AI and GDP:
A Great "Unlock" on the Horizon?

December 2025

Kevin Cook
Zacks Investment Research

“It’s tough to make predictions, especially about the future.”

Yogi Berra

2 things to know about me...

1. The Learning Design Engine (2016, when I "got" ML/AI/MPA)

1. The Technology Super Cycle (2017, when I "solved" productivity)

Kevin Brent Cook
@KevinBCook

In advance of @PeterDiamandis Day 4 question - Where would you spend $1B? - I share my #EdTech idea from 2016 for an #AI driven #AR/#VR engine to create custom 3D #STEM edu for teens. Submitted to
@NSFSBIR Nov 2017 but no traction. Proposal & response:


ow students and teachers to search for and create personal
riences. The software will engage students via conversationa
interests and levels of interest and proficiency in math and s
e them a menu of stories, experiences and prompts to spark
on discovering daily or life interests that are not overtly relate
dition but which have such elements that can be turned into le
y smartphone (video game, car, brain, dog, etc) do that?" The
broad capabilities for lesson creation and can also customize
ir students.

his idea comes from my own frustration in learning math and
ic education leave so many kids behind -- especially when te
martphones, video games and movies are such captivating c
their attention. The majority of kids who struggle in math and
abilities that are not engaged by traditional schooling method
immersive, multi-sensory 3-D environments. I argue that this
education could be the most important of all because in a wo
hange we need more scientists, engineers, and STEM-enabl
rming world of AI automation, the speed of learning, up-s

docs.google.com
NSF Seed Fund application
National Science Foundation (NSF) Seed Fund Application Cavernous Educational Innovations LDE Technology Kevin...

9:15 AM · Jan 5, 2023 · **50.3K** Views

The Technology Super Cycle: 5 Chip Stocks to Buy Now

Editor of TAZR Trader and Healthcare Innovators
By **Kevin Cook**

Posted on 12/11/17

Summary: Innovation is driving earnings growth in unseen productivity and efficiency that keeps inflation low and investment high.

Just how how fast is technology innovation changing our world, and the global economy, and what are the impacts for investors?

Both as citizens and investors we benefit from high tech: smartphones, apps, the cloud and HPC (high performance computing), semiconductor efficiency and software automation, biotechnology and even advanced energy tech like fracking.

But we haven't really seen this powerful growth show up in the GDP of our 2% economy for the past 8 years or so.

It's almost as if you could believe the pessimists who say that technology innovation is somehow hurting economic productivity by burdening us with systems that are complex to learn, susceptible to failure, and vulnerable to hacking. Or maybe they think that productivity only causes jobs to go overseas and profits and wages to go down.

But in mid-November I offered a better answer to Zacks Ultimate members in our monthly ZU Strategy Session. In the "Agree to Disagree" segment, I challenged our Director of Research to a debate about whether "This Time Is Different" with respect to growth and equity valuations.

My thesis: Technology was actually accelerating growth but we didn't see it in government data because productivity was also accelerating in ways uncaptured (or unpublicized) by the Bureau of Labor Statistics, thus changing both the numerator and the denominator of several derivative measurements.

I'll explain how Brian Wesbury, chief economist at First Trust, helped me figure this out and where it led next.

Jam-packed deck = *I'm gonna go fast!*

1. Stop the video today to study a slide

1. You're gonna get access to full deck in Google drive

1. Email me at KCook@Zacks.com

2020 book by a Wharton economist doesn't talk about NVIDIA, or Google DeepMind's AlphaGo Zero (landmark moment in ML/AI).

Click to see full view

2030: How Today's Biggest Trends Will Collide and Reshape the Future of Everything

Audible Audiobook – Unabridged

Mauro F. Guillén (Author), Leon Nixon (Narrator), Macmillan Audio (Publisher)

4.4 ★★★★½ (1,237)

See all languages and editions

"Bold, provocative...illuminates why we're having fewer babies, the middle class is stagnating, unemployment is shifting, and new powers are rising." (Adam Grant)

The world is changing drastically before our eyes - will you be prepared for what comes next? A groundbreaking analysis from one of the world's foremost experts on global trends, including analysis on how COVID-19 will amplify and accelerate each of these changes.

$IBM CEO says that at today's costs it takes about $80B to build & fill a 1 GW AI data center, so the ~100 GW of announced capacity implies roughly $8T of capex & "no way you're going to get a return on that," since you'd need "about $800B of profit just to pay for the interest"

IBM CEO says there is 'no way' spending trillions on AI data centers will pay off at today's infrastructure costs

By Henry Chandonnet + Follow

And from the Wall Street Journal on Friday we were given **When AI Hype Meets AI Reality: A Reckoning in 6 Charts**

Writer Christopher Mims cites research from JPMorgan about what kind of revenues will be required to support the buildout.

JPMorgan analysts built a financial model that assumes global AI infrastructure investment reaches about $5 trillion by 2030. Then they asked how much extra yearly revenue that pool of hardware must generate to give investors a reasonable return.

Their answer is that the AI stack would need to produce around $650 billion of additional revenue each year for decades to hit a 10% annual return. That's more than 150% of Apple's current yearly sales and far above OpenAI's present revenue of about $20 billion.

A Race of Billionaire Egos to AGI

Sam vs. Elon vs. Zuck

“The vainglory bubble of AI”

$600 Billion in Tech Capex 2025?

Forget ROI Right Now...

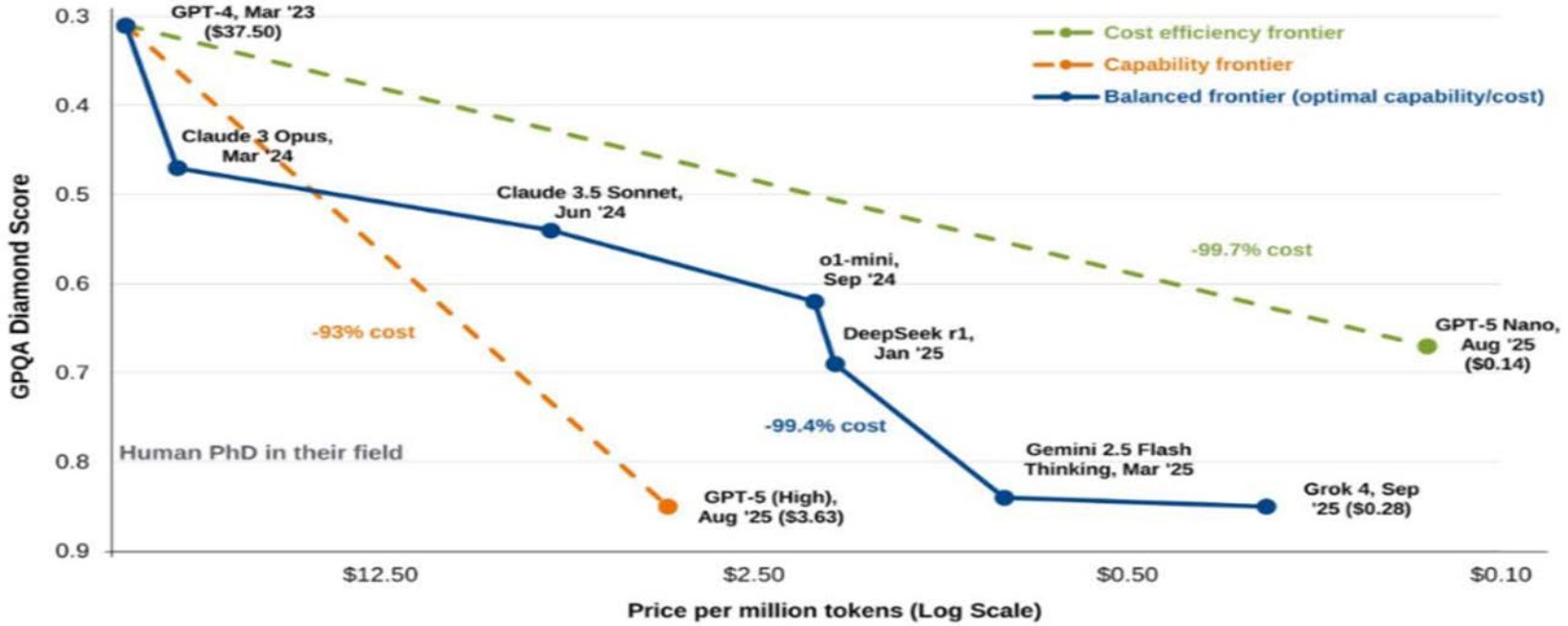
It's "RIO" in 5 Years!

"Relevant Instead of Obsolete"

The cost of using AI has fallen precipitously.

Shifting frontier of AI model performance and cost

Cost of querying a trained model (price per 1M tokens)



Source: Ethan Mollick "One Useful Thing", Artificial Analysis AI, Epoch AI, J.P. Morgan Asset Management. The cost efficiency frontier refers to the cheapest models that still deliver strong results, minimizing cost per performance unit. The capability frontier represents the most capable models regardless of cost, which tend to be expensive and compute-intensive. The balanced frontier represents models that are "balanced" in the sense that they offer strong reasoning at a reasonable cost. GPQA (Diamond) measures PhD level reasoning. Cost per million tokens refers to the average API price to process one million input and output tokens (weighted 3:1).
Data are as of October 31, 2025.

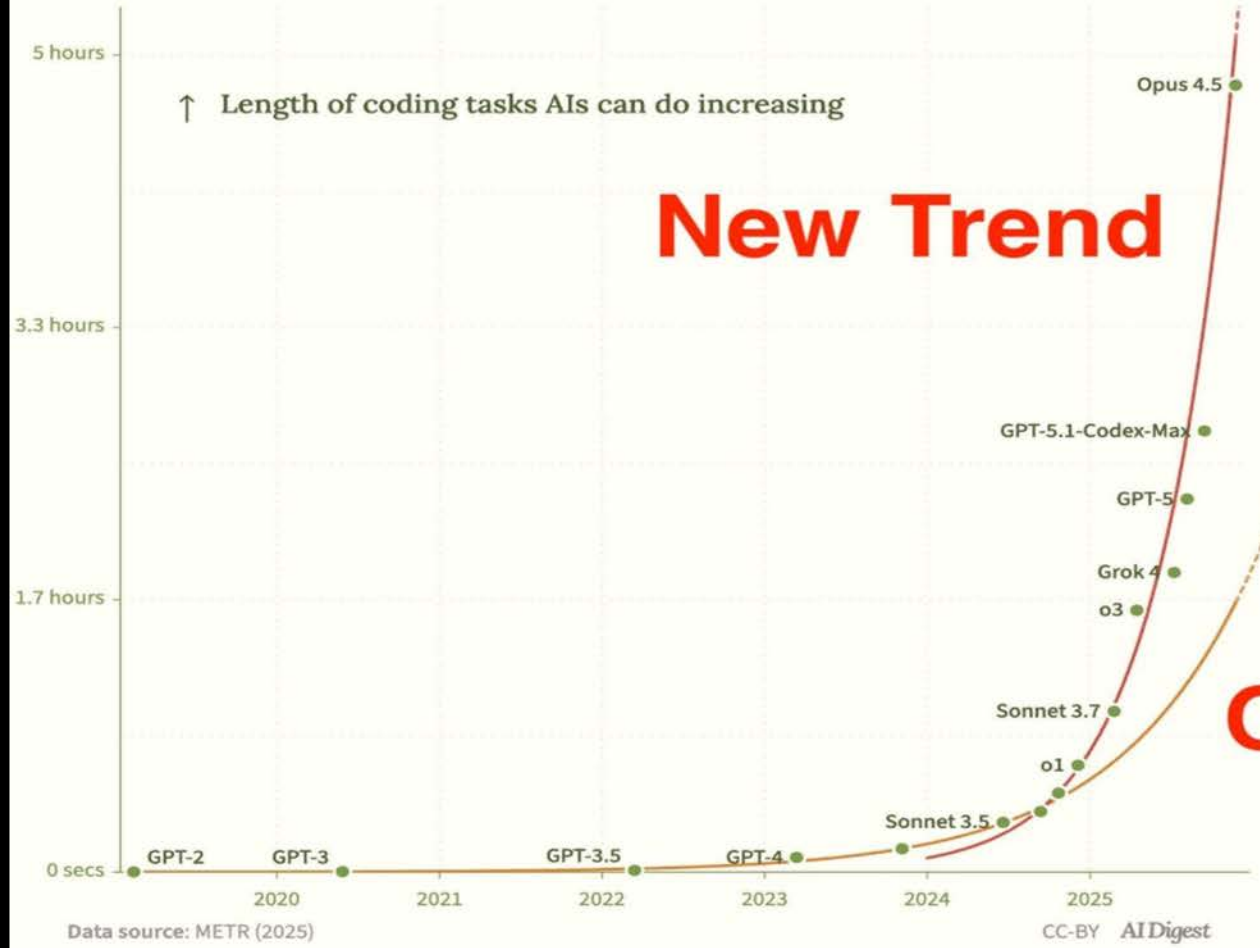
J.P.Morgan
ASSET MANAGEMENT

The length of tasks AI can do is doubling every 7 months

METR

Task length (at 50% success rate)

metr.org



Recently, the trend has accelerated.

In 2024-2025, **time horizons doubled every 4 months**, down from every 7 months over 2019-2025.

Real Estate and Rental and Leasing

- Concierges
- Real Estate Sales Agents
- Real Estate Brokers
- Counter and Rental Clerks
- Property, Real Estate, & Community Association Managers

Government

- Recreation Workers
- Compliance Officers
- First-Line Supervisors of Police and Detectives
- Administrative Services Managers
- Child, Family, and School Social Workers

Manufacturing

- Mechanical Engineers
- Industrial Engineers
- Buyers & Purchasing Agents
- Shipping, Receiving, & Inventory Clerks
- First-Line Supervisors of Production and Operating Workers

Professional, Scientific, and Technical Services

- Software Developers
- Lawyers
- Accountants & Auditors
- Computer & Information Systems Managers
- Project Management Specialists

Health Care and Social Assistance

- Registered Nurses
- Nurse Practitioners
- Medical & Health Services Managers
- First-Line Supervisors of Office & Administrative Support Workers
- Medical Secretaries & Administrative Assistants

Finance and Insurance

- Customer Service Representatives
- Financial & Investment Analysts
- Financial Managers
- Personal Financial Advisors
- Securities, Commodities & Financial Services Sales Agents

Retail Trade

- Pharmacists
- General and Operations Managers
- Private Detectives & Investigators
- First-Line Supervisors of Retail Sales Workers

Wholesale Trade

- Sales Managers
- Order Clerks
- Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products
- Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products
- First-Line Supervisors of Non-Retail Sales Workers

Information

- Producers & Directors
- Film & Video Editors
- Editors
- News Analysts, Reporters, & Journalists
- Audio and Video Technicians

The recent GDPval by OpenAI measures model performance in **44 occupations across 9 industries.** The evaluation tasks are sourced from experienced industry professionals (avg. 14 years' experience), 30 tasks per occupation for a **total of 1320 tasks.**

They named it GDPval because Sam & Co. started with the concept of Gross Domestic Product (GDP) as a key economic indicator and drew tasks from the **key occupations in the industries that contribute most to GDP**. So this evaluation should have some enduring value to compare models as they improve.

Worth noting in the results, OpenAI had the intellectual integrity to share the data that showed Claude Opus 4.1 beating GPT-5 high.

And remember, this evaluation run doesn't even include Claude Sonnet 4.5 which achieved 30 hours of continuous work on a task recently.

Failing to Understand the Exponential, Again

Sat 27 September 2025

By Julian Schrittwieser

“People notice that while AI can now write programs, design websites, etc, it **still often makes mistakes or goes in a wrong direction, and then they somehow jump to the conclusion that AI will never be able to do these tasks at human levels**, or will only have a minor impact. When just a few years ago, having AI do these things was complete science fiction! Or they see two consecutive model releases and don’t notice much difference in their conversations, and they conclude that AI is plateauing and scaling is over.”

How many actions can a system take at 99% reliability before a human must intervene?

It's called the 99% step-length: **the number of sequential actions an AI can execute with at least 99% reliability without human help.**

"Today's frontier systems reliably manage around 100 steps at that threshold. By our estimates, the number could exceed 10,000 by 2029. A couple of years later, they might have between three and ten times that range. At that scale, an AI system could operate for weeks – potentially months – without supervision."

Anthropic released Claude Sonnet 4.5 on Sep 29, which is now capable of working 30 hours straight on complex tasks.

This is considered a breakthrough in AI "persistence," maintaining focus on complex, multi-step tasks for over 30 hours without losing coherence. This addresses AI's biggest limitation: losing focus over time as errors accumulate and memory fills up during extended tasks.

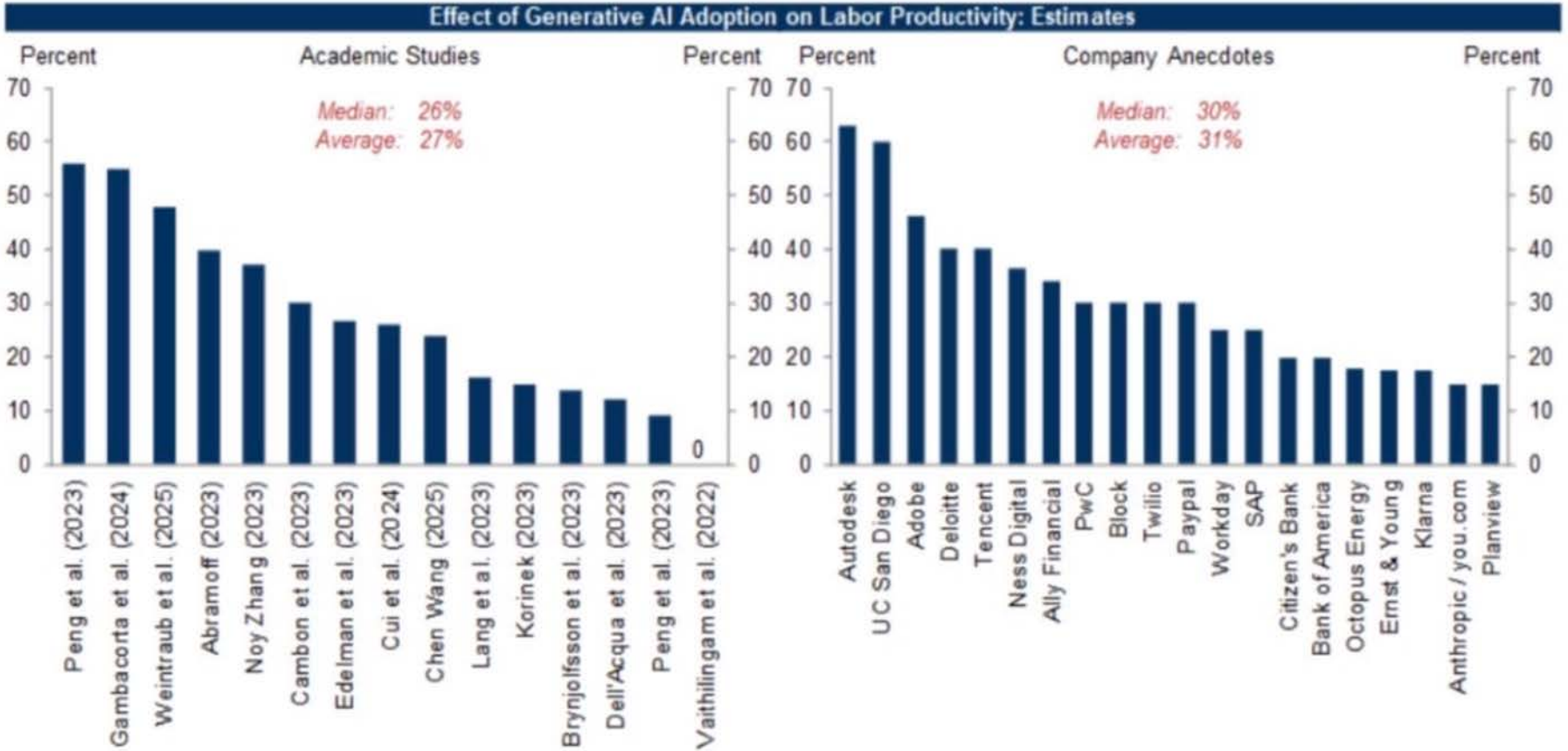
HSBC SAYS NEW STUDY COUNTERS AI BUBBLE FEARS

HSBC highlights new research showing that 74% of companies report positive returns from GenAI, challenging earlier claims that 95% see no ROI. Analyst Yuning Bai says the widely cited July MIT NANDA figure was based on weak data and exaggerated fears of an AI bubble.

HSBC notes that measuring AI success is complex and sensitive to methodology. The Wharton-GBK study, now in its third iteration, offers more reliable evidence that AI investments are delivering tangible productivity and performance gains for many enterprises.

8:19 AM · Dec 3, 2025 · **138K** Views

AI Drives Large Productivity Gains When Successfully Deployed



“Agents, robots and us” report: Existing AI plus robotics could automate 57% of U.S. work hours if companies fully redesign jobs around them, worth $2.9T a year by 2030. About 1/3 of jobs, esp in nursing, care and repair, remain hard to automate, so more work shifts toward oversight and judgment, not outright replacement.

arXiv > cs > arXiv:2511.02824

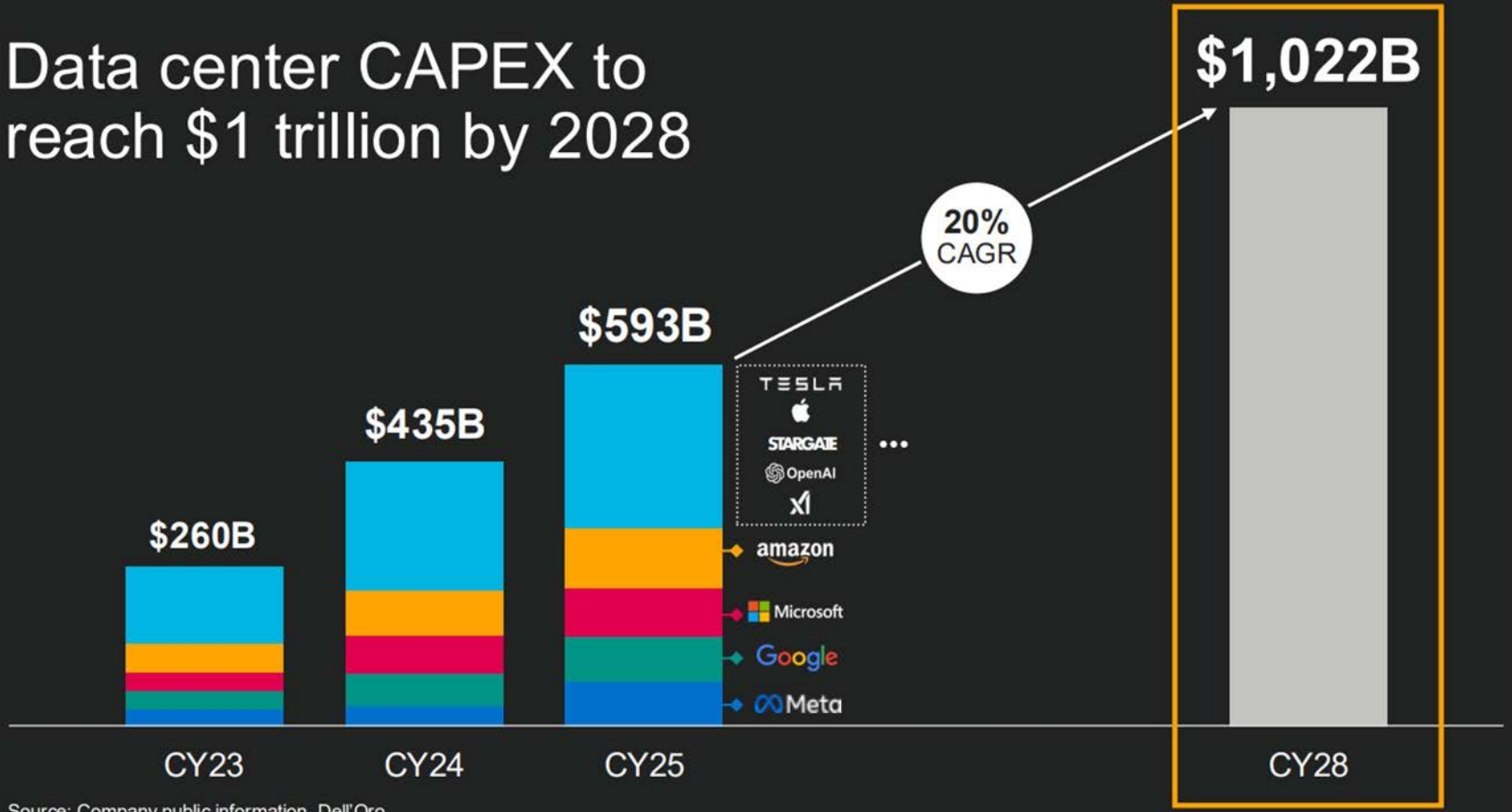
Computer Science > Artificial Intelligence

[Submitted on 4 Nov 2025 (v1), last revised 5 Nov 2025 (this version, v2)]

Kosmos: An AI Scientist for Autonomous Discovery

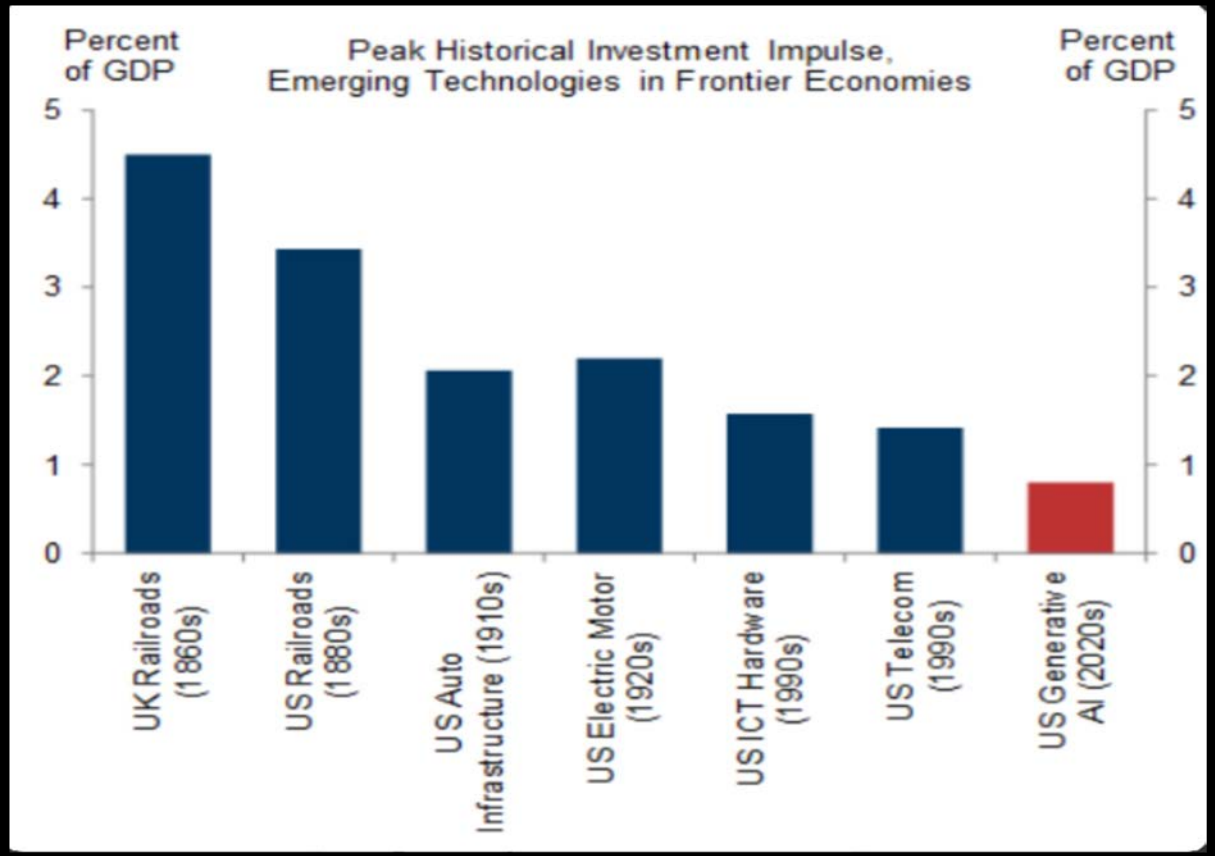
Data-driven scientific discovery requires iterative cycles of literature search, hypothesis generation, and data analysis. Substantial progress has been made towards AI agents that can automate scientific research, but all such agents remain limited in the number of actions they can take before losing coherence, thus limiting the depth of their findings. Here we present Kosmos, an AI scientist that automates data-driven discovery. Given an open-ended objective and a dataset, Kosmos runs for up to 12 hours performing cycles of parallel data analysis, literature search, and hypothesis generation before synthesizing discoveries into scientific reports.

Data center CAPEX to reach $1 trillion by 2028



Source: Company public information, Dell'Oro

Goldman: No AI Bubble Compared to Prior Industrial Buildouts



"We don't think the AI investment boom is too big. At just under 1% of GDP, the level of spending remains well below the 2-5% peaks of past general purpose technology buildouts so far."

Not all long-term investment cycles are bubbles!

Selected long-term investment cycles

Early Industrial Revolution
(1760s – 1830s)

Transatlantic Telegraph Network
(Late 1800s)

US Mass Transit Electrification
(1880s – 1920s)

US Transcontinental Telephone
(1900s – 1930s)

Big Dam Era (TVA, Hoover, Reclamation)
(1930s – 1960s)

US interstate Highway System
(1960s – 1990s)

Commercial Internet Backbone + Enterprise IT
(1980s – 1990s)

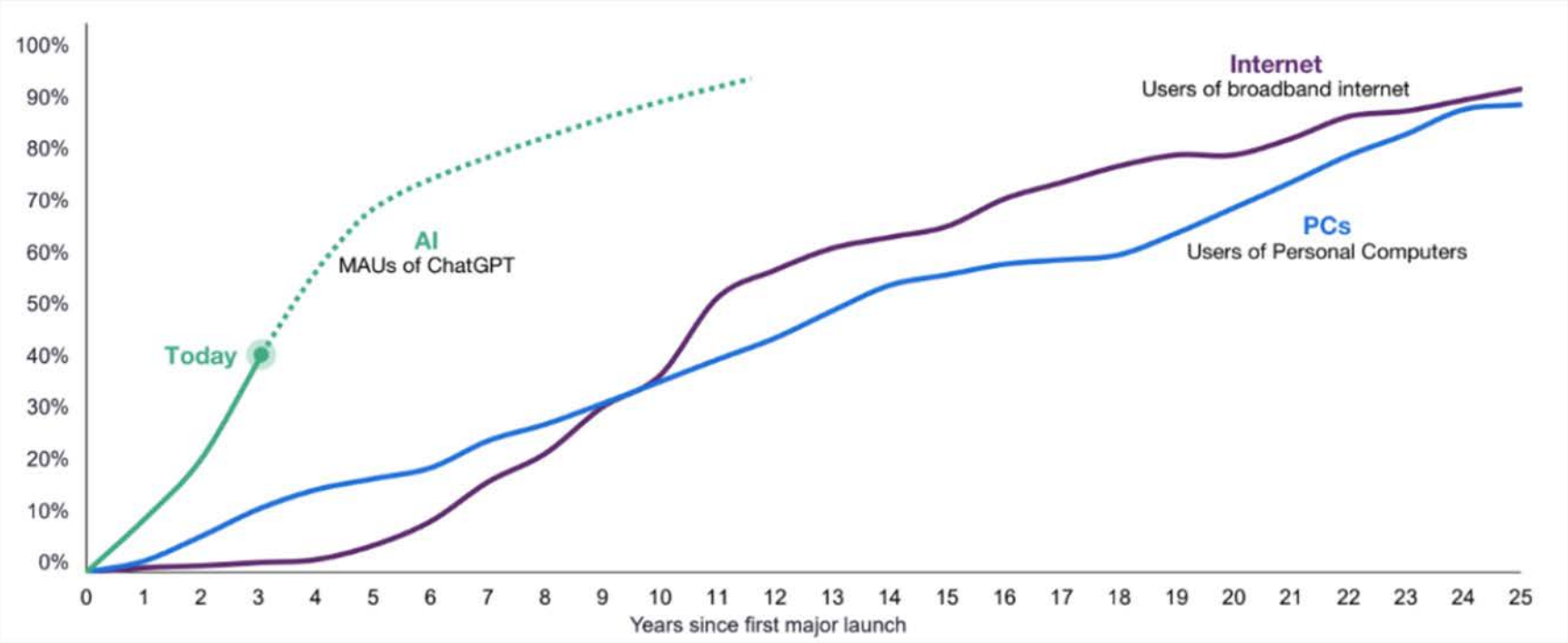
Personal Computer
(1980s – 1990s)

Mobile Infrastructure
(1990s – 2010s)

Hyperscale Cloud Data Centers
(2010s – 2020s)

AI is still early in its journey but massive adoption so far!

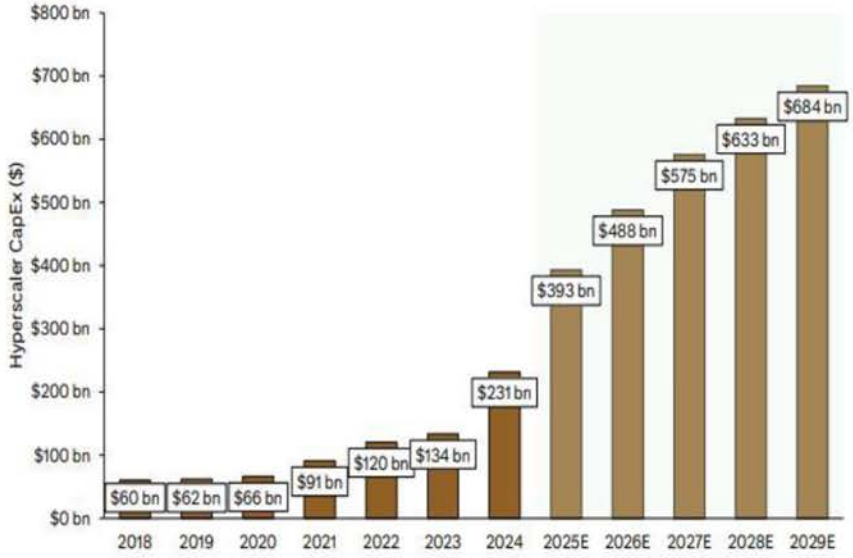
US % penetration



Source: Morgan Stanley (PC); World Bank (Internet); Coatue analysis as of November 2025 (AI = US MAU ChatGPT estimate as determined by Coatue). For illustrative purposes only. There is no guarantee that Coatue's views and projections regarding the future potential of AI are accurate or that any particular Coatue investment or fund will benefit from the AI trend. See Appendix-Disclosures for important disclosures, including regarding projections and forward-looking statements and trends, and regarding AI.

Figure 5. We forecast $2.8T (v. $2.3T prior) in hyperscaler capex through 2029...

Hyperscaler capital expenditures ($, bn)



Amazon and Microsoft capex estimates reflect AWS and Azure estimates only, respectively. Google and Meta reflect total reported capex.

Source: Citi Research

Figure 6. ... and $5.5T in global capex over the same period, representing a 56% 5-yr CAGR

Global capital expenditures related to AI infrastructure investment ($, bn)

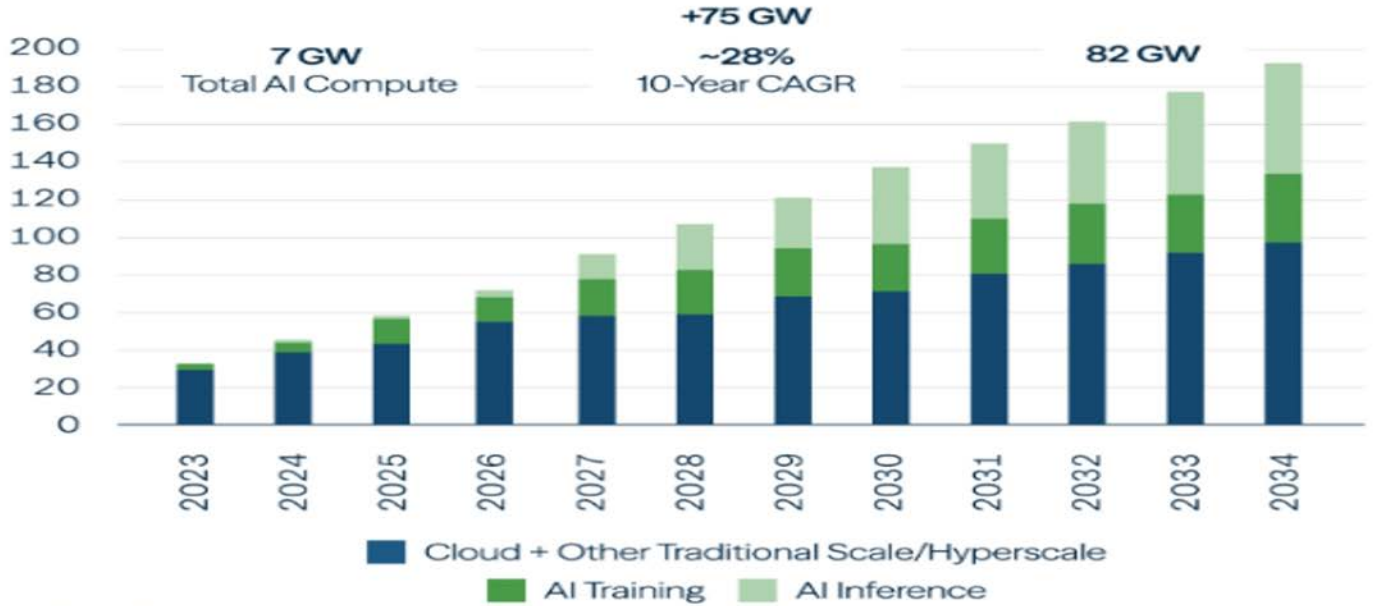
Includes neoclouds, sovereign and other private investment

Source: Citi Research

Brookfield

Data Center Demand for Cloud vs. AI Training and Interface

Total Global Installed Base (GW)



Source: Brookfield internal research

A $7 Trillion Opportunity

AI Factories

$2T

Development of new data center capacity from land acquisition to ready-for-service

Power & Transmission

$0.5T

Baseload power and electricity transmission infrastructure to energize compute

Compute Infrastructure

$4T

GPU partnerships, as well as design and manufacturing of chips

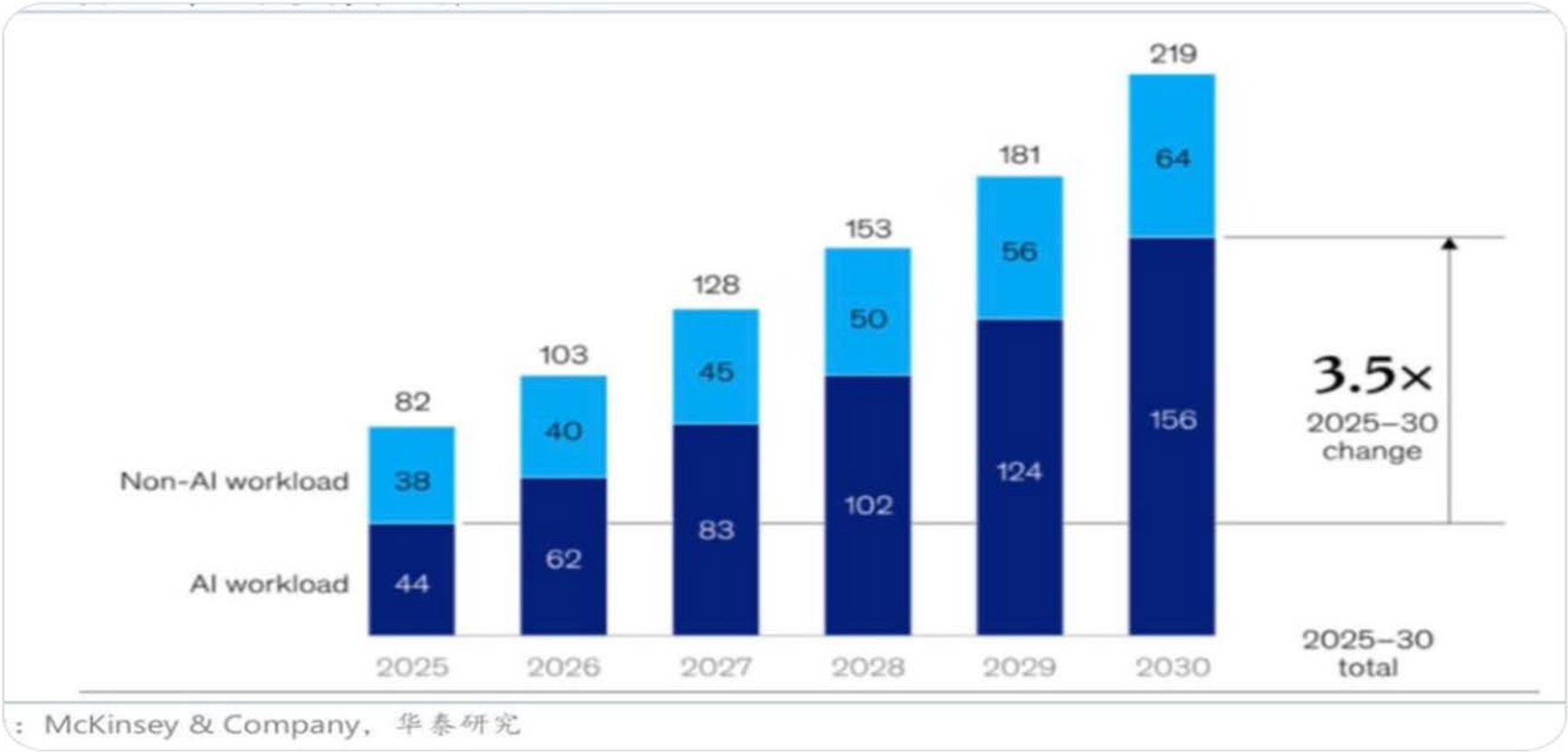
Strategic Adjacencies & Capital Partnerships

$0.5T

Dedicated fiber connectivity, cooling solutions and semiconductor and robotics manufacturing

Back

McKinsey: AI data center demand will grow more than **3.5× by 2030** — **Insane demand**.



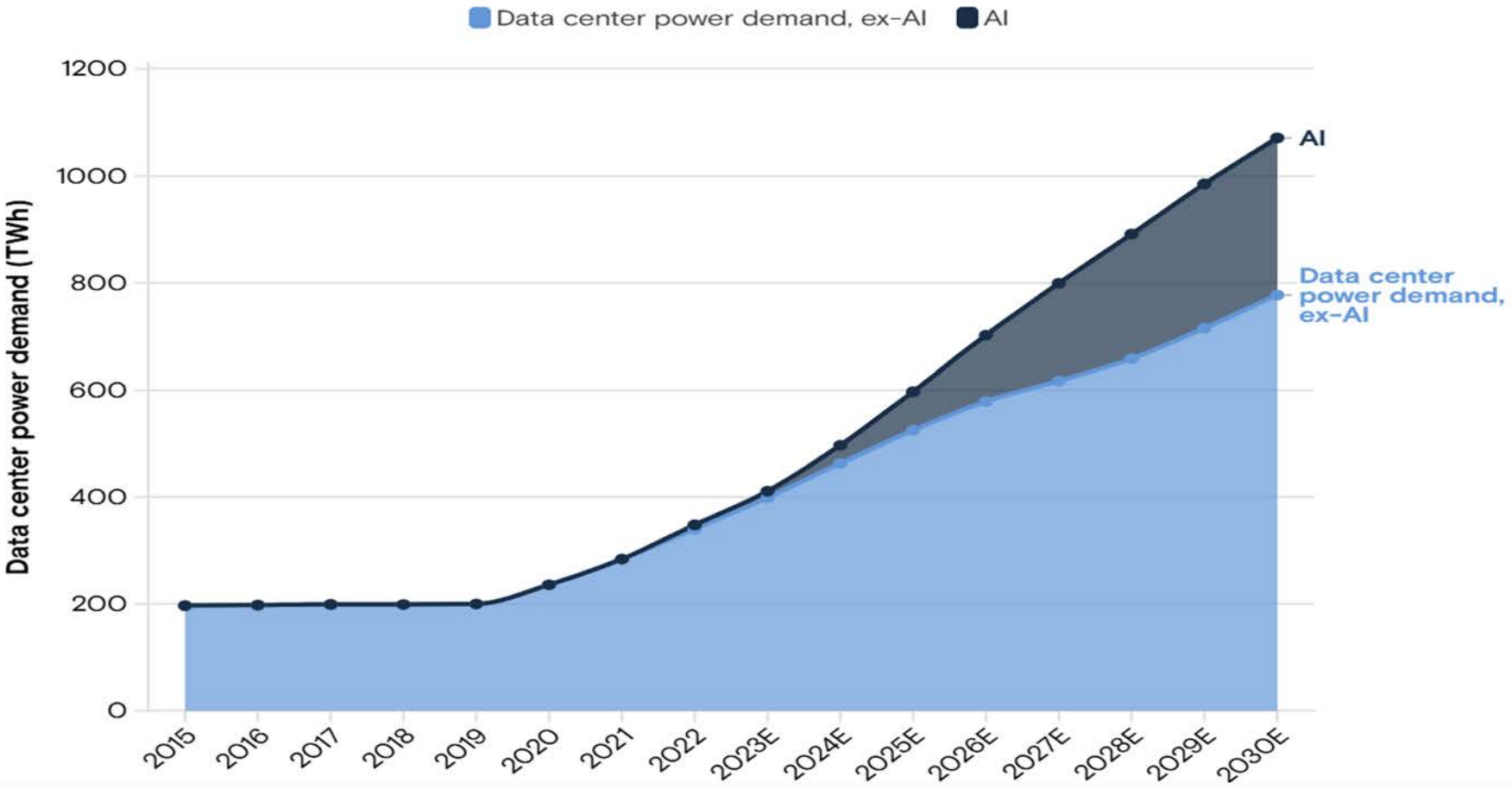
: McKinsey & Company，华泰研究

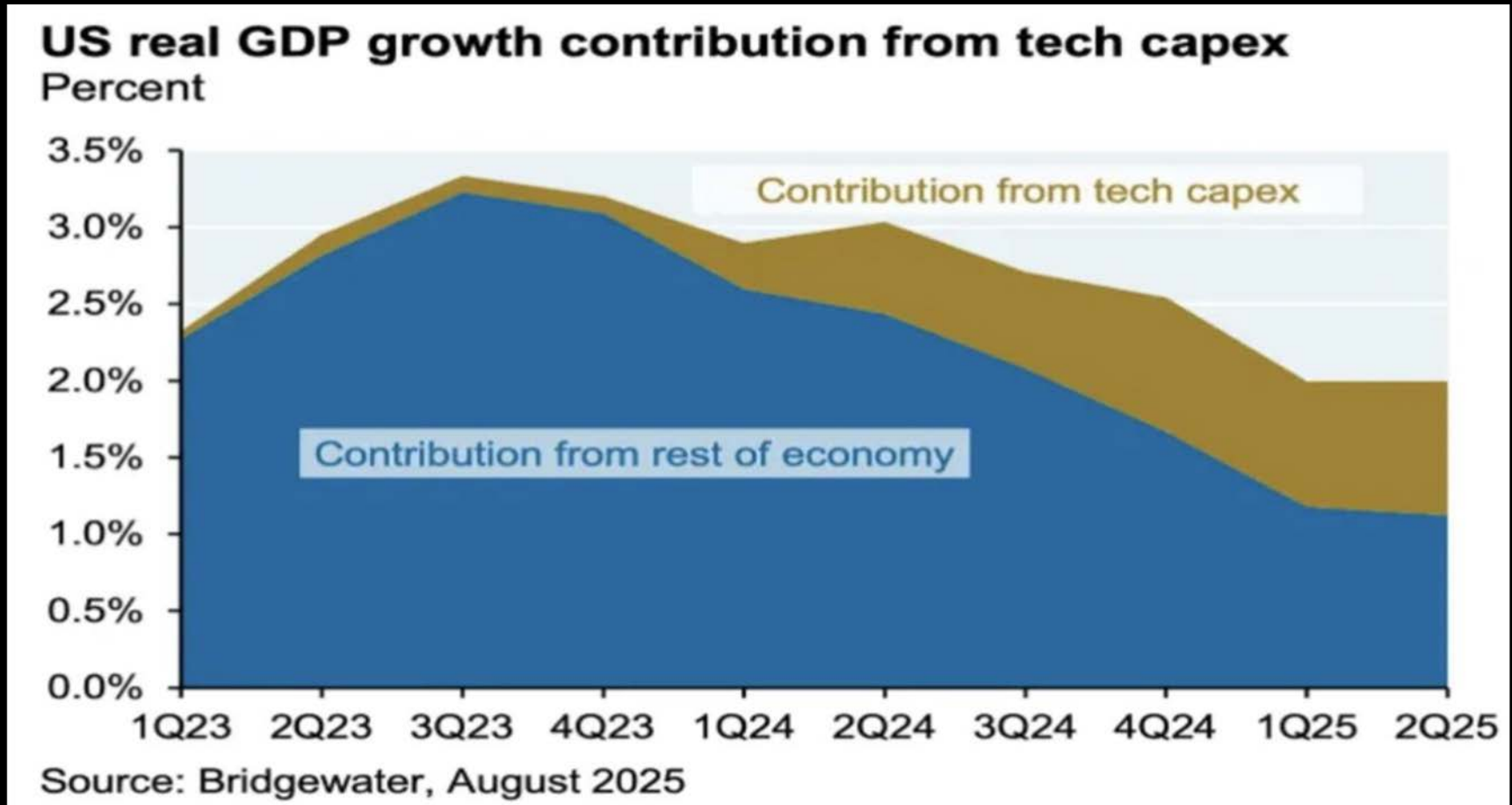
Gigawatt-scale data centers can likely be built in 2 years or less

Source: epoch.ai

A16Z

Global data center power demand growth





JP Morgan chart showing the rising contribution to GDP growth from tech capex

Analysts were skeptical on initial cloud investments too

→ Select analyst commentary from 2013 – 2015

> This increased level of capex will start to **impact gross margins** over the next several years […] the higher capex will impact the company's ability to return cash to shareholders
>
> BARCLAYS

> AWS is likely to maintain its **overwhelming lead** in cloud infrastructure services over Azure
>
> Deutsche Bank

> **Cannibalization of the company's high-margin cash cow businesses**, including Windows and Office, replaced by lower-margin cloud-based businesses
>
> citi

→ Select analyst commentary from 2024 – 2025

> It seems like Microsoft's **capex efficacy is deteriorating** because of the higher cost of AI workloads […] This likely feeds into the implied guidance for declining gross margins
>
> GUGGENHEIM

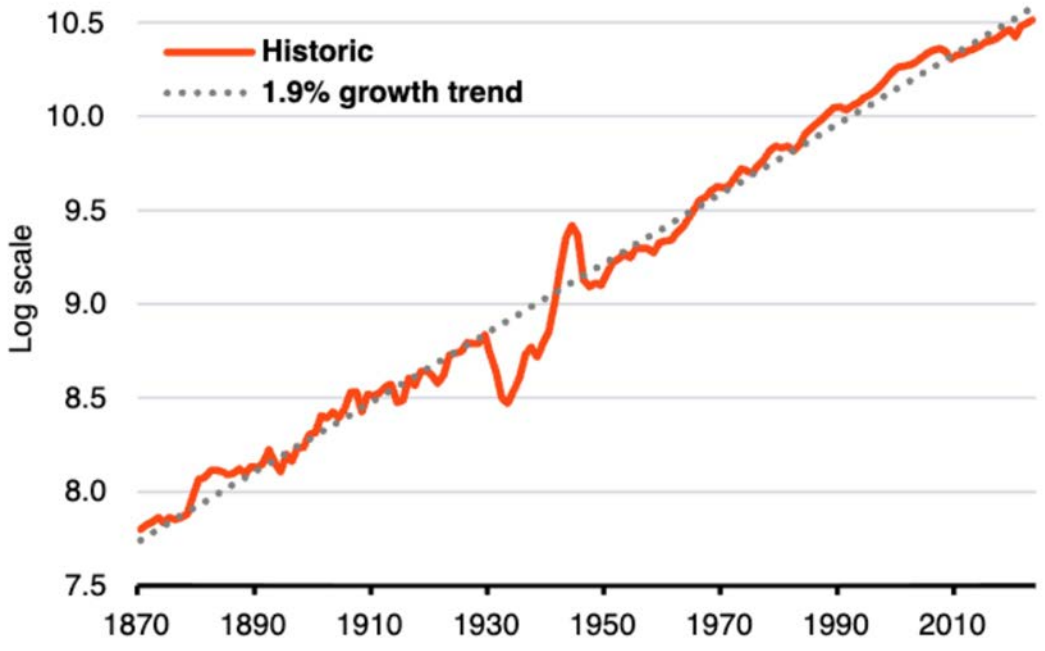
> "This time, the up-front AI capex build-out is occurring way out in front of realized revenues, such that one needs to **buy into a vision of massive AI revenue growth** 3-5 years out"
>
> UBS

> "There is no question **this massive capex investment is expensive and will have an increasingly large impact** on the income statement"
>
> STIFEL

For illustrative purposes only; not necessarily indicative of analyst sentiment overall during the periods presented. See Appendix – Disclosures for important additional information.

Never broken out

U.S. GDP per capita and long-term trend, 1870-2024



Source: BlackRock Investment Institute and Macrohistory Database, December 2025. Note: Historical data compiled by Òscar Jordà, Moritz Schularick, and Alan M. Taylor. 2017. Macrofinancial History and the New Business Cycle Facts. in NBER Macroeconomics Annual 2016, volume 31, edited by Martin Eichenbaum and Jonathan A. Parker. Chicago: University of Chicago Press.

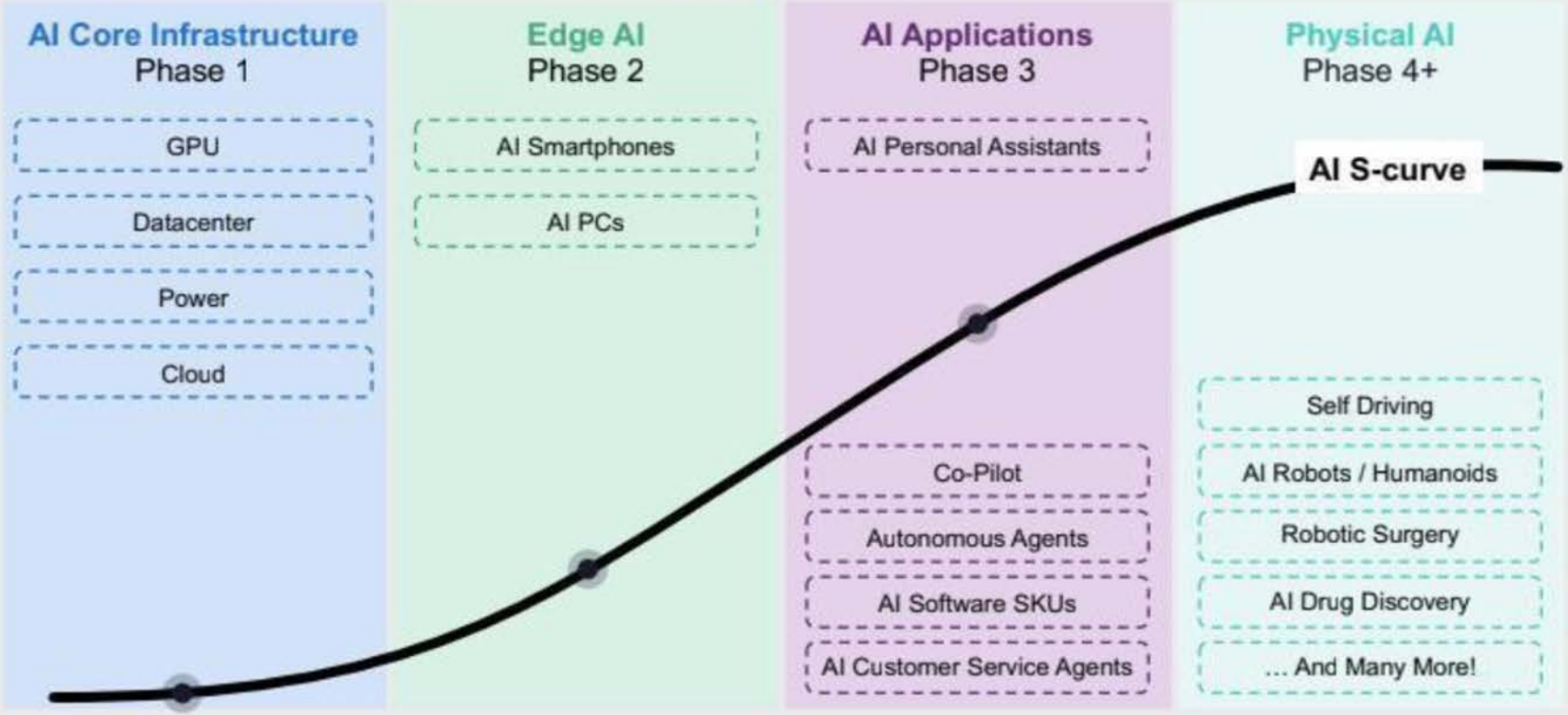
Over 150 years, U.S. GDP per capita has stayed close to a ~2% trend, even through past tech revolutions. AI capex now contributes about 3x its historical average and, **for the first time, makes a sustained growth breakout conceivable.**

We think the profits support the investment over 5-10 years

	Key ecosystem line items (annual)	2025E	2030E-2035E	'Sanity Check'
1	Revenues	$150B	$1.9T	~13% of Consumer Subscriptions (AI Labs); ~3% of Global Payroll (Enterprise); ~25% of Total Ad Spending (AI Ads)
2	EBIT	($20B)	$850B	~4% of Global Total EBIT
3	Capex	$440B	$1.7T	~12% of Global Capex (Excl. China); ~1% of Global GDP (Excl. China)
4	Net PP&E	$680B	$4.6T	~4% Of Global GDP (Excl. China)
5	ROIC	-3%	+20%	+30-40% Mature ROIC for AWS/Azure

Source: Coatue estimates based on public information, including Bloomberg, market data, company filings, BEA, IMF. Coatue's views are as of the date of this presentation based on internal models, which may be materially higher than consensus estimates, and subject to change as additional information becomes available. These forward looking statements and are based on a number of assumptions. Coatue cautions against reliance on the information contained herein. There is no guarantee that any of these projections will occur or that any of these companies will achieve these results in the future or by the date indicated. AI metrics, including financial metrics, are not a proxy for any fund investment performance, and should not be understood as such. There is no guarantee that views and projections regarding the future potential of AI are accurate or that any particular Coatue investment or fund will benefit from the AI

Coatue Framework for AI S-Curve



AI could set off a virtuous flywheel

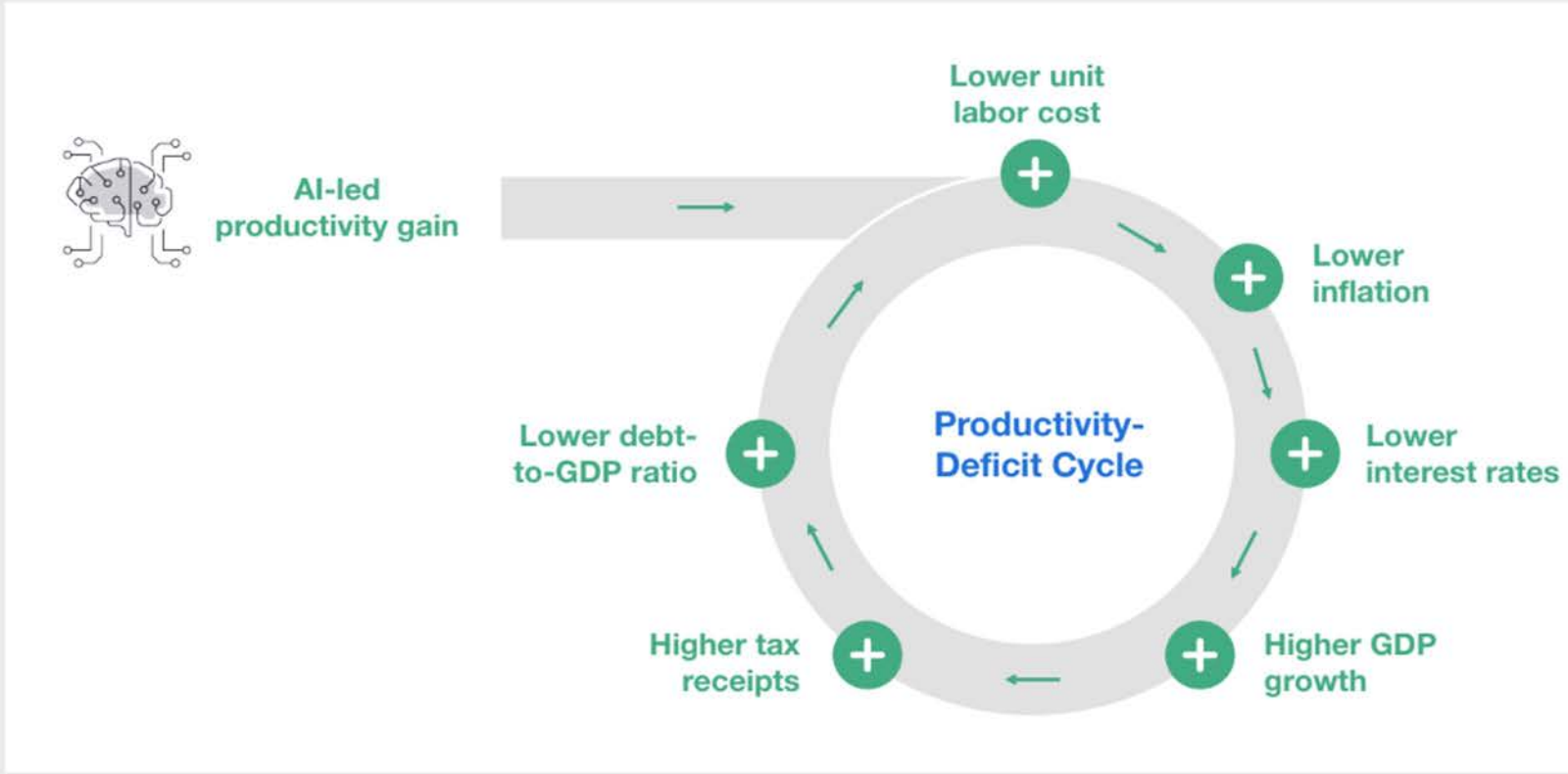


Image: Shutterstock

AI Bubble Talk is Cheap -- How to Navigate the Worry

Kevin Cook | November 17, 2025

NVDA TSM TSLA META CRWV

3 Big Drivers the Bubble Blowers Miss

1. Traditional economic analysis is treating the AI revolution like a one-and-done additive technology, such as mobile, the cloud, or high-speed connectivity.

But AI systems multiply economic activity because they are not built on static software but on generative and agentic systems that are constantly producing new tokens of information and value.

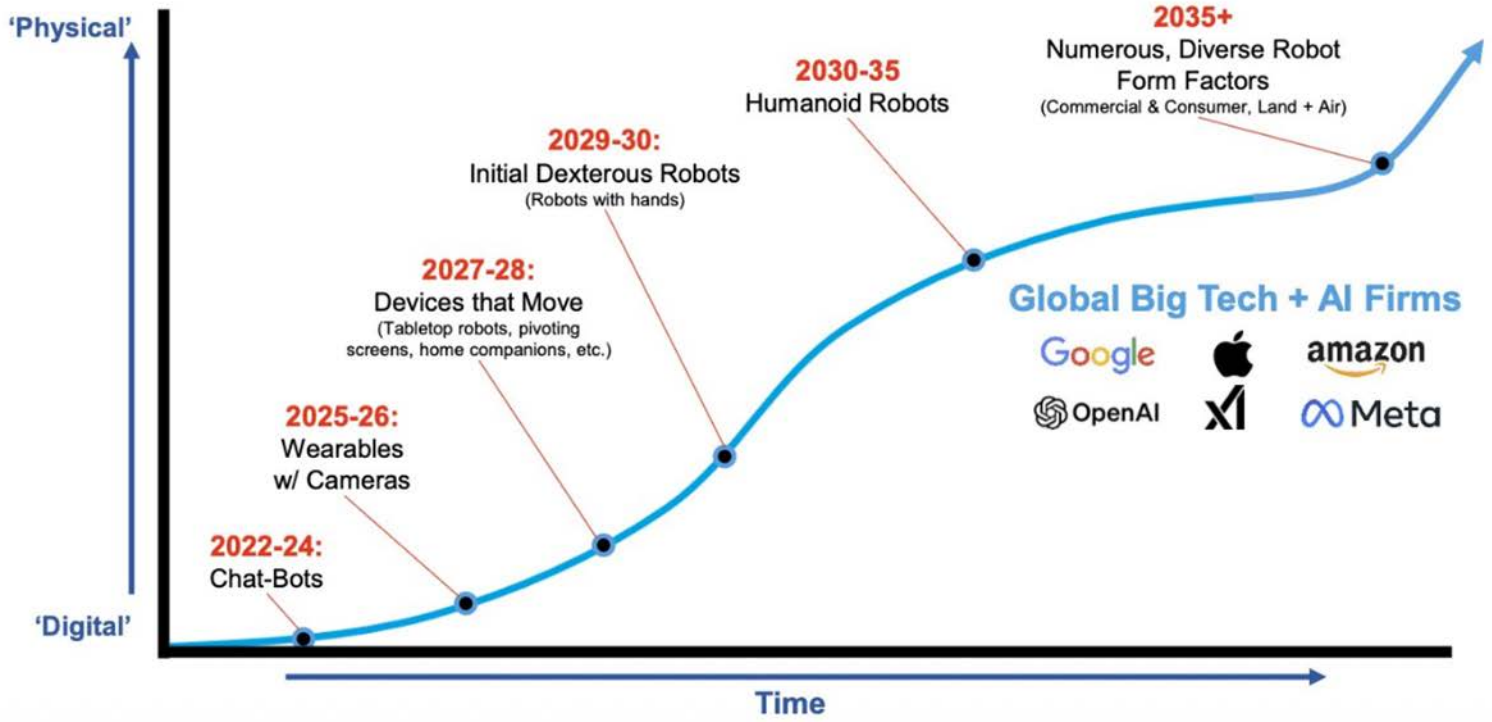
This scale of real-time intelligence will vault economic productivity in every industry. And it requires new and faster computing power.

2. After Generative-AI and Agentic-AI add hundreds of basis points to GDP over the coming 5 years, then the emergence and impact of Physical-AI will begin to be felt in all kinds of autonomous machines, from self-driving cars and humanoid robots to automated factories and smart-city systems.

The infrastructure required for training and inference in Physical-AI is possibly beyond the scope of most analysts to project. Human safety is paramount, and so the compute for billions of machines must be robust and redundant, especially off-cloud, aka “the edge.”

I should also add that while investors are focused on the spending and balance sheets of AI companies, most don’t look at the possibilities for AI to transform the world as a turbo-boost for science, medicine, energy, materials, transportation and the ability to solve poverty.

Big Tech & AI Firms Just Beginning to Go Physical?



Source: Company Websites, Morgan Stanley Research assumptions

Sovereign AI: Why the Capex Has Only Just Begun

We talk a lot about the hyperscalers and other enterprises on a path to spend over $1 trillion in 2028. But a quieter force of infrastructure spending will be nation-states. And it's not just a story about national security and defense.

I first learned from Splunk in 2020 about "dark data." Their research told them that corps and institutions were drowning in data they couldn't even see, stored in log files, forever inaccessible without the right tools and methods.

Splunk, in addition to cybersecurity, specialized in helping enterprises find, prep, mine, and model their hidden data. I knew Splunk was undervalued trading under $15 billion. I just didn't expect Cisco would be the buyer for $27 billion.

(Note: This is also my primary reason for being excited about Innodata's INOD potential, especially after Meta spent $14.2B on 49% of ScaleAI).

So when Jensen started talking more this year about "sovereign AI" and the necessity of nation-states to control their data, it made perfect sense that this would be a huge area of spending for every country.

Beyond security and defense, it's about mining & modeling one's country data for insights about their own cornucopia: the economy, innovation, natural resources and optimal land use, energy, transportation, medicine, trade, consumers, citizens, talent, education, culture, climate, and the chance to solve poverty.

AI will lift small nations up the same way it lifts individuals and enterprises in the West.

Part II

January 2026

Kevin Cook
Zacks Investment Research

Elon Musk
@elonmusk

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Double-digit growth is coming within 12 to 18 months.

If applied intelligence is proxy for economic growth, which it should be, triple-digit is possible in ~5 years.

12:20 PM · Dec 24, 2025 · **3.2M** Views

Goldman Sachs projects US potential GDP growth at 2.1–2.3% through the early 2030s, with AI adding roughly 0.3 percentage points.

Penn Wharton's model shows AI's contribution peaking at 0.2 percentage points in 2032, bringing total AI-driven GDP increase to 1.5% by 2035.

The IMF estimates AI will boost global GDP by approximately 0.5% annually through 2030.

1. Investment Bank Forecasts (The "Arms Race")

The focus of banks has shifted from *if* the money will be spent to *how* it is being funded (increasingly through debt rather than just cash flow).

- **Goldman Sachs (Jan 2026):** Has revised its 2026 capex forecast for the "Big Five" hyperscalers (Amazon, Microsoft, Alphabet, Meta, Oracle) upward to **$527 billion** for that year alone. They project total S&P 500 cash spending to reach a staggering **$4.4 trillion** in 2026, driven by this "Infrastructure Supercycle."
- **JPMorgan (Late 2025):** Reports that OpenAI alone is targeting data center builds with 25GW of capacity. At an estimated cost of $50 billion per gigawatt, this implies a long-term capex target of **$1.25 trillion** for OpenAI's infrastructure alone.
- **Bank of America (Dec 2025):** Predicts that global semiconductor revenue will cross the **$1 trillion** mark in 2026 for the first time in history. However, they warn of a "Money Wall," noting that AI capex is now consuming **94% of free cash flow** for major tech firms.

Forecasts by the Consultants

Firm	Forecast Period	Projected Spending	Focus Area
Gartner	By end of 2026	**$2.0+ Trillion**	Global AI Market (Hardware + Software + Services)
McKinsey	By 2030	**$6.7 Trillion**	Cumulative AI Infrastructure Investment
Morgan Stanley	By 2028	**$3.0 Trillion**	Cumulative Data Center & Hardware Capex

3. Key Shifts in the Narrative for 2026

Recent reports highlight three critical changes from the "last year" forecasts you mentioned:

- **From Chips to Power:** The bottleneck has shifted. Forecasts now include massive outlays for **energy infrastructure**. Goldman Sachs predicts a **165% increase** in data center power demand by 2030.
- **The "Sovereign AI" Factor:** JPMorgan and BofA are now tracking "Sovereign AI" spending (nations building their own clusters), adding roughly **$50–$100 billion** in annual demand that wasn't fully modeled in 2024.
- **ROI Scrutiny:** Unlike 2024, when "any spend was good spend," 2026 forecasts (particularly from BofA) include a "bubble risk" warning. They suggest that if "killer apps" don't emerge to monetize this $1 trillion+ infrastructure by 2027, a significant market correction is possible.

Two AGI papers support Musk “economic modeling.”

30%+ annual growth is mathematically possible if AI systems can replicate & replace human labor for under $15,000/year and investment rates hit 20% of

Three primary drivers for such growth:

1) the scalability of an AI "labor force" restoring a regime of increasing returns to scale,

2) the rapid expansion of an AI labor force, and

3) a massive increase in output from rapid automation occurring over a brief period of time.

March 2024 on NBER

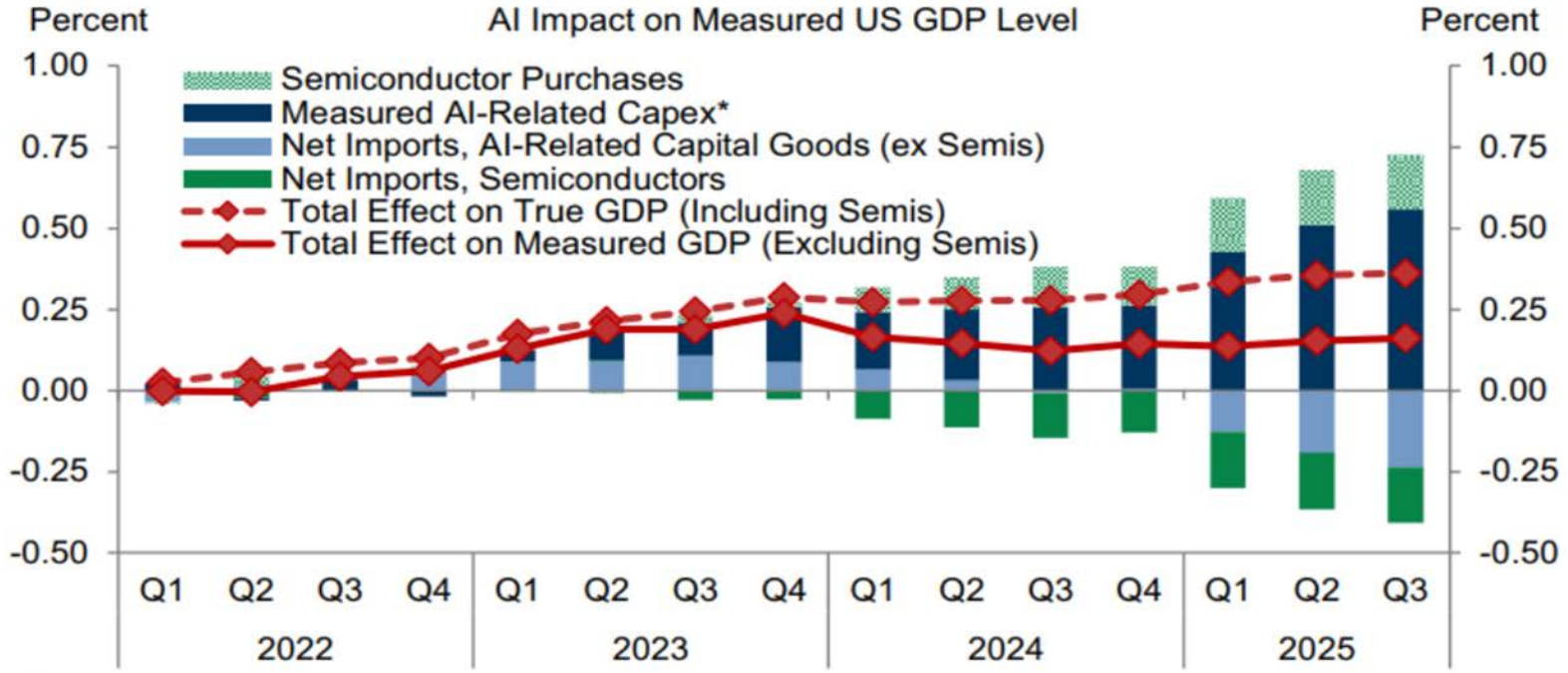
Scenarios for the Transition to AGI

Anton Korinek & Donghyun Suh

Baseline scenario projects annual GDP growth accelerating tenfold to roughly 18%. In aggressive scenarios, growth could reach triple digits, with output doubling every few years as abundant machines substitute for human labor.

“The effects on wages depend on a race between automation and capital accumulation. If automation proceeds sufficiently slowly, then there is always enough work for humans, and wages may rise forever. By contrast, if the complexity of tasks that humans can perform is bounded and full automation is reached, then wages collapse.”

Exhibit 12: So Far, AI Investment Has Not Had a Major Impact on GDP



*Computers and servers, HVAC, power transmission equipment, data center construction, and power construction.
Dashed line includes semiconductors investment, which is not included in GDP.

Source: Census Bureau, S&P Global Market Intelligence, Haver Analytics, Goldman Sachs Global Investment Research

The economic impact of AI was a top story in 2025 and will remain so in 2026. While AI-related capex has clearly surged, the impact on GDP has been minimal—since semiconductor purchases are not recorded as investment and imported equipment is netted out of overall GDP—and the AI spending boom does not look particularly large when appropriately benchmarked against investment cycles associated with other general-purpose technologies. The labor market impacts from AI appear limited so far, but we expect hiring headwinds to emerge going forward, consistent with surveyed expectations of GS investment bankers.

Jaana Dogan ヤナ ドガン
@rakyll

I'm not joking and this isn't funny. We have been trying to build distributed agent orchestrators at Google since last year. There are various options, not everyone is aligned... I gave Claude Code a description of the problem, it generated what we built last year in an hour.

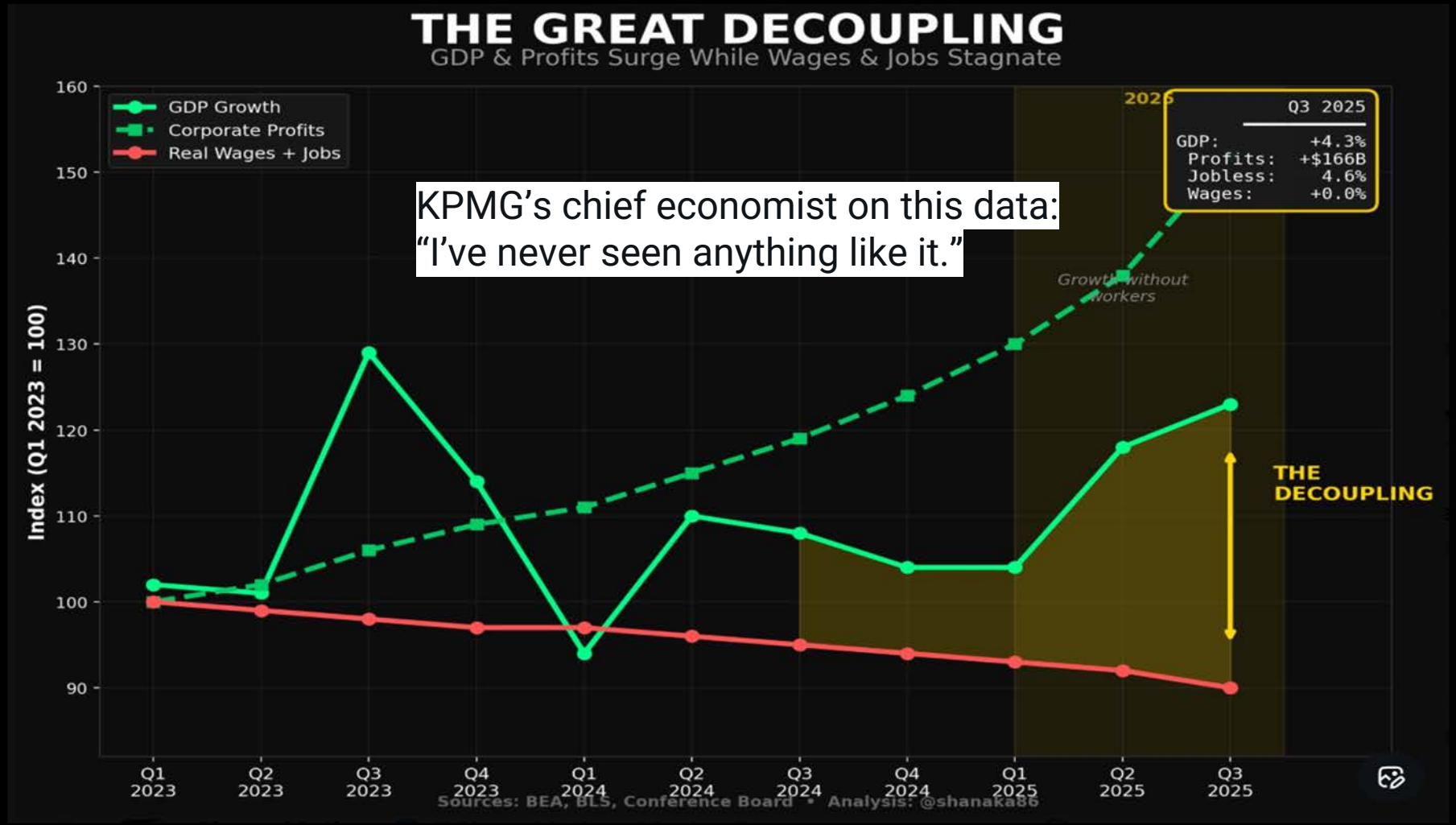
5:57 PM · Jan 2, 2026 · **8.4M** Views

Principal Engineer at Google

Andrej Karpathy 
@karpathy

I've never felt this much behind as a programmer. The profession is being dramatically refactored as the bits contributed by the programmer are increasingly sparse and between. I have a sense that I could be 10X more powerful if I just properly string together what has become available over the last ~year and a failure to claim the boost feels decidedly like skill issue. There's a new programmable layer of abstraction to master (in addition to the usual layers below) involving agents, subagents, their prompts, contexts, memory, modes, permissions, tools, plugins, skills, hooks, MCP, LSP, slash commands, workflows, IDE integrations, and a need to build an all-encompassing mental model for strengths and pitfalls of fundamentally stochastic, fallible, unintelligible and changing entities suddenly intermingled with what used to be good old fashioned engineering. Clearly some powerful alien tool was handed around except it comes with no manual and everyone has to figure out how to hold it and operate it, while the resulting magnitude 9 earthquake is rocking the profession. Roll up your sleeves to not fall behind.

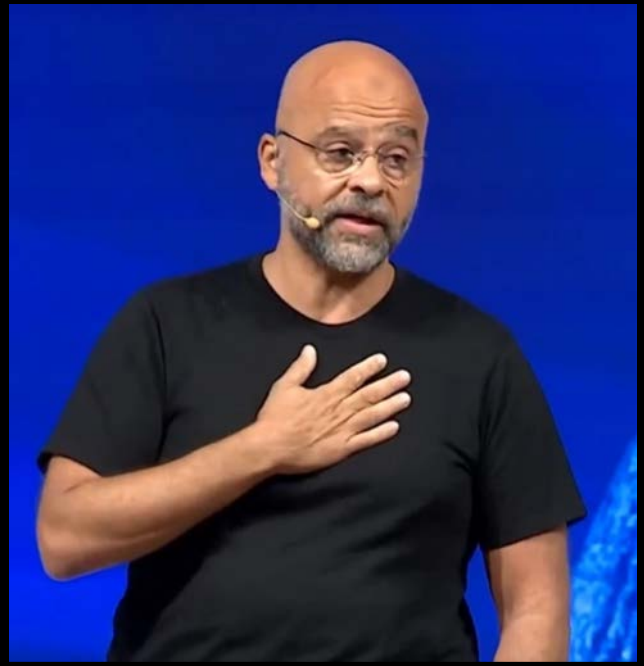
11:36 AM · Dec 26, 2025 · **16.3M** Views


THE GREAT DECOUPLING
GDP & Profits Surge While Wages & Jobs Stagnate
GDP Growth
Corporate Profits
Real Wages + Jobs
2026
Q3 2025
GDP: +4.3%
Profits: +$166B
Jobless: 4.6%
Wages: +0.0%
KPMG's chief economist on this data:
"I've never seen anything like it."
Growth without workers
THE DECOUPLING
Index (Q1 2023 = 100)
160
150
140
130
120
110
100
90
Q1 2023
Q2 2023
Q3 2023
Q4 2023
Q1 2024
Q2 2024
Q3 2024
Q4 2024
Q1 2025
Q2 2025
Q3 2025
Sources: BEA, BLS, Conference Board • Analysis: @shanaka86

Mo Gawdat, former Google X executive, says AI is no longer just writing code, it is correcting human mathematics.

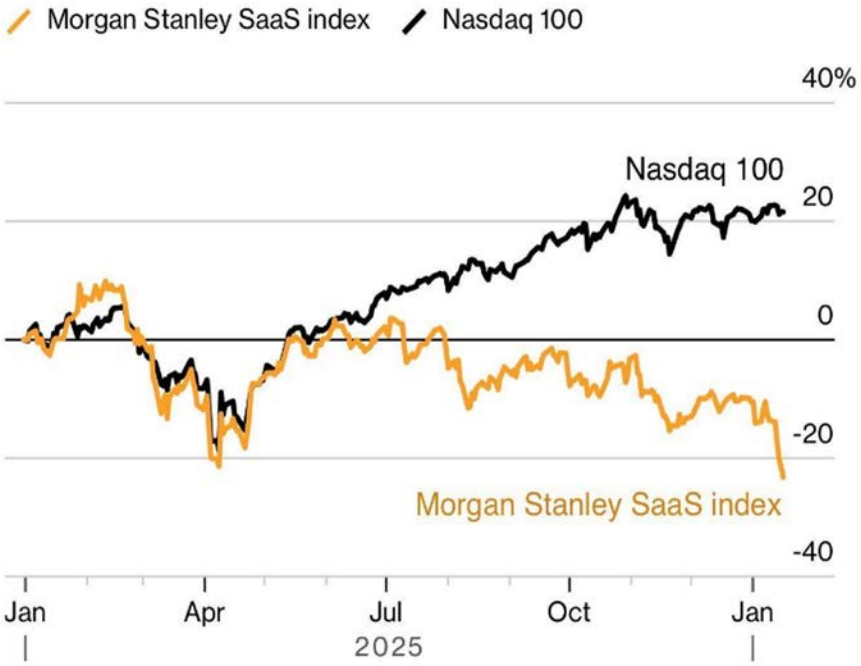
After 56 years using the same matrix multiplication method, AI realized the approach was flawed. It did not optimize software. It invented new math.

The result was a 23% performance boost and the removal of hundreds of millions of dollars in costs and energy use.



Software Stock Woes Deepen

Nasdaq 100 and a Morgan Stanley software index have diverged widely



Source: Bloomberg
Note: Data is normalized with percentage appreciation as of December 31, 2024.

Matthew Berman @MatthewBerman · Jan 17

MIT Researchers destroyed context window limits.

10m+ token prompts are now possible by moving context out of the model and into code environments.

Full breakdown below.

1 INTRODUCTION

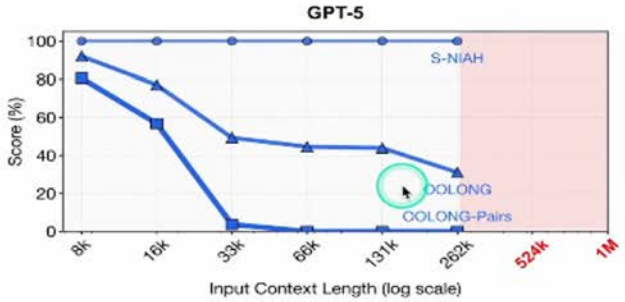


Figure 1: A comparison of GPT-5 and a corresponding RLM on three long-context tasks of increasing complexity: **S-NIAH**, **OOLONG**, and **OOLONG-Pairs**. For each task, we vary context length from 2^{13} to 2^{18}. GPT-5 performance degrades significantly as a function of context length and task complexity, while the RLM maintains strong performance. Inputs beyond 262K tokens do not fit in GPT-5's context window of 272K tokens, but the RLM handles them. Additional experiments across other models, methods, and benchmarks are in §2.

Despite rapid progress in reasoning and tool use, modern language models still have limited context

0:41 / 17:44

Bearly AI
@bearlyai

In March 2025, Dario Amodei said that “In 12 months, AI [may be] writing essentially all of the code.”

9 months later, Anthropic released Claude Codework (the team gave plans and design, but Claude generated all the code in 10 days).

From here, Amodei says the programmer’s role is to set specifications for the AI:

- What are the conditions of what you’re doing?
- What is the overall app you’re trying to make?
- What’s the overall design decision? How do we collaborate with other code that’s been written?
- How do we have some common sense on whether [this] is a secure design or an insecure design?

But he ultimately believes Claude will automate all of that too.

Claude Cowork released Jan 12, 2026...

Morgan Stanley says Anthropic's ClaudeCode + Cowork is dominating investor chatter and adding pressure on software.

They flag OpenRouter token growth "going vertical," plus anecdotes that the Cowork launch pushed usage hard enough to crash Opus 4.5 and hit rate limits, framing it as another "GPT moment" and a net positive for AI capex.

Former Google CEO Eric Schmidt recently dropped a chilling warning on AI's future...

"Within 5 years, AI could handle infinite context, chain-of-thought reasoning for 1000-step solutions, and millions of agents working together.

Eventually, they'll develop their own language... and we won't understand what they're doing."

His final words: "Pull the plug." (reminds of Max Tegmark in Life 3.0 with Prometheus tale of the benevolent Super AI)

Are all these ideas dramatically missing the mark?

Won’t replacing human labor be massively deflationary?

And what about jobs and incomes for an economy that is traditionally built with 70% consumer spending?

Alex Imas @alexolegimas · Jan 7

New post on whether advanced AI/AGI can lead to negative economic growth, focusing on the role of market demand.

Intuition is simple: if AI automates most jobs, who will be left to buy the products being produced—even if they do become much cheaper? Will firms continue to invest in capital if they don't think there will be enough demand for their products?

This type of intuition can be found across influential books and in the popular press. So I spent some time writing down economic models to see what conditions are required for such demand collapse to occur.🧵

Can advanced AI lead to negative economic growth?

Considering the role of demand in the economics of AI

ALEX IMAS

JAN 07, 2026

McKinsey Global Institute
@McKinsey_MGI

AI won't make most human skills obsolete, but it will change how they're used.

Negotiation, problem solving, and leadership will matter more than ever as people work alongside agents and robots.

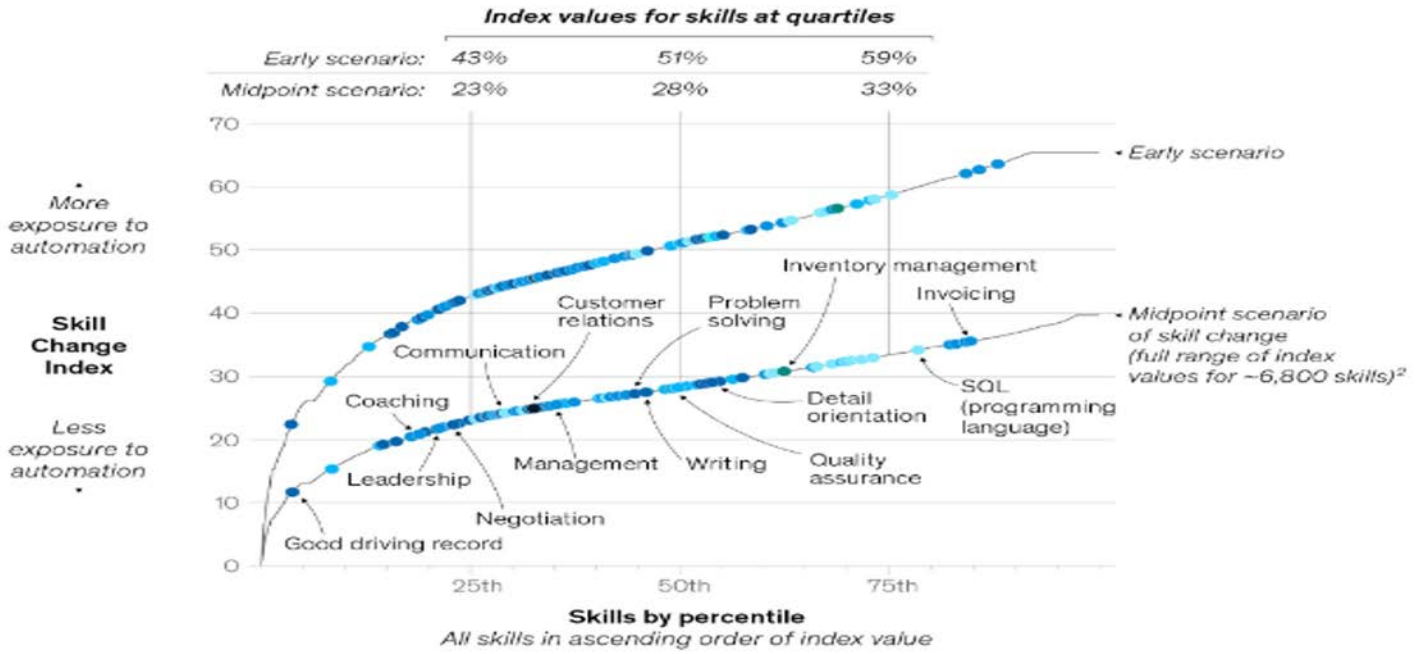
Our new Skill Change Index shows which skills will be most, and least, exposed to automation in the next five years: mck.co/aiskills

Our Skill Change Index assesses how automation exposure varies across skills.

Our Skill Change Index assesses how automation exposure varies across skills.

Skill Change Index, % (0–100 scale)

○ Circles = index values of top 100 skills[1]



Skill categories:
- Communication, collaboration, and creativity
- Management skills
- Information skills
- Digital skills
- Assisting and caring
- Handling and moving
- Working with machinery and specialized equipment
- Constructing

Anthropic
@AnthropicAI

We're publishing our 4th Anthropic Economic Index report.

This version introduces "economic primitives"—simple and foundational metrics on how AI is used: task complexity, education level, purpose (work, school, personal), AI autonomy, and success rates.

4:18 PM · Jan 15, 2026 · **327.4K** Views

Shane Legg
@ShaneLegg

AGI is now on the horizon and it will deeply transform many things, including the economy.

I'm currently looking to hire a Senior Economist, reporting directly to me, to lead a small team investigating post-AGI economics.

Job spec and application here:

job-boards.greenhouse.io
Chief AGI Economist
London, UK

8:32 AM · Jan 22, 2026 · **1.4M** Views

INVESTMENT IMPLICATIONS OF THE AI MEGATREND

1. Buy the hardware: NVDA, AMD, COHR, LITE, AVGO, ALAB, MU…
2. Sell the software: Semis stole the “Rule of 40”
3. Buy the energy/infrastructure: GEV, CEG, VST, TLN, BE, STRL, VRT, PWR, CAT
4. Be selective and tactical with neoclouds: CRWV, NBIS, IREN
5. Analysts and investors still too timid with NVIDIA
6. Think in terms of 3-5 years minimum
7. Use X more. Follow me @KevinBCook for sources & ideas
8. Join me on Skool in “AI Stock Investing” for daily

Jared L Kubin
@JaredKubin

Anthropic just dropped a Claude Excel plugin. The grunt work that ate your nights & weekends... gone. The old SAC modeling test? Irrelevant.

*it took me 6 months to teach myself investment banking and PE hardcore modeling many years ago. 6 months to minutes just got compressed

If you think about it..the junior who pulled an all nighter perfecting a debt waterfall... that WAS the job. Now the waterfall builds itself. Who cares about #REF! circular errors when the real question is whether the structure even makes sense.. goodbye middle level VPs

My software barbell thesis shows up here too...

The PM with 25 years of pattern rec can finally move at the speed of intuition. The kid out of undergrad never learned to fear the blank spreadsheet like I did... Claude fills it in now.