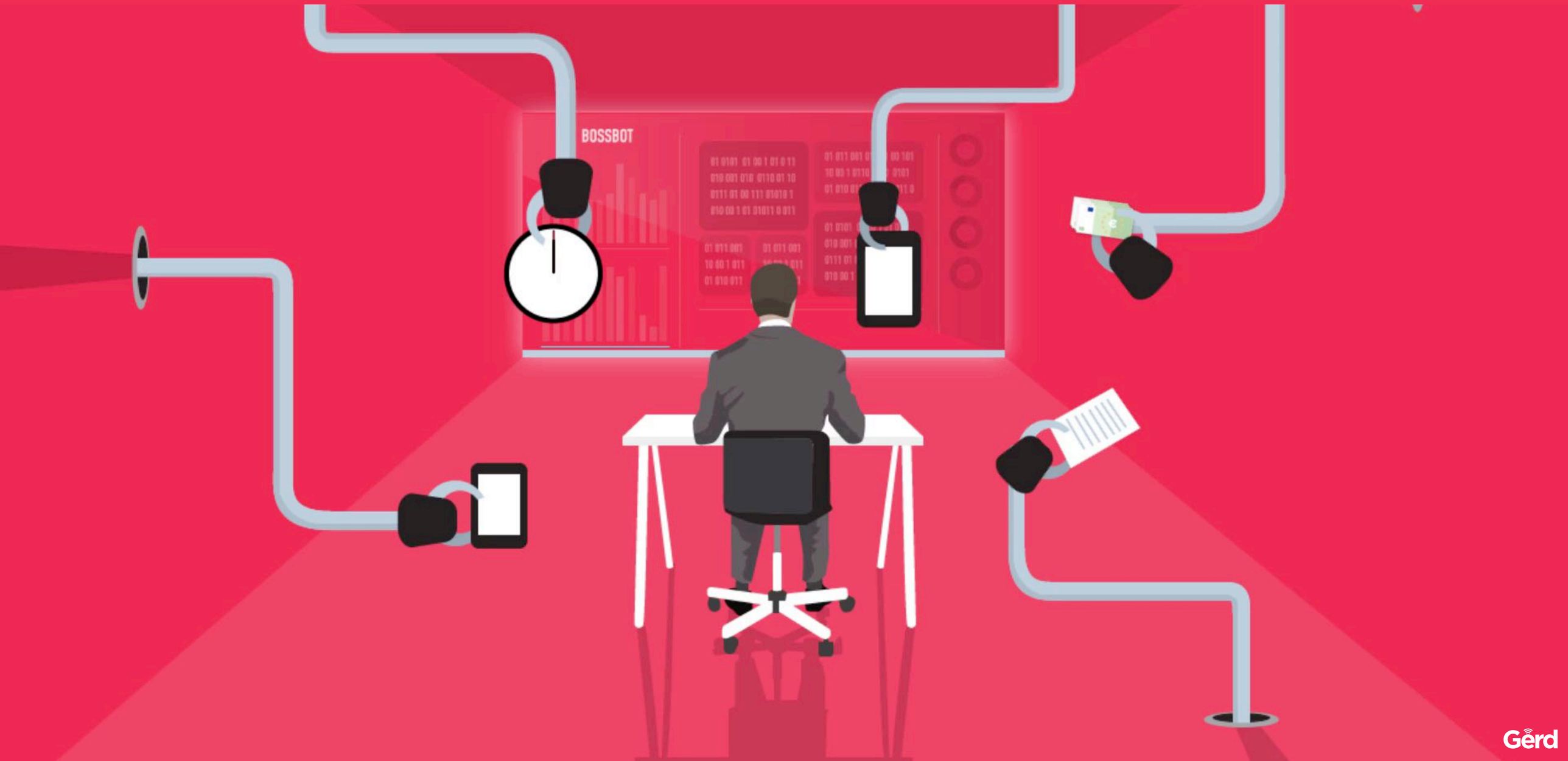
Gerd

A.I. Is Doing Legal Work. But It Won't Replace Lawyers, Yet.

By STEVE LOHR MARCH 19, 2017

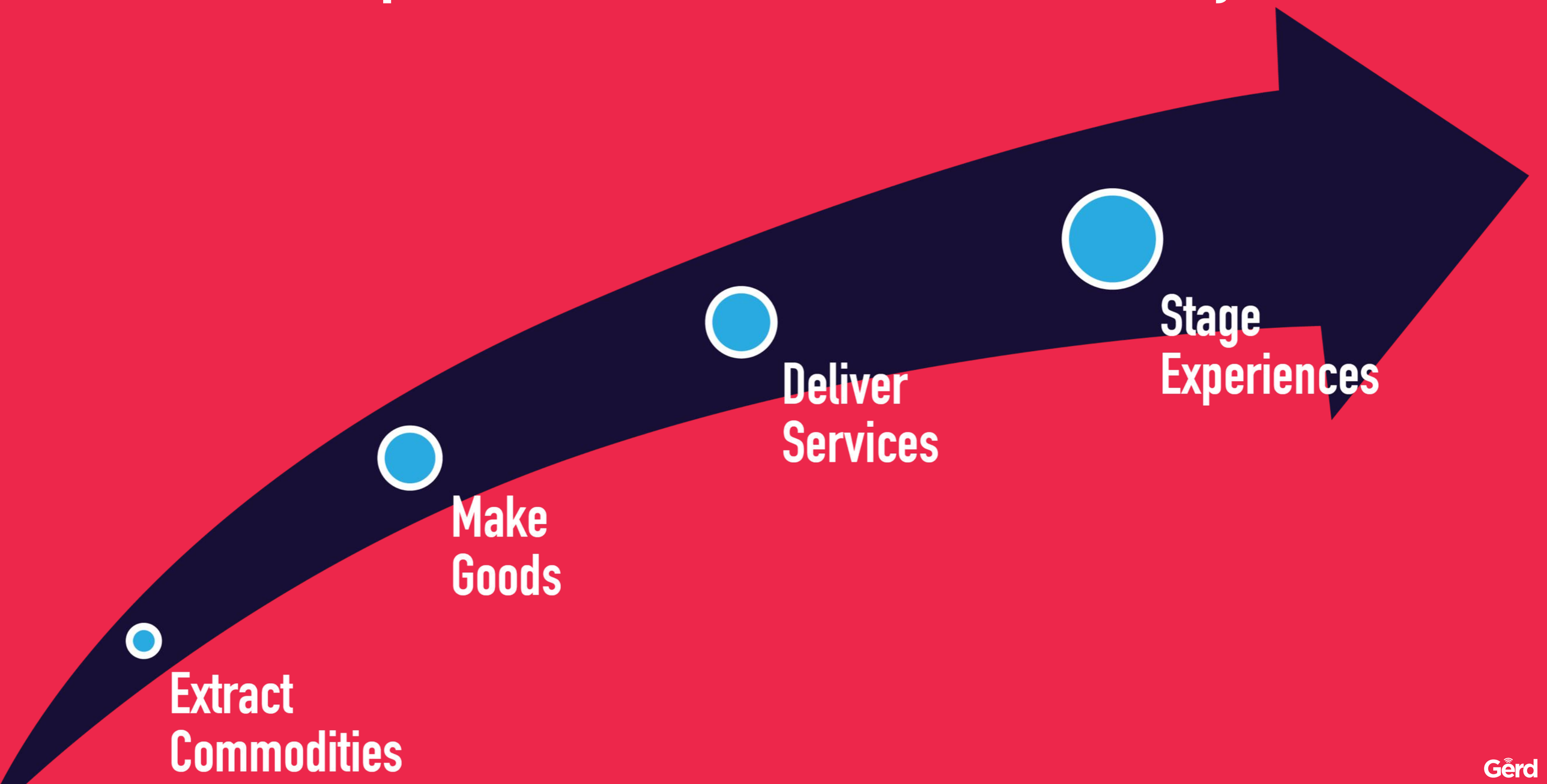
As everything moves into the cloud,
VALUE will be determined by
relevance, purpose, relationship,
meaning and experience

'Working like a robot' is not our future



Gerd

Provide indispensable EXPERIENCES, transform your clients



Gerd

Transformations

Guide

Experiences

Stage

Services

Deliver

Goods

Make

Commodities

Extract

Gerd

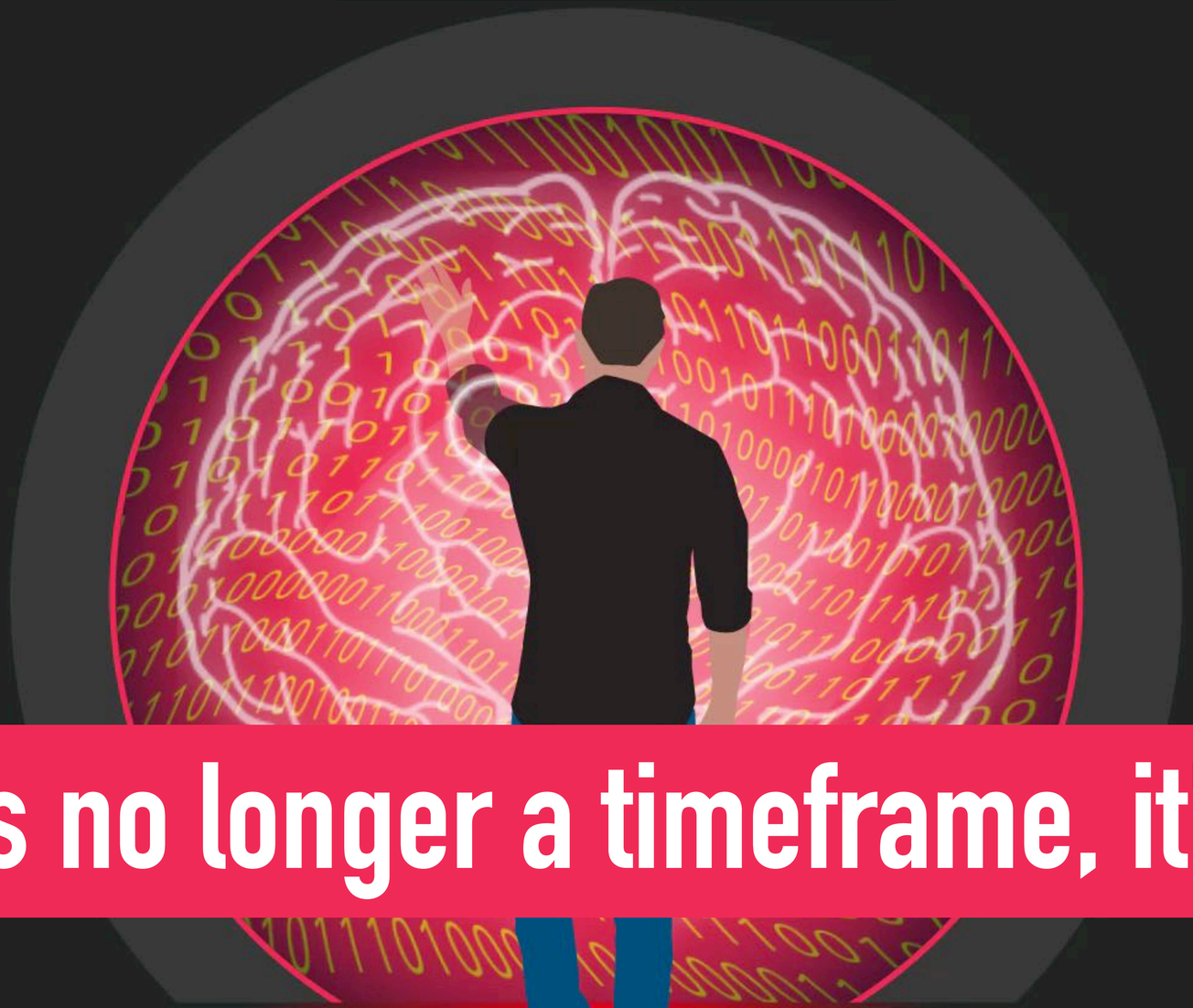
Don’t use technology just to make things more efficient – use it to MAKE NEW THINGS

Gerd

Imagine

#FutureMindset

Create



The future is no longer a timeframe, it's a mindset!

Understand

Observe

Gerd

Thought-leadership increasingly translates to MARKET LEADERSHIP

"The future belongs to those that can hear it coming"
David Bowie

Gerd

Thanks for your time and attention!

techvshuman.com

@gleonhard

gerdtube.com

gerdcloud.com

futuristgerd.com