

additiv

# Capitalizing on Generative AI for Wealth Management

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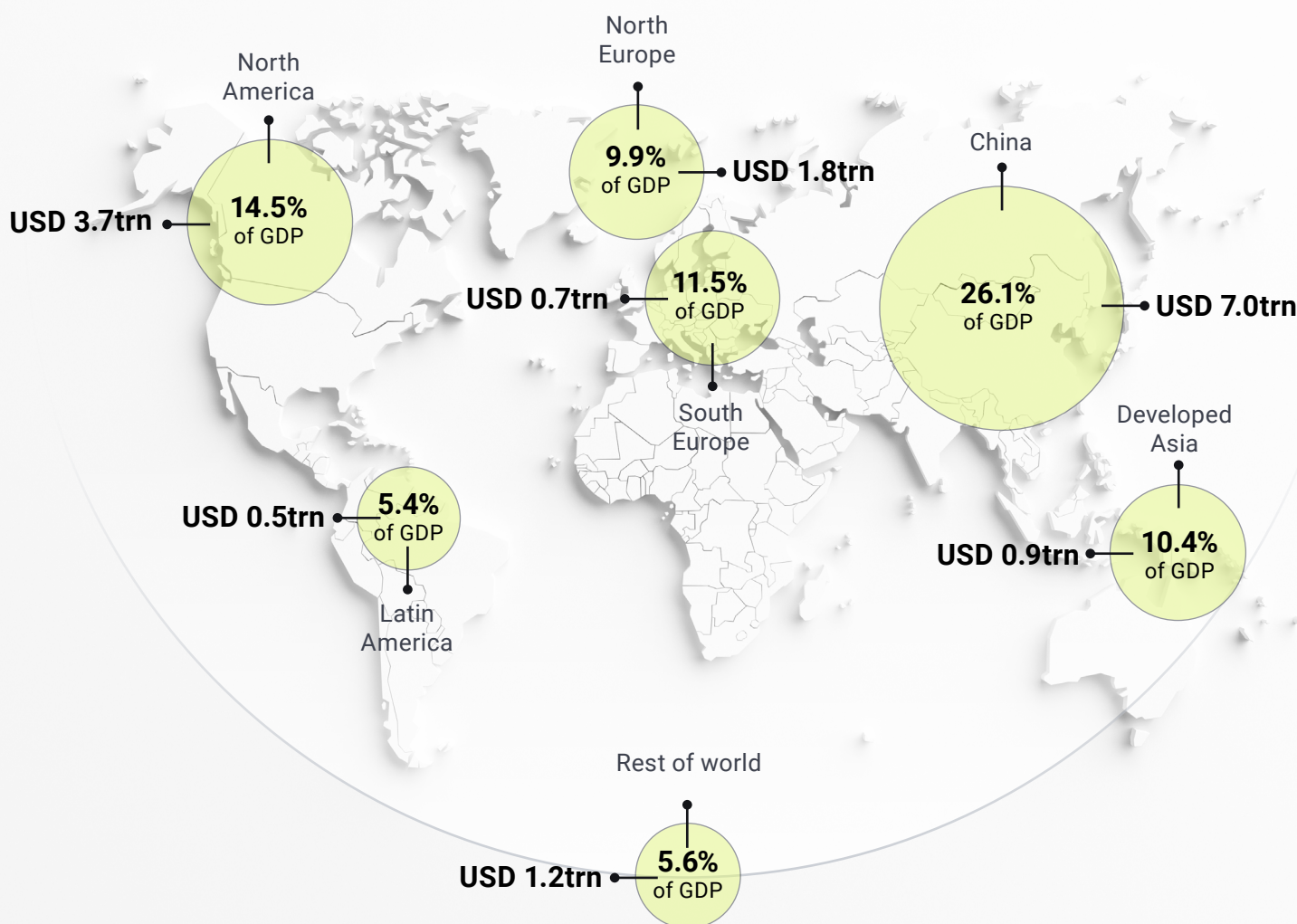
# AI Unleashed: Statistics on the Impact on Wealth Management

## AI to drive USD 15.7 trn of global GDP expansion

Figure 1

### GDP growth by Country by 2030

% total impact



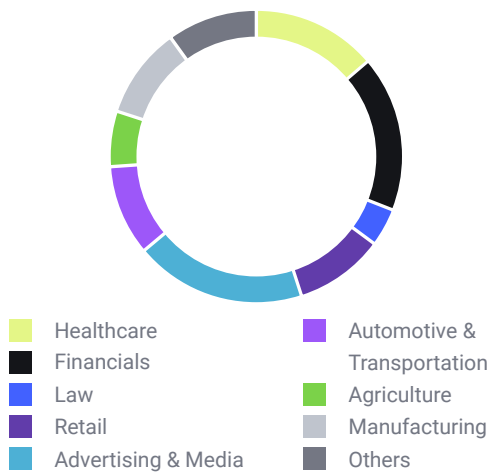
Source: <https://www.pwc.com/gx/en/issues/data-and-analytics/publications/artificial-intelligence-study.html>

All regions of the global economy are expected to be influenced by this revolutionary technology. **By 2030, AI is expected to contribute up to \$15.7 trillion to the global economy**<sup>1</sup>. AI integration will impact industries in different ways and sizes. The added value AI brings is staggering and may have unforeseen impacts.

1. *Global Artificial Intelligence Study*. PwC

**Figure 2**

**Global artificial intelligence market Share, by end-use, 2022 (%)**



Source: Artificial Intelligence Market Size & Share Analysis Report 2030, Grand View Research, 2022

**The race is on: Healthcare, Automotive and Finance most affected**

The health sector followed by the automotive sector and finance sector will be most affected. Unlike other industries, its adoption cycle will be shorter and set to happen in under < 7 years<sup>2</sup>.

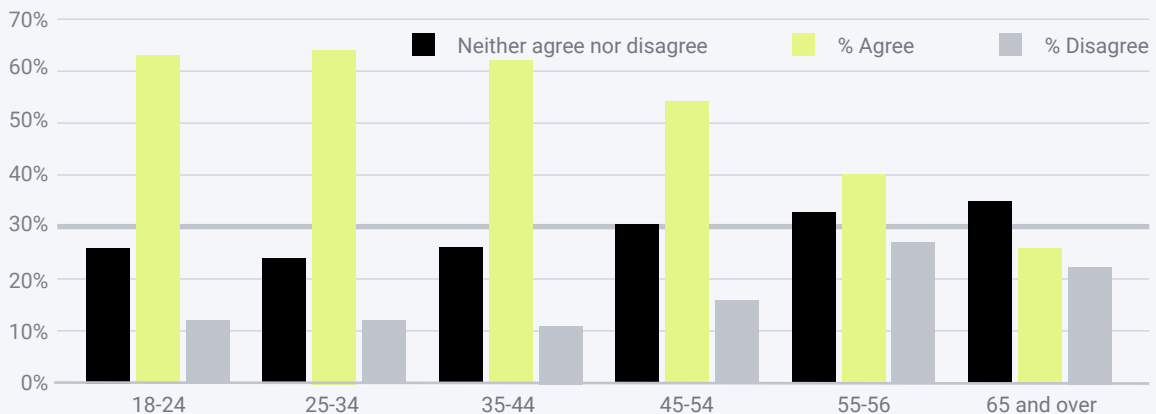
AI is a crucial topic, indicating the widespread recognition of its potential. The finance sector will undergo significant changes due to AI integration. In fact, **70% of C-level in Finance consider it a gamechanger<sup>3</sup>**.

But **current perceived limitations of AI such as trustworthiness**, privacy awareness and security are **limiting the immediate widespread adoption in Finance**.

The race is on. Knowing that AI will bring client experience to the next level due to knowledgeable advice and personalized offers, being fast matters. While consumers are today to a large extent satisfied with the banks offer, they are not loyal. Above 60% would switch for an offer that is perceived as more innovative<sup>4</sup>. We believe AI will materially re-shift the wealth management market as we know it today and standing aside is not an option.

**Figure 3**

**% consumers who would consider switching to a different bank if they provided more innovative services (by age group)**

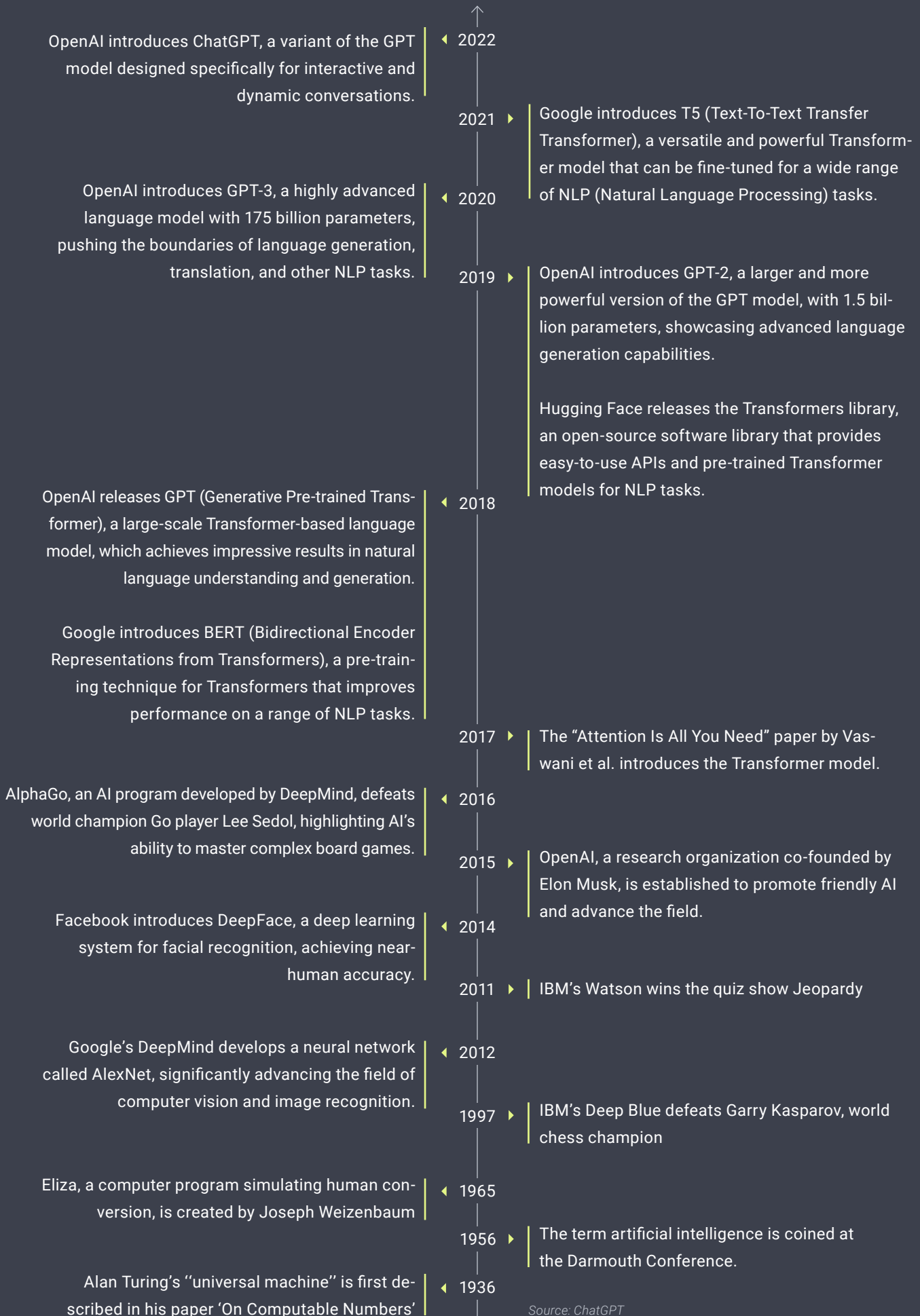


Source: additiv Consumer study 2022

2. [Global Artificial Intelligence Study, PwC](#)

3. [Roland Berger, Terradata, Sopra Steria Consulting, Artificial Intelligence to turbo boost the financial sector, 2018](#)

4. [additiv Consumer study 2022](#)



Source: ChatGPT

# Charting new territory, AI in Finance

## **Today, Generative AI and LLM is the focus**

Generative AI means that computers can generate content in “unstructured” forms, such as text or images, vs. tables (structured). It has gained attention within the overall AI space after the release of OpenAI’s ChatGPT in November 2022.

ChatGPT is a chat-bot built on GPT-3 that represented a step change where people could communicate with an AI system in a natural intuitive way, and it created written output that matched human abilities in many cases.

While incredibly impressive and flexible, the output from an AI system such as ChatGPT also presents limitations. AI responses are statistical and although ChatGPT can produce highly logical outputs it can also “hallucinate” or create outputs that appear to be made up.

If your company isn’t running experiments with Generative AI, you’re already falling behind.

## **Custom models trained with proprietary data will drive adoption in health and finance**

There are many other large language models like GPT offered by companies such as Meta or Google who have the computing resources to train and deploy such systems. These are often referred to as foundation models, as people can use them as the basis of a custom model for a specific task or domain of expertise, without having to build one from scratch.

Customising or fine-tuning foundational models doesn’t just widen the number of possible use cases but can also correct for some of the shortcomings. For instance, if an organisation has a large proprietary database of domain specific research in, say, life sciences or finance that is much more comprehensive than a model has been trained against, it can be retrained to add in this knowledge, to create a custom model for private use. Recent developments in fine tuning have massively reduced the cost of this retraining.

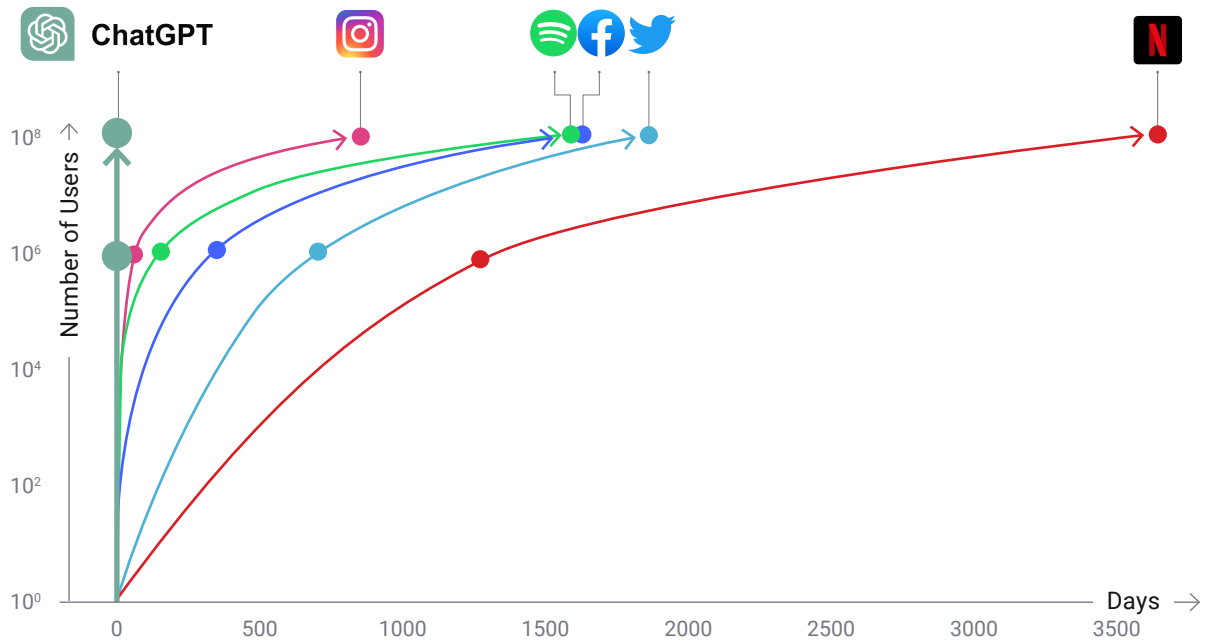
ChatGPT clearly represents a seminal moment for artificial intelligence, where something that has existed for decades is suddenly transformative. Up until now, computers worked with forms and structured inputs and outputs. Now we can communicate with computers in natural language and get responses that are close to human level.

ChatGPT's transformational quality is presaged by the rate of adoption (100m users in 48 hrs) to become the fastest growing application in history so far.

Figure 4

### Adoption Rates in Comparison

# of days to 1m and 100m users



Source: <https://explodingtopics.com/blog/chatgpt-users>

As a consequence, every organisation needs an AI brain, created from their own custom models, built on foundational technology. If you're not looking into this now, you're already falling behind. The good news is that help is also on its way. There will be many services companies that will help companies to train and implement custom models. And there will be many existing technology companies that build models that can be fine-tuned for their clients using their clients' data, which is what we are doing at additiv.

As an industry, wealth management has struggled to scale to meet the needs of a wider demographic, because it is hard to provide relationship-based or hybrid services cost effectively at scale. So, if what AI offers is a human-like interaction experience at infinite scale... then at first glance this is a magic bullet.

Some client-facing use cases will be possible with just AI, provided a layer of accuracy detection and regulatory compliance wrapped around the AI models.

# Where will AI deliver most value for Wealth Management?

## Our predictions on most impactful use cases:



### Supercharged Advisors

In general, knowing the centrality of advisors in wealth management, we see the biggest opportunity as supercharging the advisor, to let them shine by providing the most knowledgeable and efficient copilot ever, rather making human-like services more scalable.



### Personalized Portfolio Creation with Ease

Starting out on building a portfolio is a bit like starting out on Twitter. Without following anyone on Twitter, there is no content and no value, but with hundreds of millions of people to follow, where do you start? The same is true of portfolios. There are thousands of equities and investment instruments out there, getting started is difficult for any newcomer.

An important generational shift is underway. Risk-weighted returns will always be important, but for younger generations – especially Millennials and older GenZs, who incidentally make up over 3 billion people – aligning investments with their personal values, beliefs and consumer preferences is also key.

AI is well placed to meet this growing need. It can easily understand individuals' preferences and make tailored recommendations to match their personal values. What is more, it will be able to understand how those preferences change along with the individuals' life circumstances and continue to make relevant and optimising recommendations along the way.



### Enhanced Investor Engagement

Many of us are familiar with the principal-agent problem in companies between management (those in control) and shareholders (those who own), with the former at risk of optimizing for what matters to them most.

A similar problem today exists between money managers and investment owners. Investors often don't fully understand or relate to wealth management companies and funds in their portfolios or are just overwhelmed by too many investment product choices, much of which doesn't meet their individual needs. Furthermore, it is difficult for them to track performance, particularly at a fund or instrument level, and fees.



AI can also solve for these challenges. As discussed, it can help investors to find the right investments, whether instruments or funds. But then it can help keep them engaged by delivering rich interactive updates on these investments, relevant news and progress, especially where this relates to underlying stocks or mission-driven funds. This would deliver many values, from helping investors better understand the financial and non-financial performance of their investments, but also encouraging longer holding periods, which exacerbates the management-owner issue, as well as more closely aligning fees with performance.



### **Democratized Personalized Investing**

As a global population, we are getting older. The population pyramid is changing such that, according to the OECD, the global dependence ratio (the ratio of over 65s to those aged 20-64) will go from 22% to 46% by 2050.

Our estimate is that there is over 33tn in assets that are not professionally managed today (Embedded Wealth Management, additiv). Part of the solution lies in bringing wealth management closer to the client via embedding into existing distribution channels, which lowers customer acquisition costs. The other part of the solution comes from AI which lowers the cost to serve.

Wealth management may continue to be hybrid in delivery, i.e. a mix of self-directed and assisted channels. But, whether hybrid, self-directed or fully assisted, AI will democratize, allowing for more personalized service at greater scale.



### **Reduced Information Overload**

In Sheena Lyengar and Mark Lepper's famous study in 2000, consumers who were given a choice of six varieties of jam were ten times more likely to make a purchase as consumers who were given a choice between 24 varieties.

People today are increasingly time-poor and attention-poor. Information overload is a worsening problem since the marginal cost of creating content is almost zero and AI contributes to this.

However, in AI also lies the solution. An AI-powered recommendation engine can efficiently process and analyze relevant data to deliver actionable investment insight, presenting investors with a curated list of investment options, cutting through the noise, making it easier for individuals to take the right decisions.

# additiv's AI offer

## Supercharge the advisors to know everything a client could ask

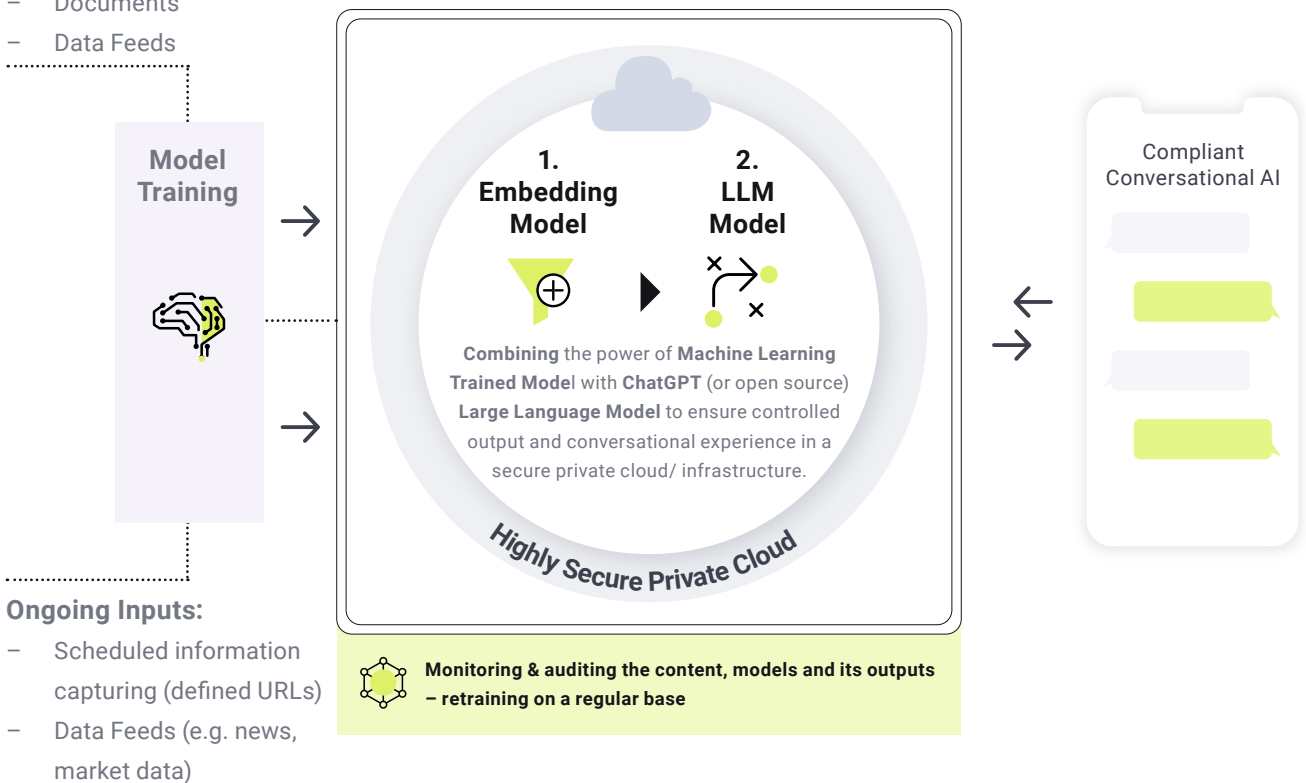
The Advisor Copilot combines the power of a Machine Learning Trained Model with ChatGPT (or open source) Large Language Model to ensure controlled output and conversational experience in a secure private cloud/infrastructure. It supercharges the advisors to know everything a client could ask: all the content of the company, the company's research department, the asset management's product units and the third-party product's selected and other selected data sources have ever published at a fingertip.

**Figure 5**

Sophisticated generative AI-technology solution specialized for the Financial Services Industry

### Initial Inputs

- Existing Data
- Documents
- Data Feeds



### Ongoing Inputs:

- Scheduled information capturing (defined URLs)
- Data Feeds (e.g. news, market data)

Source: additiv

## Making generative AI compliant

Current perceived limitations of AI such as trust worthiness, privacy awareness and security concerns are limiting the immediate widespread adoption in finance. Thus we built the Advisor Copilot as fully compliant. How do we ensure this...

### Controlled data sources:

Data and content available for the AI models are fully under control by the financial client. Initial input data (internal data, documents, restricted internet addresses, external data providers) as well as ongoing information feeds are fully controlled. Models are trained and are using only defined information/content ensuring the use of the bank's directives of regulations.

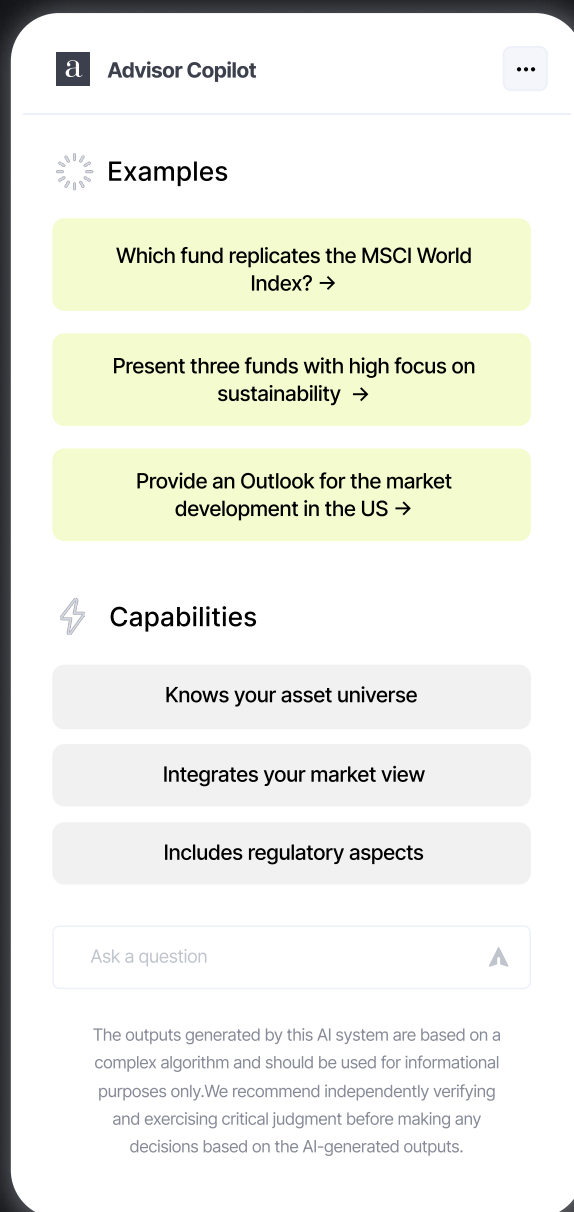
### Fully private:

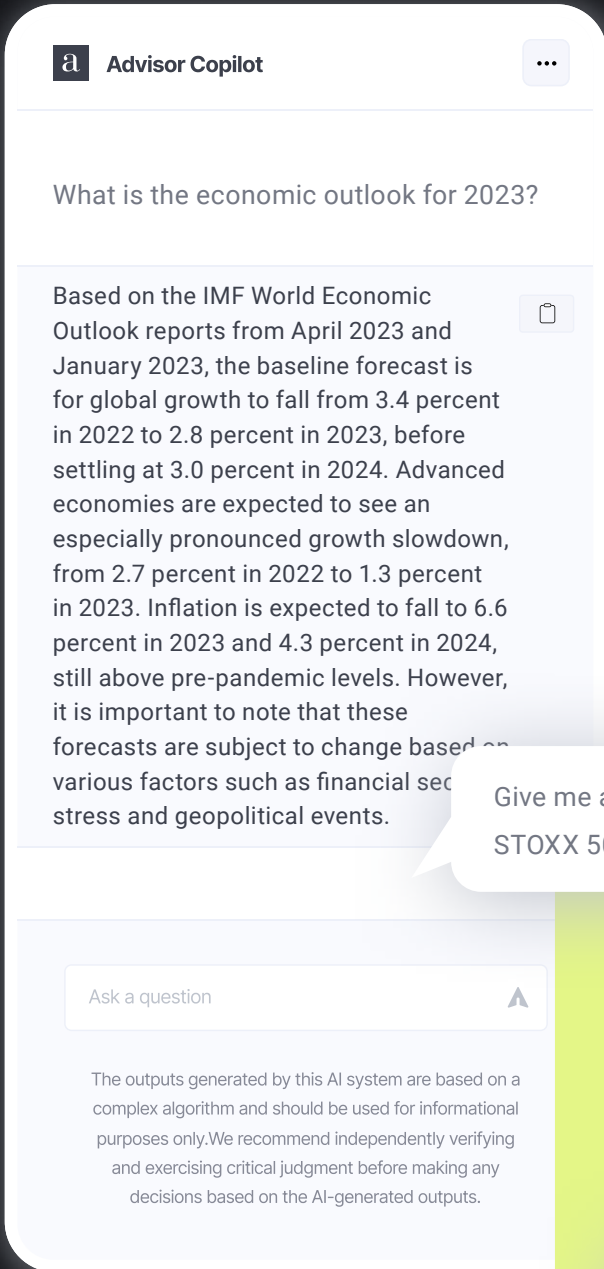
All data and applications, including the applied models, are operated and stored within a protected private cloud.

### Fully auditable:

Data audit & forensics scenarios are fully supported.

The responses generated by the Advisor Copilot are derived from both initial inputs and ongoing inputs continually added, ensuring that the Copilot remains the best companion available.





Enter the 6-month co-innovation program. Starting with 2 weeks data collection and engineering followed by tests with selected advisors and iterations. Before fully going live across your cooperation.

**Demo Advisor Copilot**

Give me an alternative to the SPDR EURO STOXX 50 ETF

Certainly! An alternative to the SPDR EURO STOXX 50 ETF is the iShares EURO STOXX 50 UCITS ETF. Both ETFs track the performance of the EURO STOXX 50 Index, which represents the performance of the 50 largest companies in the Eurozone. However, there are some differences between the two ETFs, such as expense ratios, fund size, and trading volume.

<b>iShares EURO STOXX 50 UCITS ETF</b>	
YTD return	Managed funds
16.81%	USD 753.38M

### Coming soon, AIRE – Artificial Intelligence Recommendation Engine

AIRE, works as a smart recommendation engine. It uses client’s preferences to suggest relevant securities, in the case of execution-only scenarios. When advisory mandates are involved, AIRE offers direct recommendations, affirming, for example, “based on your profile (KYC + risk profile), other clients have chosen...”. AIRE allows you to offer the right investment products dynamically matched to client needs.

# The terminology behind it all

- **AI:** Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems.
- **Generative AI:** describes algorithms (such as ChatGPT) that can be used to create new content, including audio, code, images, text, simulations, and videos.
- **Adaptive AI:** the next generation of AI systems. It has the ability to adjust its code for real-world changes, even when the coders didn't know or anticipate these changes when they wrote the code.
- **LLM large language models:** Is a type of artificial intelligence (AI) algorithm that uses deep learning techniques and massively large data sets to understand, summarize, generate and predict new content.

## The most relevant models to know<sup>5</sup>:

- AI Model #1: Linear Regression.
- AI Model #2: Deep Neural Networks.
- AI Model #3: Logistic Regression.
- AI Model #4: Decision Trees.
- AI Model #5: Linear Discriminant Analysis.
- AI Model #6: Naive Bayes.
- AI Model #7: Support Vector Machines.
- AI Model #8: Learning Vector Quantization.

## Some alternatives to Chat GPT are Bert, Bard, XLnet, PaLM

### The most prominent enterprise issues while adopting AI (Source: contextual AI):

- **Data privacy:** In the modern era, and even more so in the future, data will be one of the key differentiator for a company. Companies want to safeguard that raw data, client information, not be forced to send it to somebody else to process and store it on a private cloud.
- **Customizability:** Current LLMs are hidden behind an API endpoint, with very limited control for the end user.
- **Hallucination:** LLMs make things up, and what's worse, they tell you the wrong answer with a high degree of confidence and can't tell you how they arrived at that conclusion. That's unacceptable in most workplaces.
- **Compliance:** There is no clear-cut way to remove information from an LLM, or even just to revise it, which makes them risky from a compliance perspective. Controlling your proprietary input data and actively decide on third party data might be a solution.
- **Staleness:** ChatGPT does not know anything that happened after September 2021, and the most downloaded model on the HuggingFace hub is BERT, which still thinks that Obama is president. LLMs should be able to always be up to date and handle fresh data as it comes in, in real time.

5. <https://history-computer.com/the-8-different-ai-models-you-need-to-understand-today/>

# additiv

Established in 1998, additiv partners with leading companies across the world to help them capitalize on the possibilities of digital wealth and investment management.

additiv's embedded finance operating system, DFS®, is an orchestration platform enabling financial institutions to access new distribution channels through a Banking-as-a-Service (BaaS) model. It also allows banking and non-banking providers to embed wealth services into their client proposition. While it supports wealth managers looking for best-in-class Software-as-a-Service (SaaS) to deliver better engagement at greater scale.

Headquartered in Switzerland, with regional offices in Singapore, UAE, and Germany, additiv is supported by a global ecosystem of partners.

**[www.additiv.com](http://www.additiv.com)**