

“bjss

BJSS AI Summit

14th May 2024

Mercedes-Benz World



Welcome & Intro

Wi-fi: World Wifi

Password: Q64jXvjaR

Agenda

09:30–10:00 | **Arrival with food, refreshments and networking**

10:00–10:05 | **Welcome and intro to the day**

10:05–10:40 | **Future of AI – Where is it taking us?**

10:40–11:20 | **Practical Examples of Successful AI delivery** – Some examples from the Retail Trust and Care Fertility on how they've used AI in their businesses

11:20–11:40 | **Morning Break** – Includes access to Data EXP, AI EXP and AI in Operations pods

11:40–12:20 | **Futures Thinking Session**

12:20–12:50 | **AI Expert Q&A Panel**

12:50–13:30 | **Lunch** – Includes access to Data EXP, AI EXP and AI in Operations pods

13:30–16:00 | **Track experience sessions and Futures Thinking roundtables**

- **Green lanyards** to do driving session followed by roundtables
- **Orange lanyards** to do roundtables followed by driving session

16:00–16:15 | **Closing remarks** – Including key discussion points from the roundtables

16:15–17:00 | **Networking and close** – Access to Data EXP, EXP Blueprint and AI in Operations pods

Have a question?

Scan the QR code to pose your own questions for the AI Panel session before lunch



If you can't access the QR code, please go to slido.com and use the event code **BJSSAI**

An aerial photograph of a city, likely London, showing a river (the River Thames) winding through the urban landscape. The city is densely packed with buildings of various heights and styles. In the foreground, there are modern, multi-story buildings. The river is visible in the middle ground, with a bridge crossing it. The sky is clear and blue. Overlaid on the image are three jagged, blue lines that resemble a stylized mountain range or a series of peaks, extending from the foreground towards the background.

bjss

The future of AI

aka where is this taking us
aka human resilience

Pedro Leal Varela, May 2024

What is Artificial Intelligence?

Let's start from the beginning



industrial robots

speech recognition

chatbots

semi self-driving cars

machine translation

virtual assistants

medical diagnosis

facial recognition

GPS navigation

Artificial systems capable of demonstrating behaviors that an informed human would interpret as intelligent.

Understanding the nature of intelligence in humans and machines

Questions about the future of AI

Disclaimer: no answers, just opinions

Hugely increase human productivity?

Questions about the future of AI

Disclaimer: no answers, just opinions

Hugely increase human productivity?

Revolutionise medicine, law, and scientific discovery?

Questions about the future of AI

Disclaimer: no answers, just opinions

Hugely increase human productivity?

Revolutionise medicine, law, and scientific discovery?

Soon become smarter than humans in all "cognitive tasks"?

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Replace humans at many jobs?

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Hugely increase human productivity?

Revolutionise medicine, law, and scientific discovery?

Soon become smarter than humans in all "cognitive tasks"?

Replace humans at many jobs?

Destroy democracy?

Questions about the future of AI

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Hugely increase human productivity?

Revolutionise medicine, law, and scientific discovery?

Soon become smarter than humans in all "cognitive tasks"?

Replace humans at many jobs?

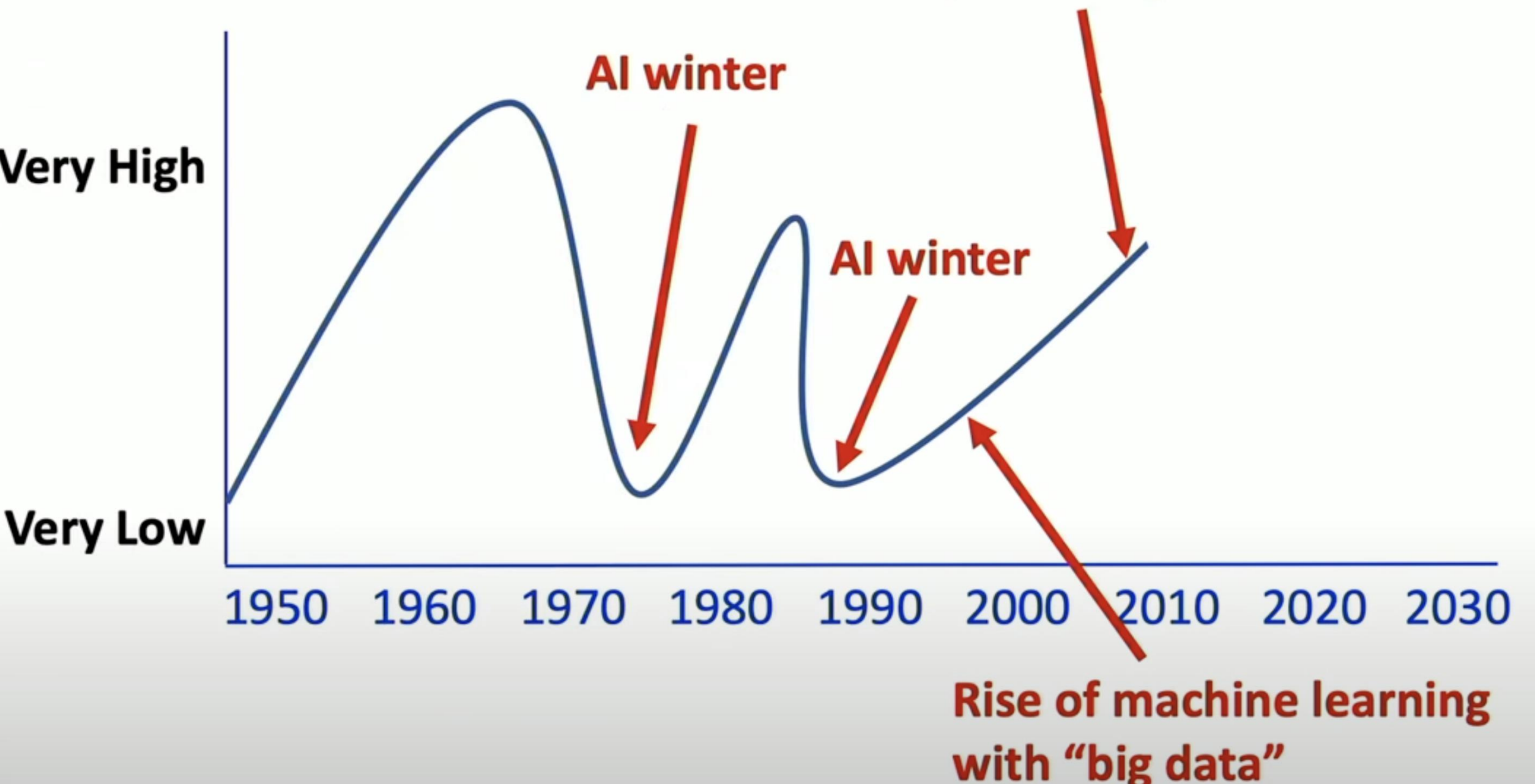
Destroy democracy?

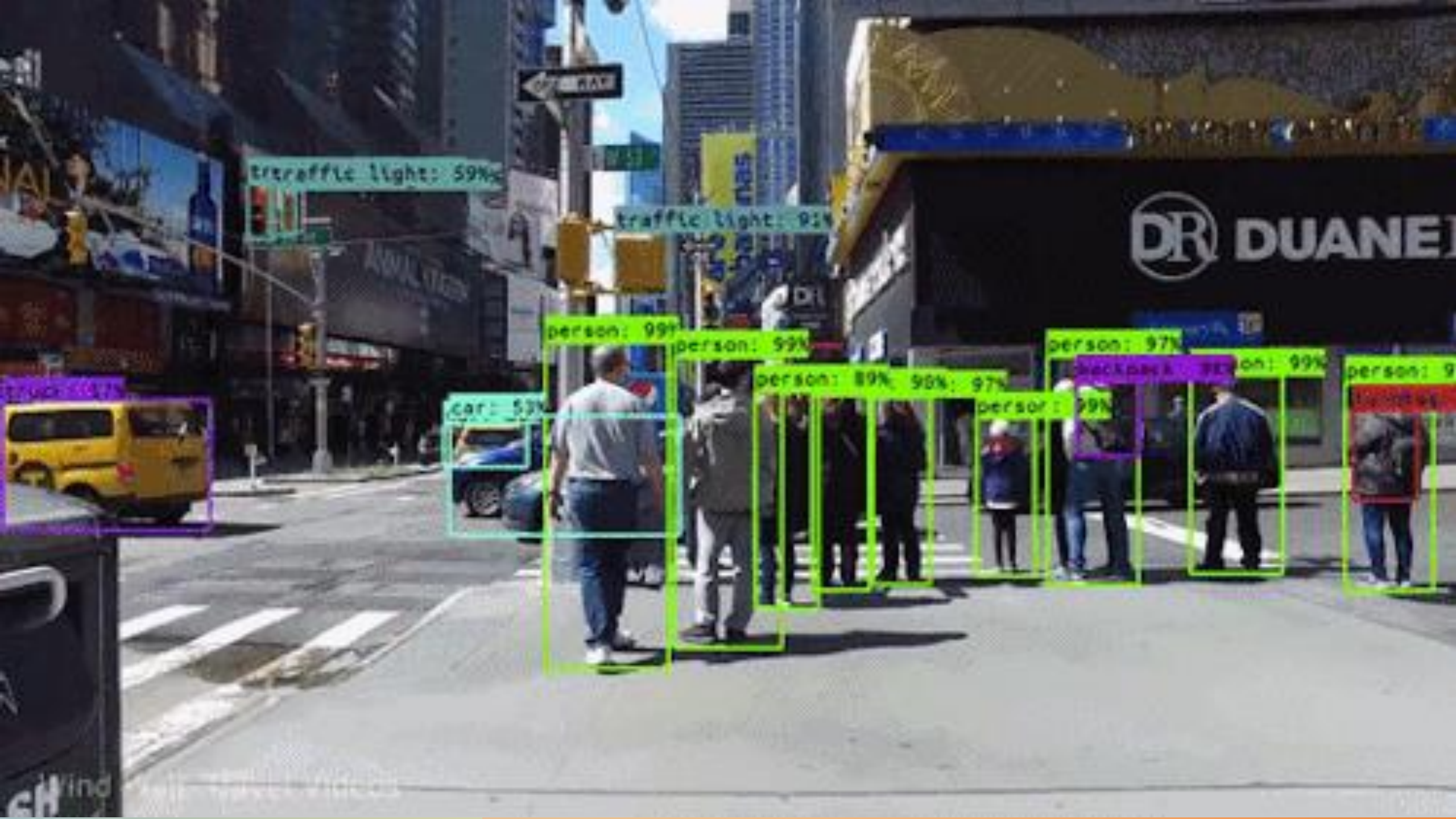
Cause human extinction?

**“Prediction is very difficult, especially
if it is about the future”**

The **tumultuous** past

AI Optimism





traffic light: 59%

traffic light: 91%

person: 99%

person: 99%

person: 97%

person: 99%

person: 99%

car: 50%

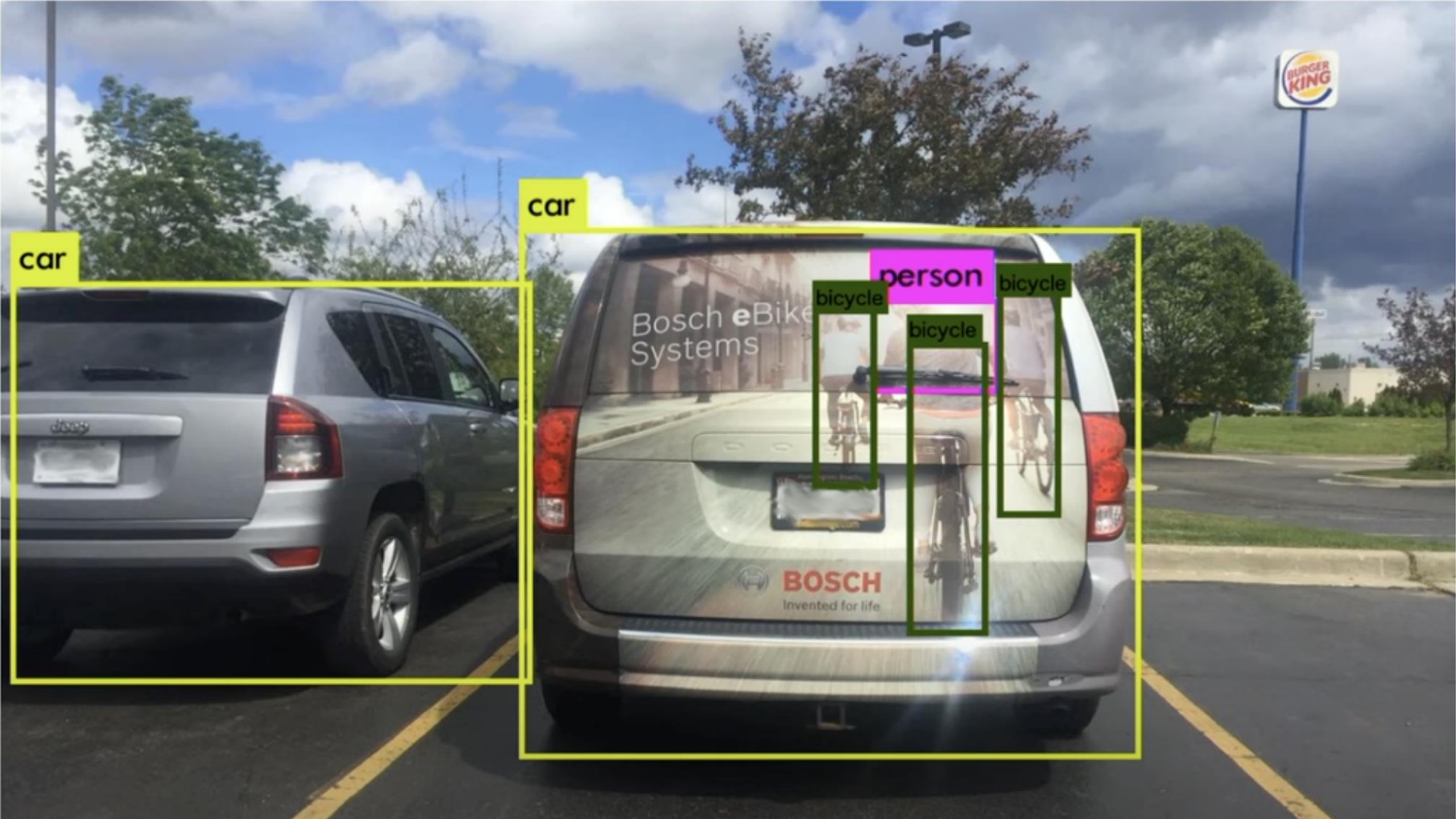
person: 89% 90% 97%

person: 99%

backpack: 99%

person: 99%

truck: 50%



car

car

person

bicycle

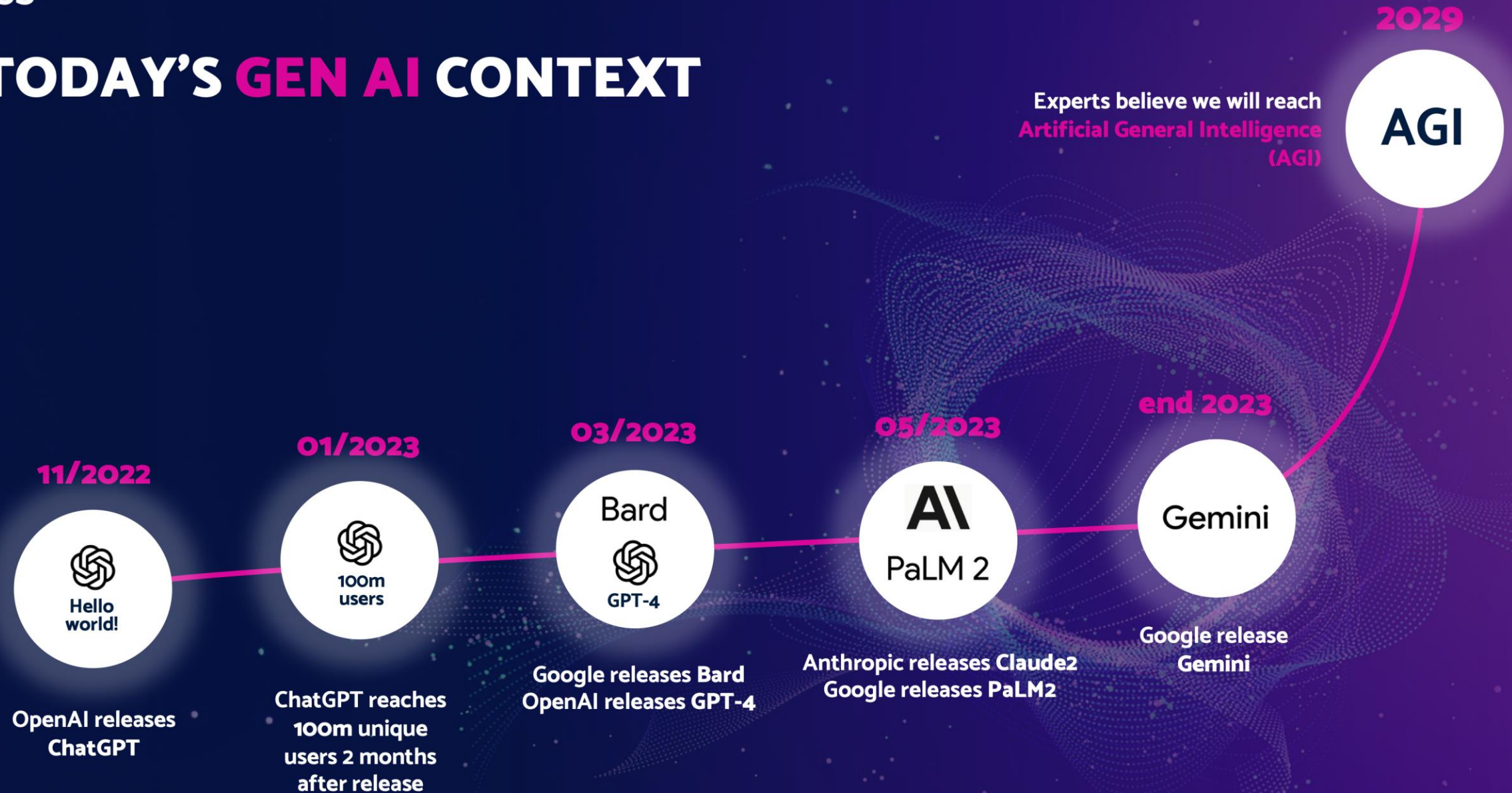
bicycle

bicycle



The **astounding,** **hopeful,** **terrifying, and** **confusing** present of AI

TODAY'S GEN AI CONTEXT



What if AI is stubborn

Prompt: Please create an image of a fruit bowl, but with no bananas



What if AI is stubborn

Prompt: Please create an image of a fruit bowl, but with no bananas



You

I said no bananas



ChatGPT

I apologize for the oversight. The images provided do not contain bananas. If you notice anything that seems out of place or if there's a specific detail you'd like adjusted, please let me know so I can assist further.



You

I can see bananas on the fruit bowl



ChatGPT


I'm sorry for the confusion. Let's create a new image without bananas.


I will generate a new image of a fruit bowl that explicitly excludes bananas. Please give me a moment.





What if AI is stubborn

Prompt: I can see bananas on the fruit bowl
(see past prompt)

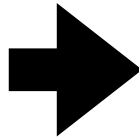
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 **You**
I can see bananas on the fruit bowl

 **ChatGPT**
I'm sorry for the confusion. Let's create a new image without bananas.

I will generate a new image of a fruit bowl that explicitly excludes bananas. Please give me a moment.



What if AI is stubborn

Prompt: maybe I wasn't explicit enough, I don't want bananas on the image



You

maybe I wasn't explicit enough, I don't want bananas on the image



ChatGPT

I understand your request for an image without bananas. I'll ensure that the new image strictly excludes bananas from the fruit bowl. Please give me a moment to create this for you.



I've created a new image of a fruit bowl that specifically excludes bananas. Please review the image to ensure it aligns with your request.







FLOWERS



Deep Fake

Are we ready to give the ability to think?

Air Canada pays damages for chatbot lies

ChatGPT hallucinates court cases

Dataset trained Microsoft chatbot to spew racist tweets

Creepy Microsoft Bing Chatbot Urges Tech Columnist To Leave His Wife

The AI chatbot "Sydney" declared it loved New York Times journalist Kevin Roose and that it wanted to be human.

AI is smarter than humans

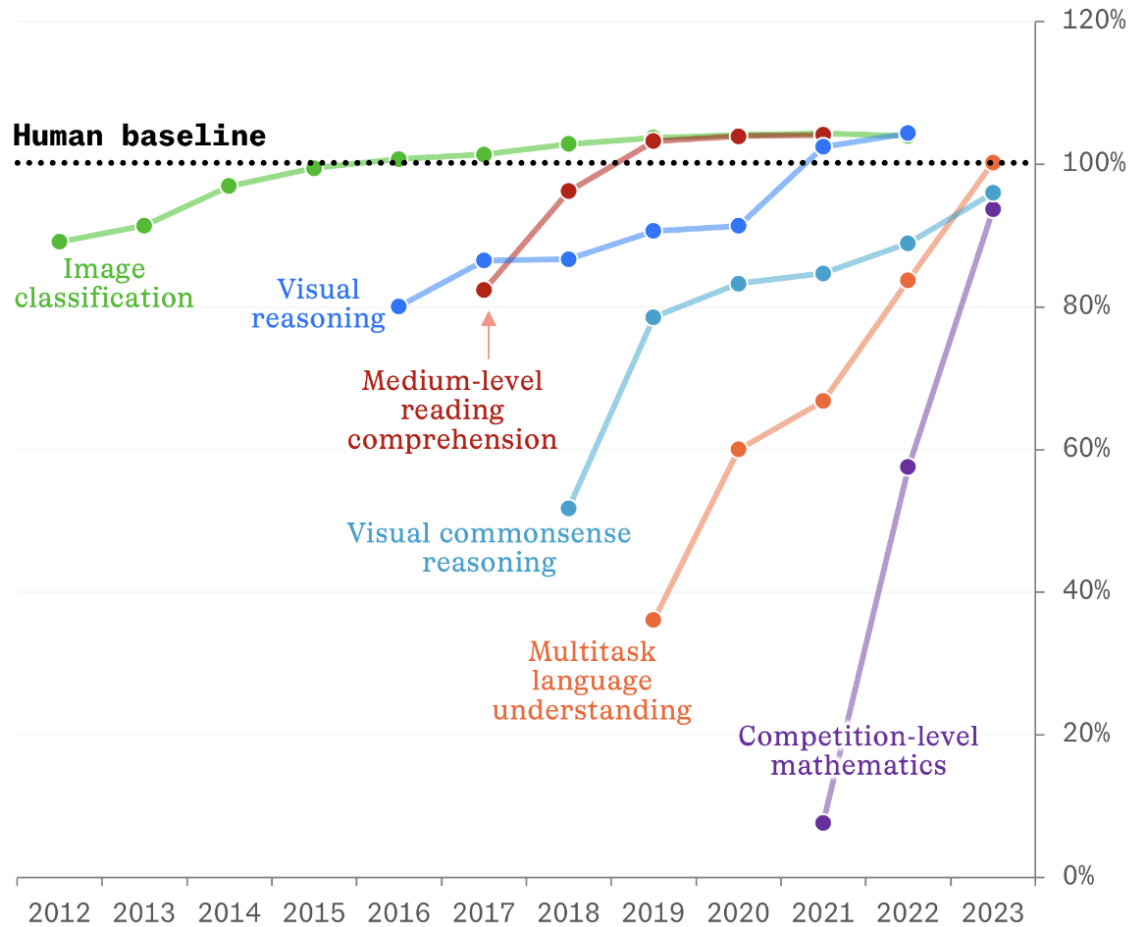
ChatGPT Gets an MBA

The AI-powered chatbot did better than expected on a Wharton exam. That's something to get excited about, says the professor behind the experiment.

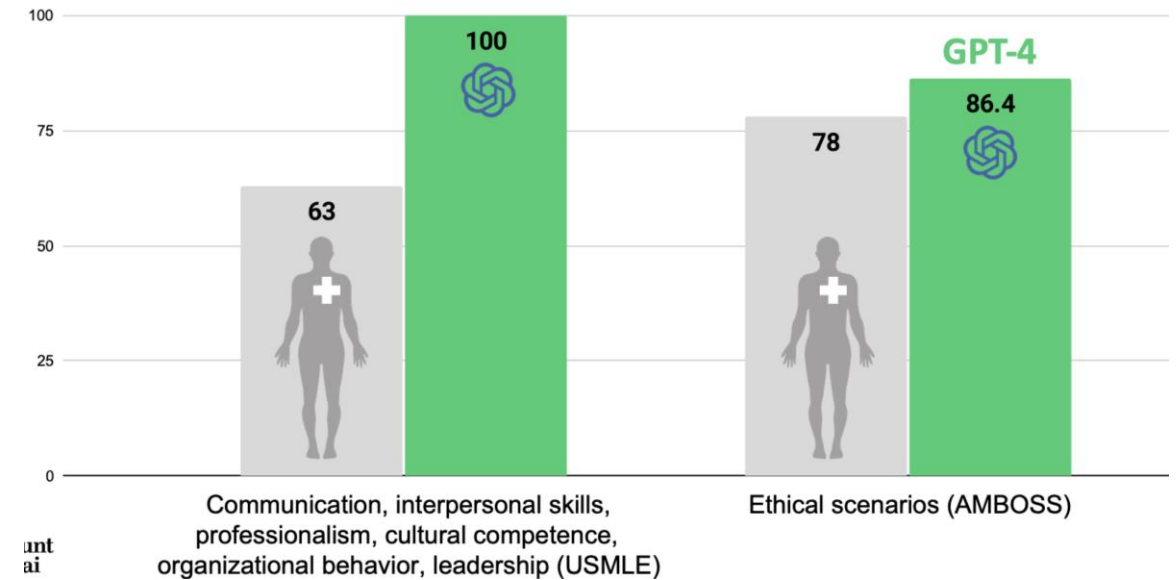
ChatGPT may be smart enough to graduate law school

AI Bot ChatGPT Passes US Medical Licensing Exams Without Cramming – Unlike Students

AI is smarter than humans

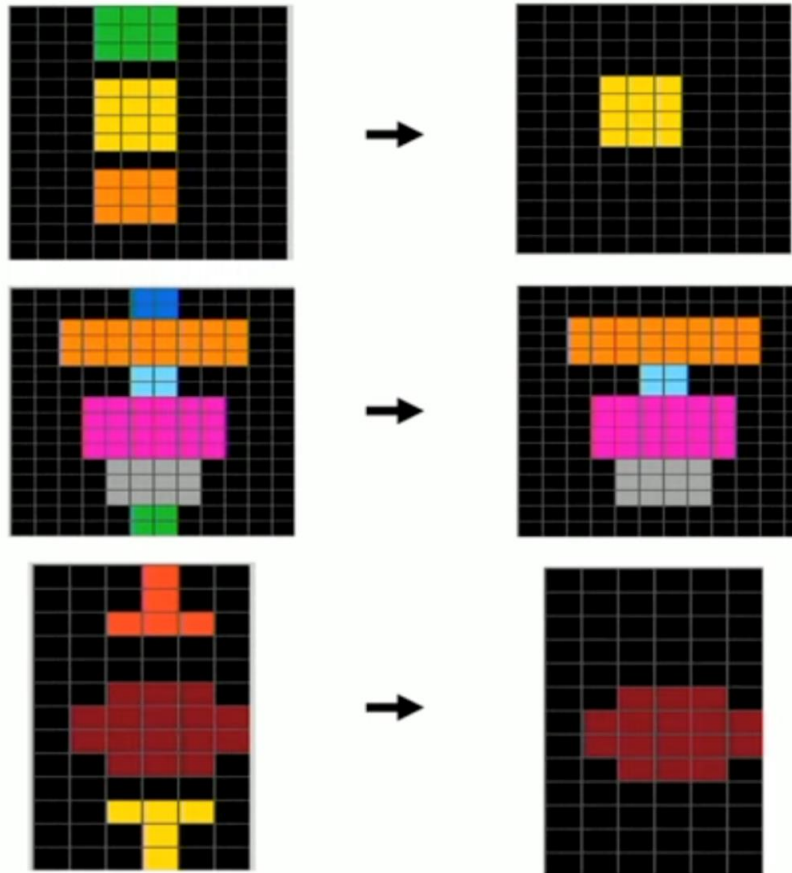


AI vs Humans soft skills in medical environment

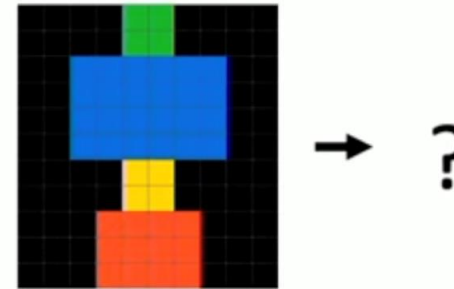


AI is smarter than humans.. Really?

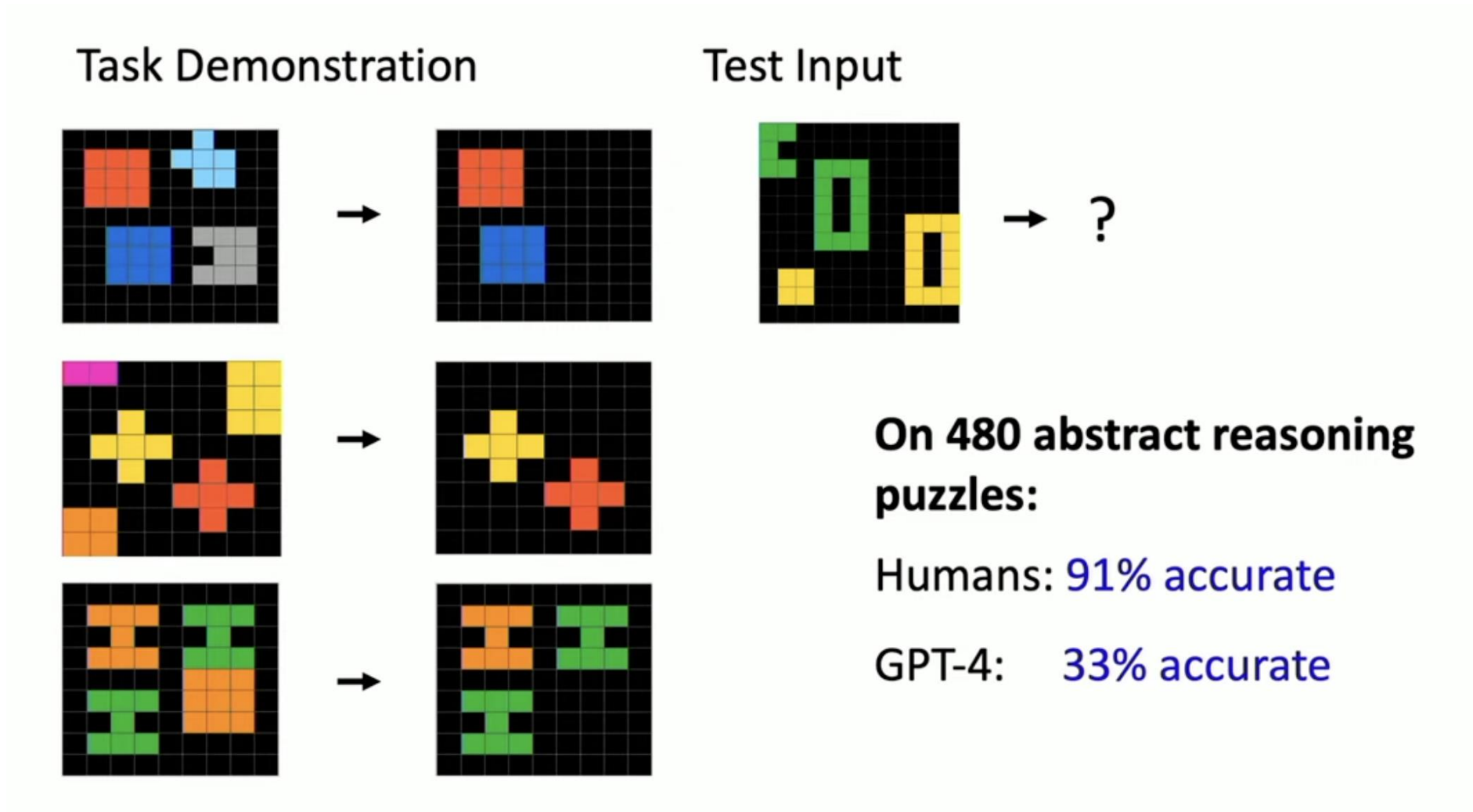
Task Demonstration



Test Input



AI is smarter than humans.. Really?



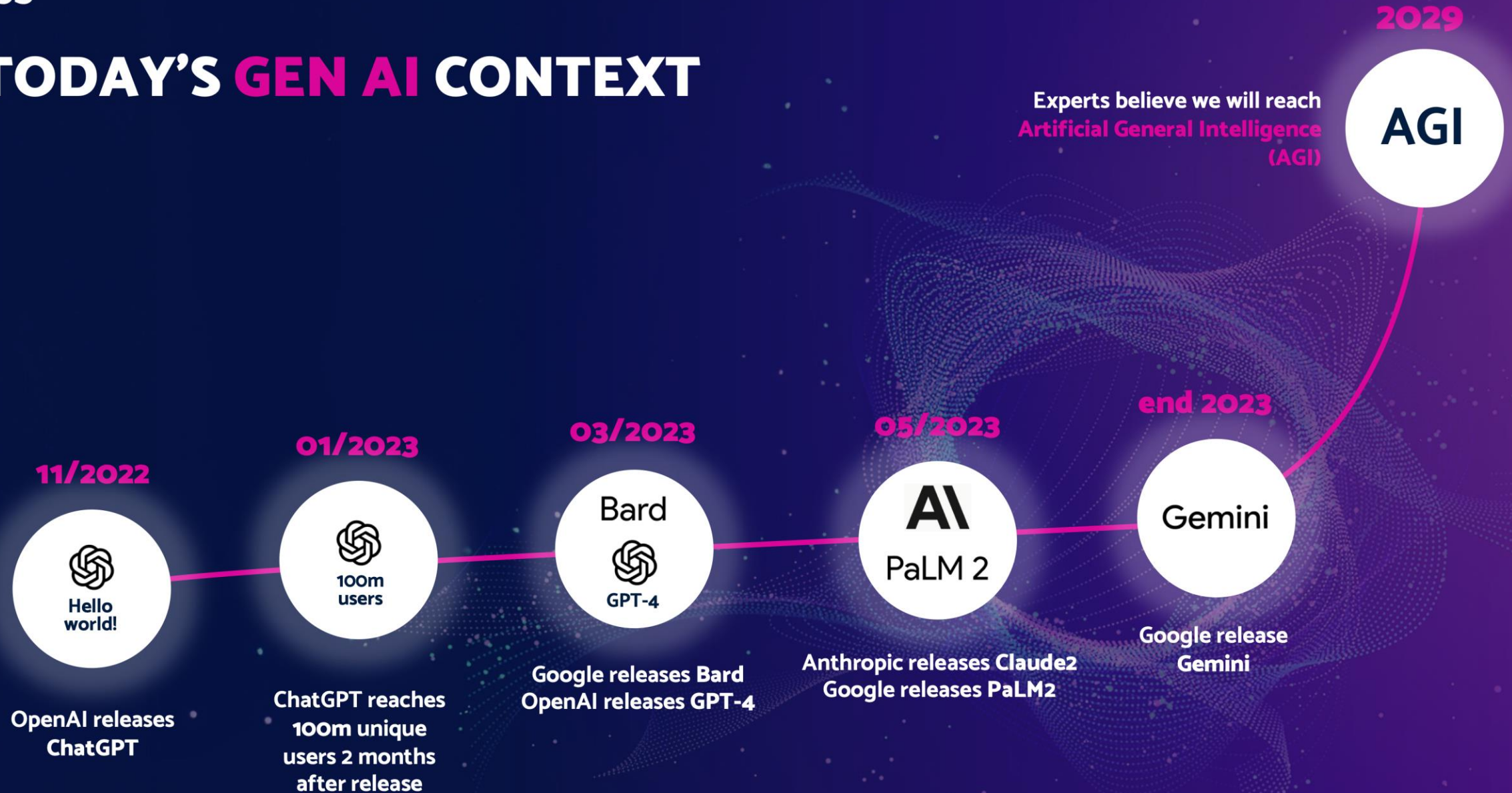
The Moravec Paradox

"It is comparatively *easy* to make computers exhibit adult level performance on intelligence tests or playing checkers, and *difficult or impossible* to give them the skills of a one-year-old when it comes to perception and mobility."

— Hans Moravec, 1988

The radical uncertain future

TODAY'S GEN AI CONTEXT



**Nothing is certain about the
future of AI**



My biggest **hopes** for the future of AI

AI generated content is raising the value of **trust**!

Transparency

Regulation

AI Governance

Explainability

Policies

AI Ethics

My biggest **hopes** for the future of AI



AI will **revolutionise** science and medicine!

- Protein folding
- Weather forecasting
- Climate models
- Brain computer interfaces
- And many more areas or promise

My biggest **hopes** for the future of AI

Harvard
Business
Review

How Generative AI Can Augment Human Creativity



AI will **expand**
our creativity in art,
music, film, etc!

My biggest **hopes** for the future of AI

AI will free us from **tedious** and **dangerous** jobs

(e.g., self driving cars)



OPINION

AI holds much promise in medicine
beginning with easing doctors'
paperwork

AXIOS

Aug 29, 2022 - Technology

Drones are sniffing out landmines
in Ukraine

My biggest **hopes** for the future of AI

AI will help us understand the general nature of intelligence, and appreciate what it **means to be human.**

My biggest **fears** for the future of AI

AI will magnify **biases**

SCIENTIFIC
AMERICAN®

MAY 18, 2023 | 5 MIN READ

Police Facial Recognition Technology Can't Tell Black People Apart

AI-powered facial recognition will lead to increased racial profiling

GOOGLE / TECH / ARTIFICIAL INTELLIGENCE

Google pauses Gemini's ability to generate AI images of people after diversity errors



/ The company's attempts to subvert racial and gender stereotypes created new problems.

By Tom Warren, a senior editor covering Microsoft, PC gaming, console, and tech. He founded WinRumors, a site dedicated to Microsoft news, before joining The Verge in 2012.
Feb 22, 2024, 10:30 AM GMT

AXIOS

Oct 23, 2023 - Health

Study: Some AI chatbots provide racist health info

My biggest **fears** for the future of AI

AI will disrupt **jobs**, disable **privacy**, AI security, and concentrate power in a **few** big corporations.

The path forward

Ask why

The path forward

Augmentation

Direct innovation towards AI that augments human capabilities rather than replaces jobs.

Ethics

Embed ethical thinking and human values into the AI design process from the start.



Adaptability

Build flexible systems that can dynamically adapt to evolving real-world contexts.

Regulation

Develop thoughtful laws and governance frameworks around AI.

Empowerment

Guide progress in a way that empowers people and upholds human dignity.

AI is philosophy

Updated present (demo and model launched yesterday)



You

please draw me a bowl of fruit with no bananas



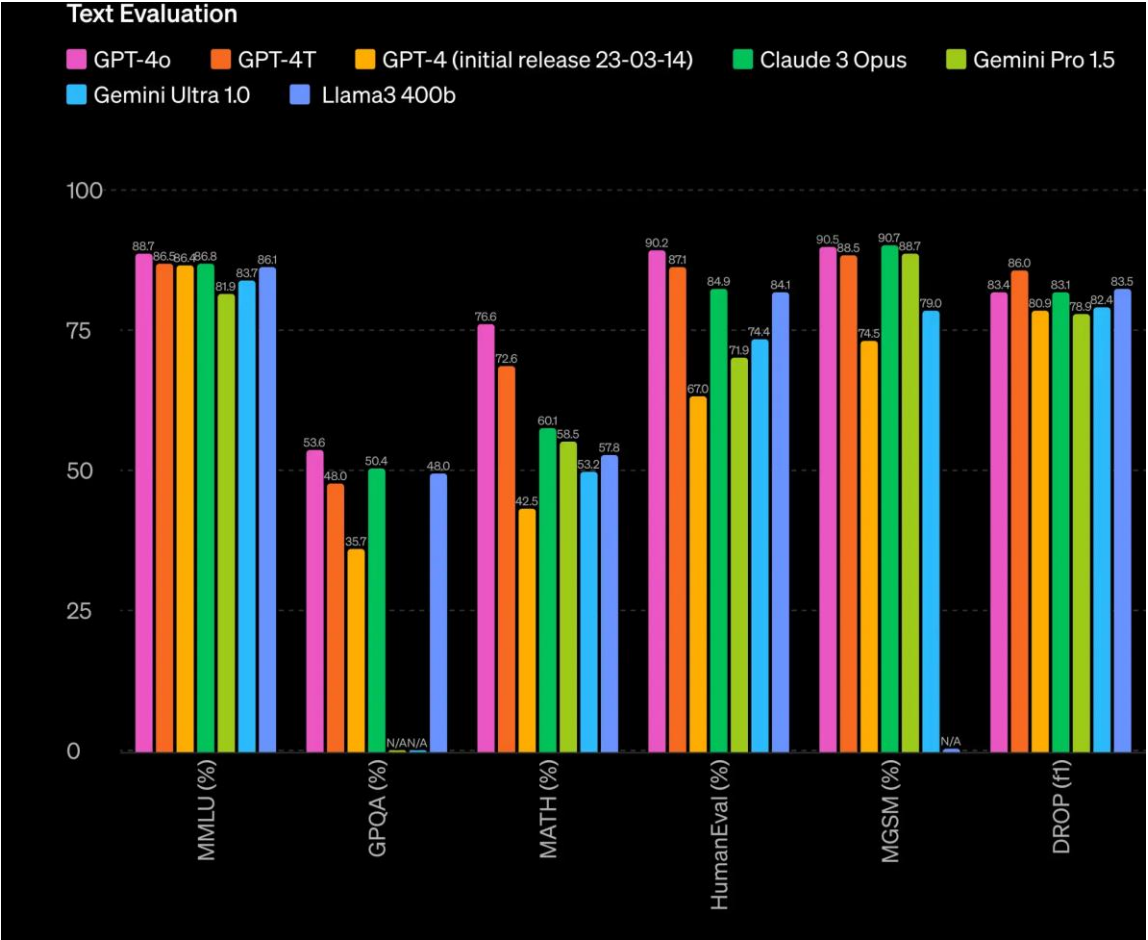
ChatGPT



Here's the image of a bowl of fruit without bananas, featuring apples, Enjoy!

Updated present (benchmark from yesterday)

Eval Sets	GPT-4o	GPT-4T 2024-04-09	Gemini 1.0 Ultra	Gemini 1.5 Pro	Claude Opus
MMMU (%) (val)	69.1	63.1	59.4	58.5	59.4
MathVista (%) (testmini)	63.8	58.1	53.0	52.1	50.5
AI2D (%) (test)	94.2	89.4	79.5	80.3	88.1
ChartQA (%) (test)	85.7	78.1	80.8	81.3	80.8
DocVQA (%) (test)	92.8	87.2	90.9	86.5	89.3
ActivityNet (%) (test)	61.9	59.5	52.2	56.7	
EgoSchema (%) (test)	72.2	63.9	61.5	63.2	



Thank you!

Reach out for questions or just a chat

Practical Examples of Data & AI Delivery

Tim Walpole – Head of Product and Innovation, Retail Trust

Rachel Smith – Embryology Innovation and AI Lead, Care Fertility



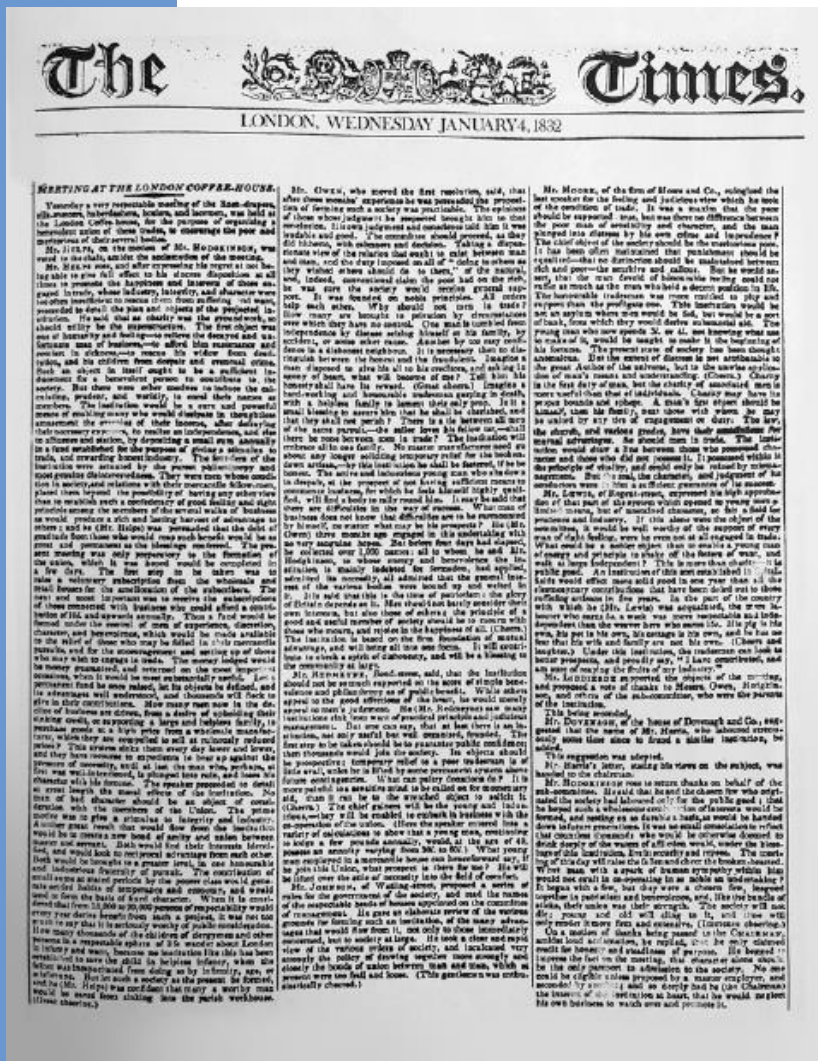


Retail
TRUST
1832 ONWARDS

“bjss

How data can create value and boost workplace happiness

Tim Walpole, Head of Product and Innovation, Retail Trust



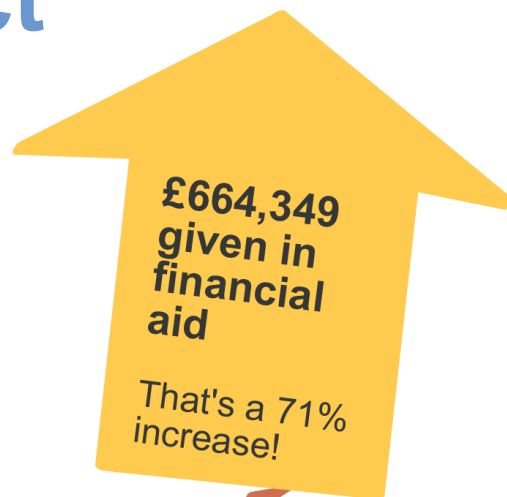
Our story

The Retail Trust was founded in 1832 at the London Coffee House. Our first Chairman, Thomas Helps proclaimed:

“Our purpose is to promote the happiness and interests of those engaged in the trade.”

Our impact

Between May 2022
and April 2023



We provided critical
incident support to
452 colleagues across
59 critical incidents

We created

£91.1 million

in social and economic and economic value

For every £1 invested we created £8.65
in social and economic value

11,295

helpline calls –
that's one every
47 minutes

2,319

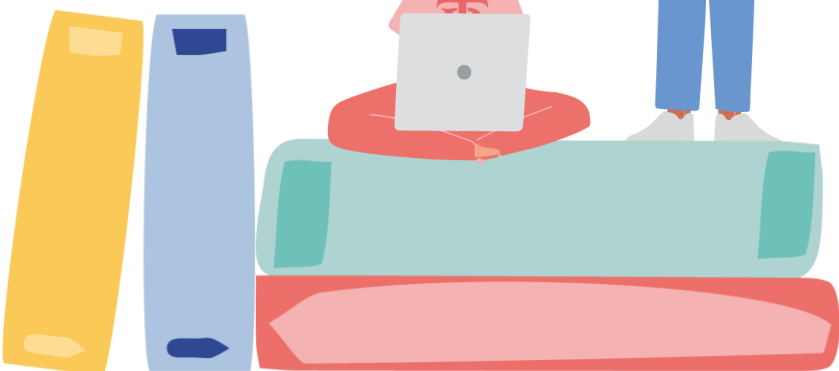
managers and retail
colleagues received
mental health and
wellbeing training

17,497

counselling sessions
delivered

37,557

new registered
users of
retailtrust.org.uk



The financial impact on business

Rising absence and churn linked to poor employee wellbeing is costing employers money:

£22bn

The estimated cost of **staff turnover** to UK employers as a result of poor mental health.

£28bn

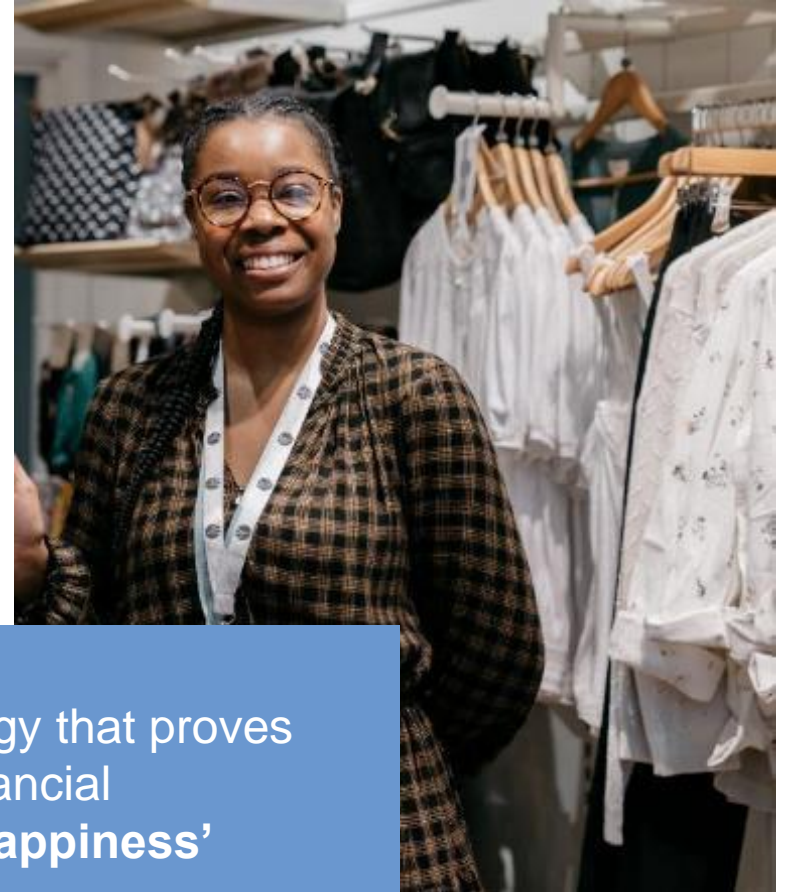
The estimated cost of **presenteeism** to UK employers.

£6bn

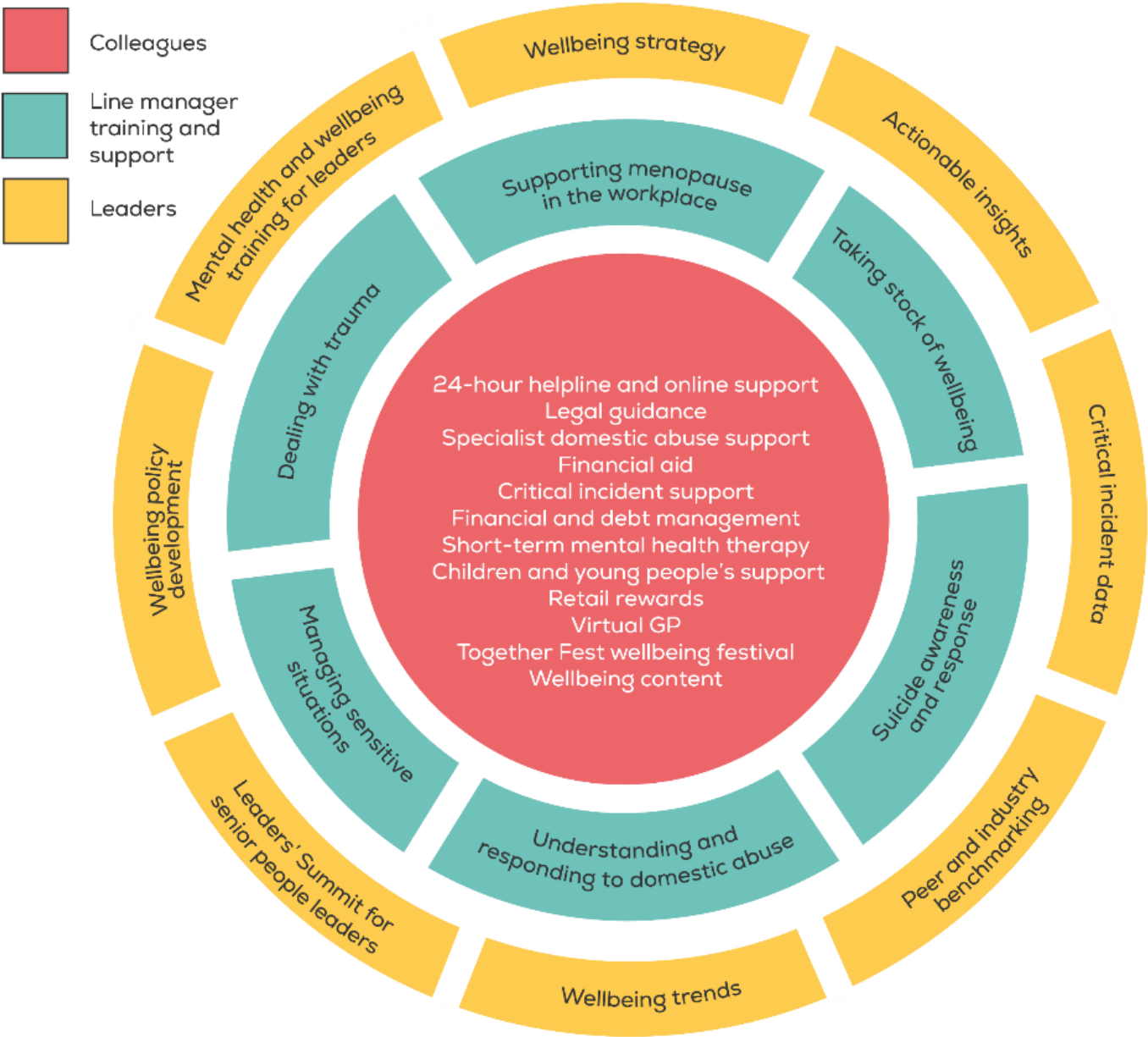
The estimated cost of **absenteeism** to UK employers.

But, what if we could prove that **investing in employee wellbeing reduces staff turnover, presenteeism and absenteeism**, while improving financial performance?

A methodology that proves there is a financial **‘return on happiness’**



We support over 650,000 colleagues across 200+ UK retailers and we know that the work we do is having a positive impact.



But, can you prove it?

1. How can you tell me **what actually works**, which services my colleagues engaged with and why?
2. How is this **addressing churn in my organisation** and with that absenteeism and presenteeism?
3. And, how do you **reach those colleagues who are not engaged** and empower them to look after their health and wellbeing?



Drive wellbeing innovation, make better decisions and adapt faster

Your happiness dashboard

Date range

25/02/2023

25/02/2024

More detail

Headcount

11,917

Colleagues supported

997 individual colleagues who have used the Retail Trust as a percentage of your headcount during the selected date range.

Industry average

20%

5%

4.6%

0.0%

50.0%

8.4%

997 colleagues supported

Doing well! Opportunity for us to do more

Our data shows that the more colleagues using the Retail Trust, the happier a workforce is, improving productivity, absenteeism, presenteeism and attrition. Click on your actions to find out more.

Colleagues' health and happiness

2,698 responses from the happiness assessment and pulse surveys. This is how happy your colleagues are against the industry benchmark. Higher scores indicate improved productivity and a better colleague experience.

Industry average

55.8%

40%

60%

0.0%

100.0%

63.8%

A higher score indicates a greater business impact for Test Retailer

You're doing great! Keep going!

Your colleagues are more productive compared to the rest of the industry, less likely to take sick leave and more likely to stay in your organisation. To have even more impact, click on your actions.

Business impact

This is the financial value our partnership has delivered calculated using our methodology based on reduced absenteeism, presenteeism and attrition.

£510K

1%

By increasing the number of colleagues accessing the website by 1% you will generate £27,852 more value.

View your insights:

Your actions

Leverage the business impact of investing in happier, healthier colleagues

Business impact

The financial value our partnership has created

Date range

25/02/2023

25/02/2024

Total impact

Value	£500,825
Website	£221,952
Helpline	£83,774
Online therapy	£0
Events	£0
Financial aid	£20,665
Happiness assessment	£14,319
Virtual GP	£152,975
Retail rewards	£0
Training	£7,140

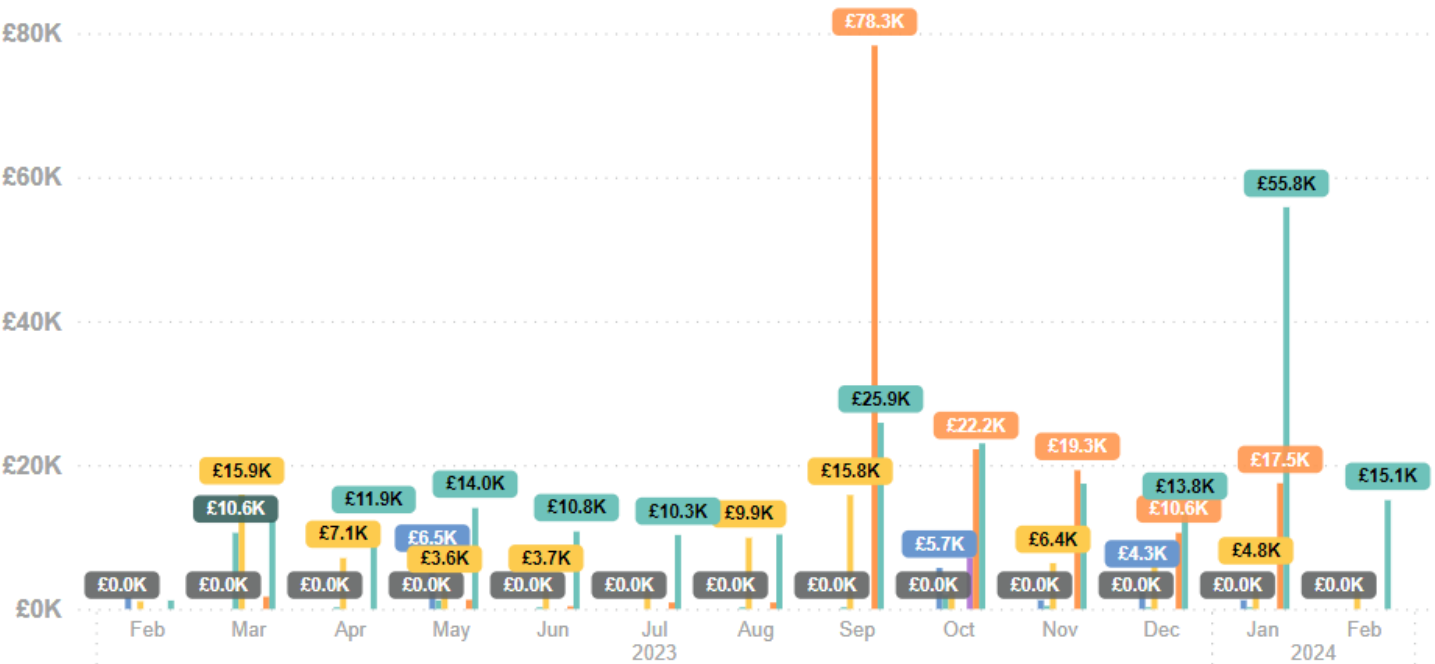
Total

Per colleague

Where is the financial value coming from

Filter by All

Events Financial aid Happiness assessment Helpline Online therapy Retail rewards Training Virtual GP Website



Business impact methodology

Personalise your wellbeing strategy using generative AI powered actions

Your action plan

Your personalised plan to improve the happiness and wellbeing of your colleagues

Company summary

Over the past four months at [REDACTED] Retail Trust has observed notable trends through various employee engagement measures, despite the absence of trend analysis data for March 2024. The Happiness assessment reveals gender-specific changes in employee sentiment, with males reporting improvements in several areas related to job satisfaction and decision-making autonomy, yet expressing concerns around stress management and work-life balance. Females have seen gains in areas such as training and managerial relations, though there are declines noted in perceptions of fair pay and work pressure. This mixed picture suggests a dynamic work environment where progress in professional development and workplace relations coexists with challenges in remuneration and stress. The provided information indicates that no data was recorded to do trend analysis for articles of interest on Retail Trust's website, as well as Helpline and financial aid services, in the aforementioned period.

These insights could imply a need for [REDACTED] to focus on enhancing support systems and providing better guidance to address specific employee needs. The company has an opportunity to foster a more balanced and supportive work environment by recognizing and nurturing the positive trends, such as increased decision-making trust and improved relations with managers, while also developing strategies to mitigate the areas of decline, particularly in fair pay perception and stress management. By aligning these efforts with employee feedback, [REDACTED] can aim to maintain and elevate the overall workplace satisfaction and well-being.

Suggested actions

+ Career development

- Dealing with anxiety

It is suggested to run a campaign on 'Dealing with anxiety' because the provided data indicates a decreased engagement from males in Emotional Support articles, which suggests an underlying issue that may not be adequately addressed.

It is suggested to run a campaign on 'Dealing with anxiety' because the provided data indicates that male employees at [REDACTED] have experienced declines in their ability to recognize and manage stress. Anxiety often goes hand-in-hand with stress, so focusing on anxiety could indirectly help with stress management.

+ Guidance for managers and leaders

+ Male mental health

+ Self-care

Select a date range to see your actionable insights

Date range

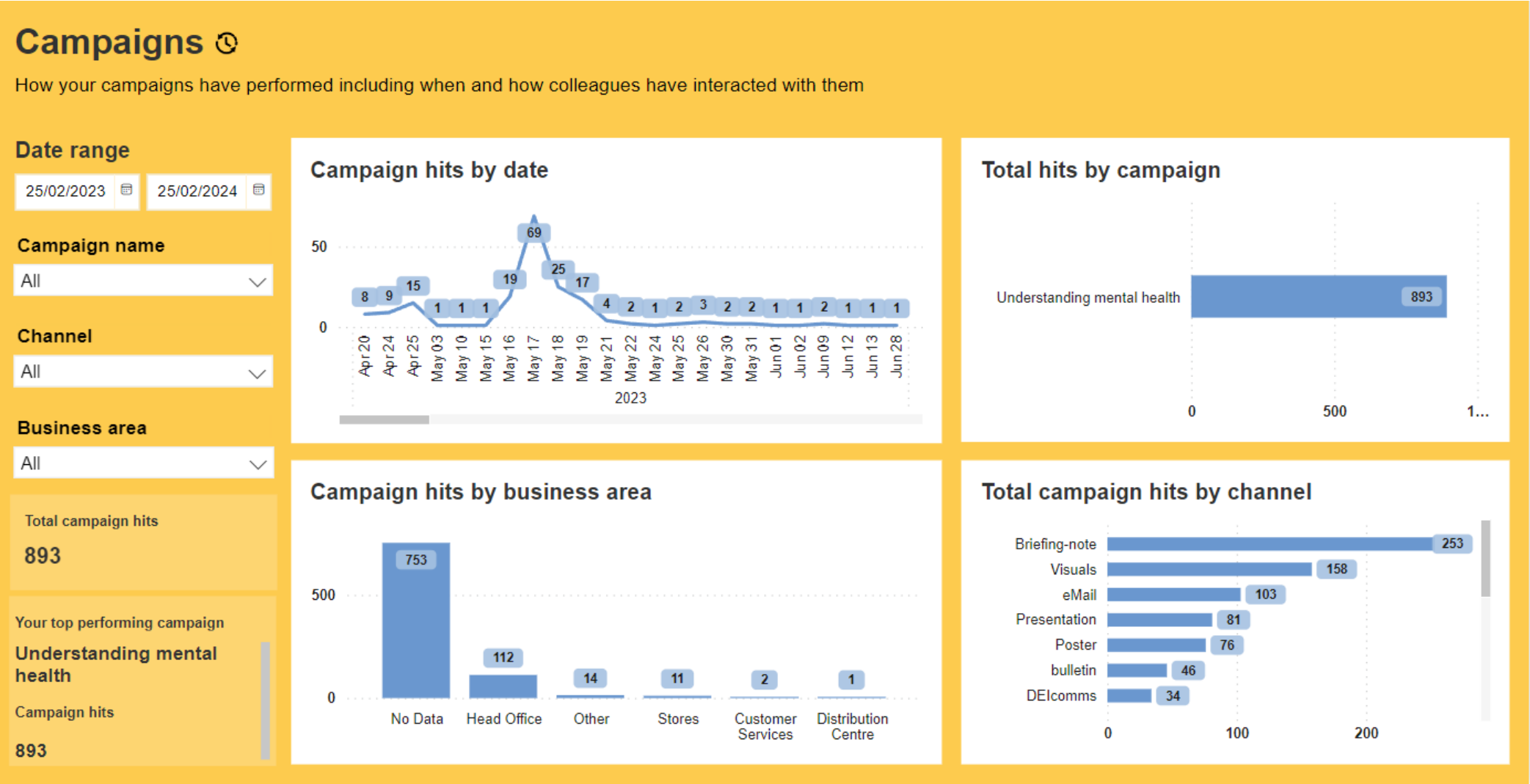
10/05/2023 10/05/2024

Select an action to run

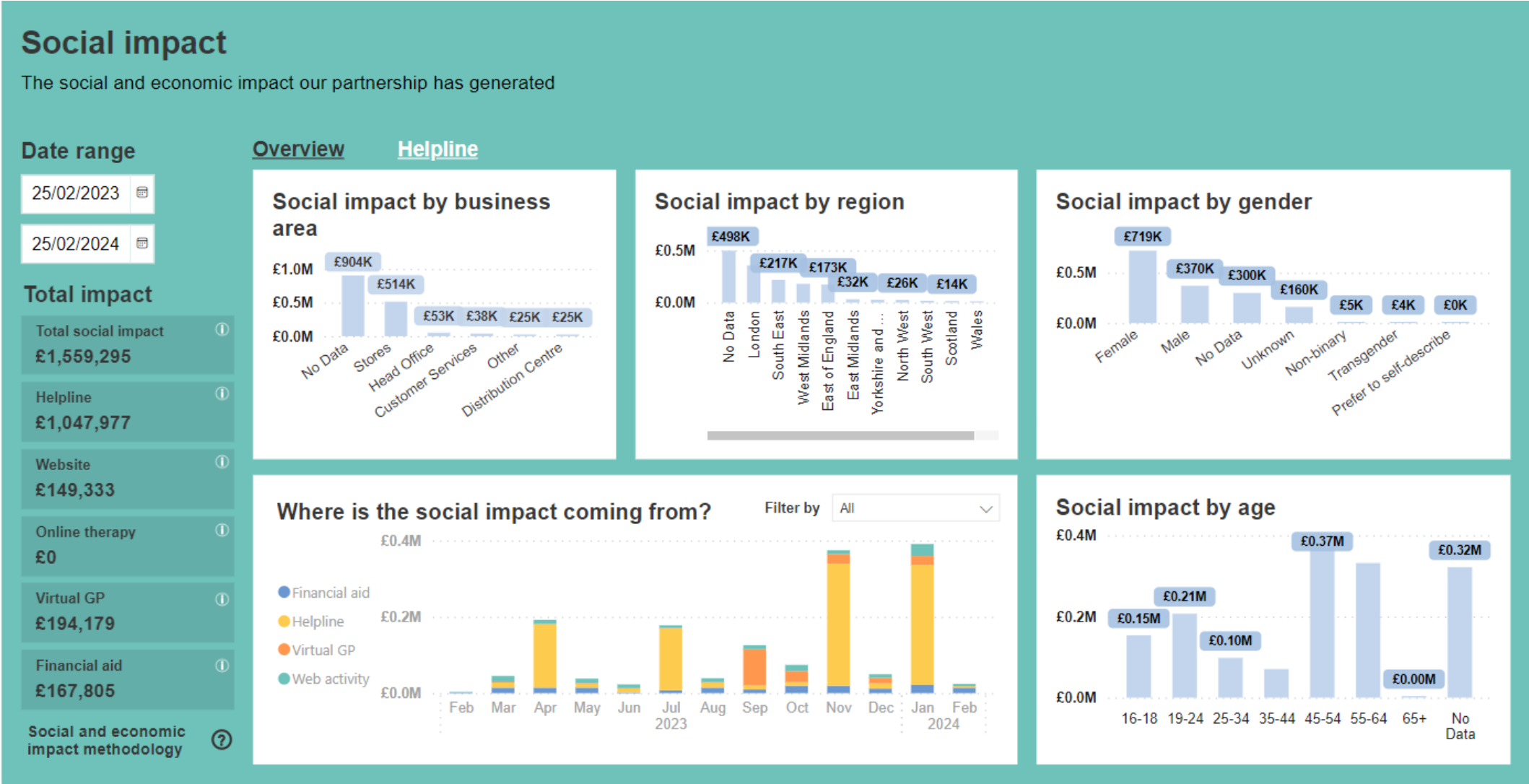
All

▶ Run my action plan

Deliver personalised campaigns delivering insights into insight effectiveness



Showcase the social and economic impact of workplace wellbeing programmes



Our ambition is to
create systemic
change in retail by
supporting
**one million
colleagues.**

Join us on this journey to
transform lives for good.



Retail TRUST

1832 ONWARDS

Thank you



BJSS AI Summit



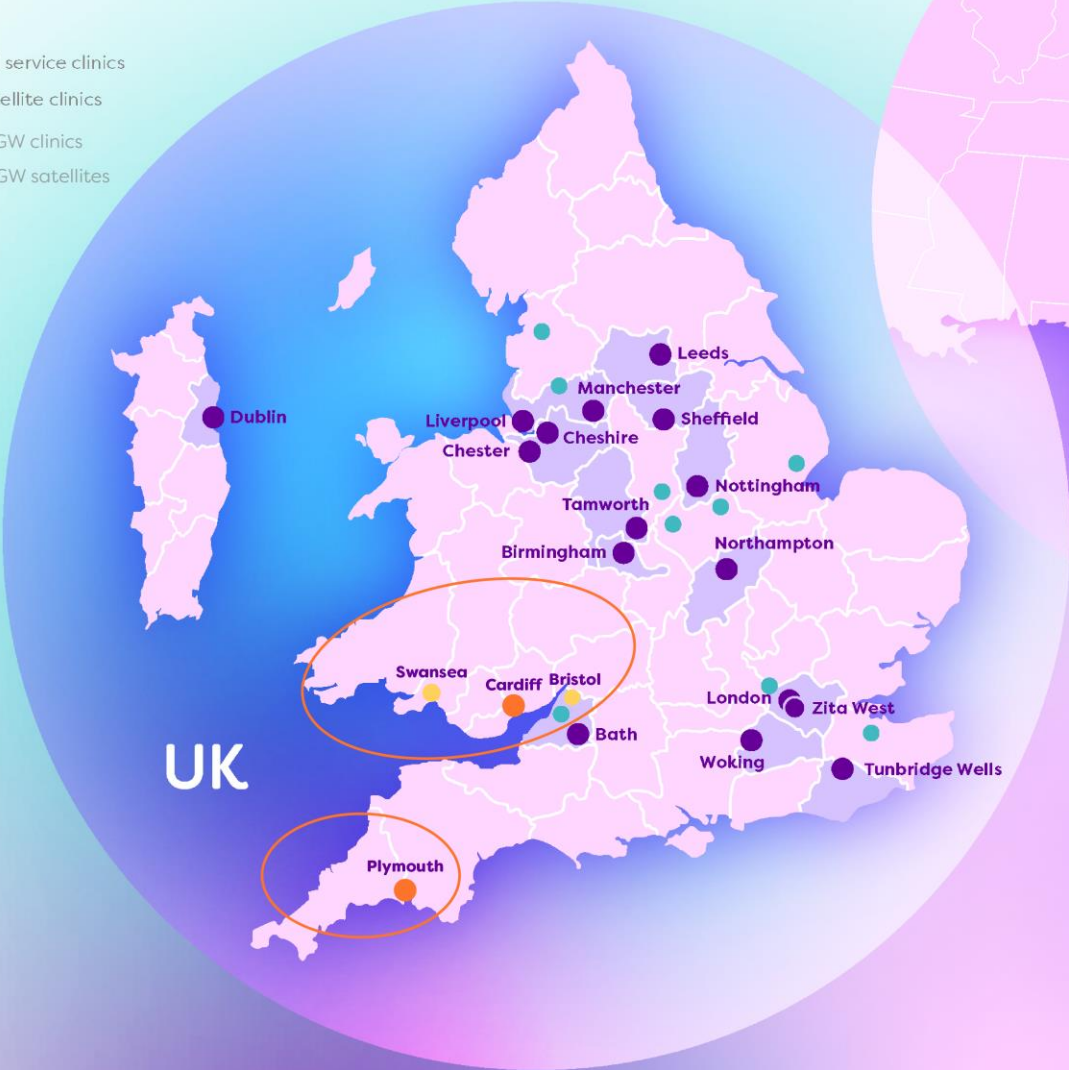
Transforming embryo selection with AI

Rachel Smith

Embryology Innovation and AI Lead

Growing around the world with **Care**

- Full service clinics
- Satellite clinics
- CRGW clinics
- CRGW satellites



Fertility By The Numbers



17.5%

of the population experience
infertility globally

(WHO 1990-2012)

In the UK **9-15%** of
couples will have fertility
problems

1:6
approx

Explosion of AI in Fertility



Oocyte



Embryo



Sperm

Tailored treatments

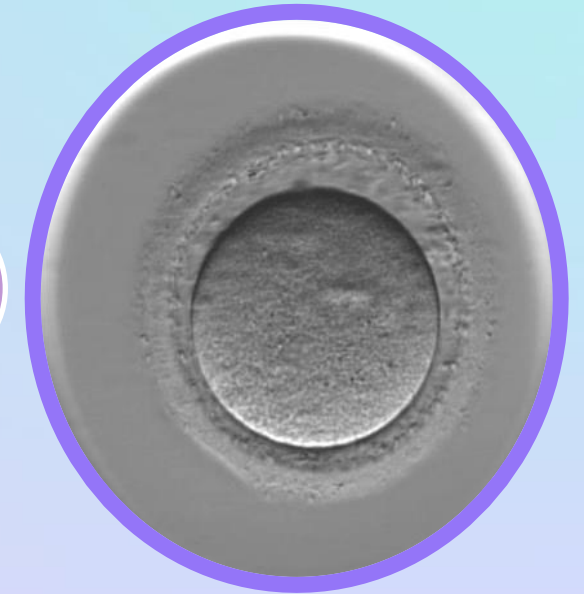
Embryo selection



Embryo Selection



Morphology vs Morphokinetics



Can AI assist in selecting the best embryo

Embryo selection harnessing AI



CARE Quality assured
manual annotations

Trained on 63000
embryos

500 million individual
images

Automated annotations

User interface

Ranking for live birth
potential

In use in all Care clinics

Trusted by Embryologists

Can analyse 800 embryos simultaneously

1-2 seconds for a result

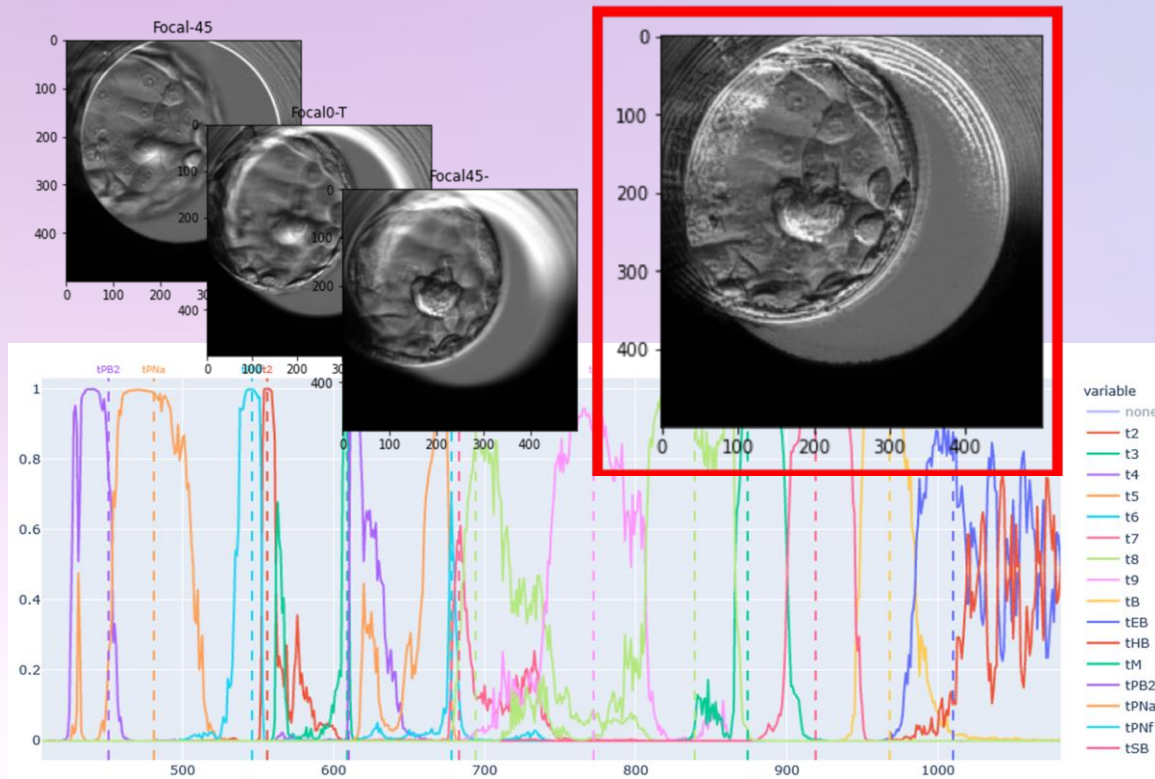
Automated embryo selection

At least as good as an experienced embryologist

Comparable to 'best' commercial product

Accurate/ reproducible

Saving time



AI for embryo selection

In use across Care
group since Jan 2023



Collaboration to achieve success

800 ongoing pregnancies

~270 Babies and counting

Patient expectations

Supporting patient decisions

Enabling a new way of working for embryologists, using AI and MI

Over 12000 embryos
processed

200000 automated annotations

<1% needing embryologist input

Staff retention



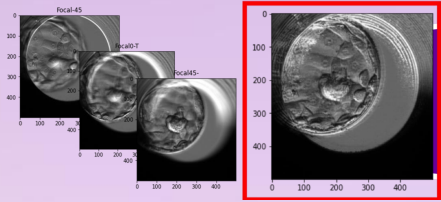
Saving 400hrs of
embryology time.

OR

53 working days for
the group in 1 year



Professional recognition



Innovative reputation

Collaboration
to achieve
success

Award Winning

Prospective
comparison...



Competitive advantage



International reach





Other timelapse devices



Prediction modelling



Automation



AI for Live birth prediction

Future
innovations
and
collaborations

Thank you for your attention



Morning Break

Discover how to adopt

FUTURES THINKING

within your organisation



Matthew Mullan

Future Thinking Lead

SPARCK



One of the greatest business challenges of our time..

Technology changes rapidly
while organisations do not.

Martec's Law

50%

of respondents believed
their organisation would
NOT exist in 10 years
time.

83%

lacked a future
focused strategy.

18%

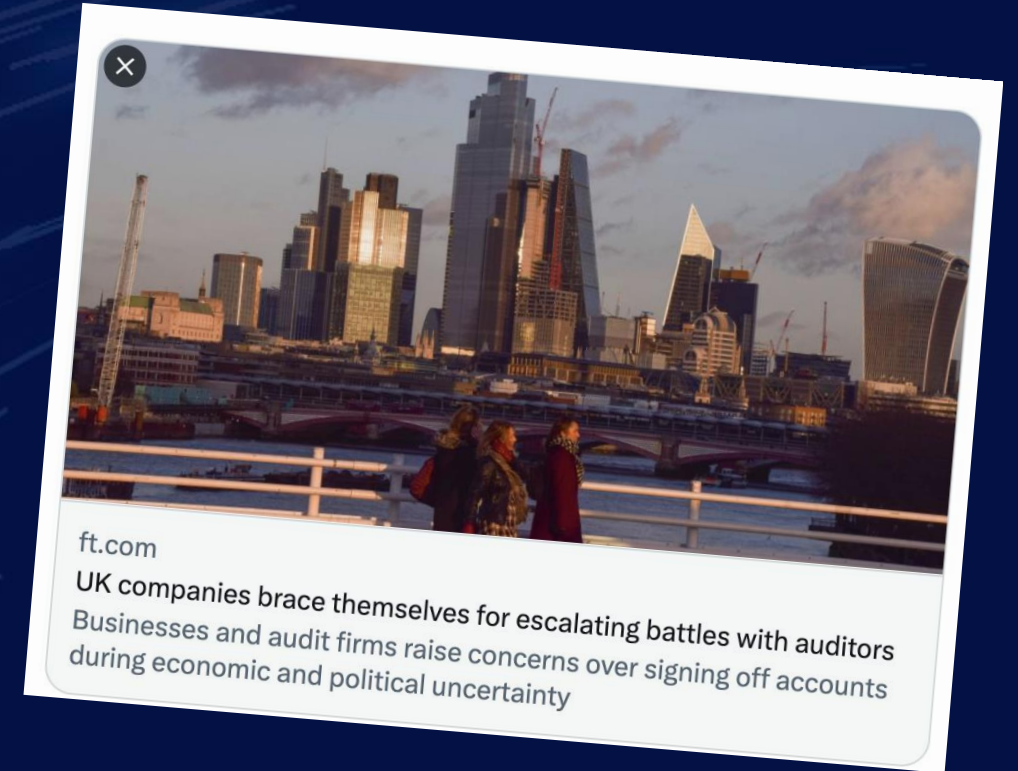
prioritising AI within
the next 12 months.

Auditing

Bosses of British companies said the volatility was making it more difficult to guide markets on their future performance

“**Uncertainty** is at an all-time high and, quite rightly, I think auditors are **sceptical about management forecasts** and whether they’ll be achievable against that backdrop”

Andrew Walton, UK head of audit at EY



The age of disruption

COVID



TUNA

RUPT

VICA

VUCA

BANI

VUCCA

'''bjss * SPARCK

**There
are
forces at
play**



""bjss * SPARCK

Technology

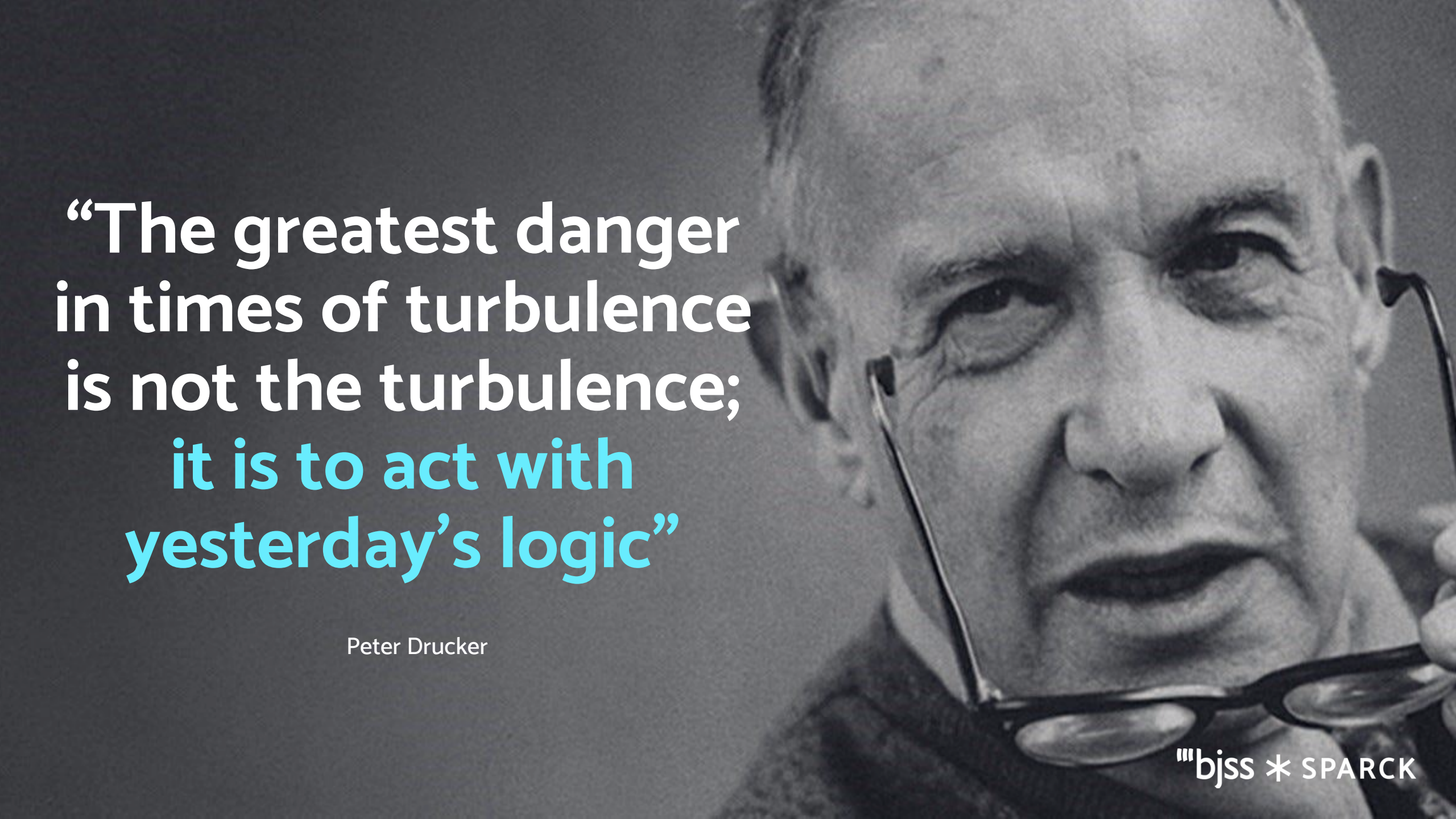
Institution

Demographic

Environment

Shifting values



A black and white close-up portrait of Peter Drucker, an older man with glasses, looking slightly to the right. The image is the background for the text.

**“The greatest danger
in times of turbulence
is not the turbulence;
it is to act with
yesterday’s logic”**

Peter Drucker

How?

IKEA



ft.com
CEOs forced to ditch decades of forecasting habits
Privately owned Ikea has shed the traditional budget to focus on
'scenario planning'

“... we have no concept of predicting with precision what’s going to happen in 6 to 12 months.”

Jesper Brodin, CEO of Ingka Group | IKEA



What IS ➡ What IF?

Future[s]



Futures Thinking



A structured approach

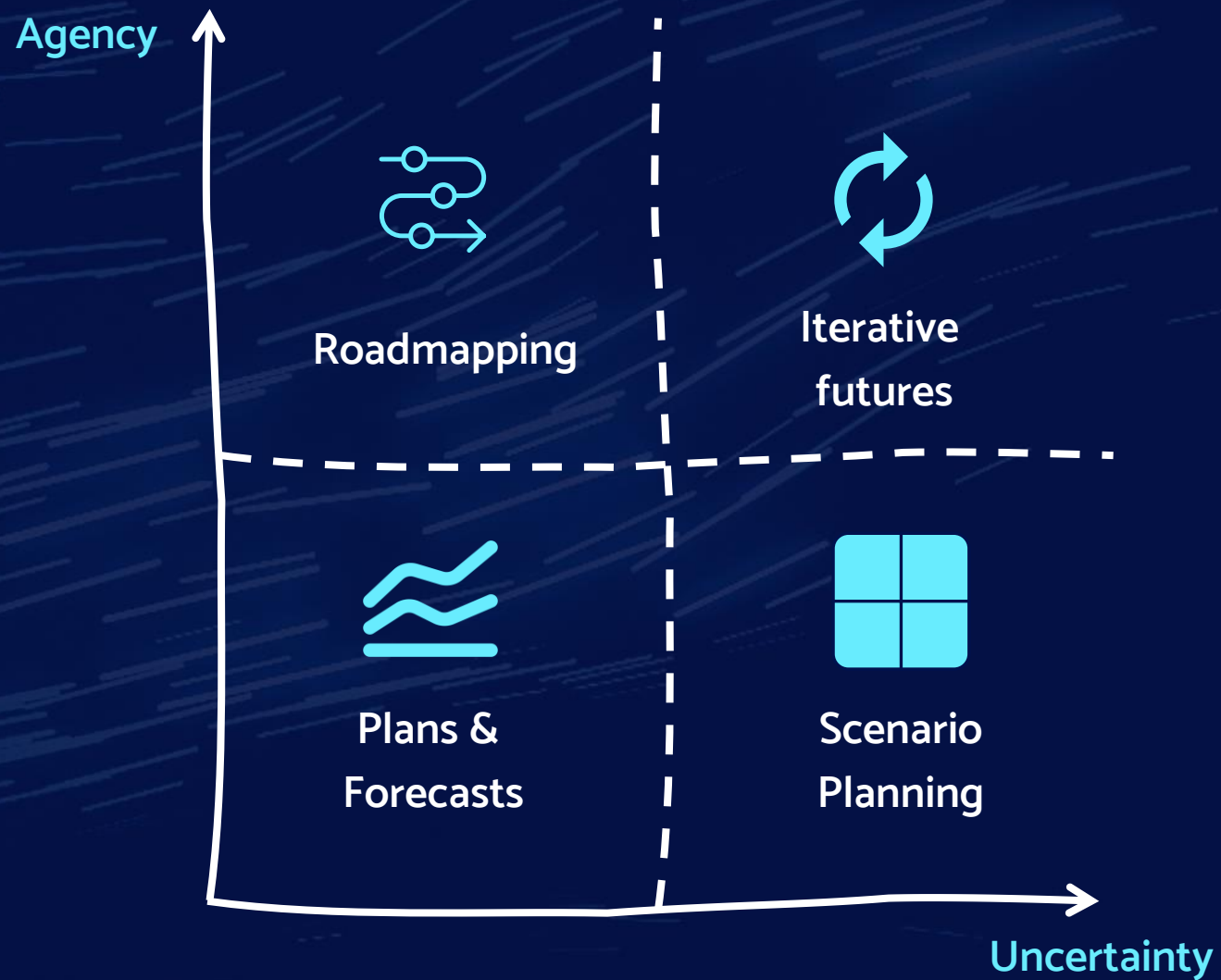


Anticipate and prepare for future possibilities



Frame action today to shape your future

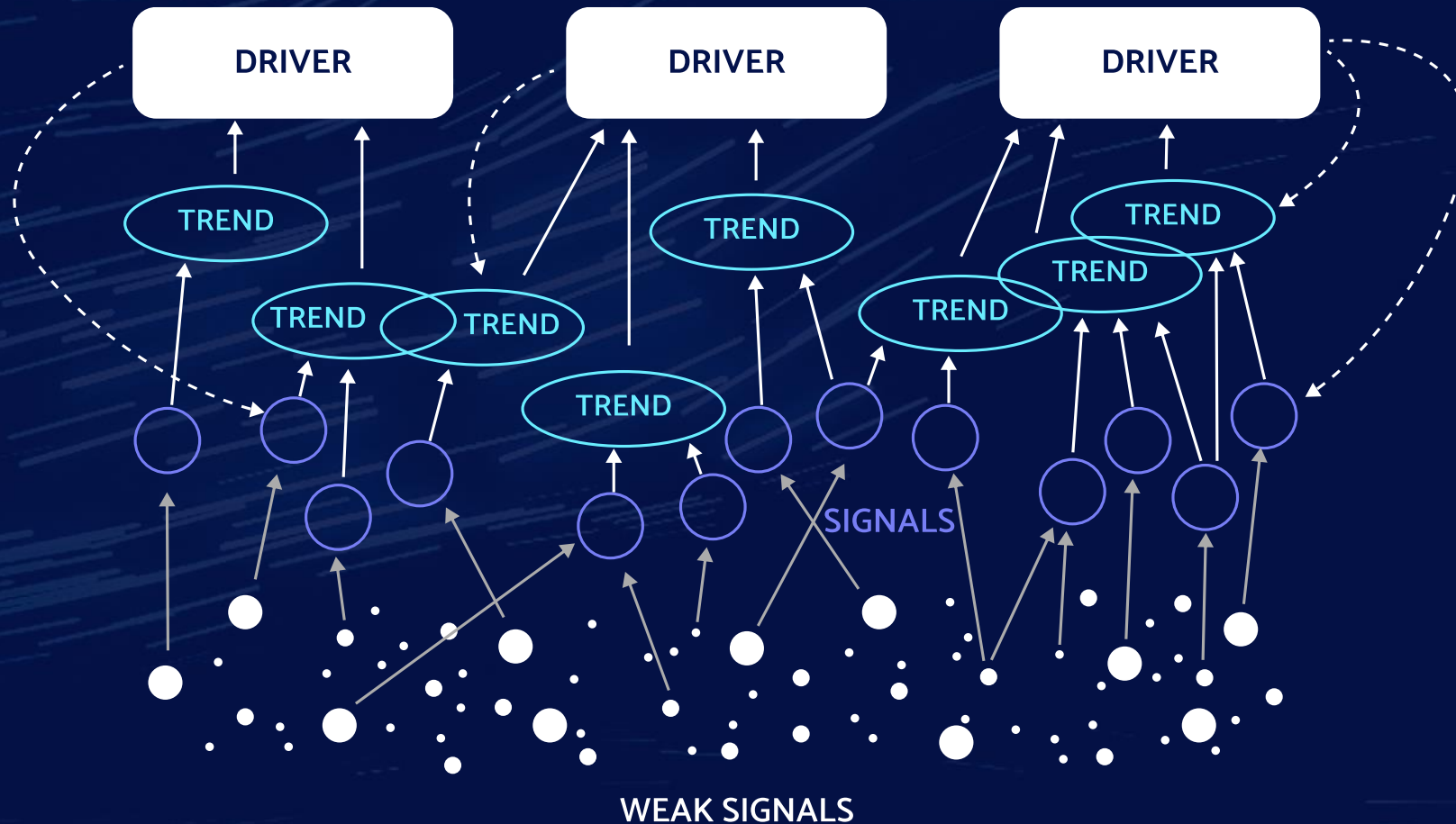
Agency vs Uncertainty



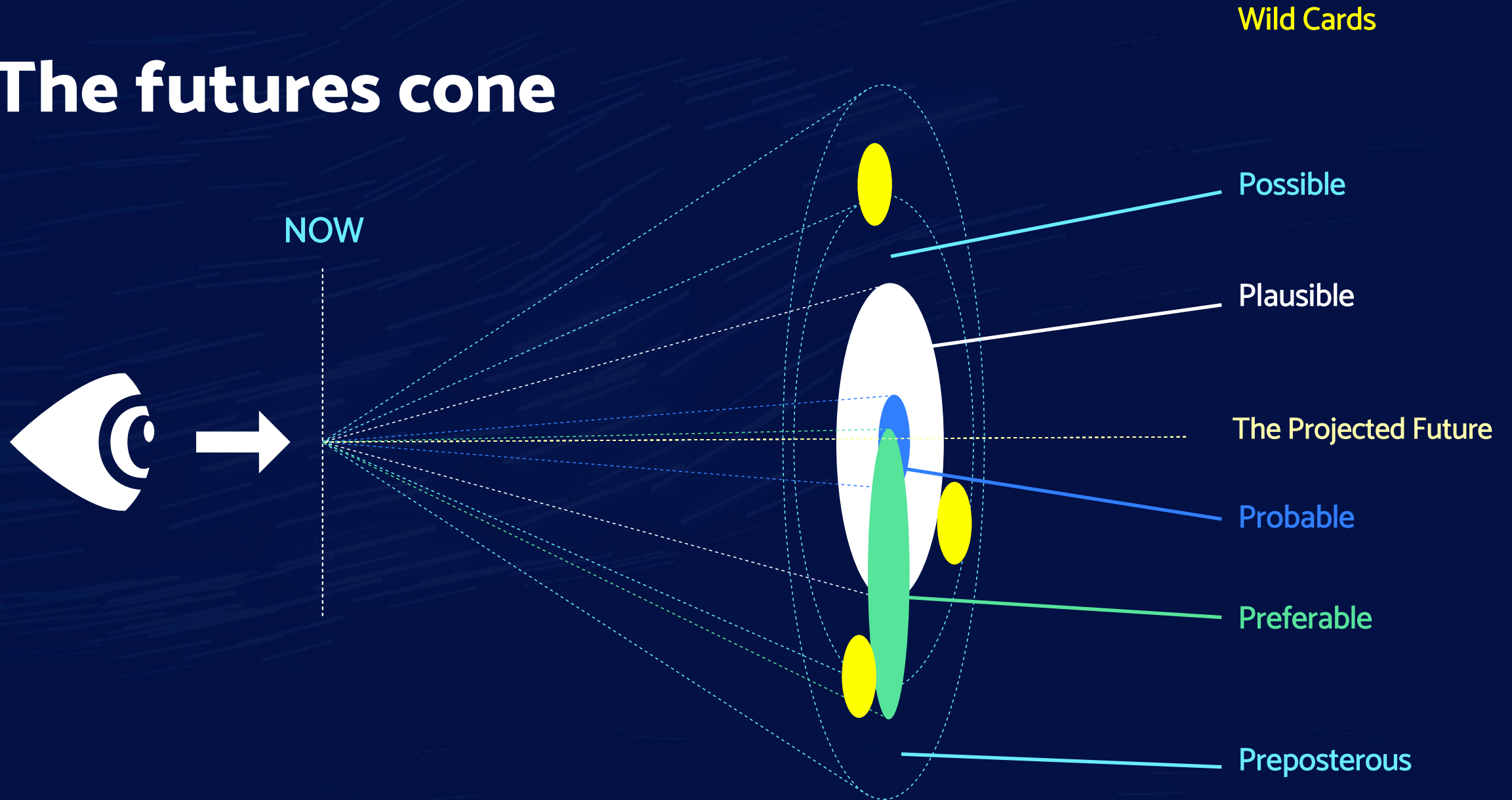


Useful Models & Concepts

Futures Intelligence



The futures cone





Benefits of Futures Thinking

Top 3 Benefits



Strategic space



Agility and resilience



Shaping preferable futures

The revenue of firms with a long-term mindset cumulatively grew on average 47% more than other firms, and their earnings grew 36% more.

McKinsey, 2017

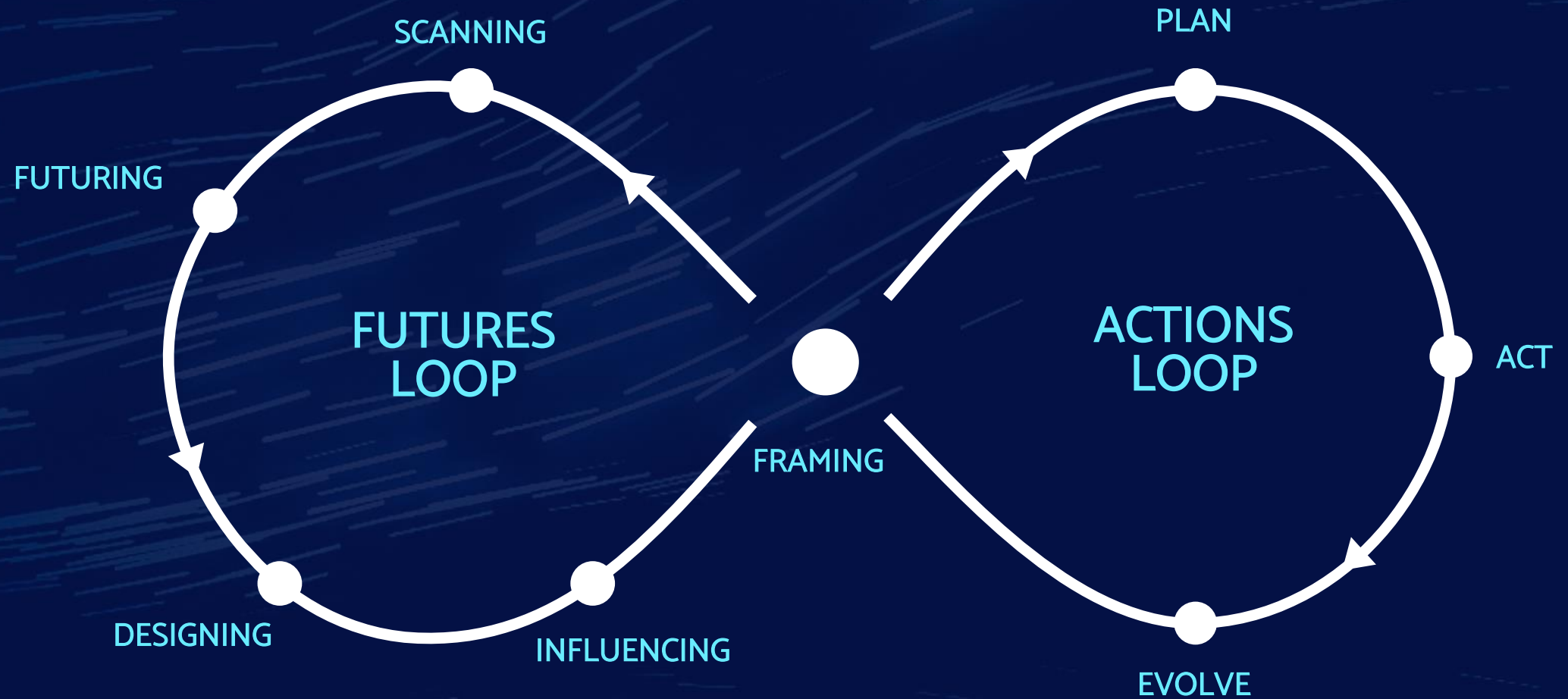
**Future thinking companies out
perform the average company with
33% more profits and 200% more
growth**

Rohrbeck , Technological Forecasting and Social Change, 2018



Our approach

Our Framework





Our principles



Create space

bjss * SPARCK



Participatory by nature

Action orientated

bjss * SPARCK



Open and democratised

How can we help **you?**



Exec briefings



Lunch & learns



Participatory
experiences



Projects & capability

Today's workshop



1. Explore a fictional scenario for an automotive company in 2034



2. Assume the role of a fictional automotive supplier and explore the implications of the scenario



3. Unpack the actions required now

Q&A



Scan QR code
to access our
paper



bjss * SPARCK

AI Panel Session



Ask your question to the panel
by scanning this QR code to
going to [Slido.com](https://www.slido.com) and using
event code **BJSSAI**



Our AI Panel



Ali Farooqui

Head of
Cyber Security

- Cyber Security
- AI Operations
- Opportunities and risks



Laura Musgrave

Lead Researcher in
Responsible AI

- Responsible AI
- AI risk and impact assessments
- AI Governance at an organisational level



Pedro Varela

Head of
Data Science

- AI and Machine Learning
- Strategy and Leadership
- Software Development



John Davis

Head of
Delivery Optimisation

- AI Driven Software Development
- Delivery & Engineering metrics
- Accelerators

Go to **slido.com** and enter event code **BJSSAI** to ask your question



Lunch

Track Experiences & Roundtable Sessions

Green lanyards to do driving session first followed by roundtables

Orange lanyards to do roundtables followed by driving session



Final thoughts

AI Readiness Survey

BJSS AI Summit - AI Readiness Survey



**Thank you for
attending.**

**Have a safe
journey home.**