

Getting Started

Here with you today from our AI & Data team



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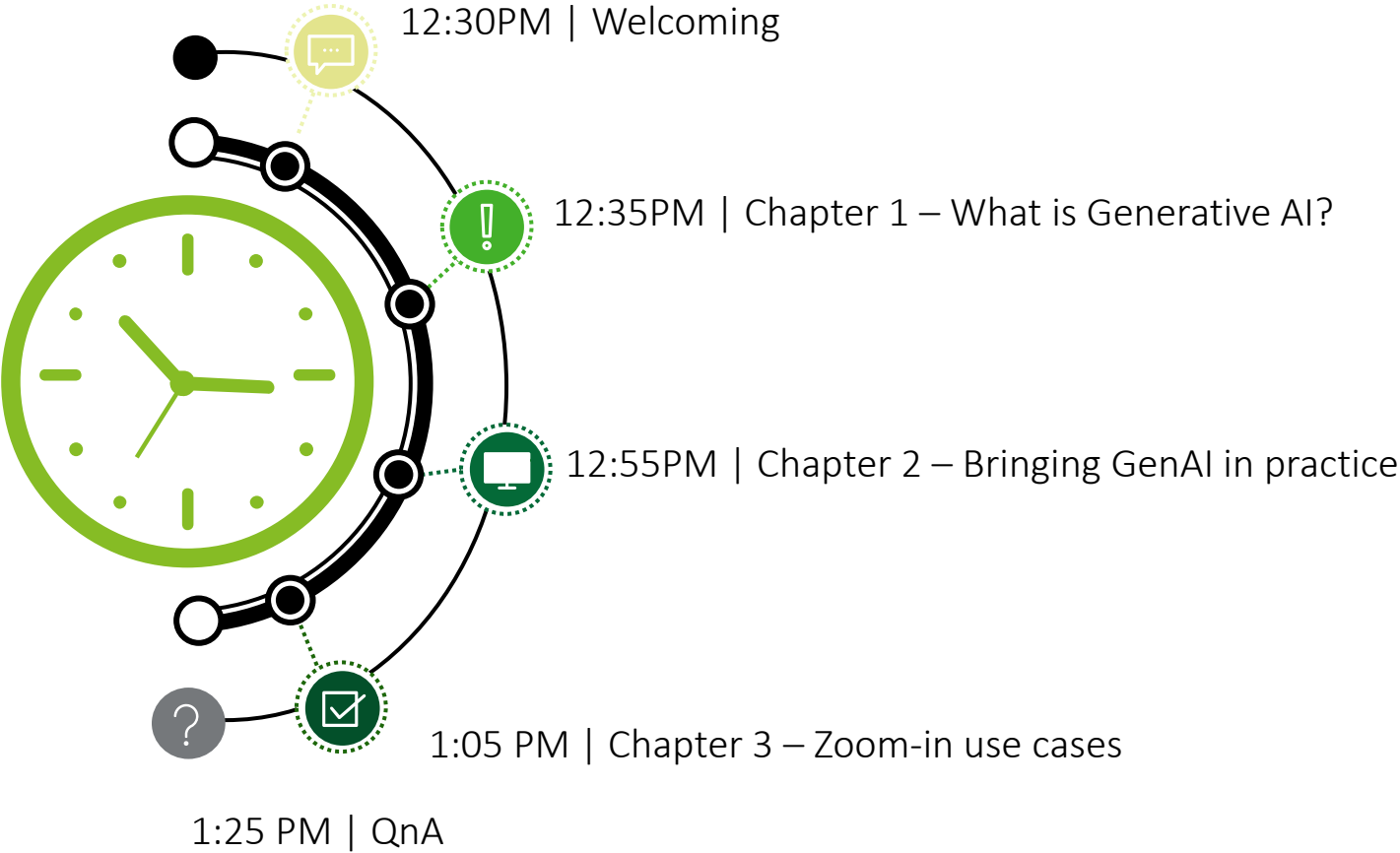


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Agenda



Chapter 1 - What is Generative AI?

AI as a market disruptor

AI includes many technologies, providing innovative solutions to transform society and business

ECONOMIC IMPACT

Generative AI expected to increase Global GDP by **\$7 trillion** (7% over 10-year period), with a **1.5% growth in labor productivity**¹

WORLDWIDE REVENUES

Global revenues for AI-related software, hardware, and services is forecasted to surpass **\$900B in 2026**, representing a **18.6% five-year CAGR**²

ENTERPRISE APPLICATION

79% of leaders reported full-scale deployment for **three or more types of AI applications** – a **17% increase from 62% in 2021**³

¹ Goldman Sachs, Generative AI could raise global GDP by 7%

² IDC Worldwide Semiannual Artificial Intelligence Tracker

³ State of AI in the Enterprise, 5th Edition, Deloitte

Artificial Intelligence (AI)

The science and engineering of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable - *John McCarthy, 2004*

Machine Learning (ML)

The study of computer algorithms that allow computer programs to automatically improve through experience – *Tom Mitchell, 1997*

Most frequent types of learning algorithms are:

- Supervised learning
- Unsupervised learning
- Reinforcement learning

Deep Learning (DL)

A subfield of machine learning methods based on artificial neural networks

While the “youngest” type of AI, GenAI is causing disruption and radiating throughout the AI ecosystem

Generative AI

1960 1970 1980 1990 2000 2010 2020

Overview of Generative AI



What is Generative AI?

A subset of artificial intelligence focused on the **ability of machines to create outputs across various modalities**



How does it work?

Uses **Foundation Models (FMs)**, such as OpenAI's GPT-4, trained on massive amounts of data to **understand human communication and natural language**



Why now?

Converging innovations in hardware, machine learning, cloud platforms, and data availability enables an **autonomous creation economy**



Who is involved?

Big tech, start-ups, and scale-ups are developing user facing applications on these underlying models; apps such as **ChatGPT, Midjourney, etc.** rising in popularity



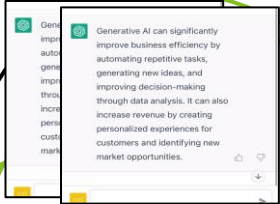
Industry Impact: These models can be finetuned to become specialized for industry & domain-specific solutions using **AI Platforms & Frameworks**

What are the capabilities of Generative AI?

Generative AI can produce a wide range of outputs depending on the specific application and type of data that is needed. Here are some common output types that are applicable to business

Text

Prompt: Explain the business impact of Generative AI in 50 words



Video

Prompt: Create a video of a teddy bear painting a portrait



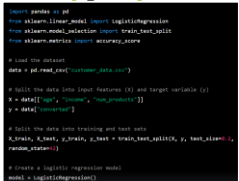
Image

Prompt: A bowl of soup that is a portal to another dimension as digital art



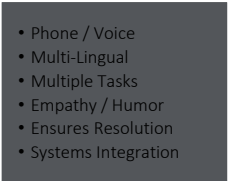
Code

Prompt: In python, code a program that predicts the likelihood of customer conversion



Audio

Generative AI-powered customer service agents



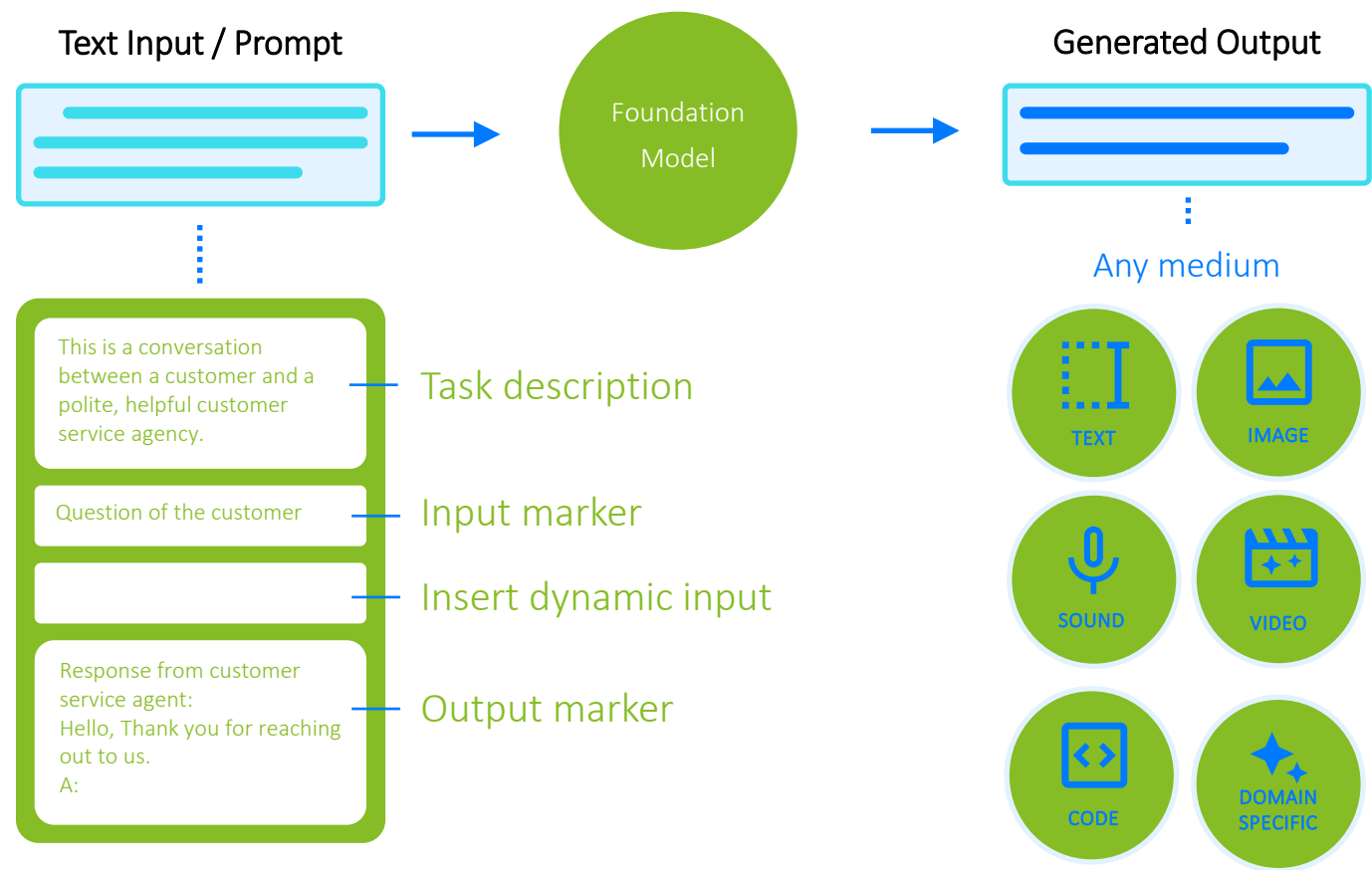
3D

Prompt: A beautiful dress made from garbage bags, on a mannequin. Studio lighting, high quality, high resolution



Currently, text, image and code are the modalities with most straightforward potential for business value generation. Nevertheless, audio, video, 3D, as well as multimodal models are expected to progress fast in terms of quality of output and number of opportunities for application.

How Generative AI is used today?



Many other prompt patterns can be leveraged for different results

Example: Predicting the next word

The [?]
The quick [?]
The quick brown [?]
The quick brown fox [?]

Likelihood ↑

-3 jumps
...
...
...
-15 runs
...
...

Prompt:

Explain generative AI to me like I am a child

Output:

Alright, imagine you have a magic coloring book. This coloring book can create new pictures for you to color based on what you tell it. So, if you say you want a picture of a dog, the magic coloring book will make a brand-new picture of a dog just for you. You don't know exactly what the dog will look like, but you know it will be something new and different each time.

Prompt:

A golden retriever in an astronaut suit in outer space, in a painted style.

Output:



Generative AI in action

"There will be tremendous benefits, but, you know, tools do wonderful good and real bad, and we will minimize the bad and maximize the good."

"Generative AI has the potential to revolutionize industries and improve our lives in countless ways. It's up to us to ensure that we harness the benefits and mitigate any potential negative consequences."

Which is AI, which is human generated?

Chapter 2- Bringing GenAI in practice

Benefits & Risks



Benefits

There are many ways that generative AI can create both value and efficiencies



Risks

With any technology, generative AI can pose certain risks to be aware of



Accelerate Content Output



Increase Task Automation



Drive Cost Efficiencies



Improve Customer Experience



More Decision-Making Inputs

Benefits & Risks



Benefits

There are many ways that generative AI can create both value and efficiencies



Risks

With any technology, generative AI can pose certain risks to be aware of



Inaccuracy



Bias



IP Violation



Privacy



Unethical Use

Guiding principles for Generative AI



The Human Touch

Keep the **human in the loop!**



Truth Testing

To counter 'hallucination' risk human **fact-checking** processes need to be in place to confirm accuracy of generative AI content.



Empower Efficiency

Repetitive, low complexity, low risk tasks are appropriate testing ground for generative AI solutions.



Dataset Diversity

Large, diverse, **high-quality** datasets are suitable starting point for exploring generative AI solutions.

Implementation of GenAI projects



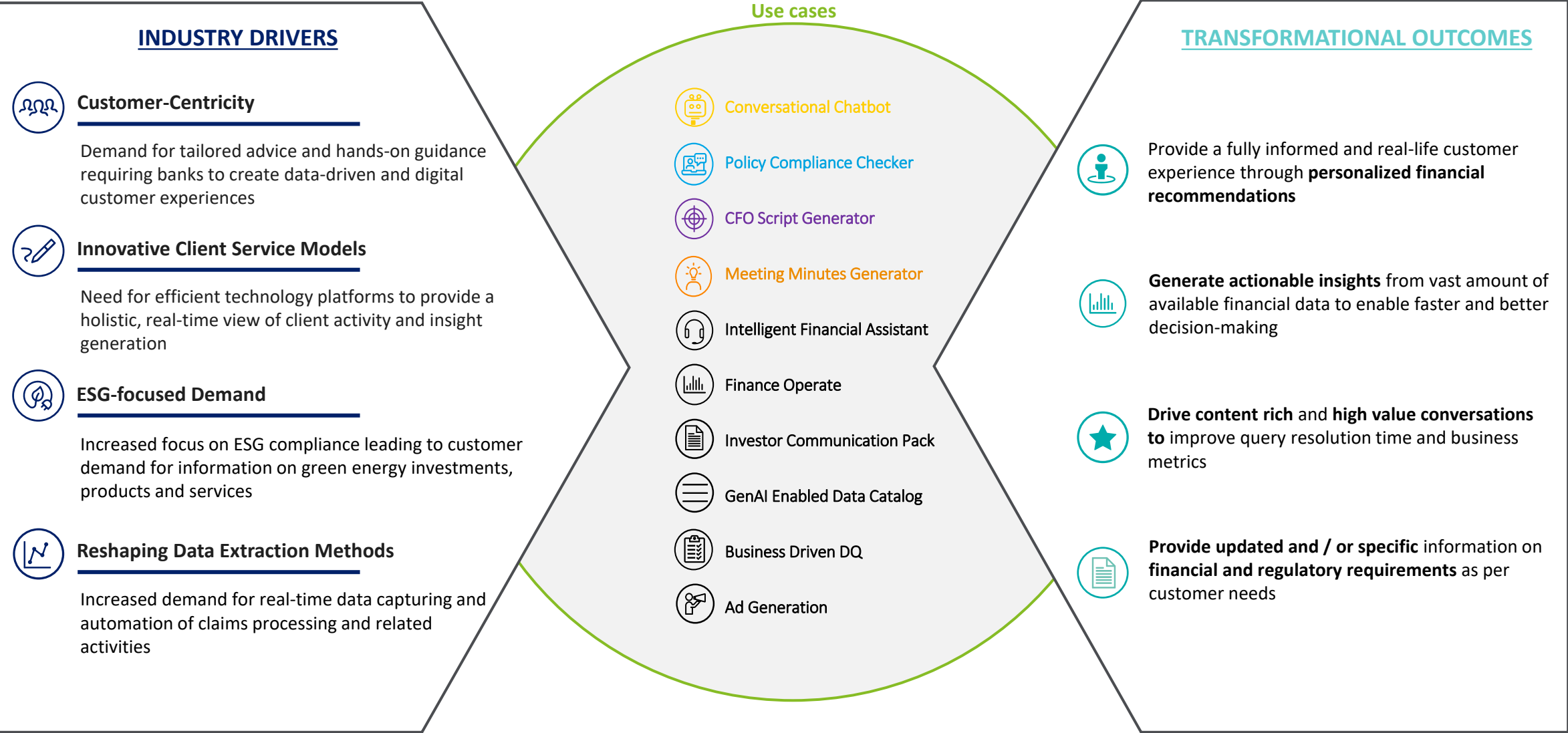
GenAI Services	GenAI Strategy <i>Setting up the strategic guardrails</i>	POC <i>Getting started</i>	MVP <i>Taking use case to production</i>	Gen AI Factory <i>Scaling across the enterprise</i>	Business Transformation <i>Reinventing the enterprise</i>
Gen AI Strategy and Governance <i>e.g., GenAI readiness, use case prioritization, op model,</i>	✓	✓	✓	✓	✓
GenAI Development and Compute <i>e.g., infrastructure mgmt., cloud, App dev, model training</i>	↓	✓	✓	✓	✓
Risk Mgmt. & Regulatory <i>e.g., regulatory compliance, risk & controls</i>		✓	✓	✓	✓
Data and Analytics Services <i>e.g., data modernization, data science, ML / LLM Ops</i>		↓	✓	✓	✓
Ethical GenAI and Legal Oversight <i>e.g., algorithm assurance, transparency & accountability</i>			✓	✓	✓
Trust, Security, and Privacy <i>e.g., Trustworthy AI, cyber, misuse detection</i>		↓	↓	✓	✓
Value & Performance Enhancement <i>e.g., embedded GenAI</i>				↓	✓
Workforce & Org Development <i>e.g., reskilling, organizational change, communications</i>					✓



Chapter 3- Use case zoom in

GenAI in action in Financial Service Industry

Multitude of opportunities will transform FSI through Generative AI



Conversational Chatbot

Extracting useful information with the chat services for question and answers

Sector:

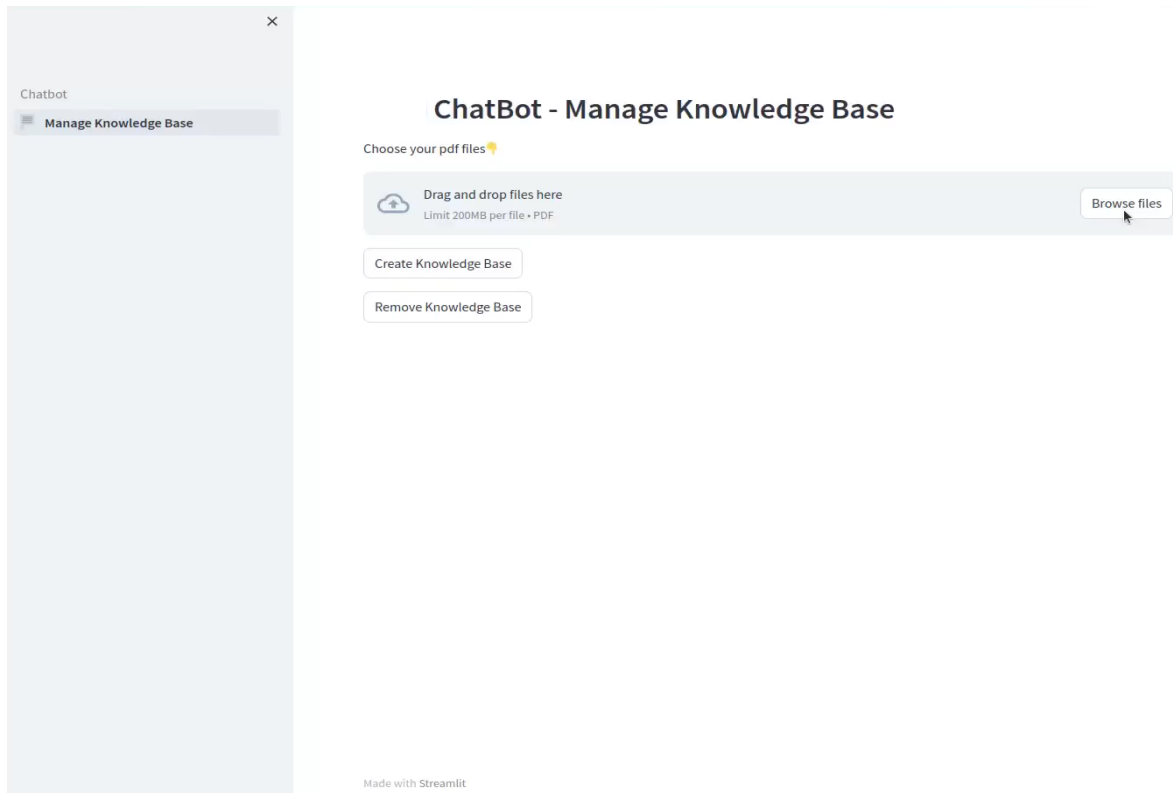
Transversal

Business challenge:

~4 hours are spent per week per person to find information from different documents

Solution:

- Quick extraction of information to support business activities
- Provides comprehensive information gathered from multiple sources with references for transparency
- QnA can be performed in multiple languages and translated



Demo video unavailable in PDF version – Please reach out to speakers from Deloitte if you would be interest in live demo



Policy Compliance Checker

Financial Management Regulation (FMR) policies against other compliance policies to identify gaps and contradiction

Sector:

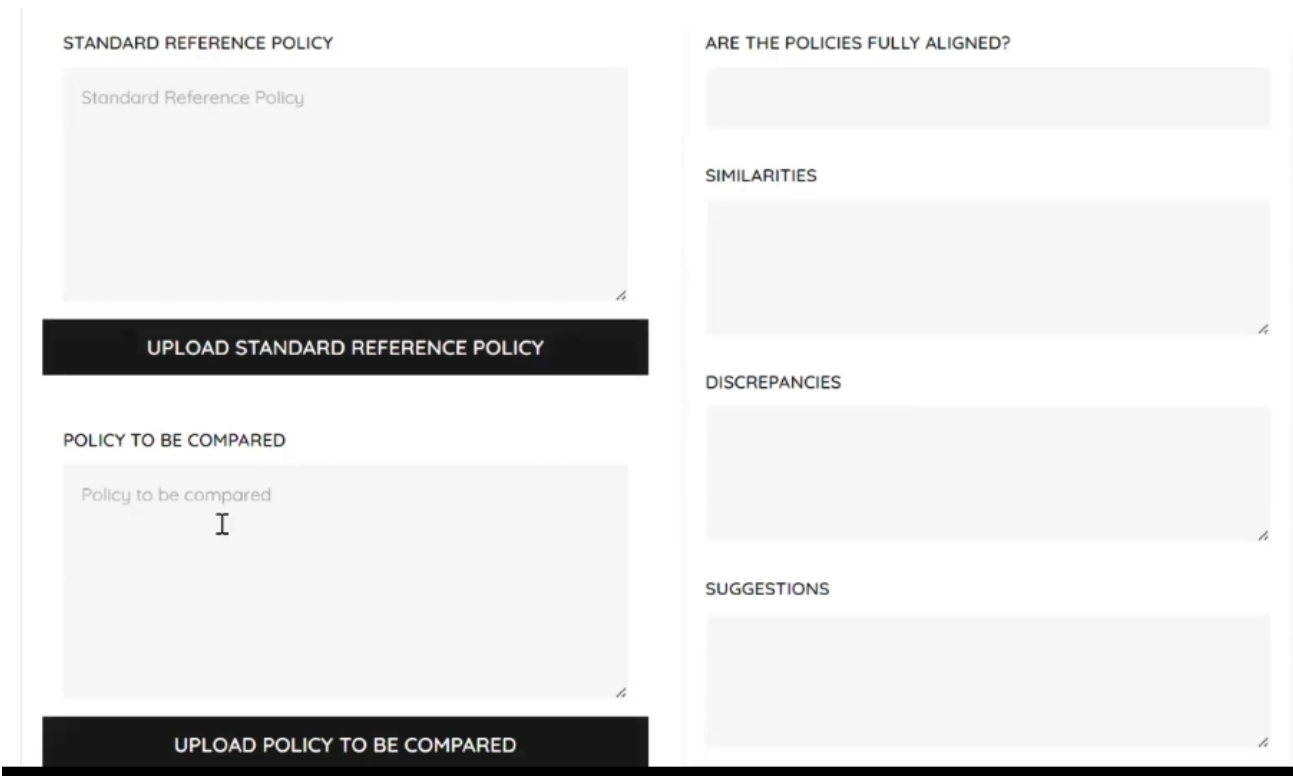

Transversal

Business challenge:

FMR document is a policy with over 7000 pages, lengthy process to compare with other accounting standards

Solution:

- Increase the speed, quality, and accuracy of compliance assessments
- Higher accuracy in retrieving appropriate guidance sections



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CFO Script Generator

Generation of drafts of a script for a company's quarterly earnings calls, using only readily-available financial reports.

Sector:

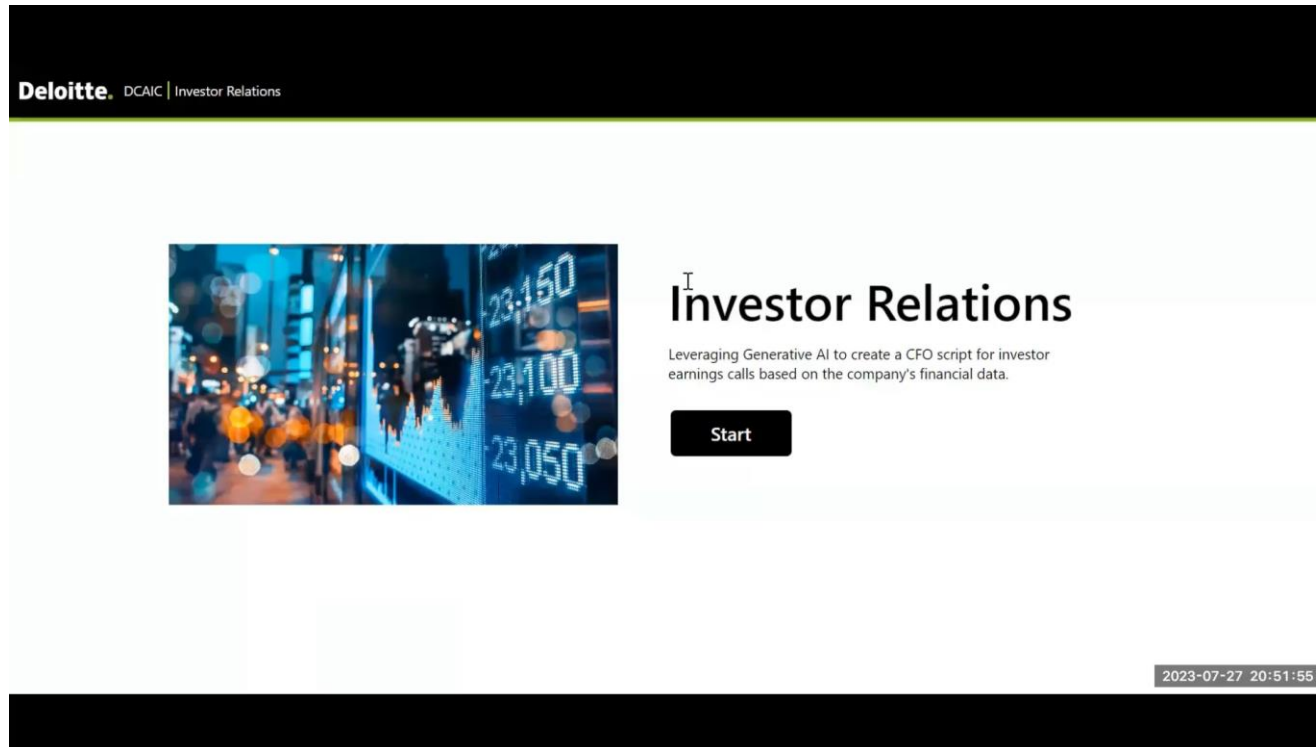
Investment Management

Business challenge:

Investor relations (IR) can be complex, and time-consuming with new challenges, expectations, and stakeholders.

Solution:

- Improves the quickness and consistency of communications with investors.



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Meeting Minutes Generator

Using AI capabilities for automatically speech to text conversion and meeting minutes generation.



Sector:

Transversal

Business challenge:

Management Committee meetings occur every week for 7-8 hours, 2 FTEs are dedicated to transcribe meeting notes


Solution:

- Reduction in the manual tasks performed by employees to note meeting minutes
- This solution can be combined with other developed solutions to provide the final meeting note in the required template

Meetings minutes generator

Meeting Notes

Upload Audio/Video/Text file



Do you want speaker recognition?

Do you know the exact number of speakers?

Maximum number of speakers

8

Number of speakers

0

Generate notes

Save notes as MS Word document

Meeting Minutes

Upload Template file

Save Template file

Please upload or type some suggestions (Prompt) for the model:

Generate minutes

Save minutes as MS Word document

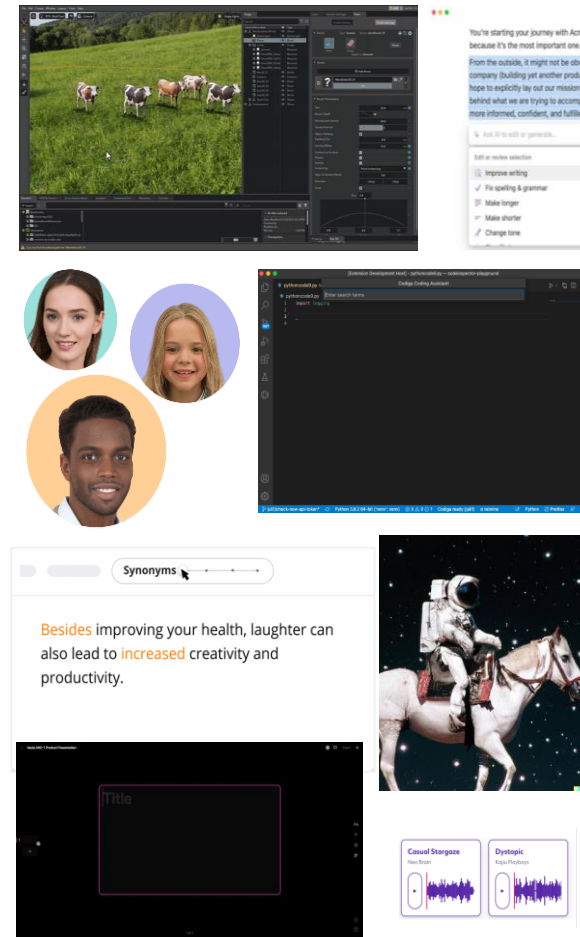
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Next: Looking ahead

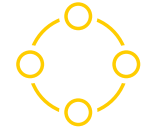
The future is still unfolding..

*"We are in the first inning of a thousand-inning game
and there's so much to be figured out."*

- Chief analytics officer, Deloitte's financial service industry



2024



Organizations moving from GenAI experimentation to implementation



AI Act coming adopted in 2024,
starting countdown for compliance



Early adopters of GenAI will see operational efficiencies and revenue



As technology matures, expect to see novel groundbreaking use cases.

Questions

What's next?

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Stay tuned for the 2024/2025 edition starting in September.





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