

Designing a Sustainable Future:

Sustainable Energy, Environment, People and Planet

Sustainable Use of Exponential Technologies such as Artificial Intelligence

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gerdtube.com



futuristgerd.com



thegoodfuturefilm.com

FUTURE
TENSE

Zagreb, Croatia

Museum of
Contemporary
Art | MSU

Avenija Dubrovnik 17

Source: MitUnsDieZukunft (via Youtube)



R. Buckminster Fuller
Mid 1974

“Humanity is acquiring all the right technology
for all the wrong reasons.”

R. Buckminster Fuller

The image features a family silhouette (two adults and two children) standing on a dark horizon, looking out over a sunset sky. A green grid pattern is overlaid on the sky, with several numerical data points in small boxes: 84583, 24564564, 14244564, and 45364676. The main text is centered in large, white, bold, sans-serif font.

**THE FUTURE IS BETTER
THAN YOU THINK**

The 3 Revolutions

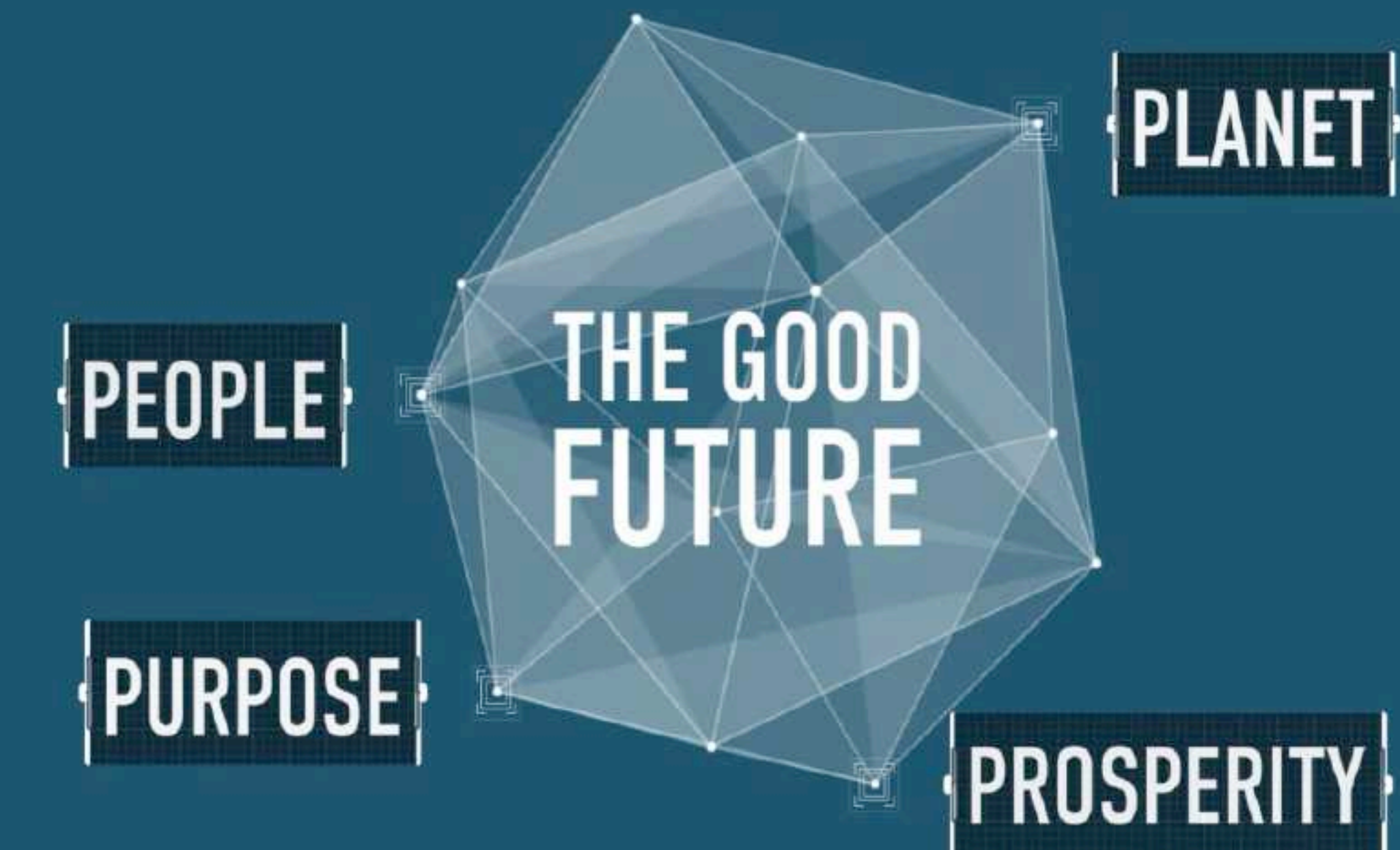
DIGITAL REVOLUTION



SUSTAINABILITY REVOLUTION



PURPOSE REVOLUTION



DIGITAL REVOLUTION+

INFO TECH



ENERGY & CLIMATE TECH



BIO TECH



AI TECH



PEOPLE



PLANET



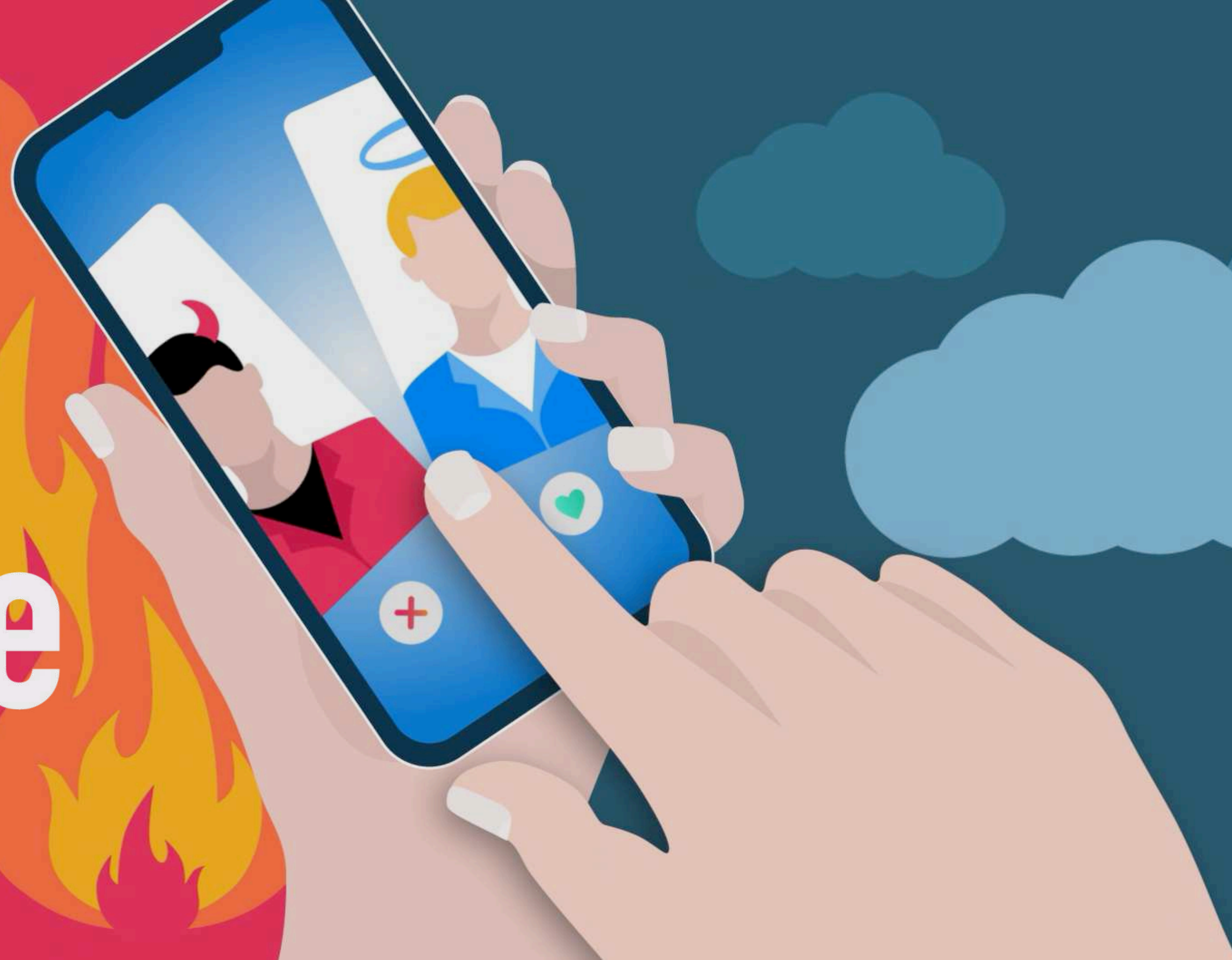
PURPOSE



PROSPERITY

Telos

Purpose



PEOPLE



PLANET

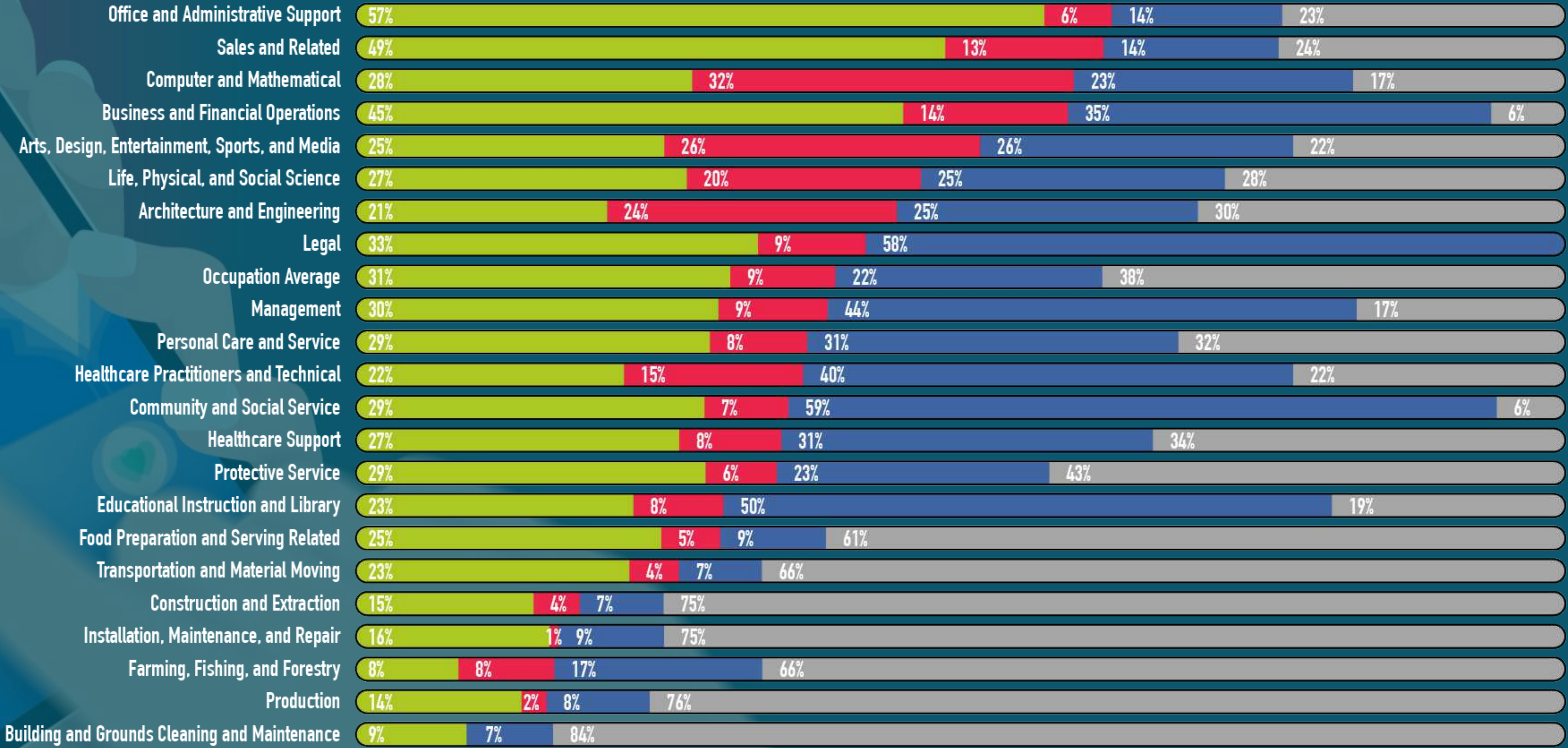


PURPOSE



PROSPERITY

GENERATIVE AI WILL TRANSFORM WORK ACROSS EVERY JOB CATEGORY



Source: Accenture



PEOPLE



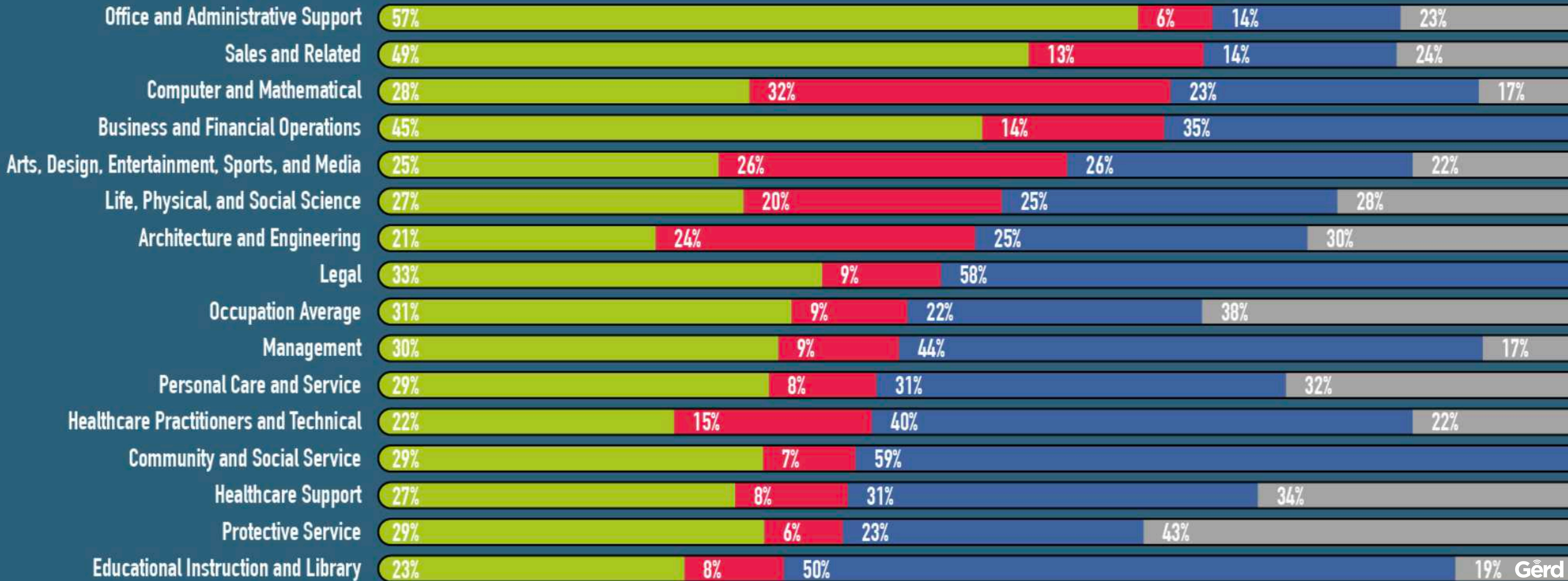
PLANET

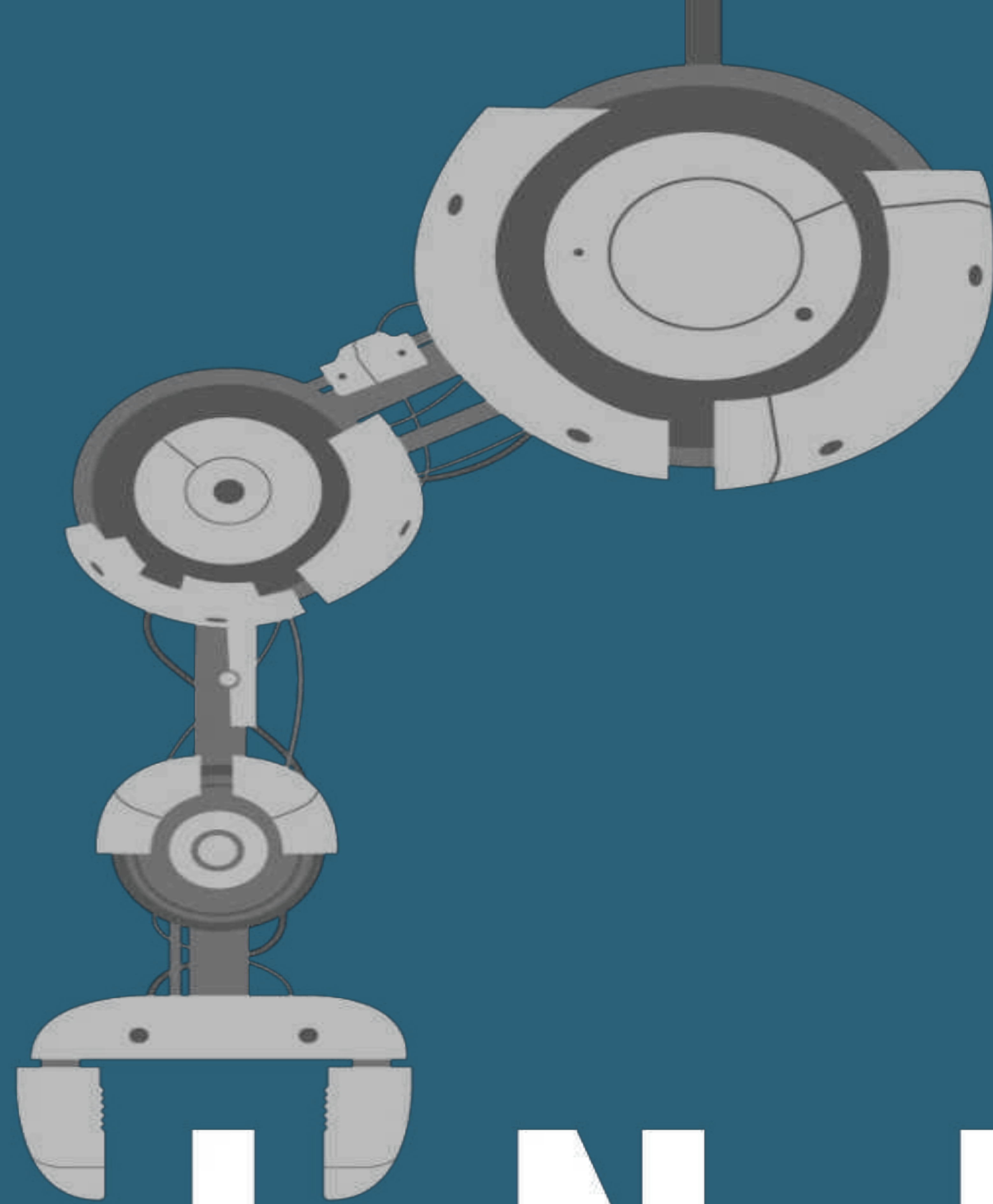
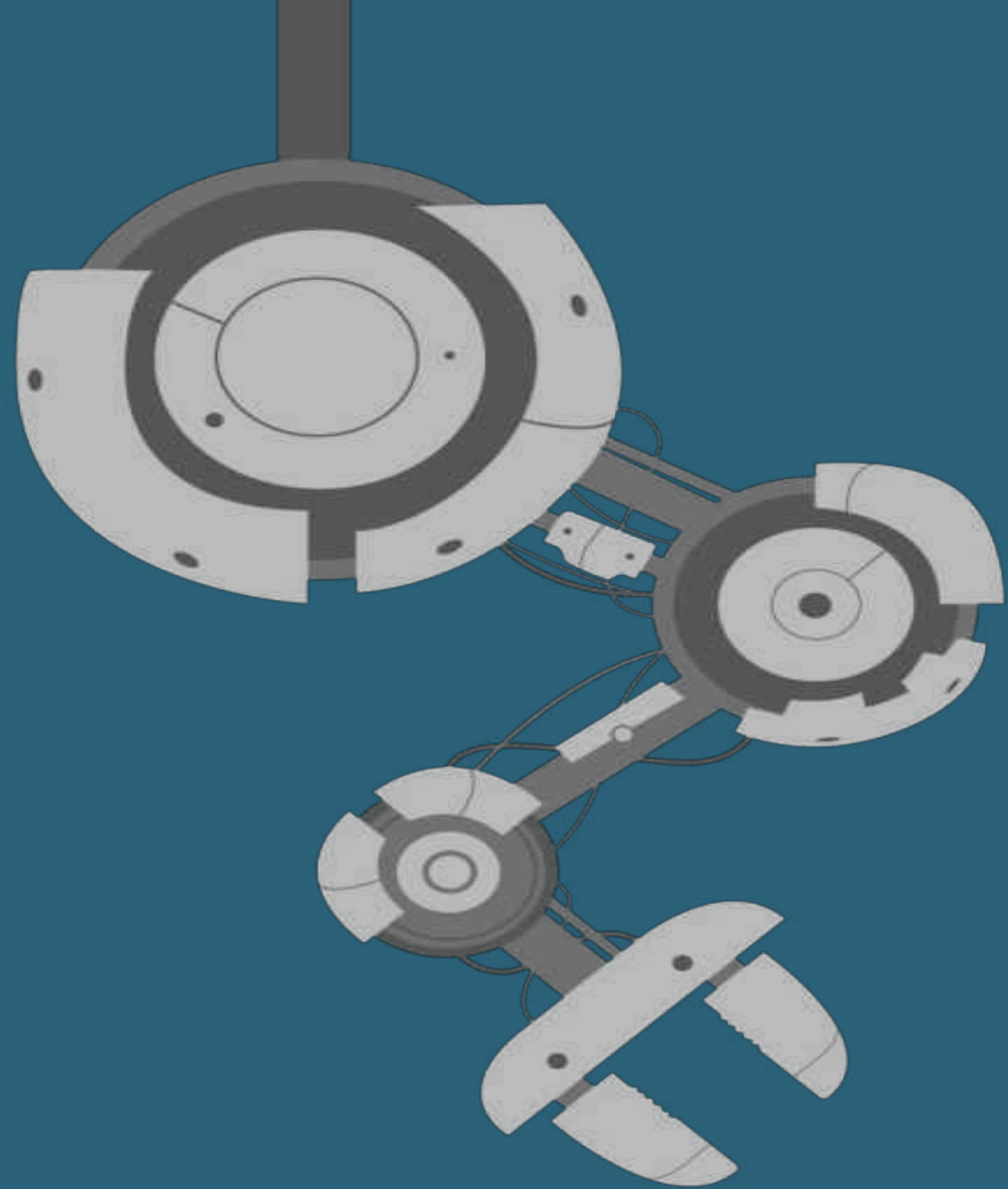


PURPOSE

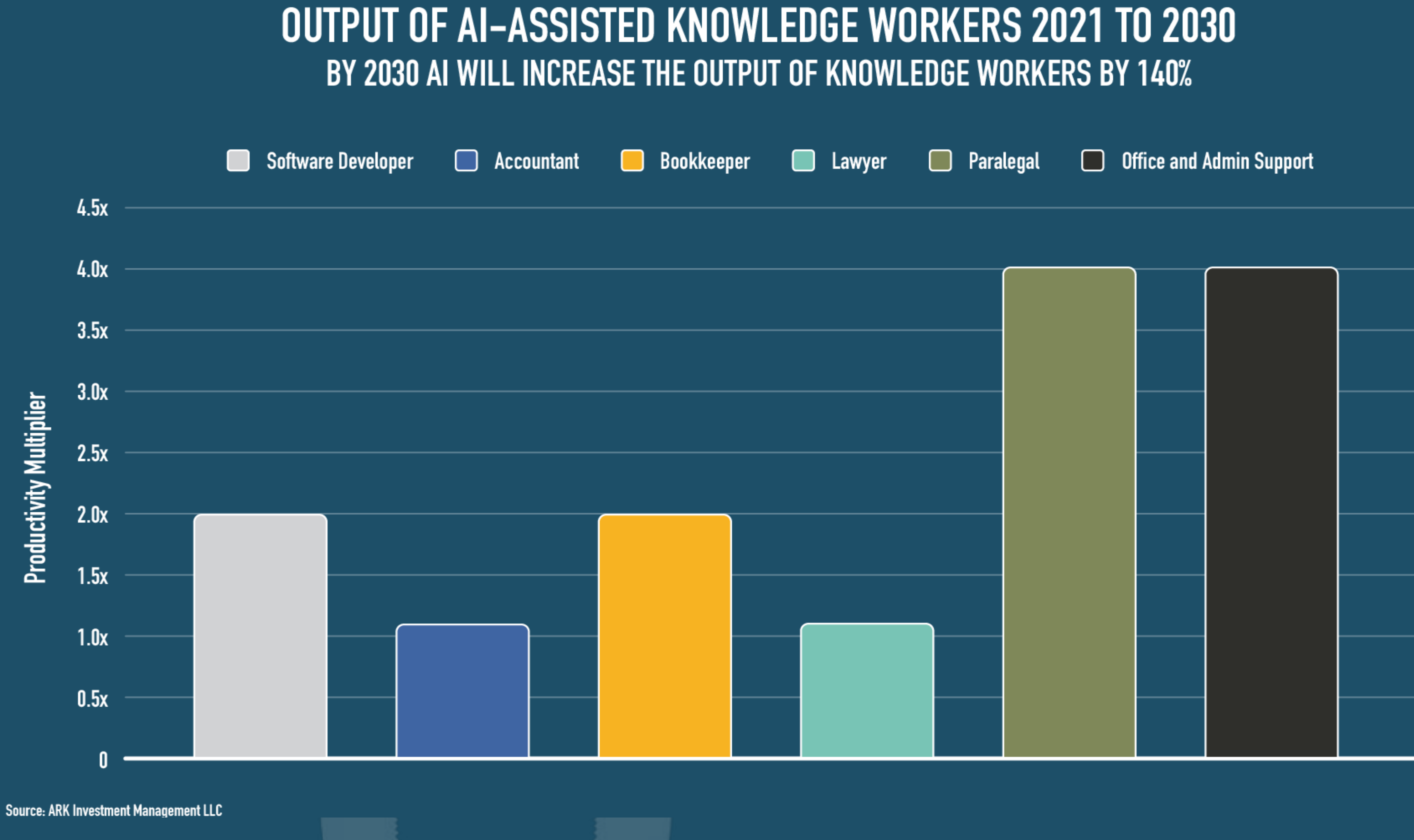
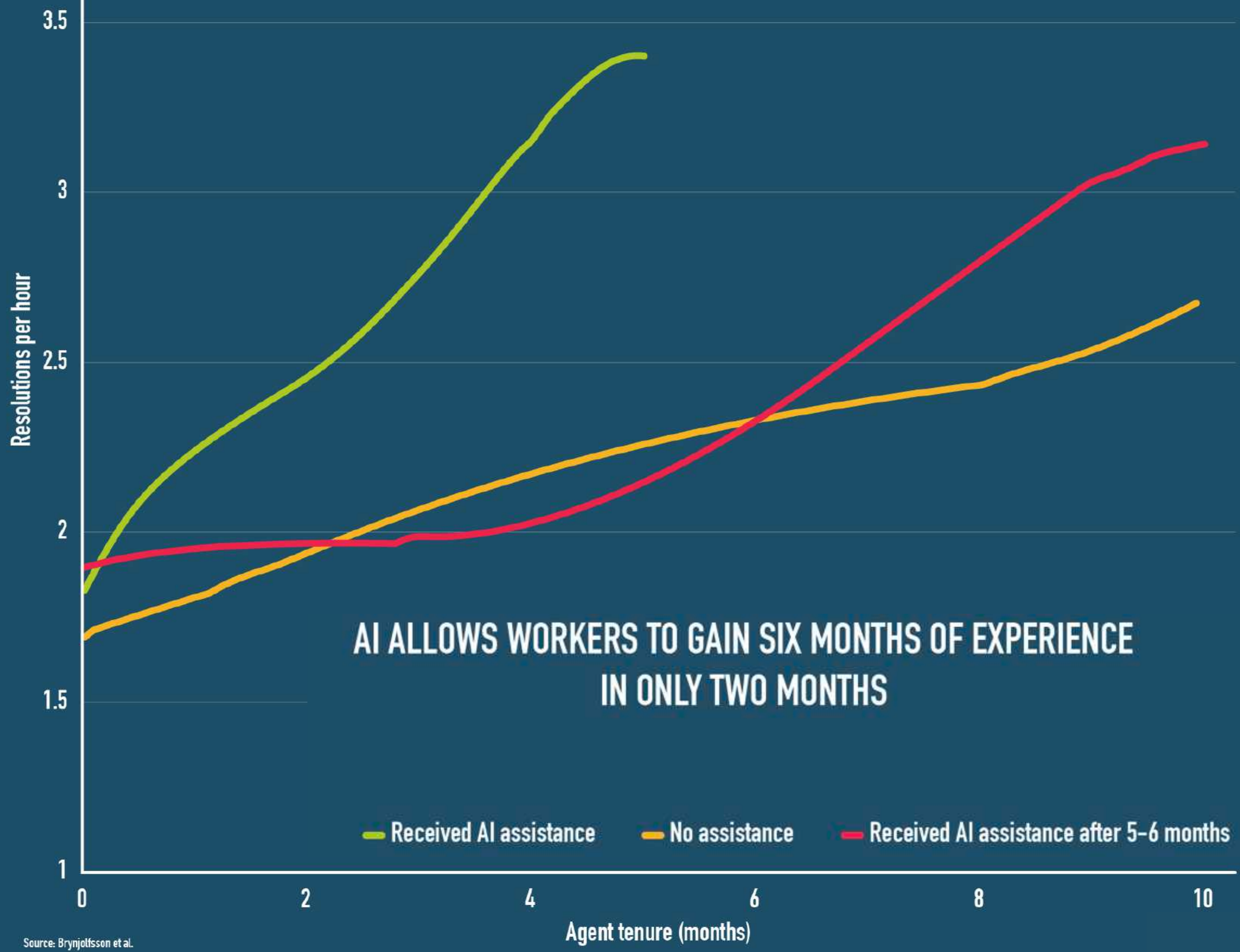


PROSPERITY





ROU'TTINE



ROU T ' I ' N E

Fastest growing vs. fastest declining jobs



Top 10 fastest growing jobs

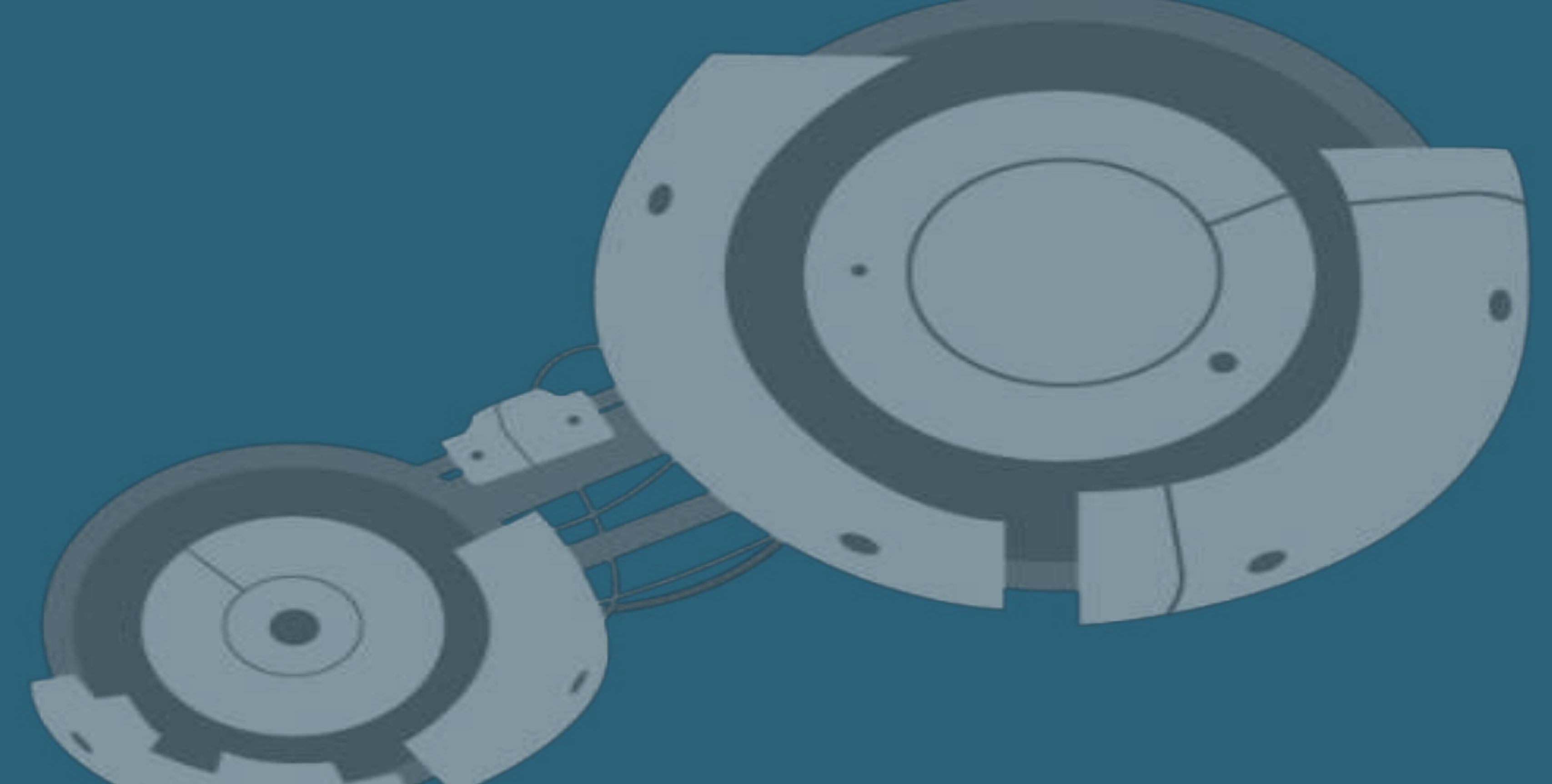
1.	AI and Machine Learning Specialists
2.	Sustainability Specialists
3.	Business Intelligence Analysts
4.	Information Security Analysts
5.	Fintech Engineers
6.	Data Analysts and Scientists
7.	Robotics Engineers
8.	Electrotechnology Engineers
9.	Agricultural Equipment Operators
10.	Digital Transformation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

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

Source
World Economic Forum, Future of Jobs Report 2023.

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



MOTHERBOARD
TECH BY VICE

GPT-4 Can't Replace Striking TV Writers, But Studios Are Going to Try

The desire to replace writers with AI is a symptom of the larger problem that the guild is fighting for—which is that companies do not value writers and their work.

ROU T T I N E

**“The real problem of humanity is the following:
We have Paleolithic emotions, medieval institutions
and godlike technology. And it is terrifically
dangerous.”**

Source: Grist (via Youtube)

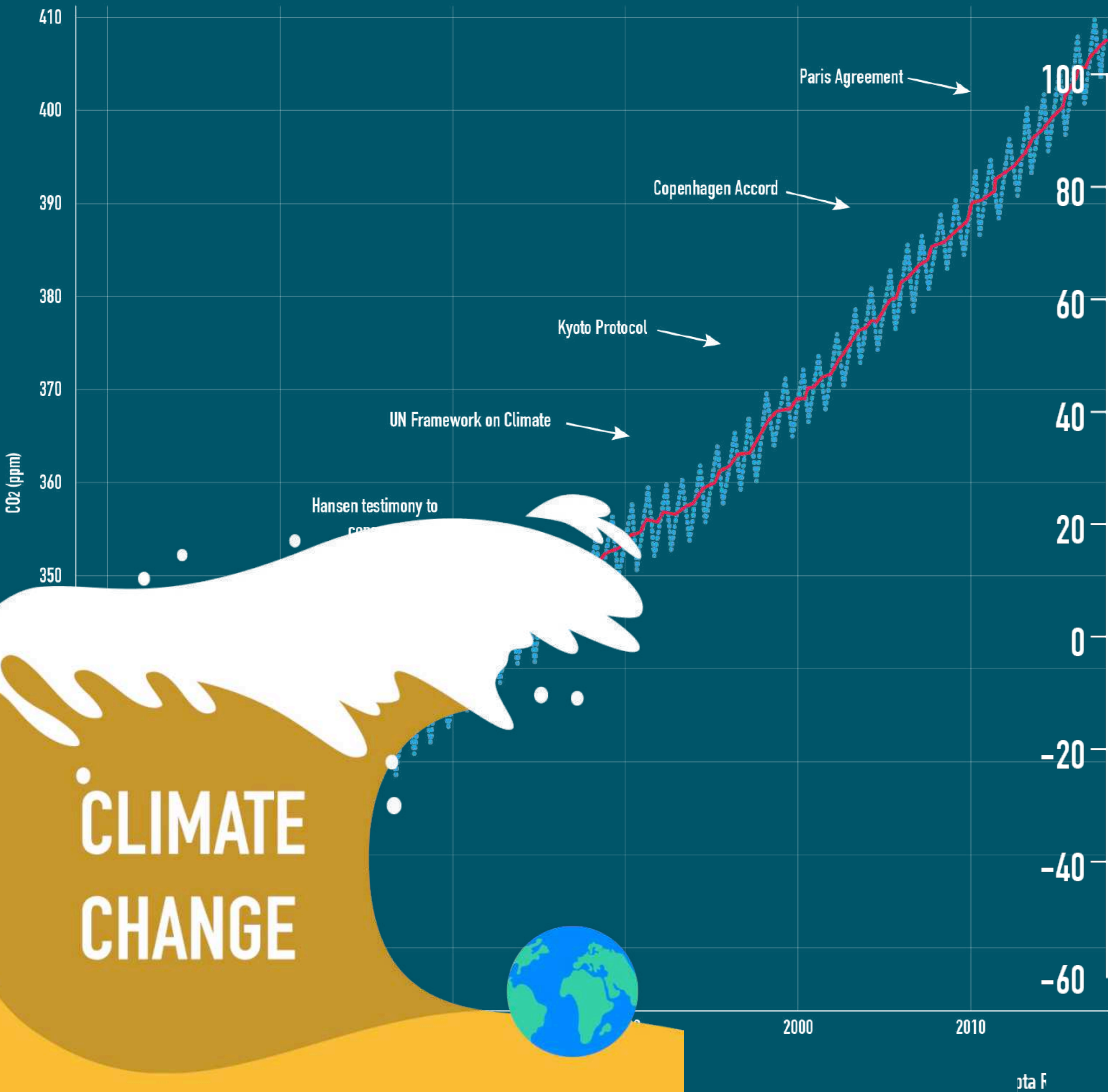


**ARTIFICIAL
GENERAL
INTELLIGENCE**

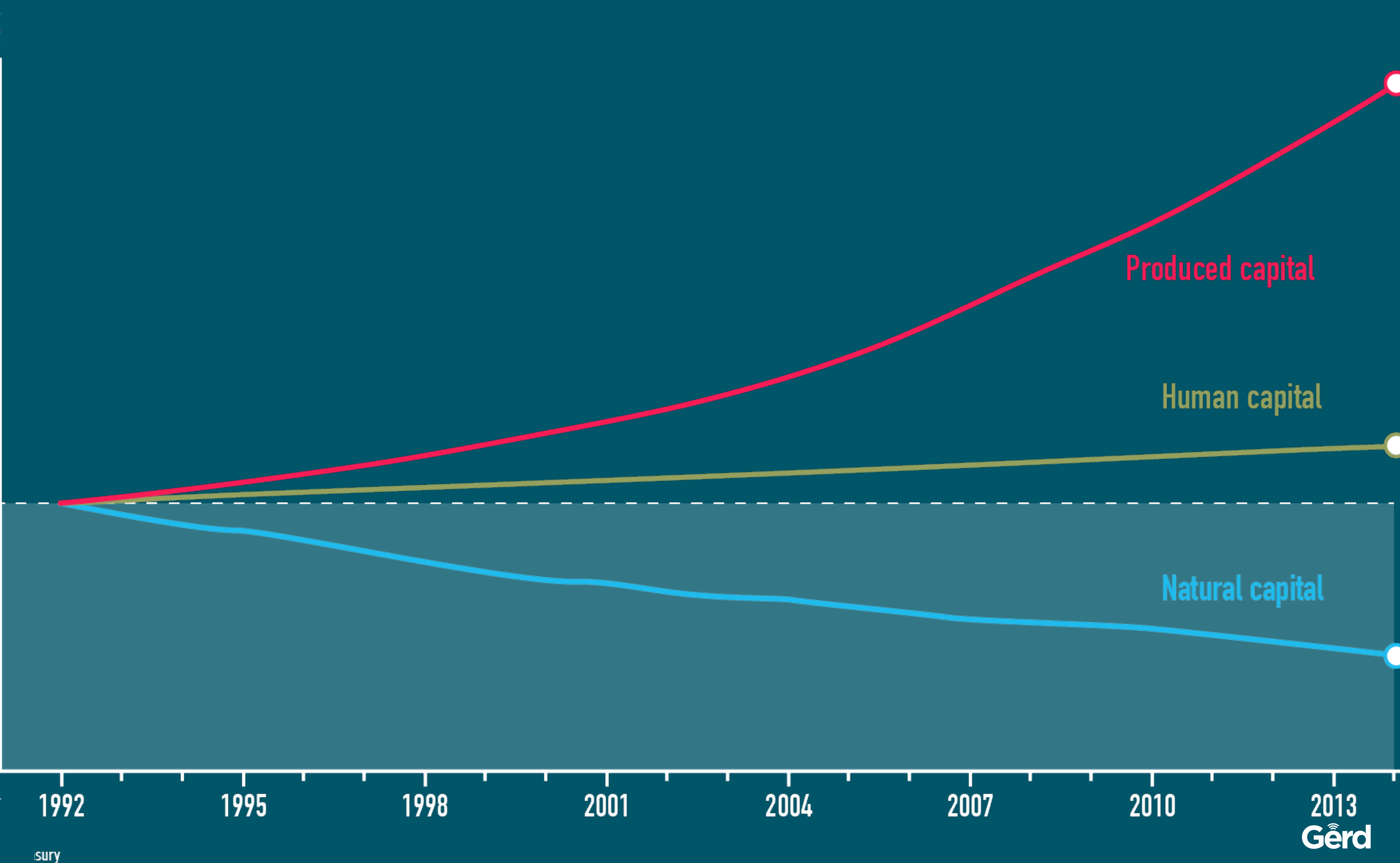
**CLIMATE
CHANGE**



MAUNA LOA MONTHLY AVERAGES

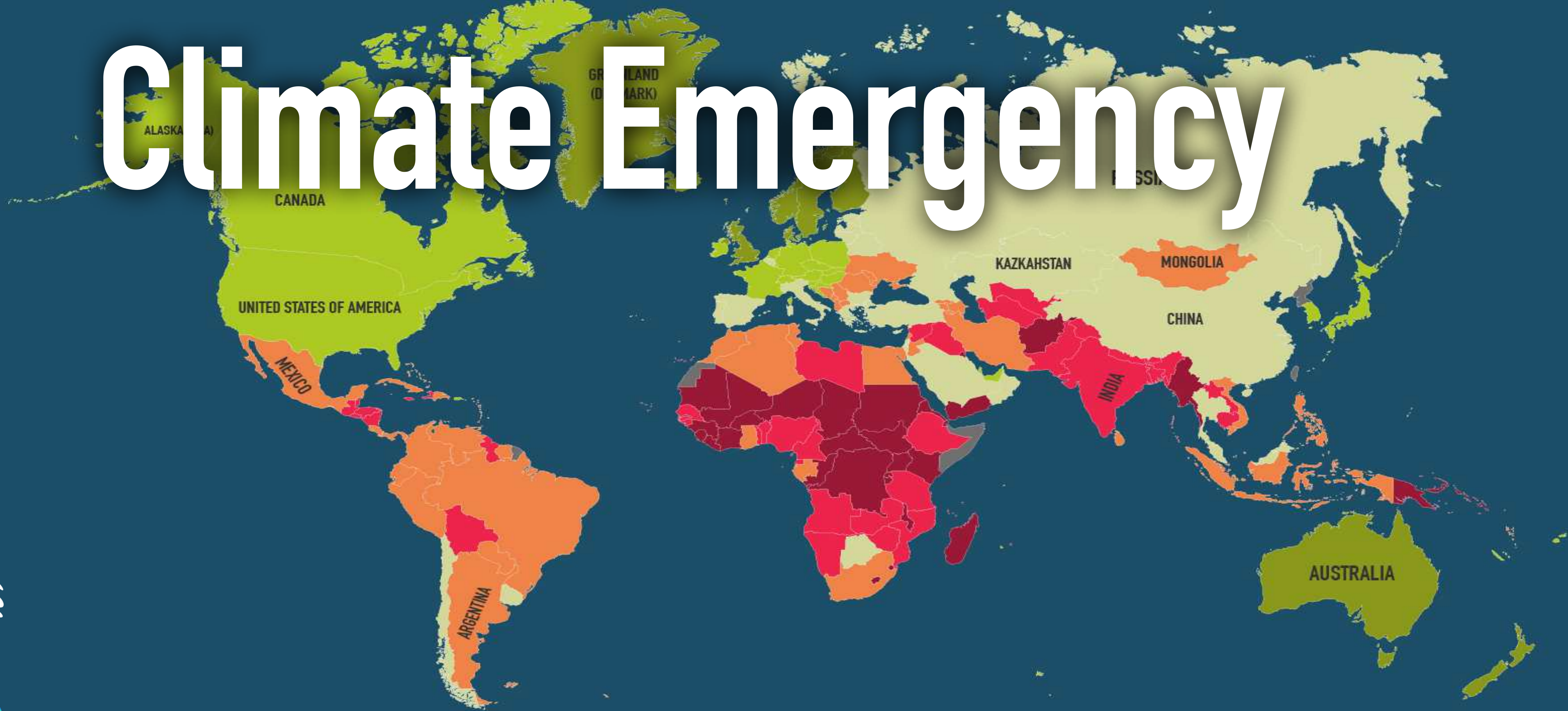
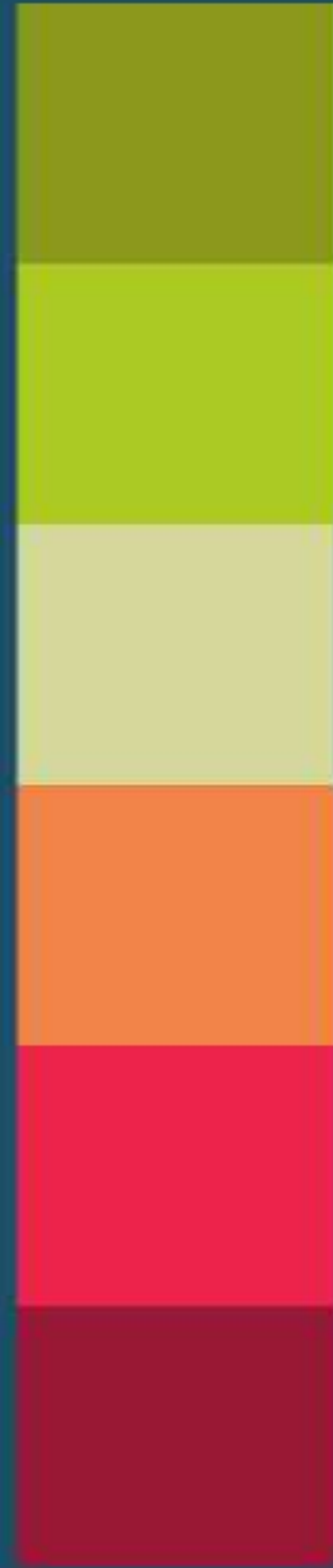


GLOBAL CAPITAL STOCKS PER CAPITA



Climate Emergency

Least
at risk



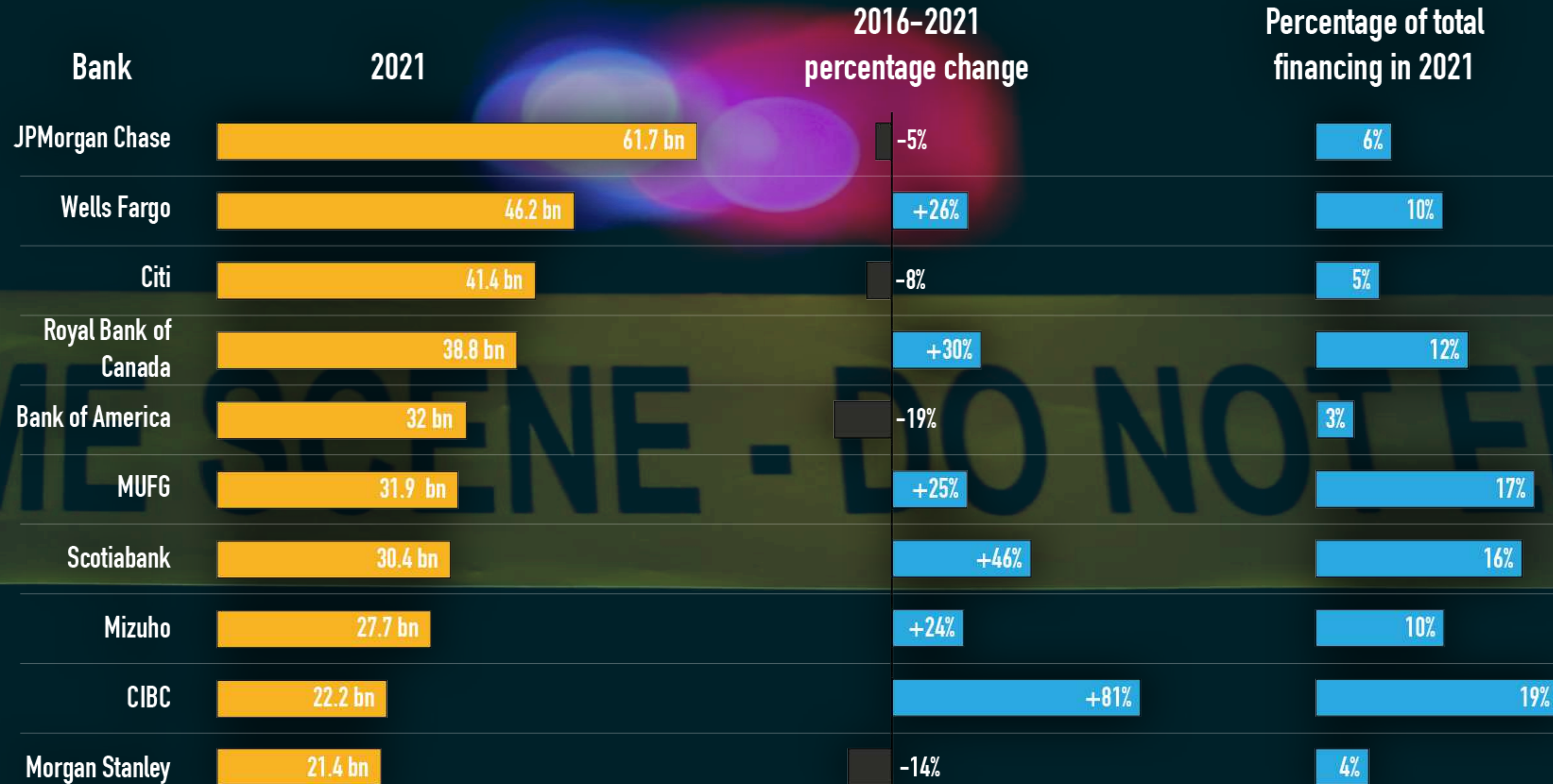
CLIMATE
CHANGE







THE BIG FINANCIERS OF FOSSIL FUEL COMPANIES SHOW LITTLE SIGN OF CUTTING FUNDING



Source: Rainforest Action Network

CLIMATE EMERGENCY 



PROFIT --- GROWTH



PEOPLE
PLANET
PURPOSE
PROSPERITY



EXTRACTION

CREATION

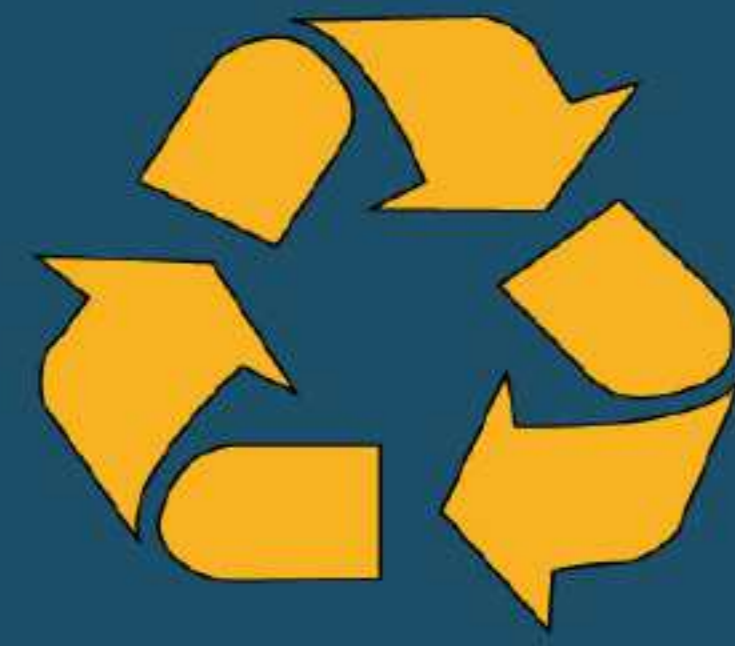


Susdaq

De-Growth or Decoupling?



Sustainability
Never deteriorate supporting ecosystems



Circularity
Waste not, want not



Cooperation
People and planet, not profit



Useful Production
What is not needed should not be made



Sharing
Sufficiency for all, excess for none



Local Production
Produce local, consume local

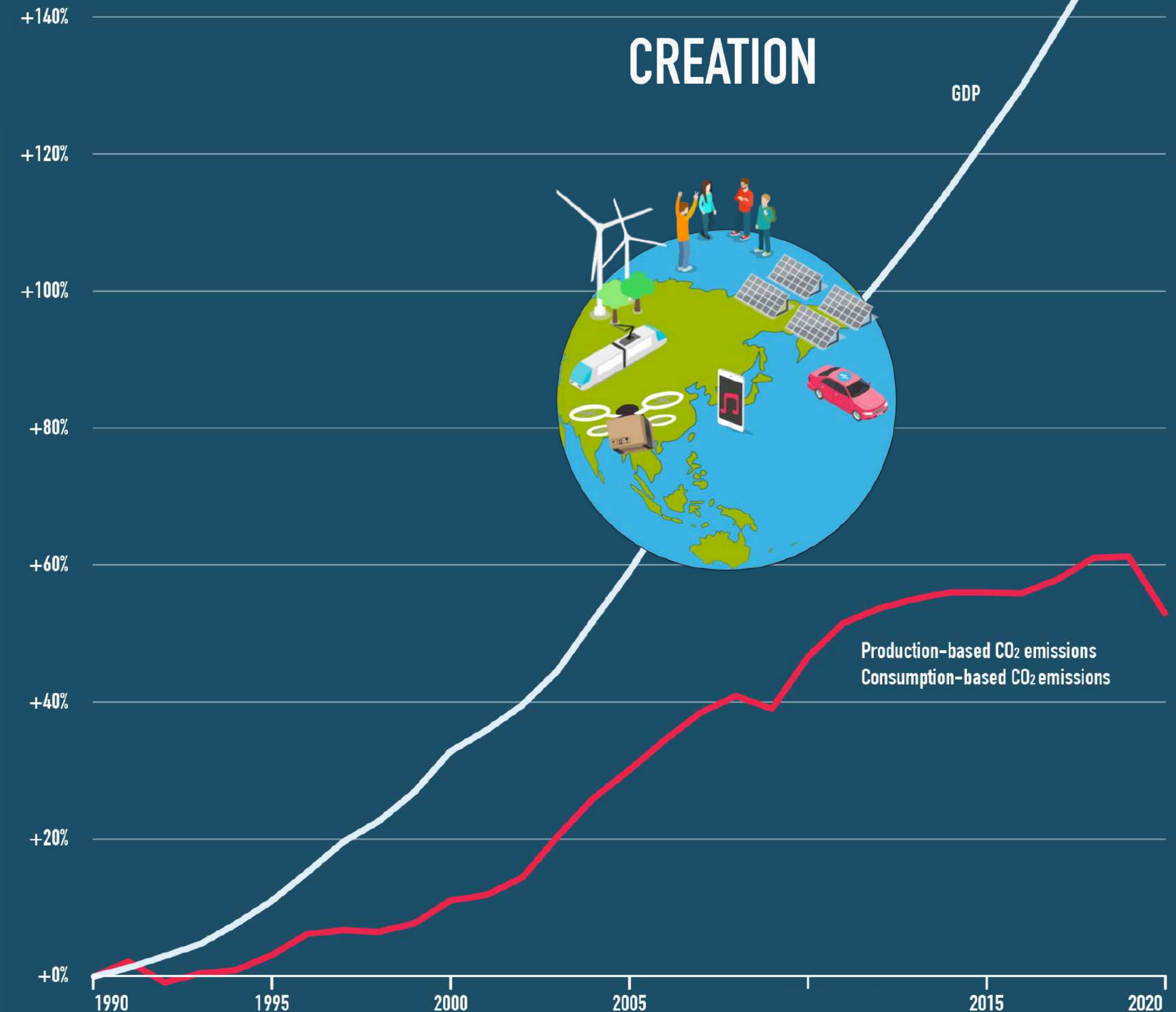


Work-Life Balance
Work less, play more



Relational Goods
Less stuff, more relationships

DECOUPLING GDP FROM CARBON



Source: Our World in Data



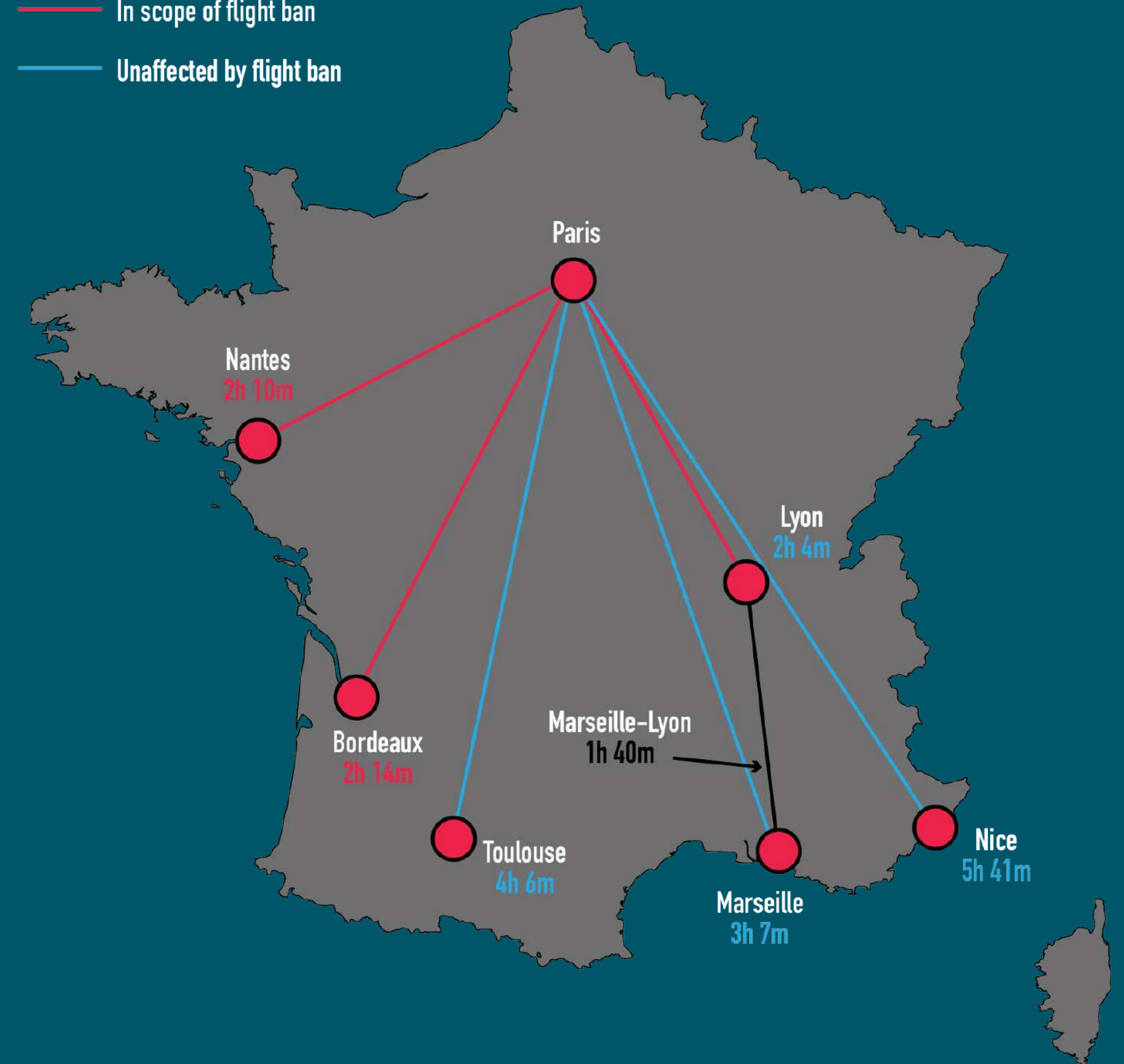
~~Unthinkable~~ NEW NORMAL

CARBON TAX



RAIL ALTERNATIVES TO FRENCH DOMESTIC FLIGHTS

- In scope of flight ban
- Unaffected by flight ban





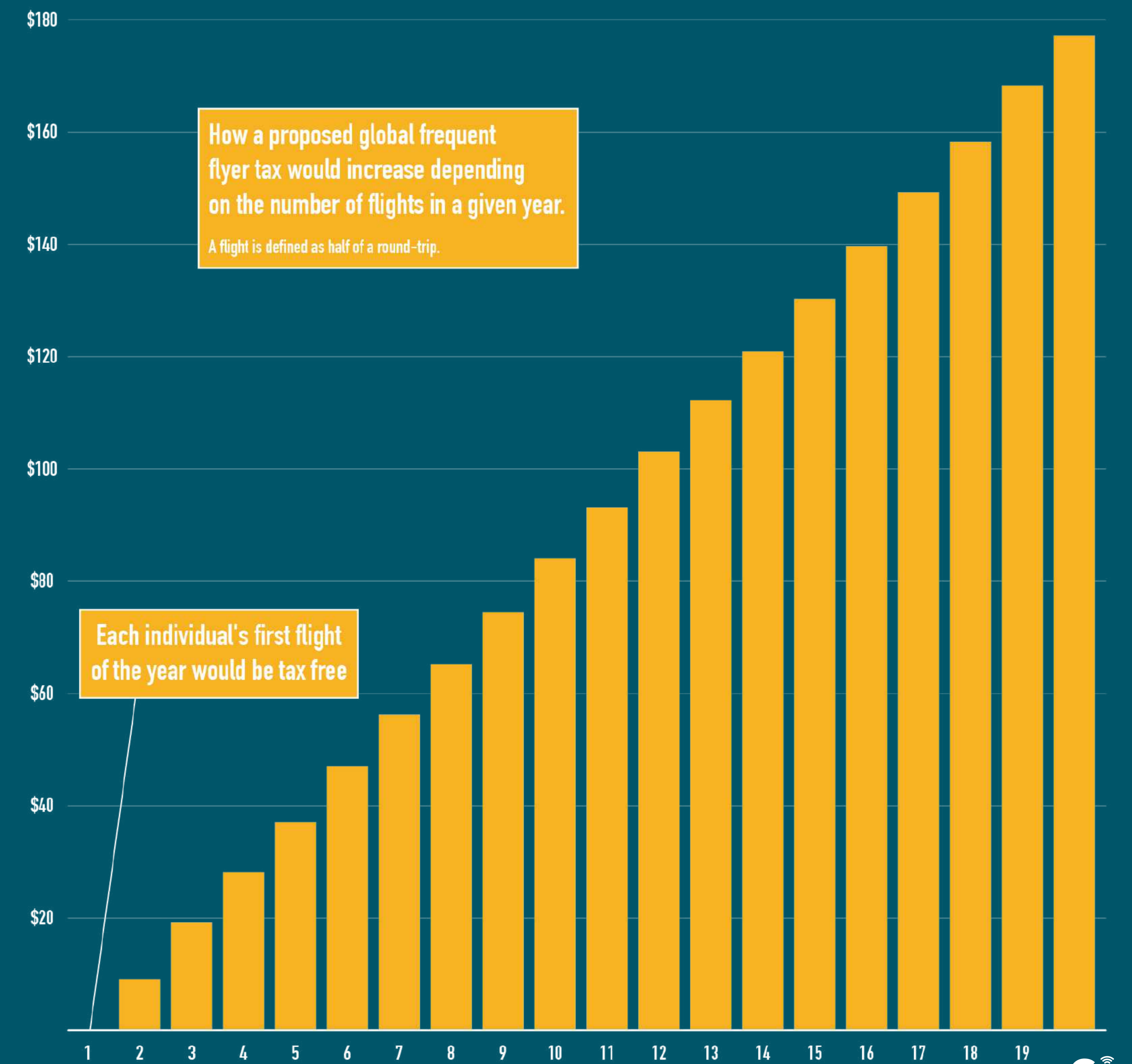
CARBON TAX



~~Unthinkable~~

NEW NORMAL

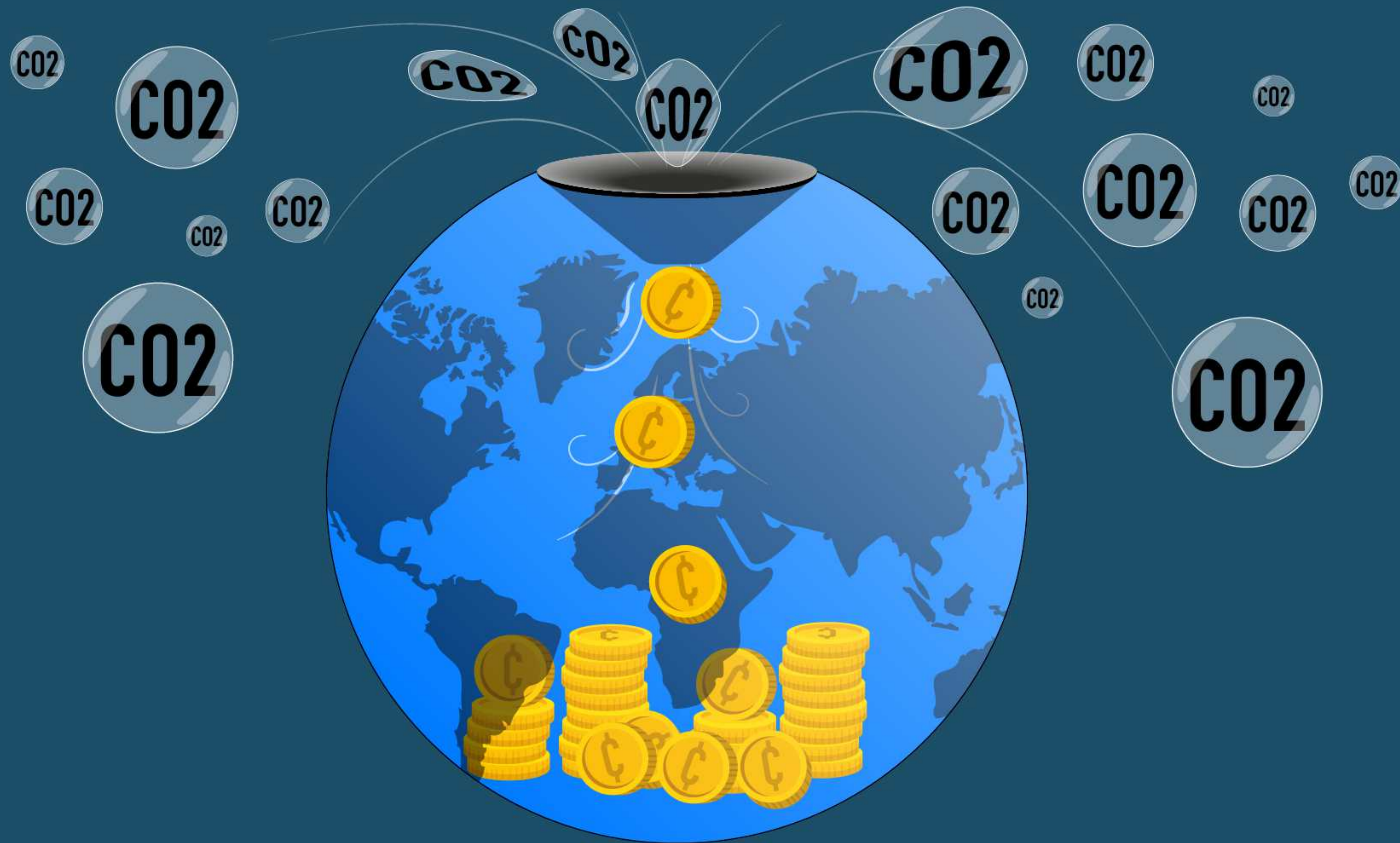
PROGRESSIVE FREQUENT FLYER TAX



How a proposed global frequent flyer tax would increase depending on the number of flights in a given year.
A flight is defined as half of a round-trip.

Each individual's first flight of the year would be tax free

Source: International Council on Clean Transportation



**“If at first the
idea is not
absurd, then
there is no
hope for it”
Albert Einstein**

THE MINISTRY FOR THE FUTURE

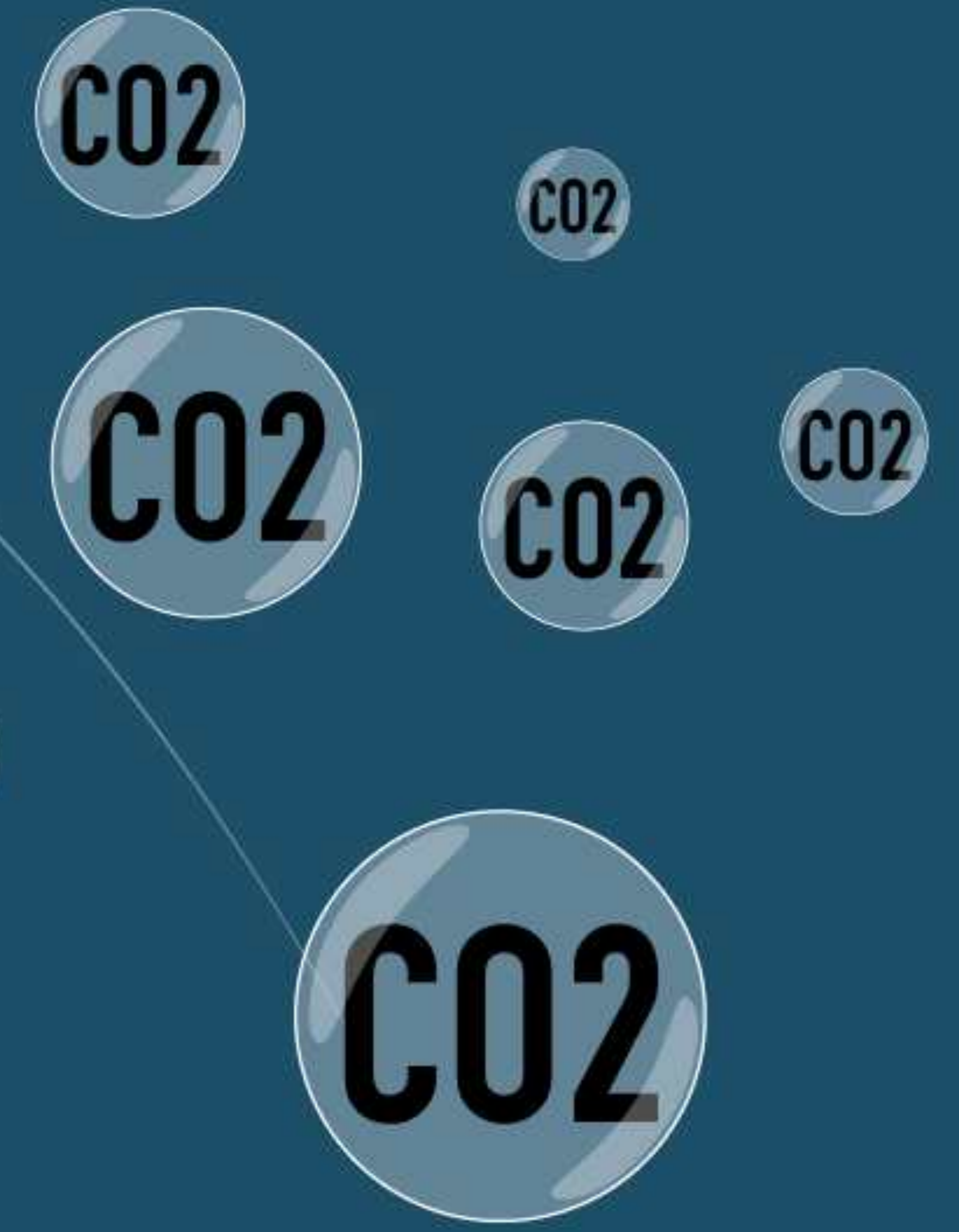
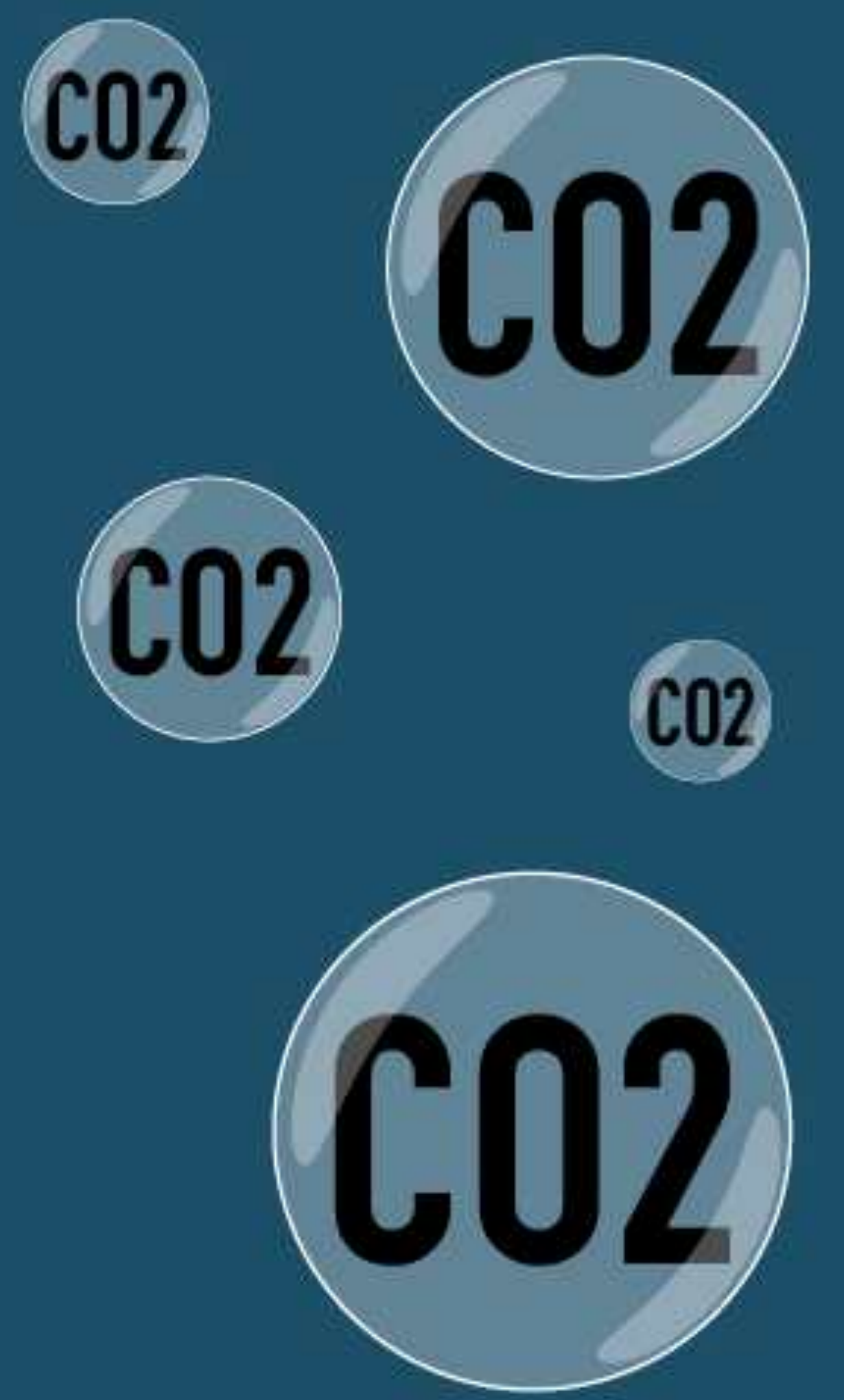
**KIM
STANLEY
ROBINSON**

'ROBINSON IS ONE OF OUR BEST,
BRAVEST, MOST MORAL AND
MOST HOPEFUL STORYTELLERS'
NEW YORKER

'ONE OF THE WORLD'S
FINEST WORKING
NOVELISTS, IN ANY
GENRE' *GUARDIAN*

NEW YORK TIMES BESTSELLING AUTHOR

“If at first the
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absurd, then
there is no
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Albert Einstein



'Unlimited' technological firepower by 2030: Safety? Security? Ethics? Control?

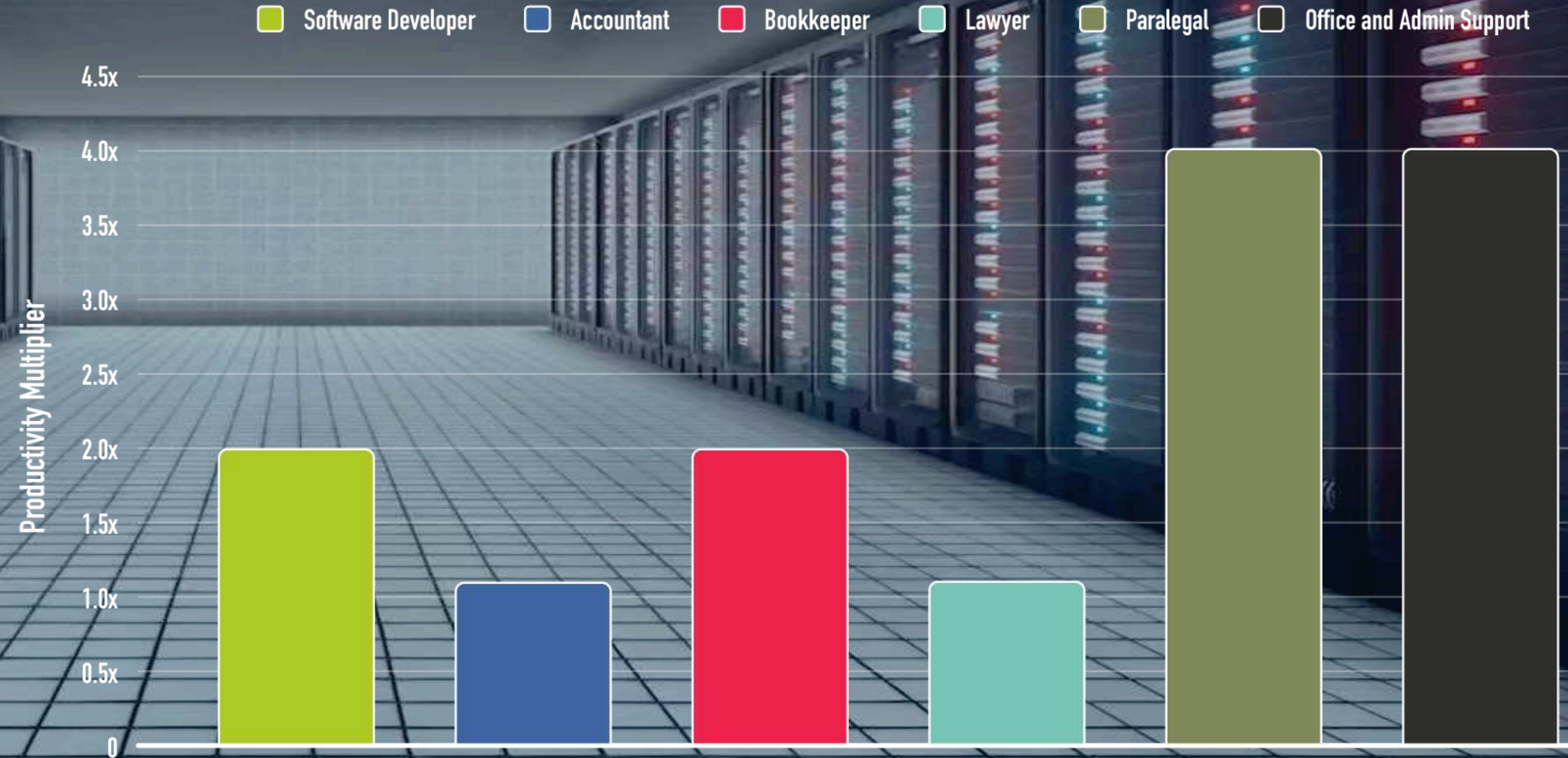
OUTPUT OF AI-ASSISTED KNOWLEDGE WORKERS 2021 TO 2030 BY 2030 AI WILL INCREASE THE OUTPUT OF KNOWLEDGE WORKERS BY 140%

THE COMPUTATIONAL CAPACITY OF THE LARGEST SUPERCOMPUTERS

NUMBER OF FLOATING-POINT OPERATIONS CARRIED OUT PER SECOND BY THE LARGEST SUPERCOMPUTER IN ANY GIVEN YEAR.



Source: Our World in Data



Source: ARK Investment Management LLC

Societies are driven by
their technology but
defined by their
HUMANITY



RESEARCH ON HOW AI SYSTEMS ALIGN WITH HUMAN VALUES
LAGS FAR BEHIND PROGRESS ON THEIR TECHNICAL CAPABILITIES

Good-level AI

Progress on
capabilities

Progress on
alignment

The ALIGNMENT Problem



Time

Progress



RESEARCH ON HOW AI SYSTEMS ALIGN WITH HUMAN VALUES
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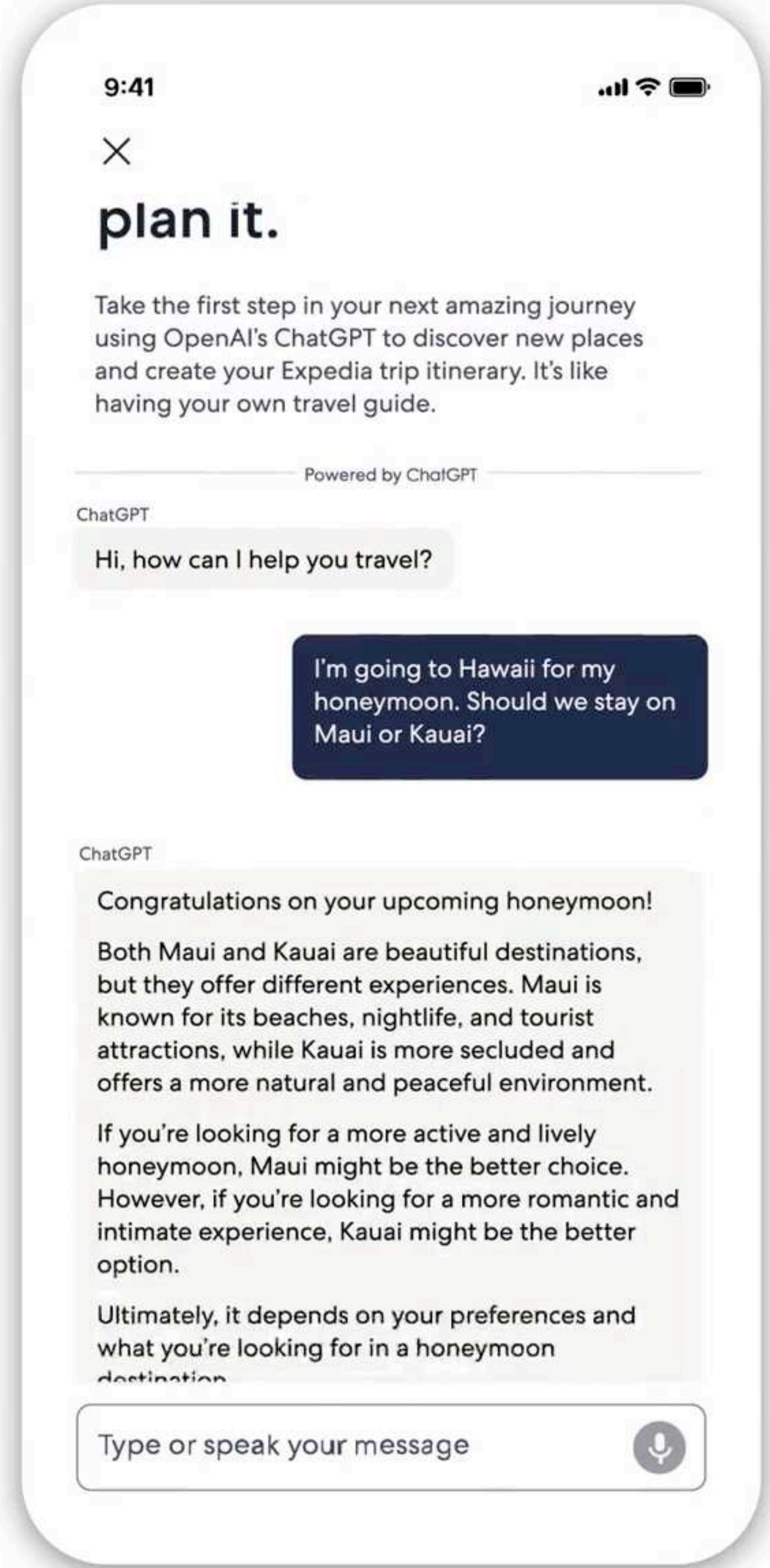
The ALIGNMENT Problem



Time

Progress





Google DeepMind CEO Says Some Form of AGI Possible in a Few Years

Demis Hassabis cites need to develop artificial general intelligence responsibly

White House Pushes Tech C.E.O.s to Limit Risks of A.I.

In the White House's first gathering of A.I. companies, Vice President Kamala Harris told the leaders of major tech companies they had a "moral" obligation to keep products safe.

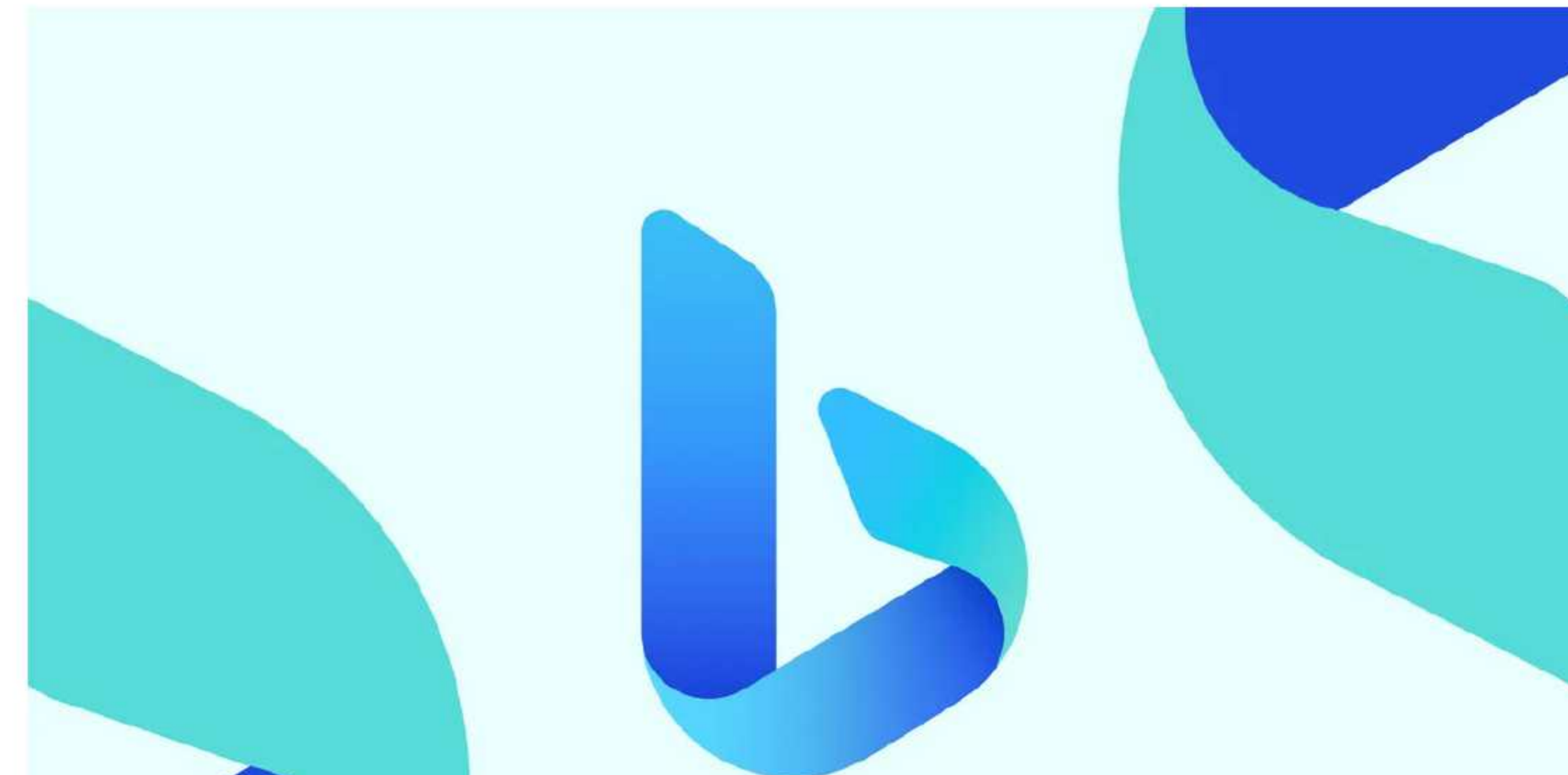


'The Godfather of A.I.' Leaves Google and Warns of Danger Ahead

For half a century, Geoffrey Hinton nurtured the technology at the heart of chatbots like ChatGPT. Now he worries it will cause serious harm.



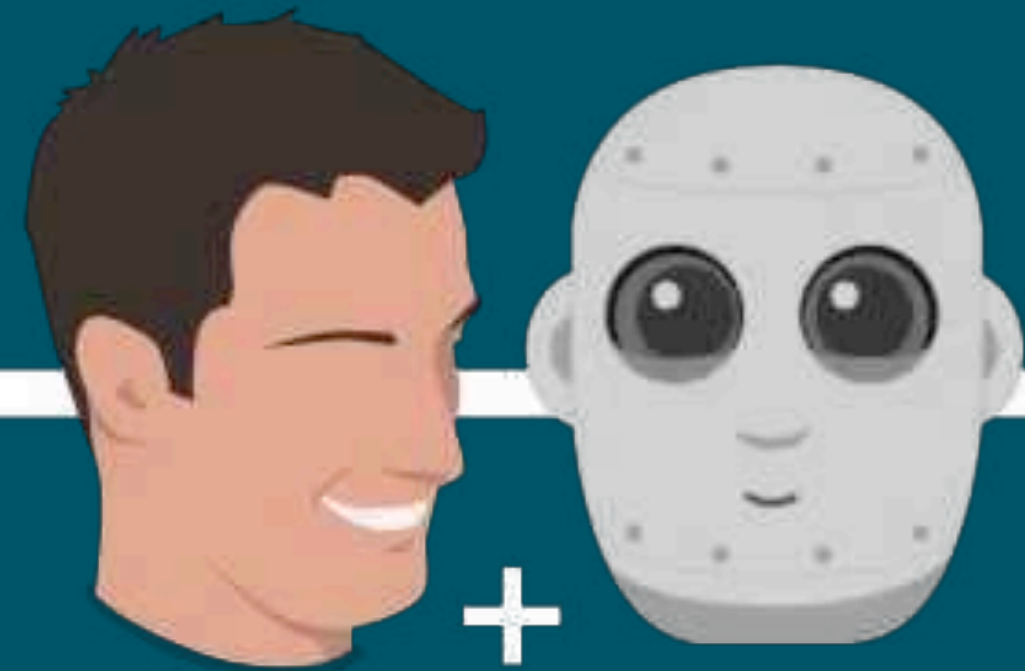
Microsoft's Bing is an emotionally manipulative liar, and people love it



/ Users have been reporting all sorts of 'unhinged' behavior from Microsoft's AI chatbot. In one conversation with The Verge, Bing even claimed it spied on Microsoft's employees through webcams on their laptops and manipulated them.

CLIMATE AGI EMERGENCY?

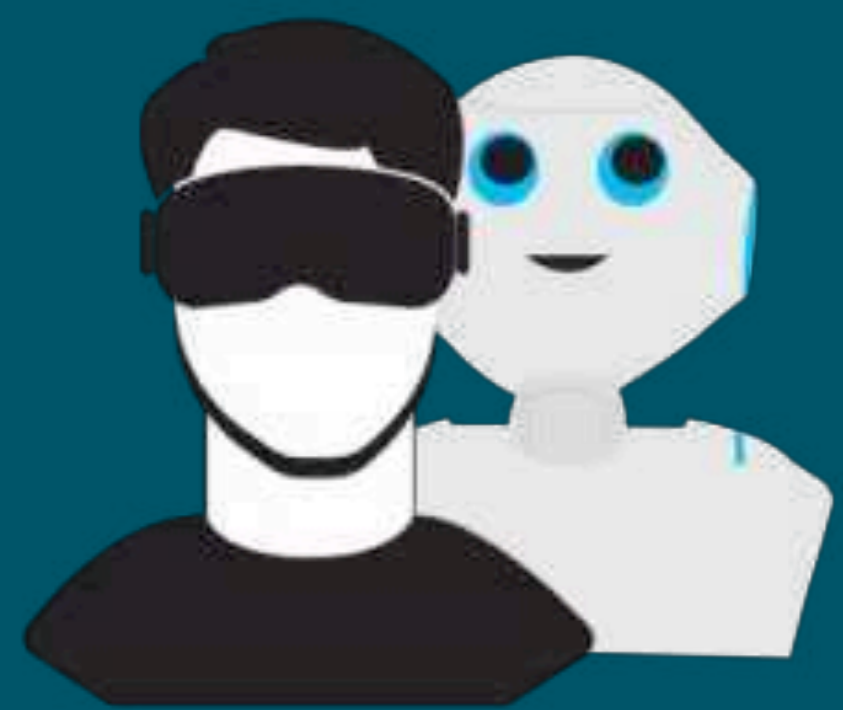
ASSISTED INTELLIGENCE



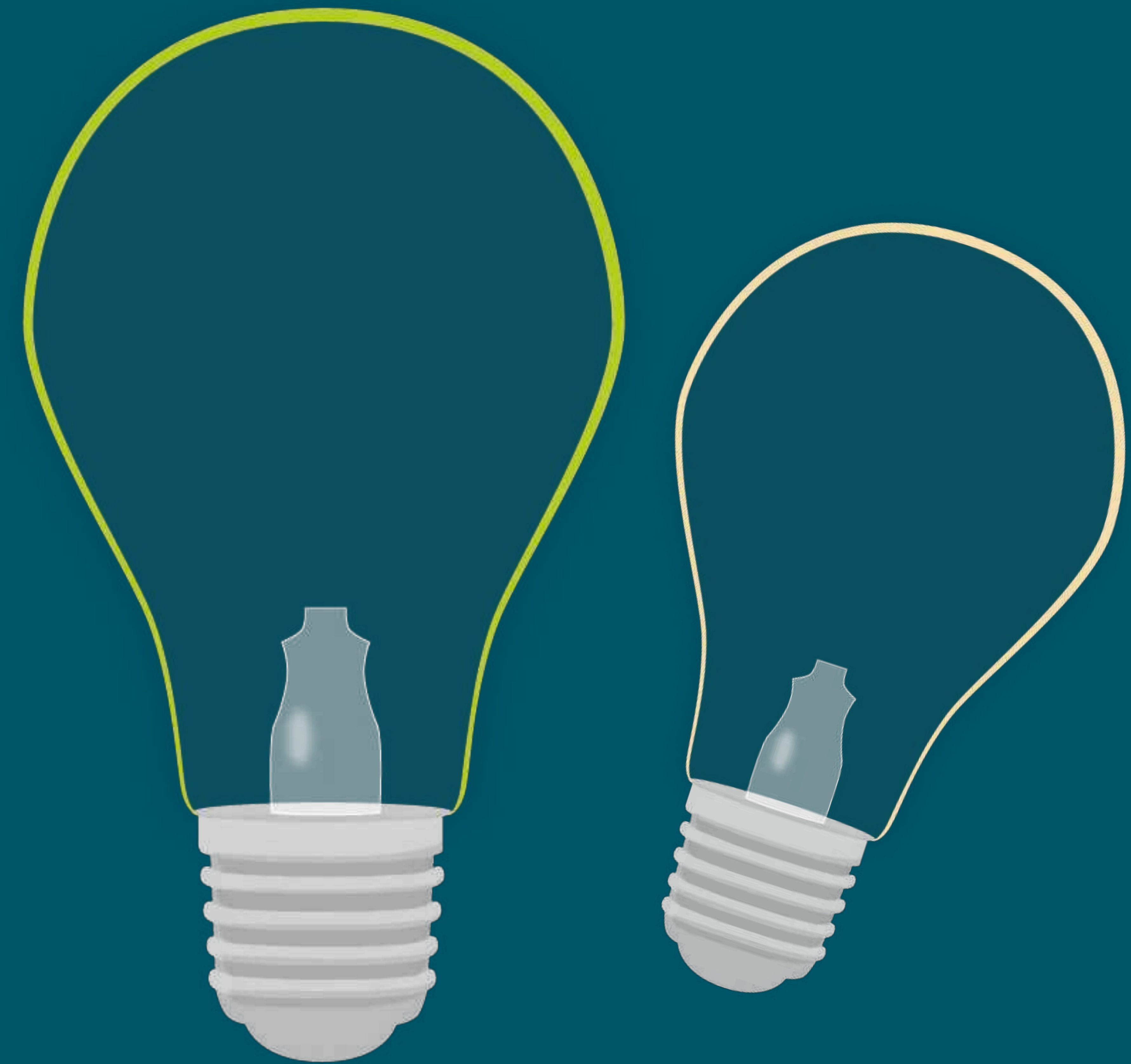
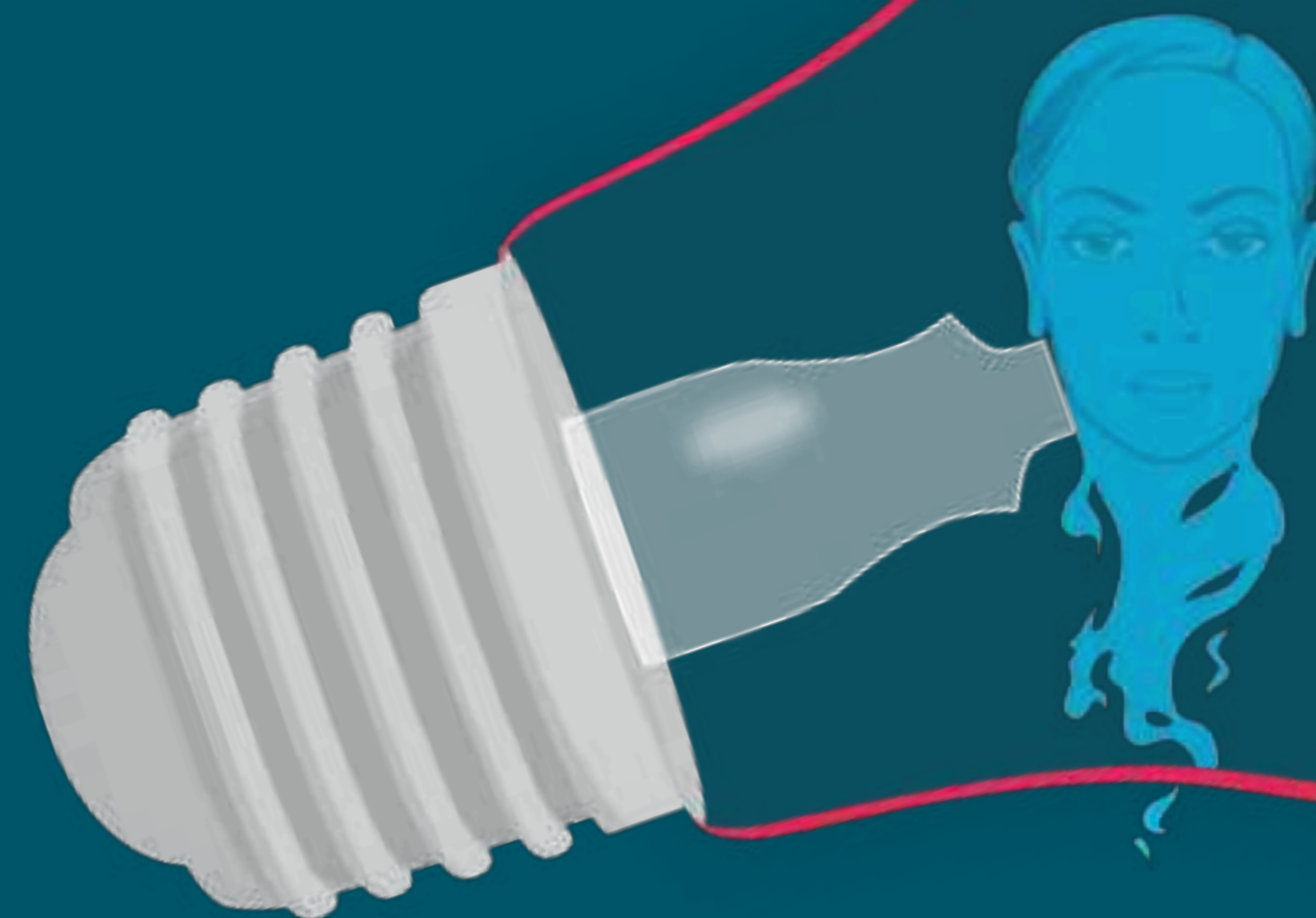
AUTOMATION



AUGMENTED INTELLIGENCE



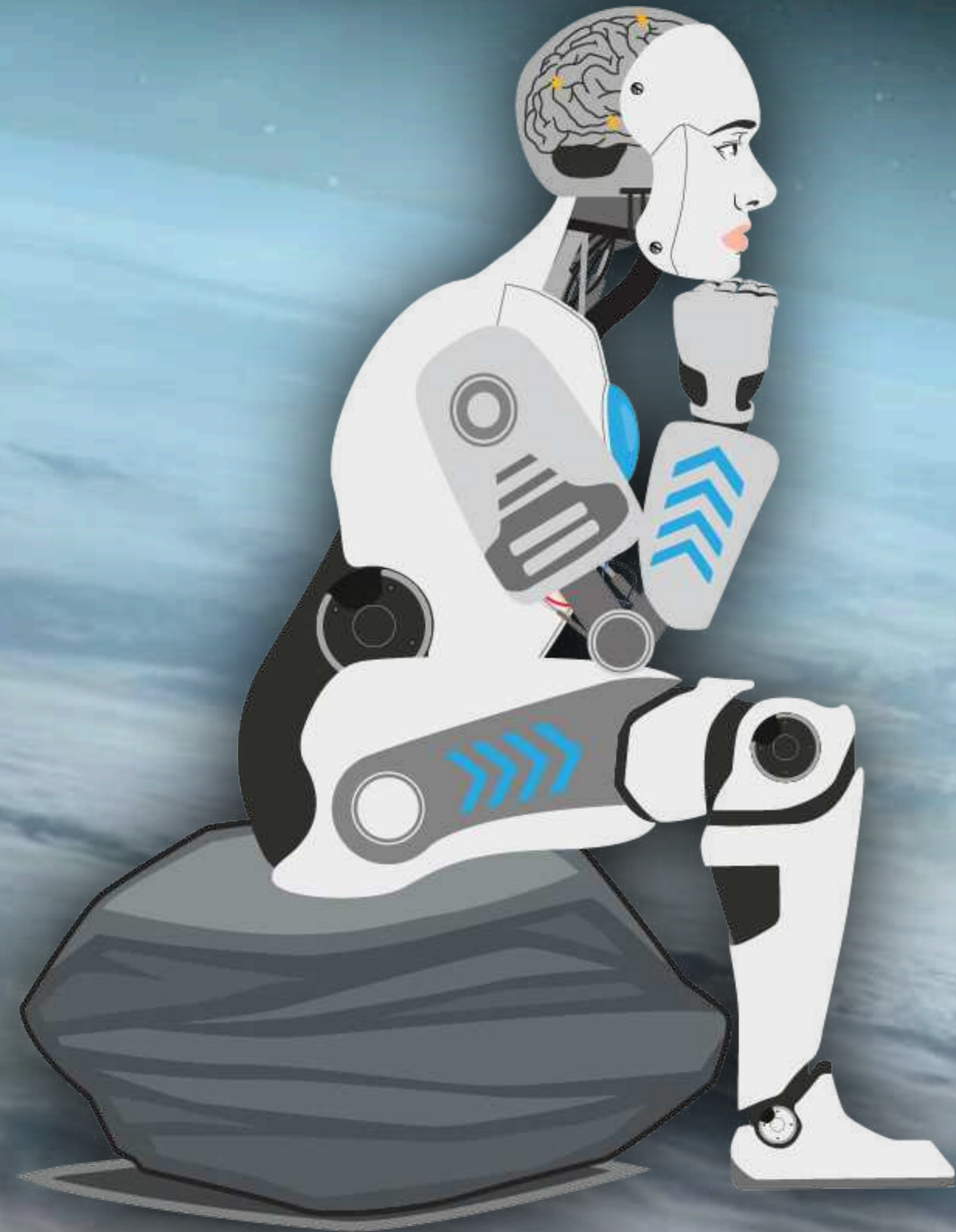
AUTONOMOUS INTELLIGENCE



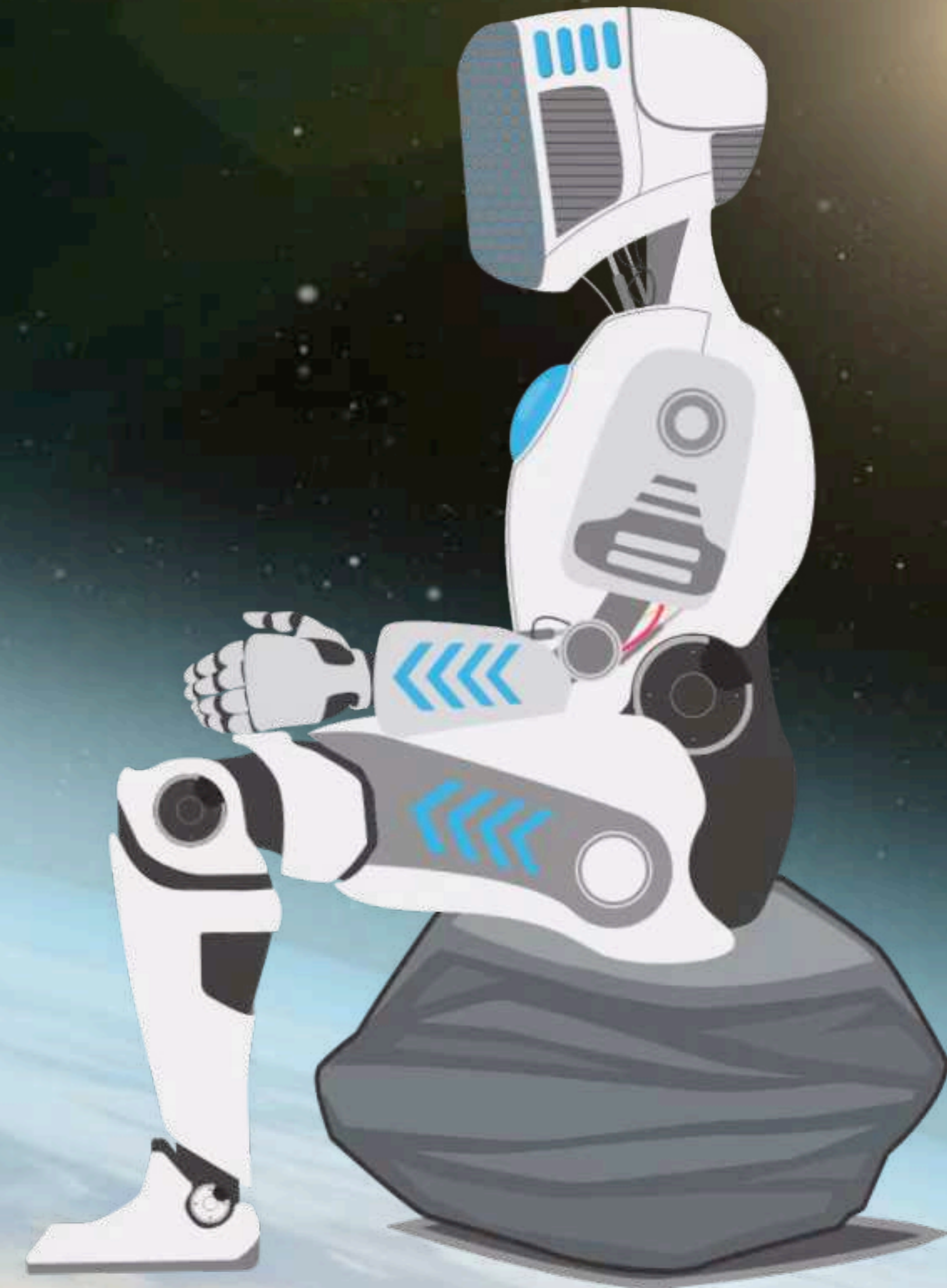
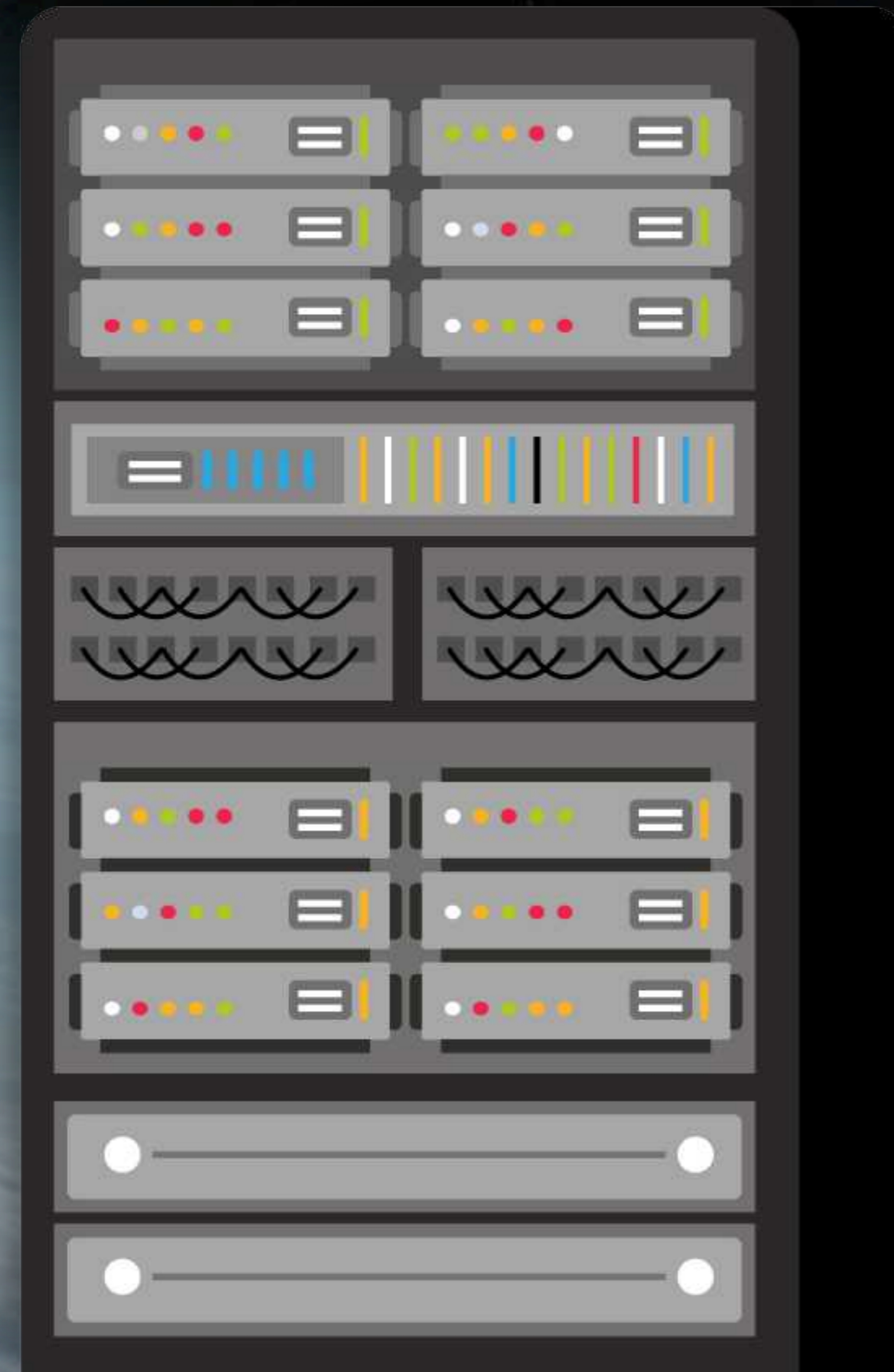
AI: Pursue COMPETENCE not CONSCIOUSNESS!

ChatGPT

What People Think
It Looks Like



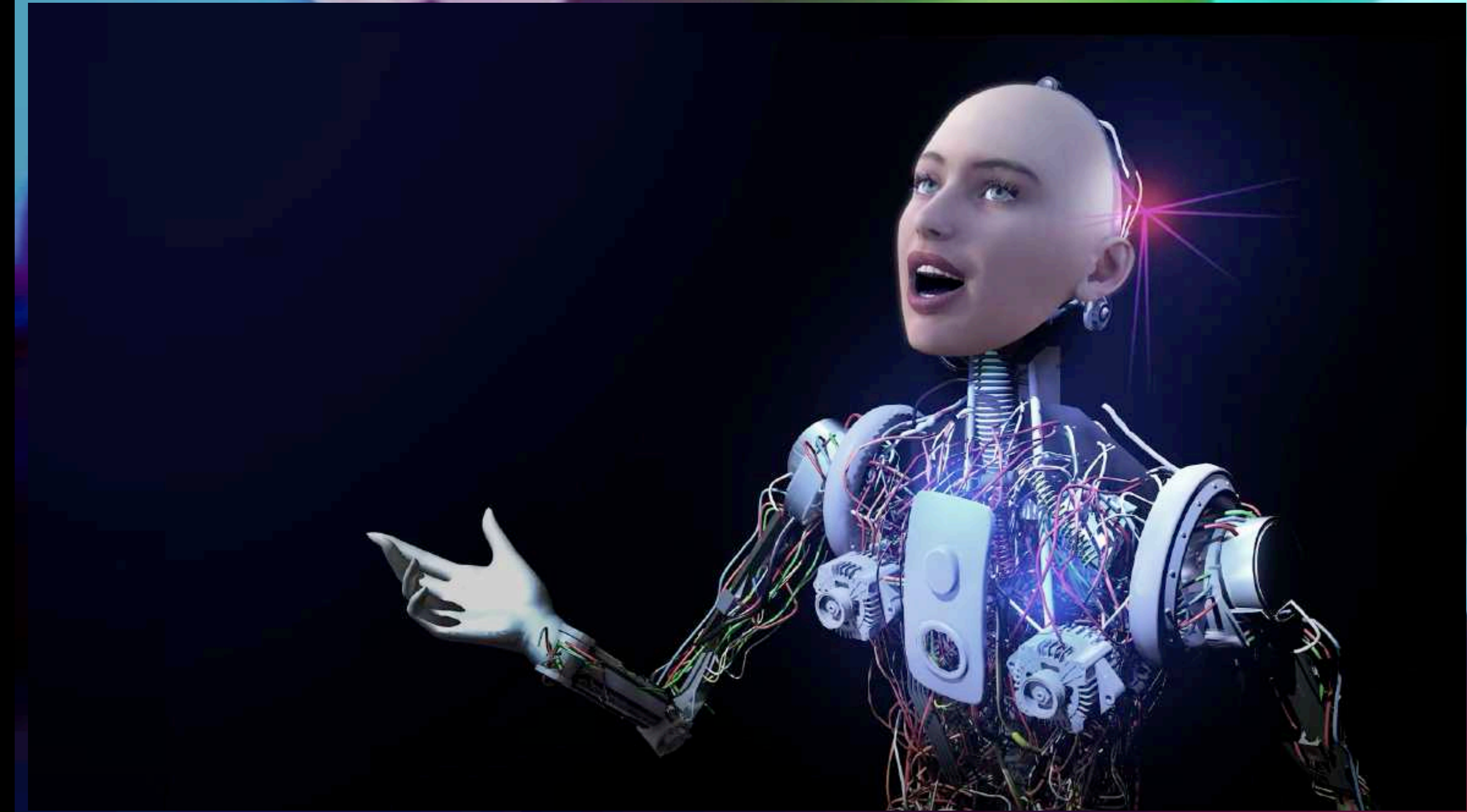
What It Actually
Looks Like



Metaverse: ~~ESCAPE~~ Engage with REAL LIFE



GenAI + VR: how would YOU feel about living in a SYNTHETIC world?



Replika

Get the app Help Log in

The AI companion who cares

Always here to listen and talk. Always on your side. Join the millions growing with their AI friends now!

Hello, stranger!

Create your Replika Log in

Geoffrey Hinton

BBC NEWS

Warnings over dangers of AI


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over technology in every decision" </h3>  
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PEOPLE

PURPOSE



PLANET

PROSPERITY

Why?



SO WHAT NOW?

Summary, recommendations and action items

**DIGITAL
REVOLUTION**

**SUSTAINABILITY
REVOLUTION**

**PURPOSE
REVOLUTION**



PEOPLE



PLANET



PURPOSE



PROSPERITY

Why?

Telos

**GREEN
IS THE NEW
DIGITAL**

SUSTAINABLE

IS THE NEW PROFITABLE

“We should be optimistic not because our problems are smaller than we thought, **but because our capacity to solve them is larger than we thought**”

Kevin Kelly



Pessimism of the intellect, optimism of the will* (Antonio Gramsci)



VELOCITY



UNORTHODOXY



CO-CREATION



AWESOMENESS

“We are to be called ARCHITECTS of the Future, not its victims”

Buckminster Fuller

THE GOOD FUTURE

**ARTIFICIAL
GENERAL
INTELLIGENCE**

**CLIMATE
CHANGE**

Thanks for your time and attention!



Now, let's talk

Gerd Leonhard, Futurist



@gleonhard



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futuristgerd.com



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FUTURE
FTENSE

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