



Generative AI Innovation

Where Is the Business Value?



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Generative AI Innovation

Where Is the Business Value?

After experimenting extensively over the past year with the amazing information, communication, and creative capabilities of generative AI, companies have begun to explore its even more valuable potential: creating business value through intelligent data organization, process automation, and management support. This Insight paper explores opportunities for innovation across most business functions from the perspective of some of the most innovative startup companies.

To maintain a competitive advantage driven by the adoption of generative AI, it is crucial for organizations to thoroughly explore the applications provided by leading generative AI developers before they become readily incorporated into business functions. Understanding where these applications can deliver the most business value is critical.

Introduction

The breakout ICT technology of 2023 was generative AI with its ability to amplify human creativity, productivity and transform the products and services we use every day.

In 2024, the only consensus on its economic impact is that it will be huge. Oxford Economics forecasts that generative AI adoption could inject anywhere from \$477 billion to \$1 trillion into the US economy alone by 2032. Bloomberg expects a generative AI market size of \$1.3 trillion by that time. McKinsey estimates economic benefits of up to \$4.4 trillion globally.

However, [Gartner's](#) market data presents an intriguing anomaly. Despite generative AI related spending catapulting from virtually nil to 8% of the \$124 billion AI software market, it surprisingly did not stimulate a corresponding rise in overall AI investment.

Today this situation is rapidly changing as we see almost every major service provider quickly moving to provide powerful new generative AI-related business tools and services. Major platform providers such as Microsoft and AWS are at the forefront of this investment, creating new ecosystems of AI powered "CoPilots", APIs and cloud services. These will become the bedrock of an AI transformation that enables developers and organizations to create the next generation of applications, products and services. Potentially more than doubling AI investment by 2027 to \$297 billion.

In addition to generative AI capabilities, Fujitsu and other major IT service providers are helping partners develop specialized AI capabilities and integrate them into cross-industry offerings. These services go far beyond one-size-fits-all solutions and perform better on specific tasks. Fujitsu's cloud-based AI platform, [Kozuchi](#), even helps to automatically select the best AI models for its partner's use cases and allows third-party models to be integrated in its secure environment.

It is the dynamic generative AI startup market, however, that is showing which innovative services can have an impact on business performance and business models before large organizations can integrate them into established business functions. Leading the development of these AI-based business services, is a growing group of "conventional" AI startups that are now adopting generative AI capabilities. These startups are often at the forefront of AI development and very close to their customers. In the following, we will explore the impact on all major business functions beyond the already widely recognized potential for chatbots and creative tools.

Generative AI Business Adoption

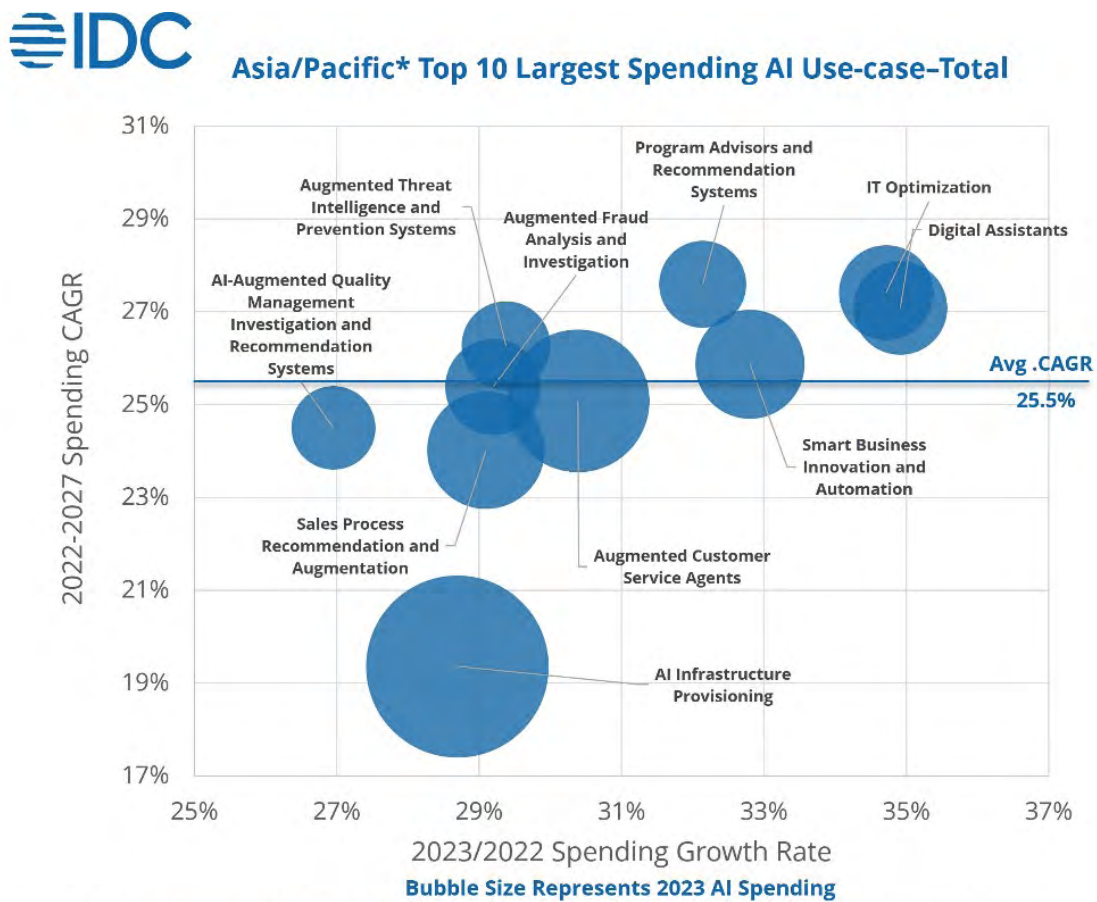
The extremely rapidly pace of innovation and growth in the generative AI services market makes it challenging for organization to navigate.

Most organizations now have clarity on how to gain advantages in personal productivity in their workforces by the adoption of generative AI powered chat bots like ChatGPT and creative tools such as Midjourney or Stable Diffusion. They are still waiting, however, for the impact of embedded generative AI powered assistants such as Microsoft’s CoPilot to boost the productivity, capability and creativity of their workforce.

Increasingly, the challenge will become to navigate the confusing and rapidly evolving range of “augmented” services, analytics and virtual assistants that become available.

The following graph by IDC documents the flurry of “augmented” AI services that become available in the Asia-Pacific market.

Graph 1 Emerging AI Use Cases 2022-2027



Source: *Worldwide Artificial Intelligence Spending Guide, August 2023* *Including PRC and Japan

Source: <https://www.idc.com/getdoc.jsp?containerId=prAP51254323>

To maintain a competitive edge and mitigate potential market disruption propelled by generative AI adoption, it’s crucial to delve deeper into the applications being offered by some of the most advanced generative AI developers. Understanding where these applications could deliver substantial business value is key.

Potentials of Generative AI beyond Chat, Text & Image Generation

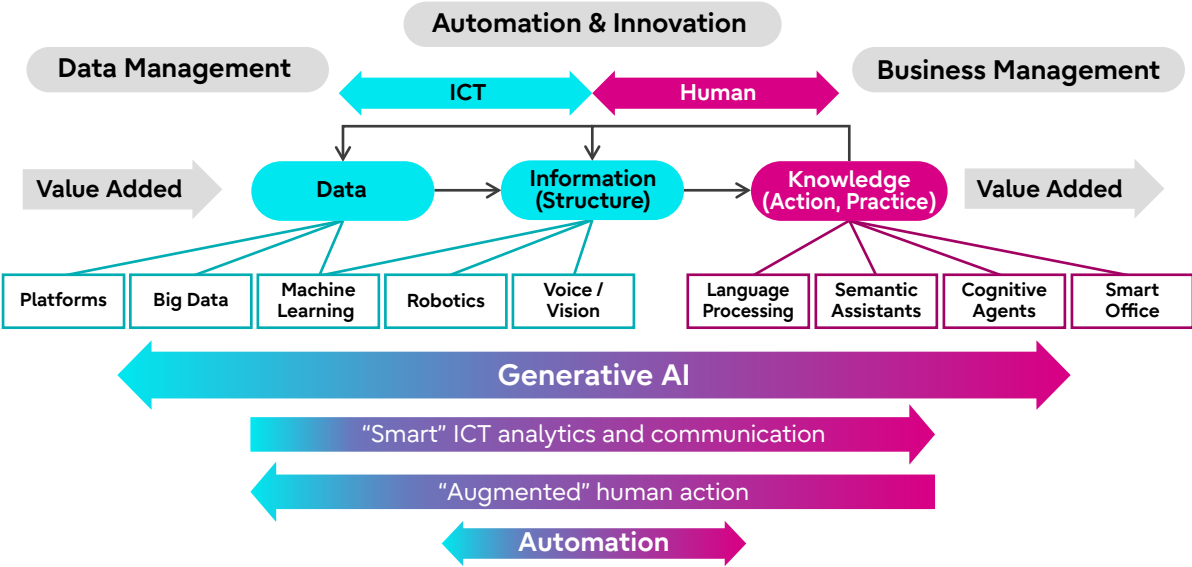
The potentials of generative AI go far beyond the chat functions that most users have already experienced. Generative AI models are not only trained on large sets of data, they can find new complex relationships in these data, generalize from what they have learned and create new data. Crucially, models are not limited to the basis of the original data (such as databases, blogs or illustrations) to answer questions, they can take additional information (including its own results) into account and let humans input "prompts" that further steer the generation of final answers.

These generalizations and flexible reaction to additional information enable generative AI models to perform tasks for which they were not directly trained for. The result is that they can enable their users to communicate and guide computers in natural language to digest, synthesize, and analyze unimaginable amounts of data to provide information, predict complex outcomes, help with any programmable task or create novel content.

This is indeed a major innovation from any perspective. As depicted in Graph 2, machine data and human knowledge capabilities have largely remained distinct entities thus far. While conventional AI big data and machine learning services have become increasingly crucial in managing the explosive growth of data on cloud platforms, their direct and consistent impact on management decisions has been minimal.

A similar scenario exists for the wealth of information generated daily by social media and e-commerce platforms. Cloud providers could access and analyze these data with their AI algorithms, but for most other companies, these crucial information sources remained a scattered and unstructured world of documents, emails, and chats. Existing AI-based language processing and semantic assistants struggled to structure this new information landscape and had only a marginal impact on business management and automation.

Graph 2 Generative AI Value Integration



Generative AI is now catalyzing a revolution in human-machine capabilities and “democratizing” their use by integrating these two worlds from both ends. Unstructured data, previously scattered across various IT systems within organizations (data lakes) and social media communication channels, can now be automatically integrated, analyzed, and communicated to human decision-makers without the need for additional IT expertise. Conversely, management communication and decisions can now translate into digital action far more directly.

In practical terms, specialized corporate “dashboards” that have been increasingly providing operational information across all departments of organizations will start to directly signal actionable insights to management in other parts of the organization and to the top. Generative AI can deliver information to relevant business stakeholders in a language and level of detail they need, and swiftly develop actionable solutions by analyzing similar situations and accessing all relevant partners. Consequently, management decisions will be able to reverberate throughout all affected parts of the organizations far more directly, rather than trickling down narrow paths of command and control as before.

Generative AI assistants or “copilots” will gradually assume this role and take on more data and business management tasks. The result is an opportunity for effective automation when machine data management and human knowledge intersect more directly in the production process.

However, such potentials for growing autonomy in automation require experience, safeguards, and trust that can only be built through a process of learning by doing over time. As we have analyzed in our Insight [Generative AI – Building Trust through Human Empowerment](#), instead of waiting for industry automation providers to develop ready-made AI-integrated solutions, innovative enterprises should therefore prefer to start experimenting with the transformative potentials of generative AI as early as possible.



Generative AI Integration into major Platform Services

Competition between major platform vendors is intensifying as vendors compete to develop AI service ecosystems to capture market share in the rapidly expanding and valuable AI services market.

This competition is driving innovation and accelerating the development of more advanced, powerful and easier to use AI developer tool ecosystems. This in turn is enabling developers to create more innovative and powerful applications and services, more quickly and at a reduced development cost.

Major platform vendors, including Google, Amazon, Microsoft, and IBM, are all rapidly expanding their AI tools to provide developers with a multitude of powerful AI tools and services they can use to create new enhanced AI powered products and services quickly and efficiently.

Microsoft was one of the early leaders in providing both generative AI enhanced applications and services thanks to its close partnership with OpenAI the creators of ChatGPT. Today Microsoft has embedded its "Copilot" assistants into many of its products and services to boost the personal productivity and capabilities of its customers. It is also importantly enabling developers using Microsoft Copilot Studio to develop Customized Copilots and Microsoft Azure services for vision, speech, language, decision, and conversational AI service development. Microsoft is also supporting the developer community by enhancing automated code generation on GitHub.

Amazon Web Services (AWS) now offers a comprehensive range of around fifty machine learning services for enterprise developers, including Amazon SageMaker to build, train and deploy ML models, Amazon Lex, the technology behind Amazon Alexa, provides developers with tools to build sophisticated, natural language chatbots, Amazon Q for developing generative AI assistant for enterprise, Amazon CodeWhisperer for rapid ML-powered coding.

IBM, a pioneer in the field of AI with its Watson platform, continues to expand its AI offerings for developers. IBM Watson now offers a range of AI services, from natural language processing and machine learning to visual recognition and speech-to-text. IBM's AI expansion aims to help developers unlock valuable insights from data and build more intelligent applications.

Google's AI-first approach is evident in its products like Google Assistant, Google Photos, and Google Translate, which leverage AI to deliver more personalized and intuitive user experiences. Google is a leader in AI development and has expanded its AI offerings with Google Cloud AI, a suite of machine learning services designed to help businesses build, deploy, and scale AI models. Google Cloud provides AI services such as Google Cloud Vision API, Google Cloud Speech-to-Text API, Google Cloud Natural Language API, and Google Cloud Dialogflow, which enable developers to add AI features to their applications with minimal coding.

The expansion of AI offerings from major platform vendors is reshaping the technology landscape and creating new opportunities for developers. The expansion of AI offerings from these major platform vendors is not without challenges, however. While developers face issues such as data privacy, algorithmic bias, and the complexity of building and deploying AI models, they need to invest not only into AI research and development but also complex compliance. We can therefore expect to see more sophisticated, user-friendly AI tools that can help developers build more intelligent applications and drive innovation while business application will evolve more gradually.

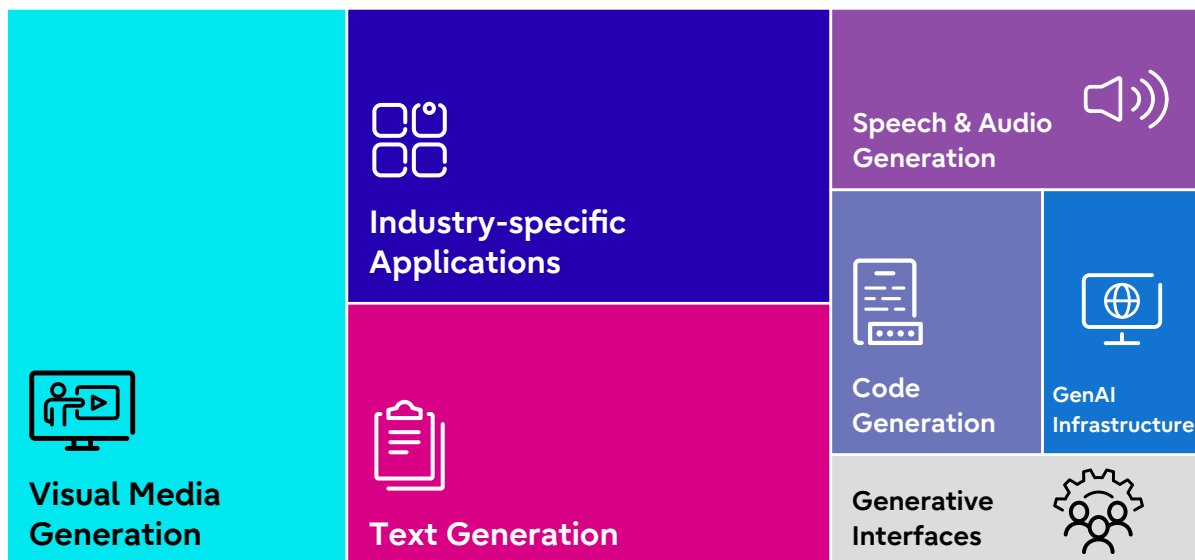
Generative AI Startups for Business Support

Beyond major platforms, a closer look at the startup market for applications and business services provides an interesting glimpse into the future, where Generative AI capabilities may soon play an important role and perhaps become available on major platforms later.

In the following sections, we will explore some of the new generative AI business services by examining service offerings of major (unicorn) and newly funded startup companies. These companies are listed in the Y-Combinator [YC Startup Directory](#) and [Crunchbase](#) for the US, [the European AI Startup Landscape](#) database, and a database for Japanese generative AI startup companies. The Japanese database was constructed by combining our FUJITSU ACCELERATOR database with the University Tokyo Matsuo Labs database and an Internet search for related startups. It contains 210 companies. In all cases, data collection and analysis has greatly benefited from Google Gemini's ability to access information across corporate homepages and summarize various public sources.

It is perhaps not surprising that the generative AI services market outside of major platform services at first appears to be centered around the novel capabilities of "augmented editing" for generating text, audio, video, or software content. As depicted CBI Insight's Generative AI Market Map of 335 vendors (Graph 3), the vast majority offer creative services, ranging from automated avatar creation to visual media production. While these functions can add value in marketing, design, and software production, they are unlikely to be game-changers for companies aiming to innovate broader business functions with the new capabilities.

Graph 3 Generative AI Market Map – Application Development

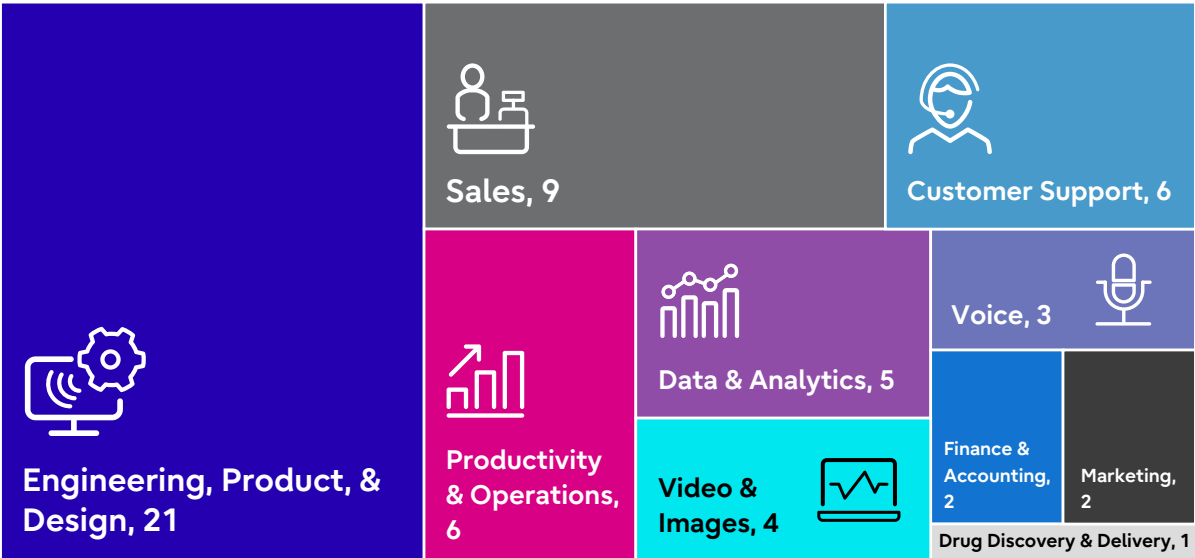


Source: CBI Insight (2023).

With broader application, generative AI's capability to learn from all sorts of data and tasks will become more important. Given that generative AI can read, analyze, and communicate information from unstructured data, it turbocharges existing business applications and significantly broadens the scope for "intelligent" action in management. This shift towards smarter and more automated business services is now gradually becoming implemented into all major cloud platforms (Azure, AWS, Google), but it is spearheaded by startups with established expertise in AI-based business support. These startups, proficient in everything from data management to analytics and automation, are now enhancing their capabilities with generative AI.

The startup map in Graph 4 plots the latest batch of startups (W2023) supported by Y-Combinator that are focusing on generative AI-enhanced business services. Out of a total of 272 startup companies, 59 offer generative AI services. Among these, 36% provide Engineering, Product & Design services, 15% offer Sales services, and 10% each offer Data & Analytics and Productivity & Operations services.

Graph 4 Generative AI Startups 2023 – Business Function Support



Source: Y-Combinator (2023).

Leading the development of these innovative, AI-based business services, is a growing group of "conventional" AI startups that are now adopting generative AI capabilities. These startups are often at the forefront of AI development and very close to their customers. Beyond interesting new services and use cases, we also found significant differences in how these companies interact and add value to their partner operations.

In the US and Europe, this generative AI market for startups is developing explosively. Many startups are often destined to be quickly acquired by a major payer for any technology that shows commercial promise. Increasingly AI startups are not just being acquired for their technology but also for AI developer talent that can provide. The market demand for AI talent has also exploded with AI and today seven figure salary packages are now no longer unusual for leading developers. We will therefore also have a closer look at the more stable Japanese market, where "conventional" AI startups are now integrating generative AI functions into their services and business models.

How AI Startups in Japan are Integrating Generative AI

Most of the generative AI startups in Japan are “conventional” AI companies that were founded before the generative AI boom and are now integrating its functionalities into their core technologies: in particular, vision/ML/automation services. Figure 5 provides an overview of their main services.

Graph 5 Generative AI Startups in Japan – Application Development by Business Function



Source: Fujitsu (2024) - Generative AI Startup Database.

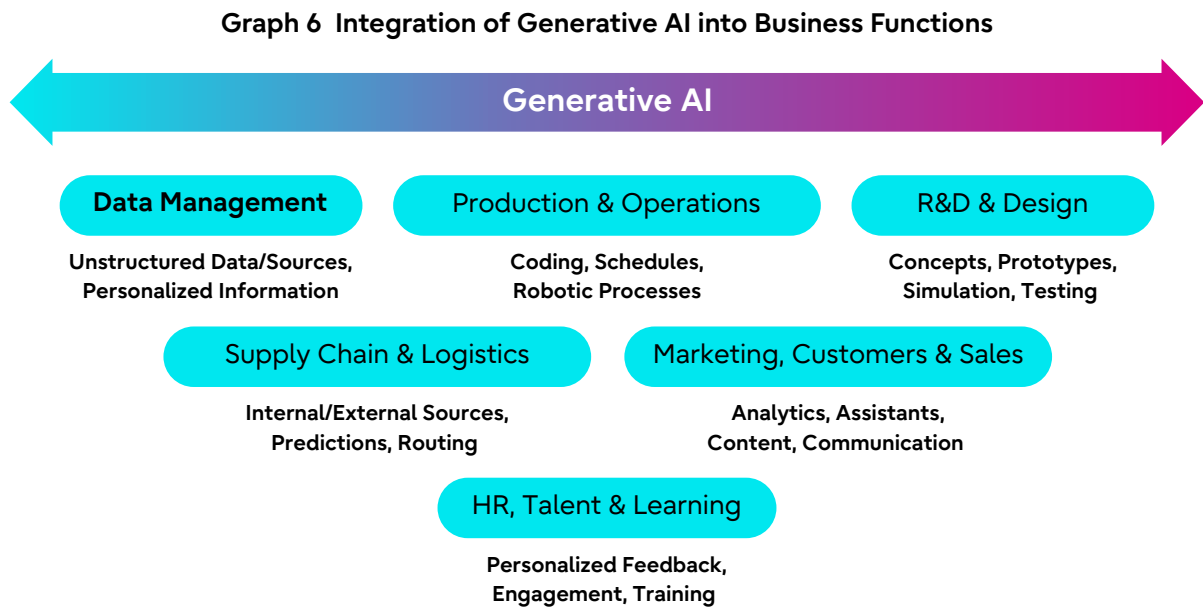
A unique feature of the Japanese market is its strong focus on the large creative, gaming and animation industries. Generative AI now helps these companies to create animated clips based on text descriptions and storyboard images. For example, [EQUES](#) is working with SEGA to generate 3D characters. [ACES](#) is working with Bandai Namco to automatically generate 3D motion clips for games and Metaverse production.

In Engineering & Development, proprietary LLM and training data development play a large role, as Japan’s distinct language and communication styles create strong demand for “Japan” models. The same is true for Productivity & Operations development, where document analysis and generation is by far the largest category. Legal services play an important role in this market, as evidenced by [LegalOn Technologies](#) for contract review, [PKSHA Technology](#) for legal summarization, and [GVA Tech](#) for contract management.

Software development (coding) and sales support, on the other hand, play a much smaller role than in the US. Coding in most programming languages is, of course, well covered by global applications, while Japanese versions of many other services are still being implemented.

Generative AI Integration into Business Functions

From a business perspective, the integration of generative AI by conventional AI developers and vendors will significantly influence the evolution of a new generation of intelligent business functions. Graph 6 encapsulates the generative AI innovations being developed for each business function.



As we will show, the new connections between Data Management and R&D/Design, which are fueling innovation in these critical business functions, are merely the beginning of fundamental changes across all other functions.

Production & Operations will benefit from automation made possible through direct access to information both inside and outside the company. While this has been a promise of “Industry 4.0” concepts for over a decade, the necessary connectivity and automation have been confined to structured data within corporate data silos. This is set to change.

Similarly, Supply Chain & Logistic operations will benefit from access to internal and external resources for more flexible operations. Marketing, Customer Management & Sales will experience unprecedented levels of individualization and content generation. Lastly, HR, Talent & Learning development will redefine how organizations operate and engage their employees in the era of human-machine collaboration.

Intelligent Data Management

“Big Data” management has been evolving to handle the escalating volume and diversity of data generated today. [Palantir Foundry](#), for example, has been growing rapidly by providing organizations access to diverse data sources. Big Data’s ability to analyze and derive actionable insights from large datasets has been based on machine learning algorithms from the start.

Within organizations, data had to be pulled out of their organizational silos, stored in minimally structured “data lakes,” more integrated “data lakehouses,” or ideally moved to “the cloud” for quicker results and better analytics.

Generative AI is now stepping in by accessing all these sources and integrating them for flexible analytics and queries. [Stardog](#), for example, accesses all sources for data lake integration. Even unstructured data, such as emails, social media posts, and customer reviews, are now becoming integrated either directly or by transforming it into structured data. [GraphAI](#), for example, transforms such data into structured Knowledge Graphs.

Another important trend is that information management can be enhanced by interfacing generative AI models with two other long-term trends in data management: the development of Knowledge Graphs and Vector Databases. Knowledge Graphs store information as interconnected entities and relationships from diverse sources (databases, documents, sensors etc.), which greatly supports the analysis and management of complex scenarios. Vector Databases allow fast access, comparison, and clustering of multi-dimensional structured data, such as product and customer information.

Generative AI models can use Knowledge Graphs and Vector Databases as an advanced basis for expanding its pre-trained “public” brain with the internal knowledge of an organization. [Stardog](#), for example, is becoming a major provider and curator of such generative AI enabled databases.

Generative AI can automatically identify relationships in information and communication across the organization in Vector Databases and Knowledge Graphs and use them to store additional information. It can continuously update and refine them, ensuring they remain relevant and accurate as new data becomes available. Together, they can form emerging knowledge bases that provide individualized answers and abstracts for each department and business function. [Flower](#) stands out by accessing distributed data within organizations for AI training. Rather than transferring sensitive data to generative AI providers, it brings LLMs into the company and solely collects insights from the learning process.

Generative AI is also starting to play an important role for data security. Although it poses an additional risk for data management when information is disseminated throughout an organization and automatically exchanged with model and infrastructure providers, it is now becoming part of the solution. [Credal](#), for example, securely facilitates and monitors communication with external LLMs and AI infrastructure providers across all major platforms. [Vellum](#) focuses on supporting and monitoring generative AI applications such as custom LLMs, Chatbots, and Agents to keep their users safe.

Generative AI can enhance data security by identifying and predicting potential security threats and breaches. Better preventive measures can be implemented to protect the data when IT departments gain a clearer view of anomalies in behavior across the organization. Moreover, data can be automatically converted into synthetic data that mirrors real-world data, safeguarding privacy and facilitating safe experimentation and exchange with partners.

R&D and Design

Generative AI has already emerged as a significant source of public information in research and helps researchers to brainstorm, model and present drafts. As advanced data management within organizations evolves, researchers will further gain access to a much wider array of information that merges internal data and results with academic sources and public information. [SciSpace](#), [Scholarcy](#) and [Connected Papers](#), for example, discover, navigate and explain research papers linked to internal projects.

For applied research in organizations, generative AI support of data collection has a particularly profound impact on survey development. Past study results can be instantly integrated into survey development. New surveys can be flexibly tested against synthetic data before deployment. New results can be automatically reported and visualized upon arrival. Surveys will soon become more individualized and interactive, and their results will be automatically enhanced with non-survey data and linked to responses in product development and customer management.

[Qualtrics](#), for example, already uses generative AI to analyze video interviews and open-ended responses in surveys, creates dynamic dashboards and targeted summaries of results. It has also started to develop tools for question personalization and dynamic question sequences based on user inputs. [QuestionPro](#) provides survey creation assistants (QxBot) with access to best practices and industry benchmarks. It personalizes surveys to target groups and embeds (Dall-E) generated visuals for user engagement. It categorizes user sentiment in open-ended responses and analyzes patterns. It detects fraud and tests integrity as well as compliance with data regulations.

In product design, generative AI's ability to create images, videos, and audio has garnered the most acclaim. The creativity of [Stability AI's](#) Stable Diffusion images has been widely recognized after designers integrated its tools into their workflows. Even major design companies, such as [Adobe](#), have integrated generative AI capabilities into their platforms within months. [Anima](#) can analyze designs and automatically convert them into code, facilitating the development of interactive designs, webpages, and applications. [Spiritt](#) and [Uizard](#) can construct complex user interfaces and applications simply by describing them.

Generative AI's ability to create 3D designs as easily as (or from) images will likely have an even more significant impact in the future. In architecture, AI has already become a key enabler of complex construction designs. Now, companies like [Hypar](#) and [Arup](#) are using generative AI to enhance flexible modeling, individualization, and the integration of multiple specifications, such as energy efficiency, waste management, and local regulation into new designs.

In the future, generative AI designs and action will become the basis of digital twins and the development of corporate metaverses, as we are pointing out in our Insight [Corporate Metaverse – Can it help to prepare for an AI-based digital future?](#)

[CloudMinds](#), a Chinese developer of (physical) service robots, is already developing a cloud-based "[RobotGPT](#)" model that allows the "brains" of service robots to interact and learn from each other in different usage scenarios.

Intelligent Robotic Process Automation (RPA) in Production and Operations

Generative AI's ability to write computer code is among the fastest evolving applications with already quantifiable results. According to a McKinsey analysis, the direct impact of AI on the productivity of software engineering could range from 20 to 45 percent of current annual spending on the function.

Generative AI boosts low-code and no-code software development and has been extensively tested in open-source programming (GitHub Copilot) with positive outcomes. [Hugging Face](#) supports a global community of Machine Learning teams and developers with great success. [Bloop](#) can analyze and explain entire codebases. [Adept AI](#) introduces generative AI Agents to existing software environments that not only comprehend natural language instructions but can also automatically extract and analyze data, add code, fill forms, and navigate complex interfaces. [Automat](#) supports the automated generation of generative AI Copilots to assist users in specialized workflows.

In application support, [Magical](#) can respond to emails and messages with a single click. Soon, such automation functions will be directly integrated into office applications like Outlook and Excel, where they could not only enhance analytics by writing complex rules in support for general users, but also manage data in ways previously only possible for IT departments.

Business process automation is increasingly being incorporated into end-to-end services on cloud platforms. RPA has become an important part of this development when software bots started to mimic repetitive human inputs. So far, however, these bots could only work with structured data provided by engineers and were very limited in their actions due to a lack of broader context and judgmental capabilities.

On this basis, several RPA companies have already evolved into major entities offering a broad spectrum of AI services, they are now fast adopting generative AI capabilities. For instance, [UiPath](#) integrates generative AI via Microsoft's Azure OpenAI Connector to summarize Zoom calls, orchestrate email campaigns, aid recruitment with the Workday and Google Vertex AI Connectors, and facilitate communication via Slack messages. [Elementary](#) employs computer vision to detect anomalies in products and production processes, predict maintenance needs, and automatically generate reports and dashboards.

As crucial as these new generative capabilities are, the potential to cross-verify the results of conventional specialized AI analytics with generative AI results before initiating robotic actions is equally important. For example, [LatticeFlow](#), a Swiss company, tests the reliability of generative AI results in real-time, elucidates predictions, and monitors performance.

Intelligent Supply Chains and Logistics

Supply chains and logistics are still incredibly labor intensive but critically depend on technology for reliable information flows and operational efficiency. AI is already supporting many functions, from traffic prediction to efficient routing and organizing warehouses.

Automation is still limited, however, and between all nodes remain small companies and busy humans who unload trucks, make calls for confirmation, send emails for orders, and optimize cost structures with the help of disperse Transport and Warehouse Management Systems (TMS/WMS) while local brokers use dated Electronic Data Interchange (EDI) systems for clearing.

Analyzing the market, a [Bain Capital Venture report](#) points to the tremendous opportunities for generative AI's ability to work with unstructured data and effectively amalgamate internal (product, customer) data with external sources. Many "multi-modal" administrative tasks, such as coordinating trucking information with routing decisions, carrier schedules and vehicle maintenance could finally become more integrated and automated.

In theory, demand prediction can be customized to individual locations, inventories and logistics can be optimized, procurement automated, risks managed based on detected anomalies, schedules adjusted, and reporting directed towards the right targets. The potential is amplified by the scope of conventional AI applications (analytics, forecasting, scheduling) that already support supply chain functions and can now be better integrated. Even warehouse storage optimizations based on the real-world fluctuations of trucking schedules have become a possibility.

In practice, however, digital freight brokerages have struggled to have an impact so far. [Convoy](#), one of the technology leaders, [even went out of business](#) last year when automation gains could not catch up with technology costs. Others, such as [Uber Freight](#), are now trying to integrate their existing databases, SQL queries, correlation analyses, and regression models, under the roof of new generative AI solutions. Its "Insight AI" takes a view of the entire market, and then curates information and recommendations for partner-specific supply chains. [Loop](#) is automatically extracting and structuring data from all freight documents to manage payments. [Parade.ai](#) has developed a "CoDriver" copilot to automate carrier (email) conversations and bidding processes for bookings.

AI solutions for predictions, at the same time, are taking on new levels of complexity in their simulation and model building efforts. [Deepvu](#), for example, is adding generative AI models to their decision models and digital twins. They can now learn from and integrate historical human decisions during demand spikes, port congestions or container backlogs into their decision models.

Marketing, Customer Service, and Sales

The new generation of Chatbots and Virtual Assistants have the highest immediate potential for gains in marketing, customer support and sales. In a [Boston Consulting Group survey](#) of Chief Marketing Officers, 70% were already utilizing generative AI in their organizations. A remarkable 93% reported immediate improvements in work organization, and 91% noted efficiency gains. Approximately 84% are even planning new products enabled by generative AI services.

Among generative AI potentials, personalization topped the list of uses, but insight generation, content creation, and social media interfacing also played an important role in about half of all use cases.

Several of the largest and most successful startups are demonstrating these potentials. [Jasper](#), for instance, can generate content for a wide variety of media, user groups, and styles. It offers personalized competitor analysis, best practices, and supports campaign development, including automated posting and mailing. [Writer](#) further integrates existing marketing and product content to build internal knowledge bases.

In customer support, chatbots can now rival human support, but they can also provide their support in all major languages simultaneously 24/7. McKinsey estimates productivity gains between 30% to 45% through cost reductions.

For individual companies, even larger gains become possible through increasing sales because of higher customer satisfaction. This becomes possible because access to valuable customer information and interaction can become “democratized.” So far, only e-commerce and platform companies had direct access to structured customer information in blogs and social media. With generative AI the access to data from different platforms (CRM) and unstructured sources (blogs, social media, feedback) can now become integrated and automatically analyzed.

[Waveline](#), for example, extracts information from documents (PDFs), images, and emails across platforms, classifies them, and sends reactions through Slack communication. Customer complaints can be combined with additional information and directed to the appropriate customer support.

On this basis, outreach can be personalized by combining product/service information with customer interests. Customer complaints and churn analytics can be improved and support better targeted. [Lavender](#) and [Kiliba](#) provide specialized email content generation services with deep integration of data from CRM platforms and impact analysis.

Agents (human & machine) can be trained in realistic scenarios and testbeds. Customer support and sales agents can receive individualized customer information during interactions in real-time. [Forethought](#) analyzes customer support and interaction, constructs dynamic knowledge bases, and assists agents with personalized information. Proactive feedback and services, including creative design and messages, become more realistic opportunities. [Cardinal](#), for example, does not only analyze customer feedback across different channels, it also supports product teams with the development of new product features.

On the creative side, [Omneky](#) and [Genus AI](#) assist in generating variations of creative content for different platforms, target groups, brand, and campaign objectives. Content can be personalized and tested with performance data. [Colossyan](#) creates videos with avatars from scripts for social media and training. [Verneek](#) provides shopping assistants for personalized e-commerce guidance, including shopping lists and recipes for cooking.

Human Resources, Talent, and Learning

Research by [Brynjolfsson, Li, and Raymond](#) has shown that generative AI assistants are already increasing productivity in customer support centers by 14% on average. The highest improvements of around 34% were found among novice and low-skilled workers who gain from real-time information and guidance on their platforms. The researcher point out that the AI models might “disseminates the best practices of more able workers and helps newer workers move down the experience curve.”

Such employee training support is now becoming integrated into all business functions. Tasks can be supported with live information and expert guidance to individuals at the point of need. This both increases the productivity of the individual and extends the range of capabilities of the personal value proposition to the organization.

Onboarding, both internal and external, for example, can become more personalized, and adaptive training programs can be integrated into work challenges from the start. [Synthesia](#) and [HeyGen](#), for example, help onboarding and training by creating videos with personalized avatars, based on a wide range of learning materials.

Work performance feedback can be greatly expanded and become more immediately available while working on tasks. It can also become more personal and shielded from management performance reviews during the learning phase, which helps employees with more explorative development. Veteran employees can receive information about the application of new technologies and services while working on their standard routines. [Zavvy AI](#), for example, generates answers related to learning course content, analyzes employee performance, and provides recommendations, resulting in personalized growth plans.

[7Taps](#) and [EdApp](#) can generate entire training courses with all relevant assets, including quizzes, polls and videos based on intended course descriptions. [STRIVR](#) provides immersive, virtual reality training programs, including avatar-based storytelling and analysis of learner responses, based on simple learning modules and storyboard descriptions.

[Genpact](#), a global consulting company, for example, had already pushed all learning process on an online platform during the pandemic. “Master Gurus” became the curators of information, guidance and training programs. The company has now added an “[AI Guru](#)” that has been trained on three years of training content and Q&As, and constantly provides support at the workplace for all employees.

In our Insight [Generative AI – Building Trust through Human Empowerment](#), we have shown how the integration of generative AI into communication channels holds immense potential for enhancing employee engagement, training, and learning. Curated information from internal and external sources can bring customer and team members closer to each other, improve transparency and decision making. Better alignment of individual preferences, motivations, and schedules can increasingly be achieved beyond tightly knit teams.

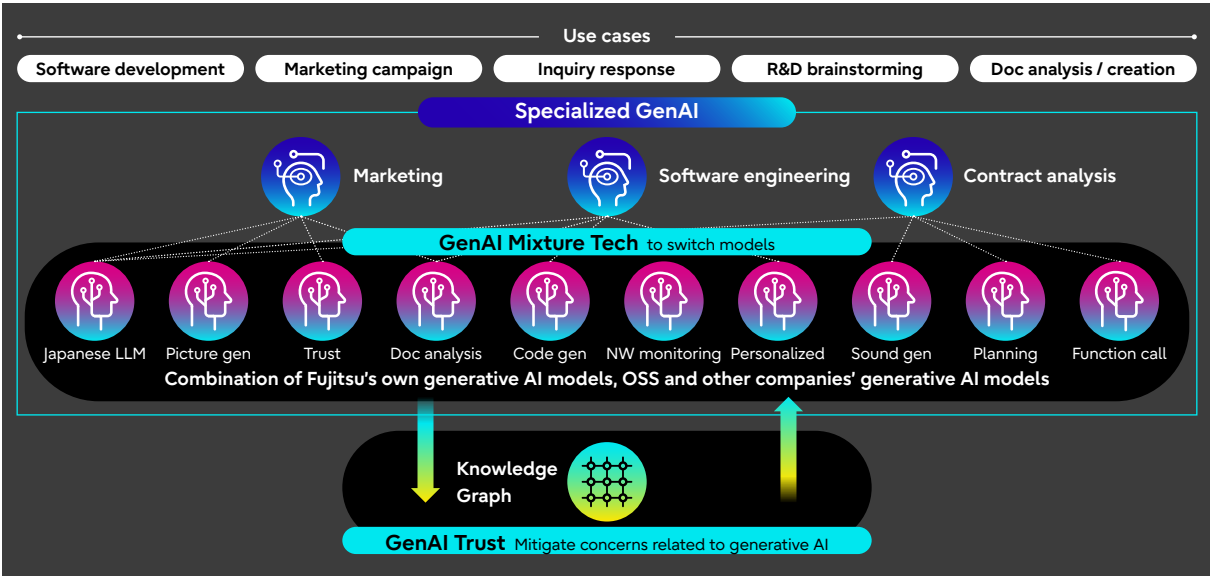
Conclusion: Innovative Generative AI Integration into Business Services

As companies move beyond the out-of-the-box capabilities of generative AI and begin to explore its potential to for data management and decision making, they will unlock new capabilities in almost every major business function. This Insight paper has explored the opportunities for innovation across most business functions from the perspective of some of the most innovative startup companies. However, safe experimentation and implementation of such innovative generative AI capabilities will require experienced partners.

To facilitate such experimentation, the Fujitsu Group has developed its cloud-based AI platform, [Fujitsu Kozuchi](#).

This rapid development and testing platform integrates generative AI with a wide range of specialized AI models and use cases, ranging from manufacturing to retail. Fujitsu Kozuchi helps organizations to innovate with best-of-breed AI technologies and transform business functions. New features are continuously developed and tested. After spring 2024, it will be possible to experiment with generative AI "Mixture Technology", which efficiently integrates multiple generative AI models from Fujitsu and third parties (see Graph 7).

Graph 7 Fujitsu's Generative AI "Mixture Technology" Integration



Source: [Fujitsu AI strategy strengthens data integration, generative AI capabilities](#)

Consulting service for Fujitsu Kozuchi is also available, along with global implementation services to accelerate time to market for Fujitsu customers. Fujitsu has already delivered over 7,000 AI projects for its customers, enabling it to provide expert insight and advice to help make AI projects a success.

With the Fujitsu Kozuchi AI Platform, Fujitsu and its partners can rapidly explore and co-create generative AI opportunities as they are integrated into their business to create new competitive advantages and maximize new business value.

Fujitsu Kozuchi enables organizations to take full advantage of the leading AI technologies and services from both the open source community and leading commercial vendors to enable effective digital business transformation.

About the authors



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- [Generative AI – Building Trust through Human Empowerment, 2024](#)
- [Generative AI - What does it take to succeed with implementation? 2023](#)
- [Corporate Metaverse – Can it help to prepare for an AI-based digital future? 2023](#)
- [Green Deals Go Digital – How Can Companies Gain from Sustainable Digitalization? 2023](#)
- [What is necessary for a "hybrid digital" work model to succeed in the next normal? 2022](#)



Nick Cowell

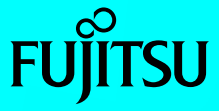
Nick is a Principal Consultant in the Fujitsu's Technology Strategy Unit responsible for the Fujitsu Technology & Service Vision. Nick is a technologist and innovator with extensive experience in developing award winning hardware, software and service for leading technology providers across the USA, Europe and Oceania.



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