

# Unlocking value with GenAI

AI Product Management for Enterprises

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# Topics and Agenda

## **What is GenAI?**

Tech behind GenAI,  
Reasons for the surge in popularity and understand the factors driving the rapid growth and widespread adoption of GenAI solutions across industries.

## **Impact of GenAI**

Overview of the industries and functions that can benefit from this technology

## **Enterprise opportunities**

Detailed use-cases, revenue and cost-reduction drivers

## **Enterprise considerations**

Understand the risks, mitigation policies and deployment models



# What is GenAI?

## **Learns from Existing Artifacts**

Generative AI (GenAI) learns from existing artifacts to generate new, realistic creations at scale, reflecting the characteristics of the training data without repeating it.

## **Produces Novel Content**

GenAI can produce novel content such as images, videos, music, speech, text, and software code.

## **Requires No Code or Prior Knowledge**

GenAI can respond directly to natural language inputs, requiring no code or prior knowledge from the user.

# Tech behind GenAI



## GANs

Generative Adversarial Networks are machine learning frameworks designed to generate new data that mimics a given data set.



## VAEs

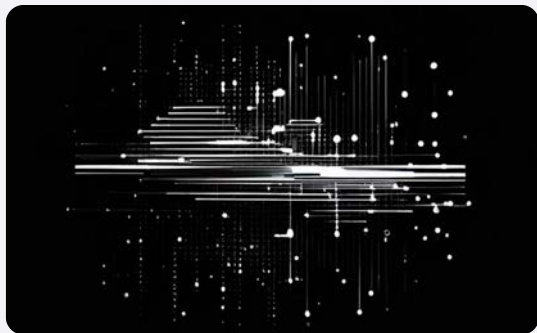
Variational Auto-Encoders are a type of neural network used for unsupervised learning, capable of generating new data samples that resemble the training dataset.



## LLMs

LLMs are designed to understand and generate human language, powering a wide range of GenAI applications from text generation to conversational AI.

# Surge in popularity



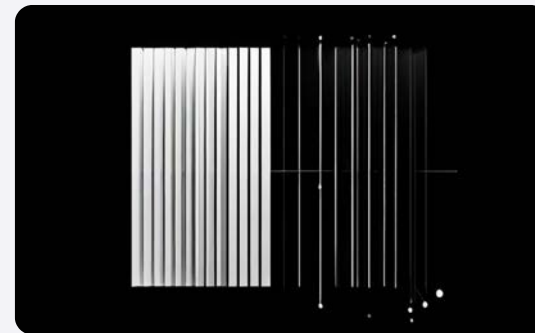
## Algorithms

Advancements in machine learning algorithms, particularly in the field of generative models, have enabled the creation of powerful AI systems capable of generating human-like content.



## Hardware

Improvements in hardware, such as the availability of powerful GPUs and specialized AI chips, have significantly increased the computational power and efficiency required to train and deploy large-scale generative AI models.



## Data

The abundance of digital data, including text, images, and other media, has provided the necessary training material for generative AI models to learn from and create new, realistic content.

# Where is the hype?

Gartner predicts generative AI will become a general-purpose technology, akin to the steam engine, electricity, and the internet. While the initial hype will fade, its impact will increase as innovative applications are discovered in daily work and life.

## Hype Cycle for Artificial Intelligence, 2023



gartner.com

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Gartner.

# Future Predictions

**40%**

**2024**

Enterprise applications with embedded conversational AI

**30%**

**2025**

Enterprises implementing AI-augmented development and testing

**60%**

**2026**

Design effort automated by generative design AI for new websites and mobile apps

**100M**

**2026**

Humans engaging robo colleagues to contribute to their work

**15%**

**2027**

New applications automatically generated by AI without human involvement

# Industries Impacted by GenAI



## Pharmaceutical

GenAI can be used in drug discovery, clinical trial design, and patient data analysis.



## Media

GenAI can generate content like articles, scripts, and personalized recommendations.



## Interior Design

GenAI can create custom designs, visualizations, and product recommendations for interior spaces.



## Automotive

GenAI can be used in vehicle design, predictive maintenance, and autonomous driving systems.



## Defense

GenAI can be applied to intelligence analysis, logistics optimization, and autonomous systems.



## Electronics

GenAI can help with product design, quality control, and supply chain optimization in the electronics industry.



## Manufacturing

GenAI can optimize production processes, improve quality control, and automate tasks.



## Architecture

GenAI can assist in design, visualization, and project planning for buildings and structures.



## Engineering

GenAI can help with product design, simulation, and optimization across various engineering disciplines.



## Aerospace

GenAI can contribute to aircraft design, flight simulation, and mission planning.



## Medical

GenAI can assist in medical imaging analysis, and personalized treatment plans.



## Energy

GenAI can be used in renewable energy forecasting, grid optimization, and asset management.



# Benefits of GenAI as perceived by enterprises

## Product Development

Enterprises can leverage GenAI to accelerate product development, streamline design processes, and create innovative new offerings.

## Customer Experience

GenAI can enhance customer interactions, personalize experiences, and provide intelligent assistance to improve overall customer satisfaction.

## Employee Productivity

Enterprises can empower their employees with GenAI tools that automate repetitive tasks, provide intelligent insights, and augment human capabilities.



# Use-cases

## Writing

**Written content augmentation and creation:** Producing a "draft" output of text in a desired style and length

**Question answering and discovery:** Enabling users to locate answers to input, based on data and prompt information

**Tone:** Text manipulation, to soften language or professionalize text

## Synthesis

**Summarization:** Offering shortened versions of conversations, articles, emails and webpages

**Simplification:** Breaking down titles, creating outlines and extracting key content

**Classification of content for specific use cases:** Sorting by sentiment, topic, etc.

## Support and customer care interactions

**Chatbot performance improvement:** Bettering "sentity" extraction, whole-conversation sentiment classification and generation of journey flows from general descriptions

## Advanced use-cases

**Software coding:** Code generation, translation, explanation and verification, legacy code modernization

**Medicine:** Creating medical images that show the future development of a disease

**Machine learning and Data-science:** Synthetic data helping augment scarce data, mitigate bias, preserve data privacy, and simulate future scenarios

# Solving the right problems for enterprises using GenAI



## Integrate in core-products

Enterprises can leverage GenAI to integrate the technology into their core product offerings, enhancing existing features and creating new capabilities that drive top-line growth.



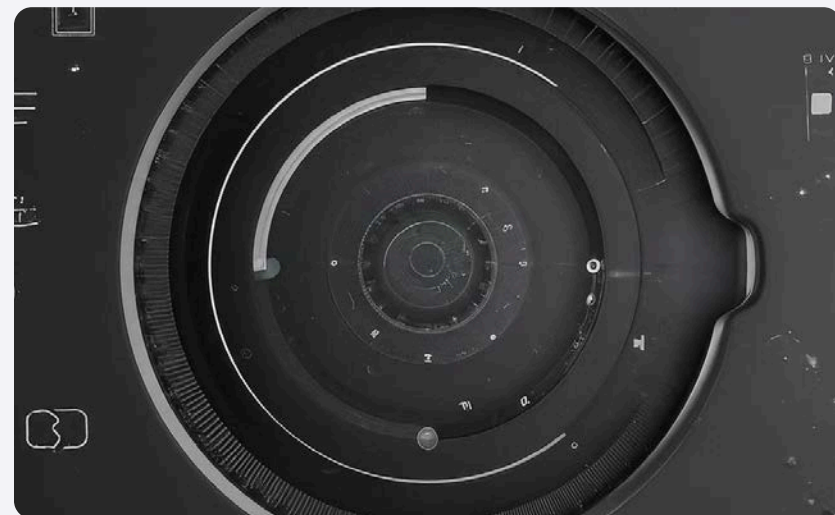
## Create new product offerings

Enterprises can also utilize GenAI to develop entirely new product offerings, tapping into the technology's ability to generate innovative solutions and meet evolving customer needs.



## Employee efficiency

Enterprises can leverage GenAI to enhance employee productivity by automating repetitive tasks, providing intelligent insights.



## Process improvements and risk mitigation

Enterprises can utilize GenAI to streamline and optimize their internal processes, and to identify and mitigate potential risks.





# GenAI Features and Capabilities

## GenAI Features

**Automated Summarization** - High capability for summarizing content like publishers, content platforms

**Creation** - Medium capability for creating content like marketing businesses, content creation platforms

**Synthesis of Information** - High capability for synthesizing information like customer case summaries, insights and reporting

**Search in Natural Language** - High capability for natural language search with broad applicability

**Automated Actions** - Additional fine-tuning needed for each new use-case like productivity, payments, home automation

## GenAI Capabilities

**Top-line Examples** - Publishers, content platforms, marketing businesses, content creation platforms

**Bottom-line Examples** - Business reporting, meetings, internal communication, knowledge management, documentation, learning and development, business analytics, research, feedback processing, customer support, incident response

# Risks of GenAI



## **Accuracy**

Generative AI systems sometimes produce inaccurate and fabricated answers. Models are prone to "hallucinations"



## **Bias**

Data used to train the model can be biased. This can influence the results in a negative way and impact the business operations significantly



## **IP**

It is possible that the model being used can ingest and train on the queries and prompts that users share. This can leak sensitive information from the enterprise to the outside world

# Scenario for PMs

As a Product Manager looking to integrate GenAI into your product to greatly improve the customer experience, you have identified a suitable Large Language Model (LLM) to power this experience. Here are the key steps you should take:

## **Understand the LLM's Capabilities and Limitations**

Thoroughly evaluate the LLM model you have selected to understand its specific capabilities and limitations. Assess its performance on tasks relevant to your product, such as natural language processing, content generation, and task automation. Identify any potential biases or accuracy issues that could impact the user experience.

## **Define the Use Cases and User Journeys**

Document the use cases where GenAI can enhance your product's functionality and user experience. Map out the user journeys and touchpoints where GenAI can be seamlessly integrated to provide value to your customers, such as in content creation, customer support, or task automation.

## **Develop an AI Trust Strategy**

Plan for responsible deployment of GenAI within your product. Ensure transparency, accountability, and user control, as well as mechanisms to address potential issues like bias, privacy, and security.

## **Implement Governance and Monitoring**

Implement a governance framework to oversee the integration and ongoing operation of GenAI within your product. This should include processes for monitoring model performance, addressing user feedback, and continuously improving the GenAI-powered experiences.

# Policies for Trust



## Disclaimers

Clearly communicate that AI-generated content can be inaccurate, and provide disclaimers to manage user expectations.



## Reporting Tools

Implement robust reporting tools to allow users to flag any harmful or inaccurate content being generated by the AI.



## Fallback Options

Offer clear fallback options for users who do not wish to interact with the AI-powered features, ensuring they can still access the core product functionality.



## Transparency

Provide clear messaging to users, indicating when they are interacting with an AI system to maintain transparency and build trust.



## Citations and Explanations

Offer optional citations and explanations on how the AI-generated content is produced, empowering users to understand the process and make informed decisions.

# GenAI Deployment Models

## **Off-the-shelf**

This model uses a pre-trained Large Language Model (LLM) that is not aware of the business's context or data. It provides a quick and easy way to integrate GenAI capabilities, but the output quality and relevance may be limited.

## **Bespoke/Fine-tuned**

In this model, the LLM is fine-tuned with data from the enterprise, significantly increasing the output quality and relevance to the business's specific needs and context.

## **Instance-based**

The LLM is local to the enterprise and does not pose a risk of leaking sensitive information outside the company. This deployment model ensures the highest level of data privacy and security.



# Enterprise Policies for GenAI Adoption\*



## Protect Privacy

If using Images, ensure that faces are blurred to protect people's privacy.



## Avoid Sensitive Data

Avoid business critical (IP) and sensitive information when using GenAI.



## Secure Data

Turn off logging and storage of queries to maintain data privacy and security.



## Protect PII

Avoid personally identifiable information when using GenAI to protect user privacy.



## Maintain Control

Give admins the ability to control availability and deployment of GenAI models.

*\*Relevant when using off-the-shelf GenAI models*

**Thank you**

