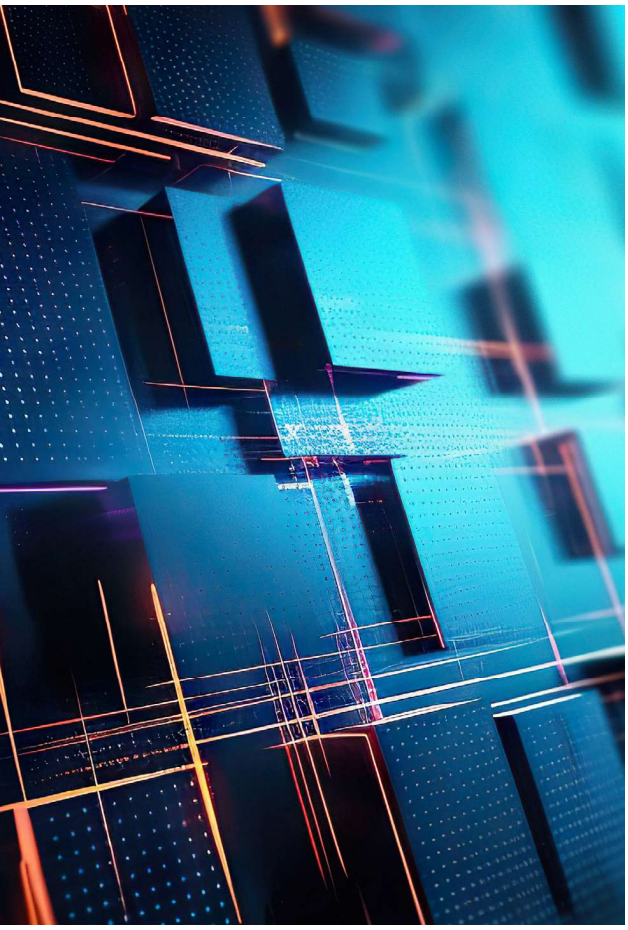
cognizant

Generative AI

Handbook

What to know and what actions to take to prepare your business for an era of exponential innovation



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Introduction

Generative AI will reshape every industry. But when?

There's little question that Generative AI is the hot topic of business in 2023. We believe that it will transform business through new levels of human-machine collaboration. Throughout this guide you'll find statistics, predictions and points of view that we hope will spur deeper thought into how your company should apply this technology to innovate and move forward. While we appreciate the sense of urgency in applying generative AI, our conversations with clients also reveal some understandable trepidation. Executives are curious about Generative AI, but they're also wading in with some caution.

In September, 2023 Cognizant research showed that executives across the Fortune 1000 (of which we interviewed over 800 in the US and Europe) are enthusiastic about Generative AI (99% of respondents) but also at least somewhat concerned about its unpredictable nature (88%). Even more are concerned about data exposure, security risks and reputational harm.

Moreover, almost all organizations are funding some degree of Generative AI research today, but many leaders (30%) don't even believe it will impact their industry within the next two years in any significant way.

For most of the leaders that we spoke with, it's not about "if" Generative AI will impact their business, but "how long do we have?"

A handbook for making progress towards Gen AI.

This research aligns with the client conversations we've been having. Across industries, there is plenty of activity, but it's just the beginning – tuning of models, building proofs of concept and gauging impact.

We wrote this handbook as a reference-point to provide insight to steer enterprise exploration of this technology, but the rules of engagement are changing rapidly as practical experience refines our thinking on the possible.

Nobody is a know-it-all in this space, but we can work together to help businesses make better decisions, increase productivity and deliver superior experiences in a responsible manner.

While rushing in is foolish, exploration, skills-building and foundation-laying certainly is not.

Let's start the journey.

Landscape

The human-like ability of Generative AI to converse, consider and create has captured imaginations. By understanding how we got here – and the decades of thinking that led us to Generative AI – we can better predict what's coming next.

Landscape

How we arrived here

An innovation boom 75 years in the making

In the summer of 2022 – well before Open AI's ChatGPT exploded into the public discourse – Generative AI began generating media buzz when a recently-fired Google Engineer claimed[1] their LaMDA model might be sentient.

True or not, this wasn't an entirely surprising claim for artificial intelligence. We've been expecting this.

Since Alan Turing's 1950 "Imitation Game" (Turing Test) proposal, we've imagined a future of computers with human-like intelligence, personality and autonomy. Today, we seem to be accelerating towards that disruptive future.

If and when we reach sentient AI is anybody's guess but Generative AI presents a significant new milestone in this journey, sparking new interest, innovation and discourse. Here's how we arrived at this moment.

Expert Advice

> "Generative AI sits within the context of decades of research into AI. We are now entering the era where this technology will start to fundamentally transform businesses."

Naveen Sharma
Head of Artificial Intelligence and Analytics Practice

1950s – 60s

The Birth of AI

In the early days of modern computing, the Turing Test and the famed 1956 Dartmouth Workshop launch the era of AI. The first AI programs form and optimism is high

1970s – Mid-90s

The Two AI Winters

While progressive advances like expert systems proliferate and cultural interest in AI grows, underwhelming results lead to two periods of reduced funding and focus

Mid-90s – 2000s

The Rise of Machine Learning

With the internet and accelerated business digitization, data availability and IT funding expand to drive practical AI applications. Major advances in robotics and data-driven solutions

2010s - Present

The Advent of Deep Learning

Significant breakthroughs in neural network and Generative AI model development, accomplishing previously impossible tasks, alongside surge in big-tech investment. **As of Q3 2023, the Crunchbase AI startup list has grown to over 9,500 companies**[2]