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Uncovering how AI is transforming enterprise applications, driving efficiency, and shaping the future of business operations.

GenAI and the New Enterprise Application Landscape

This white paper examines the rapid adoption of GenAI across enterprise functions, from customer service to sales to research to operations. It highlights how AI technologies enhance productivity, foster innovation, and create new opportunities, emphasizing the importance of strategic integration for businesses to remain competitive in the evolving digital landscape.

Contents

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The Generative AI Context

Building products in the traditional way is rapidly giving way to the emerging world of AI chatbots. Commercial functions such as in the sales & marketing, business and customer services, education, distribution and these associated *user-oriented* digital products are the most rapidly evolving. This is the space where adoption is expected and being seen to be very rapid.

users being employees, consumers, customers, & suppliers

Enterprise ChatGPT is gaining traction in marketing, finance, and product. Education, healthcare, and financial services are our largest customers

Sarah Friar
CFO, OpenAI

Consumers are signing up to AI products at a rapid rate. GPT alone has over 10 million subscribers. Earlier, this trend from consumer to enterprises *was slow*, but with the emerging trends in AI, the move from consumer (which has seen massive adoption quickly) to enterprise has been rapid. In just a year, millions of users have started using *chatbots & AI-led interfaces*. The pace of change and enterprise interest is exploding, indicating that this is not the usual 5 –10-year trend. It is much faster.

for example, cloud adoption was a ten-year journey

ChatGPT being the prime example, but open-source options are also available

The increasing availability of chips (GPU's) from Nvidia and the proliferation into mainstream servers and client software has expanded the reach of AI to *user devices*, all within a year. Social media giants like Meta, Alphabet, and the rest are scrambling to jump onto this new technology, and it is disrupting their traditional digital marketing space.

consumer desktops, laptops, mobiles, & tablets tend to come pre-loaded with AI software, such as MS Copilot

AI in the Enterprise

AI is rapidly transforming work, business, and society, integrating into various domains like voice and image content, travel (Google Maps), media (Netflix), office apps (Microsoft), e-commerce (Amazon), and CRM assistants (Salesforce, Google, Apple).

The future is happening now. There is no five-year journey with AI. If you are not on this now, if you are not moving towards getting there then you are already late.

John Roese
CTO, Dell

The productivity benefits for employees in *office-work* reduces the human-labor required for tasks. The potential for content generation and communication possible (e.g. Microsoft office co-pilot for knowledge generation, sharing, and marketing) and the benefits of using AI in technology (example Github in generating code, testing, UI development, etc.) is substantial. The pace at which enterprises are investing in this technology is rapid and driven by management seeking to improve top-lines and bottom-lines.

today, bots are producing collateral, case studies, documents, presentations, emails, & more

Enterprises are also being exposed to AI through their systems and processes, not just through the device-native productivity tools or the cloud. For example, legacy software firms like SAP are adding conversational AI bots to their products (integrating a chatbot intoto SAP UI), which means that adoption is seeping into the backend and the operations side of the businesses as well.

As we can see in large firms, both in the enterprises' *systems of engagement* as well as in their *systems of record*, AI has already played a role in the interface UIs and in the business layer. Now AI is playing a role in the systems of insight (SoI) that analyse the information stored or transacted in the SoR and SoE.

SoE: social media platforms, customer self-service, web portals, collaboration tools, CMS, mobile apps

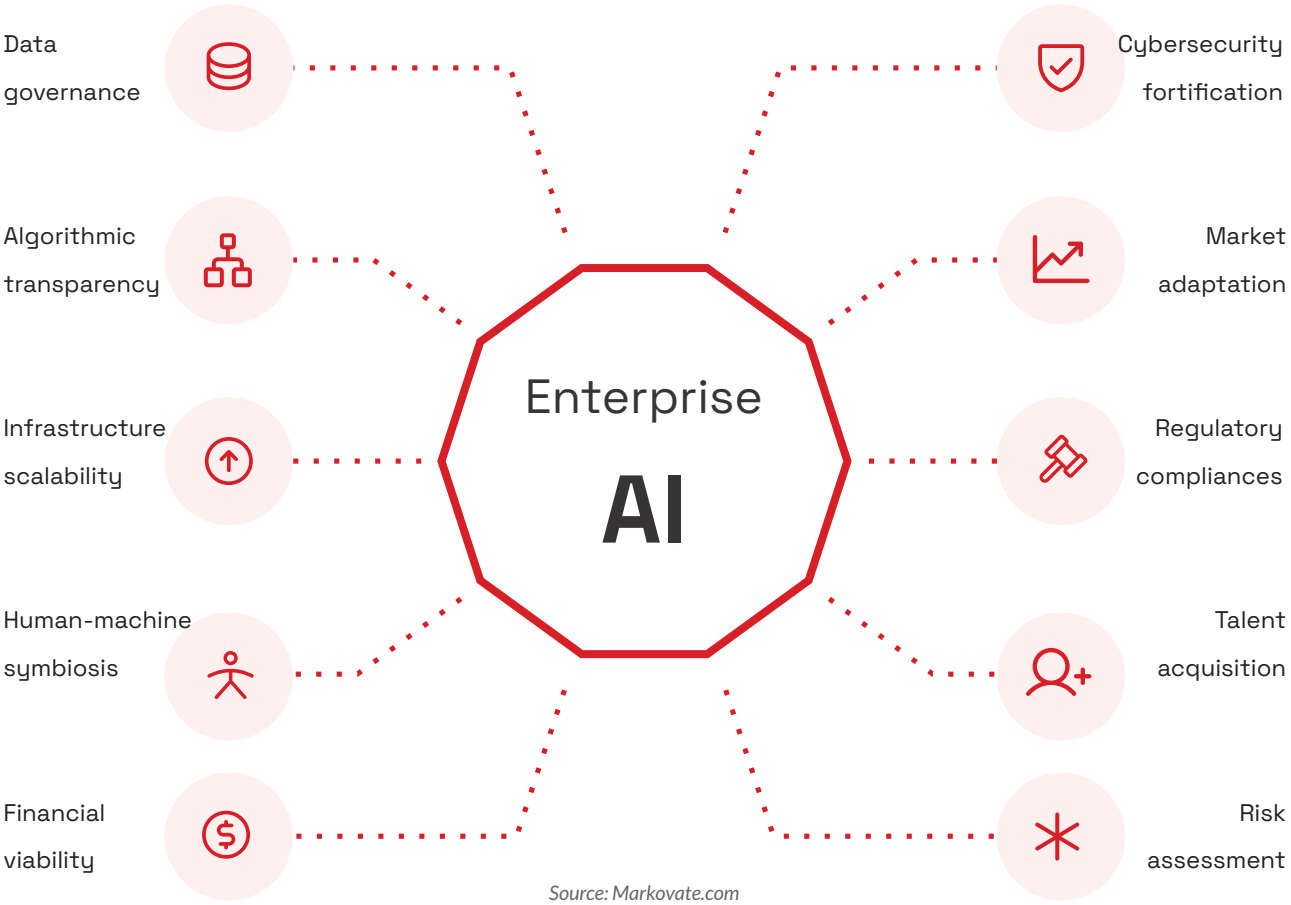
SoR: finance, CRM, HR, SCM, ERP, databases, etc

In summary, "Enterprise AI" refers to the AI technologies used by companies to transform their operations to gain a competitive advantage. AI helps enterprises facilitate at scale or small distinct processes that generate business value. AI can automate workflows and improve data management.

AI Is the New User Experience

Enterprise AI can help organizations grow revenue, increase customer engagement, and create new business opportunities. To incorporate this into the existing landscape they must consider a few things.

Key Considerations of AI Integration in Modern Enterprises



Source: Markovate.com

The enterprise AI core delivers value by automating disparate processes and providing a single interface point to manage them.

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AI Is the New User Experience

It is not just in making ads smarter or in engaging users towards spending more time on the core offerings, the business benefits are immense in multiple sectors such as medicine, education and finance. Ever since we open-sourced Llama AI models we are seeing its benefits for accountants, lawyers, doctors…. Just to take the fine tuning of Llama example, in Senegal an AI engineer fine-tuned Llama into their local language and then further worked with a local open source trusted medical database to create a chatbot, which is used by local doctors for learning and decisions.

Chris Cox

Chief Product Officer, Meta

As legacy software companies add AI chatbots into their products and as enterprises adopt more and more digital technologies and devices, it is emerging that *'AI is the new UI'*. GenAI is the interface that is gradually disrupting traditional interfaces while ensuring that the existing systems, data, and applications can be repurposed and reused to enable a 'multi-modal' user experience.

AI-powered interfaces are now becoming the norm for users to interact with technology

This Disruption is Emerging in the Following Ways

1. Conversational AI chatbots: Apps that interact with users in natural language using GenAI

2. Voice AI: Generative voice AI solutions that can respond to human voice and engage accordingly

3. Multi-format interaction: Text-to-text, speech-to-text, text-to-speech, speech-to-speech

4. Multi-lingual interaction: Translation of script/texts/audio/video into multiple languages facilitating robust localisation

5. Emotions: Building emotion into faceless chatbots and automated interactions with UIs, to provide the emotional intelligence and empathy in their communication

Transformational Opportunities for Products and Services

Creators and providers of digital products and services can consider using AI technologies on their front-ends and interfaces. As organizations across industry sectors are beginning to adopt AI into their business they can, for example,

1. Incorporate GenAI chatbots (LLM's) into legacy enterprise software, which are being upgraded with such interfaces by their vendors
2. Use personalized large language models to generate a wide range of content while ensuring data privacy and security using existing tools like MS Office Copilot or new AI applications (search-query type apps) that run on the data stored in the enterprise RDBM's
3. Build generative AI solutions to create case study descriptions, generate content (text or video) and summarizations, translations, transcriptions, craft scripts (video, audio, text), generate alerts/notifications on content (delivered into chatbot interfaces), use chatbots for short surveys, for lead capture (forms data), and user registrations
4. Integrate AI flows into legacy workflows and processes for better results
5. Transform their existing websites and mobile apps with inclusion of chatbots or replace them with AI chatbot-led primary interfaces

Leveraging Open-Source AI for Innovation

Harnessing open-source Large Language Models (LLMs) enables enterprises to maintain data confidentiality within secure, controlled environments. By using these models within their own databases, businesses ensure sensitive data remains protected while benefiting from AI capabilities. *Open-source LLM's* offer customization, flexibility, and cost-effectiveness, reducing reliance on proprietary platforms. This approach enhances security, fosters customer trust, and ensures compliance with data protection regulations, positioning enterprises to innovate and stay competitive while safeguarding their valuable data.

examples of open-source LLM's include LLaMa, DeepSeek, & Mistral

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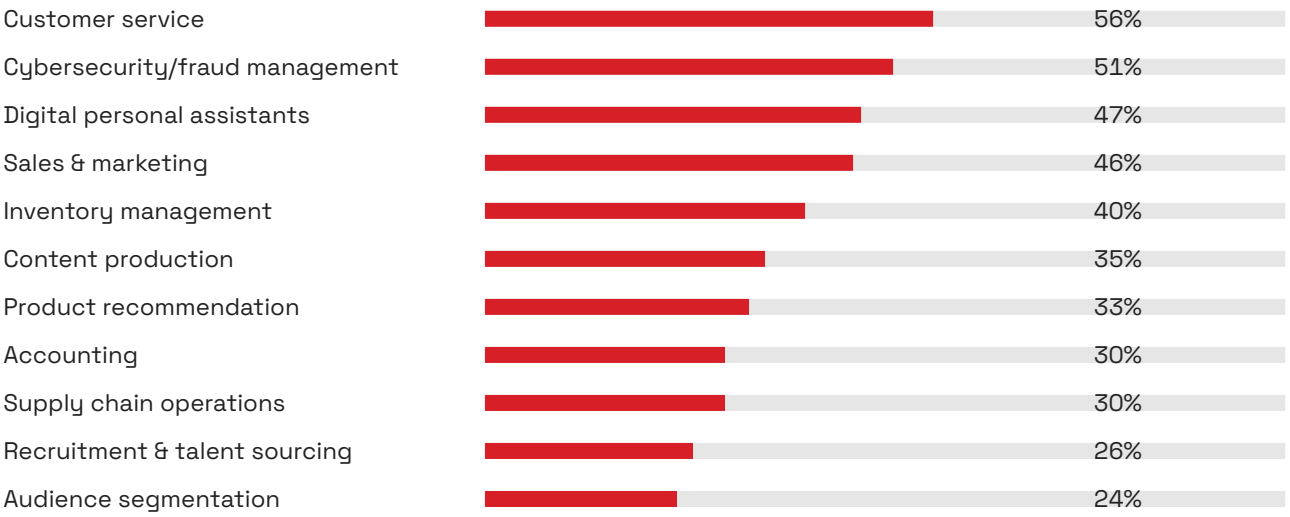
AI Integration for Improved Business Outcomes

Most Utilised Business Areas Transformed by AI



Source: Vlinkinfo.com

By automating repetitive tasks, AI allows professionals to focus on areas requiring attention. Integrating AI into business processes allows us to enhance efficiency, reduce costs, and foster innovation. This integration leads to improved decision-making, personalized customer experiences, and streamlined operations. From a proactive improvement standpoint, AI-driven processes can automatically detect and improve outcomes by analysing data from various systems, enabling real-time monitoring and swift responses to emerging issues.

Implementing AI Solutions Involves a Few Key Steps

this section only lists the key steps in implementing AI solutions; further steps are also required

1. Data Preparation: Ensuring data is clean, accurate, and accessible is crucial for effective output of the AI used

2. Model Development: Tuning AI models to be tailored to specific business needs (this includes training on datasets to refine predictions)

3. Integration: Seamlessly incorporating AI models into existing business systems to achieve functionality

4. Monitoring and Optimization: Continuously monitoring performance, making adjustments to sustain optimal outputs.

The Path Ahead for Generative AI

Even as the proliferation of the AI-driven interfaces and the emergence of AI-driven intelligent application services in the enterprise landscape begins to gather momentum, there is a phase difference in the pace of adoption. The adoption in the customer-facing, market facing (external) functions such as digital communications efforts is rapidly gaining ground at an *accelerated pace*. Adoption in the rest of the enterprise is following more gradually but surely at a controlled speed. To exploit Ai's full potential these other functions must incorporate AI into their workflows: databases, business logic, governance, trust, and security policies.

especially in the context of generative AI

For achievement of maximum benefits, the integration of AI technology into the existing landscape requires strategy, process, people, and data training and the analytics to track the outcomes realized. When done right, the potential with new generation AI tools, technologies, and cutting-edge *capabilities* provide an order of magnitude advantage to the firms which will learn to do this, over their competition.

intelligence automation capabilities are emerging at a rapid rate

The marketplace is rapidly evolving and adopting GenAI to improve or create new offerings that are showing up in the multitude of digital products and services, thereby constantly throwing up business possibilities and potential that cannot be ignored as much is to be gained.

AI-led change is here and upon business enterprises, it's time to tap into it!

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About MetaDesign Solutions

metadesignsolutions.com

MetaDesign Solutions is a dynamic digital product engineering company dedicated to driving productivity and innovation. With a strong focus on excellence, we provide expert skills, efficient project management, and flexible engagement models. Our teams collaborate closely with a diverse global clientele, delivering high-quality solutions across industries such as Retail, MedTech, Healthcare, Technology, Media, Services, BFSI, Pharmaceuticals, and more.

Metadesign has a small, growing practice working with GenAI technologies. Our engineers work with businesses to identify opportunities for AI and propose a strategic path to be delivered using these technologies. We developed an interface for a content generation pipeline, where GenAI was utilised to create customised content for a Cybercrime awareness and reporting portal of a sovereign country. The marketing department of a global enterprise uses a solution developed with our help to edit videos and audio for their sales communications. An AI-based video editor for a media company to process podcasts and thereby generate short forms of audio or video content provides them the ability to optimize efforts. For a learning and education services firm, GenAI-based content parsing to generate summaries, specific topic snippets, trailers, and subject matter topic courses help save time and money. Metadesign also has custom developed and proprietary tools, built using open standards, to offer complex Agentic AI workflows and services. For example, an AI based full-cycle recruitment platform for talent sourcing and selection processes called Cyberforce HQ.

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