

The Value of Data & AI



How to shift our focus from **COST CUTTING**
to, **GROWTH**

Einat Shimoni EVP @ STKI



Einat Shimoni

EVP & Senior Analyst @ STKI

- Leading STKI's Data & AI research
- Managing the Data & AI community
- Researching Customer Experience
- Conducting STKI's annual Data & AI benchmark in Israel



Things are moving so fast



“Future” (Dec/24) major announcements

Google is reportedly developing a ‘computer-using agent’ AI system

Meta is reportedly working on its own AI-powered search engine, too

Anthropic’s latest AI update can use a computer on its own “Computer use”

OpenAI plans to release its next big AI model by December? Orion, Operator



AI advancements are surpassing Moore's law

Improvement rate of x100 in less than a year

- ✓ Context windows grew to 2M tokens
Claude 3, Gemini 1.5 Pro
- ✓ Reasoning & planning
ChatGPT 01
- ✓ In-app Agentic AIs
Copilot, Salesforce, ServiceNow etc.
- ✓ Multimodal as the new UI
- ✓ Post-chatbots screen-assistants performs actions on user's screen

Google Jarvis. Claude



AI advancements are surpassing Moore's law

Improvement rate of x100 in less than a year

What does
all this
mean?



What does all this mean?

Models can remember much more

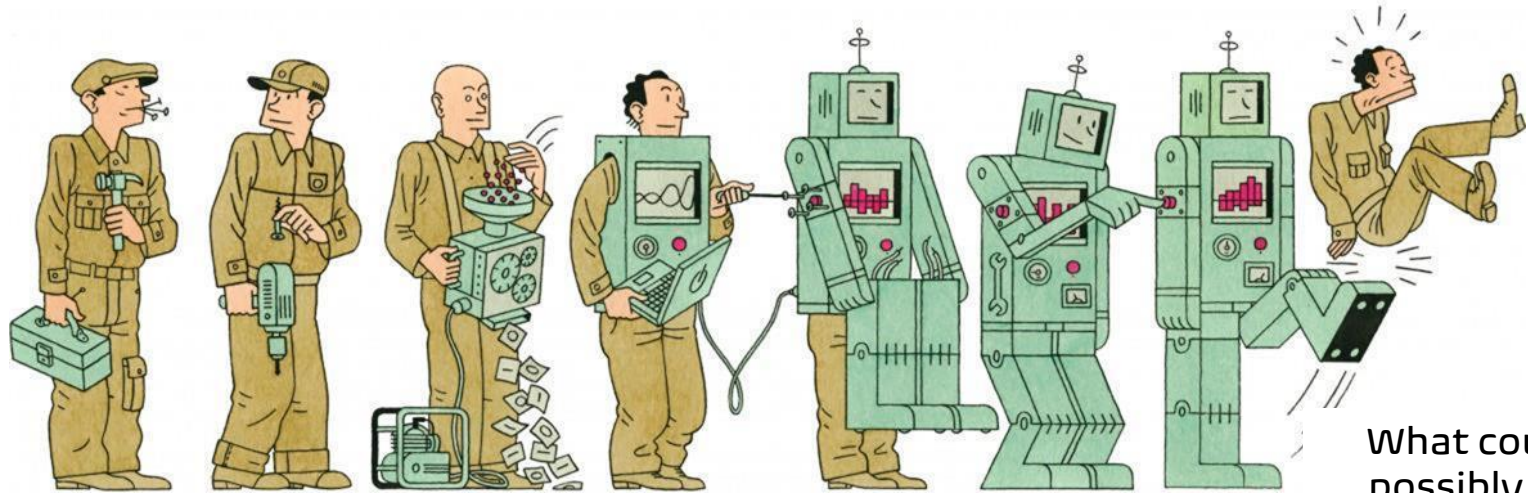
They can think & reason before they answer/ act

They can get things done

They are increasingly more immersive in our lives



The evolution of Human-AI relationship :



What could possibly go wrong?

At first, we did everything

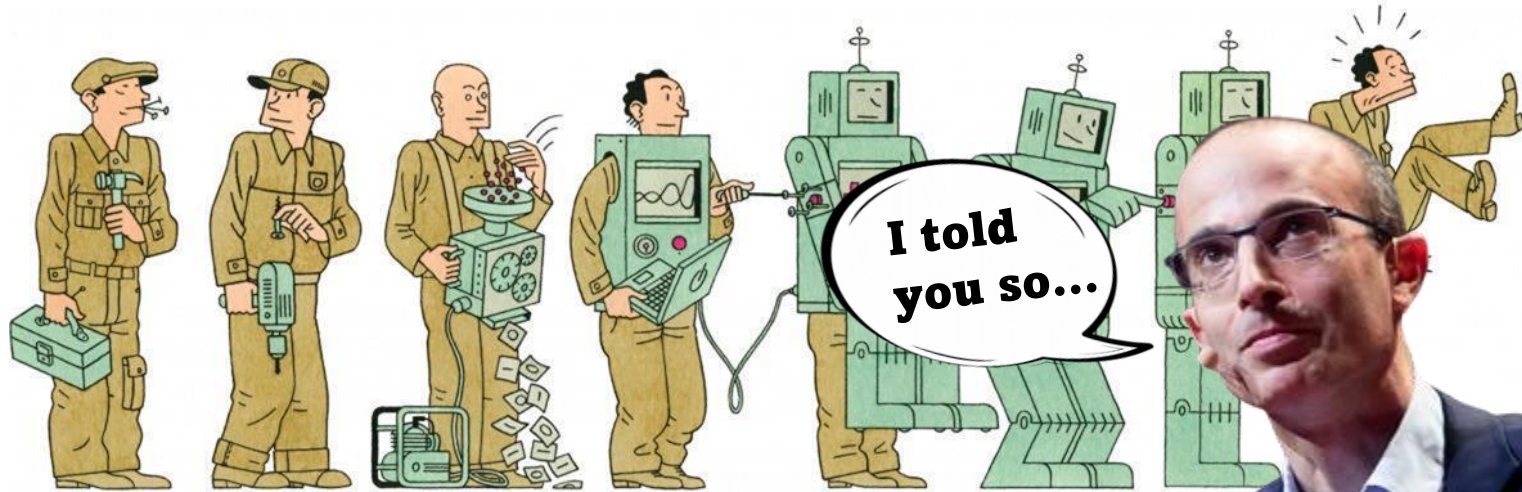
Then we taught machines to think & learn

Then we taught them how the world works (still going on)

... and how to get things done ... all by themselves



The evolution of Human-AI relationship :



At first, we
did
everything

Then we
taught
machines to
think & learn

Then we
taught them
how the
world works
(still going on)

... and how to
get things done
... all by
themselves



Are you an
AI Gloomer
or an
AI Bloomer?



“In the industrial revolution we made **human strength** irrelevant.

Now we’re making **human intelligence** irrelevant and that’s very scary”.



But let's
focus on
the
positive
side



A woman with dark hair, wearing a light blue raincoat, is laughing joyfully in the rain. Her arms are raised, and she is looking upwards. The background is a blurred outdoor setting with rain falling. The text "It's raining AI models Halleluia!" is overlaid on the image in a white, outlined font.

It's raining AI models
Halleluia!



I can now
analyze 30%
more data



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A female robot with a human-like face and brown hair, wearing a white dress, is painting a landscape on an easel. She is holding a paintbrush in her right hand and a palette in her left. The landscape features a river, mountains, and trees. A speech bubble above her says "I can draw in any style".

I can draw
in any
style

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I can even
grow a
plant

Before



After AI
assistance



It's a great time to be a generalist



“The internet put INFORMATION at our fingertips, AI is putting EXPERTISE at our fingertips”.

- Satya Nadella



“Software-as-a-Service”

i.e. Cloud 1.0



“Service-as-a-Software”

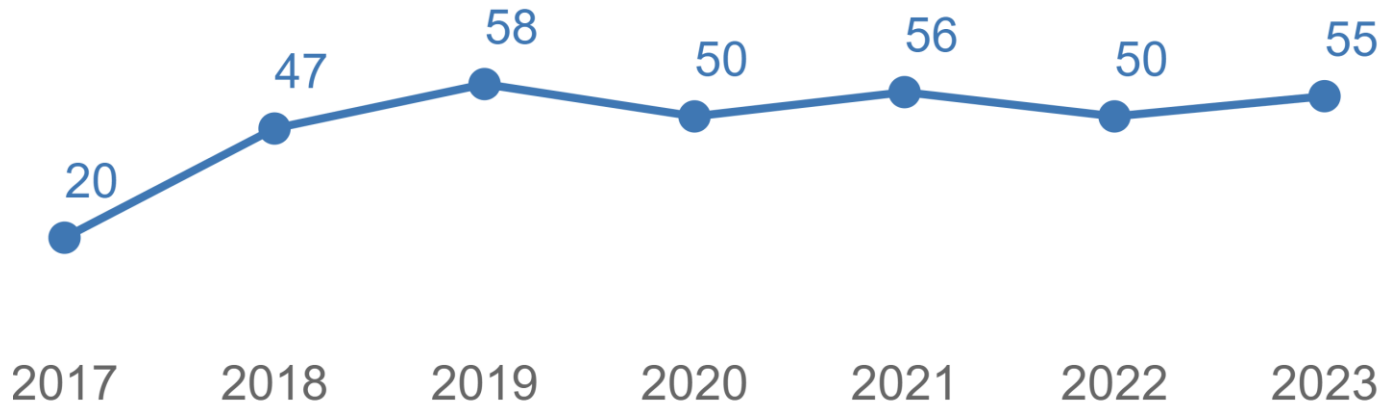
i.e. AI





First, let's look at the numbers

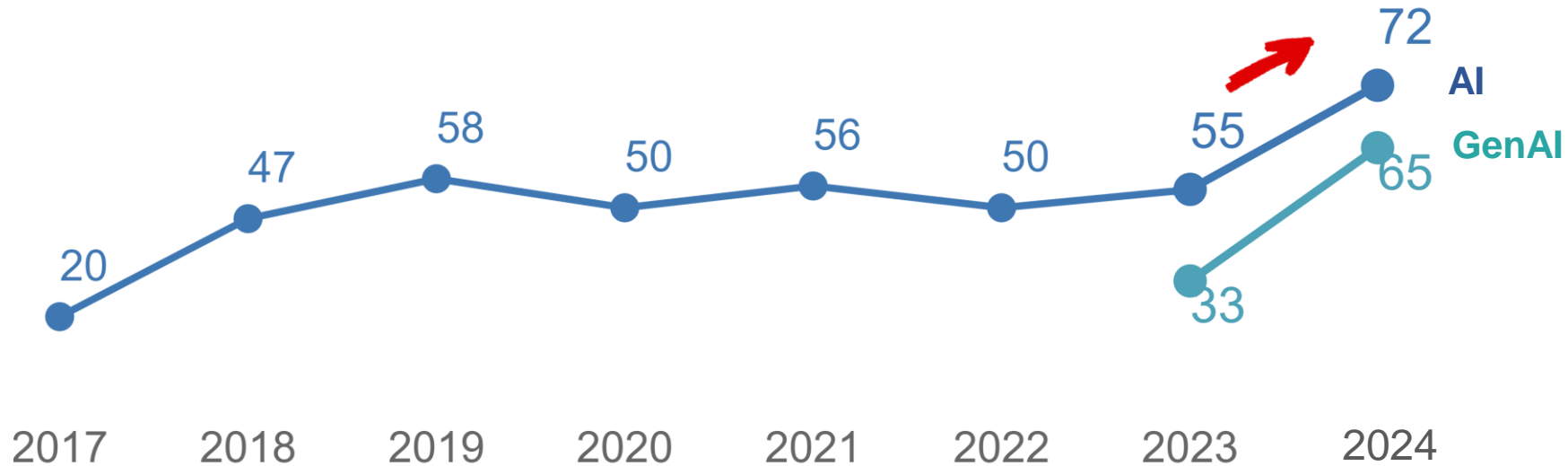
Over the years AI adoption was steady



Source: McKinsey
(% of organizations that adopted AI in at least 1 business function)



In **2024** AI adoption reached a tipping point



Source: McKinsey
(% of organizations that adopted AI in at least 1 business function)



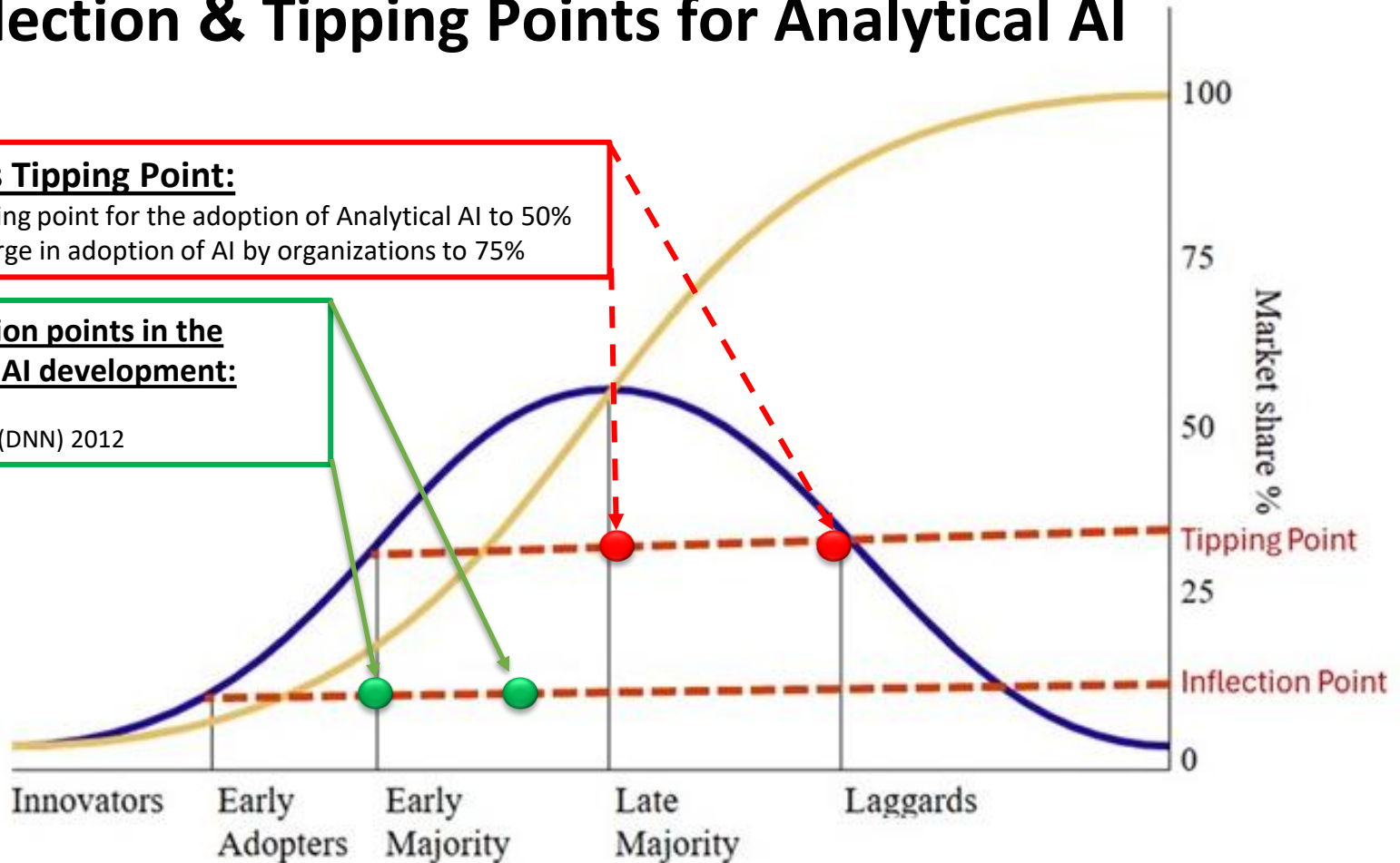
Inflection & Tipping Points for Analytical AI

Analytical AI's Tipping Point:

- 2020 was a tipping point for the adoption of Analytical AI to 50%
- 2024 a sharp surge in adoption of AI by organizations to 75%

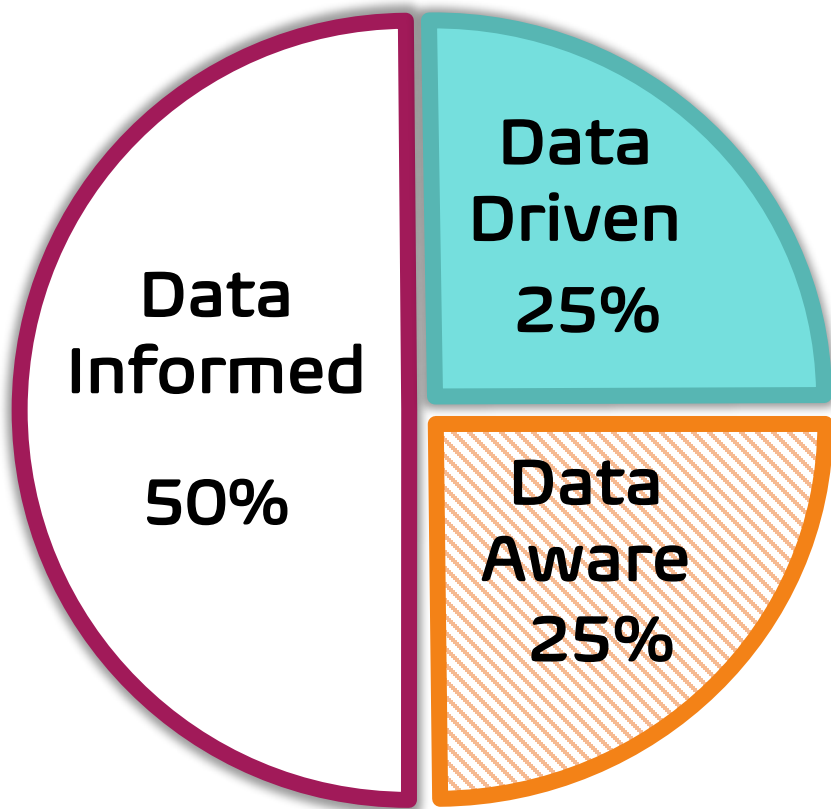
There were 2 Inflection points in the history of Analytical AI development:

- Neural Networks 1980
- Deep Neural Networks (DNN) 2012



The AI rush accelerated data driven maturity

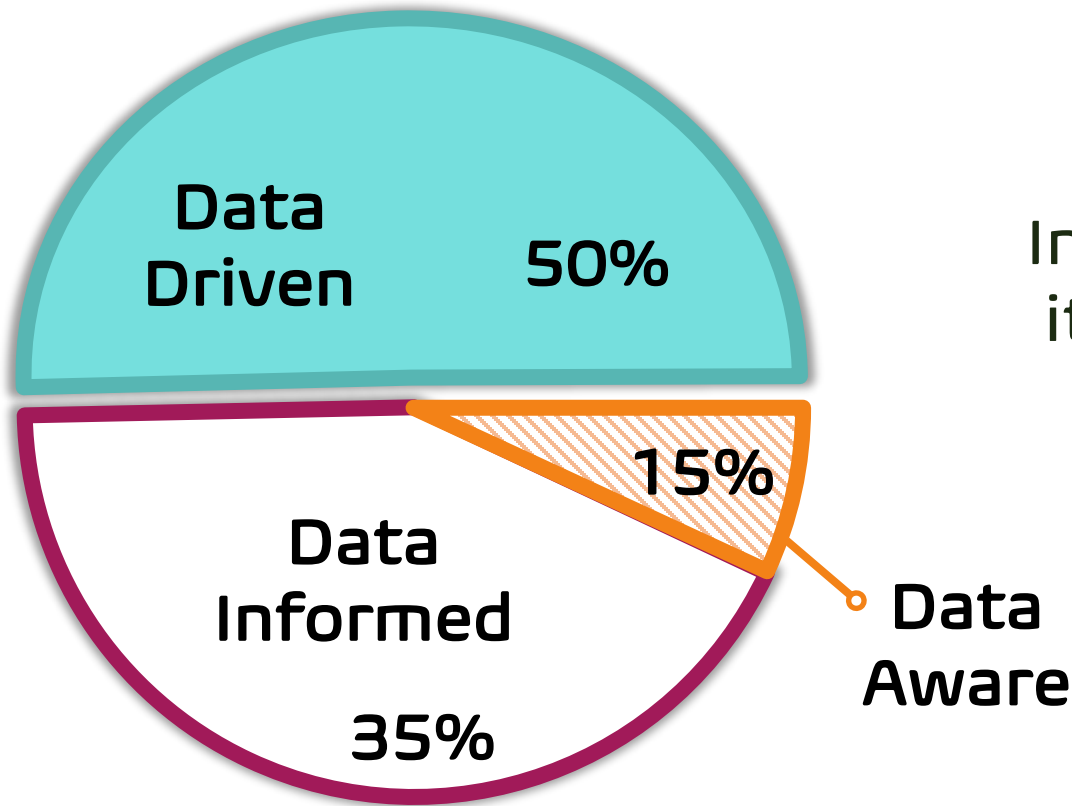




2015-2023
only 25% of
companies were
data driven

Source: Wavestone

AI effect



In 2024 this
it doubled!



The 3 AI waves





Analytical AI

Since 1950

Generative AI

Since 2023

Agentic AI

Since 2024



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Analytical AI:

Algorithms that are trained on specific data, learn from them and make predictions on a defined area

- Medical diagnosis
- Fraud detection
- Next best offer
- Recommendation engines
- Churn prediction



Output:
Predictions





Generative AI:

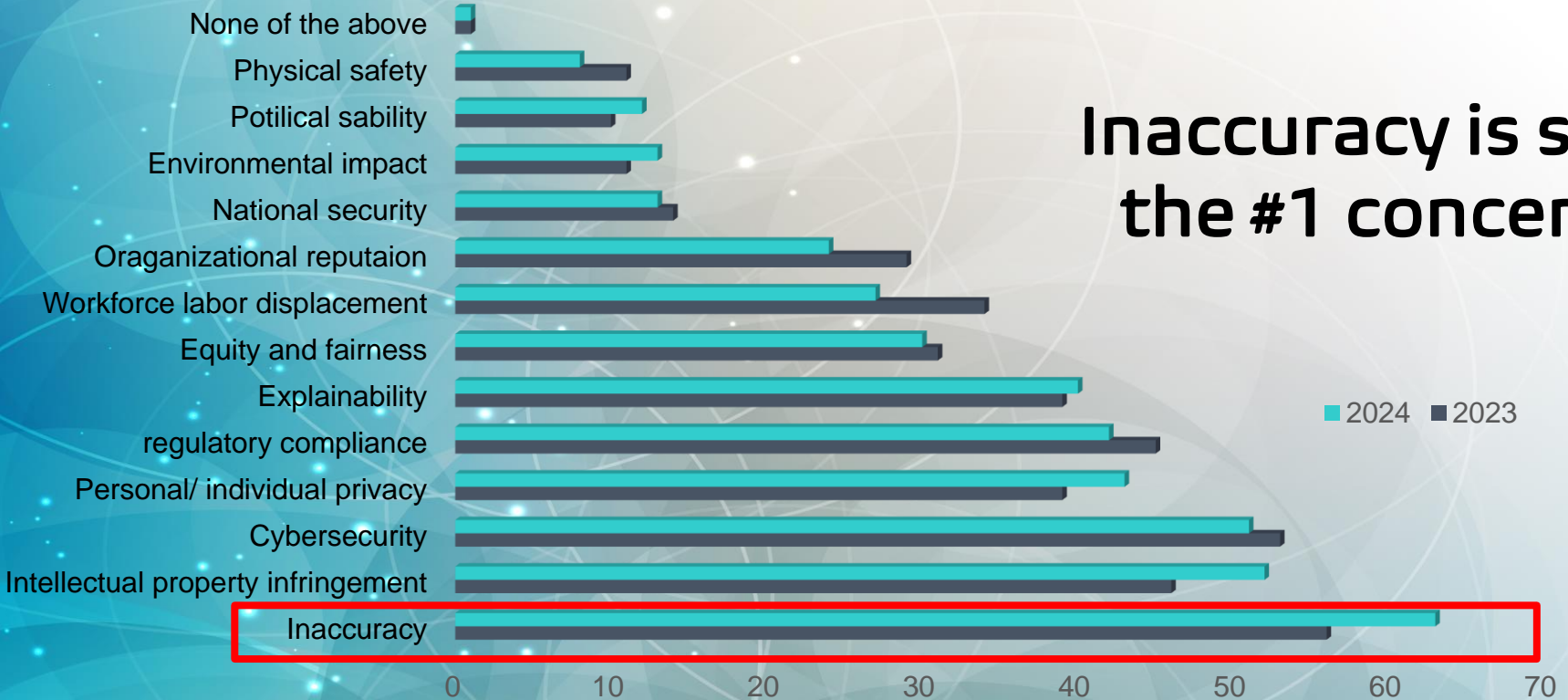
Algorithms that learn patterns from vast amounts of diverse data to create new content

Its goal is to “pass” as real content (not necessarily accurate data)



Output:
New content

Gen AI risks that organizations consider relevant, % of respondents



**Inaccuracy is still
the #1 concern**

Source: McKinsey

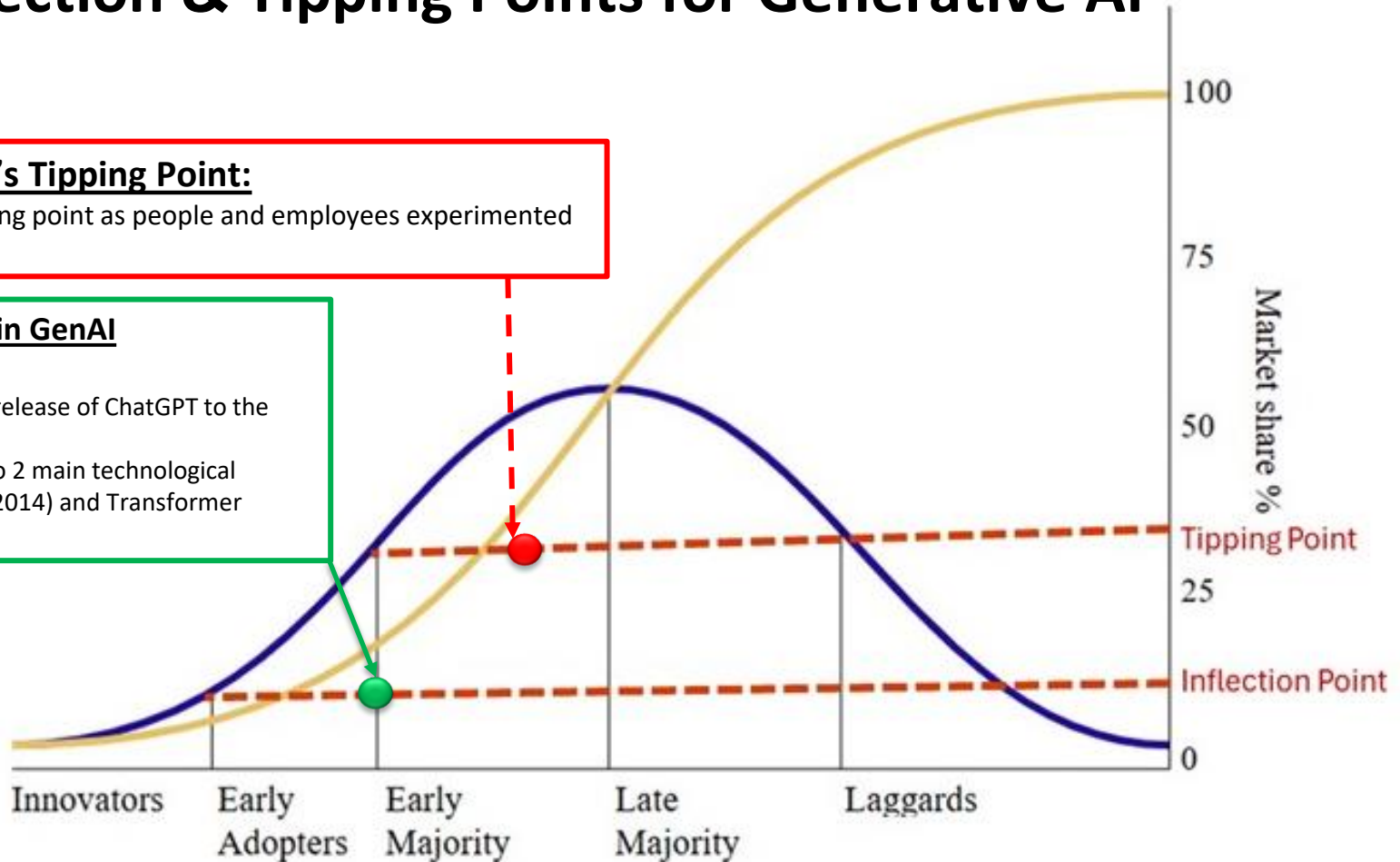
Inflection & Tipping Points for Generative AI

Generative AI's Tipping Point:

2023 was the tipping point as people and employees experimented with GenAI tools

The inflection point in GenAI development:

- November 2022 – The release of ChatGPT to the public
- This was enabled due to 2 main technological breakthroughs: GANs (2014) and Transformer Architecture (2017)





Agentic AI:

Capable of autonomous decision-making and actions.

AI Agents can:

- ✓ Be proactive, ask questions
- ✓ Collaborative with other agents/humans
- ✓ Decide on the course of action

The goal: determine the best way to solve a given goal and to act on it



Output:
Achieve
goal



AI Agents can:

- ✓ Understand intent
- ✓ Strategize
- ✓ Decide
- ⌚ Act

↖
What's missing?

from LLMs to LAMs

LLMs: Large Language Models
LAMs: Large Action Models



language
understanding

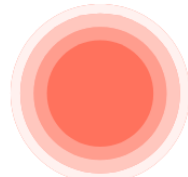
Ingredients:

- 1 box yellow butter cake mix
- 1 14 oz can Cream Of Coconut
- 1 14 oz can Eagle Brand Sweetened Condensed Milk
- 8 oz. Cool Whip
- 1 pkg. frozen coconut (thawed)

Directions:

- Bake yellow butter cake mix by directions on box in 13x9x2 pan.
- While cake is hot, pierce with fork.
- Combine can of cream of coconut and can of Eagle Brand milk and pour over cake.
- Cover and refrigerate.
- When cake is cool, spread with 8 ounces of Cool Whip and a package of frozen coconut (thawed).
- Store in refrigerator.

An **LLM** Can describe how to bake a cake



LAMs
(Large Action Models)
bridge the gap
between

real-world
actions



An **LAM** Can understand the recipe, Plan the steps and bake the cake



Agentic AI



Einat Shimoni
EVP & Senior
Analyst @ STKI



Galit Fein
EVP & Senior
Analyst @ STKI

עדיין לא התאוששנו מגל ה Generative AI ששטף אותנו בסערה, וכעת מגיע גל חדש שנקרא Agentic AI. תחום זה הוא אחד התחומים המדוברים ביותר בסוף שנת 2024, ויש לו פוטנציאל להשפיע באופן מהותי על חיי היום יום שלנו, בחיינו הפרטיים והארגוניים.

עולם ה Agentic AI מחבר למעשה את ה"חכמה ויכולת קבלת ההחלטות" של תחום ה AI, עם עולם ה"מעשים", אוטומציה וביצוע פעולות.

אנו מזמינים אתכם ל Webinar במהלכו גלית פיין ועינת שמעוני ישוחחו על תחום מרתק זה, ובעיקר על המשמעויות שלו לעולם הארגוני.

01.01.25

10:00 – 11:00



Mark Your
Calendar

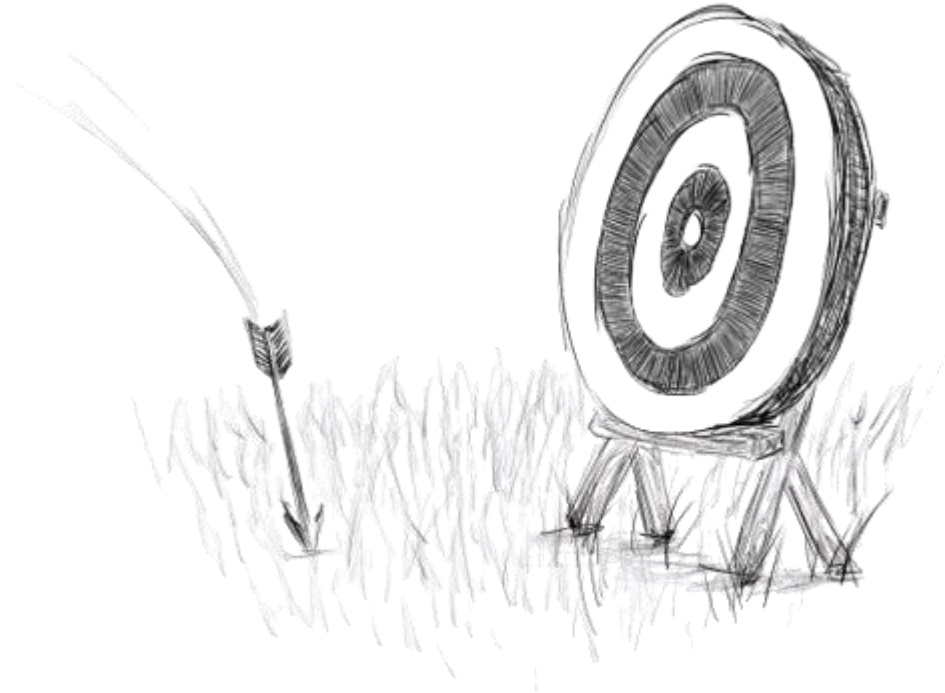
המפגש מיועד ללקוחות STKI USERS בלבד (לא ספקים), נא לא לשלוח יועצים, אלא אם הם עובדים 100% מזמנם בארגון.



THE EVOLUTION OF DECISIONS



Failures are coming



Through 2025,

30%

of generative AI (GenAI) projects will be abandoned after proof of concept due to poor data quality, inadequate risk controls, escalating costs or unclear business value.

Source: Gartner

80%

of CIOs are being asked to evaluate and implement AI solutions this year.

Yet only 36% feel they have the right data infrastructure in place to effectively enable AI.

Source: Foundry



and it will be even worse in Israel

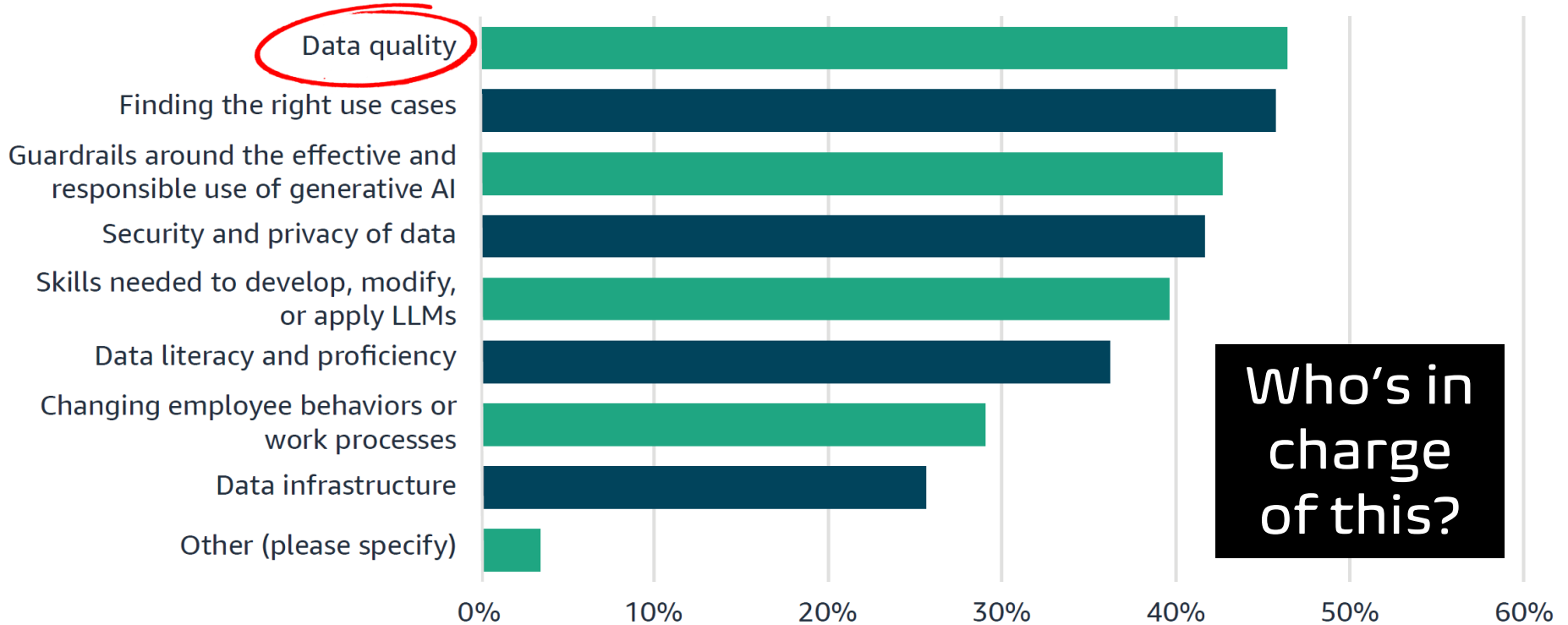


Inaccuracy is a major cause of GenAI failures

Generative-AI-related risks that caused negative consequences for organizations,¹ % of respondents



What is the biggest challenge for your organization in realizing the potential of generative AI?



Source: CDO Agenda 2024 AWS



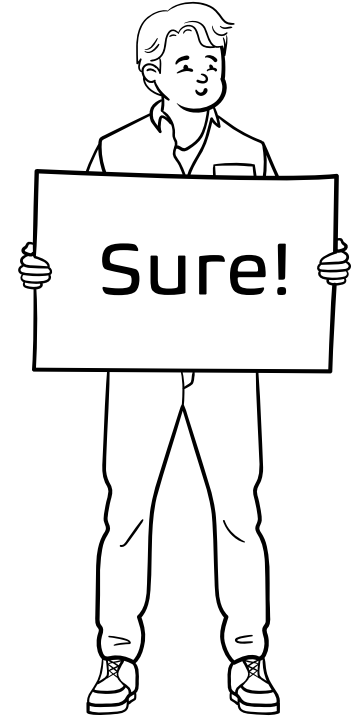
- Is the data trustworthy?
- Does it comply with regulations?
- Is the data policy enforced?
- Is it reliable and clean?
- Is the data "AI-ready"?

The Protector-CDO

Do CDOs think Data is important for GenAI?

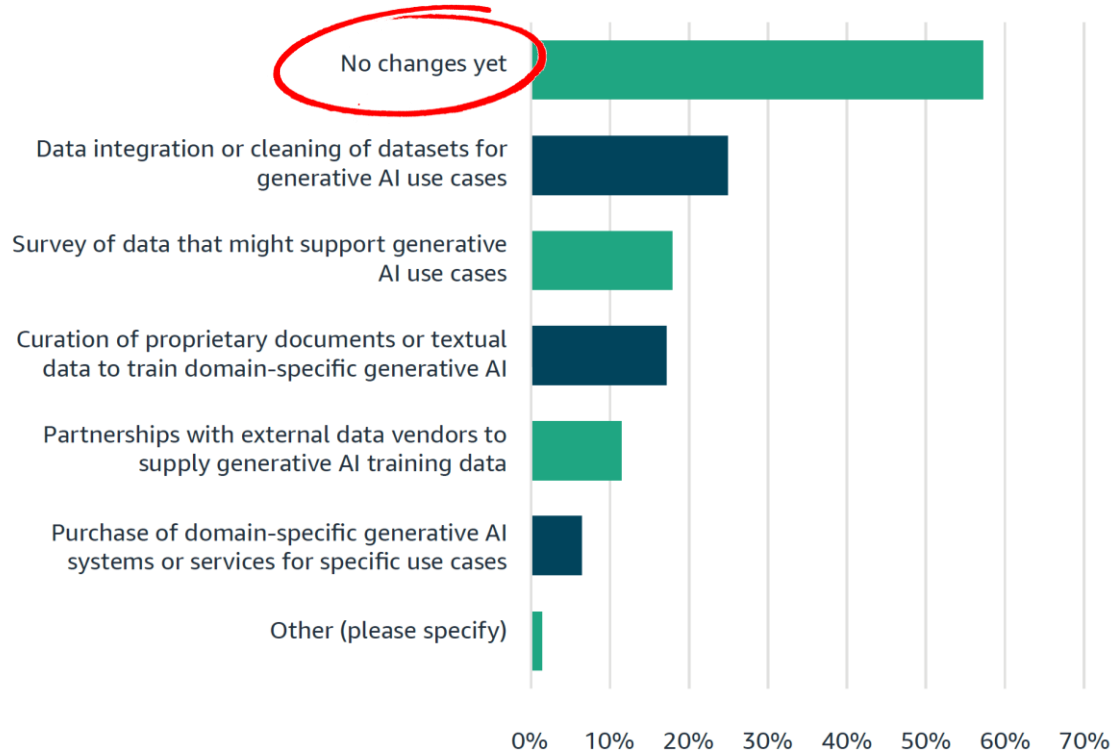
93%

of CDOs agreed that data strategy is crucial for getting value out of generative AI.



But few walk the talk

How has your data environment changed to support or enable generative AI?



57%

percent have not made any changes to their data strategy yet.

Source: CDO Agenda 2024 AWS

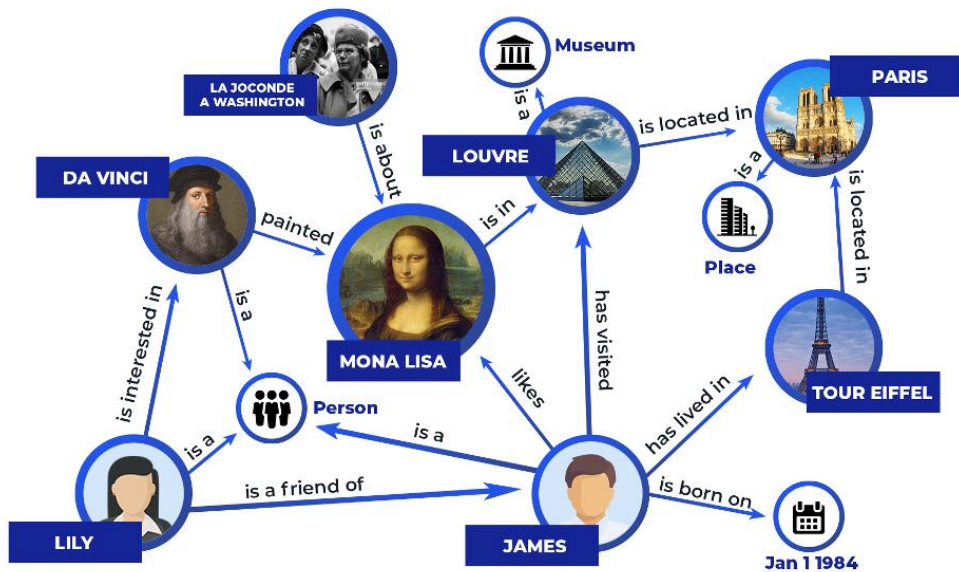


It's time to roll up our sleeves and get to work with the messy boring stuff

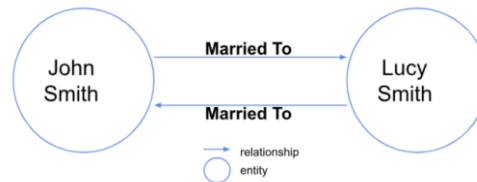
**DREAMS
DON'T WORK
UNLESS
YOU DO**

- Re-write the data strategy
- Clean up data
- Build APIs into legacy applications
- Build continuous maintenance and risk management methods
- Create a semantic knowledge graph ("AI-ready-data")





Knowledge graphs provide much-needed **CONTEXT** for AI models



Some are
doing it
right



Good AI

Good
Data



“If we want to do AI, we need to build it on concrete, not quicksand. We are getting the process and data supply in good shape. We’re working on a data inventory and catalog, a data fabric with a new data structure and metadata layer, data pipelines, and ad-hoc self-service insights generation. We believe that generative AI will be a key way to create insights from data in the future.”

Walid Mehanna

Chief Data & AI Officer, Merck Group



Source: CDO Agenda 2024 AWS

Morgan Stanley

Morgan Stanley **addressed data management issues** for an important use case involving a knowledge management application



“We have been curating our document-based knowledge for a while. Every single piece of research content has to be reviewed by a registered compliance person, so we know the training content is of very high quality. Even in non-research content, we have a team that scores individual submissions on issues like tagging requirements, broken links, presence of a summary up front, and we give each document a grade. We also had to spend a lot of time thinking about different content sets and optimizing the results. For me, the most important thing about these models is that they have to be transparent. The user should know this is what I put in, this is what came out, these are the documents the output came from, and this is confidence level for that question.”

Jeff McMillan

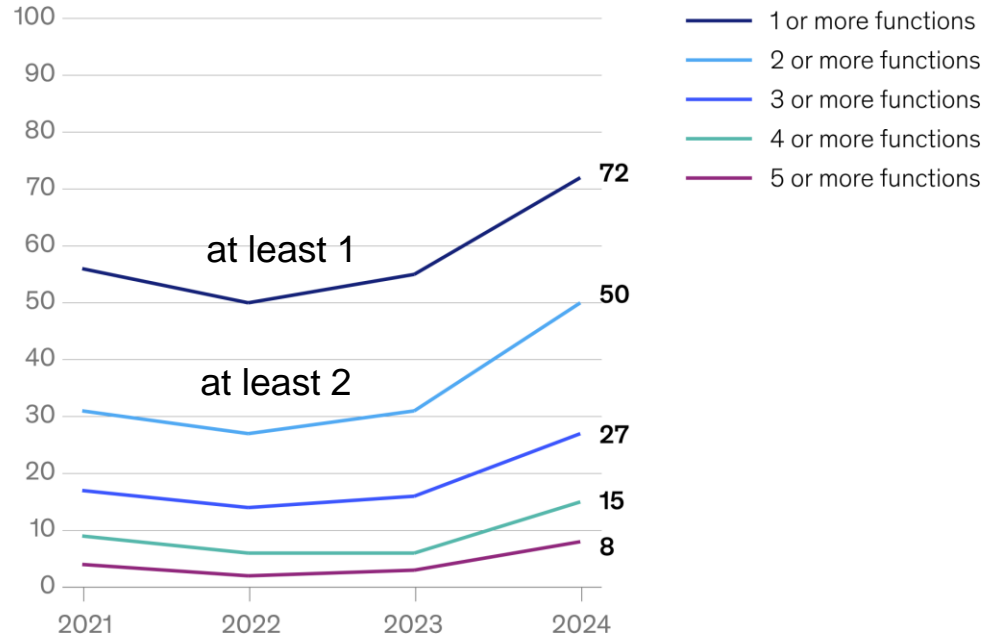
Analytics and Data Officer, Morgan Stanley

How are organizations **USING** **AI?**



Most use AI for only 1-2 functions

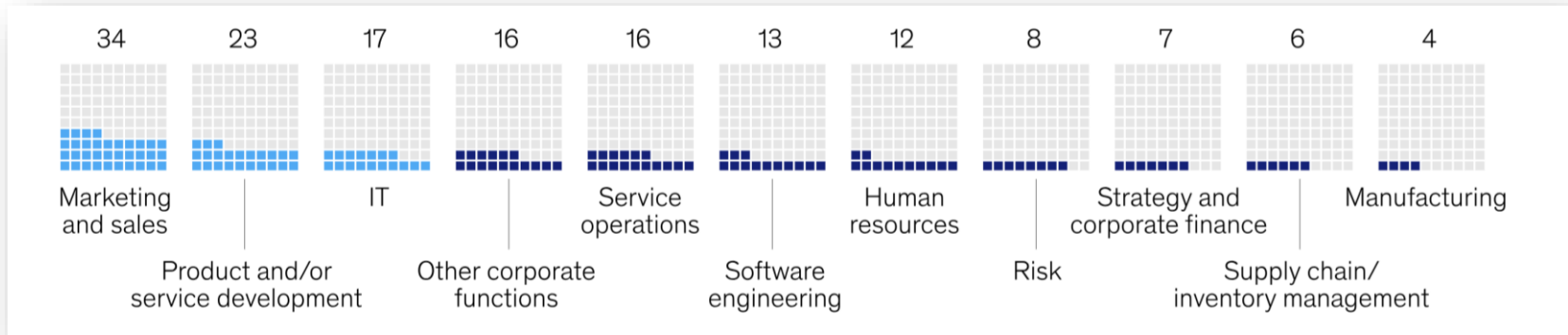
Business functions at respondents' organizations that have adopted AI,¹ % of respondents



Source: McKinsey

GenAI still used for non-core

Mainly in **Marketing & Sales, Product R&D, Software & IT & Service**



Source: McKinsey

Respondent's organizations regularly using generative AI (gen AI), by function, % of respondents



But it's used for all kinds of purposes



The diverse use cases for generative AI in the workplace confirm its status as a general purpose technology.

Source: Wharton



The Top Use Cases are Not Always Top Performers— Idea Generation, Legal Contracts, and Fraud Detection Perform Well

There are some “missed” areas that can provide high value



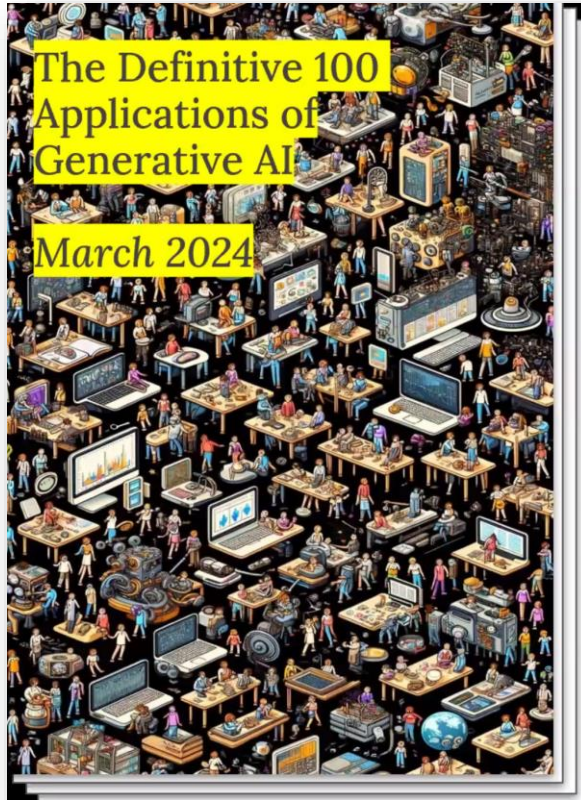
Source: Wharton

The Top Use Cases are Not Always Top Performers— Idea Generation, Legal Contracts, and Fraud Detection Perform Well

There are some “missed” areas that can provide high value

Idea Generation / Brainstorming
Legal Contract Generation
Fraud Detection and Prevention





- Idea generation
- Democratization of professional services

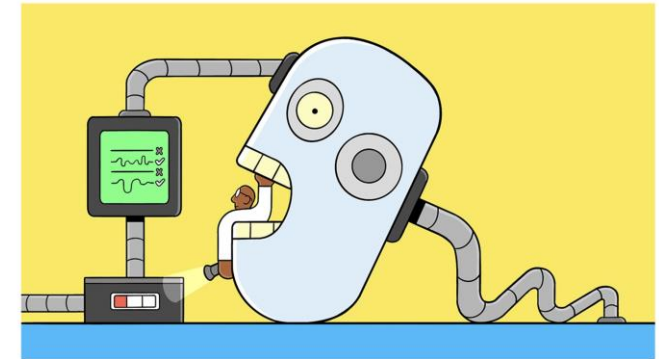
Harvard Business Review

AI And Machine Learning | How People Are Really Using GenAI

How People Are Really Using GenAI

by Marc Zao-Sanders

March 19, 2024

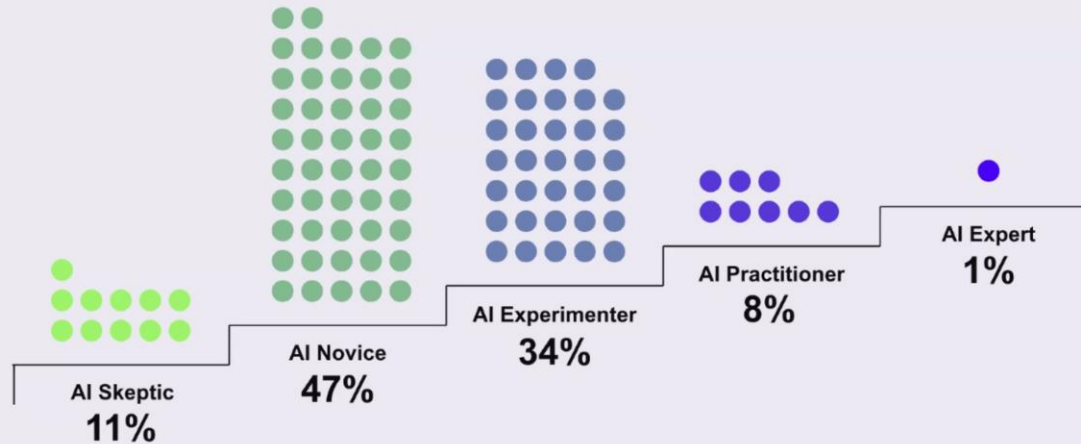


Mind the (literacy) gap

Most organizations are nowhere near ready to deploy AI



Workforce AI Readiness Based on Section AI Proficiency Benchmark



September 2024, n=5,003 knowledge workers in the US, UK, and Canada
Source: Section AI Proficiency Benchmark, September 2024.





OK, let's
talk
VALUE





Experimentations time is over



Top management now demanding measurable bottom-line value

Who's in
charge
of this?





How do we continuously deliver data products that people **value**?

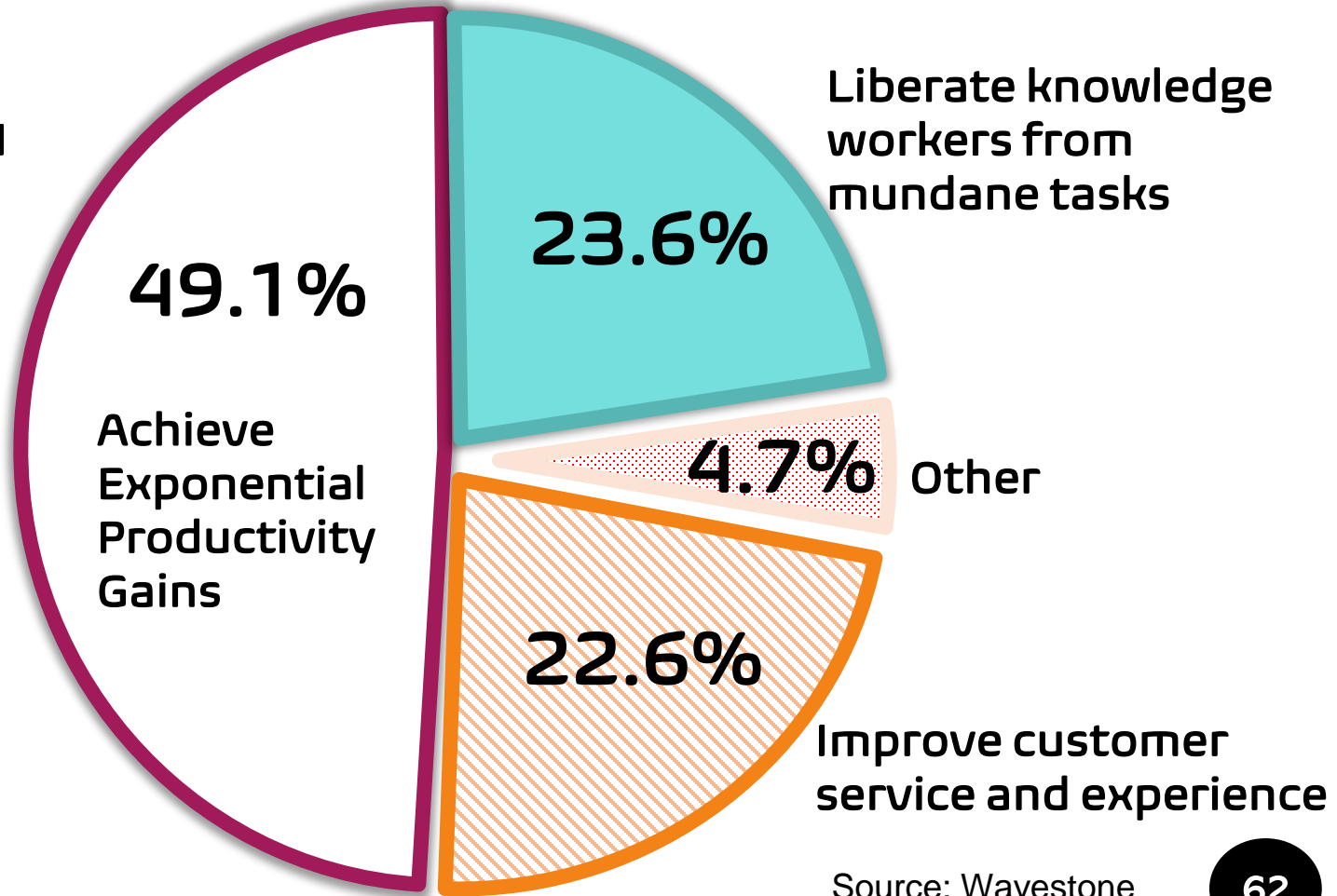
Do we define and measure “**value**” in the same way the organization does?

Is our focus on **operational efficiency** or **growth**?

The Builder-CDO:



Business Opportunities Created by Gen AI



**Business
Opportunities
Created by Gen AI**

**Liberate knowledge
workers from
mundane tasks**

49.1%

23.6%

**So, we'll way more productive.
Now what?**

Gains

22.6%

**Improve customer
service and experience**



what will organizations do with the 30% productivity vacuum?



Fire as many
people as they
can?

Create new
high value
tasks?

How People Can Create—and Destroy—Value with Generative AI

SEPTEMBER 21, 2023



GenAI Doesn't Just Increase Productivity. It Expands Capabilities.

SEPTEMBER 05, 2024

How GenAI helped workers with tasks they had the capabilities to complete on their own

How workers use GenAI to complete tasks that are beyond their current capabilities

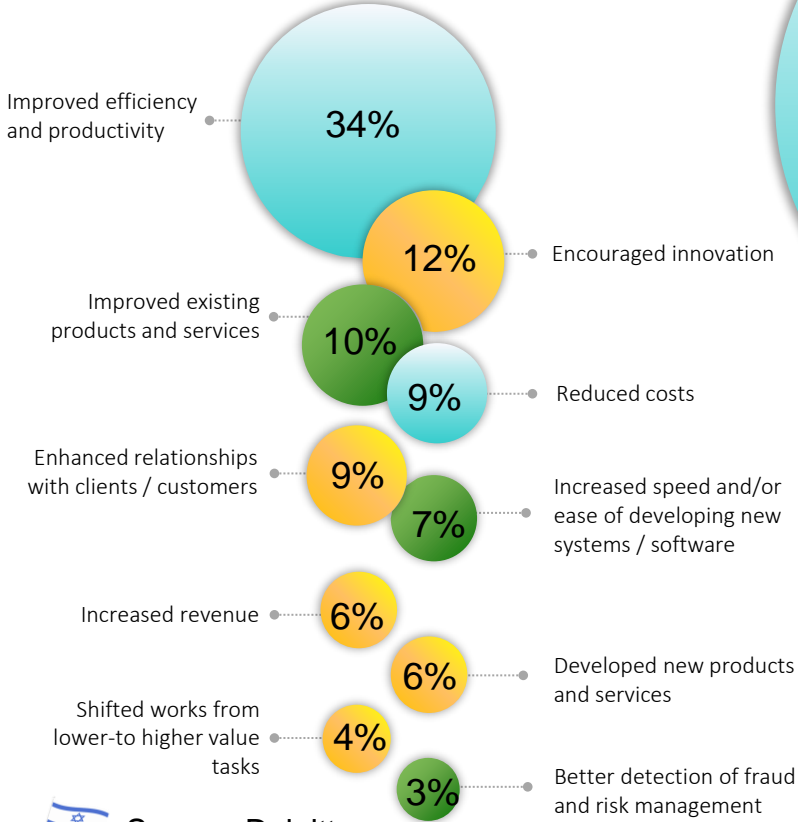
Source: BCG - BHI, Boston University and OpenAI's Economic Impacts research team

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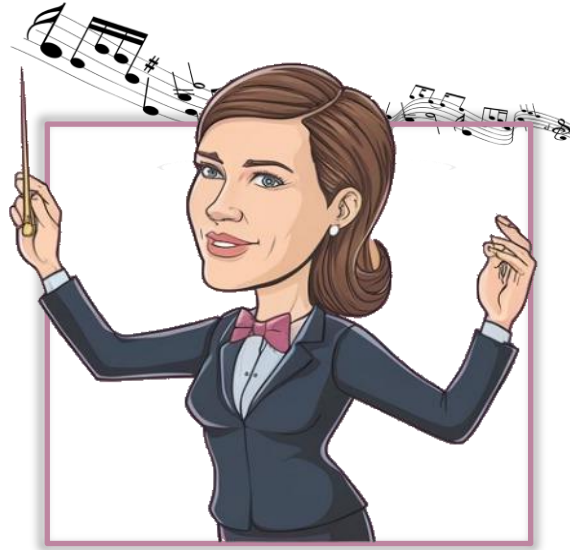
Top benefit achieved through Generative AI initiatives



Source: Deloitte



Someone will need to re-imagine how things get done throughout the organization



Is it the Orchestrator?



Who is the CAIO?

- Develops AI strategy and vision
- In charge of AI execution
- Prioritize use cases
- Upskill and train
- Overseeing responsible AI use
- Ongoing monitoring
- Value measurement
- GenAI policy and governance
- Redefining AI-powered processes
- Budget ownership? probably





Do we really need another Chief?

The **CDO** evolved to **CDAO**

Data

Data & Analytics

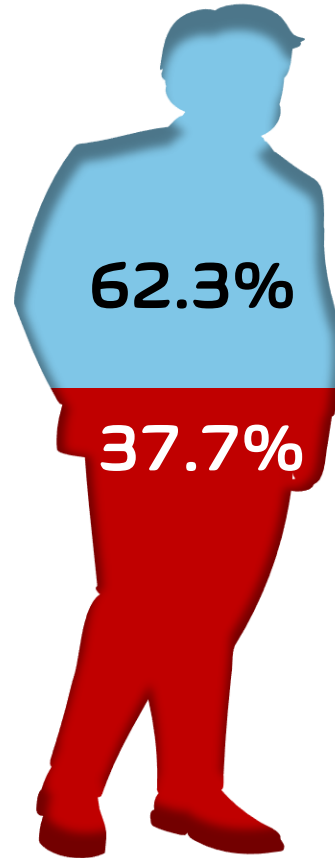


Should it turn into a **CDAIIO**?

Data, Analytics and AI



Primary Focus of CDAOs



Offense

Growth
Innovation

Defense

Regulatory
Efficiency

Source: Wavestone



11% of companies have a CAIO in place
21% are actively seeking one*

In March 2024, the Biden administration mandated that all U.S. federal agencies appoint a chief AI officer (CAIO) to oversee AI activities and minimize related risks.



David Salvagnini
CDO & CAIO of
NASA

AI Officers to Watch in the U.S. for 2024

| | | | |
|--|--|--|--|
|  Lan Guan |  Eric Hysen |  David Salvagnini |  Kelly Trindel |
|  Andrew Chin |  Nitzan Mekel-Bobrov |  Parminder Bhatia |  Joe Atkinson |
|  Rashmi Misra |  Alex Jaimes |  Vishwajeet Uddanwadiker |  Shawn Wang |
|  Luther Birdzell |  Chiru B |  Elena Ikonovska |  Nimit Sureka |
|  Andy Quick | | | |



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*Source: IDC Foundry

“The future is
already here”



“It’s just not
evenly
distributed yet.”

William Gibson



HIGH PERFORMERS*

*** ATTRIBUTE >20% OF EBITDA TO THEIR USE OF AI**

Source: McKinsey State of AI

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What can
we learn
from
them?



AI High Performers:

- Fostered a **data driven** culture
- Focus on **data governance & quality**
- **Manage risks & define policies**
- Prioritize **growth-related ROI** (rather than **operational efficiency**)
- Focus many efforts on **discovery**
- **CEO and senior mng. involvement**
- Using **cloud** as an enabler
- **Manage data & AI products**



McKinsey
& Company



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GenAI High Performers:



- Invest in AI literacy programs
- Define an organizational policy
- Built a standard organizational platform
- Creative (non-obvious) use cases
- Using GenAI in >3 business functions
- Defined a GenAI-enabling data strategy
- Prioritization method based on feasibility, risk, impact
- Central team and leader for GenAI
- Have KPIs to measure GenAI's value

McKinsey
& Company



It's convenient to keep optimizing existing processes but soon it won't be enough.

This is a **reset** time.

What we really need to do is to **reimagine** everything:

- How work gets done
- What our industry will look like
- What new things are possible





Einat Shimoni



Some parts of this presentation were written by a human.

