AI ASSISTANTS FOR PROCESS OPTIMIZATION

> *The real value of AI assistants isn't in their standardiza-tion, but in customization. Successful AI integration will depend on how well the technology adapts to an organization's specific environment, whether it's cultural nuances, industry regulations, or business needs. The future belongs to those who can mold AI to fit their unique context."*
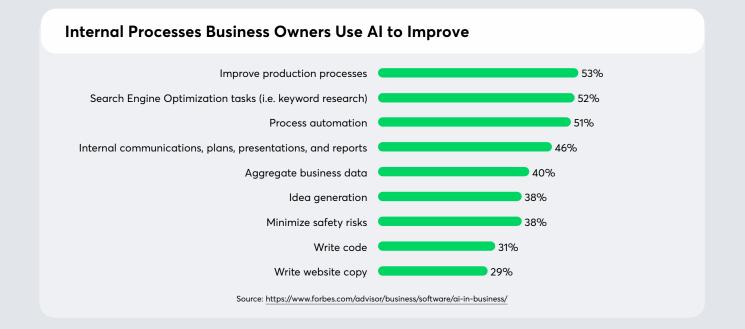
Kuba Filipowski,
CEO and Co-Founder of Netguru

AI-powered systems can accelerate internal processes, cutting task completion times from days or hours to mere minutes. The future of AI-driven process optimization is here. So, the real question is: Are you ready?

Organizations around the world are implementing AI assistants to streamline their business operations and optimize processes. 65% of the McKinsey Global Survey respondents report that their companies are regularly using generative AI – nearly double the number from the previous survey in 2023.

So, what specific benefits are these organizations seeing? According to Forbes Advisor, more than half of businesses implementing AI do so to **improve production processes (53%)** and **increase process automation (51%).**

That's not all. Other notable areas of AI adoption include, e.g., streamlining internal communications, SEO optimization, data aggregation, idea generation, and safety risk minimization.

Internal Processes Business Owners Use AI to Improve

Process	%
Improve production processes	53%
Search Engine Optimization tasks (i.e. keyword research)	52%
Process automation	51%
Internal communications, plans, presentations, and reports	46%
Aggregate business data	40%
Idea generation	38%
Minimize safety risks	38%
Write code	31%
Write website copy	29%

Source: https://www.forbes.com/advisor/business/software/ai-in-business/

Artificial intelligence has revolutionized the way our teams operate, particularly in decision-making and process automation. In our industry, AI significantly boosts our Net Promoter Score (NPS) and improves access to knowledge through advanced information management. By automating routine tasks, AI allows teams to focus on more strategic activities and align services more quickly with customer needs."

Krzysztof Pająk,
Chief Financial Officer, Proxy at ARC Europe Polska

That's why it's no surprise the market is noting a lot of spending on AI-powered technologies. In 2023, the market for AI amounted to around $200 billion, and it is expected to grow even further, reaching $1.8 trillion by 2030. The current spending on AI-powered systems varies depending on the industry – with banking ($20.6 billion in 2023), and retail ($19.7 billion in 2023) leading the way.

Yet, banking and retail are far from being the only industries that can benefit from AI assistance. Healthcare, HR, education, and many others can also introduce AI-powered systems into their operations to streamline their internal and external processes.

If you're looking to find a way for your business to utilize AI, this ebook will help you find it. Inside, you'll uncover an in-depth analysis of the **AI assistants landscape,** featuring real-life use cases and step-by-step guidance on leveraging AI-powered systems to enhance operational efficiency.

I really believe AI is the single biggest driver of innovation since the dotcom bubble in the 90s and early 2000s. And we've seen companies fail by not adapting to the dotcom, by not building an online presence, and by not creating those e-commerce stores. I believe the same risk is posed within AI."

David Westera,
Vice President - AI Research Lead at JPMorganChase

Who will benefit from reading the paper?

The ebook is dedicated to **business leaders, managers, and decision-makers across various industries**, who strive to optimize processes within their organization by AI adoption.

Some of the highlights:

- AI assistants play a significant role in industries like retail, healthcare, finance, and education, supporting many business processes. Among other tasks, they help companies generate content, process data, and offer new personalization opportunities.

- Introducing AI assistants into operations can greatly improve business efficiency, with as many as seven out of ten workers noting increased productivity and improved work quality.

- AI systems function and perform based on the model they are built on, which is why choosing the right ML model is a crucial step when selecting an AI assistant.

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01.

The definition of AI assistants

AI assistants are AI-powered programs and systems that interact with users to **perform tasks, provide information, or assist** in the decision-making process. They can understand natural language, process requests, and respond in a human-like manner, often through text or voice commands.

AI assistants can be used in two key areas: **customer-facing tasks,** such as inquiries and support, and **internal operations** like coding, data analysis, and workflow automation.

Whether used for general tasks like scheduling or specialized roles, AI assistants offer adaptable solutions. Understanding their applications helps organizations select the right tool for their needs.

AI assistants use technologies like natural language processing (NLP), machine learning (ML), and sometimes rule-based logic to provide personalized, context-aware assistance.

Moreover, these systems can learn from previous interactions and **adapt to user** **preferences** over time. For example, ChatGPT can be instructed to remember or forget past conversations, depending on your preference. This ability enhances the systems' effectiveness, making them even more useful the more they are utilized.

The difference between an AI agent, AI assistant, and AI copilot

Discussing the topic of AI-powered tools, we should also look at the **most common instances of these systems** – AI agents, AI assistants, and AI copilots.

AI agents

AI agents are large language models that can **perform different actions autonomously,** interact with other software, or work as a team of specialized agents interacting with each other.

What makes them a useful tool in business?

The future of AI lies in specialized agents tailored to specific tasks rather than relying on a single, large model. By focusing on specialized roles, these agents can deliver higher-quality and more context-relevant results, transforming how we interact with technology."

– Patryk Szczygło, R&D Lead at Netguru

They act based on the task they're given and can be used to, e.g., conduct market research, debug code, generate reports, draft go-to-market strategies or create files. In collaborative scenarios, AI agents can even work together on complex programming tasks.

AI agents go beyond traditional chat models by operating autonomously, interacting with other software, and collaborating with multiple agents to achieve complex tasks. This capability makes them a powerful tool for automating workflows and enhancing productivity."

– Patryk Szczygło, R&D Lead at Netguru

AI assistants

Unlike AI agents, AI assistants are built for **direct user interaction.** While both use advanced AI technology, the main difference is how they engage with users.

AI assistants have user-oriented interfaces—such as chat windows, voice control, or dashboards—that make them accessible, especially for non-technical users. They also come with more functions out of the box, like managing calendars, sending emails, or answering questions.

While AI agents handle tasks autonomously behind the scenes, **AI assistants guide users through tasks.** For example, an AI agent might generate a ready-to-use presentation, whereas an AI assistant helps you create it by asking questions and offering support along the way.

AI copilots

AI copilots are contextual collaboration tools designed to boost team productivity by **integrating directly into existing workflows.** Unlike AI assistants, which handle a broad range of tasks, AI copilots focus on providing real-time, context-specific suggestions and improvements within tools like text editors or development environments.

For example, in **coding,** a copilot can **suggest code snippets, fix errors, or write entire lines,** helping streamline the process and improve efficiency.

Some of the most recognized AI copilots are those from GitHub (designed to help developers code more efficiently) and Microsoft (made for office workers to streamline their work within Microsoft 365 apps).

> *We integrate AI at various stages of the software development life cycle, focusing on design-to-code, scaffolding, and pair programming. While there's buzz about AI replacing engineers, I don't believe this will happen anytime soon. But as tools advance, those leveraging AI will likely outpace those who don't."*

– Mateusz Czajka, Chief Delivery Officer at Netguru

According to GitHub's survey, **88% of developers stated that copilot improved their productivity,** and 74% said they have more time to focus on more satisfying work.

> *AI tools like GPT-Engineer handle boring, repetitive tasks, freeing up space for creativity and allowing engineers to focus on solving complex problems and refining their craft."*

– Krystian Bergmann, AI Consulting Lead at Netguru

Similar results were obtained by Microsoft Copilot users, with 70% of them noting they were more productive and 68% reporting an improved work quality.

Feature	AI agent	AI assistant	AI copilot
Autonomy level	Highly autonomous; performs tasks with minimal human input after initial instructions	Semi-autonomous; requires user input and approval during key stages	Low autonomy; provides suggestions and assists users within specific applications
Task coplexty	Can handle complex, multi-step tasks, including inter-agent collaboration	Helps with broader task management (e.g., customer support, personalized tutoring, documents analysis)	Focuses on specific, context-driven tasks within tools (e.g., code completion, agenda draft, text summarization)
Interaction type	Operates mostly behind the scenes	Interacts with users via a user-oriented interface (chat, voice, dashboard)	Provides real-time suggestions within work environments (e.g., text editor, spreadsheet, IDE)
Example use cases	Market research, data analysis, debugging code autonomously, ebook drafting	Customer tickets categorization, personalized learning, lead qualification, document analysis	Suggesting code snippets in an IDE, auto-fixing errors in a spreadsheet

Incorporating customized AI assistants—whether as AI agents or copilots—can significantly **accelerate internal processes**, reducing task completion times from hours or even days to minutes. Altogether, they help streamline workflows across your organization. Here are a few examples of their impact:

- ENN Group's AI virtual assistant quickly enabled thousands of employees to transition to remote work within half a day, while a financial assistant streamlined back-office tasks, cutting processing times by 60%.

- Merck cut chemical identification time from 6 months to 6 hours using an AI R&D Assistant.

- NewGlobe reduced the teacher's manual creation time from 4 hours to 45 seconds with an AI assistant.

- PG&E's chatbot „Peggy" automated up to 40% of helpdesk requests, resulting in over $1.1 million in annual savings.

AI didn't just accelerate process improvements—it also served as a key tool to bring interdisciplinary teams together. By doing so, we were able to combine knowledge more quickly and achieve maximum output. AI has the potential to reshape how we collaborate, and the first results are already visible."

– Marko Sebastian, Finance & IT Director, Member of the Board of Directors at Volkswagen Autoeuropa

Choosing the type of AI assistant will depend on your business needs, and deciding on the right one will be the most crucial part of the entire process.

Yet, before we get to that, let's learn a bit more about the most common models that can help you bring AI assistants to life.