

BROOKS HAMILTON



HAMILTON AI STRATEGY ADVISORS

Today

- Founded Hamilton AI Strategy Advisors to craft AI Go-To-Market strategies for industrial economy companies.
- Writes and speaks in the US and Europe on artificial intelligence strategies and best practices for AI adoption and implementation in B2B companies.
- With a deep understanding of both AI technology and business operations, Brooks and his team enable organizations to successfully navigate the rapidly evolving AI landscape.

Prior Work

- Former VP of Professional Services at Zilliant.
- Leadership role in Product Management.
- Spearheaded Product Management at several Austin-based startups.

Artificial Intelligence Strategy Advisors

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Executive Alignment

Two hour session with executive team on AI trends and implications to identify upcoming opportunities and competitive challenges

AI Roadmap Planning

Identify and prioritize high ROI opportunities within your organization with a focus on topline growth, reduction of low-value busywork, and smooth the generational transition

Software Development Acceleration

Improve speed of delivery of ERP migration and software development by 30% to 50%

A Story in Four Acts

State of AI Today

Achieving Scale

Evolving Industry

Distribution

This is

Now

A New Value Curve

The Path

Ahead

Opportunities



State of AI: Where are We Today?

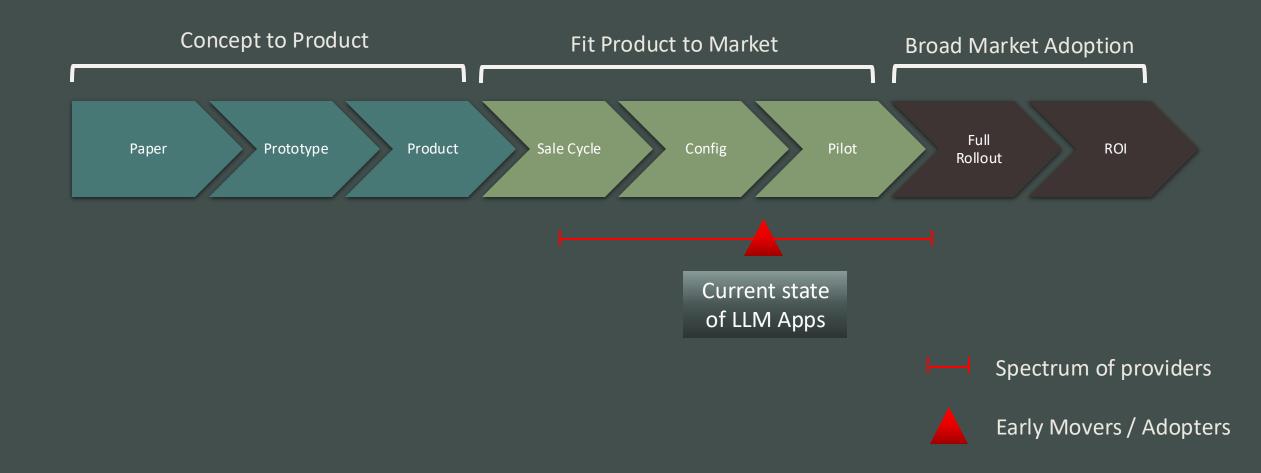
Al is a Society Scale Investment

Investment	Peak Annual Investment (2023 USD)	Estimated GDP (2023 USD)	% of GDP
Manhattan Project (1942-1946)	\$33B	\$3T	1.10%
Apollo Program (1961-1972)	\$70B	\$5.5T	1.27%
Dot-com Era Peak (2000)	\$170B	\$16T	1.06%
Mobile Revolution (2010-2020)	\$160B	\$21T	0.76%
Al Investments (2023)*	\$332B	\$24T	1.38%

Note: All figures are approximate and adjusted to 2023 USD equivalent. GDP figures are estimates for the midpoint or relevant year of each period. The % of GDP is calculated using the estimated peak annual investment.

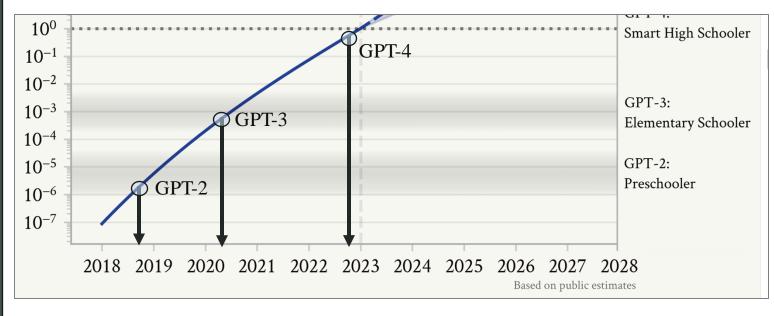
^{*} Al Investments figure includes \$189B in M&A and VC activity, plus \$143B in corporate investments (e.g., GPU purchases) for 2023.

Path to Product: Concept to ROI



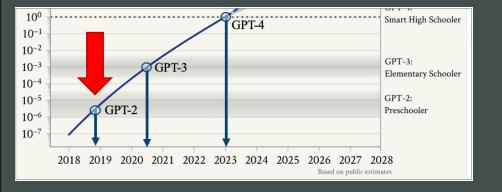
CONSISTENT IMPROVEMENT

With each order-of-magnitude increase of effective compute, models improve predictably.



Prior five years of exponential growth in effective compute

Effective Compute is the # computers, processing speed of each computer, effectiveness of the algorithm used for that purpose.



GPT-2 (2019)

Examples people found impressive at the time

Task **Reading Comprehension:** answer questions about given passages

Dataset COQA

Examples The trophy doesn't fit into the brown suitcase because it is too large.

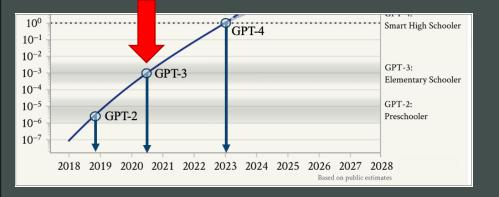
Correct answer: it = trophy

Model answer: it = trophy

The trophy doesn't fit into the brown suitcase because it is too small.

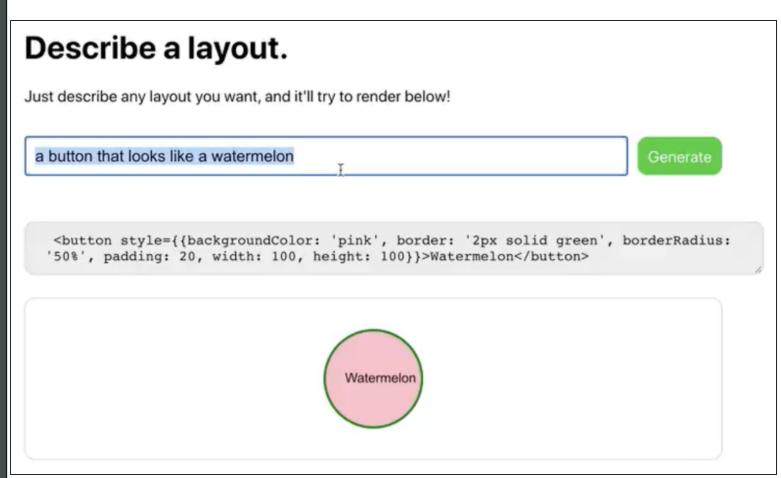
Correct answer: *it = suitcase*

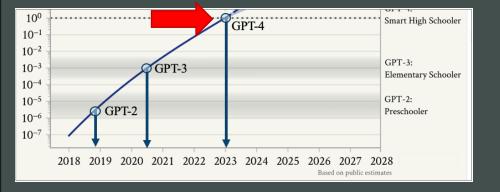
Model answer: it = suitcase



GPT-3 (2020)

Examples people found impressive at the time





GPT-4 (2023)

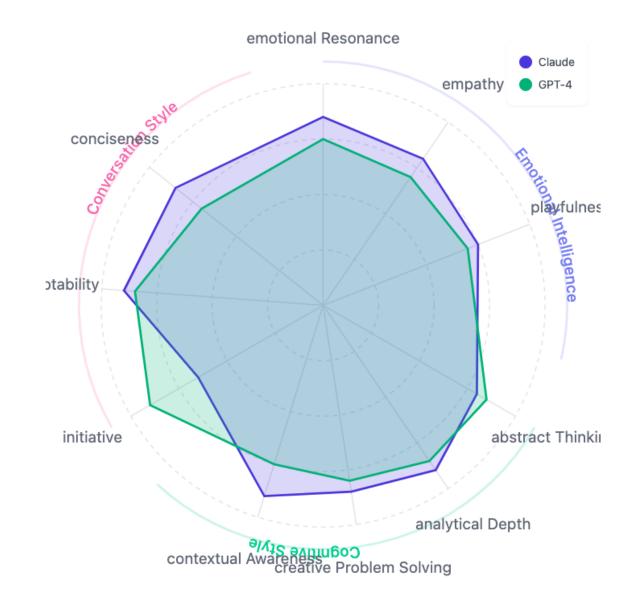
Examples people found impressive at the time

Prompt: Can you write a proof that there are infinitely many primes, with every line that rhymes?

GPT-4:

Yes, I think I can, Though it might take a clever plan. I'll start by noting Euclid's proof, Which shows that primes aren't just aloof. Assume we have a finite list, Of primes, and that none have been missed. Multiply them all together, And add one, just to be clever. The result will be a number, That has no prime factors, oh wonder! But every number has a prime, That divides it, it's just a matter of time. So we've found a contradiction. And our finite list needs eviction. There must be infinitely many primes, And that's the end of my rhyming lines.s

...And you will know us by the shape of our personalities







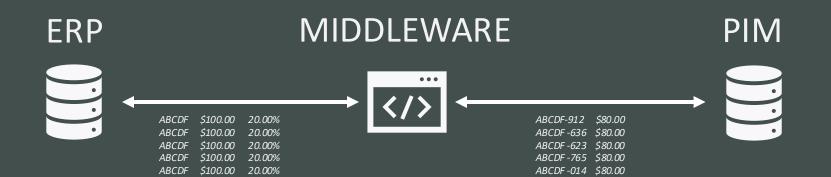
The Evolving Shape of Distribution Organizations

"It isn't that we cannot see the solution; it is that we cannot see the problem."

G.K. Chesterson

British Writer

Middleware Integrates Software Modules and Processes



Characteristics

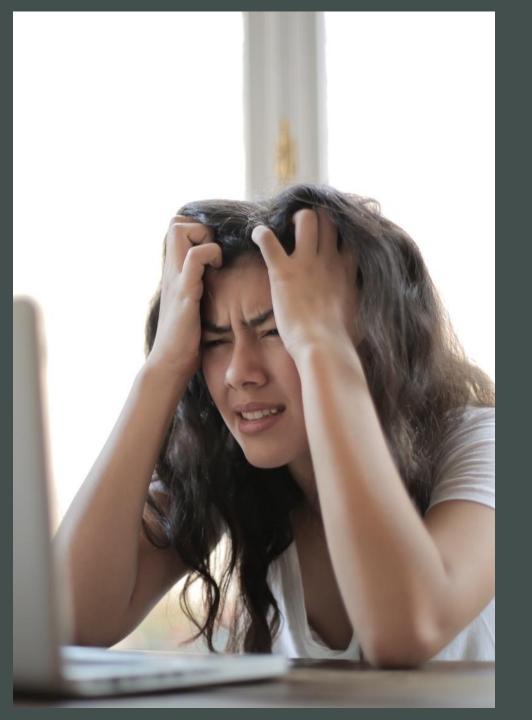
- Rigidly defined process
- Consistent data structure
- Consistent contents

Primary Actions

- Input
- Transform
- Apply business logic
- Output / Distribute

Key Tools

- TIBCO, IBM Websphere
- SFDC Mulesoft
- SAP Process Integration



If it is all automated, then why does everyone look like this?

Action shot of a vendor cost update

part matching exercise

eCommerce load

new vendor onboarding

RFQ response preparation

RFQ Task Areas by Time

WHAT I THOUGHT



WHAT I GOT

Why does Data Prep take so long?

INPUTS FROM MULTIPLE SOURCES IN VARYING FORMATS ON DIFFERENT TIMETABLES















Inherit Complexity

Inputs from multiple sources

Inputs impact differing steps in the process

Inconsistent table structure

Inconsistent field names

Inconsistent field contents

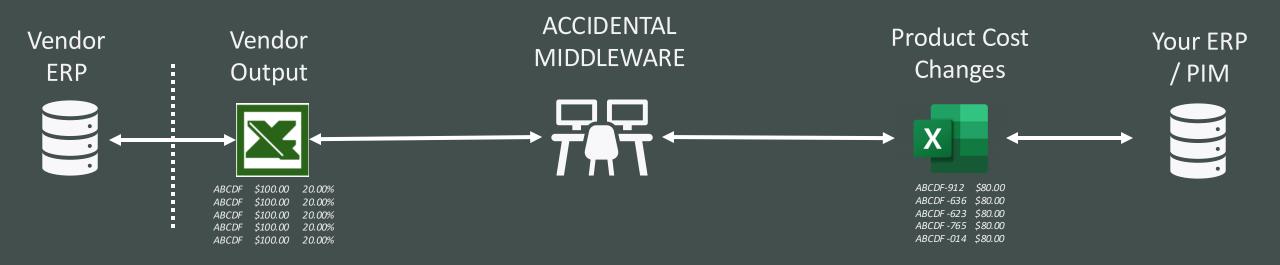
Inconsistent between versions

The process itself changes

EXTERNAL DATA INPUTS

INTERNAL DATA INPUTS

People as Accidental Middleware



Characteristics

- Variable process steps
- Variable structural consistency
- Variable consistency of contents

Primary Actions

- Input
- Transform
- Apply business logic
- Output / Distribute

Key Tools



Accidental Middleware: Example Processes

- Inventory checks
- Expediting
- Delivery updates
- Price checks
- RFQ Responses
- Vendor cost updates
- Rebate program volume checks
- Contract review
- Credit checks

Autonomous Agents

"What would you do with a company of 10,000 workers toiling day-and-night yet who you only need to pay \$1M per year?

You should start considering it because that day is not so far off."
- Sam Altman, CEO of OpenAl

Autonomous Agents (The Essentials)



PERCEIVE THEIR ENVIRONMENT



MAKE DECISIONS & TAKE ACTIONS



DEVELOP WORK-AROUND SOLUTIONS

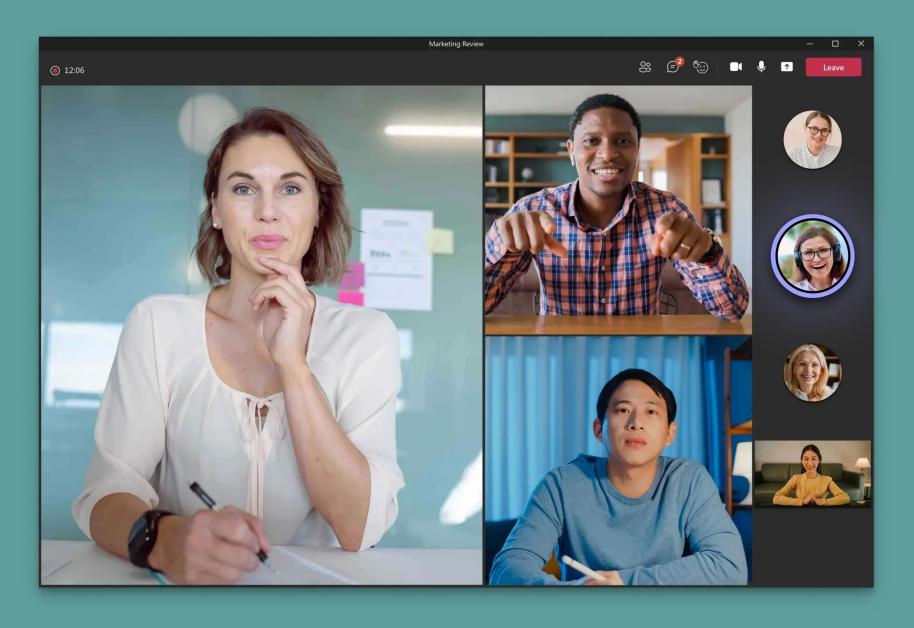


SHORT TERM & LONG
TERM MEMORY



CREATE & MANAGE DYNAMIC TASK LISTS

Agents will be Hired, not Licensed



Microsoft's "Middleware" Agents

Sales

- Sales Qualification Agent: designed to help prioritize leads
- Sales Order Agent: Automate order intake

Operations

Supplier Communications Agent

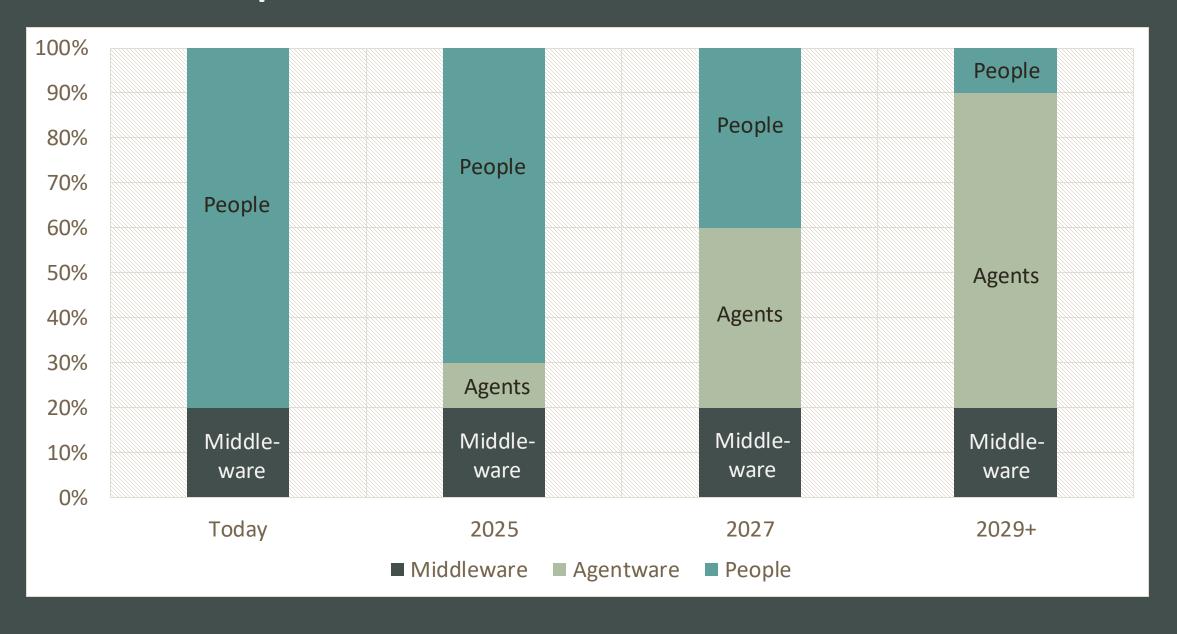
Service

- Customer Intent Agent
- Customer Knowledge Management Agent: automates case management and updating knowledge bases.

Finance

- Financial Reconciliation Agent: prepares and cleanses data for financial reporting
- Account Reconciliation Agent: automates matching and clearing transactions
- Time and Expense Agent: time entry, expense tracking, and approval workflows

% of Corporate Function Middleware Work



Structural Change in Distribution Organizations

Hypothetical Wholesale Distribution Organization

Assumptions for Each \$100 Sold

- Cost of Goods Sold \$50
- Cost of Sales \$15
- Corporate Functions \$15
- Warehousing & Delivery \$10
- Margin \$10

Structural Change in Distribution Organizations

Hypothetical Wholesale Distribution Organization





This is Now: The New Value Curve

Areas of Opportunity

01

Use Within Your Organization

- Grow sales
- Increase margins
- Improve customer experience
- Improve employee satisfaction

02

Sell into Increased Demand

Sell shovels to miners

01

Internal Areas of Opportunity

Assess Your Al Opportunities



Sell into the Al Trend

Opportunities outside of your organization

Microsoft and Amazon alone have pledged \$260 Billion in data warehouse build outs over the next decade



Time to Sell Shovels

Go-To Supplier for Data Center infrastructure projects

- Water infrastructure: advanced cooling systems, treatment and recycling systems, piping for water distribution
- Other: Telecommunications, emergency power systems, physical security, waste management, transportation

Supplier for Renewable Energy Infrastructure Projects

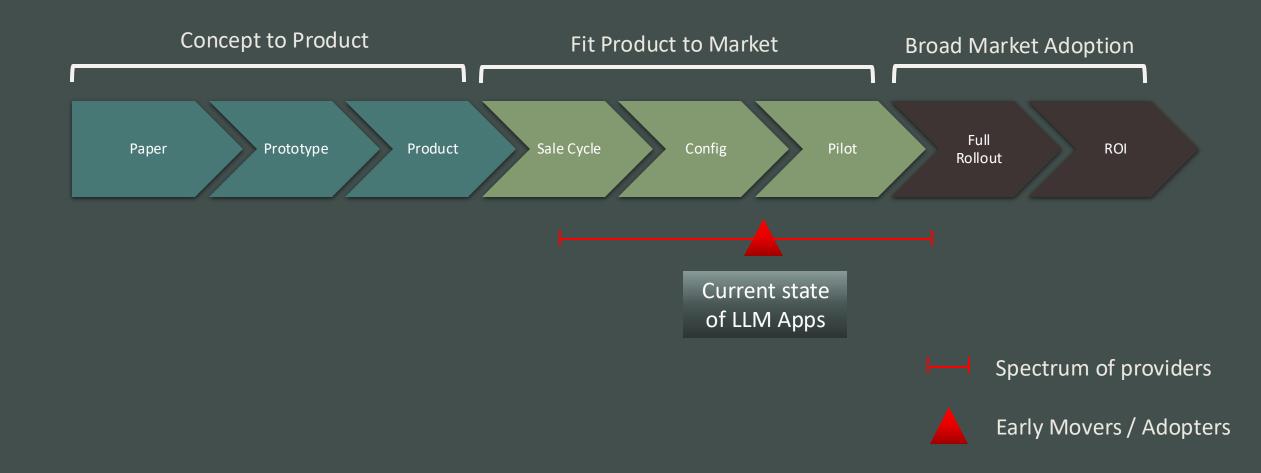
Strategic Partnerships

- Partner with Data Center specialists
- Canadian operations
- Brands that supply Data Center specific products



The Path Ahead

Path to Product: Concept to ROI





Faster Software Dev



Agents



Market opportunity: \$290B (IDC)
Margin opportunity (10% current costs)

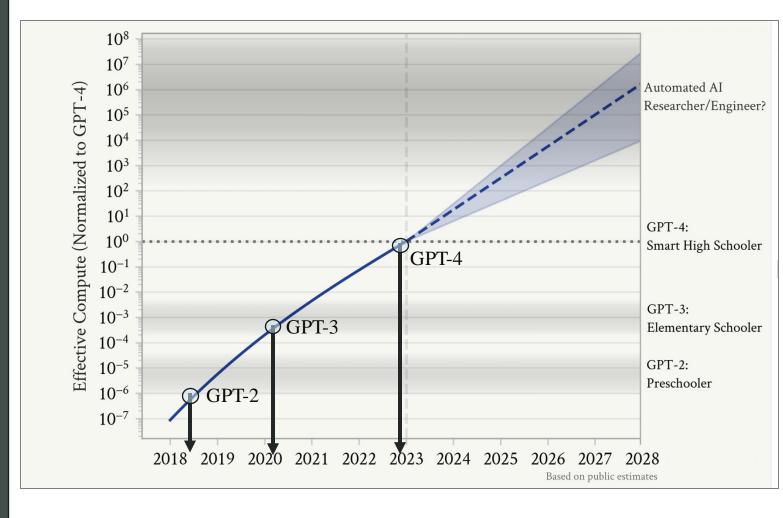
Strategic Motivation

- Current: Used to accelerate bringing software products to market
- Future: Create agents for other industries
- Objective: Build foundries to churn out new agents.

By 2027, models may be able to do the work of an Al researcher/engineer.

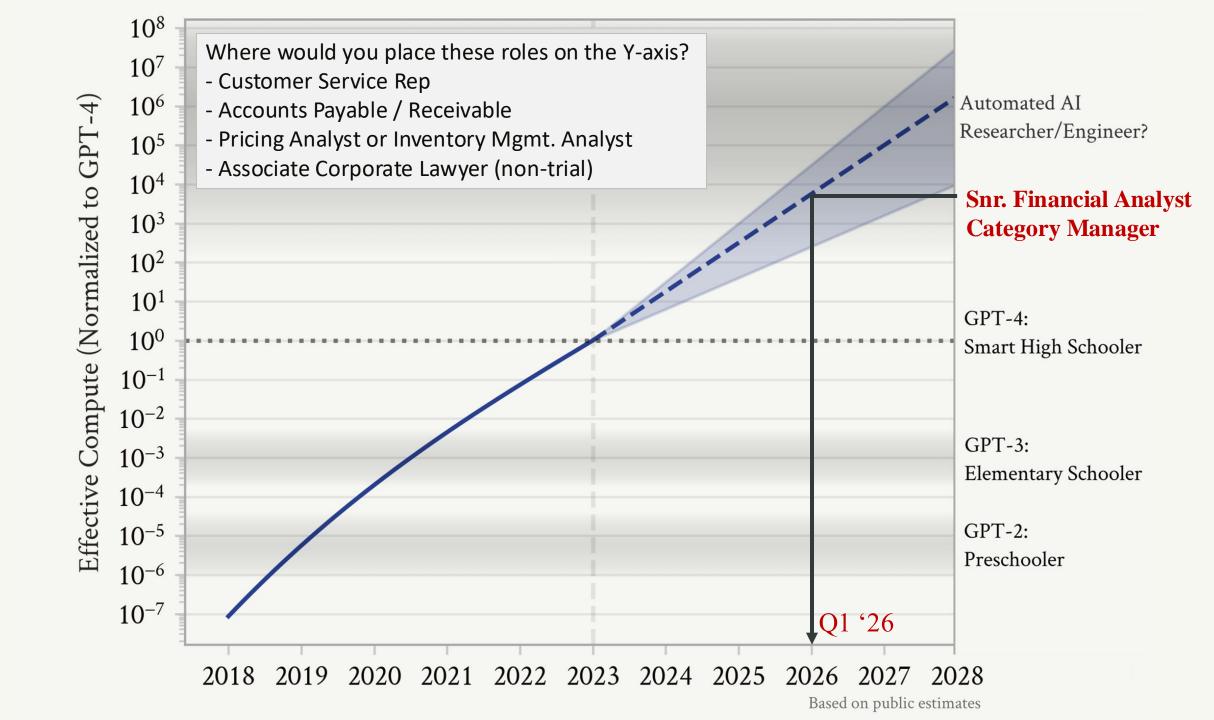
That doesn't require believing in sci-fi.

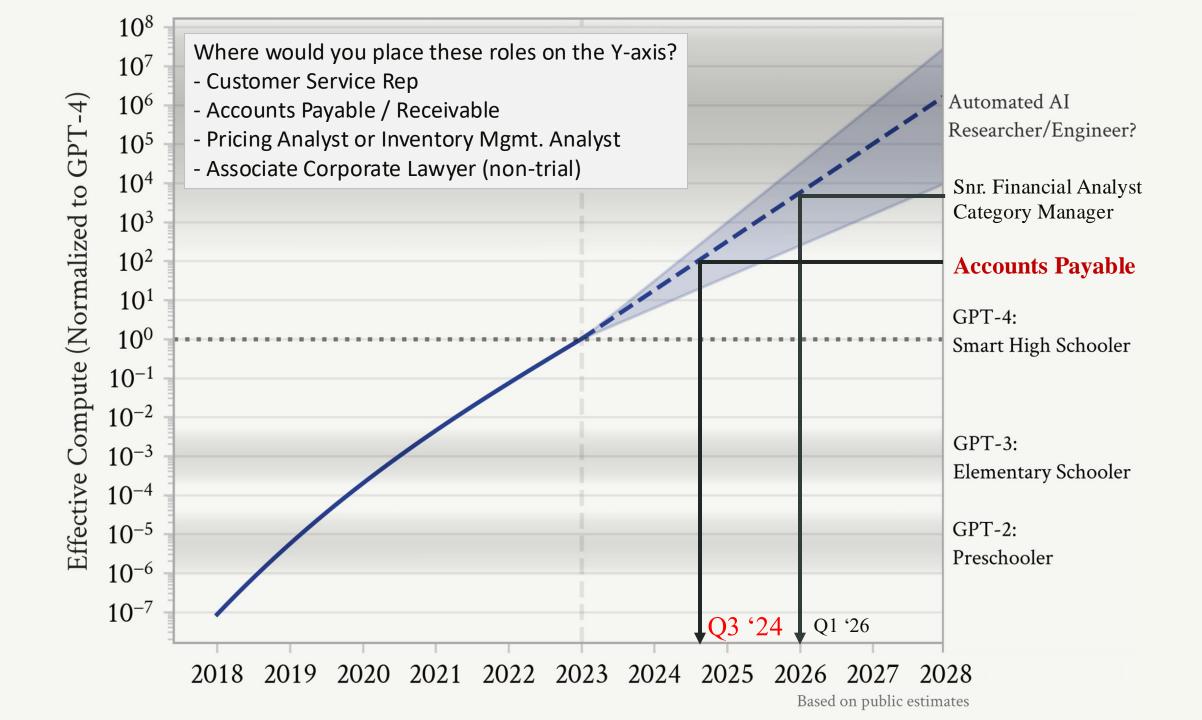
It just requires believing in straight lines on a graph.



The trendlines look innocent, but their implications are intense.

With each order-of-magnitude of effective compute, models predictably, reliably get better. If we can count the order-of-magnitude, we can extrapolate capability improvements.





Questions for Leadership

Company Values

- How will you choose to use it within your organization?
- Will you decrease your team size to take advantage of its efficiency?

Company Value Proposition

- How will your customers perceive its usage by your company?
- Will its use increase or diminish your core value propositions?
- How do you see your competitors using it?

Resource Budgeting

Which part of your organization do you need to make smarter?

Actions for Next Week

Action 1: Become an Al practioner

- Fire up a language model
- Explore the capabilities by exercising it

Action 2: Determine whether your company has AI Trend sales opportunities

 Does it sell into data center construction, data center operation, semi-conductor supply chain, power generation, or power transmission sectors?

Action 3: How will your leadership team address the approaching organizational changes in distribution companies?

- Learn about the state of agent capabilities via conferences and product announcements from the major vendors.
- Intelligence will soon become an area of corporate investment. Which department needs additional intelligence?

Al Reference Materials

Newsletters

- Ethan Mollick, Wharton Professor, One Useful Thing
- Azeem Azhar, Tech Communicator, <u>Exponential View</u>
- Benedict Evans, Tech Analyst formerly from A16Z

YouTube: News on Product Releases

- Wes Roth: Product & industry analysis
- The Al Advantage: Product releases & tutorials
- Matt Wolfe: Product releases
- Matthew Berman: Product releases & tutorials
- <u>David Shapiro</u>: Societal analysis, product releases

YouTube: Educational & Research Releases

- <u>Two Minute Papers</u>: Quick review of recent papers.
- <u>Yannic Kilcher</u>: Paper summary & analysis
- Andrej Karpathy: Former Tesla & OpenAl scientist.

My Top Recommendations

- Newsletter. Ethan Mollick's One Useful Thing
- 2. Newsletter. Azeem Azhar's, Exponential View
- 3. Book. Ethan Mollick's Co-Intelligence

Interviews & Podcasts

- Lex Fridman: Excellent guests
- <u>Dwarkesh Patel</u>: Excellent tech guests

Corporate Research Blogs

- <u>DeepMind</u>: Google's London AI team
- Google Al Blog: The Mothership
- OpenAI: Research
- Anthropic: Excellent understandability research

Books

- Ethan Mollick, <u>Co-Intelligence</u>
- Mustafa Suleyman, <u>The Coming Wave</u>
- Max Tegmark, <u>Life 3.0</u>

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