

**Creativity,  
business,  
and society  
in the age  
of AI**

# **FLASH OVER**

**Ogilvy**



Cover

*/prompt*

An image of a hillside on fire at night shot from above and zoomed in so that it looks abstracted. Similar in some respects to the images of the hillsides on fire at rush hour in LA. The image should not evoke fear, but neither should it feel happy. The image should convey fast spread and heat in an environment that is uncertain—neither hellish nor benign.

*DALLE*



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# First contact

**AI will fundamentally change advertising and marketing,** industry verticals, and society at large. Private, university, and public research has contributed to steady progress in AI, but awareness of this technology's potential blazed into the public imagination with the release of several generative AI tools. This drove rapid adoption—faster than any previous technology—and made clear that individuals, enterprises, and society would have to reckon with the impact of generative AI.

The latest AI tools are probabilistic engines that generate human-like language, images, and video. They, like analytical AI and other applications of machine learning, operate using a trained neural network. Because they excel in a specific area, these are artificial narrow intelligences (ANI) as opposed to the artificial general intelligences (AGI) that replicate human-level intelligence and are, perhaps, on the horizon. Despite their limitations, AI have proved invaluable to many fields—notably science, coding, business, and media.

Given that generative AI can produce art, copy, and code, the advertising industry must engage with these engines, and Ogilvy has been on the leading edge of that. We have explored a range of generative and analytical AI in order to serve our clients better, and we have learned that the incorporation of it into advertising and marketing will not herald the death of the agency or the sunset of human creativity. Instead, AI will lead to a creative and strategic renaissance. AI will spur better ideas and deeper insight by speeding up creative iteration

/prompt

An image of an agency at work but placed in the style and context of an Italian Renaissance painter, specifically Titian with his bright colors, contrasts, and shadows. The image should have a bit of ambivalence in it, much as his Pietà does.

Midjourney



and mechanizing aspects of execution and production, freeing creative and strategic minds to focus on big ideas and solutions to client problems—to, in short, imagine. The legal and ethical aspects of AI are unsettled, and Ogilvy will always err on the side of caution; we will respect the rights of artists and the confidentiality of client information.

Analytical AI is already embedded in performance marketing and the marketing tech stack, and as it advances and couples with generative AI, agencies and clients will be able to personalize and scale with better precision, speed, and efficiency.

Realizing the gains of AI will require better collaboration inside of agencies and between agencies and clients. Fortunately, AI will help here, too, and while this new era is likely to result in job changes and even losses, industry growth and new professions will, ultimately, lead to better outcomes for our people.

Disruption will hit all of society, and few businesses will be immune. Three hundred million full time jobs are exposed to automation worldwide, and two-thirds of current occupations are susceptible to some degree of collaboration with or replacement by AI. However, productivity

gains will ensure those displaced by AI will find re-employment and be part of a significant economic boost.

Since the field is rapidly evolving and the stakes are high, enterprises need a framework for integrating AI into their businesses. AI can help interpret, interact, create, operate, and decide. Individual businesses will explore which of those functions are best suited for their needs by comparing potential business value with the feasibility of the solution and managing the change in three areas: marketing, technology, and organizational dynamics.

Society, too, must work out how to integrate AI. The technology is developing faster than our ability to adapt—especially at the level of legislation, policy, and governance. This has left the AI community policing itself and shaping the narrative around regulation, which is problematic. As the innovation and energy in AI has shifted from academia to industry, several big players have emerged: Google, Microsoft, and Meta. It appears that, for the time being at least, they will control this powerful technology, how it develops, and how we interact with it. Their for-profit status complicates the push for safer development, and that is cause for concern. After all, AI that is



/prompt

Begin with the idea of a lifeless scene as if it were a barren planet, but have that abutting a lush region in what is obviously a contiguous spot. Now move it toward abstract expressionism but not all the way there.

Midjourney

poorly aligned to human values, desires, and priorities may be an existential threat.

Nevertheless, AI can do enormous good. It can help mitigate (or, dare we hope, solve?) climate change, revolutionize medicine, lift billions out of poverty, improve food security, and much more.

If there's a problem, even a hard one, AI can help us solve it. Along the way, we'll raise a new generation of people who have grown up in a world where AI is a constant companion. These AI natives will be the ones, ultimately, to show us how we all will adapt to this powerful force we have unleashed.

# INTRO- DUCTION

## AI—Artificial Intelligence or Apocalypse Incoming?

/prompt

An image that is a liminal space—a transition between one state and another—but avoid easily grasped ones like doorways, gaps, or seashores. Instead, think about this in terms of where one state mixes with another. It should feel a little unsettling but still beautiful and have blurred edges while not seeming alien. Think of the confluence between a silt-heavy river and one that runs clear, shot from the POV of someone riding low in a kayak along the mixing line and without any external markers that would orient the viewer in time or space.

Midjourney

“**The development of AI is as fundamental** as the creation of the microprocessor, the personal computer, the Internet, and the mobile phone. It will change the way people work, learn, travel, get health care, and communicate with each other. Entire industries will reorient around it. Businesses will distinguish themselves by how well they use it.” —Bill Gates<sup>01</sup>

Artificial Intelligences (AI), like the people who created them, are interplays of light and dark. Digital creatures of great power and potential, they can entrance and enhance humanity. Generative AI like Chat GPT and Stable Diffusion have stormed through education, the creative industries, and media, and their output feels a bit like magic. The inclusion of a conspicuously labeled paragraph of AI-generated writing is a trope in the thousands of think pieces being written on the subject as are the clearly AI-generated ad images that seem, for now, novel. These clumsy early uses of AI will give way to its seamless integration into our personal and professional lives, helping us in ways prosaic and profound. From taming inboxes and simplifying our daily lives to improving logistics, making medical and scientific breakthroughs, and everything in between, AI will remake our world. Humans have adopted these new tools faster than any

technology in history because, in part, the benefits are easily glimpsed and vast.

So are the perils. AI, in the popular imagination, might rid itself of its creators, use our metabolisms for energy, or turn the world into a giant paperclip factory.<sup>02</sup> Less fantastical worries are still vivid: wholesale job loss and transformation, metastasizing disinformation and propaganda, and handing the keys to our world over to entities that may soon surpass our capabilities—and see us as surplus. We must also grapple with risks of emergent sentience, should that happen and our ethical responsibility and vulnerability to it. And just as unconstrained nano machines could turn the world into grey goo, unrestrained AI could bring about a deluge of mediocre content, drowning out anything truly original—a giant reversion to the mean that would suck the life out of culture. It could

***Generative AI like Chat GPT and Stable Diffusion have stormed through education, the creative industries, and media, and their output feels a bit like magic.***

also perpetuate the bias long present in human society, which is a flaw, of course, that pervades what AI is trained on.

These worries are real enough that leading experts in AI and digital technology issued in March of 2023 an open letter suggesting a pause in giant AI development and a refocus on, “making today’s powerful, state-of-the-art systems more accurate, safe, interpretable, transparent, robust, aligned, trustworthy, and loyal.” Caution makes sense when dealing with technology that has existential impact, yet we are conducting a civilization-wide experiment with AI. Investment in the space has moved from academia to the private sector,<sup>03</sup> where it continues to make a great business case for its ongoing development, while being free from the constraints of institutional research. After all, we’re all talking about it, licensing it, using it, and reformatting our businesses

around it. As Mark Read, CEO of WPP, put it in *The Guardian*, AI “is fundamental to WPP’s business in the future.”

There’s no doubt about that. AI is poised to revolutionize creativity, becoming as essential a tool as digital image and video processing. It will occasion a similar restructuring of creative talent, raising the premium on originality and innovation at the expense of more mechanical execution, while giving rise to new creative subskills like prompt engineering and model training. AI will transform strategy and account management and will make it easier to get to breakthrough, well-researched strategies while easing the friction in the agency/client relationship. AI will bring about leaps in efficiency in production, media, and hyper-personalized delivery. It will up-end the whole search economy and make the race for the data AI scrapes first (AIEO, perhaps?) a whole

## INTRODUCTION

/prompt

An image of a person ascending a staircase, captured frame-by-frame as if in a strip of film, with each frame slightly superimposed on the other. With each frame, the person moves from being drawn as something obviously hand-drawn, to something done in vector art, to rotoscope, to something that is in a photorealistic style. The person also transforms from a standard nude to being a mythological figure of great power.

Midjourney, Ogilvy



**Agencies and client alike must think deeply about the ethics of AI and its use and what our responsibilities are to consumers.**



### The Art of Trending—Woods Art Institute

new subindustry. And all that? That's just one industry. Elsewhere, pioneering AI engines like IBM's Watson are already remaking everything from coding and memo writing to healthcare and law.

Agencies and clients alike must think deeply about the ethics of AI and its use and what our responsibilities are to consumers. Despite the pleas of leading AI firms for oversight, governments will not be able to keep up with the technology, and until regulations have caught up, it's up to us to uphold our honor. We must also anticipate our obligations in an evolving AI legal environment.

This is no easy task, and we will err. So will our competitors and our clients. We will also benefit enormously and will find competitive advantage in the ethical, shrewd, and carefully considered use of AI—but only if we go in with our eyes wide open.

Art is born of its time, and part of its power is the conversation it invites between art and culture. Sometimes that dialog is eternal, but as the world speeds up, art has a place in the rapid-fire news cycle, too. That's where the Woods Art Institute came in.

With Ogilvy's help, the Institute launched an experiment in September 2022 to connect art to the topics of the moment. The campaign entitled, "The Art of Trending," took Twitter's trending topics and used it to prompt DALL-E 2 to create the most contemporary of contemporary art—an exhibition curated entirely by social media users, executed by AI, and displayed OOH—that surfaced the role generative AI will have in art and culture.



# AI PRIMER

## So, what is AI anyway?

**“You can go crazy thinking about all the possibilities,** because these are very, very powerful technologies... AI is the most profound technology humanity will ever work on... I think it will get to the essence of what humanity is.”  
—Sundar Pichai<sup>04</sup>

Hands-on exploration with AI is the best way to understand in your guts how transformative it is, but for those who have been working with it for a while, that sense is old news. They point out that the technology has evolved consistently; the world at large is just now catching on. After all, in a feat of natural language processing, IBM's AI Watson beat the best human champions on the game show *Jeopardy!* all the way back in 2011. The explosion of AI into the collective consciousness is due to a breakthrough

in accessibility, not a revolution in the field. The computer itself provides a good metaphor. Computers quietly enhanced efficiency in the background for a long time before they suddenly seemed to be everywhere, and for that, we can thank the graphical user interface. That took a technology that required a lot of specialized knowledge and turned it into one that anyone could use. Generative AI has done the same thing for machine learning.



*/prompt*

Draw an image of a family partnership that is in the style of de Chirico with a deep depth of field.

*Midjourney*





### Mix Your Neighbourhood—Absolut

Every neighborhood has its own vibe—a cocktail of people, places, and culture that makes it unique. With the help of generative AI, Absolut Vodka found a way of turning the distinctive elements that give Canadian neighborhoods their flavor into that most social of drinks: the cocktail. Locals were asked to identify the exceptional ingredients unique to their area, which the AI then turned into prompts for an AI platform to turn into vibrant, stunning cocktail artworks. But that’s not all. Absolut worked with bartenders to turn those virtual cocktails into actual drinks that embodied each neighborhood. Talk about *terroir!*

*The most sophisticated in a long line of assistive tools invented by humanity, AI are likely to be our partners, for good and ill alike, in most aspects of life.*

*“Generative AI can imagine new things that our minds cannot right now achieve.”*

For all the simplification that the new tools have brought, understanding how AI fits in our world still requires a grasp of what AI is. AI combines huge datasets with computer processing to create inorganic systems that can solve complicated problems. These systems sometimes (but not always) appear human-like in the way they approach and resolve problems. They often meet or exceed human problem-solving capacity. For the sake of not getting tied up in philosophical debate about sentience, self-awareness, or cognition, we refer to them as intelligences since they act like intelligent entities: They learn from their inputs (their “environment”), reason, generalize, perceive, communicate, and evolve—sometimes in unexpected ways. The most sophisticated in a long line of assistive tools invented by humanity, AI are likely to be our partners, for good and ill alike, in most aspects of life. As Ogilvy’s executive creative director and experience creative lead EMEA David

Raichman puts it, “The first social unit that will appear—even before the family—will be the human and a generative AI partner.” But if we delegate all of our tasks to it, we will become passive recipients of culture, not its creators. Instead, we use AI as a “sparing partner,” in Raichman’s memorable phrase, “that will tempt us to create in a new way, creating a new form of art and a new form of advertising,” that could not be created before. Raichman’s Ogilvy colleague Roberto Fara, chief creative officer Spain and global creative experience lead, puts it like this: “Generative AI can imagine new things that our minds cannot right now achieve.” At the center of it all, both Fara and Raichman believe, lies the idea, and that, for now at least, remains the province of the human. “Machines don’t have creativity yet,” Fara says. “They cannot answer if something is good or wrong. They don’t know what it feels like to travel, to taste a tomato.” They lack, to use the technical term, *qualia*: introspectively available moments of subjective, conscious experience.

But since we do, imagine the potential of these tools for our business and that of our clients. “One of the biggest challenges as a creative agency,” says Ab Gaur, Ogilvy’s global chief data and technology officer and the founder of Verticurl, “is scaling our smartest people and the work they do. If we could, we could have more impact in the world for our clients, creating brand experiences and moments that AI will help us execute.”



/prompt

Describe how LLMs work in 20 words or fewer, and then draw an image of what you generate in the style of Willem de Kooning. Then describe how latent diffusion models work in 20 words or fewer, and then draw an image of what you generate in the same artist's style. Then combine the images.

Chat GPT-4, Midjourney



LLMs are models that use statistical patterns in data to generate human-like text responses.



Latent diffusion models generate realistic data by iteratively refining a latent representation through diffusion and denoising processes.



## Understanding AI

Scientists create AI using machine learning, especially a subset of that called deep learning that takes place in artificial neural networks. In essence, these systems analyze large amounts of data using algorithms that mimic the human brain to make predictions or decisions, and they are broadly classified as artificial narrow intelligence (ANI), artificial general intelligence (AGI), and artificial super intelligence (ASI). ANI is a weak AI, meaning that it can perform specific tasks. AGI is a strong AI that is similar in ability to a human, while ASI would surpass us. Though remarkable, the current crop of AI are all ANI.<sup>05</sup>

There are several types of AI. The one that's getting all the attention now, generative AI, is either a text-to-image model or a large language model (LLM). The latter has been fed an enormous dataset of human knowledge in the form of text, images, or both. Text-to-image models, such as Midjourney or Stable Diffusion, use pairs of images and the text descriptions thereof to predict the kind of image a given natural language prompt should produce. It then applies

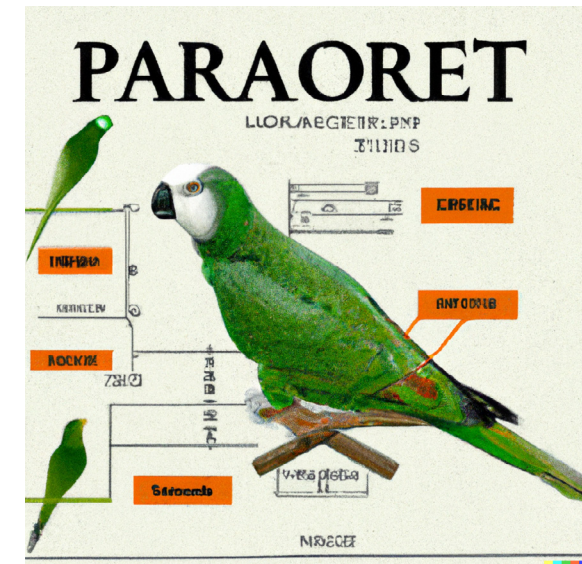


**AI already has a years-long history with marketing and advertising**

**/prompt**

Draw an image of an AI painting a self portrait in the style of Rockwell. The painter should be a robot. The image should be a human painter.

Midjourney



**/prompt**

An image of a parrot that contains elements that are randomly determined or determined via probability and not intention. Done in the style of Audubon.

DALLE

some data noise into this probabilistic engine to produce original, high quality images. LLMs work similarly. They use the billions of words on which they've been trained—and all the biases, intolerances, poor behavior, and unrepresentativeness encoded in them—to form predictions about what word is most likely to appear next in a series, a task at which it far exceeds human capacity. They are, to quote linguist Emily M. Bender, “stochastic parrots”—probabilistic content generators that have no ties to meaning. These systems are designed to mimic likely human responses and persuade us to believe them. LLMs are, as many have pointed out, A+ bullshitters, and that is one of the reasons they appear so sentient to us. We apply our own theory of mind to them and, as Bender said to reporter Elizabeth Weil in *New York*<sup>06</sup>, “We’ve learned to make ‘machines that can mindlessly generate text...but we haven’t learned how to stop imagining the mind behind it.” That said, LLMs continue to display emergent behaviors (also known as agentic behaviors) that

their designers did not and could not anticipate, which complicates the picture.

While generative AI has sucked up all the media attention of late, it’s far from the only type of AI. Neural networks and machine learning have been used to form everything from specialized expert systems to recommendation engines and from fraud detection to logistics load balancing. They’ve integrated with robotics, computer vision, facial, speech, and audio recognition, and the natural language processing (NLP) that is most familiar. One specialized AI, AlphaFold2, took a mere 18 months to crack one of the hardest problems in biology<sup>07</sup>: predicting the structure of nearly every protein known to science. This breakthrough will lead to new drugs, improve treatment outcomes, and contribute mightily to basic science. AI is already helping with resource allocation, personalized marketing, efficiency boosts, and even strategy. AI already has a years-long history with marketing and advertising through analytical AI engines enhancing sales enablement,

## ARTIFICIAL INTELLIGENCE APPLICATIONS

### Analytical AI

Analytical AI can process and analyze large amounts of data more efficiently than humans. It's the first stepping stone towards other types of AI.

### Conversational AI

This combines NLP with Natural Language Understanding (NLU) and other technology to emulate human cognition and engagement.

### Text Generative AI

Type of software that uses artificial intelligence to produce written copy.

### Natural Language Processing

NLP is the capacity of computers to understand natural language (e.g. English) as opposed to code

### Robotics AI

These are two different fields but often tied together as AI emulating human intelligence and robotics emulating human mechanics.

### Image Generative AI

AI image generators are programs that use AI technology and machine learning to generate images.

### Generative AI

GenAI is the Artificial Intelligence that can generate all kinds of data, including audio, images, text.

### Computer Vision AI

Computer vision is a field of AI that trains computers to capture and interpret information from image and video data.

### Video Generative AI

Programs that use AI technology and machine learning to generate video. As of March 2023, these are not as advanced or developed as image generative AI.

### Speech Recognition AI

Speech Recognition AI is the process of converting spoken language into text just like Siri or Alexa do.

### No-Code

No-code platforms let anyone create apps without needing to write code. AI is empowering a new wave of these platforms.

### Audio Generative AI

Programs that use AI technology and machine learning to generate audio. Just like video generative AI, this technology is still in its infant steps.

Source: Ogilvy Social Labs

CRM, personalization-at-scale, customer behavior prediction, and more. One way through this thicket is to see AI in three big buckets, as Dickon Laws, global head of innovation for Ogilvy, does. The first is generative, which will produce a golden age in creative expression and speed the production of personalized, even atomized, assets. Then there's the analytical bucket. It powers marketing automation and sales enablement, enabling us to connect communication to context at the individual level and work within a rich landscape of triggers and behaviors. The third is what

***These systems are designed to mimic likely human responses and persuade us to believe them. They are, as many have pointed out, A+ bullshitters***

Laws calls novelty. This is where AI becomes invisible, disappearing into the background as it delivers a holistic experience that, to quote Arthur C. Clarke, "is indistinguishable from magic."



/prompt:

Since proteins can be quite beautiful and their folds are amazingly complex, include an image of one remarkable one but seen from inside the volume of the folded protein in the style of a prize-winning nature photograph from NatGeo.

Midjourney

# AI adoption

**44%**

Percentage of organizations working to embed AI into current applications and processes.

AI has launched think-pieces by the thousands in the past few years, but the uptick in hot takes corresponded to the hockey stick in adoption that happened after the release of ChatGPT, a chat-based generative AI from OpenAI. Now embedded in Microsoft's Bing search engine and soon to roll out more broadly,

ChatGPT focused the public's mind on the potential (and peril) of generative AI. The hubbub pushed AI development out into the open and turned it into something of a race. A massive burst in adoption followed. Two months after its release, ChatGPT reached 100 million users—faster than any technology in



## HOW ORGANIZATIONS ARE USING AI TODAY

**33%** Automation of IT Processes

**28%** Automation of Business Processes

**26%** Business Analytics or Intelligence

**22%** AI Monitoring and Governance

**22%** Conversational AI or Virtual Assistants

**29%** Security and Threat Detection

**26%** Marketing and Sales

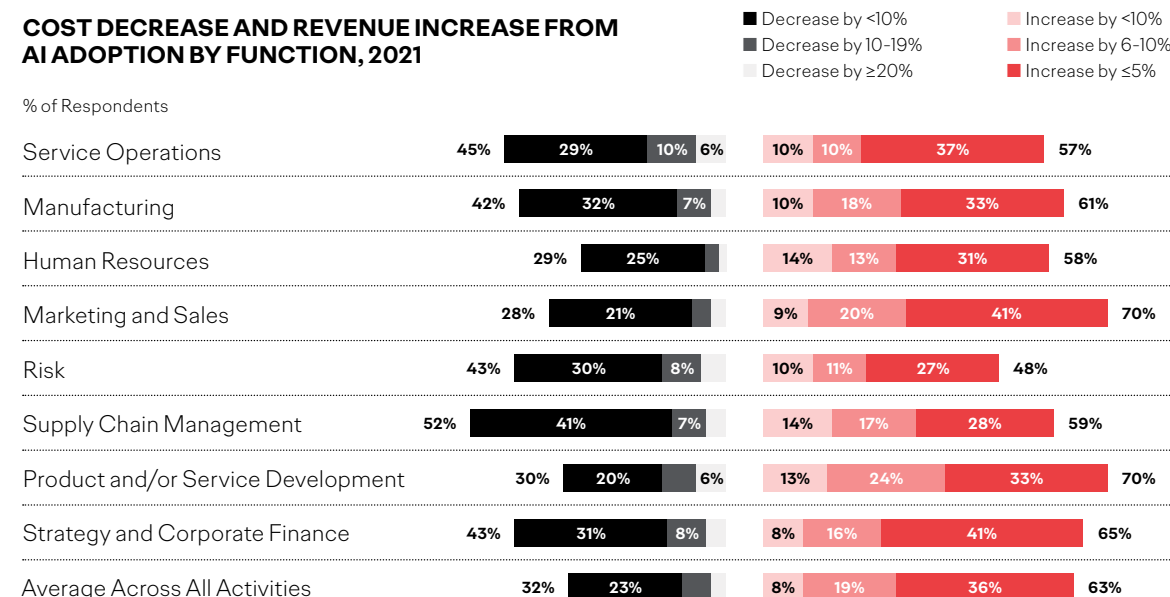
**23%** Fraud Detection

**22%** Sensor Data Analysis

**22%** Financial Planning and Analysis

Source: IBM Global AI Adoption Index 2022

## COST DECREASE AND REVENUE INCREASE FROM AI ADOPTION BY FUNCTION, 2021



Source: McKinsey & Company Survey, 2022 | Chart: 2023 AI Index Report

history. The AI market is projected<sup>08</sup> to increase from just under \$200 billion in 2023 to \$1.8 trillion by 2030, and that's probably conservative.

Even before the public's imagination caught up, however, enterprises were well on their way to making AI an essential part of their businesses. IBM notes in its Global AI Adoption Index 2022<sup>09</sup> that global adoption of AI continues to grow steadily, and it now stands at 35%. That relatively modest figure obscures that, "in some industries and countries, the use of AI is practically ubiquitous."<sup>10</sup> Business is using AI for everything from memo writing to process automation. In fact,

AI governance will join cybersecurity and compliance as a board-level topic. Data from Forrester shows that 46% of data, analytics, business, and technology decision-makers seek out partners to implement AI critical to the business<sup>11</sup>.

That said, McKinsey & Company<sup>12</sup> found in its annual survey of companies that AI adoption, after doubling since 2017, has largely plateaued. Companies that have adopted AI, however, are "realizing meaningful cost decreases and revenue increases."<sup>13</sup> Accenture is much more bold, claiming that AI will increase the developed economies' productivity by 50% in the next two decades<sup>14</sup>.

## AI development

Bill Gates gave Open AI, the developers of ChatGPT, a task. He thought it would keep them busy for two or three years, but it took them only a few months. This AI flashover has propagated throughout the space and ignited the public's imagination. One imperfect measure for the complexity, and therefore the potential, of an LLM is the number of parameters in the model. At 170 trillion parameters, the model for GPT-4 is 100 times larger than its predecessor, and, unsurprisingly, vastly more powerful, too.

It's made news for acing Advanced Placement tests and the Bar Exam while polishing off benchmark test after benchmark test with flying colors. LLMs are already working their way into most of the apps people use every day. Microsoft is introducing AI into its Office suite of products. Google is, too, but so are uncounted developers using LLMs as a spine for a bewildering array of AI-powered apps. It's going the other way, too. OpenAI has launched a plugin service, instantly turning their LLM into a platform hosting travel recommendations from Expedia, restaurant reservations



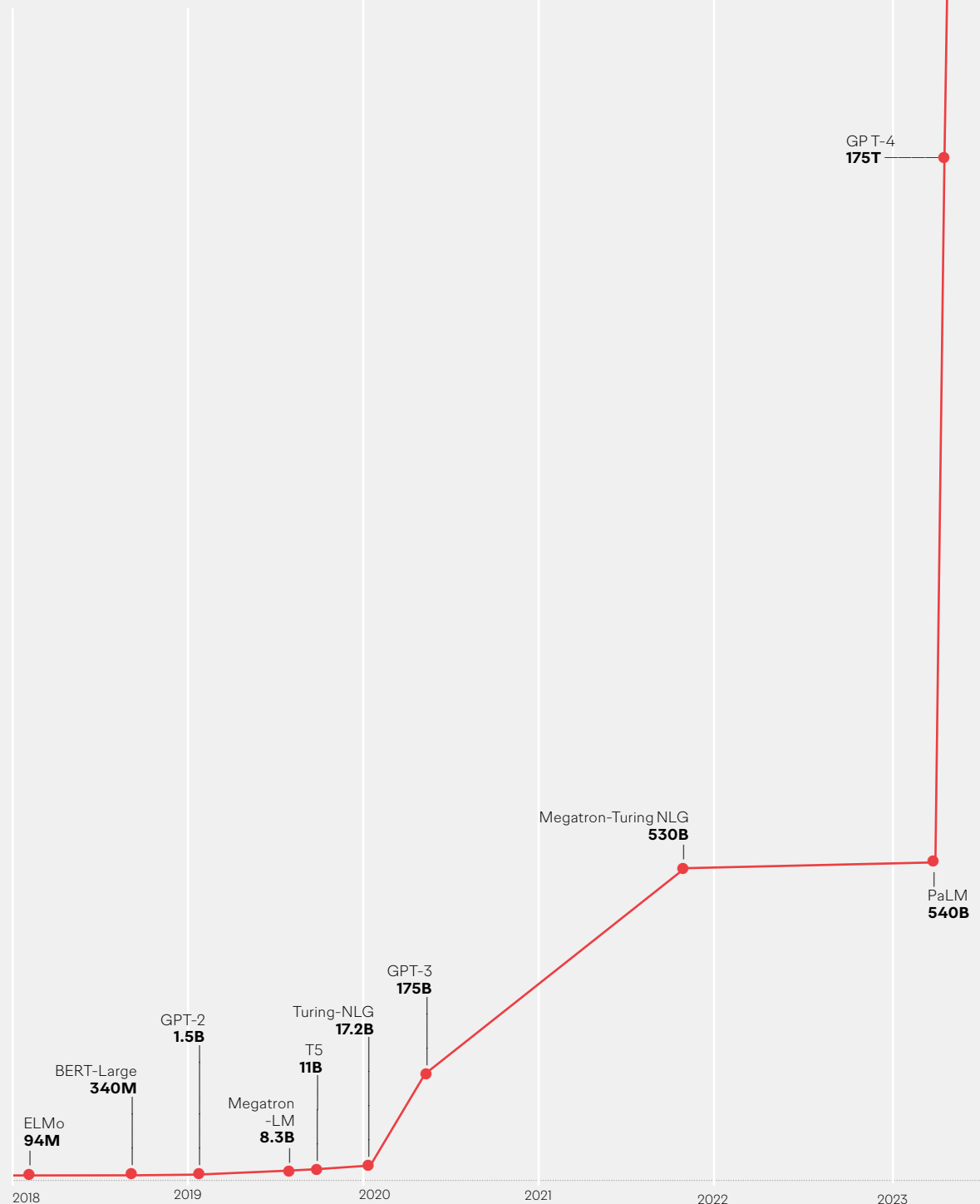
/prompt

Image that expresses complexity, such as a detailed, deep field image from the Webb telescope.

Midjourney



SIZE OF MAJOR LLMs



Sources: 1. Julien Simon, "Large Language Models: A New Moore's Law?" Hugging Face, 2021. 2. Open AI. 3. Google.

**Accenture is much more bold, claiming that AI will increase the developed economies' productivity by 50% in the next two decades.**

from OpenTable, and shopping enablement from Klarna—and that's just the beginning. Amazon, too, is in the platform game, enabling customers to build and scale generative AI applications on a range of different models.

The latest generation of AI is also showing increased flexibility, which means these can perform multiple tasks, accelerating scientific research, and, like any good overachiever, self-improving. Image generators like Stable Diffusion, Midjourney, and DALL-E-2 are refined enough to produce professional-looking work. The same is true on copy side of the house with tools like ChatGPT-4, Jasper, and Hemingway. AI coding assistants, such as Codex, CoPilot, and CodeWhisperer, are growing in sophistication and popularity. According to Forrester Research, AI will write 10% of the world's code in 2023.<sup>15</sup>

Art. Copy. Code.

If the penny hasn't dropped yet, here's the import: the major functions of many

**We Can Make Peace Come True—Emergency**

Gino Strada, the founder of Italian nonprofit Emergency, died in 2021 with his life's work still incomplete. Strada wanted to see a world without war, and his legacy isn't just an organization dedicated to helping heal those affected by war; it is also a moving appeal for a world that is free of conflict.

Emergency worked with Ogilvy Italy to bring Strada's vision to life through a film made by a team of AI artists, speakers, and composers. For the film, the medium was, in part, the message, since a world without war must be first imagined if it is to be engendered—and AI is well suited to helping humans extend their imaginations into that which is believed to be impossible.

businesses—including creative ones like advertising and marketing—can now be done at a passable level by AI, and that means standing out will be harder than ever. As AI engines become commodities, which they will<sup>16</sup>, the kind of out-of-nowhere creativity that spawns breakthroughs will be ever more in demand. Marrying that uniquely human ability to a suite of powerful AI tools will produce more (and more remarkable) creativity. Relying on the machine alone will produce a sea of mediocrity.

# The AI Landscape

## ANTLER GENERATIVE AI PORTFOLIO COMPANIES

<b>IMAGE</b>	<b>TEXT</b>	<b>CODE</b>	<b>VIDEO</b>	<b>AUDIO</b>
MODULIZE	Hypertype	Codis	TERRA	AD AURIS
Re:cast AI	Linguix	Metabob		Vocal Clarity
Sloyd	jenni			
Hexo AI				

## GENERATIVE AI INVESTORS

<b>DAY ZERO</b>	<b>PRE/SEED</b>	<b>SERIES A</b>	<b>SERIES B - GROWTH</b>
ANTLER	Combinator	COATUE	Goldman Sachs
	CRAFT	Bessemer Venture Partners	FOUNDERS FUND
	khosla ventures	foundation capital	Bloomberg BETA
	G/	octopus ventures	andreessen horowitz
	HV CAPITAL	BainCapital	Accel
		INSIGHT PARTNERS	

## GENERATIVE AI UNICORNS

<b>2019</b>	<b>2020</b>	<b>2022</b>
OpenAI	ada	glean
grammarly		Jasper
		stability.ai
		CRESTA

## THE GENERATIVE AI STARTUP LANDSCAPE

<b>TEXT</b>	<b>IMAGE</b>	<b>AUDIO</b>	
Smartwriter.ai, Hypertype, Lately, Autobound, Writesonic, Jasper, cogram, genei, YOU, AI21labs, letterdrop, copysmith, Creetext, jenni, mavenoid, anyword, [PERSADO], frase, regie.ai, Solace Vision, Mintify, Linguix, Hypotenuse AI, WRITER, OTHERSIDE AI, copy.ai, copymatic, COMPOSE AI	ClipDrop, p-e-n-c-i-l, beautiful.ai, PhotoRoom, BRA, Facet, Poly, CSM, Blend, HYPAR, KAEDEM, >ROSEBUD.AI, maket, Autoenhance.ai, BOTIKA, soul machines, Sloyd, MODULIZE, Re:cast AI, uizard, imagen, Hexo AI	MURFAI, REPLICAI, notably, Endel, WELLSAID, AssemblyAI, DEEPGRAM, krisp, Speechify, RESEMBLE.AI, NIMI, KAIZAN, coqui, Mubert, Neural@Space, soundful, PAPERUP, moises, VOICEMOD, Listnr, LOVO, Vocal Clarity, Dubverse, AD AURIS	
<b>CODE</b>	<b>CHATBOTS</b>	<b>VIDEO</b>	
Debuild, tabnine, Codiga, Locofy, AIXCODER, Mintify, māyā, MutableAI, Codis, durable, The.com, bloop, replit, ENZYME, DhiWise, codota, anima, CODACY, warp, Metabob	lang.ai, PolyAI, Tymely, Incentivai, Kasisto, ushur, NIX, CRESTA, EliseAI, verloop.io, Replika, ultimate.ai, Cohere, Sapling, haptik, ada, Forethought, OBSERVE-AI, XOKind, Balto, Certainly.	ZUBTITLE, TERRA, Peech, VOCHI, Maverick, recul, VEED.IO, Basch.io, inworld, deepdub, WOMBO, tavus, FATHOM, runway, Mani, XEMBL, PICTORY, vidyc, Rephrase.ai, lumen5, Stev, windsor.io, YEPIC, deepdub.ai, Colossyan, METAPHYSIC, Poti	
<b>ML PLATFORMS</b>	<b>SEARCH</b>	<b>GAMING</b>	<b>DATA</b>
slai, Jine, Adept, symb.ai, aporia, GANTRY, deepset, Synthesis.ai, Archistar, Galileo, featureform	glean, Logria, Hebbia, consensus, Air, vectara, Pinecone, drant	charisma.ai, hidden door, LATITUDE, Spellbrush	Pilot, gretel, DATAHERALD, SYNTEGRA, Mirry.AI, BIFROST, datagen

Source: Forsyth, Ollie, "The Antler Gen-AI Report," Antler, December 20, 2022.



# A CREATIVE RENAISSANCE—

**Is this the end of creativity? Or the beginning of a golden age?**

***AI isn't the death knell for creativity. It's a renaissance.***

**A German artist named Boris Eldagsen won the creative open category** at the 2023 Sony World Photography Awards, an honor he declined after revealing that his prize-winning photograph wasn't what it said on the tin. His image, which emerged on top of 415,000 entries, was generated by AI. Eldagsen, in a statement, said, "Something about this doesn't feel right, does it?"

No, it doesn't. This is proof positive that if even a panel of the world's premier photography experts can't tell the difference between a photograph and the work of AI, then human creativity is dead. That's the easy answer. And the wrong one.

Eldagsen, a world-class photographer, created the image to spark a discussion in the world of photography about the impact of AI and the definition of what was—and was not—photography. Not only did he succeed beautifully in that aim; he also showed that the world of creativity is not in the incorporeal hands of AI. Rather, it lies in the mind and expertise of gifted artists and writers who now have a powerful new tool to extend their creativity. AI isn't the death knell for creativity. It's a renaissance.

## Creating with AI

Imagine you're in a scriptorium as the 15th century comes to a close or an ad agency creative department as the '80s did. A powerful new tool debuted—the printing press for those early modern monks and Photoshop for the creatives who were listening to [this song](#) without irony—and with its arrival, you felt your world shift. Both of those tools brought about a flowering of creativity, stretching the bounds of what humans could do. So it is now with generative AI.

Generative AI threatens to dethrone humans as the kings of creativity, but keep in mind Elizabeth Bender's message. These systems have been trained to produce human-like responses, and while their work may appear creative, they generate it out of a dance of diffusion and probability that is divorced from meaning. It *seems* creative without actually being so, because creativity is born of meaning.

Who cares, right? So long as the output accomplishes the job, what difference does it make if the machine knows what it is doing? When it comes to the more mechanical parts of creativity—the

test runs of ideas, the variations on a theme, the stimulus to get the creative juices flowing—that question of meaning doesn't matter a bit. Nor does it matter at the other end of the process, when fully realized creative work is tweaked for multiple environments or hyper-personalization. Though done by people now, that is work that can, and probably should, be done by machine. What about the people? We'll come to that, but first let's take a look at the three different futures the *Harvard Business Review* believes generative AI might bring the creative world.

1. The AI partner. In this outcome, "AI will support humans to do the work they already perform." It would just be faster, easier, and cheaper to produce. Prompt engineering—the art of getting what you want out of the AI—will become the only crucial skill, and AI-generated art, copy, and code will flow like the Nile, fertilizing creative departments and even all of advertising and marketing.
2. The AI master. "Unfair algorithmic competition and inadequate governance" crowds out human

/prompt

Image of a garden not unlike the Garden of Eden illustrated in the style of a medieval illustrated manuscript.

More specific suggestion: the word "Creativity" rendered as it would be in an illustrated manuscript with the Garden of Eden as the theme for the surrounding illustration.

Midjourney



**It seems creative without actually being so, because creativity is born of meaning.**



### The Milkmaid—La Laitière

creativity in this scenario, leading to a flood of work competing for attention and driving the costs of creation down so far that humans become an uneconomical, inefficient relic.

- 3. The human boutique. Overwhelmed with algorithmically generated content that just isn't good enough, people turn toward the human-made variety, especially since humans, in this possible future, maintain a creative dynamism machines can't match.<sup>18</sup>

We believe the future is far more nuanced than that. We are deeply engaged with all forms of generative AI, and the near-term seems clear: AI will augment human creativity—profoundly—but the organic mind will be the source of the breakthrough idea, the creative leap, and the work that rises above

If you stare at a great painting long enough, you'll discover all manner of unexpected surprises as the art slowly reveals itself to your careful gaze. Curators sometimes take this a step further, using scans to find underpainted scenes, hidden drafting, or even whole artworks painted over by the artist. For La Laitière, Ogilvy Paris used AI to help look not just into the famous painting that forms the brand's logo but also beyond it, uncovering a vibrant, but imagined, scene that feels like it came straight from Vermeer's hand. The work showed that the technical sophistication of generative AI when paired to human creativity can extend the impact of even the most gifted painters.

the clutter. As David Raichman puts it, "Creativity will be empowered by the machine and won't be replaced by it."

### Art in the Age of AI

The art that will emerge in the age of AI will reflect a moment when an old world is dying and a new one is born. The last time that happened was in the decades before and after World War I—a time when new technology dismantled the existing order, often violently. The change unleashed a rush of new ideas in art, many of which centered on the constructive and destructive relationship between human and machine, and led to a range of movements—arts and crafts, constructivism, dadaism, surrealism, futurism, modernism, and more—that were, in essence conversations between mechanization and human creativity. That's a debate we're about to revisit.

Generative AI lets anyone turn ideas into writing, images, video, audio, and code using nothing but words. It can take a script and turn it into a mockup film in just hours. New tools (and it seems absurd to call out these bleeding-edge ones as "new" when the "old" ones haven't hit their first birthday) are now able to generate new images and videos from visual references, not just written ones. Ogilvy is using generative AI to go beyond the boundaries of what humans can achieve alone. "The magic occurs," says WPP's Stephan Pretorius, "when you combine human insight—and cultural insight—with this ability to create content with machines."

"Here, with all the dogmatism of brevity," as David Ogilvy wrote, is how we do it.

/prompt

Create a photograph of Duchamp's "Fountain," but replace the signature with "AI, 2023."

Ogilvy



/prompt

In the style of a drawing from one of DaVinci's notebooks, illustrate a human able to move celestial bodies through the medium of a computer.

Midjourney



## The 7 creative commandments for generative AI

### COMMANDMENT 1 Build new teams.

We have relied on creative teams from the dawn of the creative revolution, but no longer will they be an art director and copywriter working as a pair. To that, we now add AI, and more. These teams will grow and contract according to the demands of the project, and they will seamlessly include people from outside the traditional creative enclave: strategists, coders, account leads, and anyone in the organization who can contribute. For these teams to unleash the power of AI, they “need to explore, research, play, and learn. They are learning a new language,” as Robert Fara suggests. But what is that new language? Prompt engineering. When a creative person sits down to produce something, they do so by creating a piece of visual art, writing a block of copy, crafting a bit of code, or designing a strategy. Describing that task

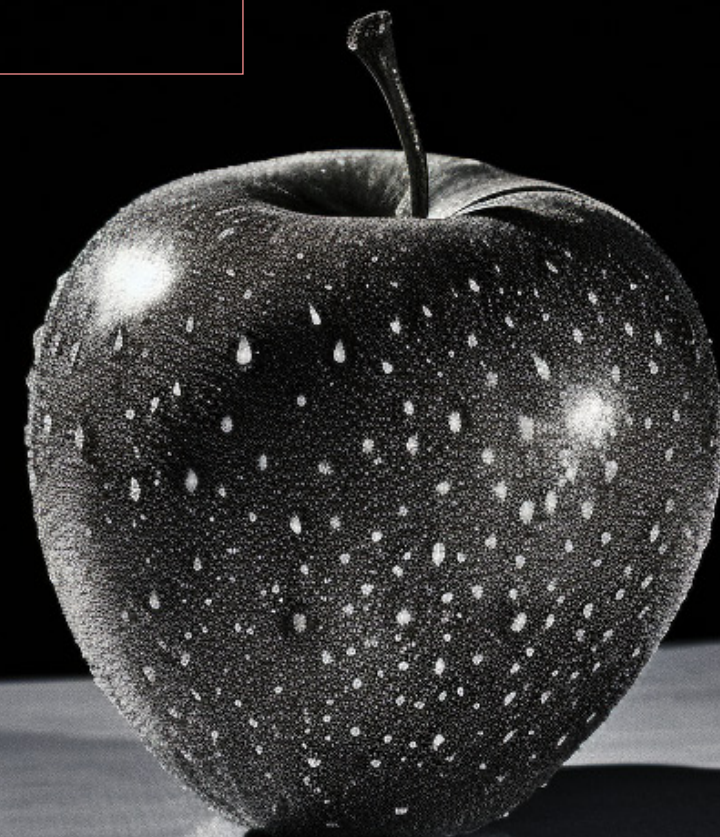


/prompt  
Image of a prompt bubble in the Russian constructivist style  
Ogilvy

to a machine using very specific words is, Fara says, “when it turns into a nightmare.” Some can deconstruct their creative process into a description that a machine can follow, and they—and the others who can learn this skill—will become a vital new part of the creative workforce: creative prompters. These will be the people who can play generative AI like an instrument, eliciting from it the beautiful realization of the notion in their hearts, and they will need to be given room to learn, to play and, for the first generation at least, define their very profession.

### COMMANDMENT 2 Honor the idea.

AI isn’t creative. It can only work with what we give it. If we ask for a picture of an apple, we’ll get something serviceable. If, instead, we ask for a photograph of an apple shot with a Summilux lens on grainy film in the style of a Surrealist version of Man Ray, we’ll get something more interesting. And if that careful description is paired to a creative concept, perhaps “fruit this good is so rare it might as well be unreal,” and a strategy that animates the brand at its best, then we are on to something that may be useful to the brands in our care. In other words, AI is in thrall to the big idea, just like we are.



/prompt  
A photograph of an apple shot with a Summilux lens on grainy film in the style of a Surrealist version of Man Ray.  
Midjourney

COMMANDMENT 3

**Become a connoisseur.**

“Just as the internet democratized information,” says Antonis Kohelis, president of advertising for Ogilvy, “generative AI is democratizing inspiration.” It takes no leap of imagination to picture what that means. The internet flooded us with disintermediated information, much of it raw, irrelevant, or just plain wrong. Generative AI will drown culture in a tsunami of mediocrity. Trained on what exists, not on what has yet to be imagined, the output of generative AI will steadily regress to the mean. You can already see it. The Midjourney- or Stable Diffusion-generated image is already something of a trope in blogposts and PowerPoints.

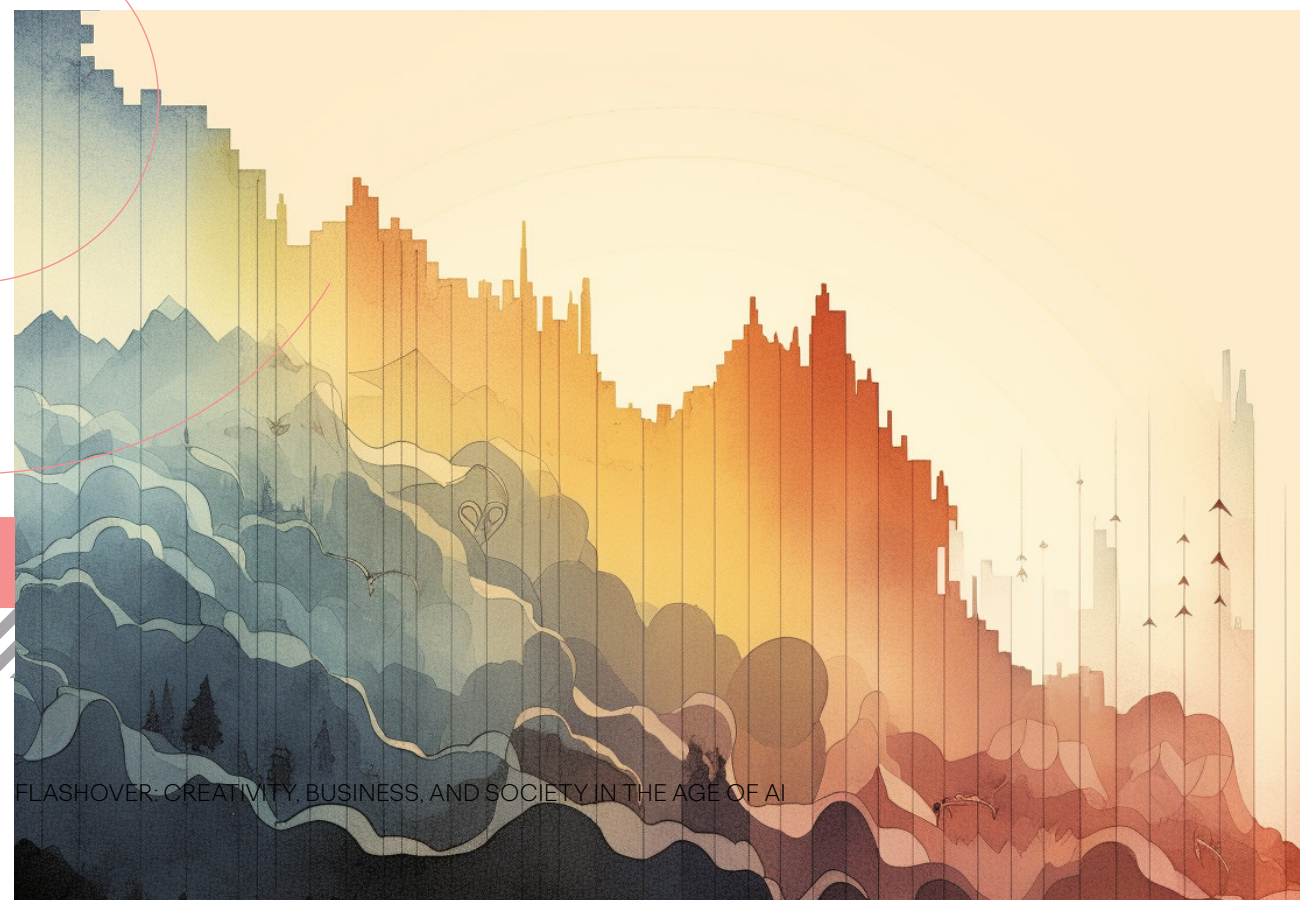
***AI is in thrall to the big idea, just like we are.***

To counter this, we must develop a talent strategy that prizes discernment everywhere in the organization: creative, account, and strategy. Ogilvy’s mantra of Divine Discontent no longer just applies to our own performance. It applies to what we work with AI to create. Because these engines are able to produce carefully crafted output, we can be lulled into praising soulless executions and not pushing ourselves hard enough to uncover the dramatic idea that should animate it.

/prompt

Image of a kaleidoscope of color and creativity steadily filtered down to the safest and blandest image or color done in the space of a graph, almost like the progression of the image from densely, chaotically creative and beautiful to mundane is the slope illustrated in the graph.

Midjourney



COMMANDMENT 4

**Iterate.**

“AI is force multiplier for creative expression.” That’s David Raichman’s phrase, and he’s right. By treating these inorganic intelligences as navigators into the land of possibility, we can uncover dimensions of our ideas we simply did not have the time or energy to explore before. That’s not laziness; it’s a function of our biology. The human mind is a pattern-recognizing machine, and it is ruthlessly efficient in pruning away that which is extraneous to the task at hand. As good as creative people are at opening their minds to serendipity, even their mental hardware innately edits out countless possibilities before they ever rise to the surface of their thoughts. AI, unencumbered by meaning or judgement, can propose iterations our minds would have never found.

***We must develop a talent strategy that prizes discernment everywhere in the organization: creative, account, and strategy.***

/prompt

An image of a dense forest with a well-camouflaged jaguar barely visible in it as seen in an x-radiogram of the type images overpainted on old masters’ canvases.

Midjourney



/prompt

A snapshot of a group of kids in daycare doing arts and crafts. One kid—clearly the photographer's child—has the faint halo and glow of the Christ child from medieval art.

Midjourney



### COMMANDMENT 5

#### Protect artists and brands.

AI will create economic upheaval for creative people. A whole layer of creative output may be wiped out as agencies automate as much of the mechanistic work of versioning, personalizing, and production as possible. Jobs will change, and, yes, some will be lost, but new opportunities will open as well. We will enhance those opportunities and nurture artists. The output of AI trained on uncompensated work is off-limits to us. Not only does it pose legal issues for us and for our brands; it steals from creators. We will train AI on our own work and use engines trained on datasets composed of rightfully compensated work such as those from stock houses and individual artists. This is a thornier problem than it seems at first glance since all LLMs are trained on datasets scraped from the internet, which, naturally, includes copyrighted work. Even fine-tuning and training generative AI may layer on top of existing training of uncertain provenance. Since legal and ethical issues remain unresolved, we will take the most conservative approach. We will also take care with what we tell generative AI. At present, many of the engines scrape and store the content of prompts, and we will never compromise client confidentiality by being careless with them.

*Jobs will change, and, yes, some will be lost, but new opportunities will open as well.*



/prompt

Create an homage to Warhol's Brillo series, only with a made up brand—or use Ogilvy. Instead of just changing the color, customize the iterations to have different logos, designs, colors, and languages.

DALLE

### COMMANDMENT 6

#### Speed production and personalization, not creation.

Much of what is done in the production phase will be automated. Production work will move from production companies to agencies where it will join personalization and versioning in being done by machine. So will market research. Some of this work won't involve the agency at all and will, instead, be done directly by clients. This will increase efficiency and cut costs. Rob Hill, chief executive officer, Ogilvy Social.Lab Brussels, recalls shooting "for 19 days to get the right packaging across 18 countries in Africa." With AI, "You can change logos, packaging, and make things relevant very quickly." AI-enabled market research will speed up response to creative stimulus and validate the work at the same time. It can also aggregate huge quantities of market feedback for creatives, expediting fine-tuning and cutting back on rounds of review. This leaves Ogilvy the freedom concentrate our efforts on our creativity and our skill so that we can work in partnership with AI to create unmistakable value across the spectrum of creative, from strategy to assets.





COMMANDMENT 7

**Advertise your ethics.**

When is AI a legitimate addition to the creative process? When it is disclosed. When it doesn't deprive creators of their rights. When it doesn't court legal jeopardy for us or our clients. When it doesn't deceive.

We will be a beacon for how to use AI to reach new creative territory, uncover deeper human connection, and do so ethically.

*/prompt*

Draw a logo of the type you would see on packaging for a food or beauty product. Instead of saying something like "Not Tested on Animals" or "Fair Trade" have it say "Made with 100% Exploitation-Free AI"

Ogilvy



## Scaling with AI

Generative AI allows us to scale our talent. When we use these new tools to reduce the time we spend on repetitive tasks, we can increase the time we

spend on craft, much in the same way that programs like Photoshop freed designers to spend more time exploring ideas instead of pasting up boards.



*/prompt*  
Create an image of a futurist sculpture of a person giving a presentation. It should be like a Boccioni sculpture.



## Talent

“If I can try 100 pictures in less than an hour, then I can spend more time thinking about the pitch,” says Fara. At the scale of Ogilvy and of our clients, he continues, “that’s a lot of money and a lot of time.” It can launch copywriters down more pathways in less time, broadening the exploration process. In fact, generative AI allows the entire organization to scale, boosting the productivity of account leads and strategists just as much as creatives. To quote Gaur, “It helps us scale the smart work done by our smart people.” AI additions to familiar tools like Photoshop and Illustrator, for example, dramatically accelerate creative output, especially in the production phase, but there’s another side of scaling. It has to do with what happens when great assets meet great data.

## Personalization

One of the ways we’ll do that is by delivering relevant content to the right people in the right context at scale—something long discussed in marketing but imperfectly realized so far. This is the true potential of marketing automation and sales enablement, and a combination of AI engines are coming together to make that possible. “The



### Shah Rukh Khan My Ad—Cadbury

The COVID-19 pandemic hit small businesses especially hard, and, for them, recovery was more challenging. Without big-brand-sized budgets, how were they to get customers to come back? With the help of one of Bollywood’s biggest stars, naturally. An AI engine helped Ogilvy India create Cadbury ads featuring Shah Rukh Khan that doubled as pitches for small businesses. By digitally mapping and recreating his face and voice, the campaign leveraged the media weight and production values of a big brand spot to boost local commerce and Cadbury brand love at the same time. Hyper-local targeting allowed for a level of individualization that would have been impossible without an AI backbone. Small business owners were even able to sign up on their own for a spot and let the machine take care of the rest, proving that in the right hands, AI-enabled creativity can be quite a sweet treat.

### *Disconnected systems and teams are becoming a thing of the past.*

adjacent technologies are jumping into the space to equip us in industry in a new way,” say Hill. Advertising has many creative tools available, “to create beautiful images, content, and templates, etc.,” says Gaur. On the other end are the outputs: TVCs, brand experiences, dot com channels, mobile, social, and the like. In the middle is data. By combing them (along with powerful workflow tools), AI can assist in the production of personalized assets in real-time.

Analytical AI can help here. An Adobe AI called Sensi can give marketers recommendations based on the performance of a similar campaigns, helping identify segments, targets, and individuals to engage with. That lets the

agency make a better recommendation to the client in less time. Or consider the sales side and, for example, the Salesforce AI, Einstein, which can qualify leads, manage opportunities, and even provide lookalike targets for salespeople to approach. No matter the assistive AI, “it reduces the cost of operation for the agency,” Gaur points out, making us less expensive to the client while being even more effective.

## Collaboration

With everything operating at greater speed, better collaboration is essential, and AI can help here, too. AI-enabled workflow management links the digital asset management, the analytical intelligence, and the people using them into a unified environment for real-time cooperation. Comms teams,

marketing teams, social teams, and digital teams can come together in a single platform, and that streamlines work and makes it easier to take in client feedback—leading to faster turnarounds and increased efficiency...and efficacy. Disconnected systems and teams are becoming a thing of the past.

The press has been filled with worry about the human cost of this automation: “The people who were part of a repetitive task that this automation takes away,” notes Gaur. But that doesn’t mean mass redundancies in his mind. Gaur sees a world where companies invest in making their people future ready, not just their tech. “There will be a lot of jobs out there that we haven’t even thought of yet,” he says. Growth in what has been a contracting industry will more than absorb any disruption.



## Strategizing with AI

“Many of these tools are interesting for analysis: summarizing articles, research, and extracting key themes.” For planners, “AI is a productivity leap board,” or so says Hill. Strategizing and planning is a research- and analysis-heavy part of our business, and that learning enhances inspiration, helping the agency get to the insights that underlie brand building efforts. Generative AI will occasion rapid change in strategy and planning, much in the same way the internet revolutionized those tasks starting in the ‘90s. The improvements fall in two categories: productivity and quality.

“AI,” Hill says, “can help us as an industry accelerate and do basic things quicker.” He’s referring to category, consumer, audience, and journey research. Inorganic intelligence can chew through the laborious part of that by directing planners to key sources and answering desk-research questions with useful summaries. Transcription, the bane of many a planner and account executive’s life, is now an AI afterthought, shaving off hours of mechanical labor. Just by automating the basic information gathering and analysis that enables insight, AI allows humans

**“There will be a lot of jobs out there that we haven’t even thought of yet.”**

to spend more time thinking while still improving productivity and lowering costs. That’s essential in a business beset by margin pressure. Hill believes that if we embrace AI, Ogilvy can improve underlying profitability. We’ll “work smarter and have fewer people doing what we used to do.” Disruption will follow, of course, but perhaps that’s exactly what advertising needs to enhance its future viability, and growth, Hill joins Gaur in hoping, will absorb the impact on people.

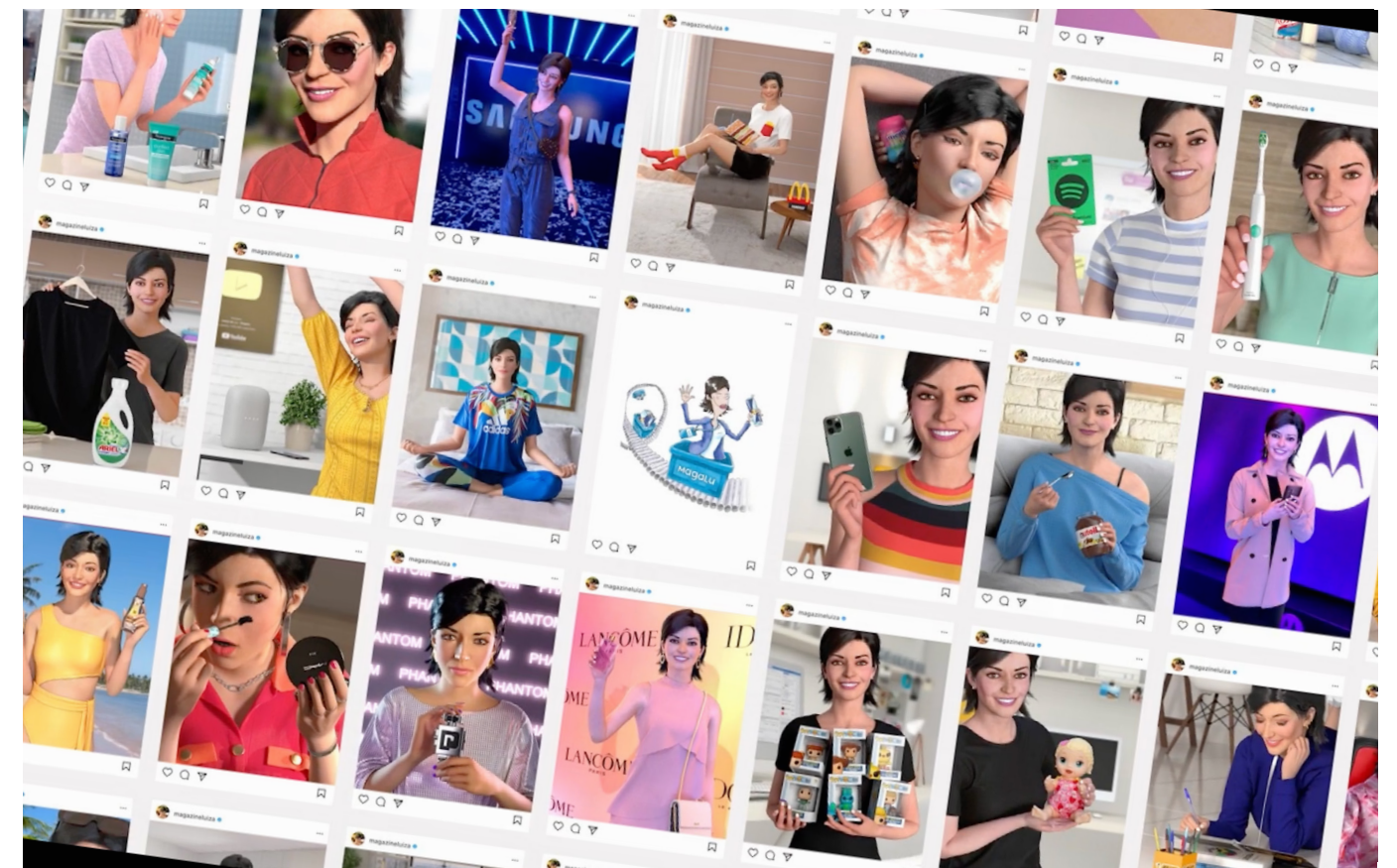
An upsurge in quality will come as Ogilvy integrates AI into planning and strategy. Beyond the obvious fact that planners will have more time to generate better ideas if they’re not spending time doing what a machine can now do, generative AI opens new paths to inspiration. With imaginative prompting, they can suggest new audiences, themes, or expressions. They can explain complex topics, allowing planners to connect dots through areas that were once opaque. AI can help people get unstuck, nudge them toward new avenues they may not have considered, and assist them in organizing their thoughts. They can suggest ways

### Lu from Magalu

One thing became apparent shortly after generative AI was publicly released: people started to form real human attachment to the AI engines they were chatting with. But that’s something Magazine Luiza knew long ago. As soon as technology allowed it, Magazine Luiza teamed up with Ogilvy São Paulo to evolve its virtual assistant, Lu, into a fully realized digital influencer named Magalu, and what a ride she’s been on since then. Magalu has appeared on live TV, in music videos, in the content produced by major brands, and even on the cover of Vogue.



Along the way, she’s driven sales and earned millions of fans—showing that, just as we’ve bonded with great characters from fiction and movies, we can connect with enthralling virtual people. The human capacity for connection is more profound than we may realize.



/prompt

Begin with the image of Charlie Chaplin caught in the gears in Modern Times. Then render that in style of Natalia Goncharova.

Midjourney



**No matter where or how we use inorganic intelligence, Ogilvy abides by WPP's six principles governing the use of AI:**

1. We acknowledge our responsibility to understand both the limitations and possibilities of generative AI.
2. Generative AI supports and complements our creativity; it is not a substitute for this.
3. We understand the provenance and models used in the learning data of our chosen generative AI platforms.
4. We are transparent to our clients, our people, and the wider community about how we use generative AI.
5. Our people are encouraged to speak up when they have concerns about our use of generative AI.
6. We recognize this technology is evolving and the evaluation of these principles is an ongoing task.

***“AI is a productivity leap board,” or so says Hill***

to improve writing, and that improves the clarity of our communications with each other and our clients. AI shines when it comes to finding just the right image to express an idea, designing a beautiful presentation, and even composing, performing, and creating a video for a song that livens up what would have been a boring topic—so long as people know how to use it well.

Creatives aren't the only ones who will need time to explore AI. Strategists, planners, and account executives do, too, if they're to master this new technology. Formal training will follow when we get to the point where AI has redefined industry processes and led to bespoke AI-enabled workflows, but until then people need room to experiment and allowance for the time and costs of satisfying their curiosity. That's how we nurture expert users and learn how to tell better stories faster and cheaper.



/prompt

There's a famous Van Gogh called "Factories at Clichy," which shows the tension between the old world and the new. Reinterpret that for the AI age. Instead of factories, use data centers. Replace the fields with cubicles.

Midjourney

# Are you ready to trust your business to AI?

Employees at one consumer electronics firm turned to ChatGPT for help on a coding project—an act that exposed confidential company information. They're not the only ones. In fact, fully 11% of the data that employees use in their ChatGPT prompts is confidential.<sup>19</sup> OpenAI uses the interactions people have with ChatGPT to train the model better, and that means your company's data doesn't just get exposed to OpenAI; it could also get included in the model itself.

## Disruption is coming—but so is growth

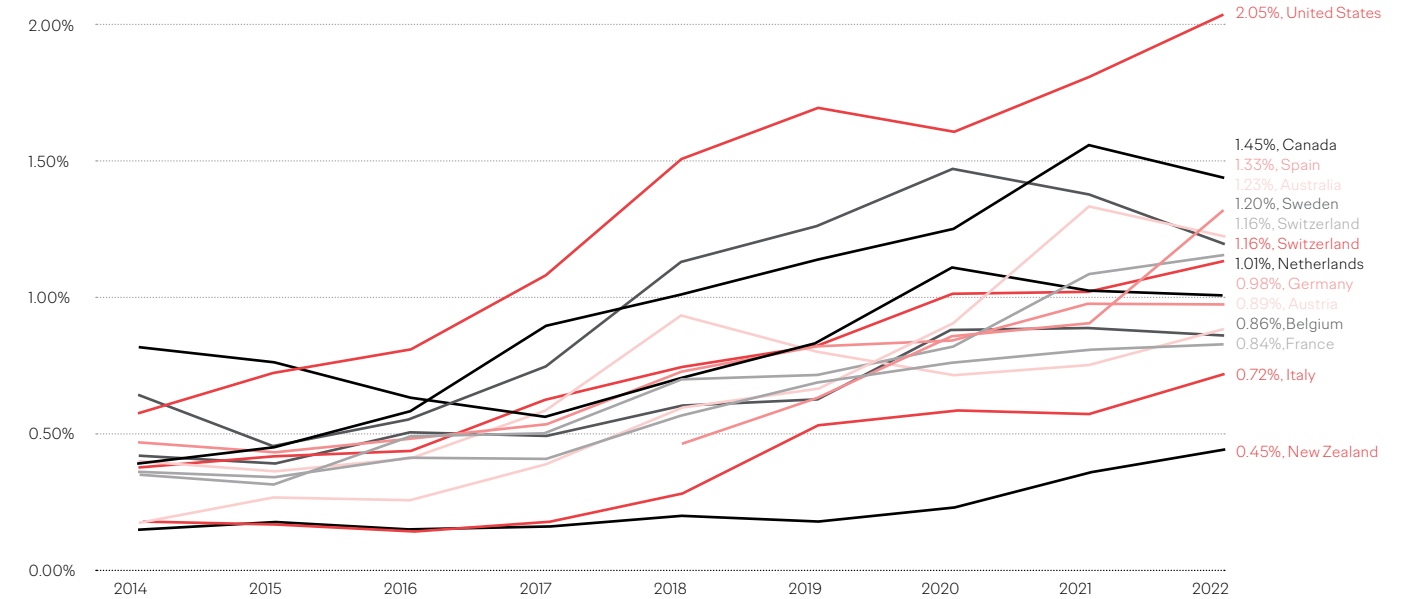


### Heavily Accented—Cruzcampo

An accent isn't just a way of speaking. It's also an emphasis—an exclamation point you draw for all to see. It is both the symbol and expression of passion, at least it is for the legendary Spanish singer and actress Lola Flores. With the input of her daughters and sophisticated AI, Ogilvy and Cruzcampo, one of Spain's leading beers, Lola Flores came back to life to deliver an impassioned celebration of the accent: her's, her country's, and that of all within reach of her reanimated voice. As AI unlocks greater creativity and opportunity for all of us, Lola Flores' message resonates: we must all be proud of our roots.

As more employees use generative AI, incidents like this will become more common. A recent survey by Kizen found that 90% of workers earning over \$100,000 reported using AI in their work<sup>20</sup>. In case the implication isn't clear, that means AI is coming for white collar jobs—something you'll learn more about in the next section. AI adopters have a downpour of how-to-use-AI content to help them do their jobs, from [prompt templates](#) and [AI work hacks](#) to breathless newsletters and databases of AI tools. No longer a specialized subset of the IT world requiring heavy training and investment, AI has shouldered into the workplace through platforms and public interfaces. Technology enterprises are striking partnerships to help them roll

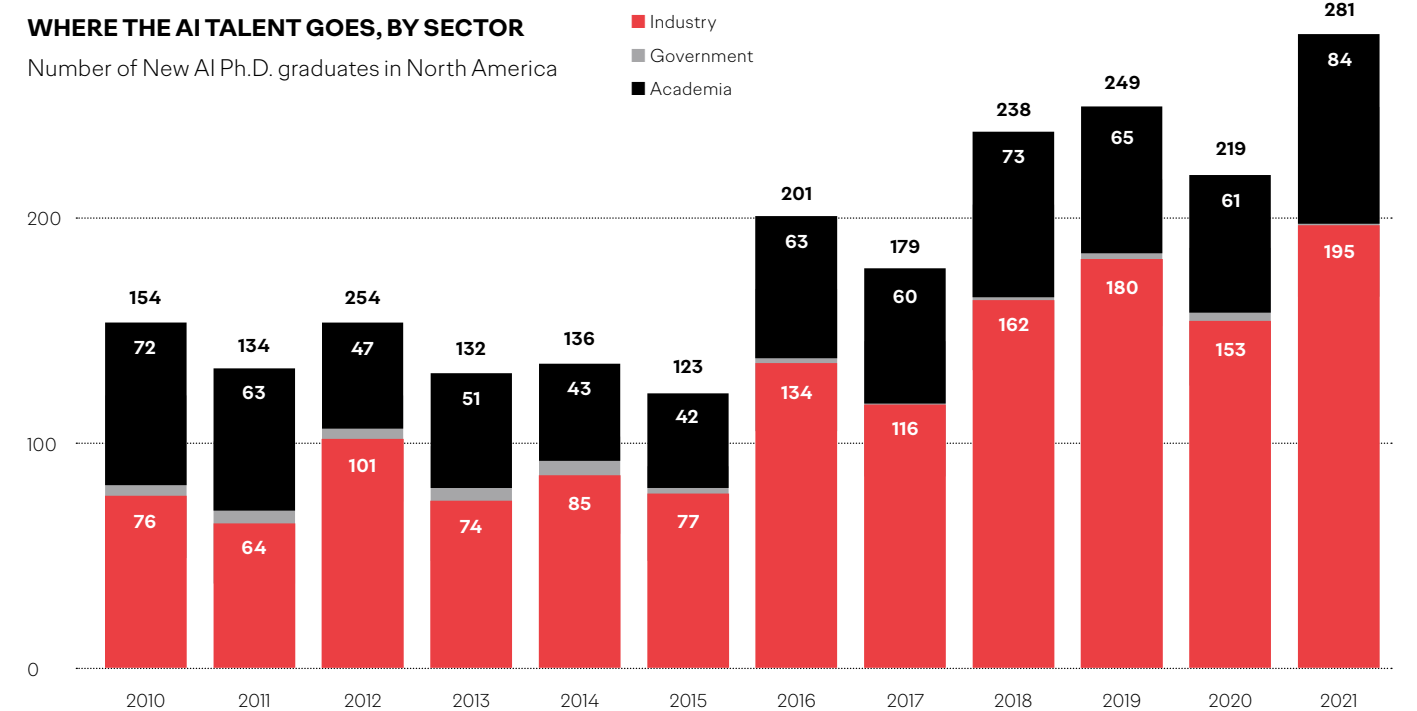
AI JOBPOSTINGS (% OF ALL JOB POSTINGS) BY GEOGRAPHIC AREA 2014-22



Source: Lightcast, 2022 | Chart: 2023 AI Index report

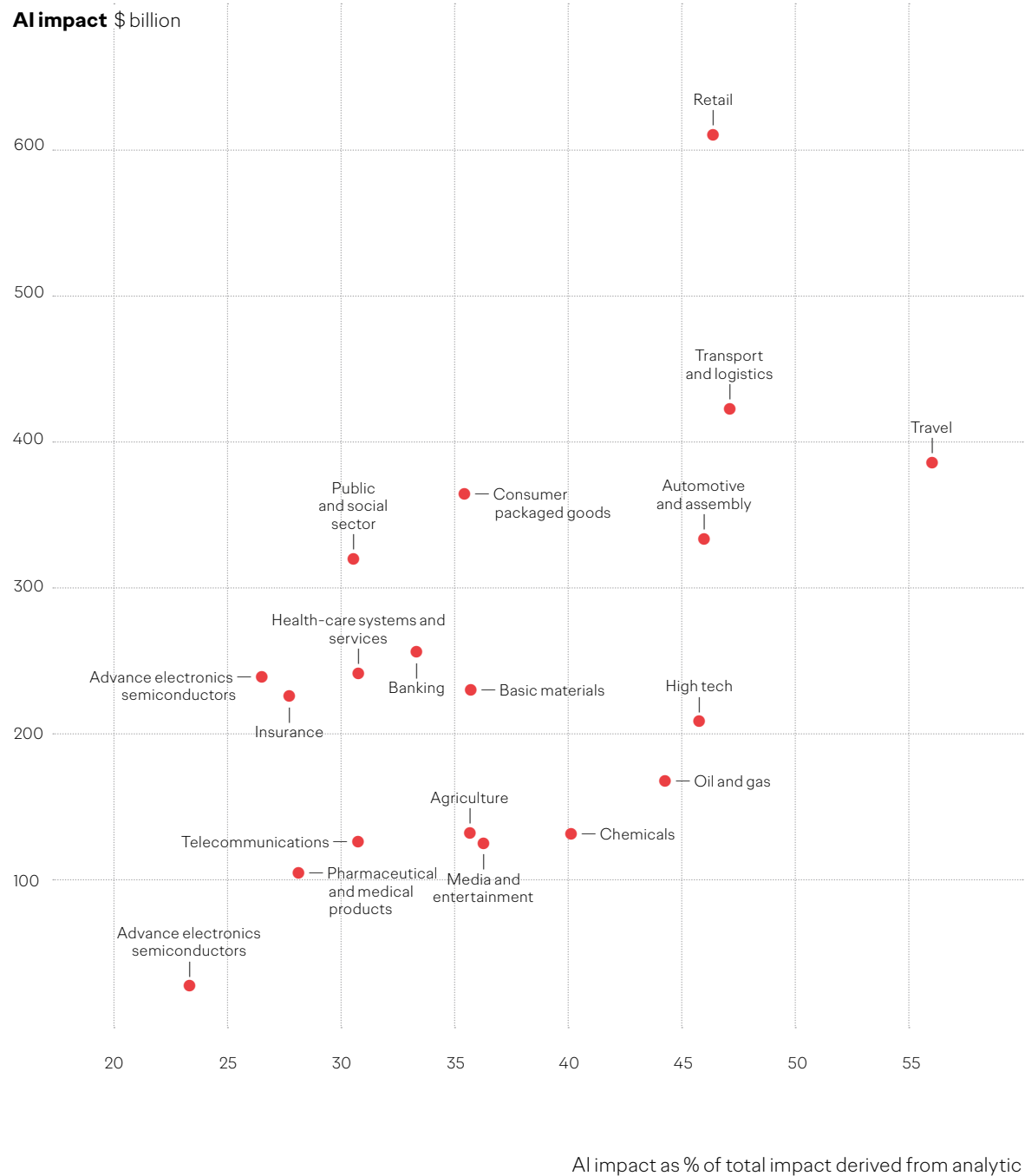
WHERE THE AI TALENT GOES, BY SECTOR

Number of New AI Ph.D. graduates in North America



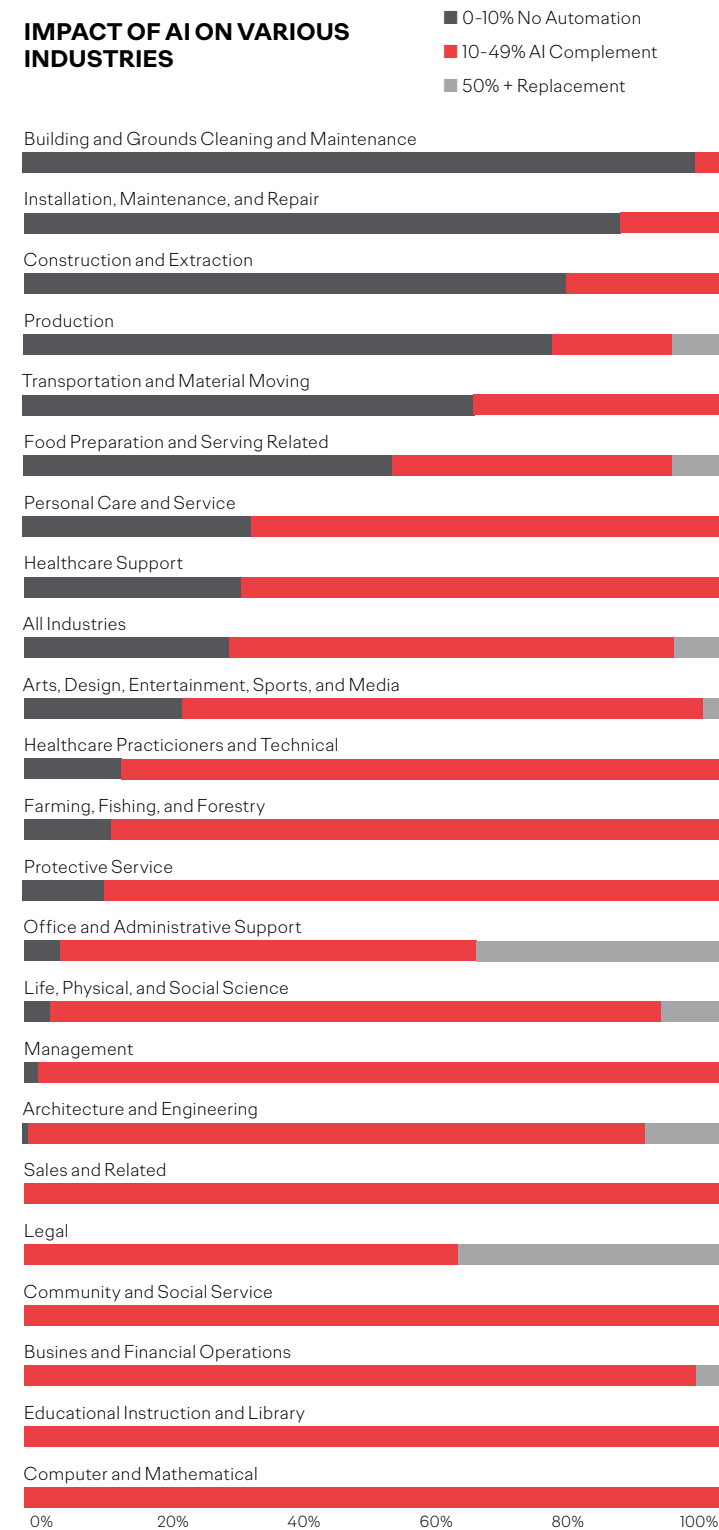
Source: CRA Taulbee Survey, 2022, via the 2023 AI Index Report

**AI HAS THE POTENTIAL TO CREATE ANNUAL VALUE ACROSS SECTORS TOTALING \$3.5 TRILLION, OR 40 PERCENT OF THE OVERALL POTENTIAL IMPACT FROM ALL ANALYTICS TECHNIQUES**



Source: Notes from the AI Frontier, McKinsey Global Institute, 2018

**IMPACT OF AI ON VARIOUS INDUSTRIES**



Source: Goldman Sachs Global Investment Research

**60% OF WORKERS ARE EMPLOYED IN JOBS THAT DIDN'T EXIST BEFORE**

2023

And most of those jobs are in industry, not government or academia.

The rest of the economy may not be so lucky. Three hundred million full time jobs are exposed to automation worldwide, and two-thirds of current occupations are susceptible to some degree of collaboration with or replacement by AI<sup>25</sup>.

Fortunately, Goldman Sachs anticipates, "that many workers that are displaced by AI automation will eventually become reemployed—and therefore boost total output—in new occupations that emerge either directly from AI adoption or in response to the higher level of aggregate and labor demand generated by the productivity boost from non-displaced workers."<sup>26</sup> Lest you think this is Pollyanna-like thinking, consider that 60% of workers are currently employed in jobs categories that didn't even exist



*/prompt*

An image that imagines the synaptic space between two neurons as something that can't be grasped. Something that's always just out of reach. Like a word you know but can't quite define or a concept that is on the tip of your tongue.

*Midjourney*

in 1940. In other words, “over 85% of employment growth over the last 80 years is explained by the technology-driven creation of new positions.<sup>27</sup>” There’s ample precedent for the positive effect of disruptive technology, too. Goldman Sachs notes that both electrification and personal computing resulted in substantial productivity booms. Perhaps the confidence Gaur and Hill have isn’t misplaced.

While the GDP impact from AI will be enormous, it won’t be evenly distributed. Judging by their investments, private investment has bet that the biggest payoffs initially will be in medical and healthcare; data management, processing, and cloud; fintech; cybersecurity and data protection; and retail.<sup>28</sup> But those aren’t the only industries to benefit.

# Making AI work for your business

**The benefit to business decision-making from having specially trained LLMs will be vast.**

The combination of just two foundational technologies—computer vision and natural language processing—provides nearly endless possibilities. The AI we already have offer so much more. Getting from that promise to the productivity and GDP gains on the horizon will involve a lot of questions, many of which, unfortunately, are still unanswered. The first, and most important may be, as Ashley Wood, global principal, brand innovation and insights at Ogilvy Consulting, asks, “Is AI truly business-ready yet? Do you really trust your business with it?” And, for that matter, how do you even make those judgements? How do you use it in your business and for your products? How do your employees use it to work better? What policies do you apply? Where do you place your investment now and in the coming years? And so many more.

Yet, there is a way through the woods: while AI is disruptive in ways we don't yet understand, it falls into a familiar framework. AI is the next chapter in the large-scale digital transformation that began at the end of the last century. As a result, some of the

same ways of looking at change may help businesses adopt AI wisely.

The first step is to look at what your business needs in light of what AI can do now and what is on the horizon.

The core layer of machine interpretation is well developed (even while it continues to advance). While slightly more advanced, interaction is also substantially developed already. AI creation, as the mania surrounding generative AI demonstrates, still leaves people astounded, even though the tools have a long way to go to catch up to the hype. On the simpler end of the scale, autonomous operation is starting to come into its own, but reliable, full AI-driven mobility in complex environments is still in the future. AI decision making, too, remains immature, even if it is getting better fast. Consider BloombergGPT, a 50-billion parameter LLM built especially for finance. It's likely the first in a series of domain-specific models that will help business leaders run companies better in the future. Rare, however, will be the company that can fund such an effort on its own. LLMs are hugely expensive to

AI CAPABILITIES BY CATEGORY

4. Decide	Aided decision-making	Autonomous decision-making	Productive inference	
	Breakthrough			
3. Operate	Control of digital processes (e.g. investment algorithm)	Manipulation of objects (Physical objects)	Guidance for mobility (cars, vacuum cleaners, robots)	Full mobility (cars vacuum cleaners, robots)
	Advanced			
2. Create	Produce text	Create images or video	Create audio	Create ideas and provide information
	Advanced			
1. Interact	Natural language processing (NLP)	Language Generation	Real-time recommendation and coaching for interactions	Computer vision: gestures and expressions understanding
	Advanced			
0. Interpret	Natural language processing (NLP)	General computer vision	Image and facial recognition	Relationship learning
	Common			
	Knowledge and rules refinement	Smart data analytics	Object detection	Audio and speech identification

Source: Ogilvy Consulting

**AI is the next chapter in the large-scale digital transformation that began at the end of the last century.**

train, in both monetary and carbon costs. Choosing to build one from scratch might break the company budget while also putting a crimp in its sustainability story.

And yet the temptation will be strong because the benefit to business decision making from having specially trained LLMs will be vast. So will the potential to sell access to insights born

of the huge data sets large companies have. Every vertical will have its bespoke large language models that are better than the generic ones.

Nevertheless, the existing ecosystem offers plenty for a company to access, and for Salmenkivi, this opportunity falls in three buckets: distribute, capture, and create.

- 1. Distribute—Businesses can license existing AI technology which they then exploit in a middleman model. They build it into their core offering or create services or products that run on top of it.



/prompt

Draw a cubist version (more Braque than Picasso) of a still life of a conference table after a big meeting. The table is littered with the remains of snacks and lunches, notes, printed papers, coffee cups.

Midjourney

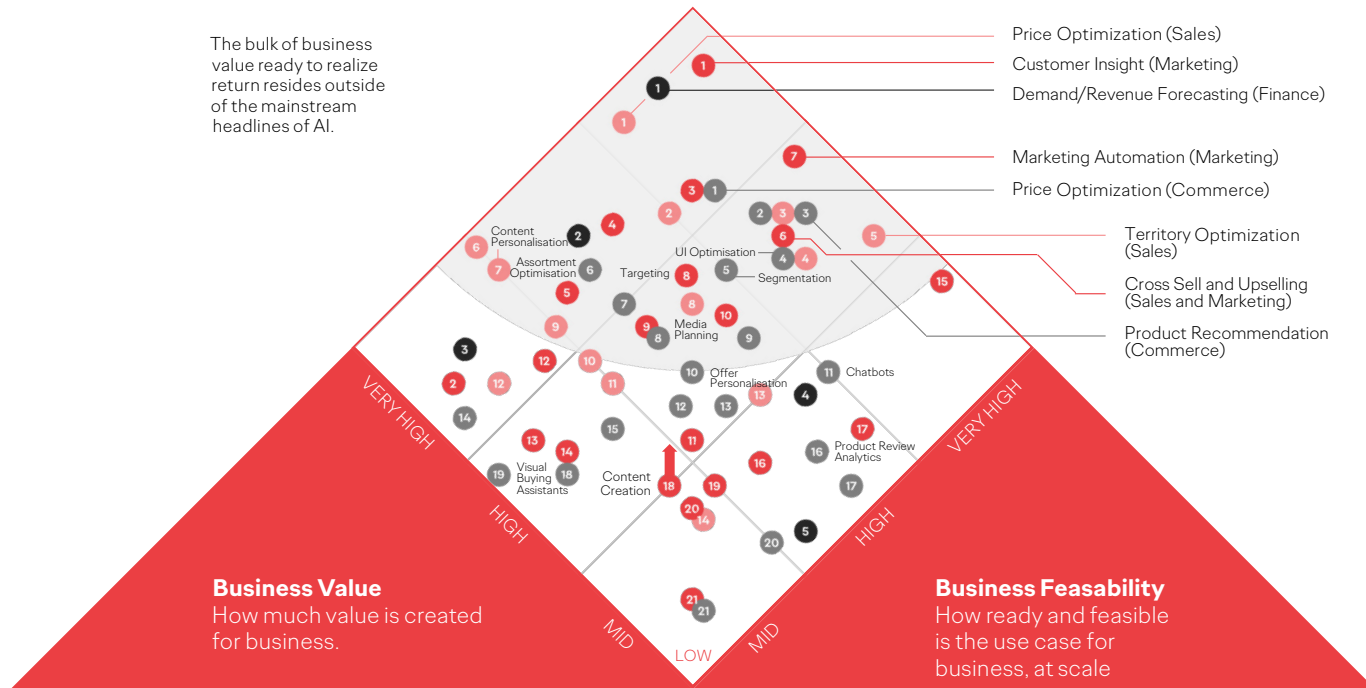
2. Capture—Open market AI services can cut costs, improve products or services, or enhance customer satisfaction. With proper safeguards in place, staff can use existing platforms outright. Alternatively, a business could purchase a tailored AI solution or build AI agents on existing APIs to automate tasks in research, marketing, customer service, or e-commerce. AI can even help enhance a business's own API.
3. Create—This is the most expensive option, and companies can choose to use some of what's already created or elect to build it all from scratch—and everything in between. This provides the opportunity to develop custom LLMs, neural networks, and algorithms, which can fuel decision-making and insight. The outcome, or for that matter, the training sets and underlying hardware, can be sold as part of an AI-specific offering, not unlike how Amazon Web Services (AWS) emerged from Amazon's internal IT systems. Armed with this broad view, a business can look more deeply into which AI





**VALUE vs. FEASIBILITY**

The bulk of business value ready to realize return resides outside of the mainstream headlines of AI.



- |   |   |   |  |
|---|---|---|--|
| <p><b>● Finance</b></p> <ol style="list-style-type: none"> <li>1. Demand/Revenue Forecasting</li> <li>2. Anomaly and Error Detection</li> <li>3. Decision Support</li> <li>4. POC Revenue Forecasting</li> <li>5. Cash Collections</li> </ol> | <p><b>● Sales (B2B)</b></p> <ol style="list-style-type: none"> <li>1. Price Optimization</li> <li>2. Lead Scoring</li> <li>3. Cross-Selling and Upselling</li> <li>4. Demand Generation</li> <li>5. Territory Optimization</li> <li>6. Customer Lifetime Value Analysis</li> <li>7. Lead Discovery</li> <li>8. Sales Content Personalization</li> <li>9. Knowledge Management</li> <li>10. Sales Forecasting</li> <li>11. Guided Conversations</li> <li>12. Opportunity Scoring</li> <li>13. Account Intelligence</li> <li>14. Relationship Intelligence</li> </ol> | <p><b>● Marketing</b></p> <ol style="list-style-type: none"> <li>1. Customer Insights</li> <li>2. Lookalike Audiences</li> <li>3. Lead Prediction</li> <li>4. Pricing</li> <li>5. Planning</li> <li>6. Cross/Up Selling</li> <li>7. Marketing Automation</li> <li>8. Targeting</li> <li>9. Media Planning</li> <li>10. Fraud/Fake Detection</li> <li>11. Brand Management</li> <li>12. Strategy</li> <li>13. Creatives</li> <li>14. Engagement</li> <li>15. Ads/Bidding</li> <li>16. Profiling/Segmentation</li> <li>17. Campaigning</li> <li>18. Content Creation</li> <li>19. Content Curation</li> <li>20. Influencer Marketing</li> <li>21. Storytelling</li> </ol> | <p><b>● Commerce</b></p> <ol style="list-style-type: none"> <li>1. Price Optimization</li> <li>2. Keyword Search</li> <li>3. Product Recommendation</li> <li>4. UI Optimization</li> <li>5. Customer Segmentation</li> <li>6. Assortment Optimization</li> <li>7. Demand Forecasting</li> <li>8. Replenishment Optimization</li> <li>9. Fraud Detection</li> <li>10. Offer Personalization</li> <li>11. Chatbots</li> <li>12. Virtual Customer Assistants</li> <li>13. Authentication Optimization</li> <li>14. Commerce Operation Optimization</li> <li>15. Product Review Analytics</li> <li>16. Product Categorization</li> <li>17. Customer Enquiry Routing</li> <li>18. Visual Product Search</li> <li>19. Visual Buying Assistants</li> <li>20. Image Categorization</li> <li>21. Natural Language Search</li> </ol> |
|---|---|---|--|

Source:  
Gartner 2022 (Finance)  
Gartner 2022 (Sales (B2B))  
Prof. Dr. Peter Gentsch ISBN: 978-3-319-89957-2:2019 (Marketing)  
Gartner 2021 (Commerce (Digital))

**ACING THE AI TRANSFORMATION**

Like all transformation, AI isn't just switched on, there are multiple dimensions which must be considered



Source: Ogilvy Consulting

applications offer the best combination of AI and feasibility. Christopher Brewer, president of Ogilvy Consulting in Asia, likes to consider if, “this disruption is going to change a leader’s world tomorrow or if it is something that has a longer tail to it,” and to determine that he’s built a framework and fleshed it out with examples from three verticals: marketing, B2B sales, and finance<sup>29</sup>.

A quick glance shows that a few things are emerging now—in Brewer’s words, “customer insight, finding audiences, finding leads...the stuff that fuels business today. That’s where AI is going to have an immediate impact.” Others,

***This is your moment to gain first-mover advantage, not the time to realign your whole enterprise to AI.***

like CLV analysis, financial decision support, or strategy, may have huge potential for business but are further down the development line. The trick, Brewer believes, is to focus on the tip of the pyramid while waiting for the technology to catch up to the other tasks of high business value.

***"Customer insight, finding audiences, finding leads...the stuff that fuels business today. That's where AI is going to have an immediate impact."***

Extracting that value requires change management in three areas: marketing, technology, and organizational dynamics.

Before you freak out—and if you're not a little nervous, you haven't been paying attention—remember this: these are the early days and progress is slower than it appears. Sure, AI is going faster than the internet, but 30 years on from the introduction of the internet, e-commerce only accounts for 15% of buying and selling. People have been formulating the future for AI for over a decade now. IBM Watson, for example, debuted in 2010. It's no stretch to say that ten or so years more will be needed for AI to mature in business. This is your moment to gain first-mover advantage, not the time to realign your whole enterprise to AI.

### Improving inter-corporate relationships

That said, AI may soon be able to help your business get in tighter alignment with your partners. Building cooperation between two organizations, either for the purpose of M&A or just a client/vendor relationship such as the one that powers advertising and marketing, is a complex problem. Systems have to be merged. Metrics shared. Individuals directed. Cultures meshed. Expectations set. The list goes on, but this is a place for AI to assist. One of the most challenging times between an agency and a client is during the first phase of working together. There's a lot of friction, not because of bad feelings but rather because, as Dickon Laws says, "You're bringing a bunch of new people together."



### AI Love You—Lacta

Generative AI is remarkably human seeming, as anyone who has played with it (or read this far in this paper) knows, but it's also devoid of emotion and meaning. So why turn to it for the most heartfelt of communications? Because in an era when expressions of love have been reduced to staccato texts, three-letter acronyms, or even just tapbacks, even the imperfect AI-generated love letter is a heck of a lot better than anything else that's going around. That's why Lacta—the Greek chocolate bar that has become synonymous with love—and Ogilvy Greece created an AI-powered love letter generator that turns the reductive power of technology into an emotional powerhouse. Better yet, the brand used AR to make the receipt of an AI love letter as fun as the generating of one. Receipts just scanned a Lacta package and poof! Instant feelings. AI may not be as smart as humans yet, but maybe it can make humans wise up a bit.

Not everyone on the client side will have been involved in the pitch, and they need to see that the company has made the right decision. On the agency side, people need to be "speed dipped into what the brand is," as Laws rather vividly pointed out. A single AI, however, trained on the particulars of the pitch, the needs of the client, and the information gaps in the agency could smooth this onboarding process considerably.

Such a vision suggests that AI could also be used, Laws suggests, to determine which agencies are a good match for the needs, culture, and talent of a client (and vice versa) and do so in a much more data-driven way than any un-augmented pitch consultant could muster. That AI could even predict the chances that each organization—client and agency—will end up in an alliance, allowing each to better apportion their resources.



/prompt

Begin with an aerial close up of a ruined landscape where You can see eddies of chemicals and waste caught in the light and reflecting into beautiful, shimmering patterns. Now render that as a Fauvist would.

Midjourney

# What does our future hold: promise, peril, or both?

As the rapid adoption of AI makes clear, we, as a culture, have decided that the present and future benefits of this technology outweigh its potential harms. Disruption is coming, and it will cut across nearly all industries. As AI integrates with robotics, that disruption will spread to verticals that may be spared the initial upheaval. Though productivity projections suggest that job losses and displacements will be absorbed by growth, that's little comfort to the individual who has been turned out on the street. Projections may be wrong, too. After all, the internet was expected to produce a massive spike in productivity, but it didn't alter the labor productivity curve much at all.

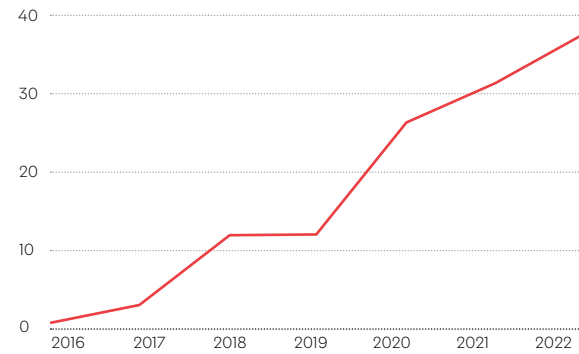
GETTING  
NAILING  
MENTEN

**Governments and policymakers are awakening to the destabilizing force that is AI.**

That's not the only worry. We are weakening the foundations on which shared information, authenticity, and veracity rest—and that comes on top of the damage that has already been done there. Given the economic incentives, it's unlikely we'll stop anytime soon, and even though open source AI engines like HuggingFace and Stability are in the market, "the way AI is going to work is through a competitive dynamic between [sic] Google, Microsoft, and Meta<sup>30</sup>," as New York Times columnist Ezra Klein puts it. Governments and policymakers are awakening to the destabilizing force that is AI. China, mindful of its internal security and social placidity, has promulgated draft regulations that would place generative AI within the nation's censorship regime.<sup>31</sup>

**Though productivity projections suggest that job losses and displacements will be absorbed by growth, that's little comfort to the individual who has been turned out on the street.**

**NUMBER OF AI-RELATED BILLS PASSED INTO LAW IN 127 SELECT COUNTRIES**



Source: 2023 AI Index Report, IEEE Spectrum

Questions of copyright for AI generated work and usage rights for training data are working their way through the legal system at a rate seven-times higher than in 2016;<sup>32</sup> the resulting decisions will have significant impact on how we use AI.<sup>33</sup> Legislatures and parliaments are keen to weigh in, too.

The speed of AI development and its uncanny imitative power will easily overmatch the glacial pace of government. From our creative agency standpoint, we worry about the tide of mediocrity that AI ensures will soon wash in, but from a societal point of view, the risk of high quality, magnetic, convincing, and even deep-faked misinformation is much more troubling. Recall that AI is designed to seem human and convince us of the authenticity of their responses. Allowing corporations that depend on the manipulation of people to wind up in effective control of that technology



**We need fear not a sea of sameness but rather an ocean of untruths. AI won't just corrupt the public's taste. It will rot its already-flimsy ability to discern truth.**



/prompt  
Draw two figures debating futility in the style of one of Max Ernst's "Robbing of the Bride" paintings.  
Midjourney

**The question of chips**

The peculiarities of computer chip design and production has been lost in all the discussion about AI, and it is an issue with geo-political ramifications. As the pandemic chip shortage made clear, the modern world depends on computer chips for almost anything. The interruption of chip delivery hobbled many industries, from headline-making ones like automotive to less-visible ones like soft-drink production. AI doesn't just depend on computer chips; it requires specialized classes of them that have graphics processing units or GPUs at their hearts. These chips are designed and manufactured by very few companies. In fact, the vast majority of AI runs on the GPUs from just one chip designer: Nvidia<sup>45</sup>. Most of those chips are

manufactured by Taiwan Semiconductor (TSMC)<sup>46</sup> in its Taiwanese foundry. (Construction of a US-based plant is underway.) Making these state-of-the-art chips is difficult and requires a highly trained workforce operating machines that are themselves made by only one company. This constraint adds complexity to US/China relations, export controls of high-end computer chips, and, of course, the very future of Taiwan itself—especially since it is enormously difficult, time-consuming, and expensive to build high-end chip design and manufacturing capacity.

As use of AI grows, companies will need to factor geopolitical GPU-supply risk into their calculations.

***We know how AI is built but not what happens in its cold, silicon heart. This is the problem of interpretability.***

is foolhardy. To put it baldly, the better Klein’s oligopoly of Microsoft, Meta, and Google persuade and manipulate humans, the better their financial performance will be.<sup>34</sup> Therefore, they will optimize for that variable. Now imagine our polarized ideological landscape and the ubiquity of irresistible falsehoods. It doesn’t take a great leap of logic to see that we need fear not a sea of sameness but rather an ocean of untruths. AI won’t just corrupt the public’s taste. It will rot its already-flimsy ability to discern truth. The AI-generated hit song featuring fakes of Drake and TheWeeknd is a catastrophe for intellectual property,<sup>35</sup> but the right (or, rather, wrong) kind of AI-generated faux presidential video could be a threat to civic order.

Consider, too, the environmental cost of AI. Training runs for LLMs use significant amounts of electricity, cooling, and, of course, electronics. Even one of the most efficient models, BLOOM, emitted 25 times more carbon than a flight from New York to San Francisco.<sup>36</sup> Daily use can be even more costly to the environment. One estimate has



*/prompt*  
 Draw an abstract impressionist take on the words “black box.” Lean more toward Rothko than toward Pollack.  
*Midjourney*



ChatGPT using as much energy as 175,000 people in January 2023 alone.<sup>37</sup>

During its training runs, generative AI drank deeply from all the bias and hate humanity has vented into publication and the internet. “It’s going to replicate those biases and going to tuck them away in a black box that makes them harder to uncover,” says Klein.<sup>38</sup> They creep into the responses we get from generative AI, even if the prejudice is covert. As AI grows in popularity, its responses will shape normative ideas of race, gender, sexuality, and representation, further cementing corrosive biases just when society was beginning to deal with them. The filters

and safeguards companies put on AI help, but they are not perfect. Clever prompt engineers have induced filtered AI to write porn and induce mayhem. Unfiltered or loosely filtered AI might be far more destructive. We just don’t know.

Why not? Well, Klein’s mention of the black box is important. We know how AI is built but not what happens in its cold, silicon heart. This is the problem of interpretability. Researchers maintain that they don’t know why their algorithms do what they do, and that’s one reason AI develops skills the designers never imagined. Until we can see inside the models, we can never adequately predict

their abilities or be fully confident in their results. If AI is going to make HR decisions, cybersecurity improvements, financial transactions, resource allocations, and the like, we need to see how it is arriving at its conclusions so that we can judge the impartiality or correctness of its actions. We demand the same accountability of humans. Why not AI? Interpretability, Klein asserts, is a potent way to mitigate some of the prosaic dangers of AI—things like economic crashes, security meltdowns, biased hiring decisions, and more. It may be in the public interest, but it’s not necessarily what the AI companies are after.

## The hard problems

As you can see, even today’s remarkable, but specialized, AI (ANI, for those of you who remember a few thousand words back) suffer from what are broadly defined as *alignment problems*—a gap between the AI’s actions and human values, goals, intents, preferences, and principles. That’s frightening enough. What happens when we achieve AGI—human-level inorganic intelligence? Poorly aligned AGI poses an existential threat, and AI business leaders and researchers know it. That’s the impetus behind a May 30, 2023 statement that said, “Mitigating the risk of extinction from AI should be a global priority alongside other societal-scale risk such as pandemics and nuclear war.” This isn’t just public posturing, either. “P-Doom” is a new topic at Silicon Valley parties. P-Doom is the probability that an individual gives to AI bringing about catastrophe for humanity, and, as Casey Newton said in a recent episode of Hard Fork, “In the AI research community, there are people who think that probability is like 10 % or higher.” As fascinating a technological problem as AI is—and as much potential for good that it has—one must wonder why humanity is



tinkering with a technology that experts believe has a 10% or higher chance of subjugating or eliminating our species.

P-Doom may be something we don’t have to worry about for a while. Even Sam Altman, CEO of OpenAI, the creator of

ChatGPT, acknowledges that less is to be gained by training larger LLMs and more to be won by focusing on “rapidly increasing capability.”<sup>39</sup> Or we may need different models, such as whole brain emulation, enhanced networks, or brain-computer interfaces, to achieve

/prompt

Create an uncanny valley photo of this quote from Stephen Deadalus in James Joyce’s Ulysses: “seaspawn and seawrack, the nearing tide, that rusty boot. Snotgreen, bluesilver, rust: coloured signs.”

Midjourney

it. It could be decades before AGI debuts. Or years. Or months. As Nick Bostrom points out, the experts are all over the map in predicting its arrival<sup>40</sup>, but we had better solve the alignment problem long before its birth. The recursive self-improvement baked into AGI will likely cause a rapid intelligence explosion, leading from AGI to artificial superintelligence far faster than we would be able to react. You can imagine for yourself the risk that an unaligned vastly superior intellect would pose to the previous holders of the cognitive crown.

This is an enormously difficult problem. Says OpenAI, “Unaligned AGI could pose substantial risks to humanity and solving the AGI alignment problems could be so difficult that it will require all of humanity to work together.”<sup>41</sup> That’s sobering. OpenAI proposes to solve it by tasking AI with it: “Building and aligning a system that can make faster and better alignment research progress than humans can.”<sup>42</sup> What could possibly go wrong?

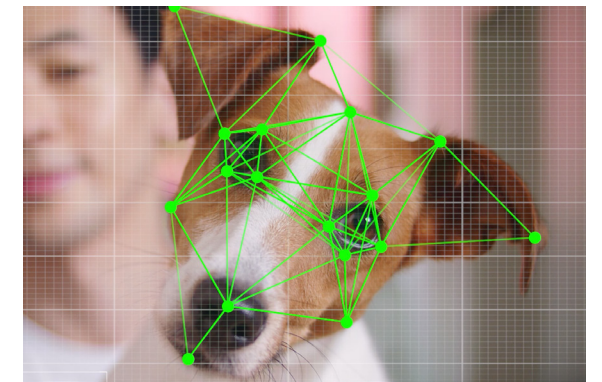
## The promising solutions

If this last section has been alarming, good. AI is here to stay, and AGI is coming. An uncontrolled experiment on an existential threat is folly, and even the inventors of the atomic bomb, working at the height of war, took every step they could to keep the world in one piece. We must do the same, policing our own use of AI, demanding that safety research progress even faster than the models do, advocating for robust regulation, providing the economic incentives for sensible AI development, and mitigating the negative effects on those disrupted by this technology.

We must do all that not just for our safety but also for our direct benefit. AI could be a source of good unmatched in human history. It can design new drugs, monitor marine mammals, and map the progress society has made toward renewable energy. It's helping us detect deepfakes, communicate better across languages, and optimize energy usage.<sup>43</sup> AI is behind a collaborative program linking NASA and the European Space Agency to gather and analyze crucial data about the earth and help

***Properly aligned and with the political adjustments to match, AI could go a long way toward ending scarcity, and that's about the most profound change imaginable.***

the world meet the UN's Sustainable Development Goals. AI solutions will be critical to commercializing nuclear fusion<sup>44</sup>, improving global food security, and bring better health to more people for less money. The list goes on; imagine the problem, and you can be sure AI will have a role in solving it—up to and including the big ones like restoring the health of our planet. These are the applications Dickon



### Pet Commerce—Petz

Admittedly, dogs are easy to please. Some chicken, a belly rub, and a log walk usually does the trick. But dogs love toys, too. Only they don't seem to love all of them. Sometimes, you tear open a package that you carefully picked out for your best furry friend only to find that you got it all wrong. Pet Commerce worked with Ogilvy to find a way to make sure pet owners get just the right toy for even the pickiest dog. The secret is Petz, a powerful AI, running invisibly in the background of the retailer's website, that is presenting choices to your dog and analyzing its gaze and face to gauge your Very Good Boy's response. The AI even uses colors and sound frequencies specially tuned to a dog's sensorium to be sure that all the couch potatoes, teacup princesses, and proud mutts get the plaything of their dreams—and you get a thank you kiss that will melt your heart. Now, who's a good AI?

Laws calls novelty, as you may recall. They are the places where visibility of the AI's involvement recedes into the background.

Is this a fantasy? Perhaps. It's good to be skeptical, and it's better to be vigilant. After all, nothing about AI is black and white. Nonetheless, "something quite profound is going on," as Klein notes, and that's with just the technology we have today. Properly aligned and with the political adjustments to match, AI could go a long way toward ending scarcity, and that's about the most profound change imaginable.

/prompt  
Draw Prometheus  
the fire giver in  
the style of René  
Magritte  
Midjourney

## The AI natives

If it isn't obvious already, this should make it abundantly clear: All of us will have to work with AI in order to accomplish the tasks of daily life—the work of living and the toil of earning. For many of us, this will be a difficult adjustment, much like what those who did not grow up with computers had faced when those wonders came to the workplace and the home. Even digital natives will have to accustom themselves to the fact that their relationship with technology has shifted to something much more bilateral. That's a fundamental change, one that treats technology as a partner, perhaps even an equal one. In a way, AI will become another member of the creative team that David Reichman spoke about and will help us create the narratives of our own lives.

There is one group that will experience no adjustment: those born in the past few years, and those yet to be born. They will be AI natives, and, like Gen Z before them, they are the ones who will define how AI is integrated into culture. They will show us how humanity will adapt to this new, powerful force that it itself has unleashed. Hopefully, we will have given them AI aligned to their interests, their values, and their desires. Hopefully, it is a partner for them and not a master. Hopefully, it brings out another layer of potential in humans in much the same way agriculture, industrialization, and electronics—our previous paradigm-shifting technologies—have. Hopefully, because of the unique partnership to be formed between AI, and those who grow up native to its wonders and its perils, those of us who pass before this world is born will have laid the groundwork for a better world for our children.

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