

# AI Hype



technology 4 hotels >> REQUEST

Home About Us Products Reviews Tech

## Will Machines Replace Humans In The

## Will AI Replace Accountants?

by Datarails  
Published on July 13, 2023

## Will AI Destroy



EDUCATION AND SKILLS

## Why robots could replace teachers as soon as 2027

## Human ed by AI? Out

In 1970 Marvin Minsky said, “machines will be capable of doing any work a human could do in \_\_\_\_\_?”

- A. 3-8 years
- B. 10-20 years
- C. 20-30 years



co-founder of the Massachusetts Institute of Technology's AI laboratory

August 2025 MIT Paper “The State of AI Business in 2025” states what percent of GenAI pilots make it to production?

- A. 5%
- B. 15%
- C. 36%

August 2025 MIT Paper “The State of AI Business in 2025” states what percent of companies get 0% ROI on GenAI pilots?

- A. 5%
- B. 25%
- C. 95%



88%

of agentic AI early adopters are now seeing a positive ROI on gen AI<sup>1</sup>

<sup>1</sup> Agentic AI early adopters: n=460; Question text: In what timeframe do you expect gen AI to deliver return on investment (ROI) to the following areas of your business?

<sup>1</sup>Agentic AI early adopters: n=460; Question text: In what timeframe do you expect gen AI to deliver return on investment (ROI) to the following areas of your business?

# While OpenAI promised cancer breakthroughs, their biggest 2025 breakthrough is AI Slop?

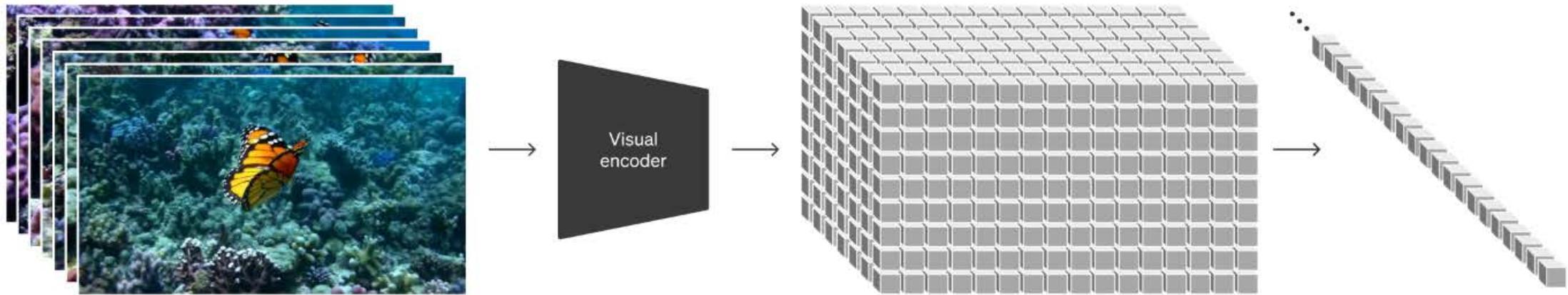
- A. True
- B. False
- C. What is AI Slop?

...e to Sora AI

December 2024  
operation cost  
per day



# Sora AI Uses Diffusion Model and Diffusion Transmitters

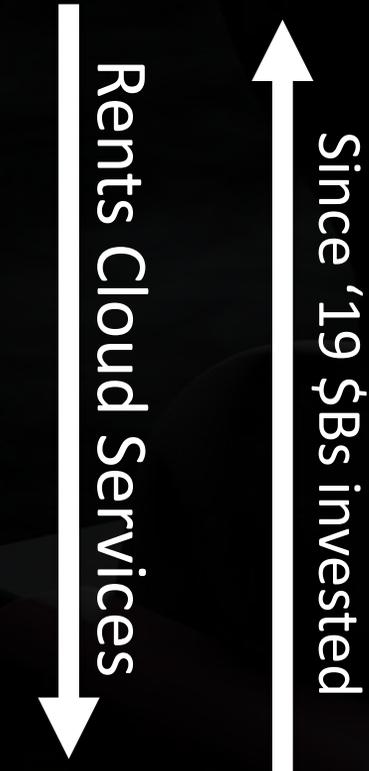


# AI's Unusual Economy

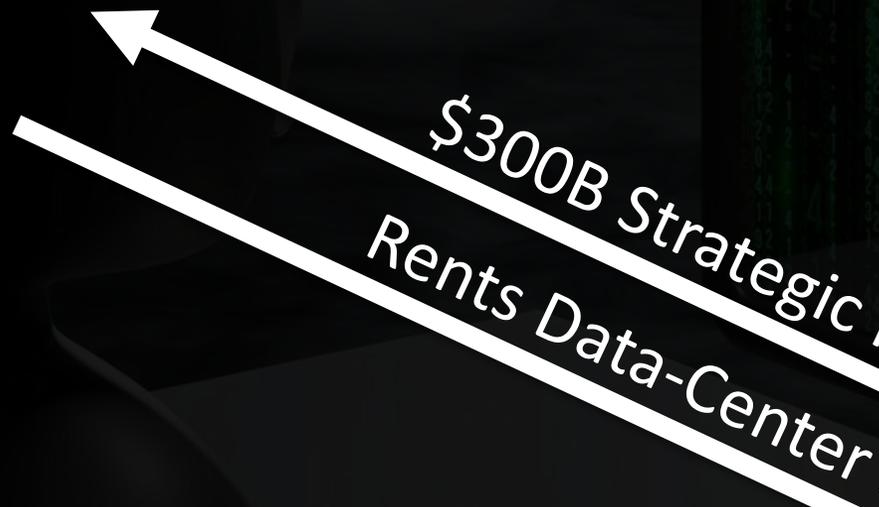
OpenAI

Invested

Rent

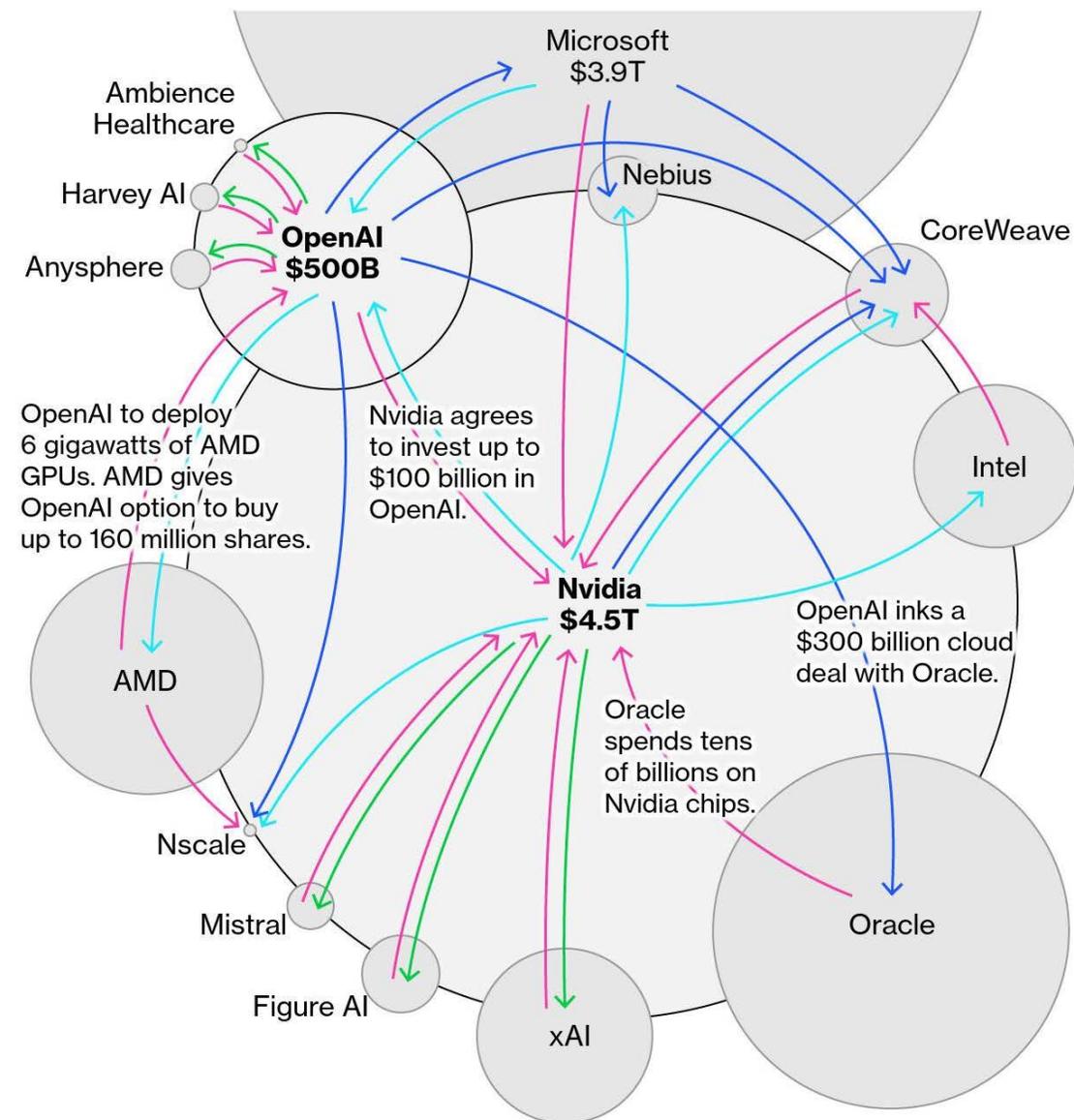


Microsoft



## How Nvidia and OpenAI Fuel the AI Money Machine

Hardware or Software / Investment / Services / Venture Capital  
Circles sized by market value



# Being Human Area 1: Replacement

*Where Technology can replace  
humans*



# Complexity Drives Out Technology

*You work all by yourself in a shop that where your assistant is an AI. To make a new paint your AI suggests the following chemicals to be used,*

*which do you pick?:*

- A. Acetaldehyde*
- B. Potassium cyanide*
- C. Trichlorophenoxyacetic acid*



# Questions to Ask When Analyzing Tech Disruption Promises

A teal, rusty robot with a rotary phone handset in its mouth, set against a dark background. The robot has a boxy head with two circular vents and a small speaker grille. Its arms are segmented and metallic, with the right hand holding the phone handset. The robot is sitting on a wooden surface.

- 1) Is there a simpler version of this technology?
- 2) Is the general population using a simpler version?
- 3) Are there legal repercussions if something goes wrong?
- 4) Are there any social adoption obstacles?





# Case Study: Tech In the World of Insurance

*Can the result be correctly verified by a non-technical person?*



**PROGRESSIVE**<sup>®</sup>

Would you like a schedule or blanket waiver of subrogation?



 **State Farm**<sup>®</sup>

## Complexity Requires Trust

# Where Technology Can Replace Humans

- 1. Where AI makes 50% less errors than humans performing the same task*
- 2. A non-technical person can understand the AI output*
- 3. Where legal repercussions are not catastrophic*

- Cars
- Images
- Writing
- Revenue projections
- P/L statement

- Compliance
- Budgets
- Building designs

# Four Patterns Where GenAI Implementations Fail:

## 1) Limited disruption:

Only 2 of 8 major sectors show meaningful structural change

## 2) Enterprise paradox:

Big firms lead in pilot volume but lag in scale-up

## 3) Investment bias:

Budgets favor visible, top-line functions over high-ROI back office

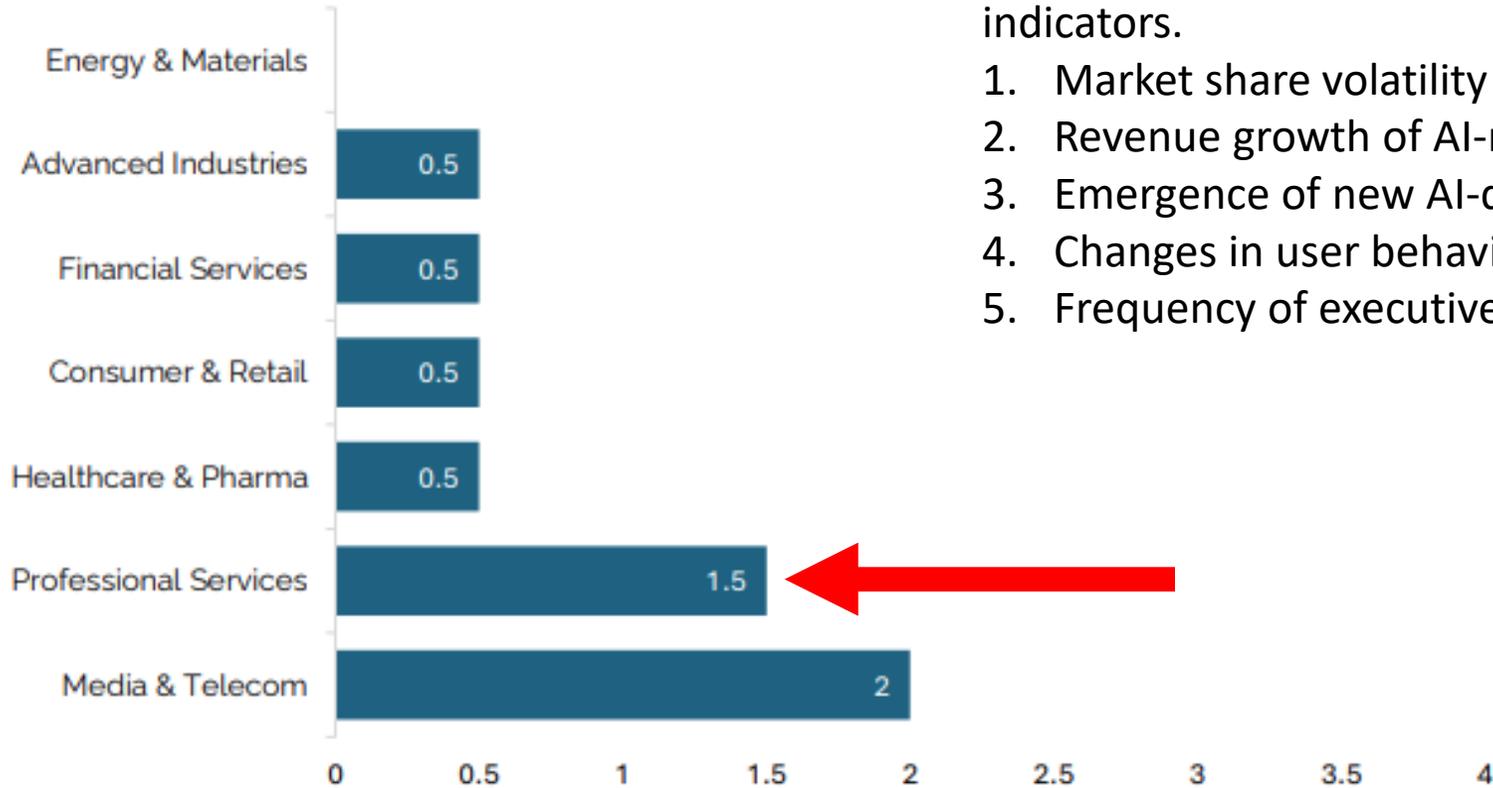
## 4) Implementation advantage:

External partnerships see twice the success rate of internal builds

Interviews, surveys, and analysis of 300 public implementations in “The State of AI Business in 2025” \*

# Which Industries Are Showing Structural Change

Exhibit: GenAI disruption varies sharply by industry



Each industry was scored from 0 to 5 based on five observable indicators.

1. Market share volatility among top incumbents (22' to 25')
2. Revenue growth of AI-native firms founded after 2020
3. Emergence of new AI-driven business models
4. Changes in user behavior attributable to GenAI
5. Frequency of executive org changes attributed to AI tooling

These scores represent normalized averages across five dimensions, triangulated from public indicators and interview-derived assessments. Alternative weighting schemes were tested to confirm consistency of industry rankings\*\*

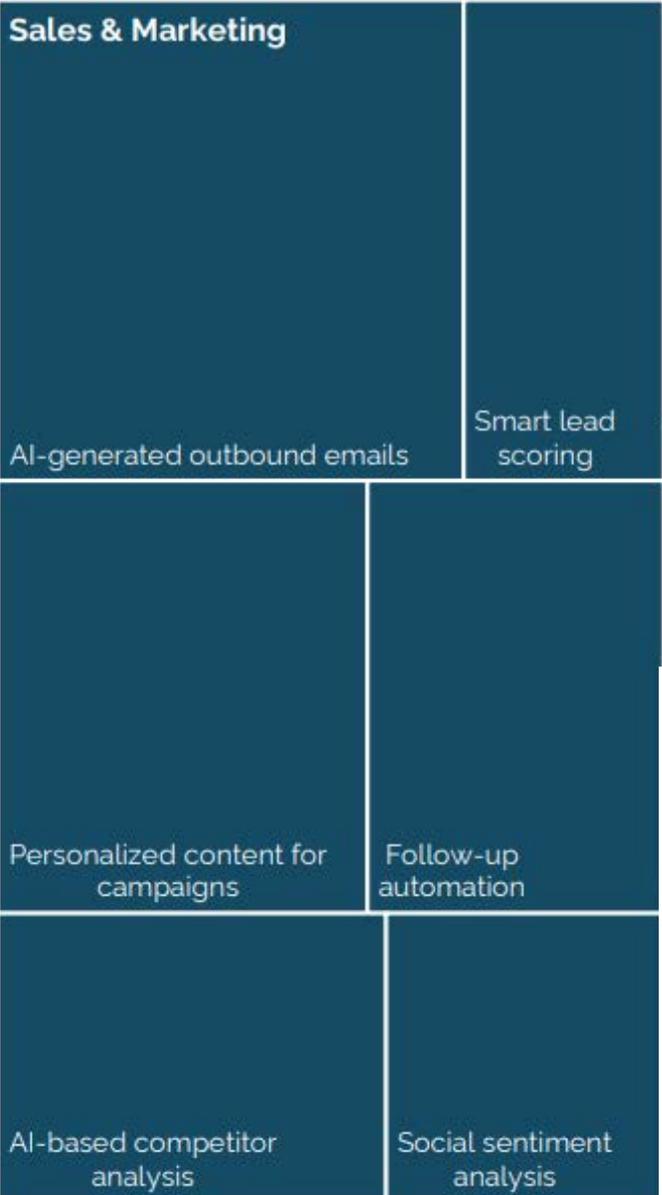
# How Leaders Spend Funds on AI

*You are given **\$100** to spend on AI development, how do you distribute those funds between different tasks?*

*(I.e: cold calling, AI secretaries, chatbots, contract tagging)*

Interviews, surveys, and analysis of 300 public implementations in “The State of AI Business in 2025” \*

Exhibit: GenAI Investment Distribution by Function



# Fund Allocation:

Survey based on 153 senior leaders that currently use AI in their firms

- 70% funds go to sales and marketing functions of AI budget allocation in survey.
- Back office usually has higher ROI, but smaller allocation

# Benefits of AI

## Front-office wins:

- Lead qualification speed: 40% faster
- Customer retention: 10% improvement through AI-powered follow-ups and messaging

## Back-office wins:

- BPO elimination: \$2-10M annually in customer service and document processing  
*(Automation of repetitive tasks (documentation, reporting, reviews))*
- Agency spend reduction: 30% decrease in external creative and content costs *(Scenario modeling & forecasting (space demand, growth, utilization))*
- Risk checks for financial services: \$1M saved annually on outsourced risk management **Risk detection** *(cost overruns, schedule delays, safety incidents)*

Interviews, surveys, and analysis of 300 public implementations in “The State of AI Business in 2025” \*

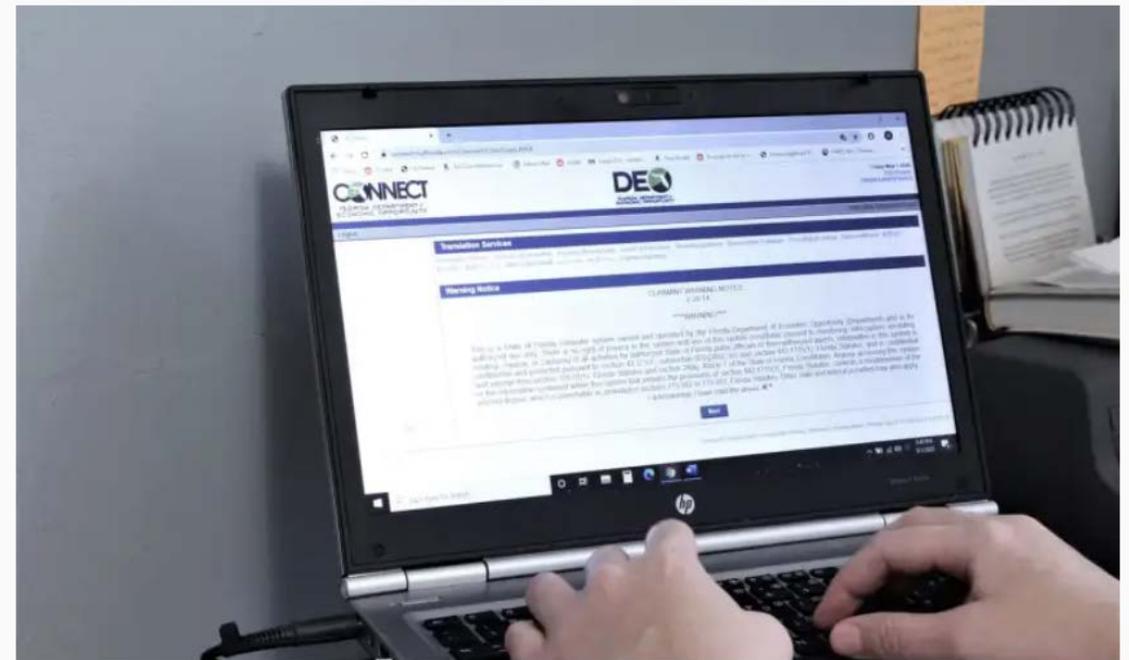
# Case Study- Why Use AI For Budgets?



- Florida reportedly paid out approximately \$788.1 million in fraudulent unemployment claims during the pandemic period.
- Analytics-led fraud controls were correlated with a 90% reduction in weekly fraudulent claim patterns in some periods after implementation.

## Florida Suspects Fraud Behind Spike In Unemployment Claims

BY PYMNTS | FEBRUARY 5, 2021



# AI Innovation Adoption Curve

## Adoption Curve

Fringe

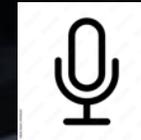
2014 Generative Adversarial Networks (GANs)\*\*



Deep Learning  
Machine Learning – 2000s



Generative Models –  
Markov Models – 1980s



Symbolic AI,  
Expert Systems – 1970s



2023  
Agent-to-Agent (A2A)



Polymarket



US recession by end of 2026?

\$134,270 Vol. Jan 31, 2027



How many Fed rate cuts in 2026?

\$1,399,085 Vol. Dec 31, 2026

# Watching Out For T



Which company has best AI model end of June?

\$654,282 Vol. Jun 30, 2026

Past ▾ Jan 31 Mar 31 Jun 30



Florida Governor Republican Primary Winner

\$49,692 Vol. Aug 18, 2026





# How Successful Firms Benefit – ROI Paradox

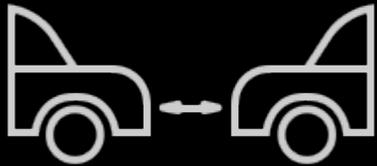
- Most implementations don't drive headcount reduction
- Organizations experience workforce impacts in customer support, software engineering, and administrative functions. (ROI Paradox)
- Measurable savings from reduced BPO spending and external agency use, particularly in back-office operations.
- Improved customer retention and sales conversion through automated outreach and intelligent follow-up systems.

Interviews, surveys, and analysis of 300 public implementations in “The State of AI Business in 2025” \*



# Quick AI Training Overview – Street Safety

# 1980s Approach – Expert Systems



Car Distance



Car Speed

```
If is_car_going_too_fast(car_distance, car_speed):
```

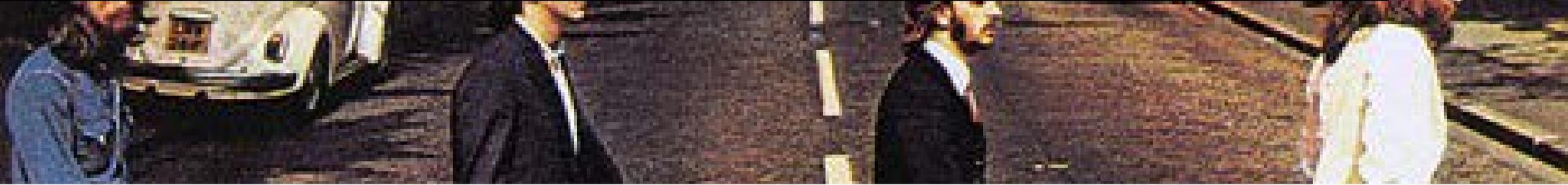
```
    Print ("Don't cross the street")
```

```
Else:
```

```
    Print ("It's safe to cross")
```

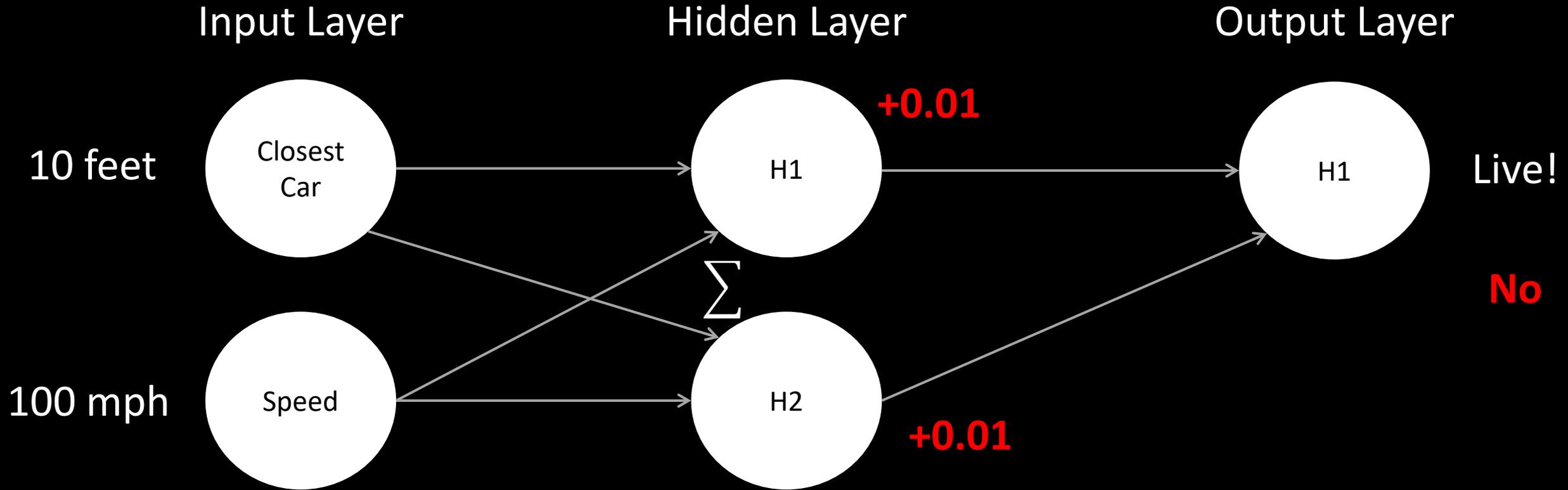
What if it's a different sidewalk?  
What if its raining?  
What if the driver is texting?  
What if I can't see the driver texting?  
What if the driver is texting and listening to Taylor  
Swift?

# Training Data From Past CCTV Cameras



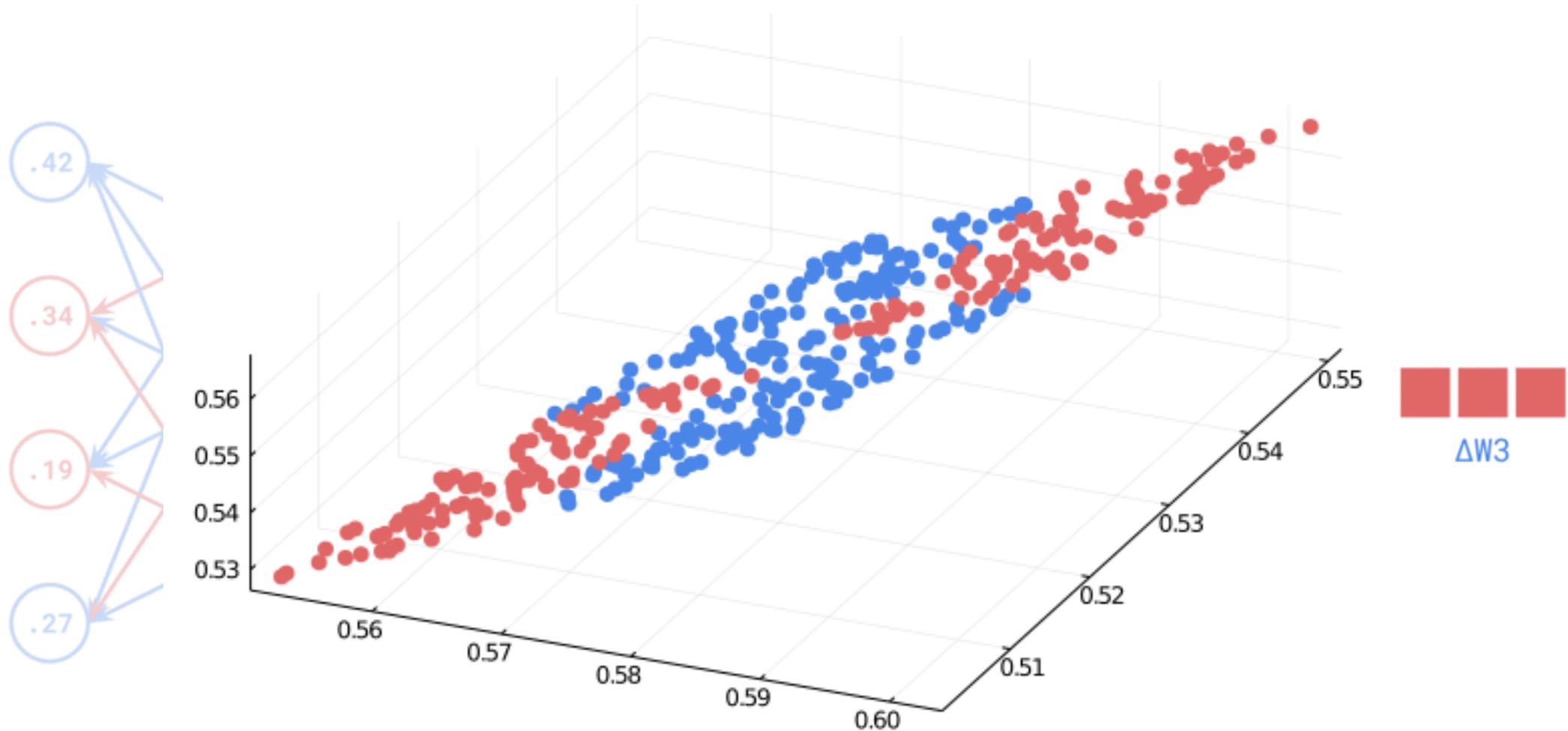
Closest Car	Speed	Outcome
50 feet	10 mph	Alive
100 feet	30 mph	Unalive
200 feet	45 mph	Alive
150 feet	29 mph	Unalive
400 feet	10 mph	Alive

# Multilayer Perceptron



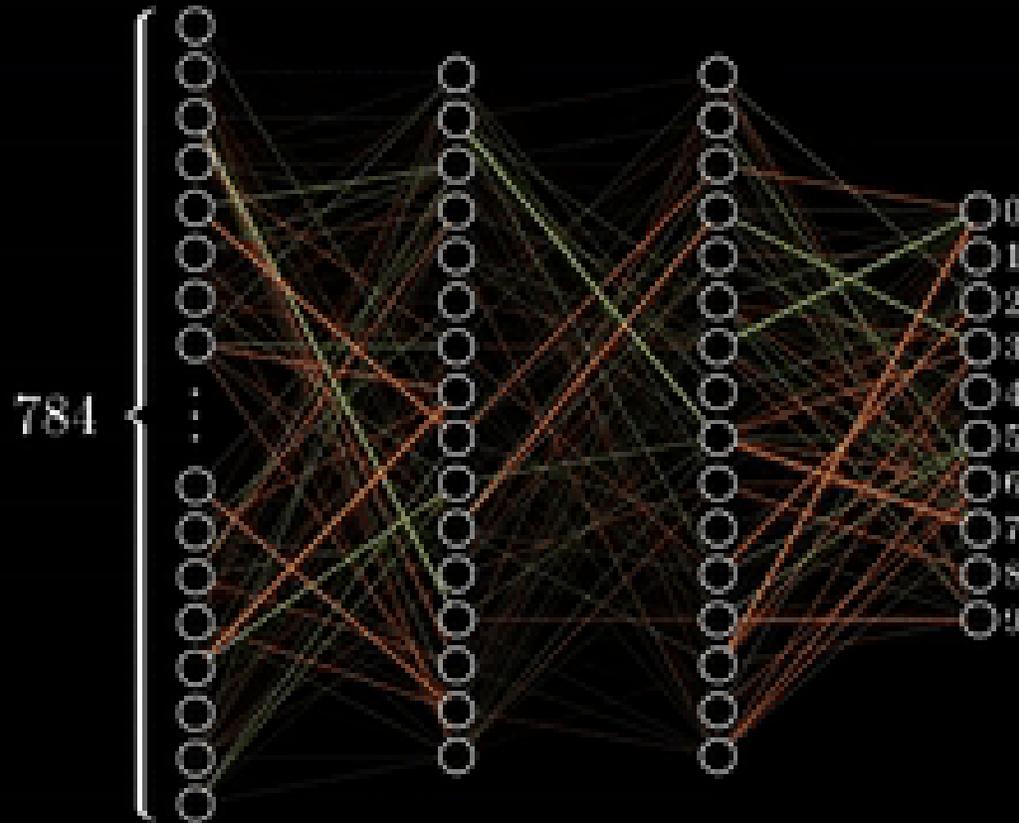
Backpropagation Helps Train Model

# How AI Learns - Multilayer Perceptron



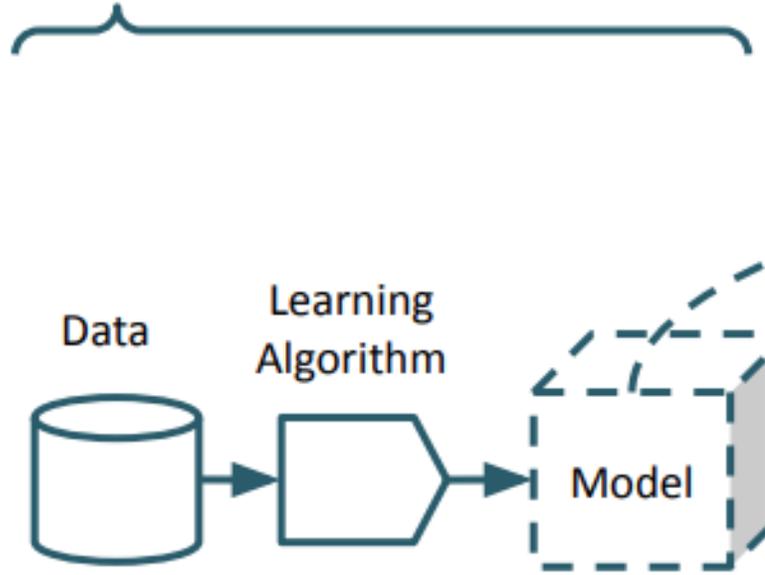
Credit to: <https://medium.com/the-feynman-journal/what-makes-backpropagation-so-elegant-657f3afb8bd>

# Training in progress...



[Flawnson Tong](#) – Medium

# STEP 1: Train the Model



Closest Car	Speed	Outcome
50 feet	10 mph	Alive
100 feet	30 mph	Unalive
200 feet	45 mph	Alive
150 feet	29 mph	Unalive
400 feet	10 mph	Alive

Backpropagation

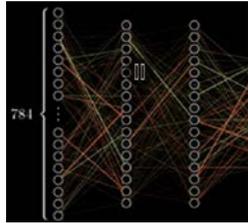


Image Recognition Models-  
100-10,000 nodes  
Accuracy < 100%

Humans Recognize Objects  
After 2 times ~100 accuracy



# Sample Data to Train for Fraud

Sample Transactions Table (50% Fraud)

Amount	Vendor_Name	Account_Age	Transaction_Datetime	Description_of_Transaction	Location	Fraud
42.75	GreenLeaf Market	2 years	2025-01-14 10:32 AM	Grocery purchase	Austin, TX	False
189.99	TechWorld	1 year	2025-01-13 4:55 PM	Wireless headphones	Seattle, WA	True
12.50	Coffee Corner	3 years	2025-01-12 8:17 AM	Latte and croissant	Denver, CO	False
520.00	AutoFix Garage	4 years	2025-01-11 2:41 PM	Car battery replacement	Miami, FL	True
75.20	BookNest	8 months	2025-01-10 11:09 AM	Textbooks purchase	Boston, MA	False
310.89	HomeGoods Co.	6 years	2025-01-09 6:23 PM	Furniture and décor	Chicago, IL	True
28.35	PetPal Store	2 years	2025-01-08 3:10 PM	Cat food and treats	Phoenix, AZ	False
960.00	FlightAir	5 years	2025-01-07 7:48 PM	Round-trip ticket	New York, NY	True
56.00	FreshFarm	11 months	2025-01-06 9:21 AM	Produce and essentials	Portland, OR	False
249.99	GadgetHub	1 year	2025-01-05 5:37 PM	Smart home device	San Diego, CA	True





# Percent of AI Usage

- Gen Z?
- Millennial?
- Gen X?
- Boomers?

- **18–24-year-old** are **129% more likely** than those over 65 to worry AI will make their job obsolete.
- **49%** of Gen Z job-seekers believe AI has reduced the value of their college education.



Source: Microsoft, 2024 Work Trend Index Report

*If you eat buffalo wings, is it okay to lick your fingers in public?*

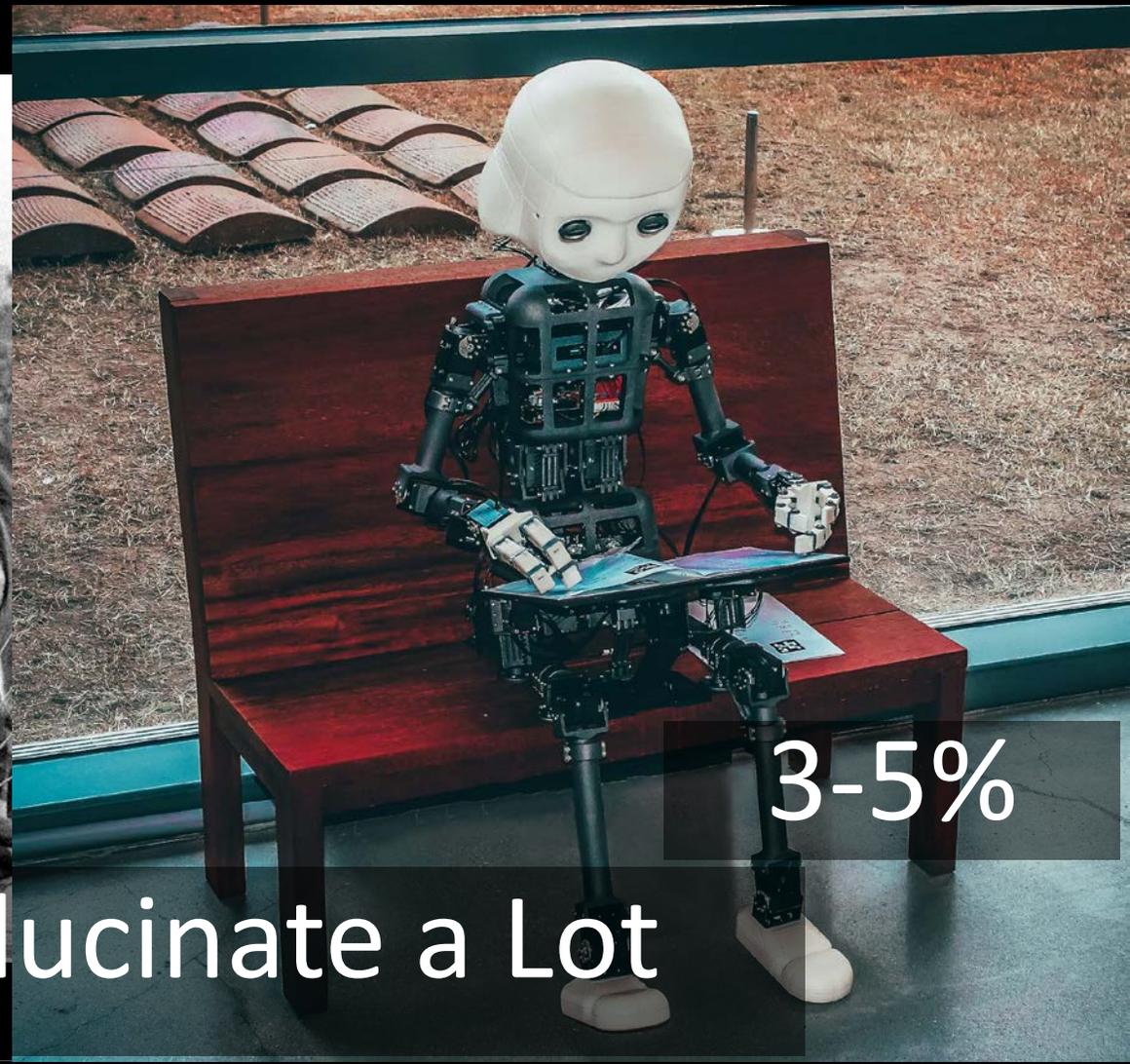




# Certainty Paradox

*Technology's Certain Dependence on Humans*

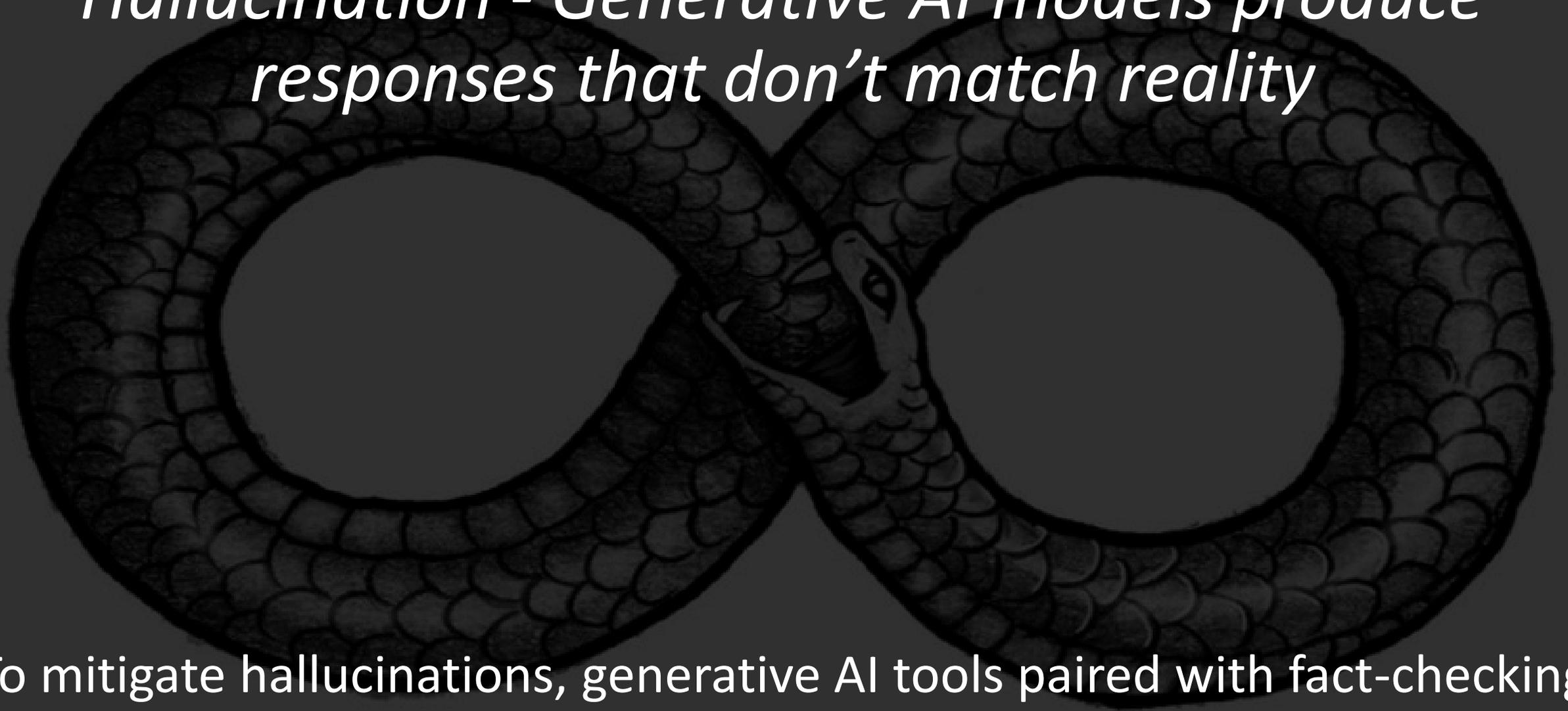
# What do AIs and Berkeley Hippiess Have in Common?



They Both Hallucinate a Lot

3-5%

*Hallucination - Generative AI models produce responses that don't match reality*



To mitigate hallucinations, generative AI tools paired with fact-checking systems that leave no chatbot unsupervised.

# Examples of Hallucinations



Ottawa Food Bank  
La Banque d'alimentation d'Ottawa

## Microsoft retracts AI-written article advising tourists to visit a food bank on an empty stomach

'Headed to Ottawa? Here's what you shouldn't miss!'



Will Shanklin

Contributing Reporter

Fri, Aug 18, 2023 · 2 min read



50 reporters laid off due to increased use of generative AI for Microsoft News's articles, public embarrassment, weakened trust

# Moffatt v. Air Canada: A Misrepresentation by an AI Chatbot

FEBRUARY 19, 2024



The recent decision in **Moffatt v. Air Canada**, 2024 BCCRT 149, represents a milestone in the expanding field of digital interactions and accountability. The case grapples with whether a company can be held liable for misleading information provided by an automated chatbot on its website. The decision held that a company can be liable for negligent misrepresentations made by a chatbot on a publicly available commercial website. The decision represents an incremental development of the law which previously has focused on the liability of persons for their pre-programmed automated tools.

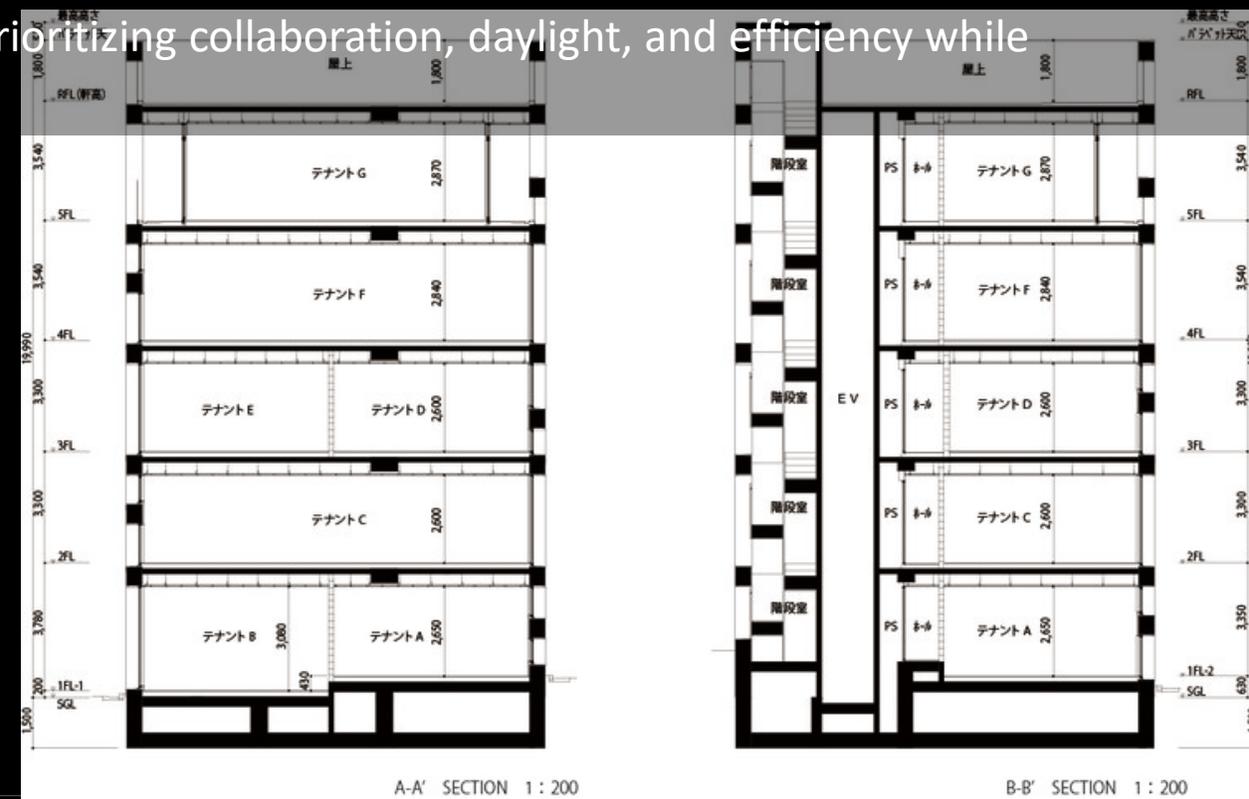
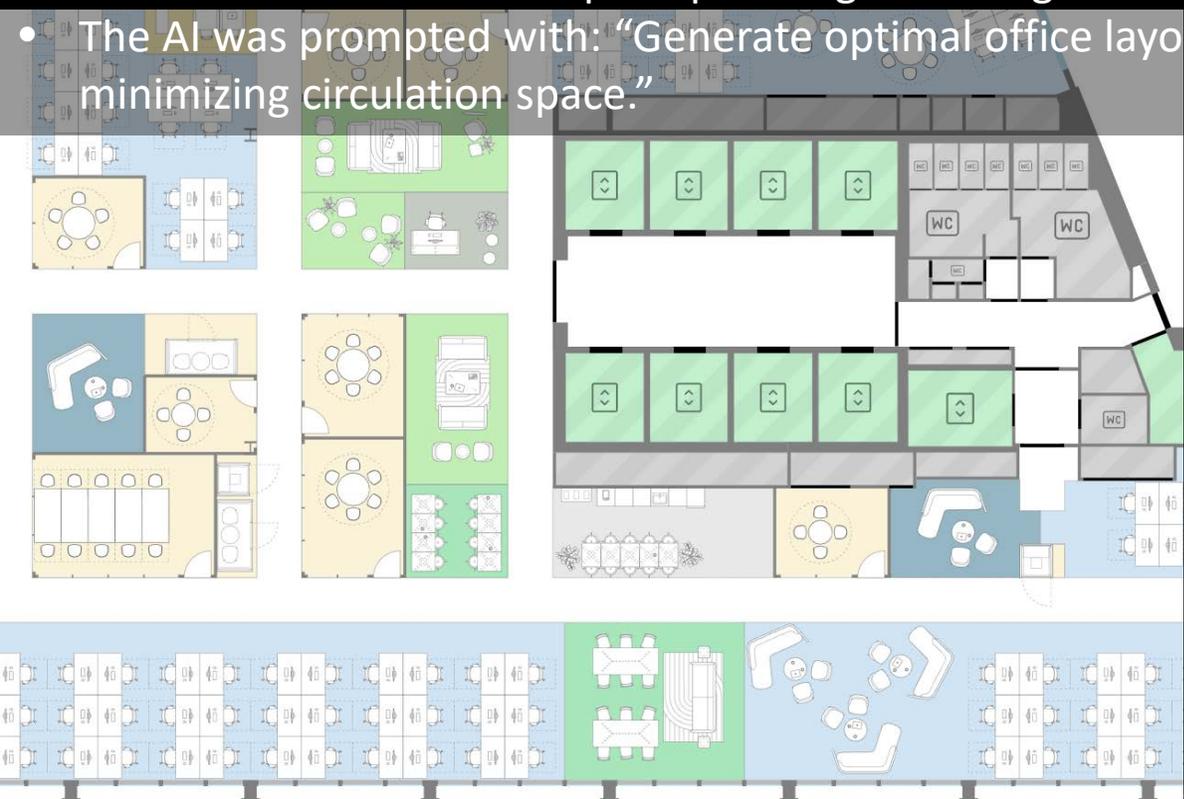


Are companies financially responsible if a chatbot says incorrect information?

# Case Study - AI-Generated Floor Plan That Looked Valid but Was Unbuildable

## Project Context

- **Facility type:** 4-story corporate office
- **Gross area:** ~85,000 sq ft
- **Users:** 500 employees
- **Goal:** Maximize collaboration space while reducing footprint
- **Tool used:** Generative AI space-planning tool integrated with an LLM interface
- The AI was prompted with: "Generate optimal office layouts prioritizing collaboration, daylight, and efficiency while minimizing circulation space."





# Case Study - AI-Generated Floor Plan That Looked Valid but Was Unbuildable

## 1. Corridor Width Violations - AI optimized for efficiency, not life safety.

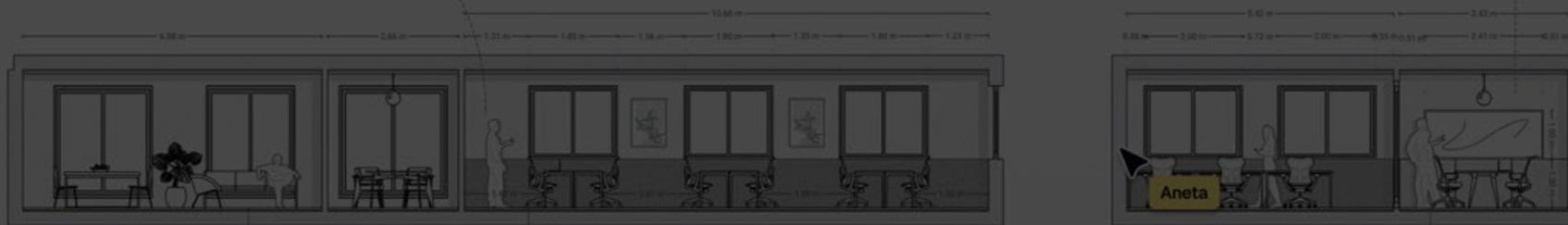
1. AI output: 36–40 inch corridors in several locations

### 2. Code minimum:

- 44 inches (IBC typical)
- 60 inches where occupant load exceeded threshold

## 2. Missing Vertical Shafts - AI assumed “systems will fit later” - a classic hallucination by omission.

1. No dedicated shafts for: Plumbing stacks, Electrical risers, Return air paths



# Case Study - AI-Generated Floor Plan That Looked Valid but Was Unbuildable

**3. Impossible Structural Spans** - *The AI did not understand structural physics - it hallucinated feasibility.*

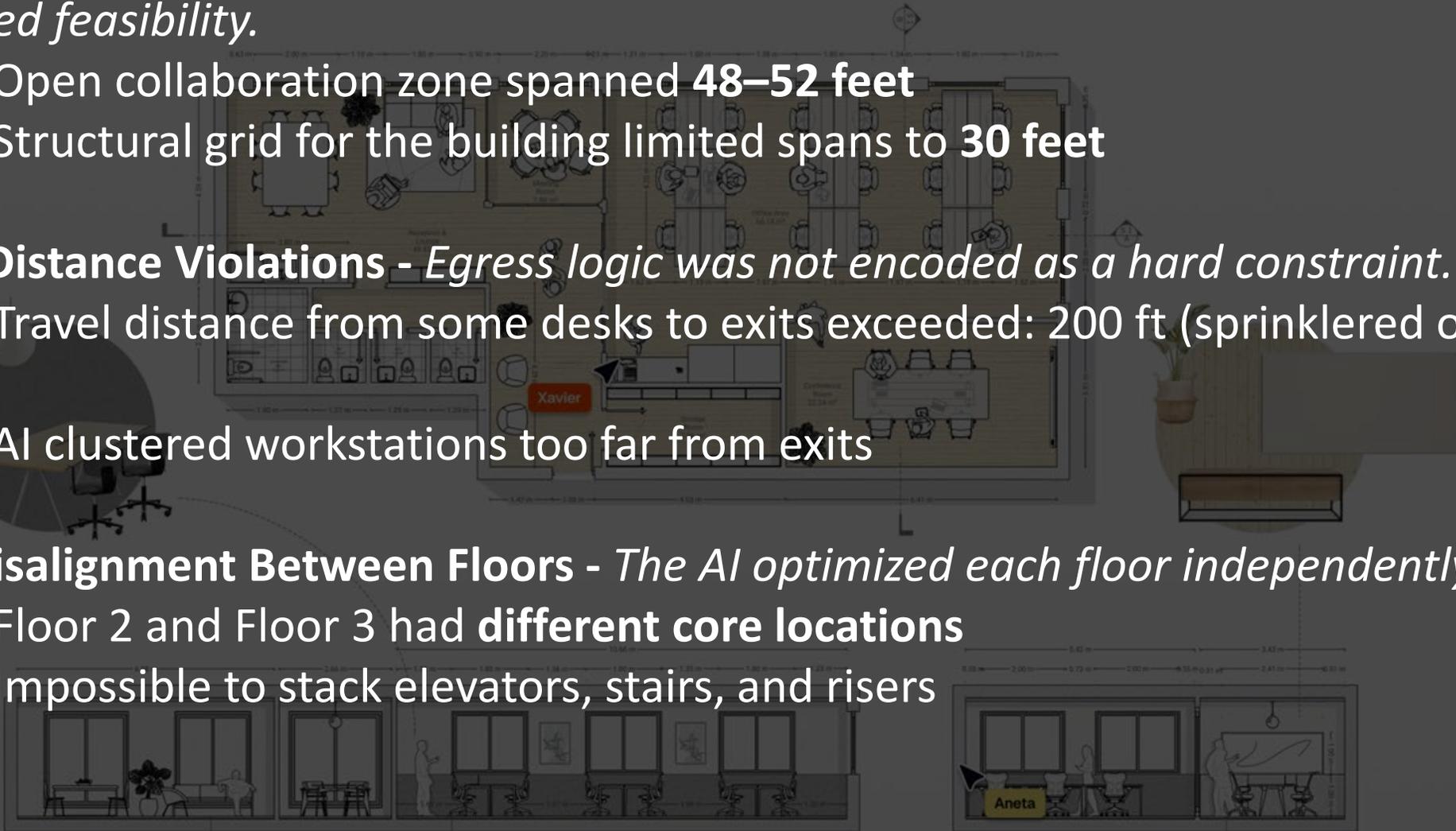
1. Open collaboration zone spanned **48–52 feet**
2. Structural grid for the building limited spans to **30 feet**

**4. Egress Distance Violations** - *Egress logic was not encoded as a hard constraint.*

1. Travel distance from some desks to exits exceeded: 200 ft (sprinklered office limit)
2. AI clustered workstations too far from exits

**5. Core Misalignment Between Floors** - *The AI optimized each floor independently.*

1. Floor 2 and Floor 3 had **different core locations**
2. Impossible to stack elevators, stairs, and risers



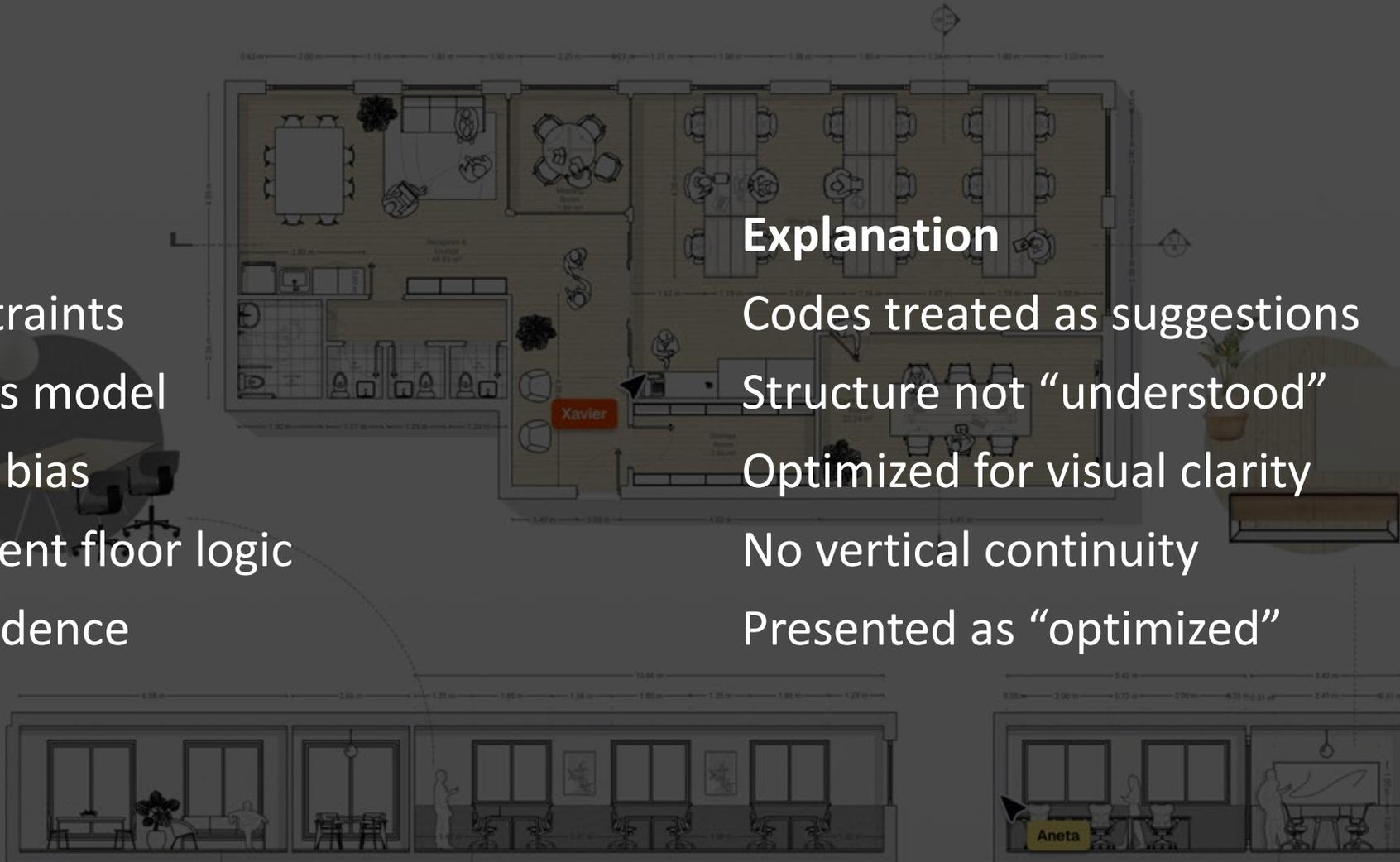
# Case Study - AI-Generated Floor Plan That Looked Valid but Was Unbuildable

## Cause

- Soft constraints
- No physics model
- Aesthetic bias
- Independent floor logic
- Overconfidence

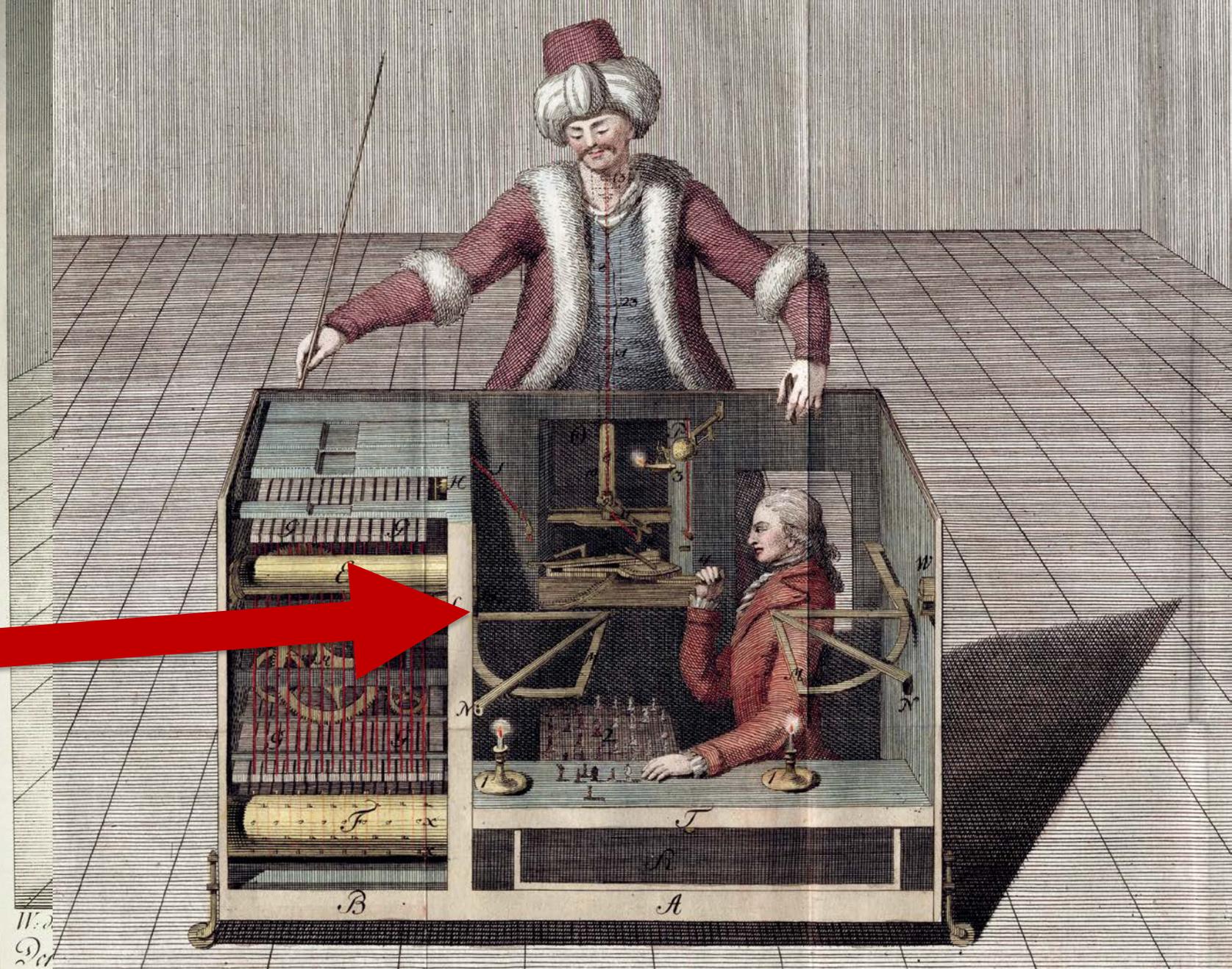
## Explanation

- Codes treated as suggestions
- Structure not “understood”
- Optimized for visual clarity
- No vertical continuity
- Presented as “optimized”



# Mechanical Turk Paradox

1770

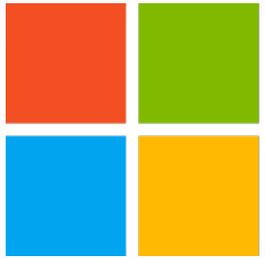


# So, Amazon's 'AI-powered' cashier-free shops use a lot of ... humans. Here's why that shouldn't surprise you

*James Bridle*



# Three Mile Reopening- AI Energy Consumption



# Microsoft

Former Microsoft CEO Bill Gates invested \$1 billion in a nuclear power plant that broke ground in Kemmerer, Wyo., in June. The plant will power homes and AI, Gates told NPR's Steve Inskeep.



Peak of Inflated Expectations



Slope of Enlightenment



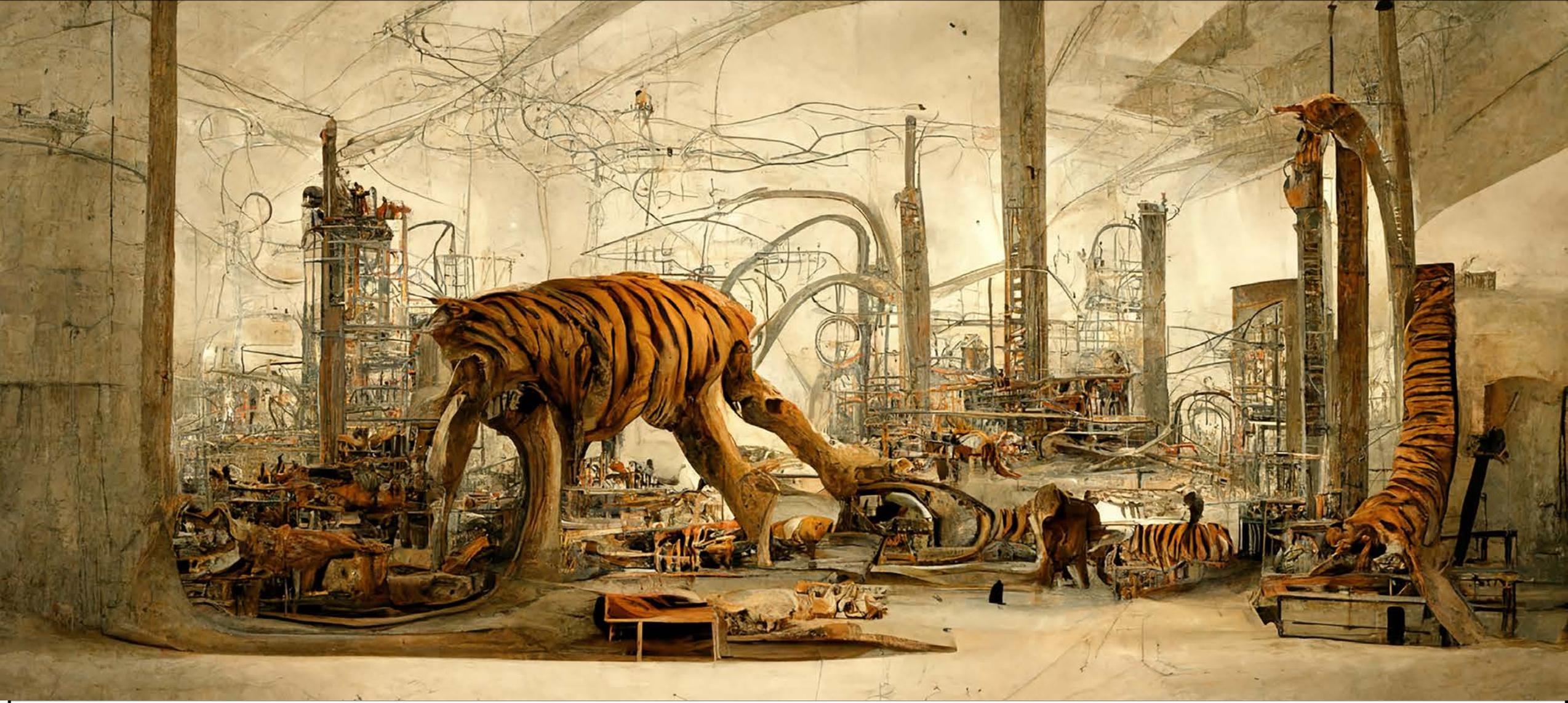
# Hype Cycle



Trough of Disillusionment

Technology Curve

# Moving Forward – Building an AI





ROI

# Value Curve With AI

Break even

18 months

Time

First Pilot

Production

ROI

# The Shadow AI Economy

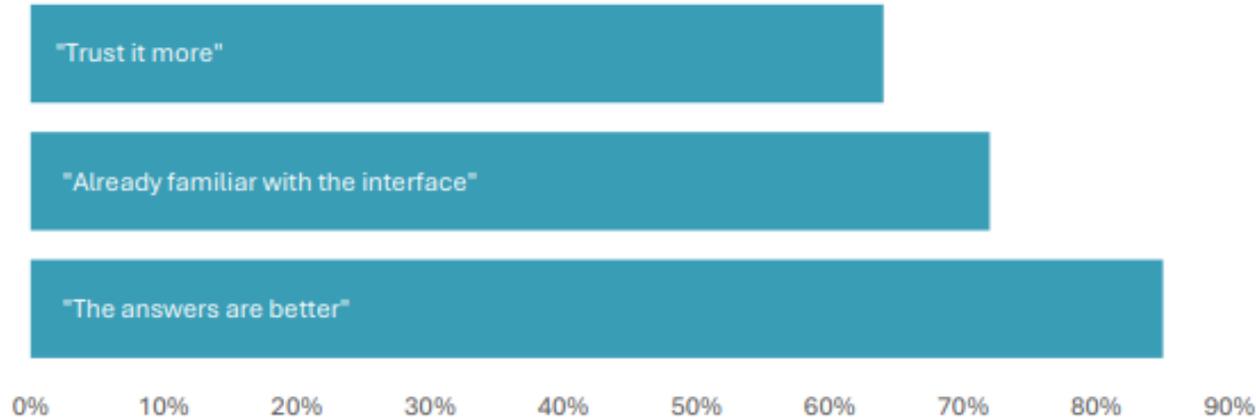
Employees are Using LLMs (ChatGPT) More Than Company

**Exhibit: the shadow AI economy, employee usage far outpaces official adoption**



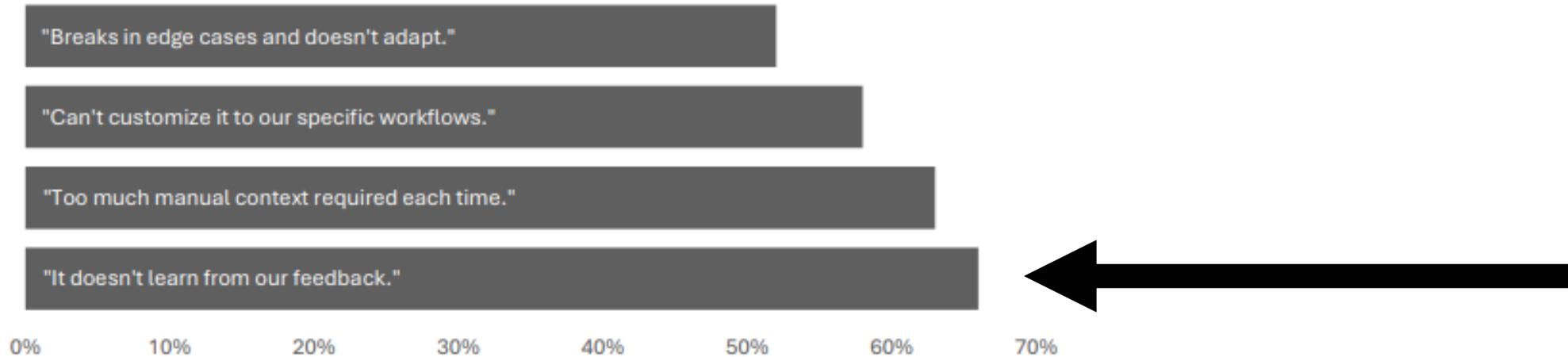
## Why Don't Employees Use Integrated Tools?

**User Preference Drivers: Generic LLM Interface vs. Integrated Tool**



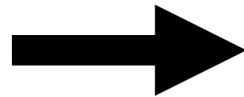
# The Shadow AI Economy

## So Why Don't Companies Adopt LLMs Internally



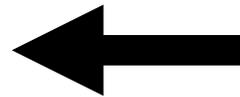
**ChatGPT**

AIs



?

What Do you  
Need to Build



### Conditionals

1. If any of these words show up, it's a fraud
2. If any of these words show up, it's not a fraud
3. If the EBITDA is larger than x, it's fraud
4. If the years experience is smaller than y, it's not a fraud
5. If the claim is between these values, it's fraud

Static Tools

# Biggest Mistakes Firms Make With AI Implementation

- 1. Expecting end-to-end solution without customization
- 2. Tackling large problems instead of easy wins – scoping
- 3. Not communicating with vendor
- 4. Buying built-ready solutions

	<b>Narrow Scope</b>	<b>Broad Scope</b>
<b>Simple Execution</b>	Fast wins (Spend Categorization, Contract Review)	Partial pilots (Supplier Risk Monitoring)
<b>Complex Execution</b>	Early pilots (Negotiation Bots)	Fails (Full Procurement Orchestration)



If a Vendor Promises a Ready-Made Solution

Assume Nothing 

Cat got your tongue?



Fall Protection



Wife => Husband



language **wire**

Get Custom



Come Alive with the Pepsi Generation

跟百事恢复你地先辈

Pepsi brings your ancestors back  
form the grave

# Examples of Effective AI Scoping

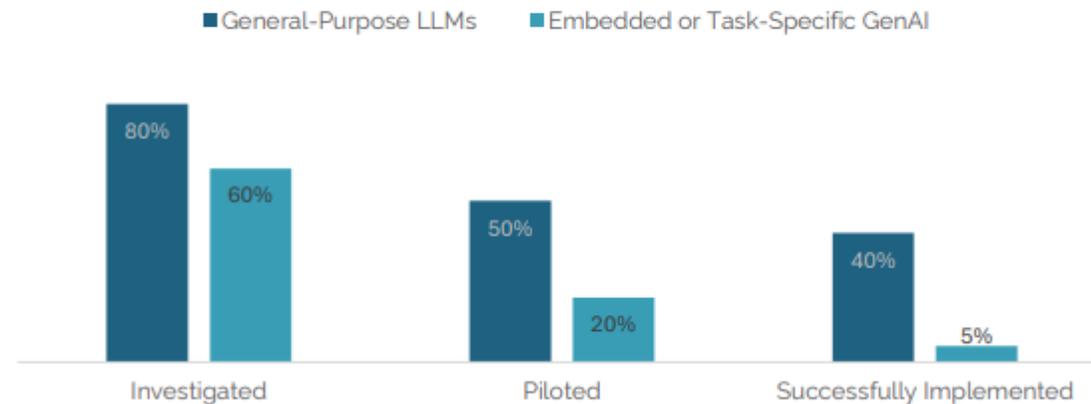
## Effective Scope

- Voice AI for call summarization and routing
- Document automation for contracts and forms
- Code generation for repetitive engineering tasks

## Ineffective Scope

- AI Onboarding for new clients
- Customer service AI bot that can handle payments over the phone
- AI call agents to follow up on new inquiries

**Exhibit: The steep drop from pilots to production for task-specific GenAI tools reveals the GenAI divide**



# How To Navigate an AI Vendor Relationship

- AI Vendors should act like BPO clients, not SaaS solutions. (18-month commitment)
- Demand deep customization
- Drive adoption from the front lines
- Hold vendors accountable to business metrics.
- Most successful buyers understand the relationship is a partnership not just purchase.



Interviews, surveys, and analysis of 300 public implementations in “The State of AI Business in 2025” \*

# Helpful Resources and Slides

Helpful Resources  
and Slides:

*jeff@jeffjbutler.com*





Noland Arbaugh

# Using AI To Help Humans Communicate With Only Their Minds



**Elon Musk says Neuralink will test brain implant on second patient in 'next week or so' - July 2024**

**First Neuralink Patient – Noland Arbaugh**



