esynergy™

Unlocking the potential:

A playbook for responsible GenAI development

“

Generative AI has the potential to change the world in ways that we can’t even imagine. It has the power to create new ideas, products, and services that will make our lives easier, more productive, and more creative.

”

Bill Gates

Introduction

Technological evolution proceeds in many small steps and occasional giant leaps.

There are long periods where only incremental gains in efficiency and effectiveness are made, suddenly punctuated by paradigm-shifting innovations that change the rules of the game completely, such as electricity, personal computers or the Internet.

GenerativeAI (GenAI) is one such leap, ushering in a new era of innovation that will fundamentally change how businesses work and is disrupting the status quo across all industries.

The impact will be on the order of billions of dollars as GenAI helps businesses to eliminate costly manual or repetitive work, on the one hand, and generate valuable new business ideas and content, on the other.

That's why nearly two-thirds (64%) of business and technology leaders feel a "sense of urgency" to adopt GenAI, according to Google. But only 4% feel they have the necessary skills and knowledge to do so.

Implementing AI is as important for competitiveness now as leveraging the internet was back in the year 2000. And equally challenging.

This playbook explores the possibilities and considerations for implementing GenAI in an enterprise context, covering the following core topics:

- What is GenAI?
- Why GenAI matters
- Benefits of GenAI
- How to implement GenAI successfully
- How to choose the right technology
- Best practices
- How to measure success and ROI
- Key challenges and barriers
- GenAI case studies
- The esynergy approach
- Conclusion

What is generative AI?

GenAI refers to a subset of artificial intelligence (AI) technology that is capable of generating new content, such as text, images, audio, and other data types, by learning from a vast amount of existing data.

It is a dynamic intelligence that synthesizes vast digital reservoirs of human knowledge to meet specific requests by generating innovative new content.

GenAI is able to generate this content dynamically in accordance with relevant preferences for tone or, style for instance, incorporating the intention and circumstances of the user to deliver superior and highly context-aware results.

Much of its power lies in the fact that these systems are based on large language models (LLMs). This means that users can engage with them using natural language requests, just like they're talking to another human, making them incredibly accessible.

The genie was truly let out of the bottle in November 2022 with the introduction of ChatGPT by OpenAI. Since then, many new GenAI platforms have broken through into the mainstream and are democratizing and liberating the power of AI for day-to-day business activities and processes.

Other prominent LLMs and GenAI platforms include Midjourney, LLaMA 2, BARD, Falcon, Cohere, PaLM, Claude v1, Mistral 7B, Vectara.

Core capabilities

What can GenAI do?

GenAI's creative possibilities can be broken down into some combination of five core capabilities: search, summarize, generate, translate, convert.

Search

Enhancing search capabilities by understanding and interpreting complex queries, providing more relevant and context-aware results.

GenAI can understand the business context and user intent of a search query and deliver relevant results, even in the absence of the right keywords. It can also understand much more complex search queries than traditional search.

Example: you could ask GenAI to search for all financial documents related to a specific project and the AI would be able to take your intention and the context and use it to deliver the documents much more quickly than manually deciding which docs are relevant and which are not.

Summarize

Taking information and summarizing it according to specific parameters (e.g. length, detail, tone, style, structure) that you define. GenAI excels at condensing large amounts of information, while maintaining key points and context.

Example: the insurance industry can use GenAI to trawl through years of customer information, demographic data, policy information and claim reports in order to neatly summarize the key points of a client's insurance claim in alignment with a specific claim template.

Generate

Creating new content or data (e.g. blogs, social media images, graphs, reports etc.) that didn't exist before, based on learning from existing datasets. Algorithms can tailor content based on user demographics, past interactions and predicted preferences.

Example: a company could use GenAI to generate unique marketing copy or images of virtual models for fashion catalogs, created in alignment with the context and audience that you define.

Translate

Translating text or speech from one language to another, understanding and preserving the meaning, tone, and context.

Example: GenAI can provide real-time translation of business documents or live speech, making cross-language meetings more efficient and accurate.

Convert

Changing data from one format to another, often enhancing it or making it more accessible. Users can request that notes, documents and databases be converted into more specific or useful text or visual formats.

Example: convert complex data sets into visual representations (graphs, charts) for easier interpretation or convert medical scans into 3D models, aiding in diagnosis and treatment planning.

Combinations

Where GenAI really takes off is when you start to combine its capabilities, which results in powerful and multifaceted applications.

This not only enhances each individual function but creates synergistic effects that open up new possibilities in efficiency, creativity and accessibility across various industries.

Example: enhance data analysis by scouring through vast databases to find relevant information (search), consolidate key findings from different sources (summarize), and transform these findings into easily digestible formats like infographics or executive summaries (convert).

Use cases

What are the kinds of business processes and activities that AI will be able to transform and how?

1. IDP - Intelligent document processing

Intelligent document processing (IDP) using Generative AI (GenAI) and Large Language Models (LLMs) automates the extraction, processing, and analysis of information from documents with high accuracy and efficiency. This technology reduces manual errors, speeds up workflows, lowers costs, and enhances decision-making by providing real-time, accurate data. It ensures regulatory compliance and scales easily to handle large volumes of documents. Applications span across industries like finance, healthcare, and legal, where it processes invoices, policy documents, binder documents, terms and conditions, contracts, medical records, contracts, and more, offering customized solutions and significantly improving operational outcomes.

2. Optimize customer service

GenAI can support the customer experience in a variety of ways, all of which are enabled by a deeper understanding of the customer: instantly accessing and digesting customer data and history, analyzing customer sentiment and feedback in real-time and producing insights into customer preferences and behavior based on these.

These allow GenAI systems to quickly answer customer queries via chat or to provide customer service agents with highly-detailed information and summaries that enable effective and incredibly personalized customer service.

Examples:

- AI-enabled chatbots and assistants
- Answering customer queries with context- and customer-specific responses
- Recommending personalised products, services and experiences

3. Knowledge management

Making key knowledge discoverable and accessible is a major challenge in large enterprises.

GenAI can almost instantly search through vast quantities of information to efficiently retrieve key information and documents and even suggest other relevant documents that might assist, given the context and intent of the query.

Example: A consultancy could use AI to automatically categorize, tag, and summarize documents relevant to a specific project, making it easier for consultants to find relevant information.

4. Data analysis

Process and analyze huge swathes of data much more rapidly than ever before, identifying patterns, trends, and insights that might be missed by human analysts. This is invaluable for making data-driven decisions, making market predictions and forecasts, and understanding customer behavior.

Example: A financial analytics company could deploy GenAI to process vast amounts of financial data—including past market trends, news articles, and economic reports—to identify patterns and make accurate stock market predictions

5. Development co-pilot

GenAI sits in your development environment, suggesting code improvements, debugging, and even writing code snippets. It can also help in designing user interfaces and experiences, reducing development time and enhancing the quality of the final product.

This integration significantly speeds up the development process and improves code quality, leading to more efficient project completion. According to Microsoft research, 70% of co-pilot users said they were more productive when using AI to assist their programming work.

Example: A product company could use an AI co-pilot to help developers interpret client requirements and suggest innovative features or solutions that can be included in the projects as well as make real-time suggestions for improving code quality and efficiency.

6. Translation

GenAI revolutionizes translation by not only converting text from one language to another but also by maintaining the context, tone and cultural nuances. This capability is crucial for global businesses in ensuring accurate and relatable communication across different languages and cultures.

Example: An e-commerce platform that operates globally uses GenAI for real-time translation of product descriptions, reviews, and customer queries.

Key concepts

Machine learning models: GenAI is built upon machine learning models (a subset of AI) that learn from data

Deep learning: a subset of machine learning that uses neural networks with multiple layers (deep networks) to model complex patterns in data; it allows models to adaptively learn from experience

Neural networks: an artificial network that mimics how the human brain operates to identify patterns

Natural language processing (NLP): allows the AI system to understand, interpret, and generate human language in a way that is coherent and contextually relevant

Large language models (LLM): AI systems that trained on vast amounts of data and are capable of understanding and generating human language

Prompt engineering: prompts are the requests made to the AI model; prompt engineering is about fine-tuning prompts to make them more effective in communicating the request to ensure a more accurate response

Benefits of GenAI

Implementing GenAI in enterprise operations offers incredible benefits, enhancing efficiency, enabling informed decision-making, and driving innovation.

This leads to not just cost savings and operational improvements, but also to long-term growth, creative innovation and sustainability in a rapidly-evolving business landscape.

1. Efficiency, effectiveness and quality

- **Increase speed/quality of tasks:** The uptick in productivity that GenAI enables is staggering. It can streamline business processes, automating routine tasks, eliminating many manual tasks and enabling faster completion of complex tasks with higher accuracy. Automation of routine tasks using AI has shown to improve process efficiency by up to 50-70% in some industries.
- **Reduce total cost of ownership (TCO):** By automating tasks and optimizing processes, GenAI reduces labour costs and operational expenses. It also minimizes errors and inefficiencies, leading to lower maintenance and rectification costs, ultimately reducing the total cost of ownership.
- **Improved quality and customer satisfaction:** AI chatbots and virtual assistants have shown to handle customer queries more efficiently, with some studies indicating a reduction in response time by up to 80% compared to human-only customer service centers.

2. Data-driven decision-making

- **Predictive analytics:** GenAI enables enterprises to analyze large datasets to forecast future trends, market demands, and potential risks. This predictive capability supports strategic planning and proactive decision-making.
- **Deep customer knowledge and personalization:** GenAI provides deep insights into customer behaviors and preferences, allowing businesses to personalize products, services, and marketing efforts. This leads to enhanced customer satisfaction and loyalty.
- **Deep business and competitor knowledge:** By analyzing both internal performance metrics and external market data, GenAI helps businesses understand their position in the market, identify areas for improvement, and stay ahead of competitors.

3. Drive new revenues

- **New products and services:** GenAI helps generate ideas for new products and services by understanding customer needs, identifying emerging trends and unmet gaps in the market. This includes using AI to enhance creative processes, generating highly personalized content catering to individual customer preferences, such as custom merchandise or personalized videos.
- **Rapid innovation:** It enables rapid prototyping and testing of new ideas, accelerating the development of innovative products and services. Businesses could model how changes in a product design might affect its performance or consumer acceptance, allowing for rapid iteration and refinement. This not only helps in maintaining competitiveness but also opens up new business opportunities and markets.

How to successfully implement GenAI

What does it take to properly implement, deploy and use GenAI in a way that lets you extract the benefits and business value?

This is the process of transforming GenAI from a standalone tool to a widespread organizational capability.

The LLM or GenAI platform is not enough by itself. It must be seamlessly integrated into the rest of the business and specific use cases built up and around it, which is no small task.

Most GenAI use cases will require their own applications, meaning that your business will need the means to build, deploy, maintain and use possibly tens if not hundreds of GenAI-enabled applications.

What is required is an enterprise-level framework that includes the infrastructure and data to make everything happen, the means to make GenAI applications easily buildable and consumable within enterprise workflows as well as manages the key principles that must underpin it: safety, compliance, governance, data and more.

The esynergy GenAI strategy framework

At esynergy, we champion a GenAI strategy that ensures secure, innovative solutions, with a focus on controlling data. This concise strategy shapes the path for advanced GenAI integration into business, driving efficiency and a competitive edge through a responsible, skilled team and continuous improvement.

Here are the key elements of the esynergy strategy framework for implementing GenAI in the enterprise.

1. Objectives:

Define clear objectives for integrating GenAI, focusing on innovation, efficiency, and competitive advantage

2. Ethics and compliance:

Establish guidelines for the ethical use of GenAI, adhering to legal and regulatory standards

3. Team and roles:

Create a diverse team, including business experts, AI architects, data engineers, software engineers and support for data governance, security, and ethics

4. Data management:

Prioritize robust data management practices, ensuring the quality, privacy, and security of data used in GenAI models

5. Technology and tools:

Select appropriate tools, technologies, base models and frameworks in line with business goals

6. Use case identification:

Identify and prioritize value-add use cases, e.g. customer service, marketing, operations, and product development

7. Continuous improvement and innovation:

Adopt a culture of continuous learning and improvement, continuously learning and iteratively refining your approach

8. Stakeholder engagement:

Involve all stakeholders (employees, customers, and partners) in the GenAI journey, addressing concerns and expectations

9. Performance measurement:

Develop metrics to measure the performance and impact of GenAI initiatives, ensuring alignment with business objectives

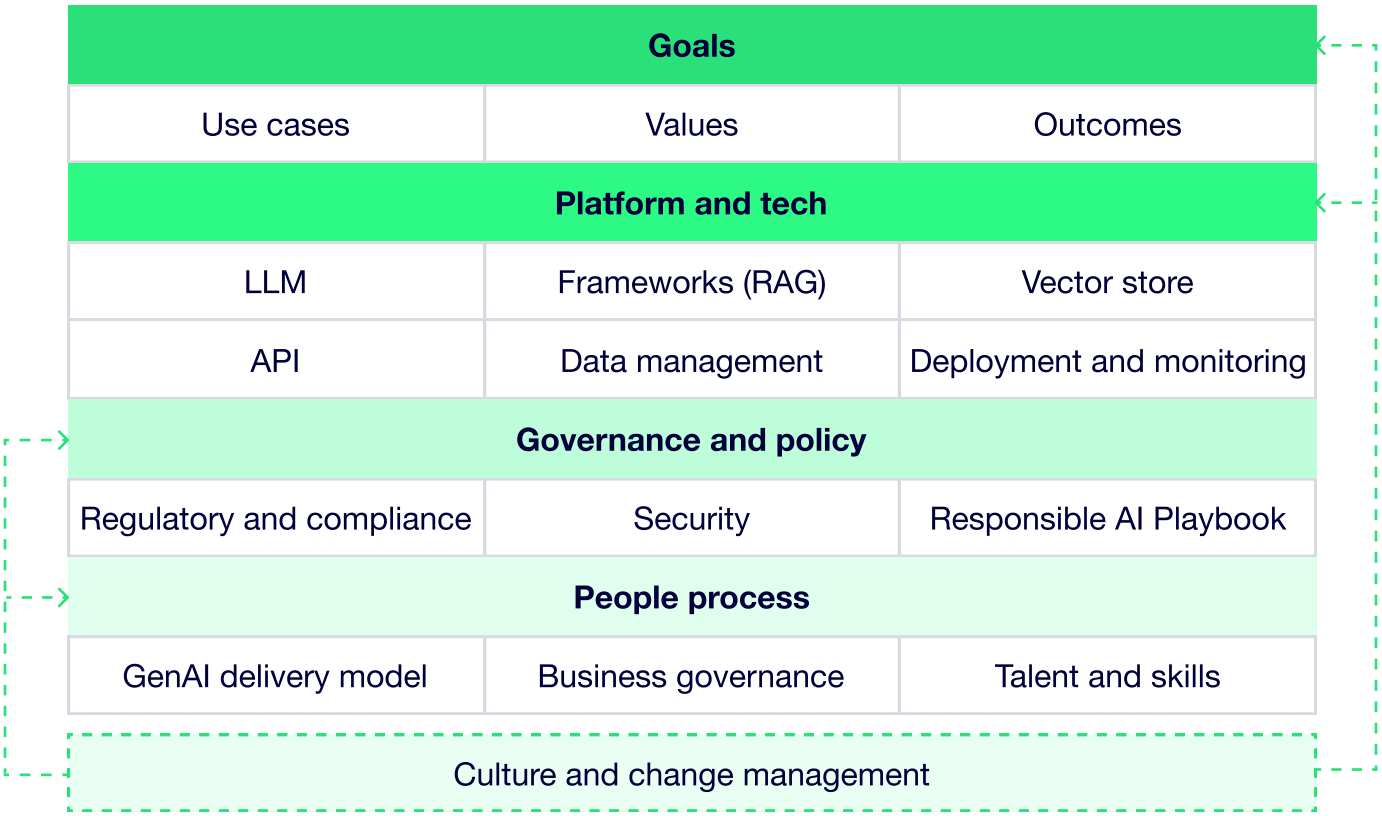
10. Scalability and integration:

Plan for scalability and seamless integration of GenAI into existing systems and processes

11. Training and development:

Invest in training and development programmes to build internal GenAI capabilities

GenAI strategy framework



The esynergy GenAI strategy framework

Getting to this level of maturity, however, is a journey. The next section will outline three broad stages to the unfoldment of the strategy framework.

Three stages of GenAI implementation

01

Copilots and assistants

An excellent starting point is deploying AI copilots and assistants to support day-to-day business processes as a first use case.

This implementation involves fine-tuning GenAI prompts to be augmented by your unique organizational context. For example, if an AI is responding to a customer inquiry it will be framed by the context, branding, tone-of-voice of your business and supported by the relevant customer data. It won't just sound like ChatGPT!

Note that you need to ensure that you are compliant. You will need copilots behind your firewalls to sense-check outgoing communications to ensure that they are not just all AI-written!

02

Unlocking experimental use cases with a RAG

The next stage is to start unlocking more experimental use cases using a RAG: retrieval-augmentation framework.

A RAG is a technique for linking GenAI to external sources to improve the accuracy and reliability of GenAI models and improve their context-awareness. It works by pulling on relevant sources to gain context and then uses that context to provide enhanced responses. By using a broader range or more up-to-date data, GenAI systems can provide more contextually-appropriate answers that are based on newer and broader data.

This enables businesses to start to liberate their LLM and harness its power for a wider range of use cases, such as AI agents, AI-assisted customer service (e.g. chatbots), enhanced search, recommendations, financial and data analysis applications. You can start to pull in relevant business data sets and documents to liberate your LLM to work on all corners of your business. You can turn technical manuals, sales spreadsheets, development logs etc. into knowledge bases to enhance LLMs and open the door to new use cases and applications.

For example, an AI could draw on FAQs and product manuals to provide incredibly specific technical answers to respond to customer product queries or produce personalized marketing emails for customers based on their past behaviors and preferences.

03

Scaling to an enterprise-level GenAI framework

Once the business has matured into a wider range of use cases, the next stage is to scale that maturity across the business by establishing a business-wide GenAI framework.

The purpose is to efficiently integrate AI capabilities into business operations so that they are highly accessible in the enterprise workflow (including the development, consumption and maintenance of AI applications and their associated infrastructure, data and others).

Here are some of the key ingredients that will have to be considered:

- **Robust AI models (including RAGs):** support a range of AI models tailored to specific business needs (including multiple RAGs) to generate more accurate and contextually-aware responses.
- **Generative AI operations (GenAIOps):** this is the management and orchestration of AI operations to ensure they are efficient and scalable. It includes model training, tuning, deployment, monitoring, and maintenance.
- **Data management:** creating data architecture and governance structures that ensure high data quality, integrity and accessibility across the business to enable effective preparation and consumption of data for AI.
- **User interface and experience (UI & UX):** providing intuitive interfaces for non-technical business users to build and consume AI capabilities, including visualization tools to make it easier to use AI-generated insights.
- **Integration:** processes and standards for ensuring that AI systems can seamlessly integrate with business systems and workflows (for example, CRM and ERP systems).
- **Monitoring and feedback:** continuously monitor the performance and outcomes of AI systems in line with key metrics and KPIs, providing feedback for ongoing improvement and addressing issues quickly.

Choosing the right tech stack

Understanding the capabilities and characteristics of the different LLMs out there is crucial for assessing the cost and feasibility of specific GenAI use cases.

This section will provide some of the key considerations when choosing an LLM, as well as a matrix comparing the major LLMs against each other.

Key LLM considerations

These are split into two groups: strategic and technical.

Strategic considerations

- **Accessibility:** How easy is it to use the LLM for different purposes and applications?

  Some are open source and can be run locally, while others are only available through APIs or cloud services that require registration and payment.

- **Multilingualism:** How well does the LLM support multiple languages and cross-lingual tasks?

  Some LLMs are trained on a diverse range of languages, allowing users to interact with them in their preferred language or translate between languages.

- **Creativity:** How imaginative and innovative is the LLM in generating text and content?

  LLMs are designed to foster creative writing and inspire users with novel ideas, while others are more focused on factual and informative text.

- **Ethics:** How ethical and responsible is the LLM in generating text and content?

  Some LLMs may produce text that is harmful, offensive, biased or misleading.

Technical considerations

- **Compute costs:** How much does it cost to run the LLMs?

  Some may require more computational resources than others.

- **Data security requirements:** How much does it cost to run the LLMs?

  What are your standards?

- **Customizability:** How flexibly can you customize the LLM to meet specific needs?

  Some LLMs may be more customizable than others.

- **Latency requirements:** How long does it take for the LLMs to process data?

- **Internal expertise:** What is the level of expertise required to set up and maintain the LLMs?

- **Context window:** How long can the input text be that the LLM can see and use to generate the output?

  The larger the context window, the more relevant and coherent the LLM's output can be, but the more memory it consumes and the more expensive it is (typically).

- **Open source:** Is the LLM open source or not?

  Open source means that the LLM's source code is publicly available and can be downloaded and run locally.

Comparing LLMs

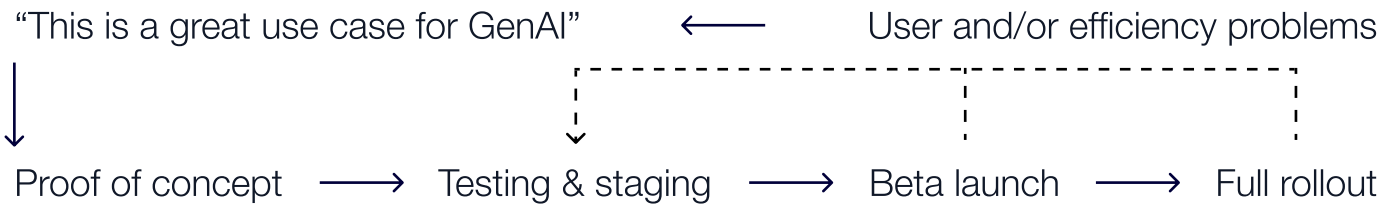
The below chart compares and contrasts popular LLMs against the above criteria to get an overview of the LLM landscape.

LLM	Accessibility	Multi lingualism (x/10)	Creativity (x/10)	Ethics (x/10)	Compute costs	Data security req.	Customizable	Latency requirements	Internal expertise	Cost ownership	Open source	Commercial use	Content window (K)	Input pricing ($/1000 tokens)	Input pricing ($/1000 tokens)
GPT-4	API only	10	9	8	● ● ●	● ● ●	● ○ ○	● ○ ○	● ○ ○	● ● ●	No	API only	8	0.03	0.06
ChatGPT	API only	8	8	7	● ● ○	● ● ○	● ○ ○	● ○ ○	● ○ ○	● ● ○	No	API only	16	0.001	0.002
LLaMa 2	Open source	7	7	6	● ○ ○	● ○ ○	● ● ●	● ● ●	● ● ●	● ○ ○	Yes	Yes	4	n/a	n/a
FALCON	Open source	5	6	7	● ○ ○	● ○ ○	● ● ●	● ● ●	● ● ●	● ○ ○	Yes	Yes	2	n/a	n/a
BLOOM	Open source	6	10	8	● ○ ○	● ○ ○	● ● ●	● ● ●	● ● ●	● ○ ○	Yes	Yes	2	n/a	n/a
Mistrak 78	Open source	7	9	8	● ● ○	● ● ○	● ● ○	● ● ○	● ● ○	● ● ○	Yes	Yes	8	n/a	n/a
Claude2.1	API only	8	7	9	● ● ●	● ● ●	● ● ○	● ○ ○	● ○ ○	● ● ●	No	API only	200	0.04	0.024

Key: Low ● ○ ○ Medium ● ● ○ High ● ● ●

Route to live - GenAI and LLM_Ops

GenAI and LLM_Ops provide powerful ecosystem for developing and optimising LLM applications, addressing unique challenges through comprehensive quality evaluation, iterative improvement, and robust debugging capabilities. GenAI dev platform help developers create more reliable, effective, and user-responsive LLM applications, driving better performance and user satisfaction across diverse use.



- Traces for debugging
- Prompt management
- Datasets for local testing
- User feedback collection & manual labelling
- Model-based evaluation
- Identify usage patterns & edge cases
- Monitor latency & cost
- Track experiments & releases
- Fine-tuning

Generative AI (GenAI) and LLM_Ops significantly enhance the development and optimisation of large language model (LLM) applications by providing comprehensive tools for evaluating and improving their quality and effectiveness. These tools utilise feedback functions to programmatically assess inputs, outputs, and intermediate results, enabling faster and more scalable experiment evaluation. This is crucial for various applications, including question-answering, summarization, retrieval-augmented generation, and agent-based systems.

Key features and value:

- **Quality evaluation:** Developers can measure how well their LLM applications perform across multiple feedback functions such as groundedness, context relevance, and safety. This objective measurement helps identify areas for improvement and ensure high-quality outputs.

- **Iterative improvement:** By leveraging an extensible library of built-in feedback functions, developers can observe weaknesses in their applications. This insight informs iterations on prompts, hyperparameters, and other components, continuously refining the application's performance.

- **Comparative testing:** Developers can compare different LLM applications using a metrics leaderboard, helping them choose the best-performing models based on objective criteria.

5 best practices for GenAI

This section lays out some common best practices that we have found are critical in ensuring the success of GenAI implementation projects.

1. Apply Generative AI operations (GenAIOps)

GenAIOps is a holistic approach that refers to the set of practices, processes, and technologies used to manage and deliver GenAI models effectively within an enterprise. It encompasses the entire lifecycle of a GenAI model, from development and deployment to maintenance and optimization.

The goal is to enable rapid changes to your AI data, models and applications to ensure that they are not only functional and efficient but also scalable and aligned with business goals.

To enable the rapid productionizing of AI artifacts, GenAIOps incorporates approaches such as heavy automation, tools for experimentation, lifecycle management, cloud-native infrastructure, decentralized data architectures or resource utilization.

2. Ensure data privacy

Data privacy is a critical concern to ensure the confidentiality, integrity, and availability of data, to safeguard sensitive information and build trust with customers.

- **Privacy-by-design:** integrate data privacy considerations into the design and architecture of your GenAI systems, rather than as an afterthought
- **Data anonymization and pseudonymization:** before using data for training GenAI models, cleanse it to remove personal identifiers
- **Zero-trust control and authorization:** this approach requires that all users, whether in or outside the organisation's network, be authenticated, authorised, and continuously validated before being granted access to applications and data

- **Data usage transparency:** maintain transparency about how and why data is used. Inform stakeholders, including customers and employees, about the scope of data usage and the purpose behind it
- **Incident response plan:** have a robust incident response plan in place to address potential data breaches or privacy violations

3. Understand new token economics models

Critical to understanding the total cost of your AI operations is the new economics of AI consumption. Just as the cloud brought in new OpEx models of consumption that contrasted with traditional CapEx models for IT infrastructure, GenAI changes the economic playing field.

Understanding the new token economics becomes very important. LLMs are priced by computational consumption, just like the cloud. However, the unit of measurement is the token, which is the basic unit of text or code that LLMs use to process and generate language.

It's critical to understand the TCO of tokens, compute and storage linked to your LLMs and GenAI systems to properly assess cost and ROI.

4. Offset carbon emissions

If your business needs to complete environmental, social and governmental (ESG) reporting, it will need to calculate the carbon emissions generated by their use of AI and explain how they are going to offset them.

AI has high resource requirements and can generate substantial carbon emissions (especially if not used efficiently). At the same time, GenAI can be leveraged to streamline ESG reporting and generate insights into making business activities and processes more sustainable.

5. Ensure regulatory compliance

Ensure that GenAI implementations comply with the relevant regulations (e.g. GDPR in Europe or HIPAA for healthcare data in the US), focusing on aspects such as consent, data subject rights, data minimization and cross-border data transfers.

In the specific context of GenAI, certain regulated industries (e.g. finance and healthcare) need to be able to explain the rationale behind any AI-enabled decision, insight or action.

For example, if an AI-enabled chatbot makes investment recommendations to a client, the business must be able to pop the hood on that calculation and explain before regulatory reporters how the chatbot came to its conclusions.

How to measure success and ROI

How you measure success and track the ROI of your GenAI implementation will depend on your initial business goals and objectives.

In this section, however, we will give an overview of the five main areas where businesses typically develop Key Performance Indicators (KPIs), along with example metrics.

1. Financial performance

How has GenAI reduced costs and contributed to revenue growth?

Cost reduction metrics:

- Reduction in operational costs (e.g. manual labour savings, decreased infrastructure costs)
- Decrease in human-error-related costs (i.e. rectifying mistakes)

Revenue growth metrics:

- Increase in sales or revenue from new or enhanced products/services due to GenAI
- Growth in market share or new customer acquisition rates

2. Operational Efficiency

How has GenAI streamlined processes and increased productivity?

Process improvement metrics:

- Increase in throughput and velocity of business activities and processes
- Reduction in processing time or increase in capacity utilization

Productivity metrics:

- Reduction in time spent on routine or repetitive tasks
- Increase in employee productivity (i.e. more high-value tasks completed)

3. Quality and performance

How is the quality and performance of your AI models?

Quality assurance metrics:

- Reduction in error rates or defect rates in AI-enhanced processes
- Improvements in product or service quality ratings

System performance metrics:

- Accuracy and precision of AI models
- Efficiency and response times of AI systems

4. Customer and market impact:

How has GenAI impacted the customer experience and improved innovation and competitiveness?

Customer engagement metrics:

- Improvements in customer satisfaction scores or Net Promoter Scores (NPS)
- Increases in user engagement, retention, or conversion rates

Market impact metrics:

- Time-to-market for new products or features
- Changes in competitive positioning or market perception

5. Risk and Compliance:

How has GenAI impacted your compliance and risk profile?

Compliance metrics:

- Reduction in compliance-related incidents or violations
- Efficiency in managing and adhering to regulatory requirements

Risk management metrics:

- Decrease in operational or financial risks
- Effectiveness of AI in identifying and mitigating potential risks

Key challenges and barriers

As with any cutting-edge technology, implementation is not without its challenges.

Here are the biggest and most common barriers to successfully integrating GenAI in an enterprise context.

1. Data quality and availability

The effectiveness of GenAI systems is utterly dependent on the quality and availability of data.

However, many enterprises struggle with siloed data, overburdened data teams, inconsistent data formats or data that is incomplete or outdated, which can lead to inaccurate AI predictions and analyses.

Addressing this challenge requires a robust data governance strategy that democratizes high-quality data throughout the business. Key considerations here include:

- Decentralized data architecture (e.g. data mesh)
- Cross-functional team structures (to eliminate bottlenecks)
- Federated data governance (to shift left data governance standards)
- Data-literate culture (to empower business teams to take ownership)

2. Change management and cultural resistance

Deeply implementing GenAI systems in your business will require significant changes in business processes, roles and organizational structure. This change can be met with resistance from employees who might be skeptical about AI or fear that it might replace their jobs.

For example, according to Botco, training teams on how to use generative AI effectively is a major roadblock affecting 50% of marketers' adoption of AI.

Effective change management is crucial to address these concerns. It involves clear communication about the benefits of GenAI, how it will augment rather than replace human work and the new opportunities it presents.

Providing training and involving employees in the transition process can also help in mitigating resistance. Leaders play a critical role here, as they need to champion the use of AI and foster an environment that encourages experimentation and learning.

3. Skills and talent

The successful implementation of GenAI requires a workforce with the right mix of skills, including data science, AI programming, domain expertise, and the ability to interpret AI outputs.

However, there's a significant talent gap in the market, making it challenging to find and retain these individuals. Fostering a culture of continuous learning and innovation can help in attracting and retaining the necessary talent.

Organizations might also consider adopting AI tools that are more user-friendly and require less specialized knowledge to operate, reducing the dependency on highly skilled AI experts.

4. Integration with existing systems

Integrating GenAI systems with existing IT infrastructure and business processes can be complex and challenging. Legacy systems may not be compatible with modern AI technologies, and modifying them can be costly and time-consuming.

Ensuring seamless integration requires careful planning, a thorough understanding of both the existing systems and the GenAI technologies and, often, a phased implementation approach.

We are here to help

At esynergy, we're redefining how public and private sectors innovate with GenAI. We deliver strategic solutions that enhance efficiency, ensure security, and foster competitive advantage. By turning data into actionable insights and automating complex tasks, we free up your resources, enabling you to focus on growth and innovation. Whether it's engaging with customers or transforming business processes, our GenAI strategies are tailored to drive your organization forward.

GenAI use cases that we are helping our clients to deliver include:

- Public services: content search and summarization, coding automation, chatbot citizen engagement, content generation, internal operational efficiency
- Private sector: AI customer assistance agents, marketing and sales AI assistants, software development, data analysis, business transformation, knowledge management.

If you are struggling with any of the key challenges of GenAI implementation:

- Making a business case
- Identifying most suitable use cases
- Winning over key stakeholders
- Understanding readiness of data sources
- Deciding what approach to take
- Determining the most appropriate patterns, tools and technologies
- Determining what a good GenAI team looks like
- Measuring success and key metrics (TCO/sustainability)
- Ability to deploy, monitor and continuously improve

Get in touch with us:

info@esynergy.co.uk

New London House, 6 London St, London EC3R 7LP

0207 444 4080