



Disruptive potential

How generative AI is redefining
business models

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IMPRESSUM

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FOREWORD

Generative AI has long since ceased to be a buzzword and is now an integral part of the future orientation of a company. It thinks, writes and designs faster and more precisely than we humans usually can. The use of GenAI goes beyond optimising processes: The technology is calling entire business models into question and creating new ones. Our study 'Disruptive potential: How generative AI is redefining business models' shows this: Almost half the companies surveyed in Germany are already using generative AI, but often only selectively.

Few are on the threshold of scaling and deep integration. Only 20 per cent of the companies surveyed in this study use the technology company-wide. Even fewer (15 per cent) assume that most of the business models that exist today will become obsolete due to generative AI – and thus overlook the enormous (future) impact.

Science and technology company Merck provides a positive example of the use of GenAI. In an interview, Walid Mehanna, Chief Data & AI Officer, explains how the technology, which is the driving force behind the company's vision, is directly helping realign the existing business model. Michael Buttkus, Head of Sopra Steria Next Germany, explains what companies should look out for when implementing and scaling generative AI.

Another case worth reading about is that of DB Fernverkehr AG. Axel Schulz, Head of the AI and Data Intelligence Centre, reports in an interview on how the company is using generative AI to tap into potential in knowledge management.

The examples demonstrate that Germany definitely has a chance of becoming a key location for applied generative AI. However, to achieve this, the technology must not only be implemented, but also recognised as a strategic instrument. Companies that take the plunge today will secure a competitive advantage that will be decisive for their business success in the coming years.

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Key findings



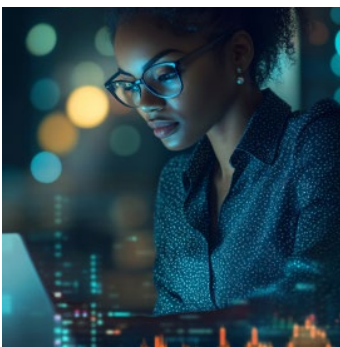
Companies are still experimenting

- Generative AI is here to stay: Around half of companies in Germany are now using generative AI.
- 64 per cent of users use GenAI selectively in individual areas. One in five is already scaling the technology company-wide.
- Users are most active in departments with quickly achievable successes such as marketing/communications (40 per cent).



Underestimated effects of GenAI

- The users predominantly are the ones who currently see the capabilities of the technology: 81 per cent of users expect GenAI to offer (very) large opportunities to develop their existing business model further.
- The technology is viewed as a risk to their own business model by 11 per cent of users.
- 15 per cent of all respondents believe that most existing business models will be rendered superfluous by generative AI in the future.



GenAI is more than just process optimisation

- 91 per cent of (prospective) users expect the use of GenAI to change their HR management over the next three years – especially knowledge management.
- Change will affect management: 63 per cent of (prospective) users expect that managers will have to develop the skills to use the technology over the next five years.

DEFINITION OF TERMS

The following explanations and the underlying survey address the topics of artificial intelligence (AI) and generative AI (GenAI). We understand these terms for this study as follows:

Artificial intelligence (AI)

Artificial intelligence describes machine systems that imitate human intelligence based on stored data using learned algorithms in order to fulfil tasks. These tasks can be simple, such as recognising images, or complex, such as writing new code based on instructions in natural language.

Generative AI (GenAI)

Generative AI refers to precisely these complex AI systems that not only sort and organise data, but can also generate new content such as text, images or designs based on the training data. It creates corresponding elements for complex instructions such as 'Create a competitive analysis, an onboarding schedule or a social media campaign for me'. Well-known examples of this subtype of AI are ChatGPT, MidJourney and DALL-E.

Whenever we talk about generative AI in this report, we are referring to those advanced applications that can perform complex tasks independently, such as generating analyses and formulating recommendations for action derived from them.



Companies are still experimenting

Generative AI is here to stay – but widespread adaptation in Germany is faltering. Company-wide deployment is rare. Many companies are still experimenting with how they can meaningfully integrate the technology into work processes and business models, and the potential already looks promising.

Generative AI is fascinating, because it cannot just organise and analyse data, but also create new content. This ranges from simple texts and images to complex tasks such as competitive analyses and product prototypes. Thus, GenAI is fundamentally changing the way we work and enabling companies to reorganise their business models. Decision-makers need to get to grips with the new possibilities to grasp and exploit the transformation opportunity. A look at the status quo shows that there is still a lot of potential for German companies to utilise GenAI.

There is a lot of experimentation, but little transformation

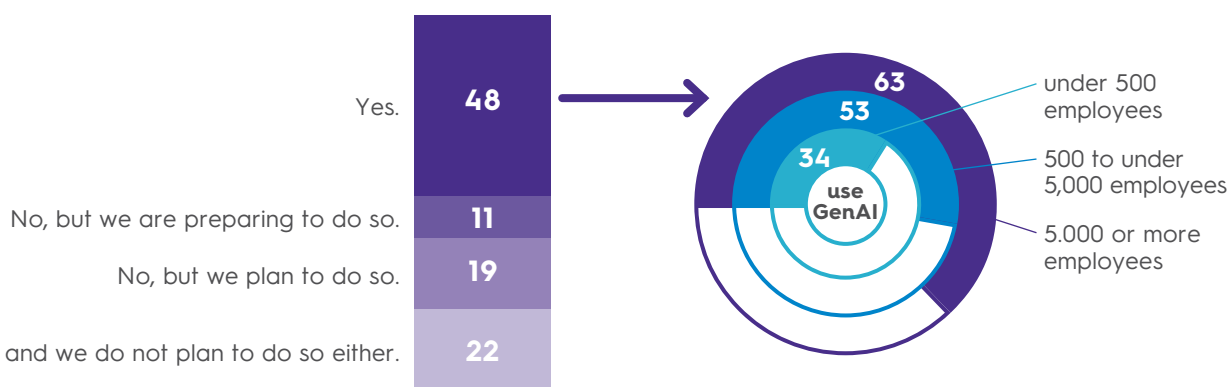
Many companies in Germany are currently still at the trial stage or are exploring the technology more intensively for the first time: just under half are already using generative AI. Corporations with 5,000 or more employees are the pioneers. Small companies, on the other hand, are more hesitant. They often lack the expertise, budget and personnel to integrate the technology.

Few completely forego the use of generative AI

Three out of ten companies belong to the group of prospective users that are already preparing to use generative AI (11 per cent) or are planning to do so in the future (19 per cent). To introduce the new technology successfully, companies must first complete a few strategic, legal and cultural tasks. Many companies are currently working intensively on this. Only around a fifth are not using generative AI at all. Small companies in particular (34 per cent) fall into this group.

Around half already use generative AI

Is your company currently using generative AI?



In per cent of respondents; n = 189

Source: F.A.Z. Institut, Sopra Steria

Scaling and deep integration still lacking

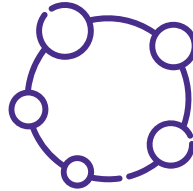
When a company uses generative AI, it is often in selected areas: Around two thirds of the user group are applying the technology selectively, while a further 14 per cent are looking for suitable use cases. Only one in five companies that use GenAI are deploying the technology company-wide. Overall, it seems that many are struggling to operationalise and scale pilot projects beyond the trial phase. However, the deep integration and company-wide scaling of the technology is a key lever.

Company-wide use of GenAI is the exception

To what extent does your company currently use generative AI?



20%
use GenAI
company-wide.



64%
use GenAI in
individual
business units.

Respondents who use generative AI; n = 90; other responses: „We are still collecting use cases for deployment.“ (14%) und „do not know/no answer“ (1%)

Source: F.A.Z. Institut, Sopra Steria

Find and utilise use cases

Companies are faced with the difficulty that they often have little experience with generative AI, but at the same time are confronted with a multitude of possible use cases and programmes. In this jungle, it is important to gain an overview of which applications fulfil the company's requirements and create real added value. Those with little prior knowledge can avail of external support to accelerate this important decision-making process.

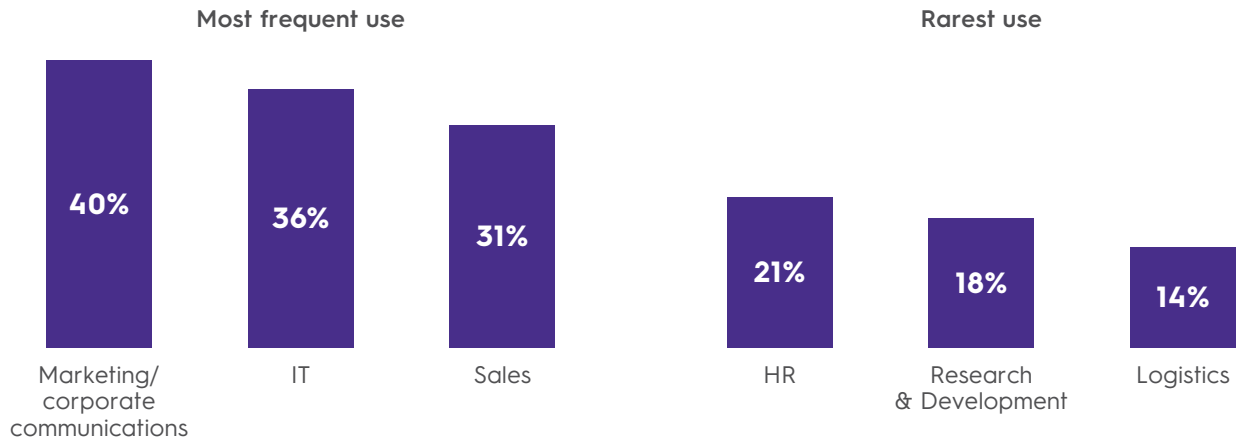
The step from a limited test phase to widespread use with added value for the company is complex but promises long-term benefits – especially for non-users. Small companies are less likely to create the necessary business conditions for the use of generative AI, which could put them under even greater pressure in the future if they do not follow suit in this area. To date, company-wide use has mainly been achieved by large organisations with more than 5,000 employees (32 per cent).

“Using generative AI will become as natural as using Google search.”

One respondent company decision-maker

Marketing and IT lead the way

In which business areas is your company currently using or planning to use generative AI?



Respondents who use generative AI or are preparing/planning to do so; n = 128; multiple answers possible; other answers: "finance/controlling" (30%), "service/consulting" (30%), "management" (26%), "purchasing/procurement" (23%), "production/manufacturing" (22%) und "do not know/no answer" (9%)

Source: F.A.Z. Institut, Sopra Steria

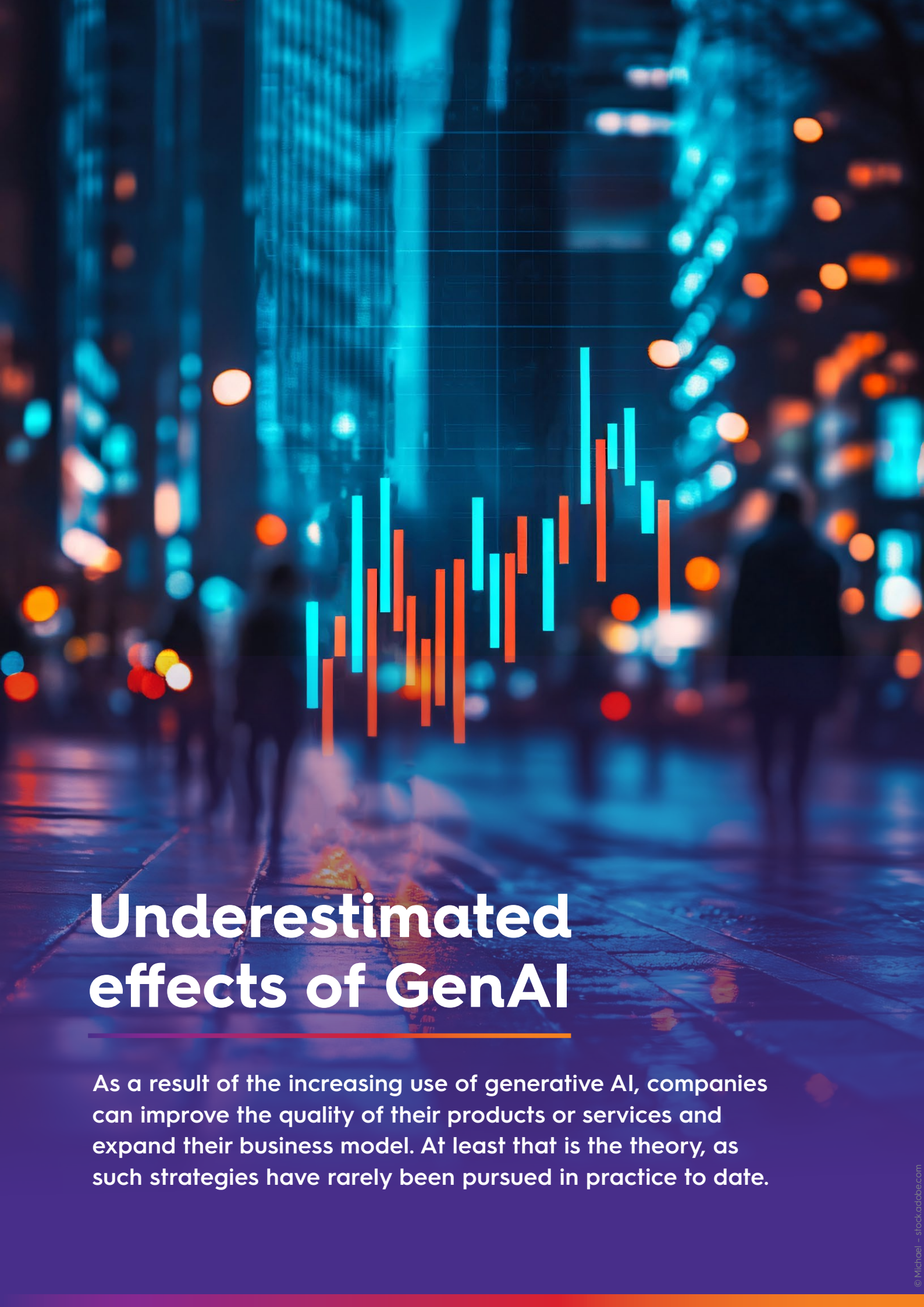
Prioritising areas of application with efficiency potential

Companies that only use generative AI in a few departments or are planning to do so sometimes choose very different application areas in which to do this. Most frequently areas of the company where success can be realised quickly are selected. These include departments such as marketing (40 per cent), IT (36 per cent) and sales (31 per cent). The respondents are focussing primarily on making processes more efficient and reducing costs. In contrast, innovative potential, ranging from the development of new products to entire business models, is hardly utilised.

Departments in which respondents rarely use generative AI are primarily logistics (14 per cent) and research & development (18 per cent), with the latter being so important for the future of the German economy. However, it is precisely in these neglected units that considerable growth opportunities lie dormant: The first companies in the chemical and pharmaceutical sectors, for example, are relying on the support of generative AI to create product designs and develop prototypes for materials and medicines faster.

"Marketing and advertising will be more creative, innovative and targeted, while the creation time required will be significantly reduced."

One respondent company decision-maker

The background is a blurred night city street with bokeh lights. Overlaid on this is a financial candlestick chart with red and blue bars. The chart shows an overall upward trend with some fluctuations. The bars are semi-transparent, allowing the city lights to be seen through them.

Underestimated effects of GenAI

As a result of the increasing use of generative AI, companies can improve the quality of their products or services and expand their business model. At least that is the theory, as such strategies have rarely been pursued in practice to date.

The capabilities of generative AI are enormous: The technology can handle complexities that employees were previously only able to manage with great effort or not at all. A major advantage of GenAI is that it can be used along the entire value chain – from logistics through production and sales & marketing to customer service.

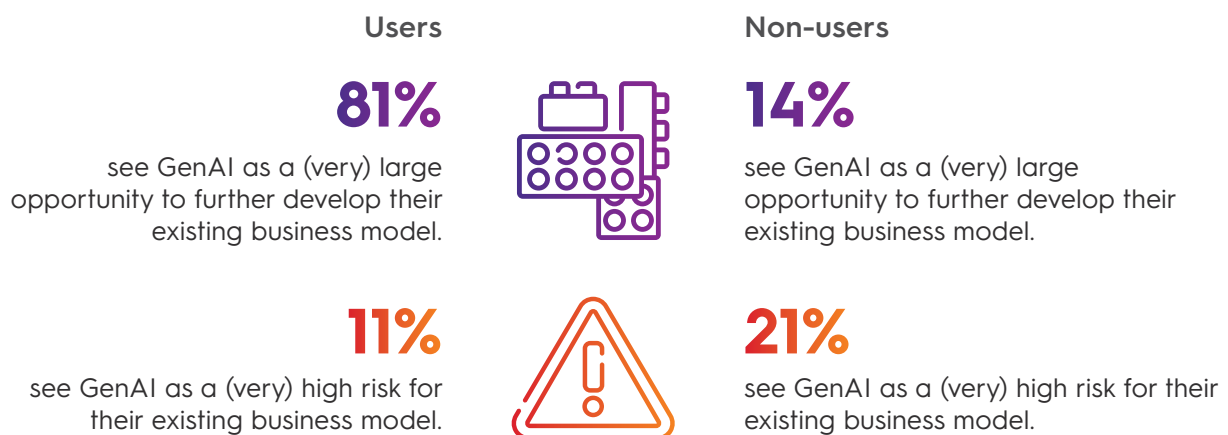
Awareness of benefits increases with practical experience

However, non-users of the technology rarely recognise such opportunities at present. Instead, the majority of them (60 per cent) believe that generative AI is overestimated as a game changer. Two-fifths state that its use offers little or no opportunity to further develop their own business model. They do not see generative AI as an effective means of solving problems such as insufficient staff or a lack of expertise.

The situation is different for companies that already use generative AI: Four out of five see (very) large opportunities to expand or redesign their business model with the aid of the technology. Early adopters are more likely to recognise the range of possibilities offered by GenAI and know where its use is worthwhile. They are also better at analysing the direction in which the market will develop and making targeted adjustments to their business models. For example, machine manufacturers can use generative AI to create automated reports on the optimum operation and maintenance of the machines they sell. This allows them to expand their traditional product range to include additional services and to gain valuable data at the same time.

Divided opinions on the opportunities and risks for business models

To what extent do you see the use of GenAI as an opportunity to further develop your company's existing business model or as a risk for your company's existing business model?



n = 90 (users), 42 (non-users)

Source: F.A.Z. Institut, Sopra Steria

Majority regard their business model as safe

Only a few of the companies surveyed feel threatened by the capabilities of this powerful technology. 11 per cent of users see large to very large risks to their own business model in generative AI; among non-users, this proportion is almost twice as high. Accordingly, the disruptive effects of large language models are greatly underestimated: Just 15 per cent of those surveyed assume that GenAI will render most of today's business models superfluous in the future. The majority of respondents fail to realise how drastic the changes will be for some industries.

Major impact on the professional world

All experts on AI are certain that GenAI will fundamentally change the world of work. The authors of a report by Goldman Sachs assume that the work of a quarter of the current workforce in the US and Europe could be replaced by AI across all industries. Even if only a tenth to just under half of an employee's activities are affected, this demonstrates the disruptive power of the technology.

For example, companies can use generative AI to create websites almost or completely automatically. External service providers such as web agencies are rendered dispensable. The same applies to large parts of programmers, service centres as well as communication, design, architecture or administrative offices. It is clear that generative AI will relieve the burden on experts in these professions in many ways. This will make services more readily available and cheaper to produce. This may result in many make-or-buy decisions being made differently in the future than they are today.

Many technological opportunities await

Although the development of generative AI is still in its infancy, it is already opening up exciting possibilities and demonstrating impressive capabilities. Based on existing data, it generates market analyses, simulates market activity, draws conclusions and makes recommendations for decisions. It is only a matter of time before data of sufficient quality and quantity is available so that



80%

of respondents disagree with the statement that GenAI will render most of today's existing business models obsolete.

n = 189

Source: F.A.Z. Institut, Sopra Steria

“The services we provide as a communications agency, such as consulting, copywriting and graphics, will shift and change significantly through the use of generative AI. The agency business model, as it is currently established in the economy, will become obsolete.”

One respondent company decision-maker

the technology will have mathematically improved by then and be able to design business models independently. The majority of decision-makers surveyed have so far found this difficult to imagine.

Adapt to survive

To pave the way for a successful future, companies and agencies therefore need to take a close look at the opportunities and risks of generative AI for their business models today and critically scrutinise their focus. Otherwise, they run the risk of being left behind and being pushed out of the market. Half of the users of generative AI have recognised this threat, but the vast majority of non-users have not yet done so.

Capabilities of GenAI are often overlooked

GenAI will be able to develop and customise business models without any human interaction.



38%

response share; n = 189



56%

Source: F.A.Z. Institut, Sopra Steria

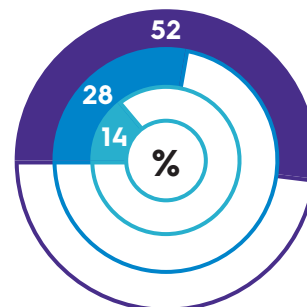
The impact of generative AI is underestimated

This also explains why the majority of respondents do not see that the time to act is in the here and now. Instead, they place the extensive use of generative AI in the future. Not even half of those surveyed believe that the technology will be ubiquitous in three years' time. They view related job cuts as a long way off. At least the majority of respondents do not believe that there will be large-scale redundancies due to generative AI in the next five years.

Quite the opposite: The majority (54 per cent) of surveyees do not even expect that employees within the next five years will need skills in using generative AI to be employable on the labour market. This notion should be scrutinised, as employees need to be qualified to use the technology in a value-adding way, otherwise a lot of potential will remain untapped.

Generative AI is still placed in the future

Companies that do not incorporate GenAI in their business model in three year's time will disappear from the market.



■ users of GenAI ■ prospective users ■ non-users

Share of approval; n = 90 (users of GenAI), 57 (prospective users), 42 (non-users)

Source: F.A.Z. Institut, Sopra Steria

INTERVIEW

“End users, just like us”

Generative AI has the potential to change entire business models. Nevertheless, its current use in most companies is still mainly at the process level. Dr Axel Schulz, Head of the AI and Data Intelligence Centre at DB Fernverkehr, talks about the reasons in an interview.

Dr Schulz, what role does AI currently play at Deutsche Bahn?

AI is one of the key technologies for Deutsche Bahn to drive digitalisation. S3 is a restructuring programme we have launched with the aim of becoming more punctual, more reliable and more economical. Digitalisation and the use of AI in the right places can and will help us achieve this. Specific AI projects include the automated processing of customer feedback, more reliable information for passengers, the digitalisation of maintenance as well as capacity forecasts.

How many of these projects are based on AI and how many require generative AI?

Many of the AI systems we use today are primarily in the field of machine learning. We work with AI applications that we have trained ourselves over the past ten years. This means that we know the data sets underlying the systems. And above all, we have the licences to use this data. In the case of large language models and generative AI, however, there are still unresolved data protection, licensing and liability issues that pose challenges for us when integrating them into critical operations. We have therefore only recently started to use AI applications that utilise GenAI productively.

What could happen in a worst-case scenario?

Imagine if we were to utilise the technology as is without specific adaptations in systems our employees use to dispatch trains. And suddenly there would be a successful lawsuit against our model provider, which would result in them having to switch off their systems. This would mean that our operations would come to a standstill. As critical infrastructure, we have high data protection and security



Dr. Axel Schulz

has been responsible for business intelligence, data strategy and AI strategy at DB Fernverkehr AG in various roles since 2015. Since 2019, he has been responsible for the overarching AI governance of long-distance transportation. To this end, he has set up a competence centre for AI. This deals with topics such as standardisation, portfolio management and the development of AI systems which, for example, help to improve customer experience, optimise revenue management and make operations more stable.

standards. We want to utilise the opportunities of this technological revolution as well – but responsibly, without reservation, securely and fairly.

How do you rate the potential of generative AI for Deutsche Bahn?

The potential is immense, for example in knowledge management: We work with countless sets of rules, some of which are 600 to 1,000 pages long, and this technology can help us to find the information they contain faster in our day-to-day business. However, I also see great potential for us when it comes to natural language interactions, software development or image generation in marketing. All these topics contribute directly to our S3 reorganisation programme.

Is there a use case related to generative AI that is particularly close to your heart?

Currently, our most important use case in long-distance transportation is making optimal use of the possibilities of large language models to make corporate knowledge more easily accessible internally. Our internal rules and regulations are not only long, but also complicated. On top of that, we have a lot of them. If we succeed in making this information easier to use in the needed situations, that would be a huge lever for saving time and becoming more efficient. After all, this is the use case that concerns most employees, be it in information security when operating IT systems, as for me as a manager, be it on board as personal or when workers are carrying out train maintenance. There is huge potential here for everyone.

How far along are you in implementing this use case?

We introduced our own Bahn-GPT in November 2024. It is based on one of the latest versions of ChatGPT but is tailored to our DB-specific requirements. We have developed a kind of security shell that enables us to use Bahn-GPT without reservation. Data protection violations are eliminated by default. At the same time, we will now have access to several other language models. We are currently developing use cases and analysing the areas with the greatest potential for applying generative AI. For example, we are trialling the use of Bahn-GPT in smaller groups. This enables us to formulate clear guidelines that indicate which user groups are particularly suited to using the tool.

How did you introduce the tool?

In the same way as other software projects. We carried out change management, paid attention to security, data protection, the involvement of committees such as the works council, and portfolio management. First, we sensitised the Executive Board and managers to the opportunities and risks of Bahn-GPT. This



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“AI is one of the key technologies for Deutsche Bahn to drive digitalisation.”

knowledge was then gradually transmitted to the organisation. My team and I are supporting this process and providing advice and assistance. Group-wide training and courses on the use of Bahn-GPT are also being offered. This has worked well so far.

How do you ensure that AI applications are introduced successfully?

Digitalisation is not an end in itself. It has to make life easier for customers and employees. That is why we make sure we maximise the added value from the use of AI and ensure transparency. Every new project needs clear benefits that we can measure using specific criteria. We work along four benefit dimensions: AI is used to increase customer satisfaction, to boost sales and the quality of a service, to reduce costs or to support employees. For example, AI can be used to improve material planning or deploy staff more efficiently.

How do you identify interesting use cases?

At DB Fernverkehr AG, we already decided many years ago that the ideas for using AI had to come from our departments. There is no point in prescribing the use of AI. It's the same as with other software. The forces of inertia in the specialist departments are too great for such an approach. Instead, we are working specifically on increasing AI readiness at DB Fernverkehr AG. We are using various formats to achieve this. There is a regular AI lunch for the entire workforce where the possibilities and limitations of the technology are discussed. As DB Fernverkehr, we offer this format for the entire rail company. At the same time, we have formats specifically for managers in which we discuss possible areas of application with them. There are also all-day workshops that we use to develop specific AI use cases with employees. To do this, we document daily activities, look for repetitive tasks and see what can and should be automated. Of course, we also strive to use AI in certain fields of application because we know from other companies that it is worthwhile. But we involve the specialist departments in this process as well. It does not work any other way.

Do you think it is fundamentally possible that the use of generative AI could change your business model?

We are not a software tech company; we are not Google or Apple. Our core business is getting our passengers from A to B punctually, happily and reliably. I do not see it as our job to develop new digital services or language models and sell them. And I think that is how many companies feel at the moment. They are end users, just like us.



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“At DB Fernverkehr AG, we already decided many years ago that the ideas for the use of AI must come from our departments. There is no point in prescribing the use of AI.”

Do you see any areas of application where generative AI could contribute to your current business model?

There is currently a lot of hype surrounding multi-agent systems. In other words, agents that can perform miniscule tasks, interact with each other and proactively report faults. If that worked reliably, it would be a huge asset for us. Imagine an agent being able to reliably detect that a machine's temperature is one or two standard deviations outside the norm and inform another agent so that it can find a solution or inform a person on duty. This holds tremendous potential, but a lot still needs to happen before we get to that point.

What would have to change?

On the one hand, the models would have to be improved so that they hallucinate less and perform mathematical operations reliably. On the other hand, there are still many unanswered questions, however – ranging from all the legal and financial uncertainties to the actual implementation. After all, how do I integrate generative AI into my existing IT infrastructure? Take an ICE which has a service life of at least 30 years. Back then, no interfaces for this technology were considered. We need a solution for this first.

Do you think generative AI will create new business areas for Deutsche Bahn one day?

I definitely believe that we will be able to develop tools, software and IT applications that will also provide added value to other companies from other sectors. Although we are not an IT company, we are working on and with many different AI projects and are in talks with other companies about them. Companies from Switzerland and Austria, for example, are very interested in our feedback system. Nevertheless, I see this more as a thing of the future. In the here and now, I think we should concentrate on our core business and make sure we get even better at it.

Let us try a far-reaching thought: Do you believe that generative AI will be able to develop and adapt business models in the future without any human intervention?

I believe that in the future, agents will be able to carry out many activities. As soon as the agents can gather the required data themselves and draw good conclusions from it, there is nothing to prevent them from developing business models: Agents can observe the markets, analyse their own data, compare the information and classify which markets may potentially no longer be relevant. Based on this, they can develop new strategies and provide impetus. This will enable companies to react faster to market events.



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“Digitalisation is not an end in itself. It must make life easier for customers and employees.”

We have talked a lot about the risks and opportunities of generative AI. Assuming all the legal issues no longer existed – what would you say? Jump on board the hype surrounding generative AI or not?

Definitely jump on board. I believe that all the dams would break if the current open legal issues, such as copyright, no longer existed. Companies would experiment more and technologies that already exist today could be used much more widely. One example is the Japanese railroad: The regulatory framework there is more flexible than ours. Cameras can therefore be used in Japan to detect when people fall at the station and need help. Ticket inspections have also been automated using cameras. We could use cameras in a wide variety of places, but for various reasons we cannot use them in this manner. The same rings true for generative AI. We have the technology and can assess fields of application for it. But as long as we cannot work with it in a legally secure manner, the technology and all its possibilities will not be used. That is still the case for many companies at the moment.

The interview was conducted by Mira Würzberger.



“We are working specifically on increasing AI readiness at DB Fernverkehr AG.”

"Knowledge management is the current focus of attention. Corporate knowledge is often spread across silos and not easily accessible. This is where we see great potential in large language models and internal chatbots, both to give new employees better access to the company and to enable current employees to work more efficiently."

"Education, education, education! Internal and external training is needed at all levels. This is no longer a luxury, but the most important mandatory task for safeguarding and expanding the company – nationally and internationally."

How do you envision the change(s) that will result for your company from the use of generative AI for HR management?

"Roles in the company will change in the direction of closer integration of specialist expertise, handling data and technical elements."

"In future, companies will apply to job seekers and graduates."

"Actually, all processes that do not relate to co-determination issues will change. Teams will be able to work in a more focused manner and set better priorities."

"We will be able to make it more pleasant for many employees to work for us. We will automate many HR processes. Search times for information will be greatly reduced. Onboarding will be restructured."

A woman with dark hair and glasses is looking down at a laptop screen. The background is dark with colorful bokeh lights in shades of blue, green, and yellow. The overall mood is professional and tech-oriented.

GenAI is more than just process optimisation

Generative AI is not just a machine for process efficiency, as it is often seen today. With the help of this technology, the logic of how companies do business can be elevated to a new level or even redefined. GenAI provides access to previously closed sources of revenue and promotes the development of new business models and value chains.

Generative AI has enormous potential for transformation, just as for example the printing press, the steam engine or the internet did in the past. However, the results of the study show that not all companies by any means consider generative AI to be one of these technological revolutions, but rather see GenAI as a helper in their day-to-day business. However, this means that companies run the risk of missing out on innovation potential.

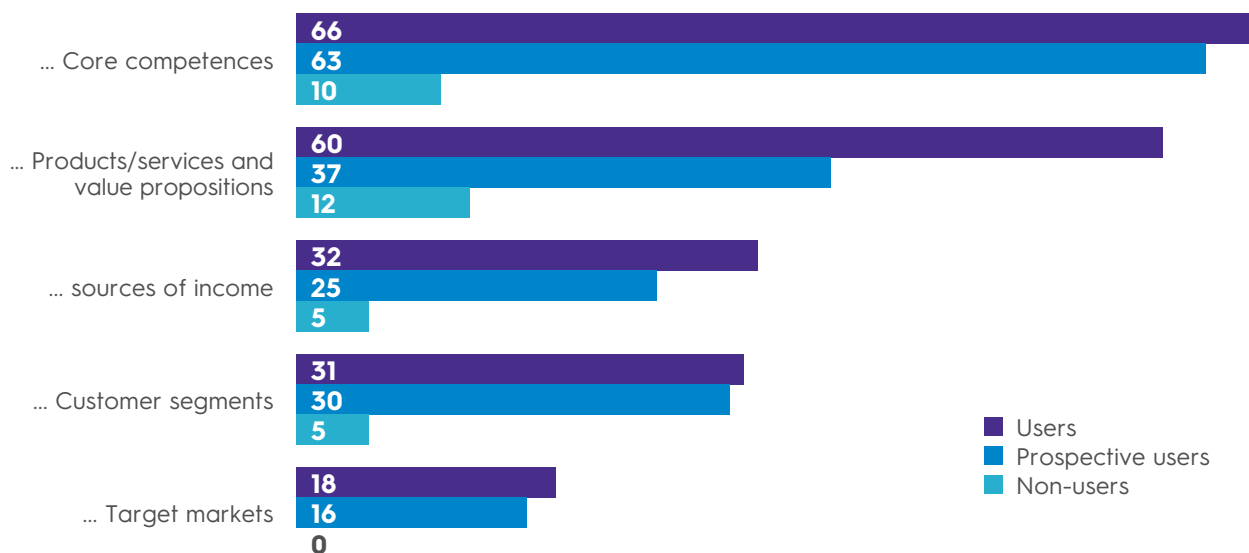
GenAI as a driver for economic success

To exploit the disruptive potential of generative AI, companies must integrate the technology into the key success parameters of their organisation. These include core strategic elements, customer relationships, collaboration with partners, HR management and the structural and process organisation.

Currently, the respondents' assessments of the extent to which generative AI will reshape these five parameters vary greatly. The majority of companies seem to be so preoccupied with operationalisation that they lack the imagination to think about what is possible with GenAI beyond process optimisation.

Companies expect strategic realignments when they use GenAI

Will the strategic core elements of your company change over the next three years as a result of using GenAI? There is a need for further/different ...

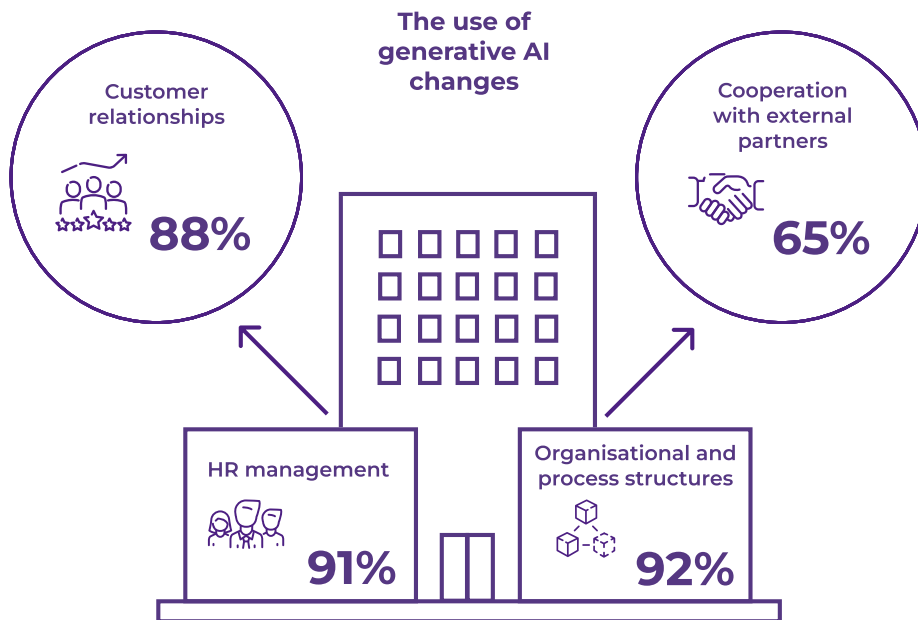


In per cent of respondents; n = 90 (users), 57 (prospective users), 42 (non-users); multiple answers possible; other answers: "Nothing will change." (17%/12%/64%) and "do not know/no response" (2%/4%/14%)

Source: F.A.Z. Institut, Sopra Steria

The biggest changes are expected internally

For each success parameter, the percentage of (prospective) users surveyed who selected at least one response item is shown; n = 147



Will the use of generative AI change (1) the management of customer relationships, (2) cooperation with external partners, (3) elements of HR management, (4) your company's organisational and process structures in the next three years?

Source: F.A.Z. Institut, Sopra Steria

Only a few recognise the full disruptive potential

More individualised offers, shorter innovation cycles, additional services or a shift in activities: The use of generative AI can change and improve a lot about companies' range of products and services and the associated value proposition. Three out of five users of generative AI assume that this will be the case in the next three years.

One in three companies that use generative AI also want to use the technology to address new customer segments in the next three years. In addition, in the user group more than one in six can imagine addressing new target markets and adapting their business model accordingly. The disruptive potential of generative AI is therefore recognised, albeit by a minority.

"In all areas, the use of GenAI can increase efficiency, reduce the error rate and achieve goals earlier and more reliably."

One respondent company decision-maker

Closer to the customer with generative AI

Will the use of GenAI change the management of customer relationships over the next three years?



65%

More personalised customer approach and/or new target groups



50%

New customer experiences and journeys



49%

More satisfied customers and closer customer relationships

(Prospective) users; n=147; multiple answers possible; further answers "new/other sales channels" (42%), "other pricing models" (35%), "nothing will change" (7%) and "do not know/no answer" (5%)

Source: F.A.Z. Institut, Sopra Steria

Redefining customer relationships with GenAI

The (prospective) users have a relatively concrete idea of the upheavals caused by using generative AI, particularly in the areas of customer and HR management. Almost 90 per cent of this group assume that relationships with their customers will change in the next three years. By using GenAI and large language models (LLMs) that are specially trained in the language of an industry, survey bots can be generated in real time for market research, for example. By analysing social media posts, they enable the company to respond quickly and in a targeted manner to the current needs of selected customer groups. In detail, companies can use this to identify ideal occasions for sales talks, submit individualised offers for cross-selling and upselling, improve products and thus strengthen customer loyalty.

"Lead management and its evaluation will become more important thanks to generative AI – more leads, more opportunities."

One respondent company decision-maker

This hyper-personalisation is possible because generative AI enables companies to understand customers and their individual behaviours and preferences optimally based on large amounts of data. The technology also helps to further increase the automation of the customer approach and optimise the customer journey right through to the closing stage.



42%

of (prospective) users of generative AI assume that they will use the technology to utilise other or new sales channels in the next three years.

n = 147

Source: F.A.Z. Institut, Sopra Steria

How GenAI can act as an enabler for co-creation models

- **Creating data bridges between companies and public administration and breaking up isolated value chains.**

For example, new mobility solutions can be created by combining vehicle and weather data as well as road condition information from authorities and municipalities. While traditional AI focuses on specific problems such as traffic forecasts, GenAI creatively combines these elements to create new services that generate added value autonomously.

- **Enabling real-time analyses and decision-making.**

AI-optimised energy networks are a potential model for energy and building management. Based on building consumption data, GenAI generates suggestions that are individually tailored to building types and user behaviour. For example, it could generate 'virtual energy consultants' that calculate potential energy savings in real time and directly recommend or even trigger measures (for example automatic adjustment of the heating curve). Traditional AI would merely evaluate data in this instance, whereas GenAI actively develops simulations and decision templates that open new use cases, such as dynamic tariff models or personalised energy products.

- **Promote customer-centred models with added value that are created through collaboration between different players.**

Banks, retailers and platform providers could establish a joint GenAI-supported ecosystem. For example, customers looking to buy an electric car could automatically receive financing suggestions, discounts from manufacturers and insurance options – all on one platform. Banks would earn money from the financing and be able to use the data for their advisory services. Retailers could increase their sales through personalised, AI-generated offers, platform operators could take over the technical infrastructure and profit from transaction fees and customer data analyses.

“Partners who do not utilise the advantages of generative AI will no longer be the first choice in some business cases.”

One respondent company decision-maker

Why GenAI is different

1. CREATIVITY

GenAI can generate new content, concepts or approaches that did not exist before – be it in the form of text, design or decision models.

3. INTERDISCIPLINARITY

While traditional AI is often narrowly focussed on one task, GenAI integrates a wide variety of data and application areas to create innovative solutions.

2. ADAPTIVITY

GenAI reacts dynamically to new data or requirements and generates solutions in real time that can continuously evolve or are continuously developing.

4. AUTOMATED PROBLEM SOLVING

GenAI enables AI agents to make decisions independently and create added value without human intervention.

Utilise knowledge everywhere with generative AI

To transform business models and merge value chains, silos must be broken down – namely process, technology, data and thought silos. Using generative AI and deeply integrating the company with the technology promote this connection. Around two-thirds of (prospective) users assume that the use of the technology will improve knowledge management in the company. There is therefore a solid awareness of the transformative power of better utilising knowledge for innovation.

Generative AI makes knowledge available where it is needed. In addition, the technology makes this knowledge available at a low threshold and is already refining it into concrete added value. The advantage: Employees no longer have to painstakingly collect the knowledge themselves and link it to creative ideas and results – the technology does it for them.



68%

of (prospective) users say that skills/knowledge management will change in the next three years as a result of the use of GenAI.

Which of the following elements of HR management will change in your organisation over the next three years with the use of generative AI?
(prospective) users; n = 147; multiple answers possible

Source: F.A.Z. Institut, Sopra Steria

Disruption through technology starts at the top

Almost all (prospective) users assume that their core strategic elements will change. 52 per cent also estimate that there will even be new business models in the future that are completely driven by generative AI.

An elementary step towards this is to gradually expand the foundation of expertise gained from the experience and success of Gen AI-based process optimisation and to systematically transfer it into innovation management and business development. This primarily requires a sound understanding of the transformative power of generative AI at the executive level. This requirement is shared by the majority of companies in Germany. 63 per cent of (prospective) users of generative AI state that managers will need to build up expertise over the next five years to exploit the disruptive potential of the technology for their own company and thus assert themselves at C-level.

The results show that many decision-makers in Germany do not view generative AI as hype. However, the topic of transforming business models is not currently at the top of their agenda. Companies should not wait too long to take this step – from optimisation tool to business model designer – in their use of generative AI. Instead, this transformation should be given a fixed and clearly scheduled place in corporate strategy.



63%

of (prospective) users of generative AI expect that managers who do not develop competence in the usage of GenAI today, will no longer be at C-level in five years' time.

n = 147

Source: F.A.Z. Institut, Sopra Steria

INTERVIEW

“Generative AI helps us to develop drugs faster, more selectively and more efficiently”

Not many companies have recognised the transformative effects of generative AI on business models yet. Merck is doing pioneering work in this area. The science and technology company is using generative AI to improve research, diagnostics, production and customer service. It has set up a wide range of training programmes to ensure the technology is used successfully. In this interview, Walid Mehanna, Chief Data & AI Officer at Merck, and Michael Buttkus, Head of Sopra Steria Next Germany, talk about success factors and obstacles in the use of generative AI.

Mr Mehanna, what role does generative AI currently play in your organisation?

Mehanna: Generative AI is the driving force behind our corporate vision ‘Sparkling Discovery, Elevating Humanity’. The application of technology is crucial to accelerating innovation, increasing efficiency as well as value creation, and improving people’s standard of living. That is why we have been working with data analytics and AI for a long time. Generative AI is therefore a logical extension of our existing technology portfolio.

What is the internal objective behind the use of generative AI?

Mehanna: For us, AI is a means to an end to enable sustainable growth in all our business areas. We want to use it to become faster in research, make our diagnostics more precise, optimise our production and improve our customer service. This is how we are contributing to our corporate goals.



Walid Mehanna, Chief Data & AI Officer at Merck
Michael Buttkus, Head of Sopra Steria Next Germany

In which departments and applications are you already using generative AI?

Mehanna: Primarily in areas that generate or process a lot of text. In our case, this applies for example to documentation and regulatory affairs. Whether it is to understand the requirements of the individual regulatory authorities, to assimilate them and implement them within processes, or to simplify the application for authorisation of new medicines.

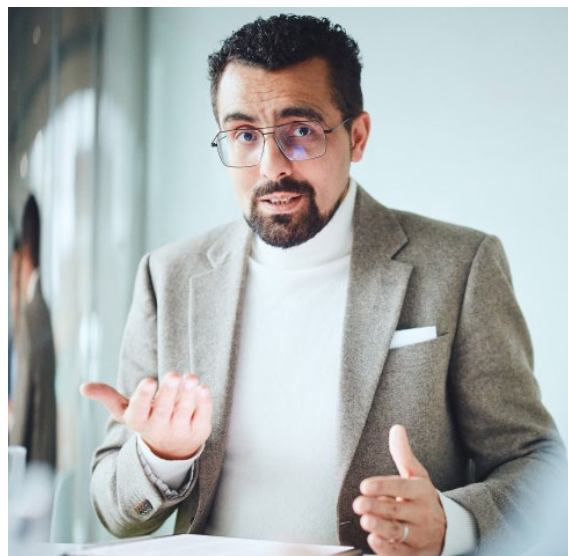
Additionally, generative AI opens new possibilities for us in research and development by helping us identify new molecule variants and develop drugs faster, more selectively and more efficiently by shortening test cycles. At the moment, we assume that we will be able to cut product development times for new molecules by up to two years thanks to GenAI. Normally, we are talking about seven to ten years. The technology is also used in the operations area to optimise processes, create maintenance plans, prevent machine downtime or use resources more efficiently.

How does Merck manage to scale generative AI beyond use cases?

Mehanna: On the one hand, we set the framework for deployment. This means we have clear governance and prioritised pilot projects. On the other hand, you cannot build a pyramid from the top down, because even pilot projects require a solid foundation. Therefore, in addition to the framework, we are also strengthening our company-wide ability to understand and apply AI. To this end, we have set up our own training programmes within the Merck Data & Digital Academy. The programmes last up to ten weeks and are designed not only to provide further training, but also to solve real problems in the work context. The prerequisite for taking part in the training programmes is therefore to have real use cases with real data.

Mr Buttkus, our survey on GenAI has shown that many companies find it difficult to scale the use of the technology beyond the use cases. Why is that?

Buttkus: There are several reasons for this. Taken together, it is a mixture of risk aversion, a lack of imagination regarding the possibilities of GenAI, a lack of willingness to invest and, in some cases, a continuing lack of know-how. Part of the problem is that many companies are missing the expertise and capacity to orchestrate the use of generative AI. Instead, they think in terms of use cases. Although they implement small pilot projects, they often cannot see the big picture. Therefore, the application of the technology remains tied to the projects and



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Walid Mehanna

is Chief Data & AI Officer at Merck, where he drives global data strategy, the "Data & AI" ecosystem as well as data culture. As Chairman of the Digital Ethics Advisory Panel, he supports the implementation of ethical guidelines for digital technologies. He was previously Chief Data Officer at Mercedes-Benz Cars and has over 20 years of experience overall at the interface of technology and business administration. Born in Egypt and raised in Germany, diversity characterises his leadership style.

"At the moment, we assume that we will be able to cut product development times for new molecules by up to two years thanks to GenAI."

Walid Mehanna

is not integrated into the day-to-day running of the company. In addition, it is architecturally and technically different whether companies work with platforms and, for example, connect their individual AI agents with each other, or limit themselves to individual use cases. The step from individual cases to platforms is associated with larger investments that not everyone wants to make.

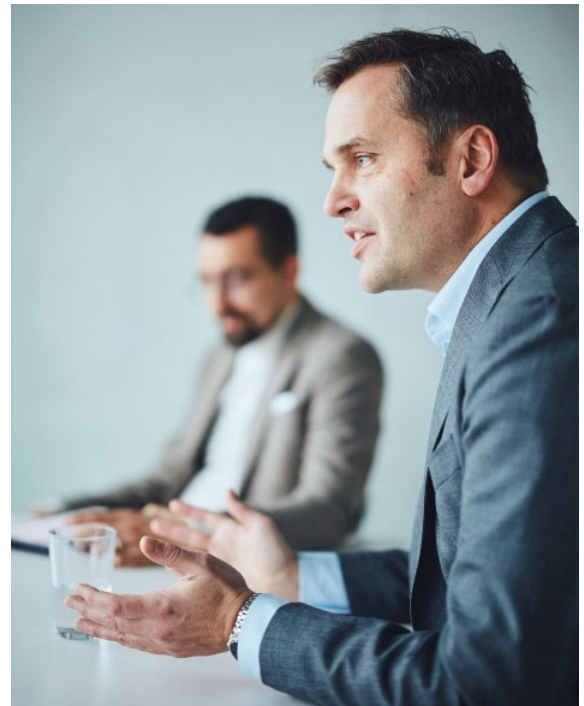
Seen from another angle: What do companies need to proceed if they are to implement generative AI successfully?

Buttkus: First of all, it is about people management: Companies are well advised to get their employees on board with GenAI, to get them excited about the technology and also to benefit from the potential of young employees, regardless of hierarchy. The technical perspective is also relevant: Companies need to engage intensively and continuously with generative AI; after all, approaches, platforms and models are becoming increasingly sophisticated and powerful. It is also important to build an architecture that is connective and future-proof. This includes the cost aspect: The use of the technology must pay off. On the one hand, companies need to look for efficiencies and, on the other, specifically consider how they can proactively change their business models, be it incrementally or innovatively.

Mehanna: When it comes to technology, I would like to add the aspects of flexibility and agility. Large companies in particular have numerous lock-in effects in their technical architecture. Added to this is the human tendency not to want to change running systems. I think this is fatal and I am convinced that you have to adapt, especially with such a fast-moving technology as generative AI. Thus, the right culture and the right mindset are also crucial to the success of the implementation. If a company only has administrators in key positions and not people who enjoy working on changes and driving innovation, the transformation will not succeed.

Do you have an example of this?

Mehanna: When ChatGPT was released in November 2022, we developed our own in-house version, MyGPT. We launched this in June 2023, but then decided to discontinue it in October 2023. Instead, we entered into a partnership with a start-up from Berlin. This worked wonderfully and gave us an upgrade. This was



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Michael Buttkus

has been Head of Sopra Steria Next in Germany since July 2024. At the same time, he was appointed as a member of the Sopra Steria Management Board. He is responsible for the management consulting business and his organisational unit forms the interface between business and technology. The business graduate has more than 25 years of experience in consulting, including at Accenture and Horváth. He is the editor of several books and has published numerous studies and specialist articles.

“Many companies are missing the expertise and capacity to orchestrate the use of generative AI.”

Michael Buttkus

only possible because our employees pulled together and were prepared to accept this change. Not many companies manage a turnaround like this.

Let us return to the issue of business models. Has Merck already brought about specific changes using generative AI?

Mehanna: Definitely. We support our core products with digital services that we market as add-ons. Here, for example, we are operating in the context of digital health. We now also offer fully digital products, such as our drug discovery software Aiddison, which we developed based on our experience, data and models in the field of drug discovery with the help of generative AI, machine learning and computer-aided drug design. The Synthia retrosynthesis software, which shows the best possible way to produce a desired molecule, is a second example. Digital products are not yet major sales drivers, but they will grow.

However, as a large corporation, we have various business models. We are just as active in the field of raw materials as we are in the field of contract production. We offer products and hardware, but also services. For example, our Life Science division also works with B2B e-commerce. This means that we have significant sales in the USA, which we process via our plant there. The targeted marketing or hyper-personalised marketing using GenAI is an absolute game changer there.

What changes will the use of generative AI bring to companies' business models in general?

Buttkus: Almost everything: Just look at the interfaces in a value chain. It can be assumed that something new will happen at every interface as a result of generative AI. To utilise this potential, we need different cooperation partners, different skills, and motivated and competent employees. In the future, we will have to deal with completely different requirements than we do today.

Mehanna: I assume that the use of generative AI and increased efficiency will change business models just in terms of speed alone. Customer expectations are also evolving. Companies that are unable to keep up with this speed because they have invested late or not at all in generative AI will have a hard time on the market, because even strong brands are only 'defensible' for a certain amount of time, as we are currently seeing in the automotive industry.

Where does Merck's willingness for constant transformation come from? Is it perhaps due to the DNA of a family-owned company?

Mehanna: I would not put it down to the DNA. I believe it is important to think not just from quarter to quarter, but to adopt a more long-term perspective. I see this more often in family businesses like ours. We think more strategically and



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"I believe that the openness to evolve completely is essential for sustainable growth."

Walid Mehanna



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“What we need more of is technological substance. We need more working code, more solutions, more services and more customers for these solutions.”

Walid Mehanna

more in terms of generations. In addition, many family businesses are very pragmatic. Continuously reinventing themselves is often one of their core competencies. Merck started out as a pharmacy, then moved into the production of medicines and scaled up accordingly. The company then started trading in raw materials and built up the Performance Materials division, which has since evolved into Electronics. I believe that this openness to evolve completely is essential for sustainable growth.

How do you rate Germany’s position as an AI nation? Why is it so difficult for us to be a digital leader?

Mehanna: There is enormous potential in Germany. We have innovative concepts, ideas and approaches. Nevertheless, we are failing to realise this potential due to our preservationist and administrative mentality. We usually lack a hands-on mentality. There is a lot of paperwork, especially in large companies. But what we really need more of is technological substance. We need more working code, more solutions, more services and more customers for these solutions. Take start-ups and small companies: We are pushing them overseas because their success in Europe and Germany is failing due to the unwillingness of large companies to take risks. Instead of investing in the solutions of young companies, they prefer to rely on less progressive products from established companies. They lack curiosity, openness and flexibility. But up-and-coming companies are like seeds or tender little plants. They not only need sun, which in this

case would be investment and funding, they also need water. And water is paying customers who enable start-ups to put themselves to the test in practice, to learn and further develop their products.

What changes would you like to see in the future?

Mehanna: I would like to see more pragmatism, more openness and more people with a hands-on mentality. Regulation is important, but it should not get too much attention. There needs to be an openness to taking calculated risks and making investments. To achieve this, we need enthusiasm for the topic of AI, but also an open discussion about its potential, risks and ethical issues. Of course, these issues slow us down, but they are important. After all, you can only drive fast if you have good brakes. I like driving fast and would like to see us enjoy driving more again overall in Germany.

***The interview was conducted by
Jacqueline Preußner.***



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**“There must be an openness
to taking calculated risks and
making investments.”**

Walid Mehanna



Expert insights and takeaways

CROSS-INDUSTRY FINDINGS

AI is a key competitive factor

“GenAI is not only changing how companies work, but also what they can provide and achieve. The efficiency gains are enormous: If a service centre with 10,000 employees becomes 10 percent more productive due to GenAI, the company can potentially deploy 1,000 employees for other tasks and thus offer additional services. The core of the differentiation is achieved by integrating GenAI into the company’s processes – from customer service to controlling. Companies that do not actively introduce GenAI and do not optimise their processes on a large-scale risk being left behind in the coming years. Technology will no longer be a differentiator, but a key competitive factor.”



Oliver Bleutgen
Vertical Lead Energy/
Utilities & Industrials
Sopra Steria Germany

BANKING

Banks are platforms that create customer experiences and added value through GenAI

“So far, banks have mostly used GenAI for increased efficiency and automation, but the full potential lies in redefining business models. GenAI enables hyper-personalised products that are individually tailored to customers – such as dynamic investment portfolios based on real-time data or AI-supported financial planners that make wealth management accessible to everyone. Banks that are specialised providers of financial assistance GPTs are also conceivable. To achieve this, banks need to question their traditional, product-centric approaches and build data-driven ecosystems that are closely linked to AI. It takes the courage to innovate, strategic investments and a clear vision to rethink the role of the banks – not as pure financial service providers, but as platforms that create customer experiences and added value through technology.”



Thomas Otto
Management
Consultant and CIO
Advisor at Sopra
Steria Next Germany

INSURANCE

How AI is transforming insurance sales

“GenAI is changing the insurance industry, especially in sales. This is particularly evident in the intermediaries’ business model as well as in the cooperation between insurers and brokers. Pools and larger sales organisations will continue to gain influence through efficiency and technological support, while multiple agents will increasingly become the focus of attention. Insurers are therefore faced with the question of which business model to focus on: Will they strengthen their ties to the pools, address brokers directly with their own GenAI solutions or transform tied agents into multiple agents? New technological solutions such as research assistants accelerate data-driven processes. Initiatives such as the EU’s Financial Data Access (FIDA) Regulation also enable hyper-personalisation and automated advice. GenAI is causing a race that not only increases efficiency, but also opens up new business models and growth. Speed is therefore of the essence.”



**Dr Thorsten Voith
from Voithenberg**
Head of Insurance
at Sopra Steria Next
Germany

AUTOMOTIVE

From product-oriented to service- and data-driven mobility

“GenAI is presenting the automotive industry with far-reaching opportunities to develop new business models. These include the development of hyper-personalised customer experiences, data-based platform solutions and intelligent mobility services. In Germany, GenAI is currently used primarily to optimise internal processes, for example to increase efficiency and automate structural activities, while the potential for far-reaching, transformative innovations in business models remains largely untapped.

The future lies in customer-centric ecosystems that see vehicles not just as products, but as platforms for personalised mobility offerings. Asian manufacturers in particular are consistently focussing on innovative approaches. For example, they create an emotional bond between driver and vehicle and drive the integration of data-driven platforms and subscription-based business models, thereby securing strategic advantages. The German automotive sector needs to pick up speed significantly to keep pace with global competition. This requires targeted investment in partnerships with technology companies, the expansion of digital ecosystems and a cultural shift towards customer-centred approaches to innovation. Only then can German manufacturers successfully master the transition from product-oriented to service- and data-driven mobility and tap into new sources of revenue.”



Peter Engelke
Head of Automotive
at Sopra Steria
Germany

PUBLIC ADMINISTRATION

Why efficiency is the first step towards disruption

“Against the backdrop of demographic change and budgetary pressure, public administration is currently less concerned with new business models than with increasing effectiveness and efficiency. GenAI offers enormous potential here, both for individual productivity and for the automation of processes and entire specialised domains. However, we can only realise this potential if we consistently break down existing structures and work in a cross-functional and product-oriented manner. We also need centralised platforms and orchestrated governance so that digital tools can be used synergistically. This is the basis for disruption. Because it does not happen on its own – it takes time, resources, structural changes and the will to do things differently.”



Dr Bernd Peper
Head of Public Sector
at Sopra Steria Next
Germany

Takeaways

AI offers companies great potential to successfully transform their business. Here are seven recommendations for action that you should start now.

Many companies view GenAI as an isolated IT project.

1

STRATEGIC ANCHORING

Anchor GenAI firmly into your corporate strategy. Define how the technology supports your goals. Set standards for its secure and responsible use.

Only 20 per cent of companies use GenAI company-wide.

2

SCALING IS A SUCCESS FACTOR

Develop a clear roadmap and an investment evaluation grid to guide the roll-out to the application areas with the best return on investment.

Many companies shy away from high licensing costs.

3

MANAGE INVESTMENTS INTELLIGENTLY

Rely on flexible partnerships so that you can react quickly to market changes, minimise long-term cost risks and develop innovative business models.

GenAI thrives on high-quality and networked data.

4

BUILD DATA ECOSYSTEMS

Accompany every GenAI investment with a data strategy. Ensure that the right departments have the necessary access and that their data is up-to-date and secure.

63 per cent of decision-makers see the need to develop new skills.

5

PRIORITISE SKILLS DEVELOPMENT

Promote targeted skills-building programmes for employees and create incentives to develop expertise in AI and data analysis within the company.

Companies often get stuck in the optimisation trap.

6

ESTABLISH A CULTURE OF INNOVATION

Promote a culture of experimentation, incentivise new thinking and turn ideas into a productive innovation process.

GenAI is mainly used in isolated departments.

7

RESTRUCTURE THE ORGANISATION

Radically break down silos and create interdisciplinary teams that can use GenAI across departments.

Methodology

From September to November 2024, F.A.Z. Business Media I research surveyed a total of 189 people with exposed decision-making positions in companies in Germany for the study 'Disruptive potential: How generative AI is redefining business models' by Sopra Steria and F.A.Z. Institut. Computer-assisted web interviews (CAWI) and telephone interviews (CATI) were conducted for this purpose. The survey analysed the extent to which companies use generative AI, how they view the technology and what effects they expect its use to have on their business model. Free text questions were also asked in this context. Some of the answers are distributed throughout this study report and labelled accordingly.

The respondents' backgrounds

Around a third of respondents hold a top-level position, for example as owner, president or CEO. A further 13 per cent have another C-level role. Middle and senior management accounted for 38 per cent. This group of people was only included if they came from companies with at least 500 employees.

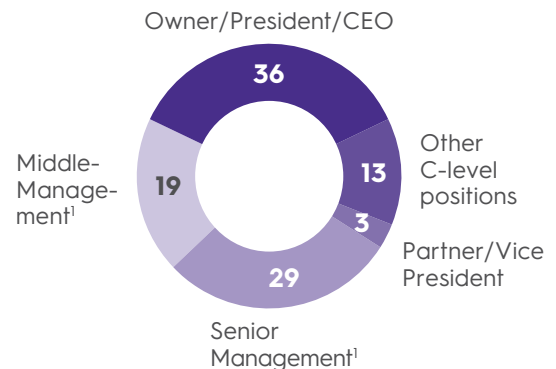
Of the respondents' companies, 39 per cent have fewer than 500 employees. Three out of five respondents come from organisations with 500 to under 5,000 employees. A quarter work in organisations with 5,000 employees or more.

Expert interviews provide context

In addition to the quantitative survey, two expert interviews were conducted. These discussions consolidate the results and provide additional background knowledge. Both the interviews and the anonymous free text responses from the survey reflect the opinions of the respective persons.

Respondent's position in the company

In per cent of respondents; n = 189

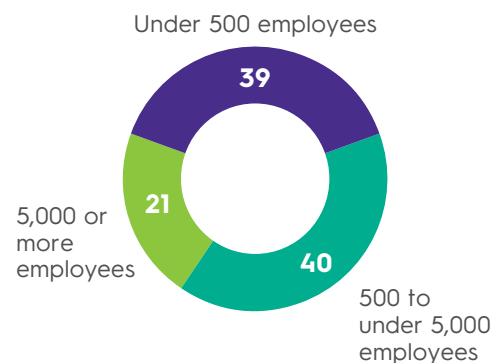


¹ Persons in this position were only considered if their company had at least 500 employees.

Source: F.A.Z. Institut, Sopra Steria

Number of employees at the company

In per cent of respondents; n = 189



Source: F.A.Z. Institut, Sopra Steria

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