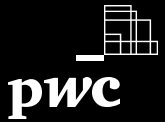


The Essential Eight



With you today...

Joe
Harrington

AI Engineering Leader, PwC
Global Technology

Joe.Harrington@pwc.com



Today's agenda

- 01 Essential Eight Overview
- 02 The EmTech Accelerators
- 03 Essential Eight Convergence
- 04 Risks in Acceleration
- 05 Discussion

In less than a year, GenAI went from this...

ChatGPT

Examples	Capabilities	Limitations
"Explain quantum computing in simple terms"	Remembers what user said earlier in the conversation	May occasionally generate incorrect information
"Got any creative ideas for a 10 year old's birthday?"	Allows user to provide follow-up corrections	May occasionally produce harmful instructions or biased content
"How do I make an HTTP request in Javascript?"	Trained to decline inappropriate requests	Limited knowledge of world and events after 2021

Free Research Preview: ChatGPT is optimized for dialogue. Our goal is to make AI systems more natural to interact with, and your feedback will help us improve our systems and make them safer.

9:41 📶 🔋

ChatGPT > ✍️

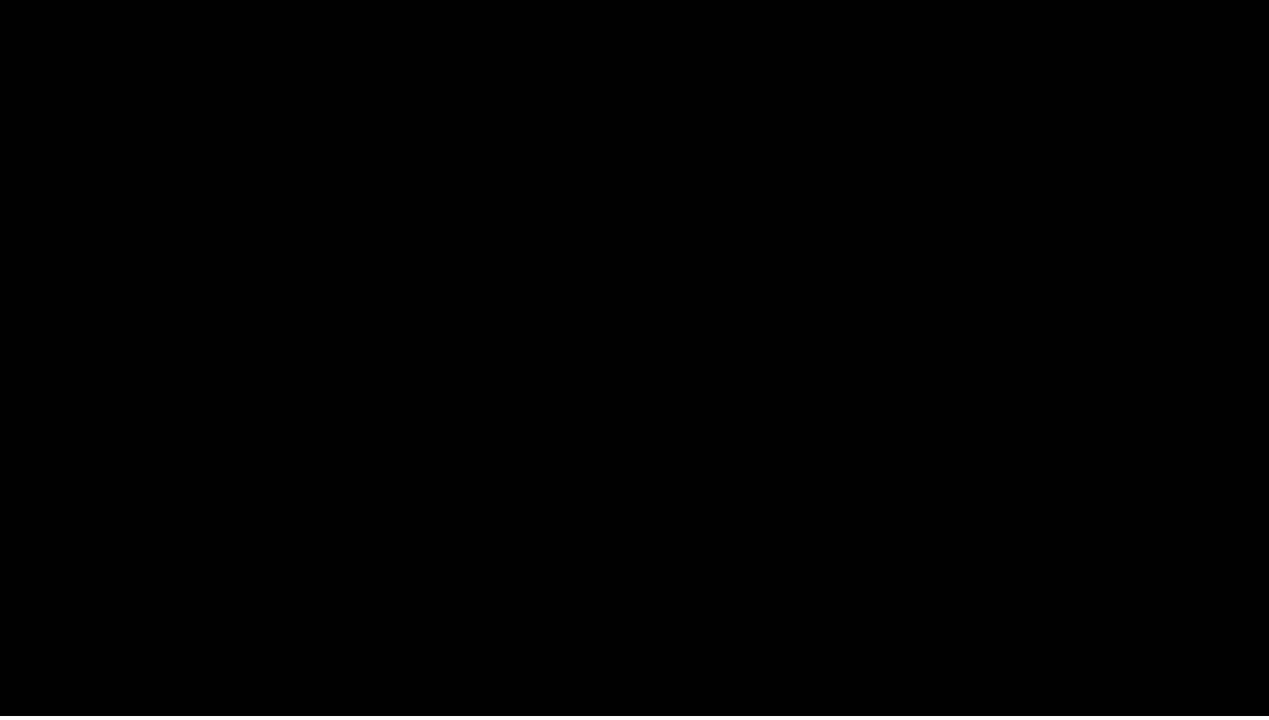
Me
I am hosting my friends for brunch on Sunday and they are asking what to bring. Could you give me a list of suggestions? I'll be making a frittata and mimosas.

ChatGPT
Certainly! Here's a list of brunch items your friends could bring:

1. Fresh fruit salad or a fruit platter
2. Pastries or croissants
3. Bagels with cream cheese and smoked salmon
4. Yogurt with granola and berries
5. Breakfast potatoes or hash browns
6. Sausages or bacon
7. Quiches or savory tarts
8. Pancakes or waffles with syrup
9. Coffee or tea
10. Freshly squeezed orange juice

These options can complement your frittata and mimosas nicely and provide a variety of flavors for your brunch gathering.●

+ | Send a message... | 🔊 🎧



Last October alone, we experienced a surge of accelerated innovation unlike any other.



MFG
MIL

13M views

SPEED	1139 KM/H	SPEED	15244 KM/H
ALTITUDE	1 KM	ALTITUDE	144 KM
LOX	██████████	LOX	██████████
CH4	██████████	CH4	██████████

T+00:06:31
STARSHIP FLIGHT TEST

Artificial Intelligence

Adobe starts roll-out of AI video tools, challenging OpenAI and Meta

By Reuters
October 14, 2024 10:07 AM EDT · Updated 2 hours ago




Adobe's new AI video tools, including Adobe Firefly, are set to challenge OpenAI and Meta's AI video tools. The company is rolling out these tools to its Creative Cloud subscribers.

Artificial Intelligence

Zoom will let AI avatars talk to your team for you

By Reuters
October 14, 2024 10:07 AM EDT · Updated 2 hours ago



You'll soon be able to create a custom AI avatar of yourself that you can use to record and send short messages.

2024 Behind the Scenes with Zipline + GMA

Zipline
17.5K subscribers



Join us for a behind-the-scenes look at our new generative delivery service. Fast, smart, clean - it's basically transportation for food, medicine, and more. Platform 2 is launching in select areas throughout the United States next week.

US News

Elon Musk jubilant as SpaceX Starship makes flawless flight, splash-down — and a first-ever 'Mechazilla' booster recovery

By CNN News
Published Oct. 13, 2024 | Updated Oct. 13, 2024 2:01 p.m. ET



244 Comments

US News

Elon Musk jubilant as SpaceX Starship makes flawless flight, splash-down — and a first-ever 'Mechazilla' booster recovery

By CNN News
Published Oct. 13, 2024 | Updated Oct. 13, 2024 2:01 p.m. ET



244 Comments

Chinese researchers break RSA encryption with a quantum computer

News
Oct 14, 2024 · 4 min



US News

Fidelity Plans First Fund That May Use Blockchain

By Reuters
October 14, 2024 10:07 AM EDT · Updated 2 hours ago



Artificial Intelligence

Meta unveils augmented reality glasses prototype 'Orion'

By Reuters
October 14, 2024 10:07 AM EDT · Updated 2 hours ago



Mark Zuckerberg says lightweight AI-enabled device is the 'most advanced' in the world.

Home · Tech

Tesla's surprise announcements: RoboVan and Optimus

The Cybercab wasn't the only big reveal Elon Musk had on Thursday.

By Ars Technica on October 15, 2024



Artificial Intelligence

Why the Nobel Prize in Physics Went to AI Research

Nobel committee recognizes scientists for foundation research in neural networks

By Reuters
October 14, 2024 10:07 AM EDT · Updated 2 hours ago

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Our new synthetic reality: What it means for media and business communication



01

PwC Essential Eight overview

The Essential Eight

In 2016, we first identified the **Essential Eight** - settling on the crucial shortlist after **analyzing more than 250 technologies in our labs.**

Since then, much has changed. Several of the Essential Eight have advanced so quickly that the value propositions they offer business have changed. Still other, newer technologies are now becoming instrumental.

Publication: [The New Essential Eight technology trends](#)



Artificial Intelligence (AI)



Internet of Things (IoT)



Blockchain



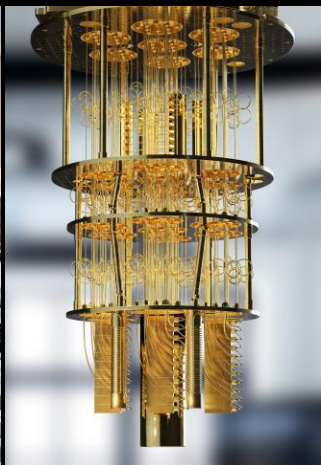
Augmented Reality (AR)



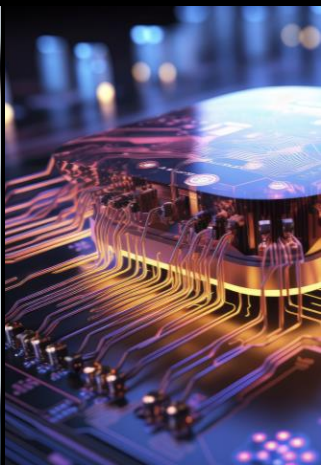
Virtual Reality (VR)



Advanced Robotics



Quantum Computing



Neuromorphic Computing

What makes these eight “essential?”



Artificial Intelligence (AI)



Internet of Things (IoT)



Blockchain



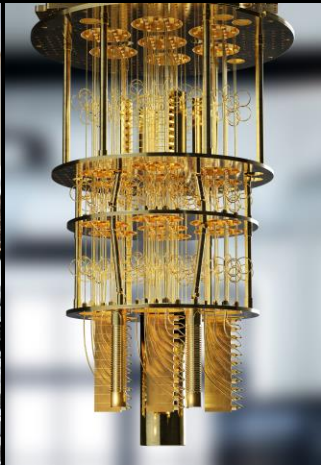
Augmented Reality (AR)



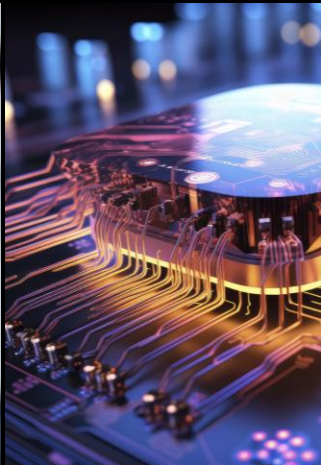
Virtual Reality (VR)



Advanced Robotics



Quantum Computing



Neuromorphic Computing

These technologies will be essential for a variety of industries, businesses, and use cases for the next five years and beyond.

The pace of adoption among the Essential Eight (E8), driven by Generative AI (GenAI), points to these technologies being essential sooner and with immediate impact.

While these technologies are not essential for every industry, almost every industry from small to large should implement at least some of the E8 to scale and compete. The E8 are not “add-ons” but rather essential technologies for business success.

Another profound shift: these individual technologies are essential because they are combining in transformative ways. For example, Generative AI is massively impacting business and converging with every E8 technology.

Expand, Evaluate, Experiment

A framework for strategic evaluation and engagement

Because these technologies can be so transformative, understanding what they can do – and when to integrate them into your business – can be fundamental for both everyday operations and long-term strategy.



Essential to **Expand**

These technologies are **used at scale in many enterprises**, and many companies are ready to expand further. If you're not looking at more widespread implementation, **you should be.**



Artificial Intelligence (AI)



Internet of Things (IoT)



Blockchain



Augmented Reality (AR)



Virtual Reality (VR)



Advanced Robotics



Quantum Computing



Neuromorphic Computing

Essential to Evaluate

These technologies are deployed for a growing number of use cases but were placed on the back burner at some companies. You may want to reevaluate their fit within your business strategy given recent advancements.



Artificial Intelligence (AI)



Internet of Things (IoT)



Blockchain



Augmented Reality (AR)



Virtual Reality (VR)



Advanced Robotics



Quantum Computing



Neuromorphic Computing

Essential to Experiment

These technologies are highly promising and **rapidly advancing but are not yet mainstream**. It's important to **begin exploration** and consider how your business or industry could be impacted by them in the coming years.



Artificial Intelligence (AI)



Internet of Things (IoT)



Blockchain



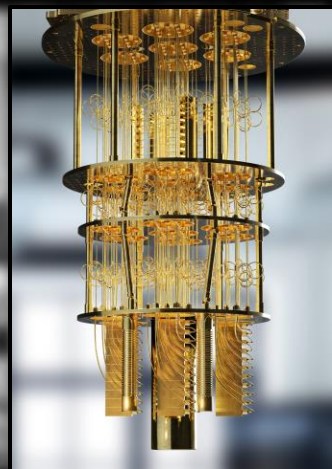
Augmented Reality (AR)



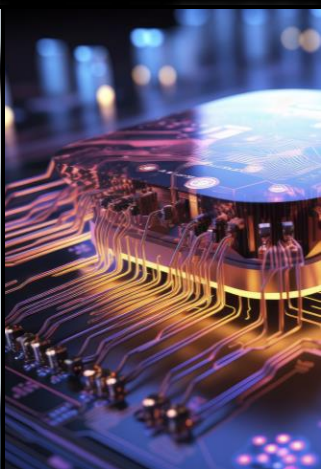
Virtual Reality (VR)



Advanced Robotics



Quantum Computing



Neuromorphic Computing

02

The EmTech Accelerators

Meet the EmTech Accelerators

AI, blockchain, virtual reality, even quantum computing and the rest of the Essential Eight can drive business growth. But **without the right approach**, they can **result in wasted investments, shareholder frustration** and **uncertain futures** for the executive champion.

Our 2023 EmTech survey shows that **a very few companies are getting these technologies right**. Executives in these organizations report significantly higher benefits from emerging tech in general, and from generative AI (GenAI) in particular, than their peers. With the help of tech-specific governance and of workforce transformations, many are even using emerging tech to build trust with stakeholders.

We call these companies - 7% of respondents in our survey - EmTech Accelerators



Artificial Intelligence (AI)



Internet of Things (IoT)



Blockchain



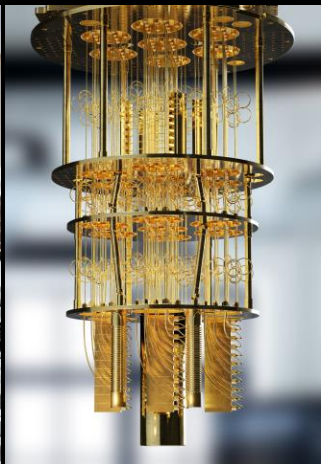
Augmented Reality (AR)



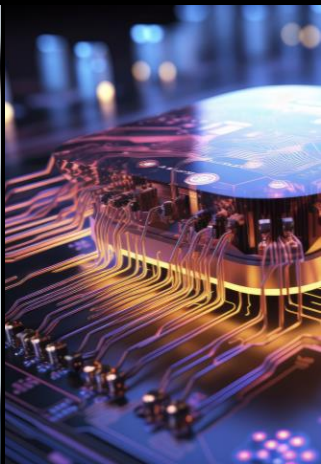
Virtual Reality (VR)



Advanced Robotics

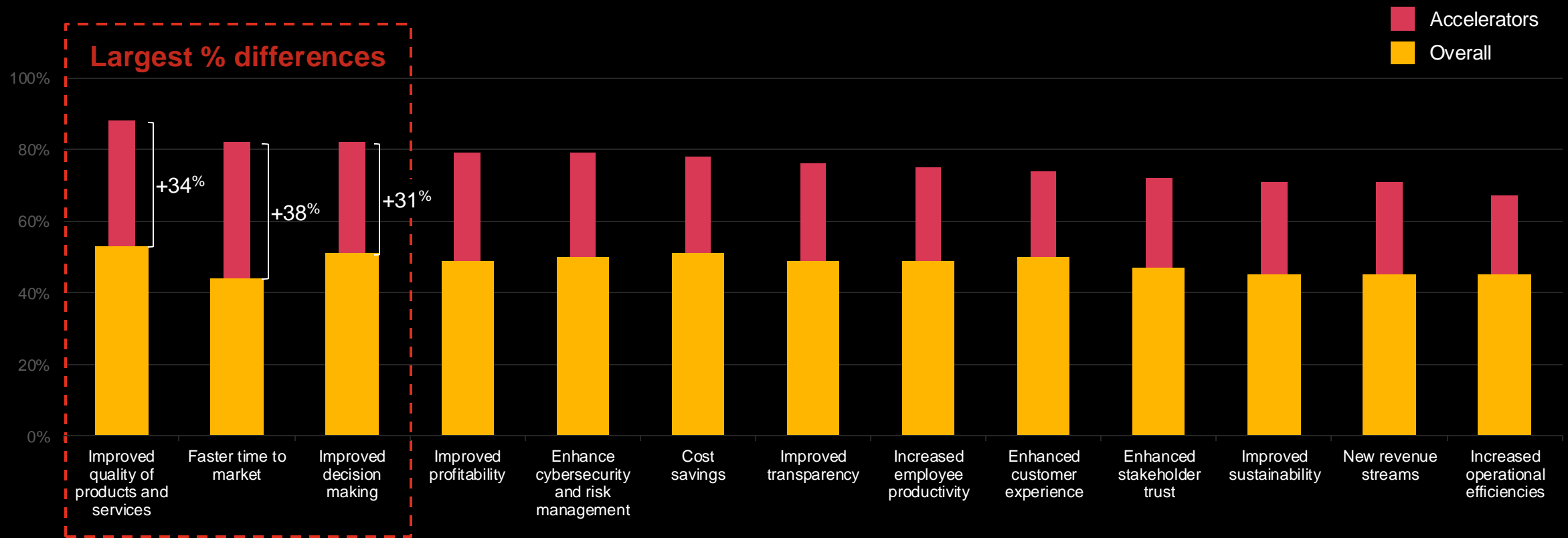


Quantum Computing



Neuromorphic Computing

EmTech Accelerators are achieving **greater value** from their emerging tech investments



Q18. Which, if any, of the following benefits has your company achieved or expects to achieve from the use of emerging technologies? Base: All Respondents (1026)
PwC: US Emerging Tech Survey 2023

03

Essential Eight
convergence

The Essential Eight: **Convergence**

Convergence among the Essential Eight is real - and accelerating. It is enhancing everyday processes and driving long-term transformation.

The Essential Eight are powerful and when deployed responsibly, can give more people more opportunities to create value.



1

The IoT blends with AI and blockchain for more resilient, transparent and agile supply chains

2

AI and quantum computing together can help improve travel routes for business travelers

3

VR & AR blend with AI and the IoT to develop products and services that enable seamless workforce collaboration across geographies

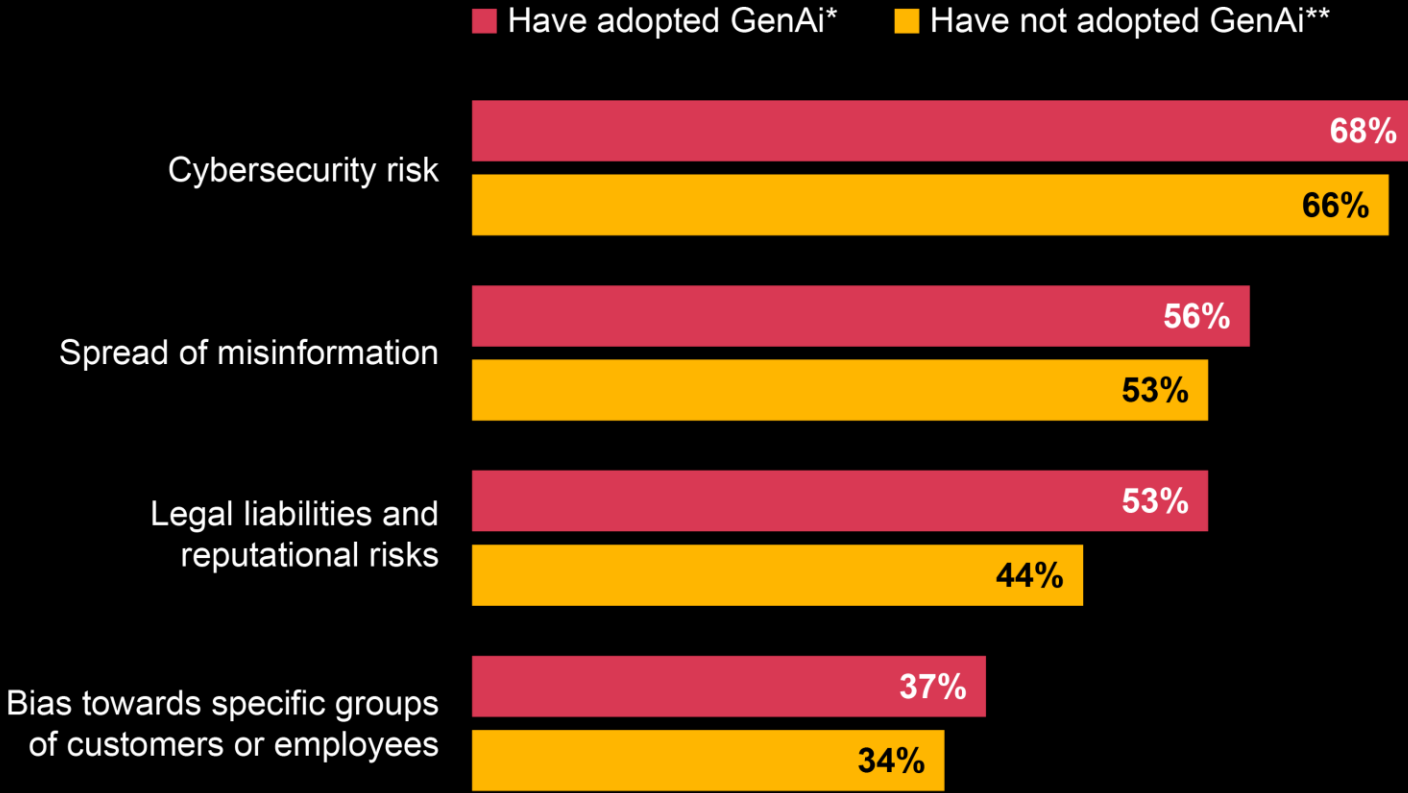
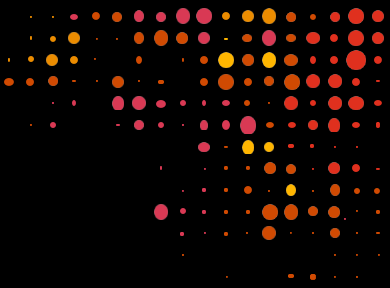
4

Neuromorphic computing and advanced robotics can automate complex industrial processes

04

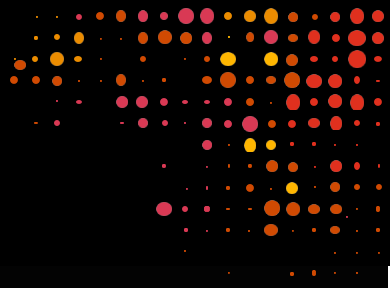
Risks in acceleration

Generative AI adoption does not mitigate concern about risks



Notes:
*Based on respondents who selected 'slightly agree', 'moderately agree' or 'strongly agree' that generative AI has been adopted across their company in the last 12 months (1500)
**Based on respondents who selected 'slightly disagree', 'moderately disagree' or 'strongly disagree' that generative AI has been adopted across their company in the last 12 months (2394)
Source: PwC 27th Annual Global CEO Survey

Common questions we hear from global business leaders



Is AI spreading as fast as the media makes it seem?

Is it bad for the environment?

Will it help or will it hurt humanity?

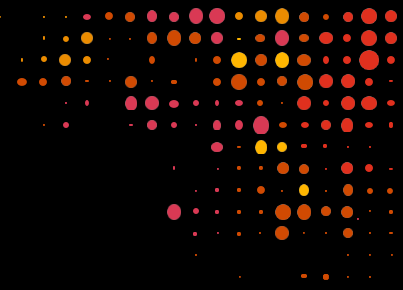
Is it expensive to use?

Are companies who don't have an AI strategy by now falling behind?

04

Discussion

Resources suggestions (not exhaustive)



Reddit – subreddits including: Singularity, LLMdevs, Langchain, Chatgptcoding, claude, locallama

Youtube - @aiexplained-official

Lmsys.org

Huggingface.co