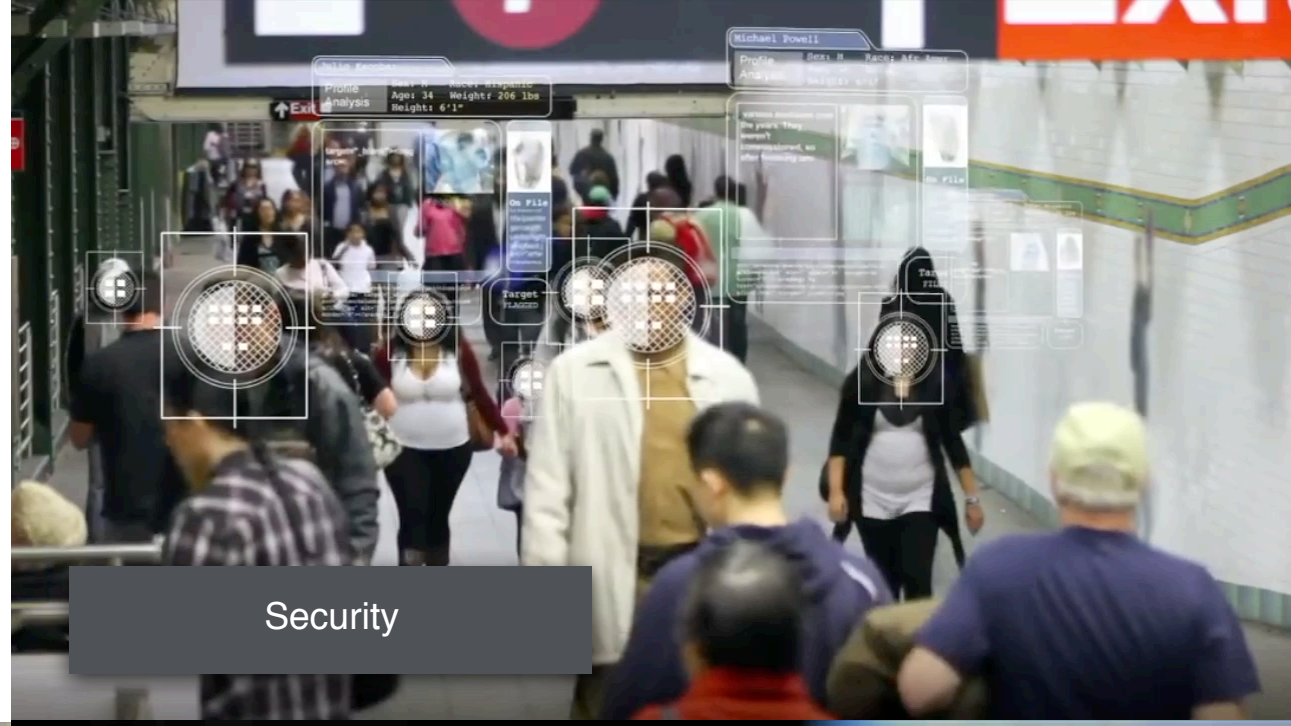
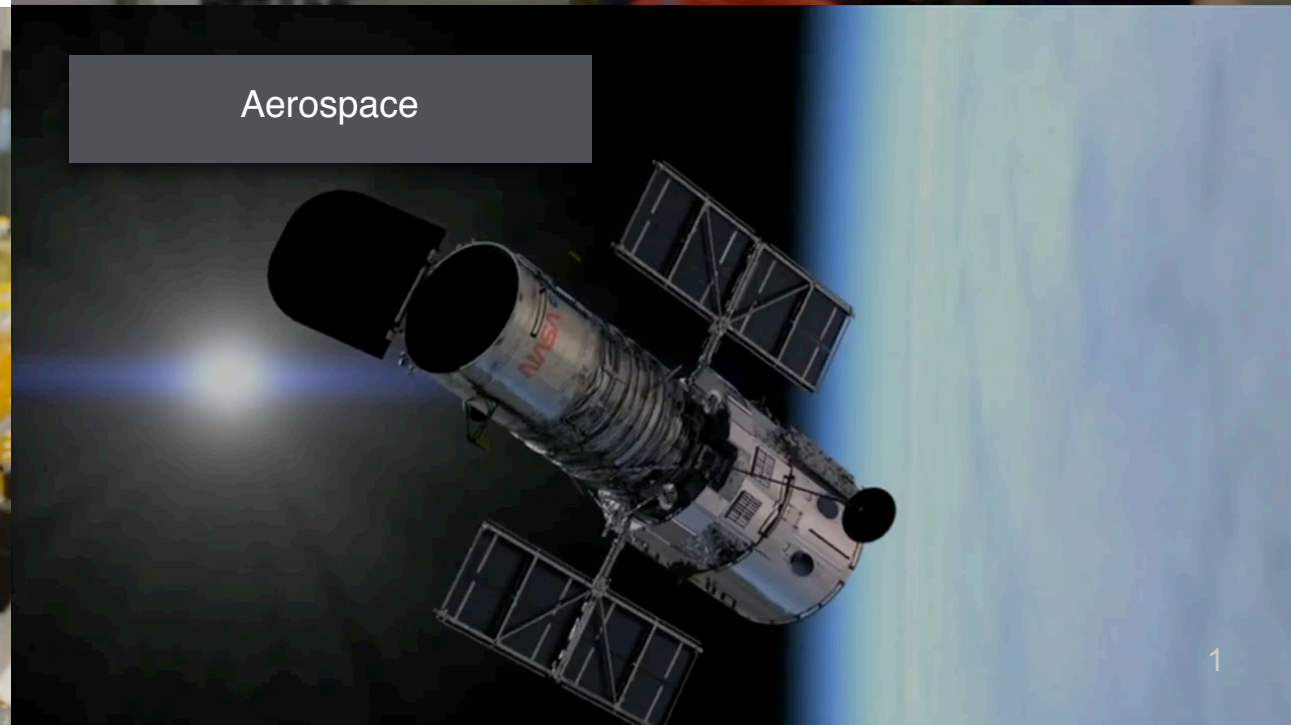
AI is the new Electricity





A DAY IN DATA

The exponential growth of data is undisputed, but the numbers behind this explosion – fuelled by internet of things and the use of connected devcies – are hard to comprehend, particularly when looked at in the context of one day

DEMYSTIFIYING DATA UNITS

From the more familiar 'bit' or 'megabyte', larger units of measurement are more frequently being used to explain the masses of data

Unit		Value	Size
b	bit	0 or 1	1/8 of a byte
B	byte	8 bits	1 byte
KB	kilobyte	1,000 bytes	1,000 bytes
MB	megabyte	$1,000^2$ bytes	1,000,000 bytes
GB	gigabyte	$1,000^3$ bytes	1,000,000,000 bytes
TB	terabyte	$1,000^4$ bytes	1,000,000,000,000 bytes
PB	petabyte	$1,000^5$ bytes	1,000,000,000,000,000 bytes
EB	exabyte	$1,000^6$ bytes	1,000,000,000,000,000,000 bytes
ZB	zettabyte	$1,000^7$ bytes	1,000,000,000,000,000,000,000 bytes
YB	yottabyte	$1,000^8$ bytes	1,000,000,000,000,000,000,000,000 bytes

*A lowercase "b" is used as an abbreviation for bits, while an uppercase "B" represents bytes.

463EB

of data will be created every day by 2025

IDC

500m

tweets are sent every day

Twitter

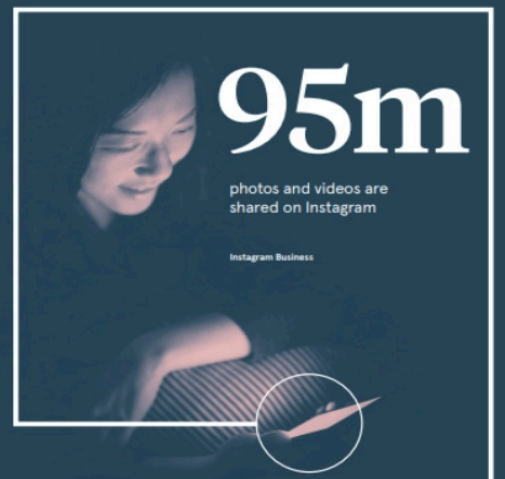
4PB

of data created by Facebook, including

350m photos

100m hours of video watch time

Facebook Research



95m

photos and videos are shared on Instagram

Instagram Business

65bn

messages sent over WhatsApp and two billion minutes of voice and video calls made

Facebook

320bn

emails to be sent each day by 2021

306bn

emails to be sent each day by 2020

294bn

billion emails are sent

Radicati Group

3.9bn

people use emails

4TB

of data produced by a connected car

Intel

Searches made a day → **5bn**

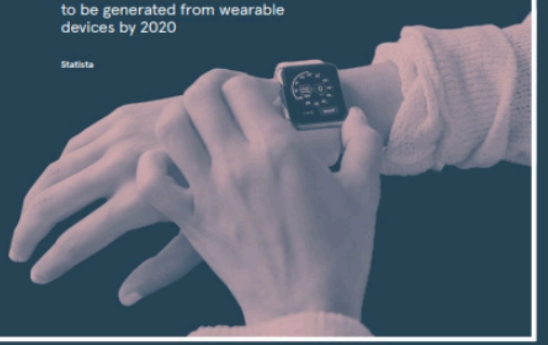
Searches made a day from Google → **3.5bn**

Smart Insights

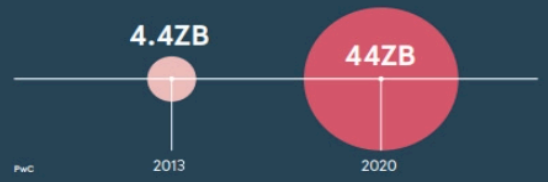
28PB

to be generated from wearable devices by 2020

Statista



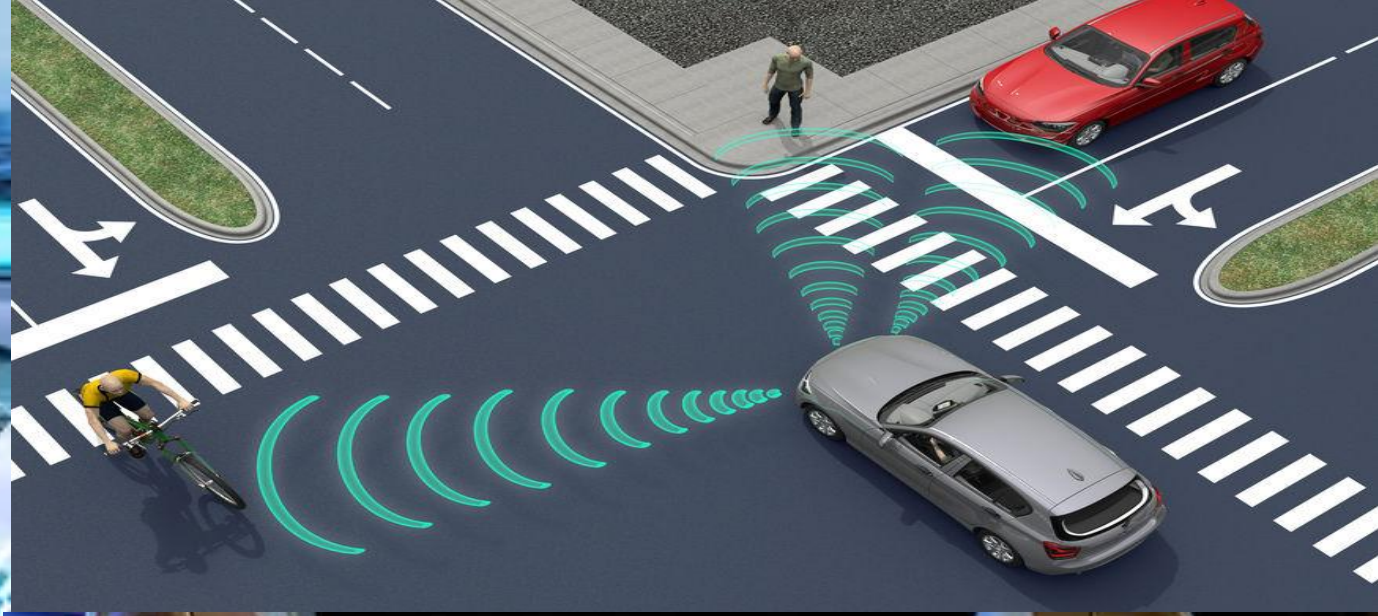
ACCUMULATED DIGITAL UNIVERSE OF DATA



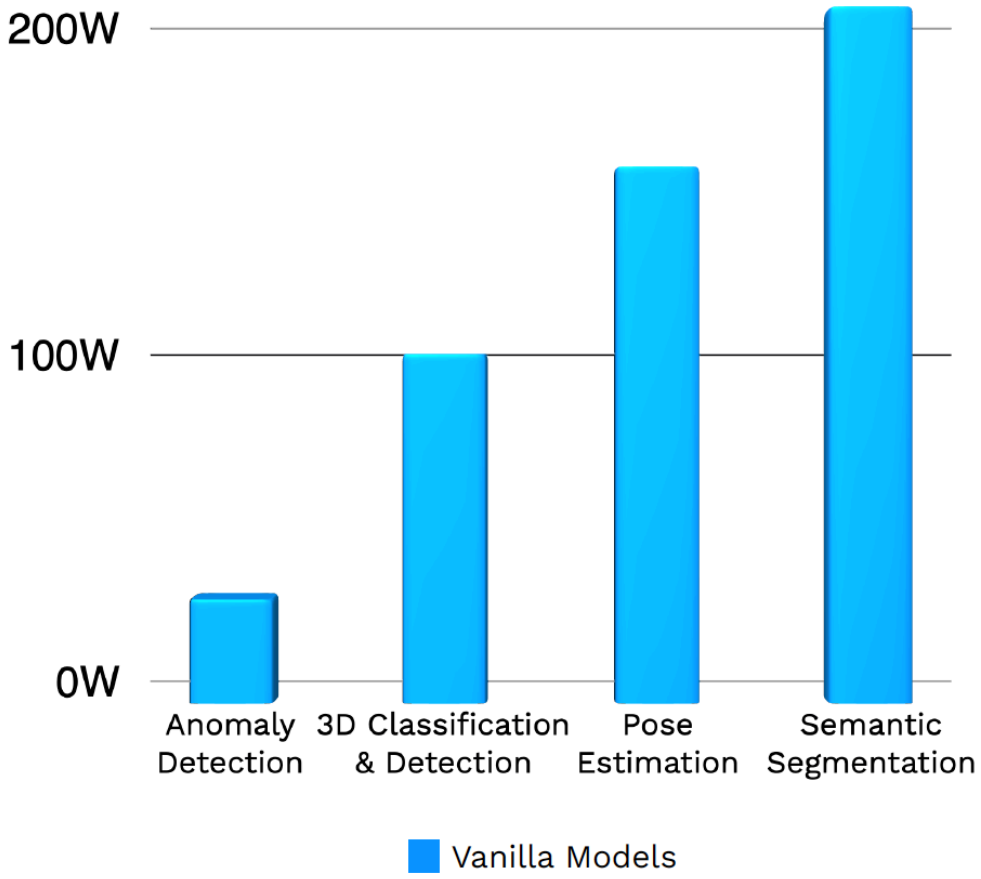
PwC

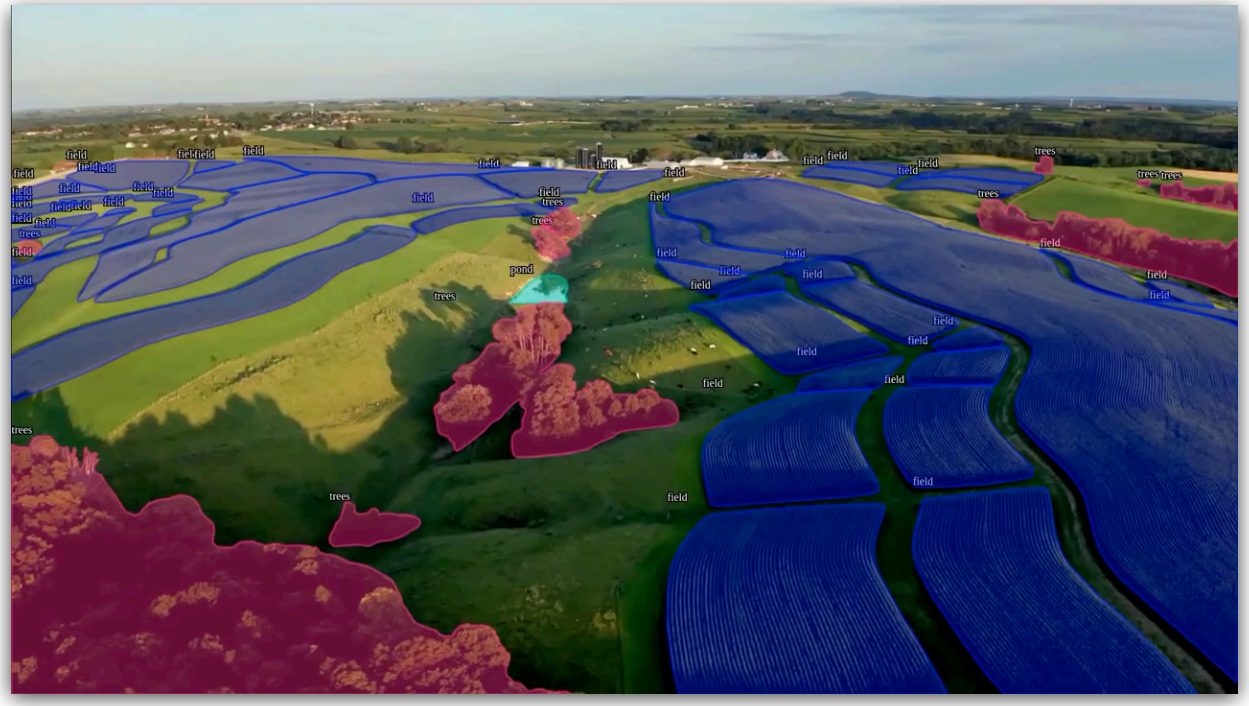
RACONTEUR


PR2



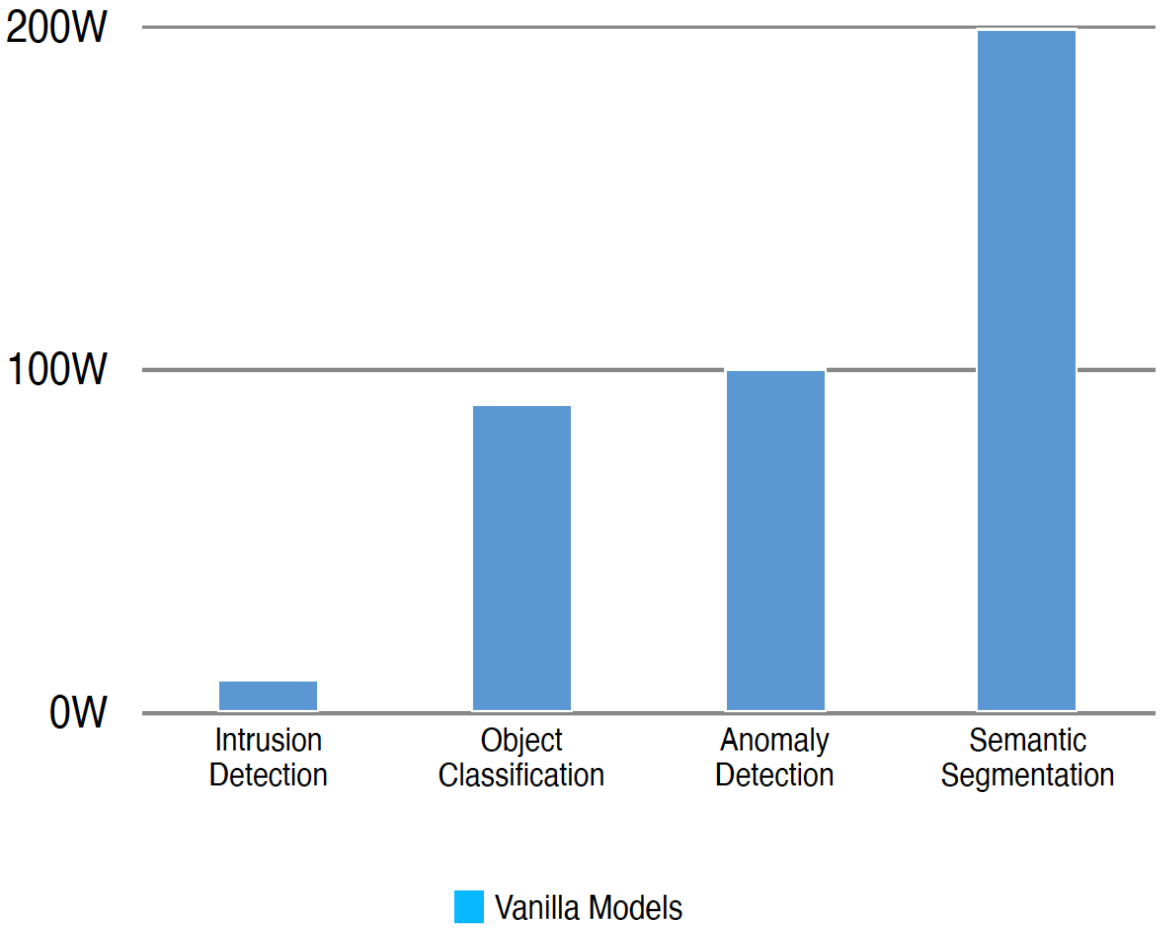
No Free Lunch





Aerial Segmentation for crop monitoring

No Free Lunch

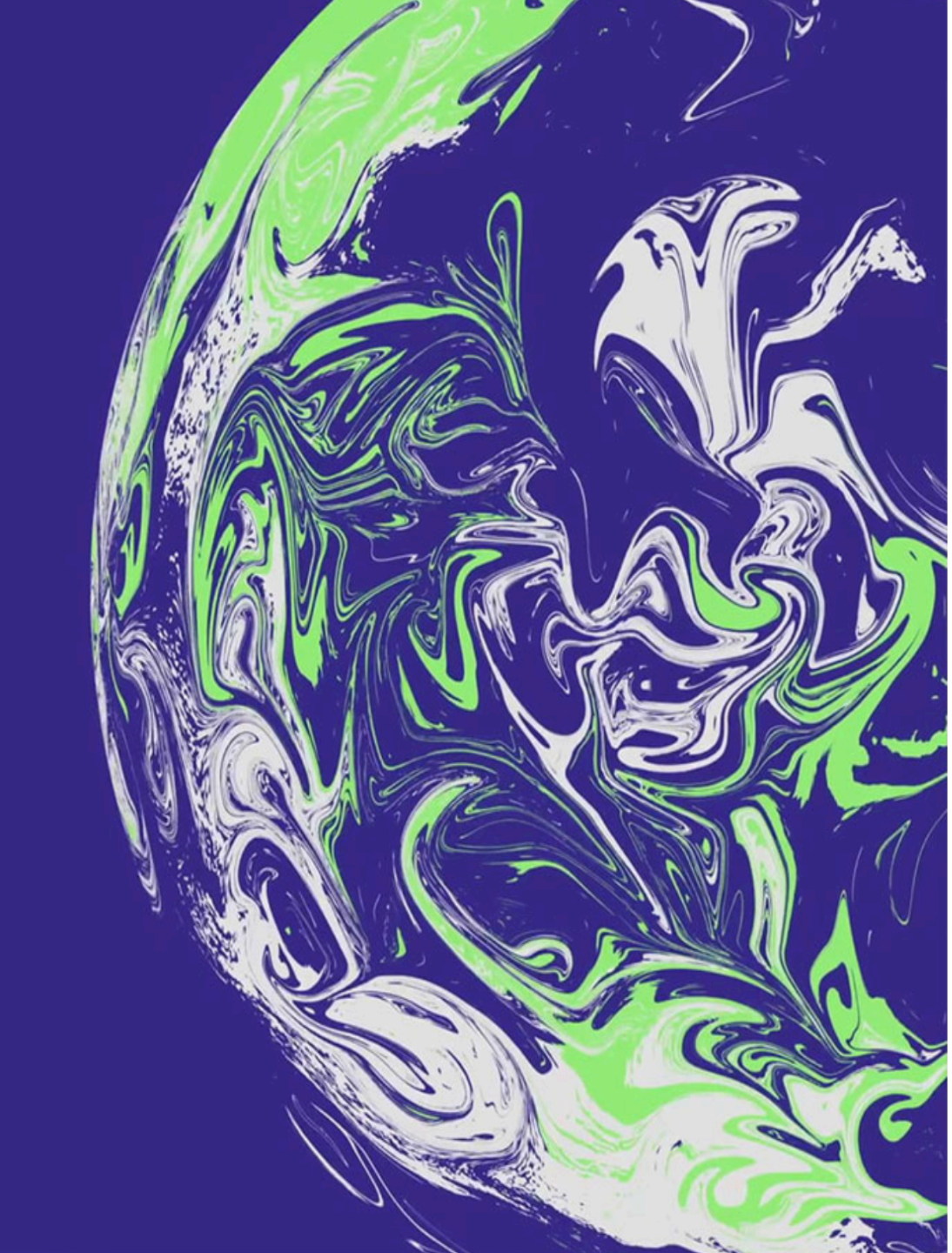


Carbon footprint:
A huge problem

The carbon footprint associated to a single training of an AI models is **more than twice** the impact of a standard American citizen's daily life

OF A WHOLE YEAR!

American Council for Energy-Efficient Economy

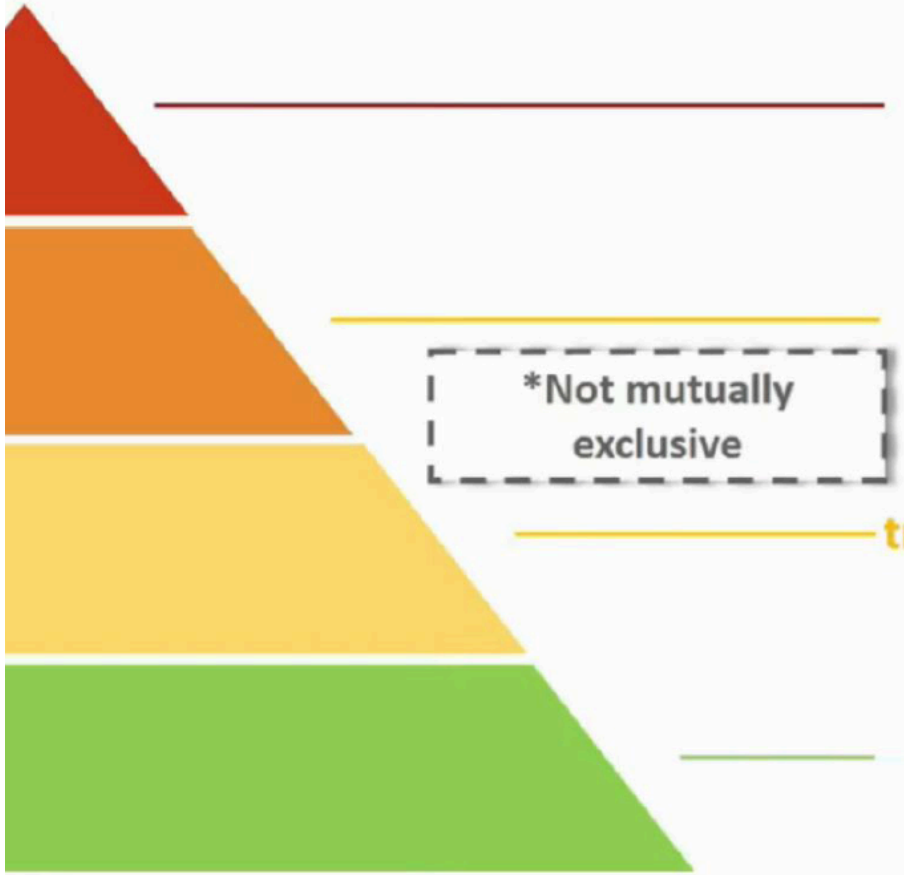


Game over

COP26 - Glasgow

- Reduction of 45% of CO_2 emission by 2030
- Zero emission by 2050
- Carbon credits

A risk-based approach to regulation



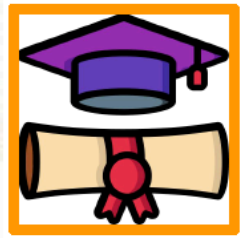
Unacceptable risk
e.g. social scoring
— **Prohibited**

High risk
e.g. recruitment, medical devices
— **Permitted** subject to compliance with AI requirements and ex-ante conformity assessment

*Not mutually exclusive

AI with specific transparency obligations
'Impersonation' (bots)
— **Permitted** but subject to information/transparency Obligations

Minimal or no risk
— **Permitted** with no restrictions



European Commission


PR2