

Module V

Interface Between Law & Technology

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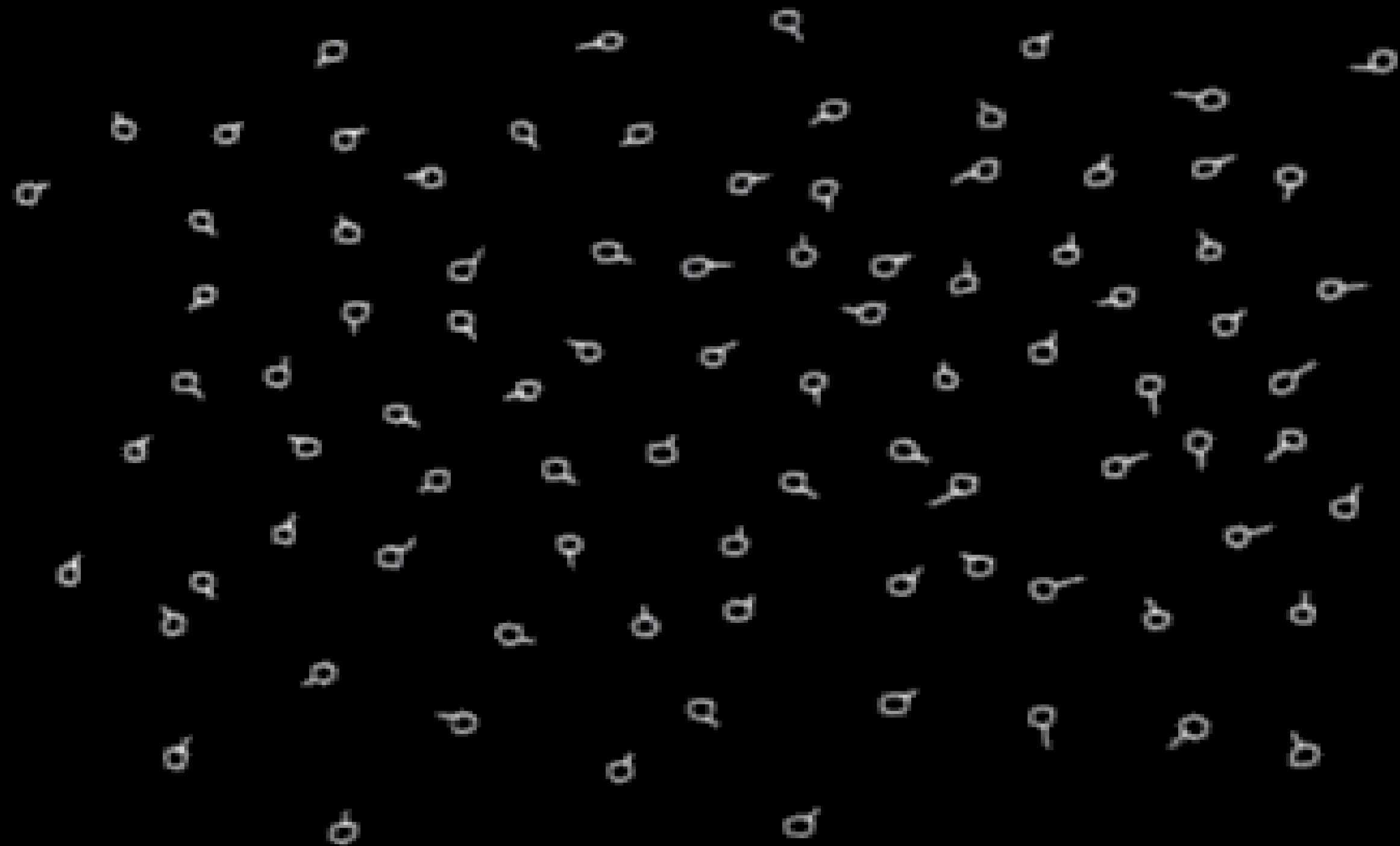
Latin-English Dictionary

**Ignorantia juris neminem
excusat**

Ignorance of the law excuses no one



Ultimately Balance Prevails....









Industry 1.0

Machinery,
Water power,
Steam power

1780

120 years



Industry 2.0

Mass
production,
Assembly line,
Electricity

1900

70 years



Industry 3.0

Computer and
automation

1970

30 years



Industry 4.0

Internet and
cyber-physical
systems

2000

20 years



Industry 5.0

Human-cyber-
physical
systems (HCPS)

2020

We stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. In its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before.

***Klaus Schwab,
President of the World Economic Forum,
The Fourth Industrial Revolution***

Productivity growth from the **steam engine**

0.3%

1850–1910



Source: McKinsey Global Institute analysis

McKinsey&Company

#Automation

Evolution of Communication Technology



DOMO

DATA NEVER SLEEPS 10.0

DATA NEVER SLEEPS 1.0 VS. 10.0



GOOGLE
USER QUERIES



YOUTUBE
HOURS UPLOADED



INSTAGRAM
PHOTOS SHARED



TWITTER
TWEETS SHARED

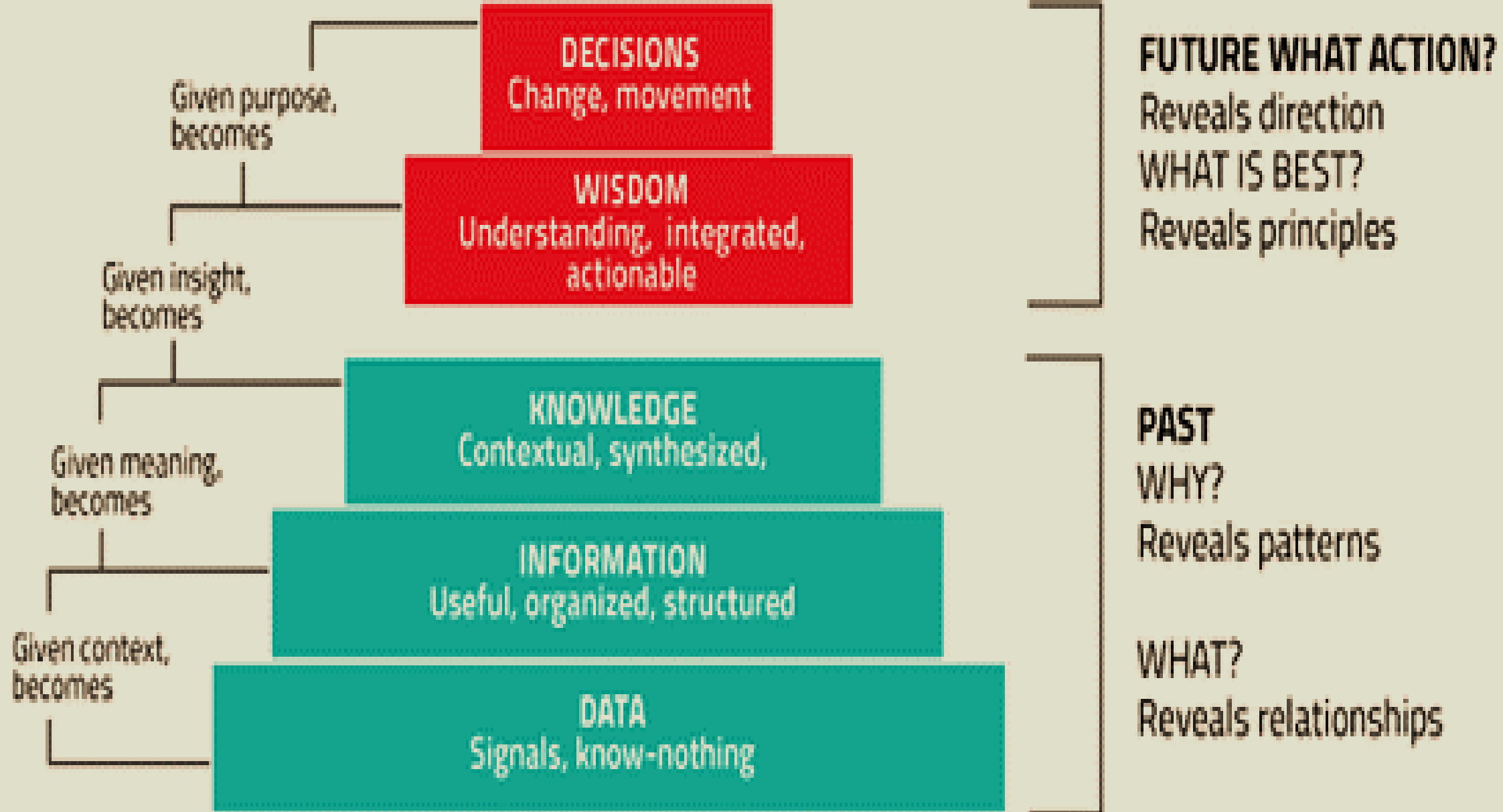


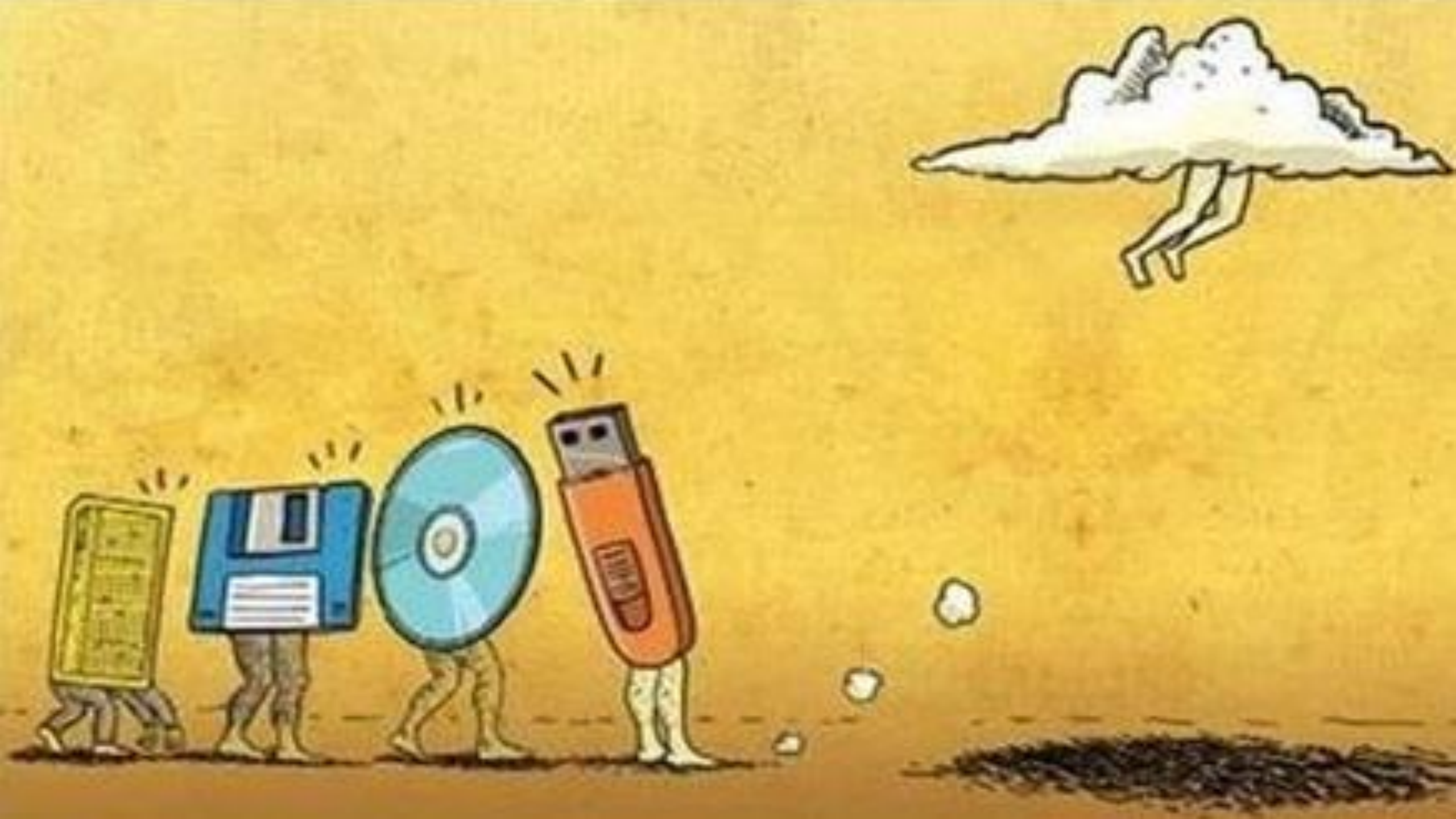
FACEBOOK
CONTENT SHARED

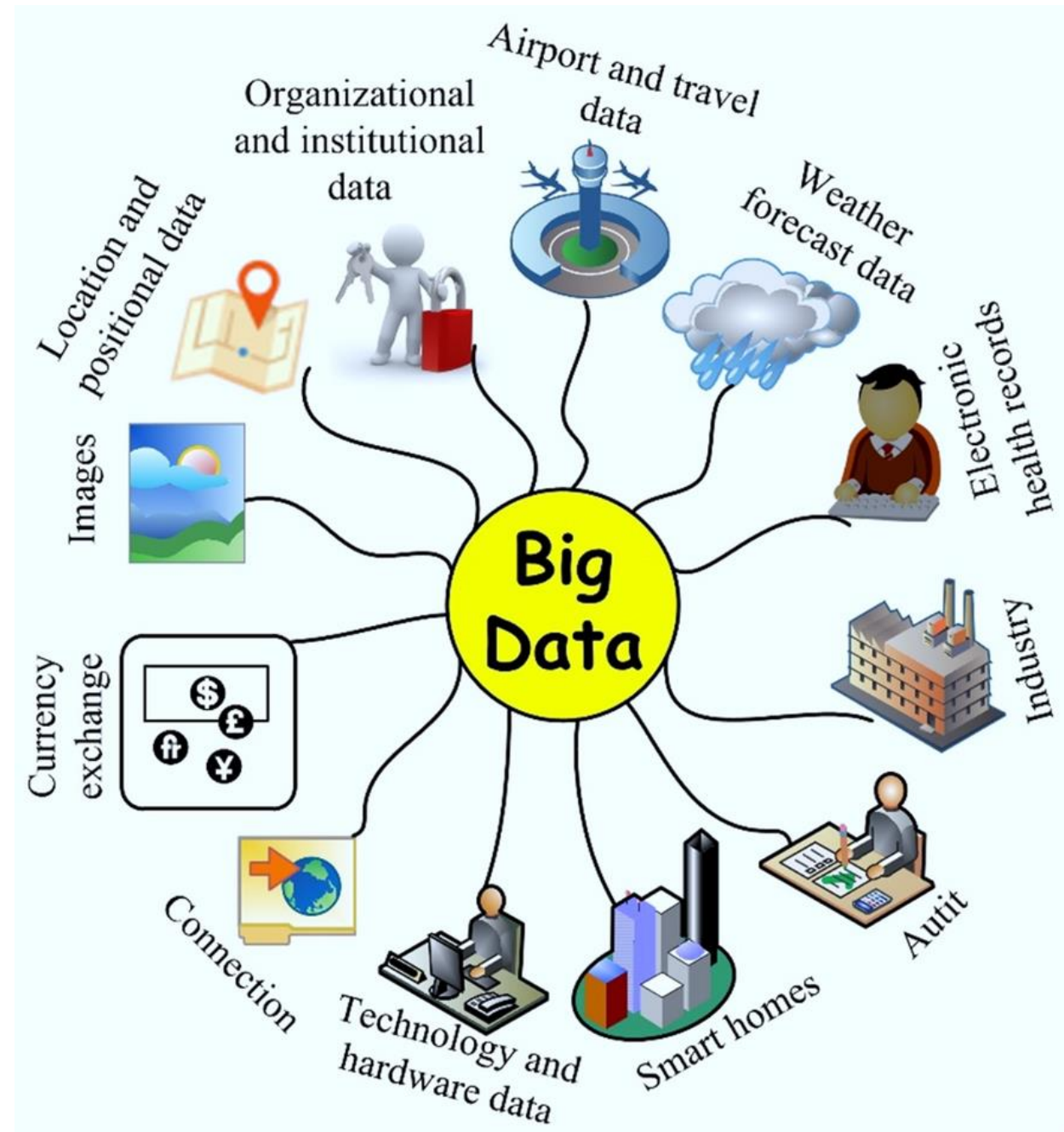
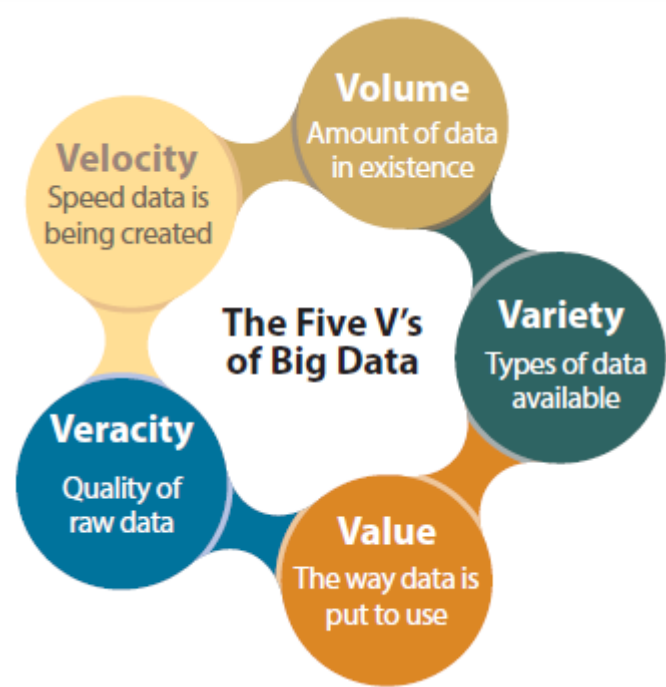


EMAILS
EMAILS SENT

Analytics







Bit

Nibble

Byte

Kilobyte

Megabyte

Gigabyte

Terabyte

Petabyte

Exabyte

Zettabyte

Yottabyte

Brontobyte

= 4 Bit

= 8 Bit

= 8×10^3 Bit

= 8×10^6 Bit

= 8×10^9 Bit

= 8×10^{12} Bit

= 8×10^{15} Bit

= 8×10^{18} Bit

= 8×10^{21} Bit

= 8×10^{24} Bit

= 8×10^{27} Bit

= 4 Bit

= 8 Bit

= 8×2^{10} Bit

= 8×2^{20} Bit

= 8×2^{30} Bit

= 8×2^{40} Bit

= 8×2^{50} Bit

= 8×2^{60} Bit

= 8×2^{70} Bit

= 8×2^{80} Bit

= 8×2^{90} Bit

Decimal

Binary

Artificial

Something,
which is...?
NOT Natural

Intelligence $\neq$ *Intellect*

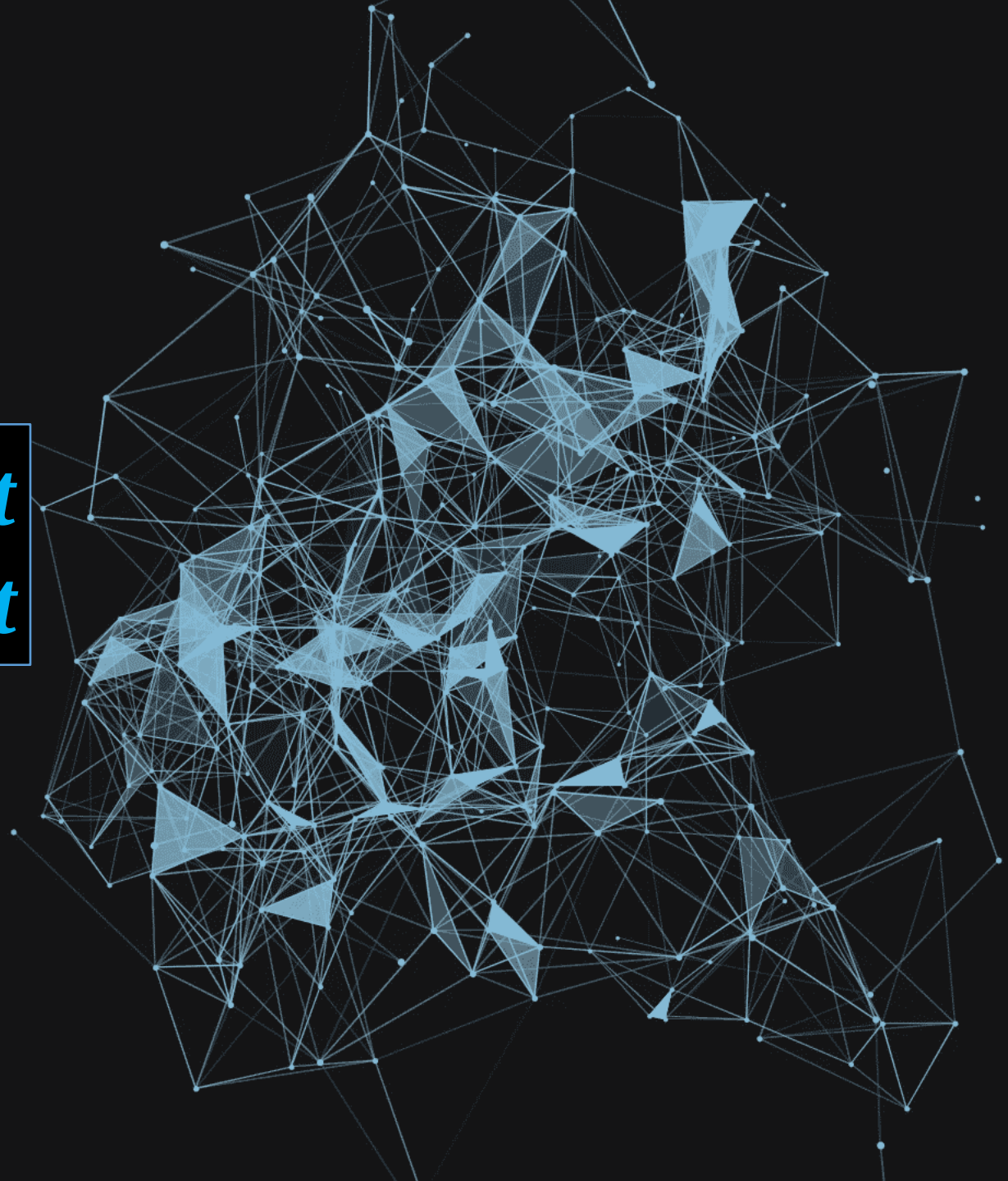
Intelligence $>$ *Intellect*

Intelligence

The Capacity:

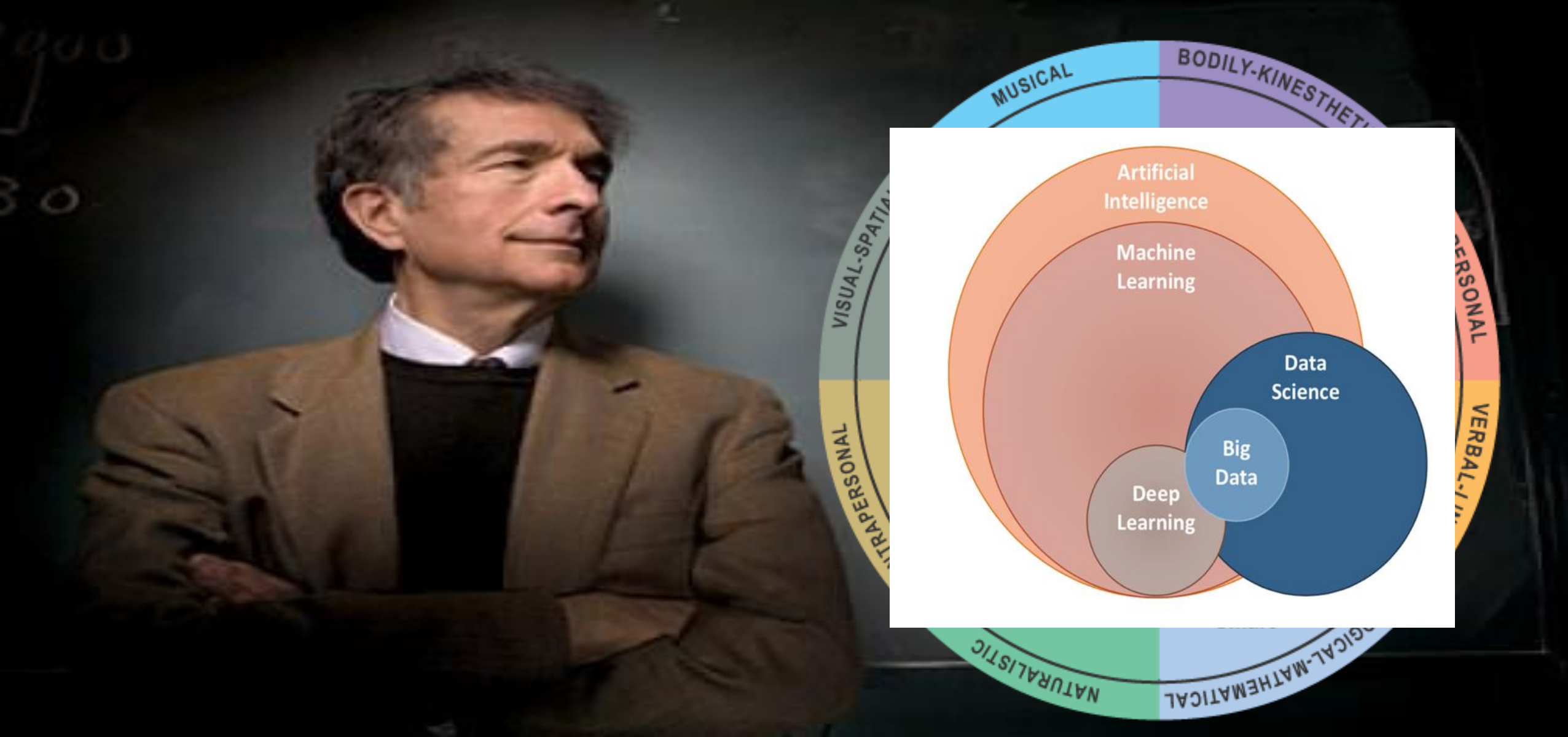
- ✓ To Learn
- ✓ To Reason
- ✓ To Understand
- ✓ To Judge
- ✓ To Decide

*I
N
T
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L
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T*



Multiple Intelligence Theory

Howard Gardner (Frames of Mind) 1983

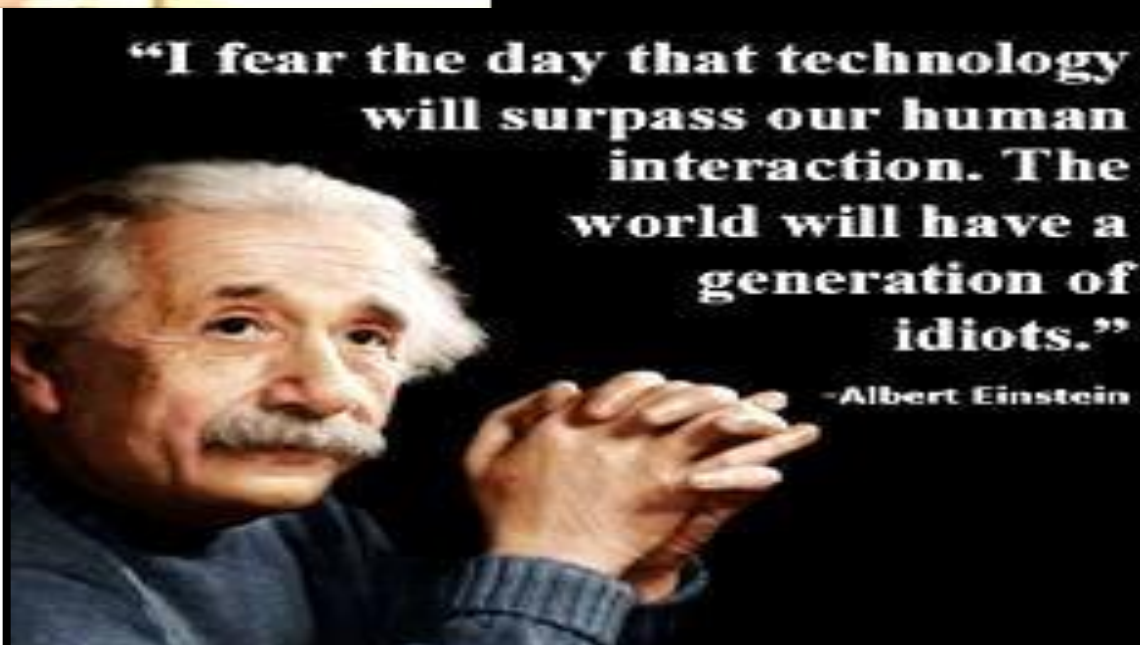




"If it takes 200 years to achieve artificial intelligence and then finally there's a textbook that explains how it's done, the hardest part of that textbook to write will be the part that explains why people didn't think of it 200 years ago."

- John McCarthy

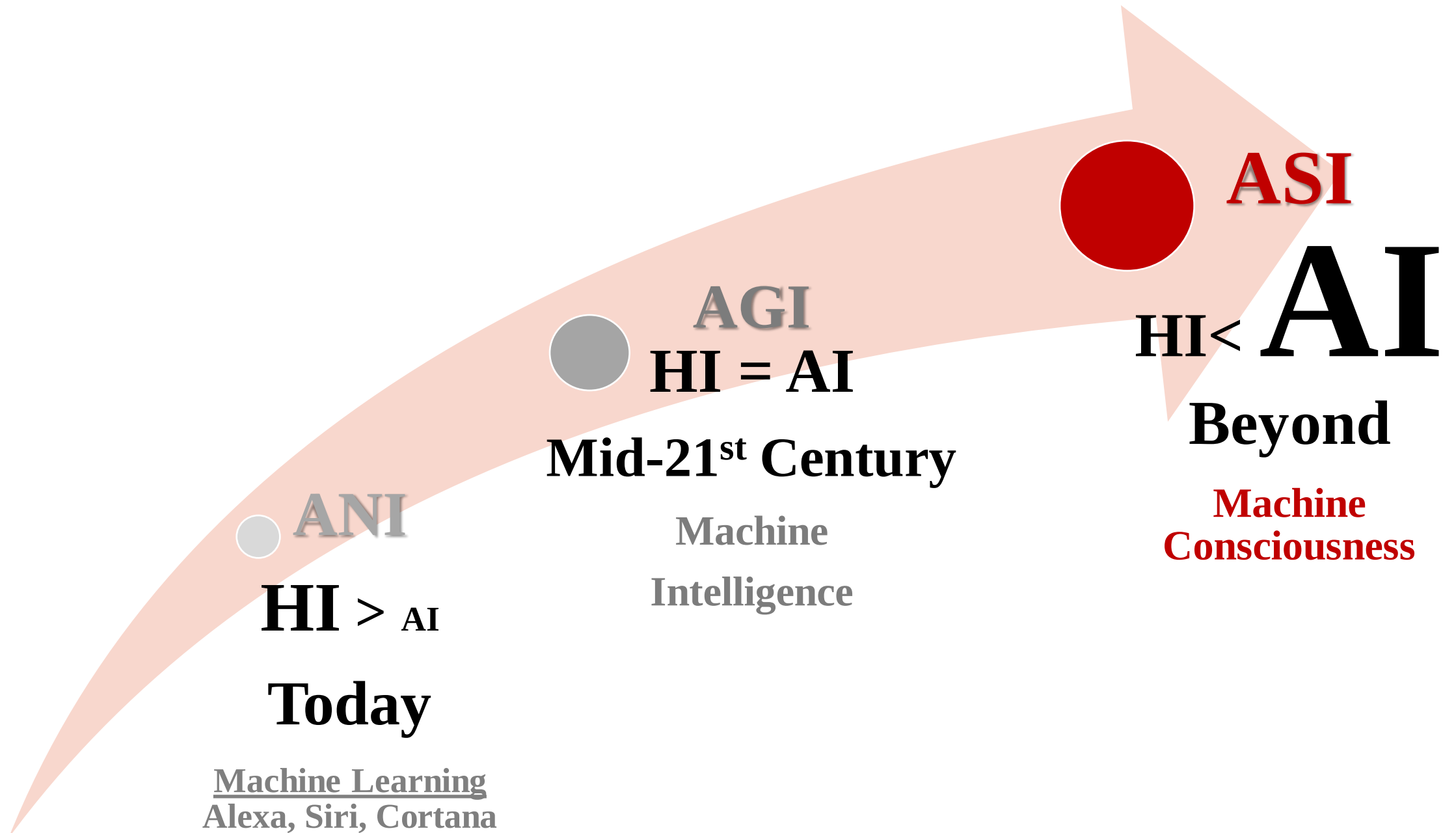
(Coined the term "Artificial Intelligence")



"I fear the day that technology will surpass our human interaction. The world will have a generation of idiots."

- Albert Einstein

Evolution of AI

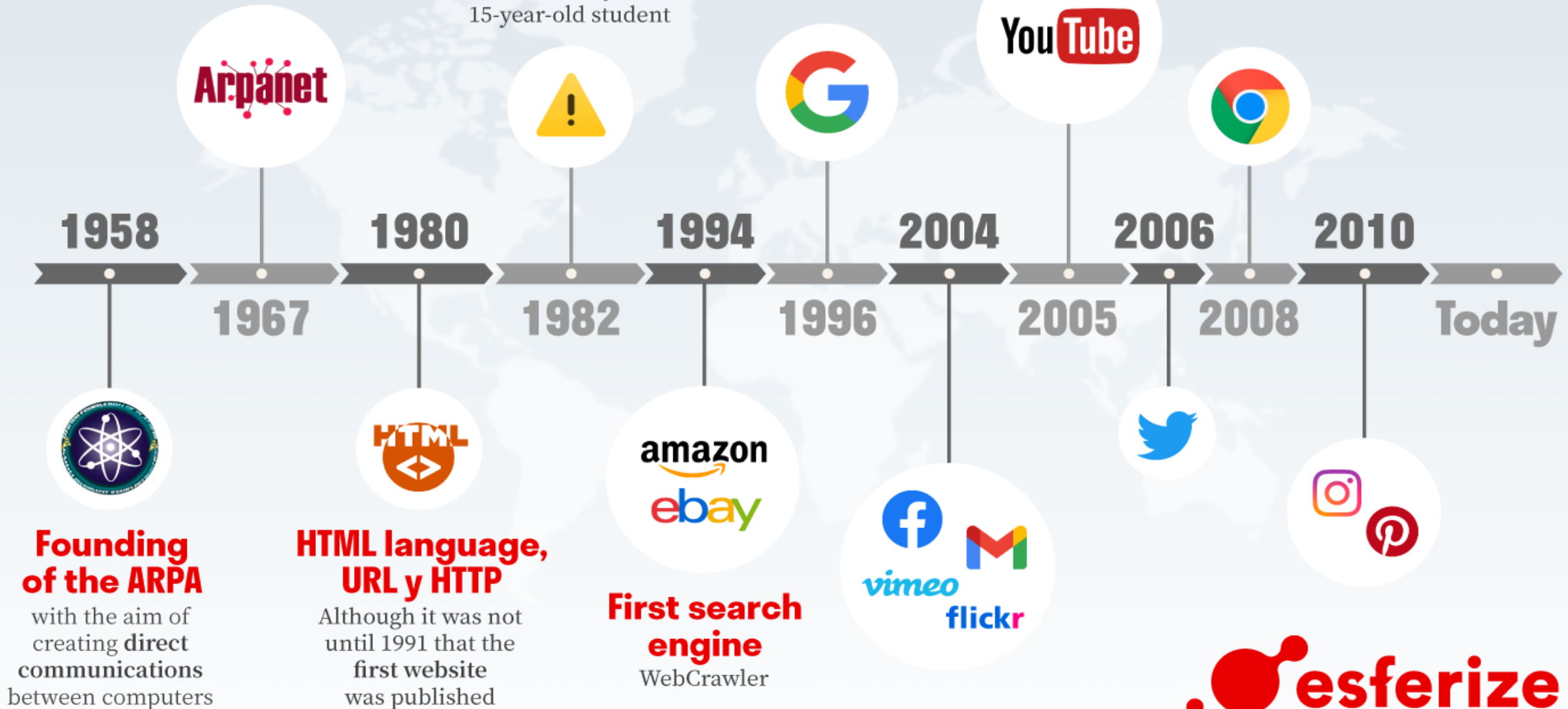


ARPANET is born

a computer network that brought together the best ideas from MIT, NPL and RC

First virus

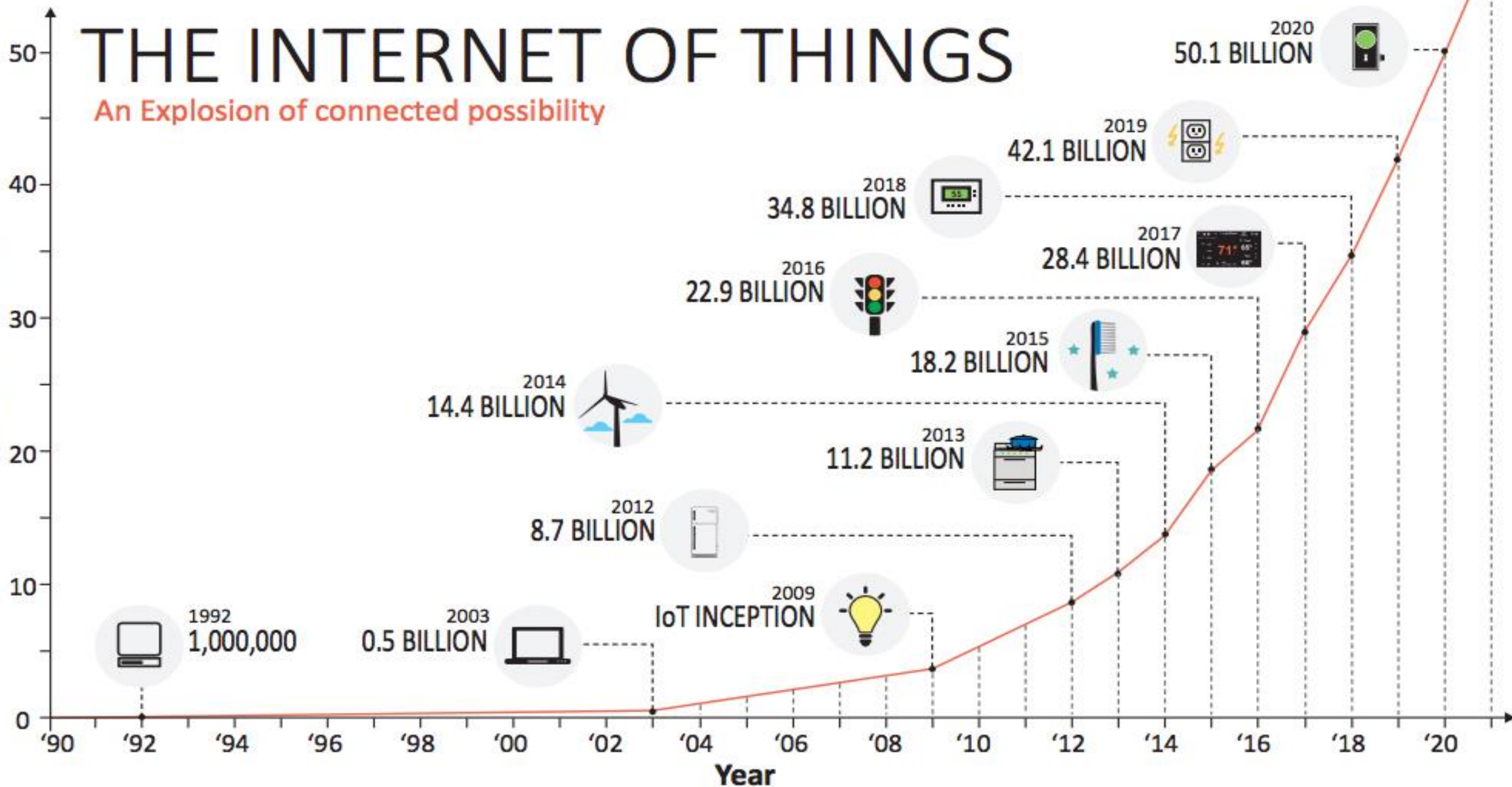
in history created by a 15-year-old student



THE INTERNET OF THINGS

An Explosion of connected possibility

Billions of devices



Machine-to-Machine



A device that captures an event and transmit the event over the network to an application. The application translates event to meaningful information.

Internet of Things

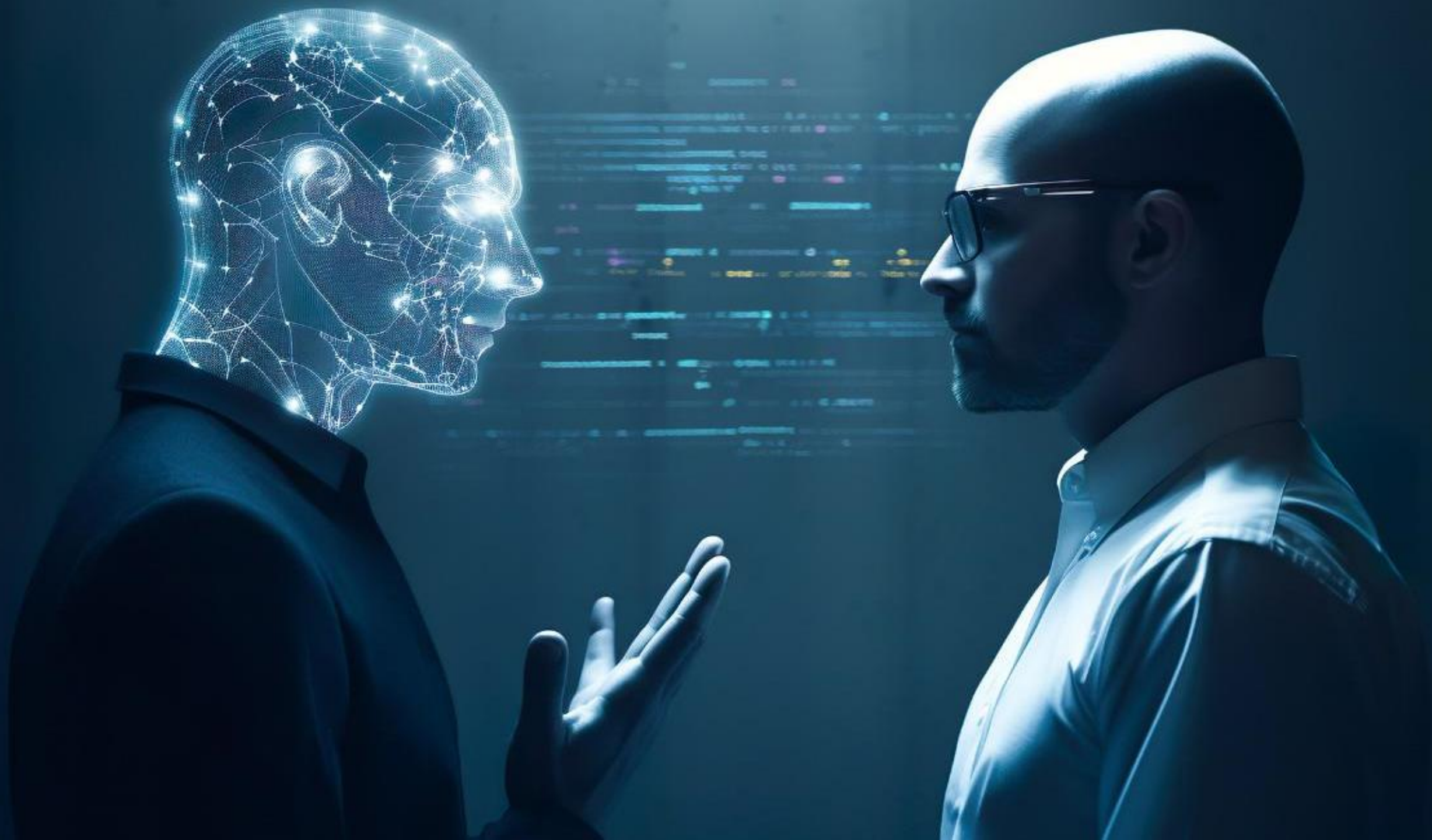


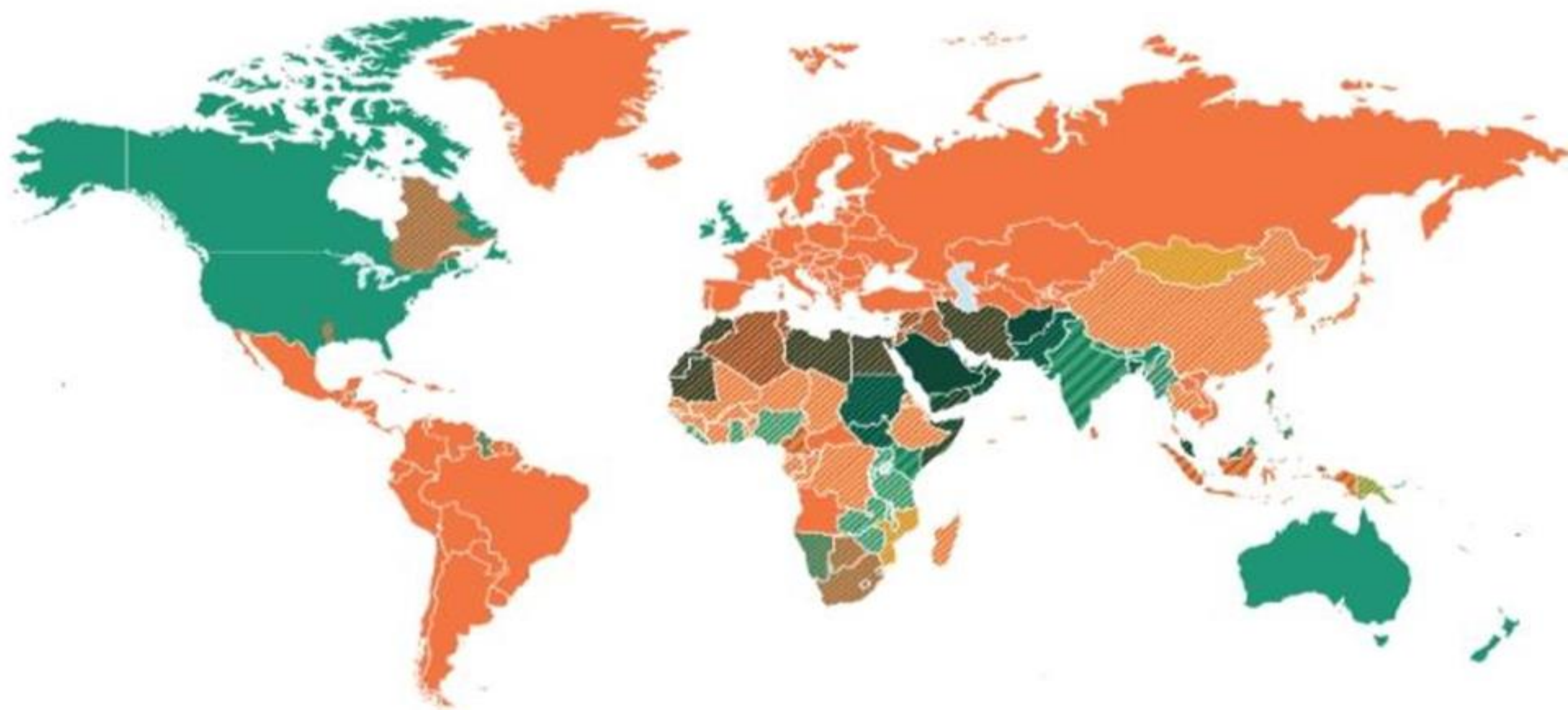
A network of uniquely identifiable things that communicate without human interaction using IP connectivity.

Internet of Everything



Bringing together the people, process, data, and things to make networked connections more meaningful by turning information into actions.





■ Civil Law ■ Common Law ■ Islamic Law ■ Customary Law ▨ Mixed System

THE RULE OF LAW



Equality
under the law



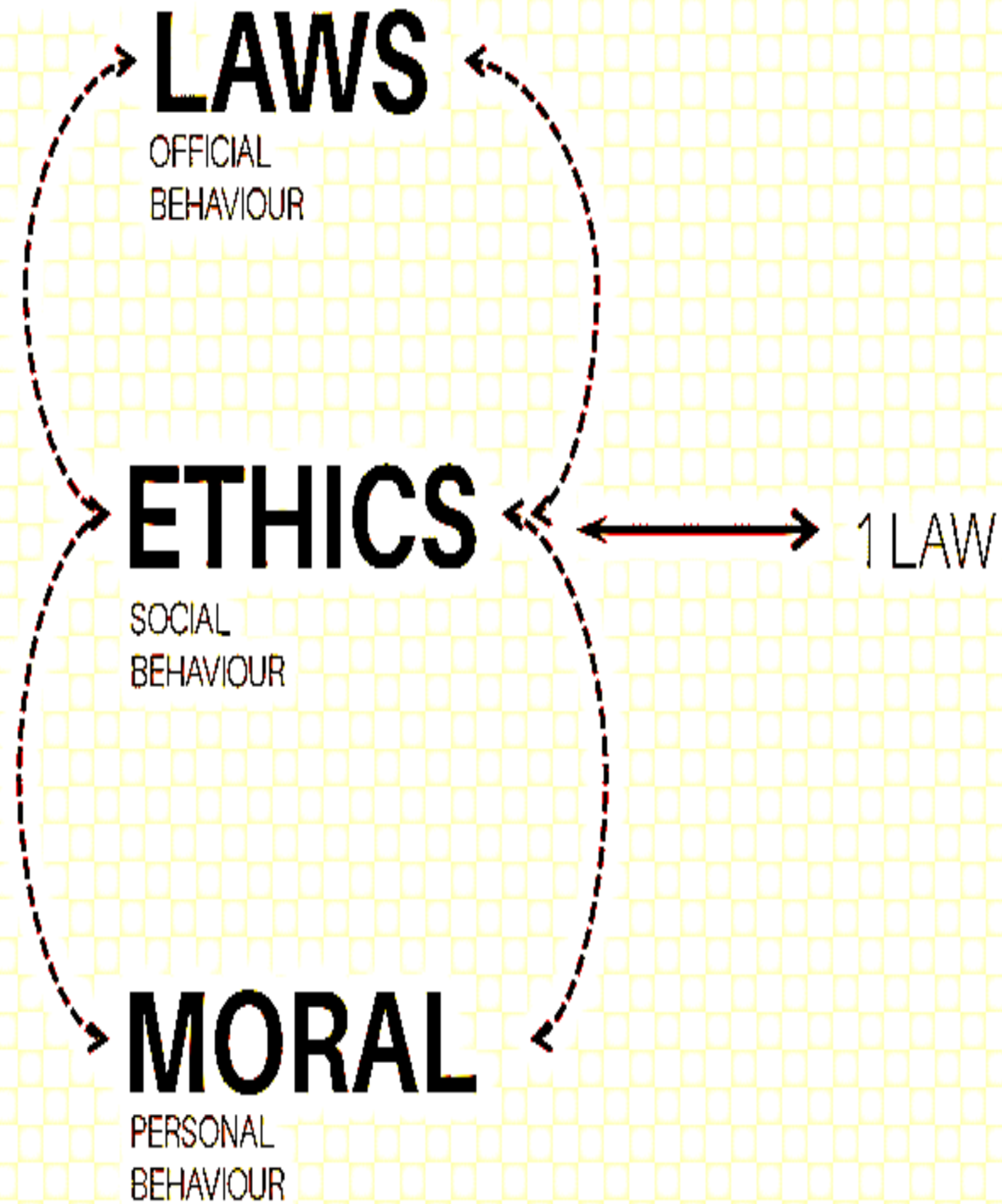
Transparency
of law



Independent
judiciary



Accessible
legal remedy



RULES



Made by groups
and their leaders



Group leaders make
sure members of the
group follow the rules



There are consequences
for people in the group
for not following
group rules

LAWS



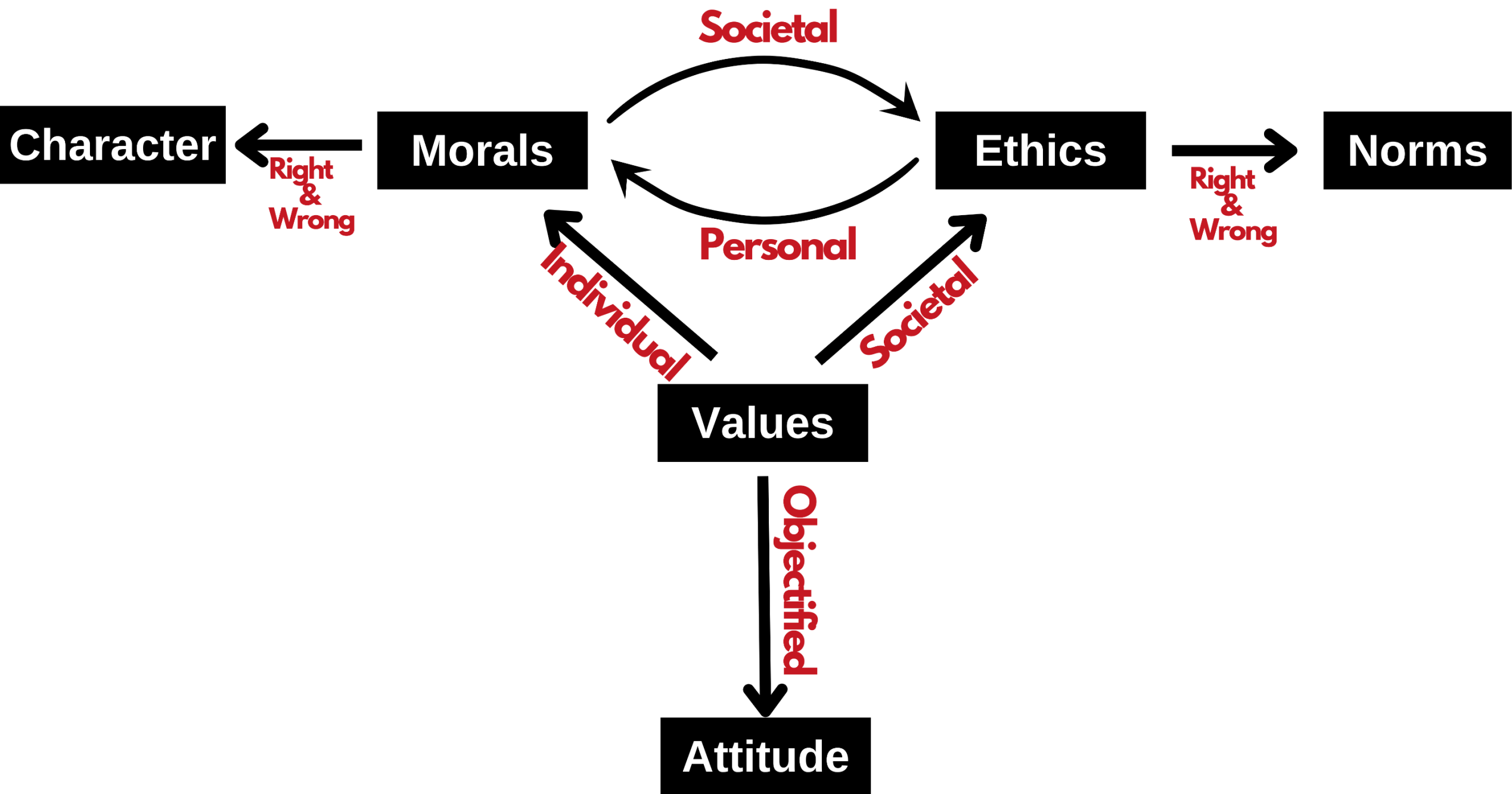
Made by parliament
and the courts



Police and courts
make sure people
follow the laws



Legal consequences
for not following
laws include fines
and jail time



Knowledge

(Informs)

Principles

Why

Codes of Conduct
(Ethics, morals, laws, etc)

How

Behavior

Consequence

What

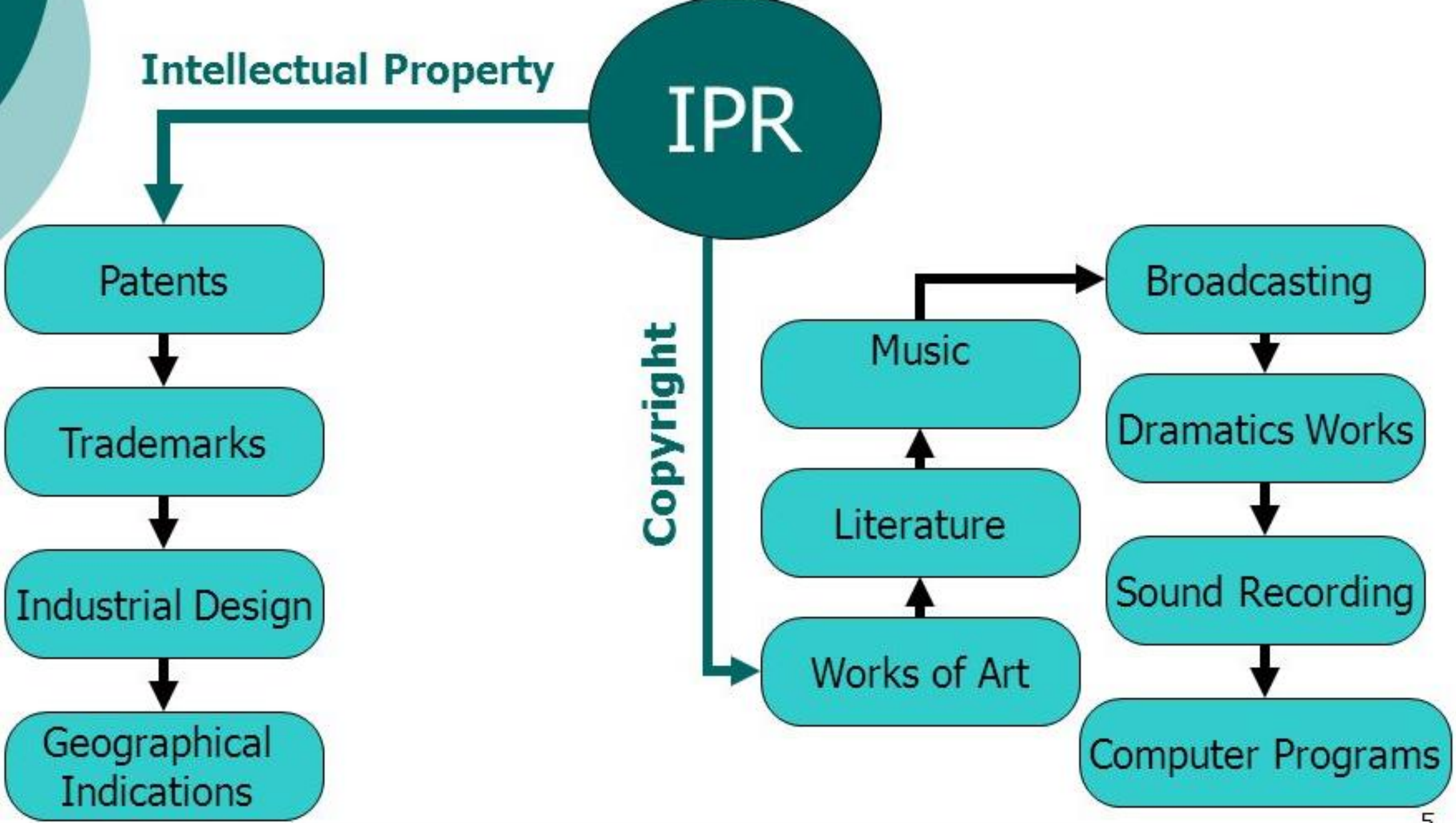
Values
(Filter)

(Influence)

Created Reality

Beliefs

Experiences







Elon Musk's company Neuralink has received approval from the FDA to begin the first human trials of its brain-computer interface (BCI) device. The announcement was made on May 25, 2023, and marks a major milestone for the company



Disinformation

Misinformation

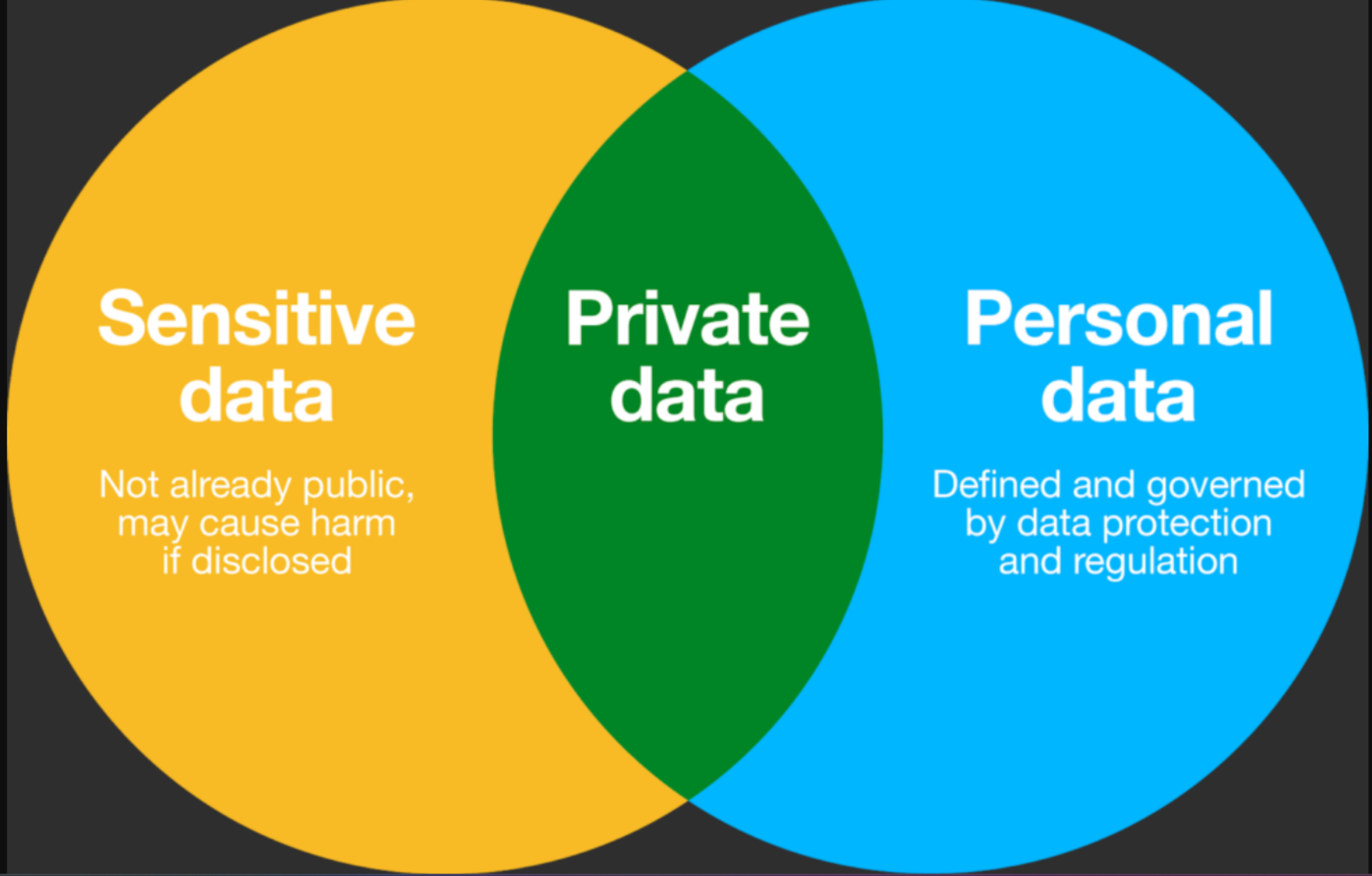
...is false info
that spreads
– **regardless
of intent** to
mislead
others

...is
deliberately
created to
harm,
manipulate, or
mislead.

...is based on
fact but taken
out of context
**to mislead,
harm, or
manipulate.**

Malinformation





A Venn diagram with two overlapping circles. The left circle is yellow and labeled 'Sensitive data'. The right circle is blue and labeled 'Personal data'. The intersection of the two circles is a darker green color and is labeled 'Private data'. Below the yellow circle's title is the text 'Not already public, may cause harm if disclosed'. Below the blue circle's title is the text 'Defined and governed by data protection and regulation'.

Sensitive data

Not already public,
may cause harm
if disclosed

Private data

Personal data

Defined and governed
by data protection
and regulation

ETHICAL

Regulation

Privacy

Mitigation of Bias

Transparency

Relevance



LEGAL

Governance

Confidentiality

Liability

Accuracy

Decision Making



Sam Altman
CEO, OPENAI

It's, it's one of my areas of greatest concern.

Mr. Samuel Altman



Sen. Josh Hawley (R-Mo.)

Should we be concerned about models that can?

MR. HAWLEY

MR. BLUMEN

Fastest growing vs. fastest declining jobs

Top 10 fastest growing jobs

1.	AI and Machine Learning Specialists
2.	Sustainability Specialists
3.	Business Intelligence Analysts
4.	Information Security Analysts
5.	Fintech Engineers
6.	Data Analysts and Scientists
7.	Robotics Engineers
8.	Electrotechnology Engineers
9.	Agricultural Equipment Operators
10.	Digital Transformation Specialists

Source

World Economic Forum, Future of Jobs Report 2023.

Top 10 fastest declining jobs

1.	Bank Tellers and Related Clerks
2.	Postal Service Clerks
3.	Cashiers and ticket Clerks
4.	Data Entry Clerks
5.	Administrative and Executive Secretaries
6.	Material-Recording and Stock-Keeping Clerks
7.	Accounting, Bookkeeping and Payroll Clerks
8.	Legislators and Officials
9.	Statistical, Finance and Insurance Clerks
10.	Door-To-Door Sales Workers, News and Street Vendors, and Related Workers

Note

The jobs which survey respondents expect to grow most quickly from 2023 to 2027 as a fraction of present employment figures



*Loss of
Privacy **and** Confidentiality*

Loss of Routine Jobs

*Writers Guild of America
Against AI ChatGPT Generative Pre-Trained Transformer*

Age of Disinformation

Cloned Voices, Driverless Cars, Virtual Torts

*Lack of Unified Regulation on
AI*

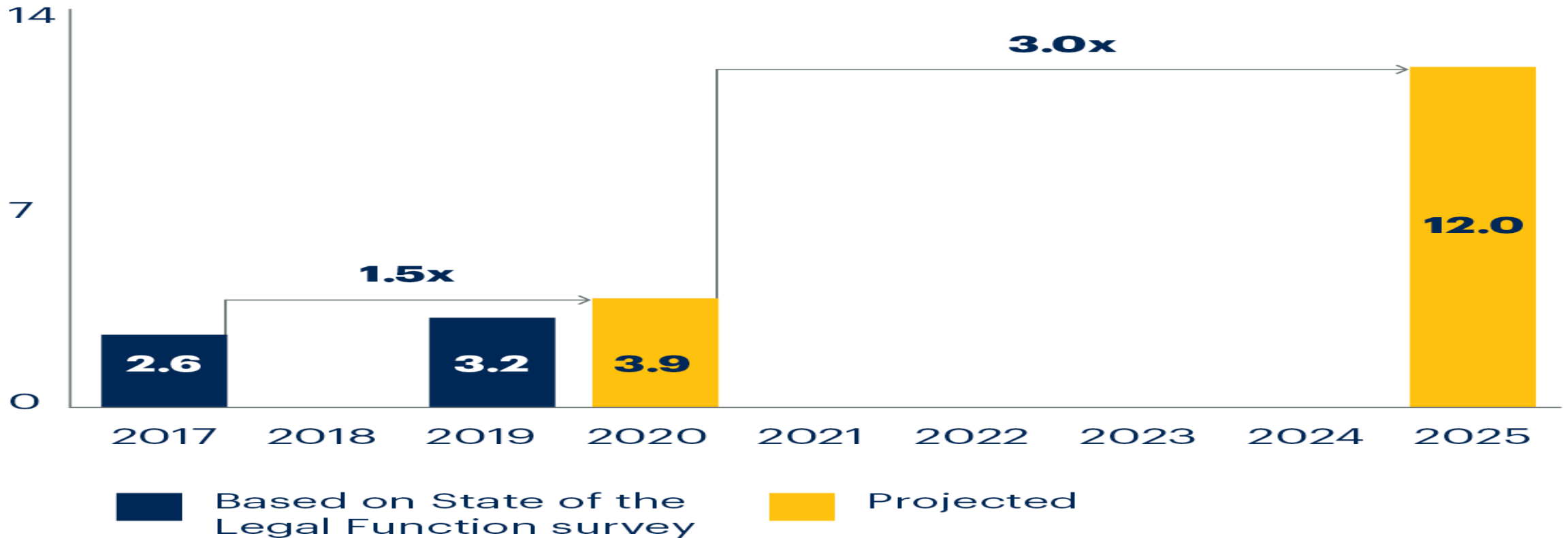
Cyber Forensics

IPRs Lapses

*Drone Aviation with AI
Metaverse*

Legal tech budgets are growing amid crisis

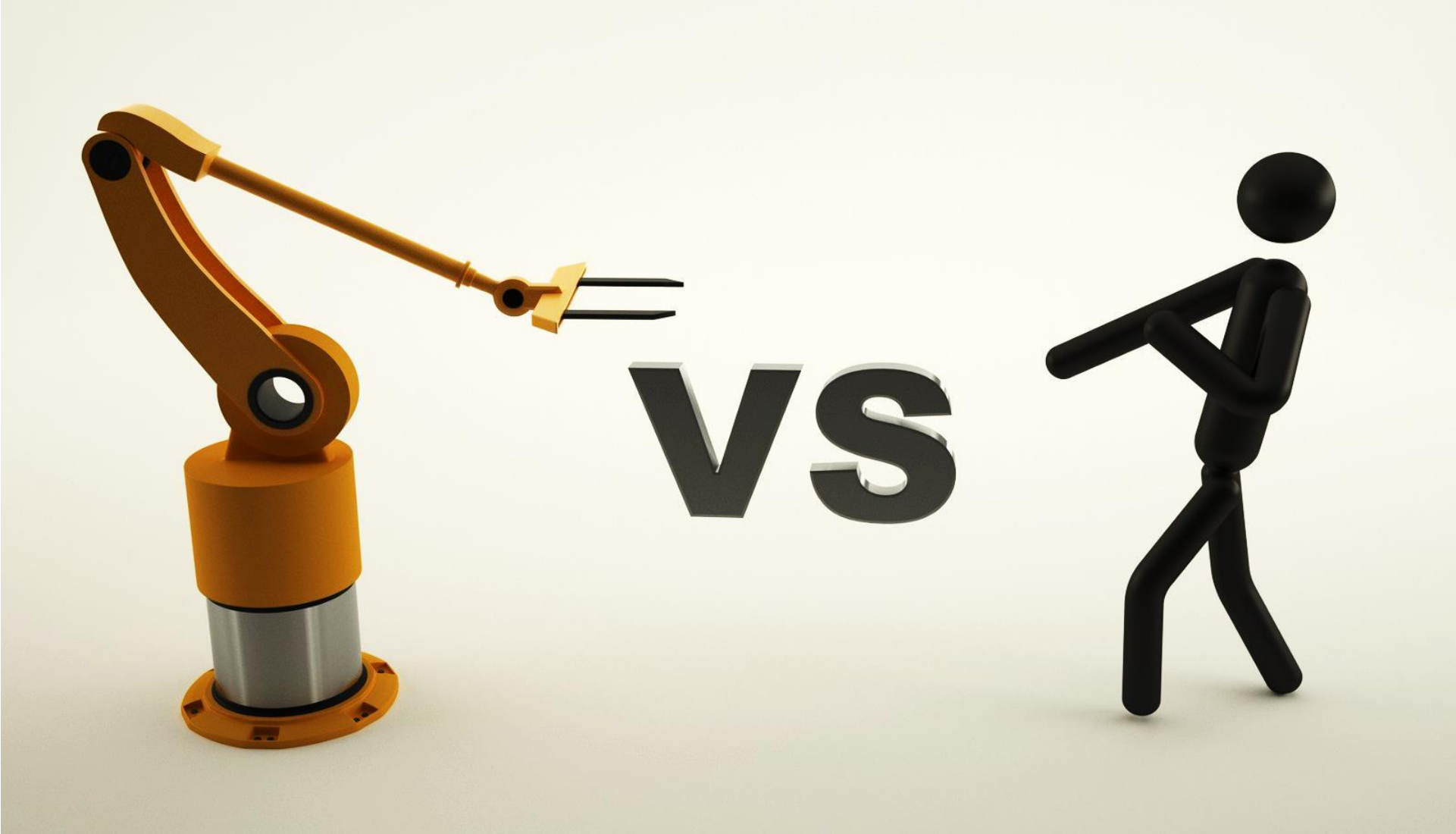
Average legal technology budget as a percentage of total legal department budget



gartner.com/SmarterWithGartner

n = 142 (2018), n = 116 (2020)
Source: Gartner State of the Legal Function
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Gartner





**“First the machines will
do A LOT of jobs
for us and not be
super intelligent...”**

**A few decades
after that though
the intelligence is
strong enough to
be a concern.”
-Bill Gates**