

INTERNATIONAL CONFERENCE

# ENERGY IN BUILDINGS ATHENS 2025

ΥΠΟ ΤΗΝ ΑΙΓΙΔΑ ΤΟΥ TEE

SATURDAY  
NOVEMBER 15, 2025

- DECARBONIZATION & ENERGY SECURITY
- SUSTAINABILITY & GREEN TRANSITION
- ARTIFICIAL & BUILDING INTELLIGENCE
- ENERGY SAVING IN COMMERCIAL & INDUSTRIAL APPLICATIONS

09:00-18:00 | @ DIVANI CARAVEL HOTEL, ATHENS

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ΓΕΡΜΑΝΙΑ ΚΟΖ

ΚΤΙΠΙΟ  
ΕΚΔΟΣΕΙΣ

ΠΡΑΣΙΝΟ 4green

**Dimitris Dimitriadis**

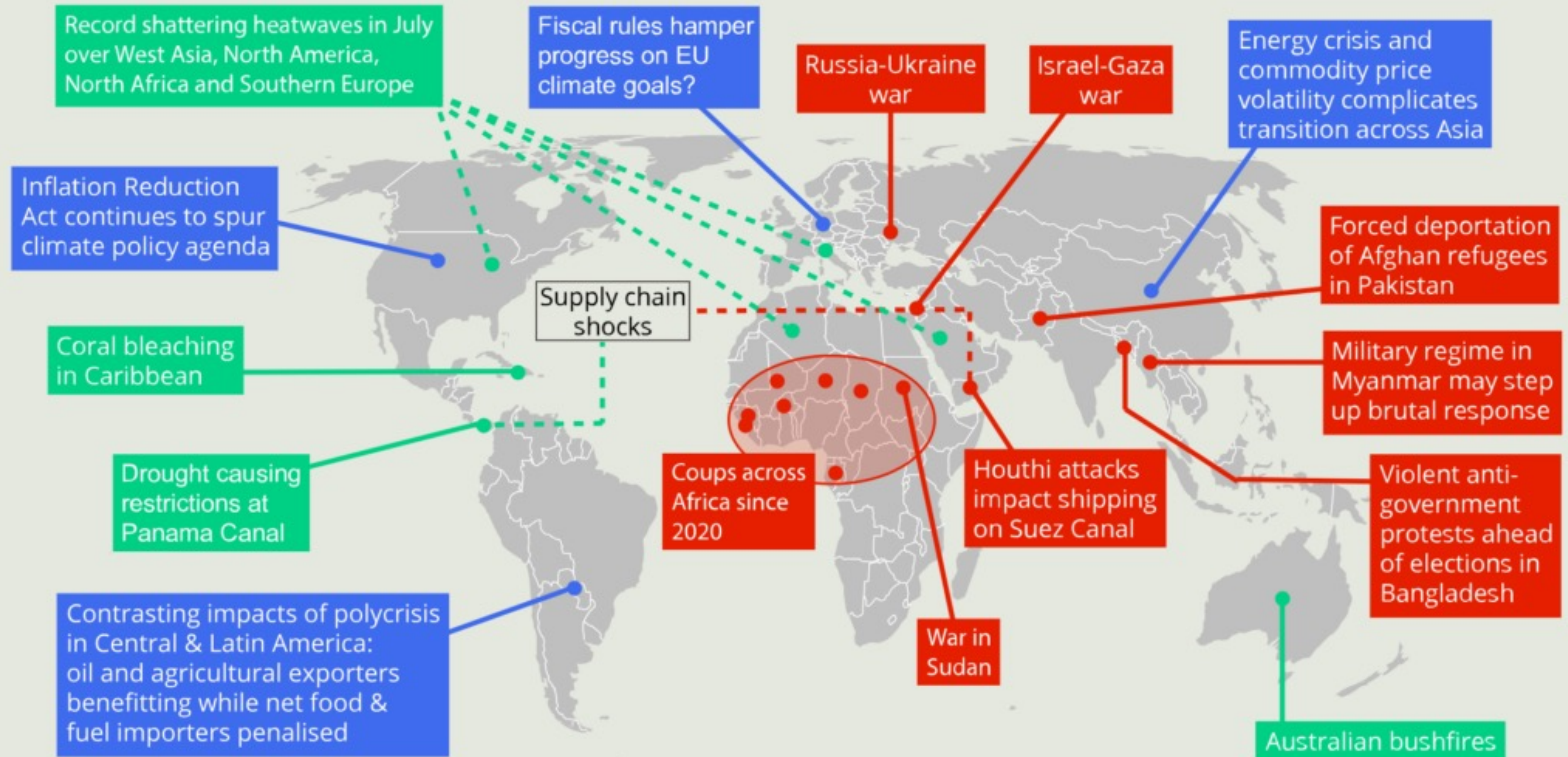
CIO TheFutureCats Innovation Consultancy

*From Smart to Sentient: The Future of Energy-Intelligent Buildings*



# Overlapping crises in 2023/24/25

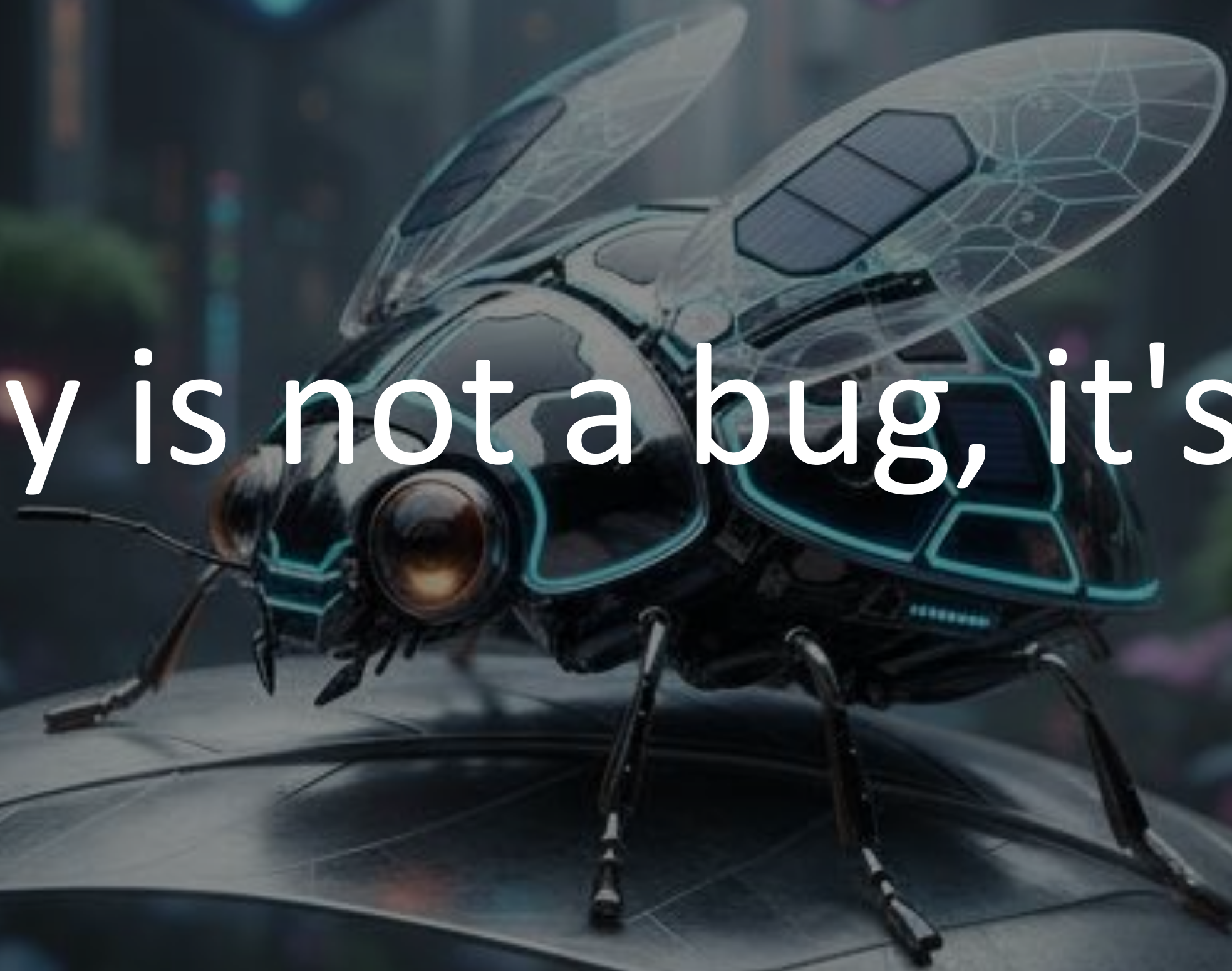
*Military*, *Economic*, and *Ecological*







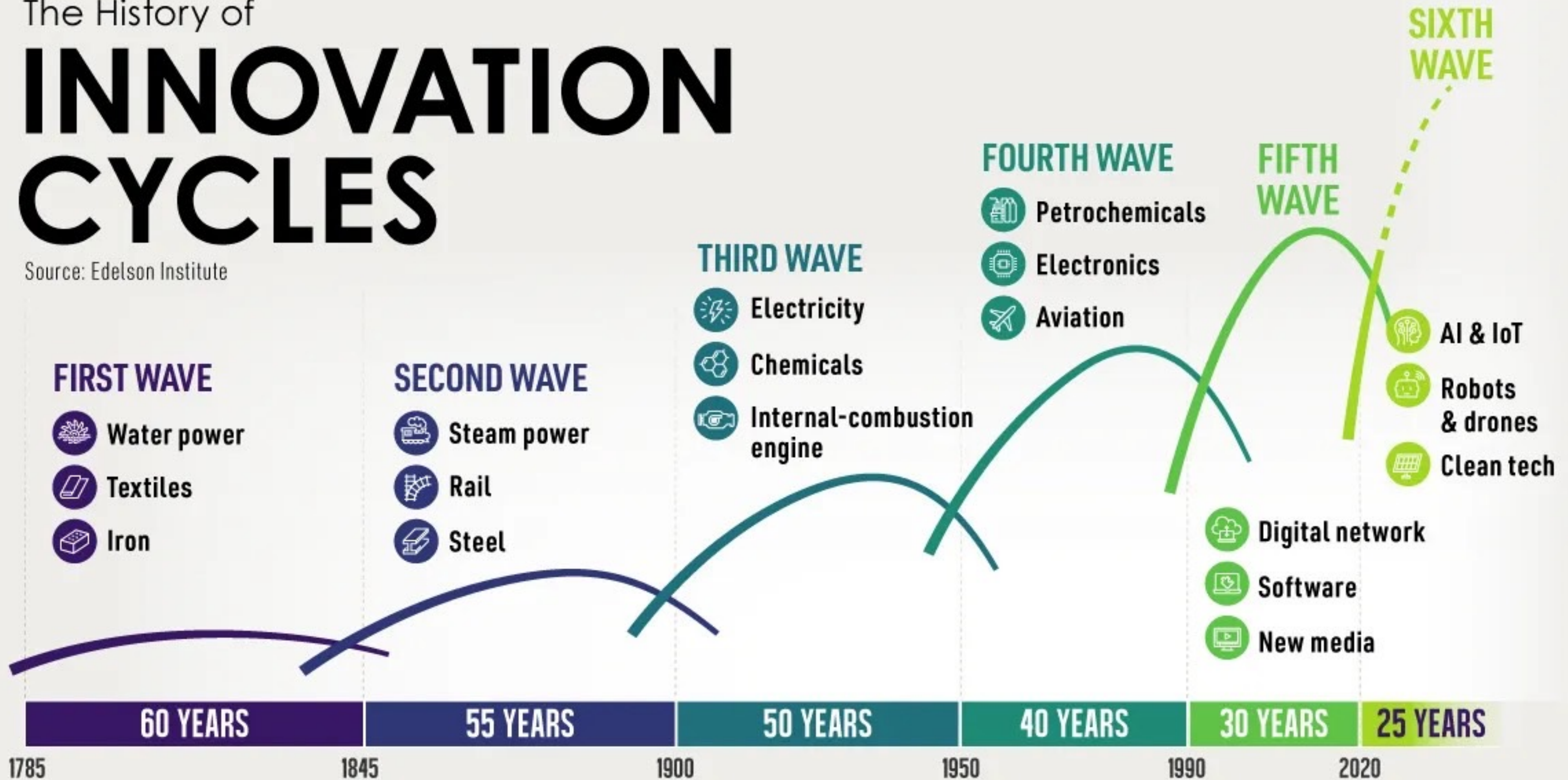
Uncertainty is not a bug, it's a feature.





# The History of INNOVATION CYCLES

Source: Edelson Institute





# ChatGPT Sprints to One Million Users

Time it took for selected online services to reach one million users



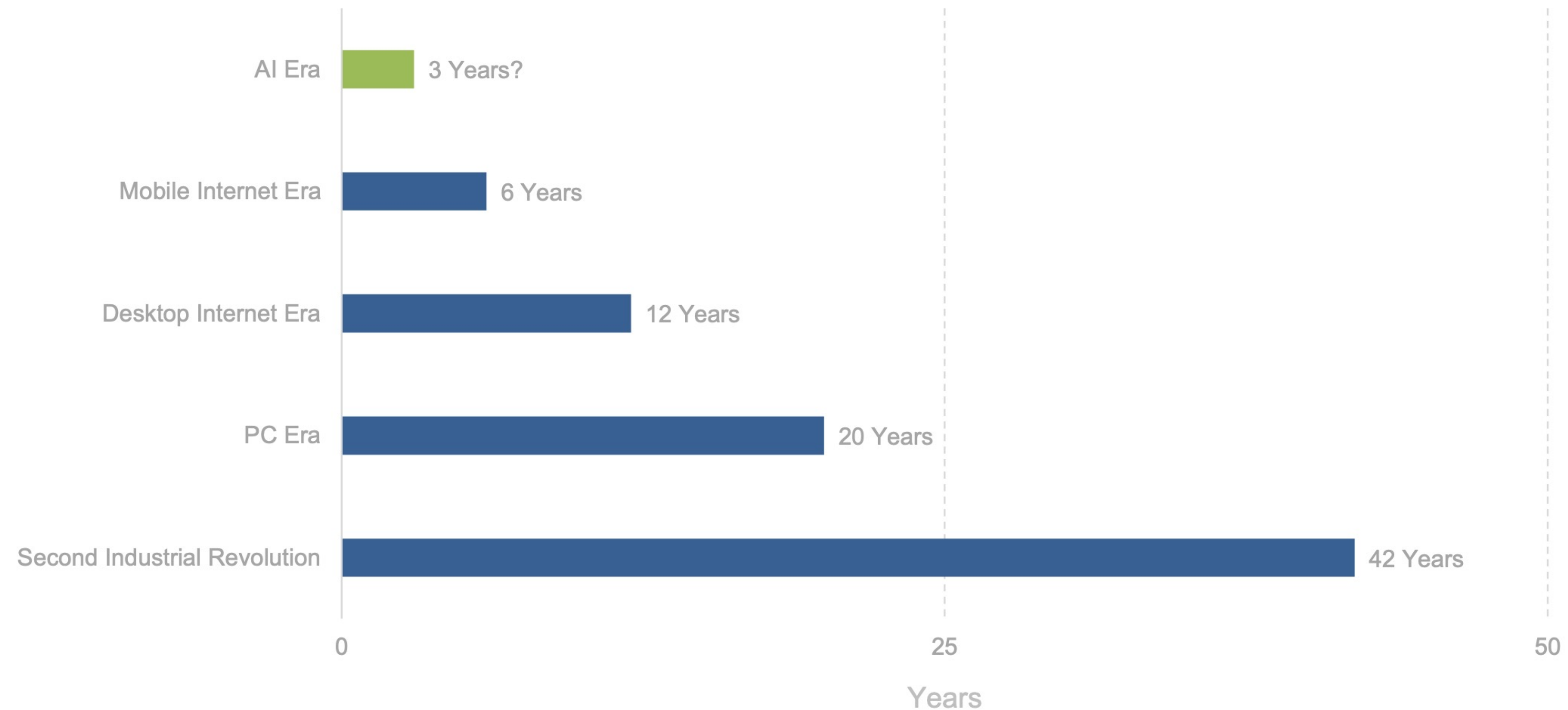
\* one million backers \*\* one million nights booked \*\*\* one million downloads

Source: Company announcements via Business Insider/LinkedIn



# AI User Adoption – Time to 50% Household Penetration = Each Cycle Ramps in ~Half-the-Time...AI Following Pattern

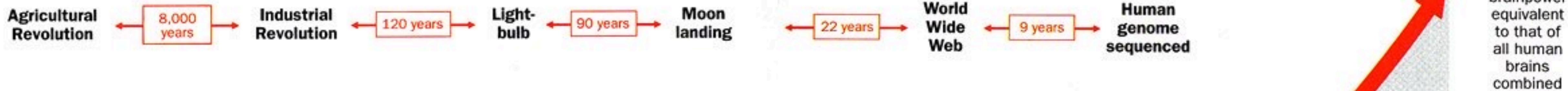
**Years to 50% Adoption of Household Technologies in USA, per Morgan Stanley**



*Note: 3 years for AI Era implies that the time to 50% USA Household Adoption is similarly cut in half from the previous cycle. Source: Morgan Stanley, 'Google and Meta: AI vs. Fundamental 2H Debates' (7/23), Our World in Data, other web sources per MS*



# 1 The accelerating pace of change ...

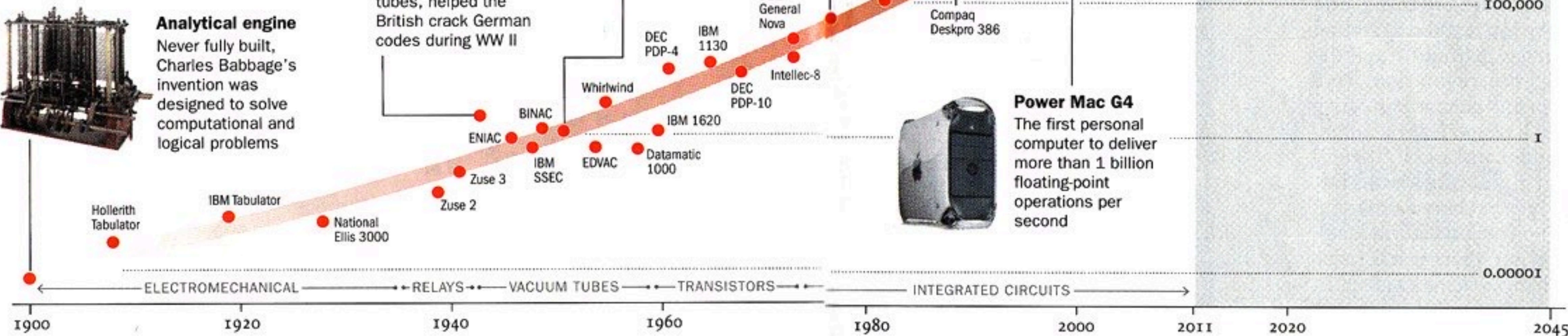
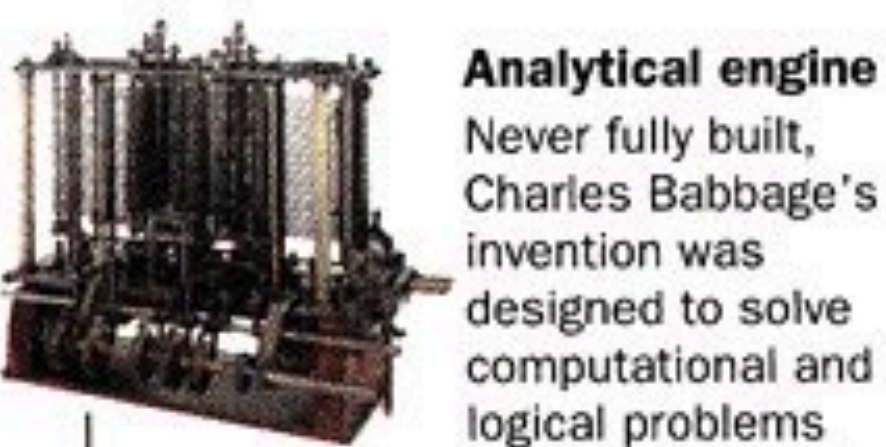


# 2 ... and exponential growth in computing power ...

Computer technology, shown here climbing dramatically by powers of 10, is now progressing more each hour than it did in its entire first 90 years

## COMPUTER RANKINGS

By calculations per second per \$1,000



# 3 ... will lead to the Singularity

Surpasses brainpower of human in 2023

Surpasses brainpower of mouse in 2015

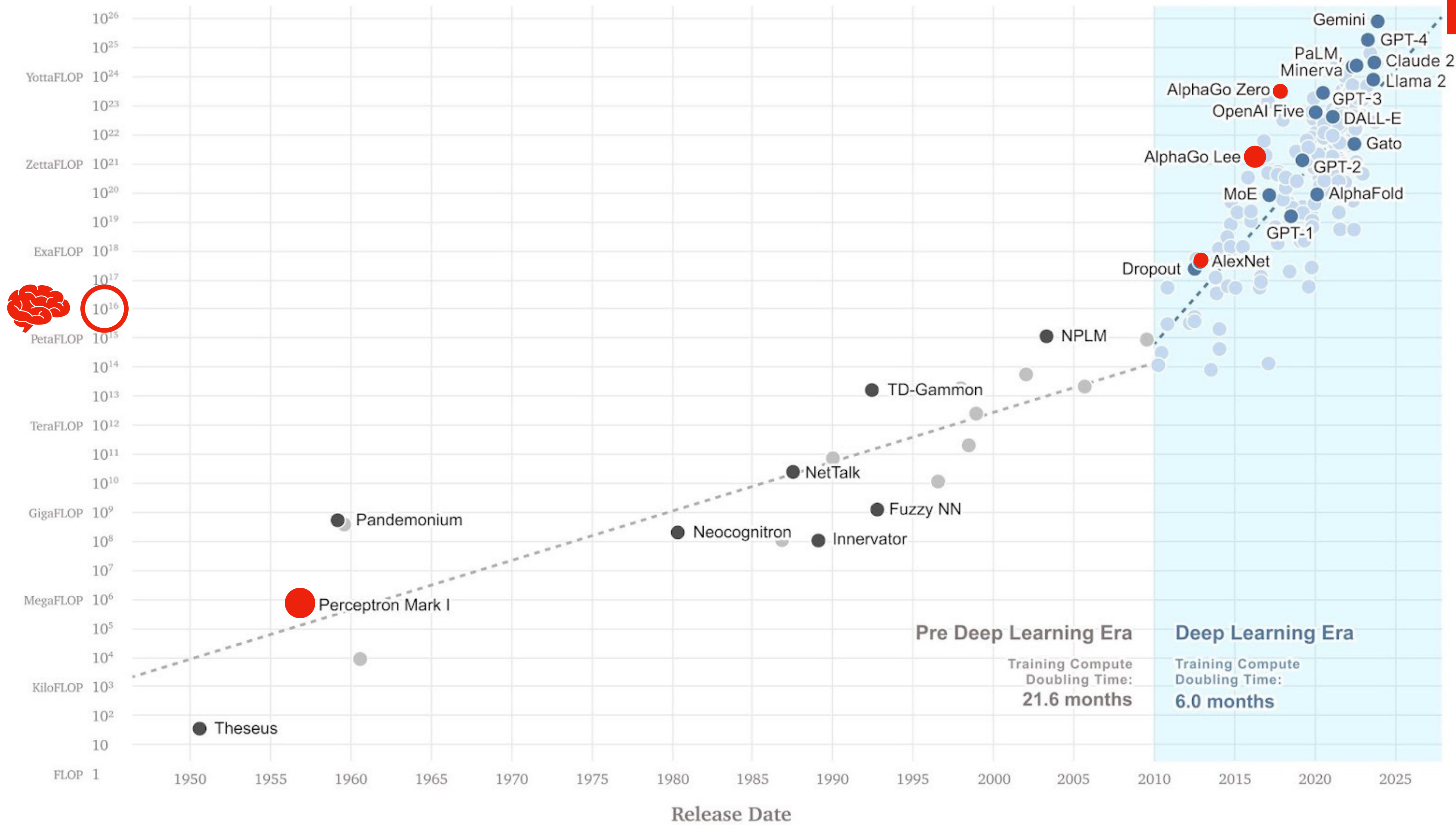
2045  
Surpasses brainpower equivalent to that of all human brains combined



# Compute Used for AI Training Runs

Total compute used to train notable AI models, measured in total FLOP (floating-point operations) | Logarithmic

AI is here  
for today!



The amount of compute used to train notable AI models has doubled roughly every six months since 2010. Note the logarithmic y-axis. Data from [Epoch](#).



**In times of change learners  
inherit the world,  
while the knowers will be  
beautifully equipped for a  
world that no longer exists.**

**Eric Hoffer - American Philosopher**



**We need to  
Learn how to Unlearn**

**Dimitris Dimitris - Futurist**



# 2026 MEGATRENDS



**“Any useful idea about the future should appear to be ridiculous.”**

**Jim Dator**





# From control to anticipation

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With AI and data-rich environments, a different logic emerges: “given what we’ve learned from the last 10,000 hours of operation and the next 48 hours of weather and pricing signals, this is the optimal trajectory for your building.”








# From efficiency to resilience

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In a resilient future, a building is not simply a consumer of energy. It is a stabiliser  
an asset that helps the wider system absorb shocks rather than amplify them.





# From smart to sentient human-centered energy intelligence

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The opportunity with AI and advanced analytics is that we can now personalise and dynamically manage these conditions at scale, without exploding energy use. Instead of a single “comfort band” for an entire floor, we can design micro-climates that adapt to real human preferences while maintaining an energy-optimal envelope.





AI Generated Image from MidJourney



**«The Space Between»**





# Thank you