Streamline complex activities with AI PCs featuring AMD Ryzen processors

On-PC AI technologies allowed us to perform coding and other tasks on the HP EliteBook X G1a 14 and the Dell Pro 14 Plus, both featuring the AMD Ryzen processor, in less time than using a traditional, manual approach

Tech expert
Juggles software development and other tasks

Reclaim up to 2 days per week for high-value work

by employing on-PC AI features to help streamline activities

Cut the time to complete a task

by up to 81% by using AI technologies

Software developers and other highly technical professionals typically divide their work days between periods of focused coding or other technical work, communicating with colleagues and clients through meetings and email, and staying on top of other repetitive administrative tasks. Using AI to accelerate these activities helps workers carve out the mental space necessary to think innovatively and mitigate the stress that a never-ending to-do list can generate.

To learn about the ways that software developers and other technical experts can benefit from adopting AI technologies, we tested a series of defined scenarios with AMD Ryzen™ processor-powered AI PCs from Dell and HP. Using AI technologies reduced the time to complete tasks by up to 81 percent compared to traditional, manual approaches. Our findings show these systems are a strong choice for tech professionals who want to harness the potential of AI.

The daily routine of a busy software developer

To explore the ways AI can help workers, let's imagine a hypothetical professional named Mallory. Software development is the primary focus of her job at a boutique web firm. In addition to focused blocks of coding time, her days also include project management responsibilities such as summarizing email threads, taking meeting notes, dealing with Jira tickets, and drafting various kinds of documentation.

Mallory's default setting during the workday is "stressed." She feels as though she spends too much time on repetitive administrative tasks and wonders if her coding work is taking longer than necessary. If AI could help her complete tasks more efficiently, her stress level would improve, and she could devote more time and energy to innovative ideas.

The price of employee burnout

Mallory is a hypothetical figure we've created to show how AI can transform work for busy professionals, but the issues she faces are real. Recent evidence shows that employee burnout stemming from chronic stress remains high and is increasingly linked to both organizational and external pressures. A 2024 survey found that 79 percent of full-time U.S. employees had experienced burnout in the past year, with more than half reporting that it reduced their engagement and over a third saying it hurt their productivity.[1]

How an AMD Ryzen AI PC can help Mallory work smarter

We tested AI features on notebooks powered by AMD Ryzen processors to understand how they streamline tasks. We tested two Windows 11 Pro notebook systems:

HP EliteBook X G1a 14 AI
AMD Ryzen AI 9 HX PRO 375

Dell Pro 14 Plus
AMD Ryzen AI 7 PRO 350

On each system, we carried out the following five tasks:

- **Summarizing an email chain**
- **Taking notes during video conferencing**
- **Summarizing a Jira ticket**
- **Building a predefined application**
- **Drafting and reviewing a document**

We executed each task using either AI features or a manual approach without AI features. AMD provided initial tasks and workflows that we reviewed and—in some cases—adjusted to reflect real-world usage. For some tasks, a single individual performed the manual approach three times, and for others, three individuals each performed the task once. For complete details on the test systems and our procedure, see the science behind the report.

About the AMD Ryzen AI processors in the systems we tested

The HP EliteBook X G1a 14 we tested featured an AMD Ryzen AI 9 HX PRO 375 processor. It had 12 cores, 24 threads, 5.1 GHz boost, 12MB L2, 24MB L3 cache, 32 GB of memory, and 85 overall trillions of operations per second (TOPS). Learn more.

The Dell Pro 14 Plus we tested featured an AMD Ryzen AI 7 PRO 350 processor. It had 8 cores, 16 threads, up to 5 GHz boost, 2 GHz base clock, 16MB L3 cache, 32 GB of memory, and 66 TOPS. Learn more.

Both processors are part of the Ryzen AI PRO 300 Series and feature the new AMD Zen 5 architecture. According to AMD, they deliver "outstanding CPU performance, and are the world's best line up of commercial processors for Copilot+ enterprise PCs."[2] AMD Ryzen AI PRO 300 Series processors also "offer a cutting-edge 50+ NPU TOPS (Trillions of Operations Per Second) of AI processing power, exceeding Microsoft's Copilot+ AI PC requirements."[3]

Summarizing an email thread

People with roles like Mallory's must keep teams current, which can involve summarizing long email chains. In this scenario, we used the Microsoft Copilot AI-powered email summarization feature for the AI approach and compared it to the traditional approach of reading the email thread and manually drafting a summary. The test used a realistic email thread with nine messages to demonstrate a real-world situation. Three individuals completed the activity manually, and we report the average of their times. As Figure 1 shows, using the AI feature dramatically reduced the time to complete this task, saving an average of 86.8 percent of the work time—over 14 minutes of time savings for this task alone.

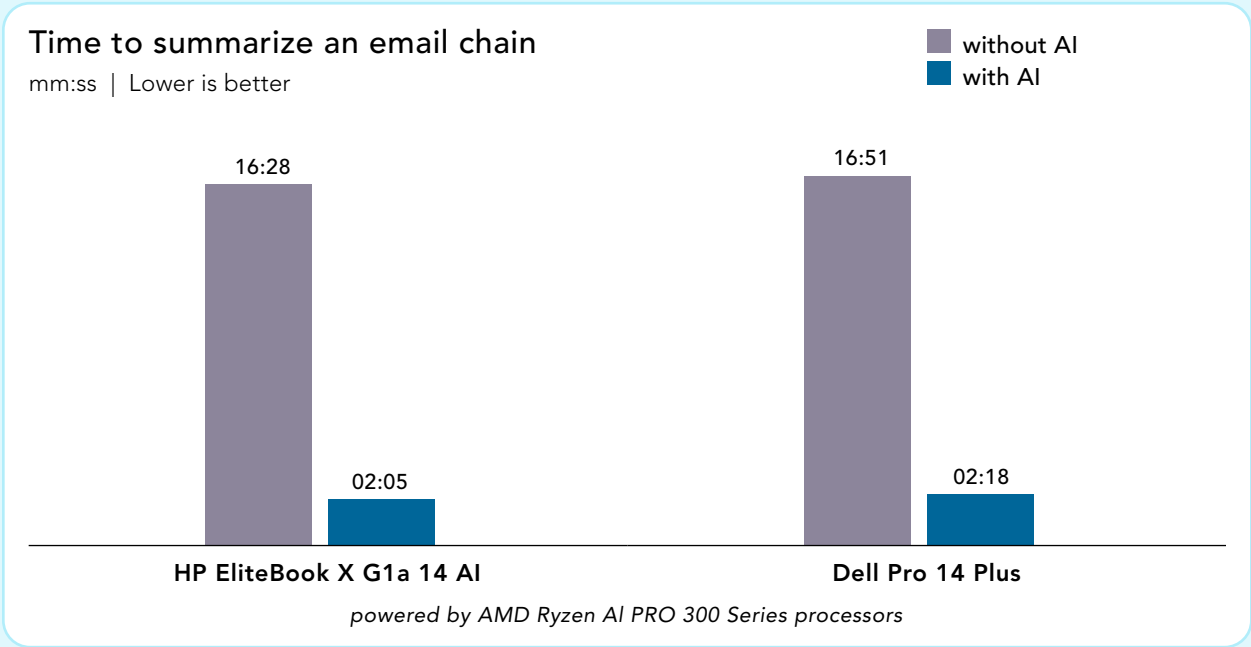


Figure 1: Time to summarize an email thread comprising nine messages on two different systems with and without AI assistance. Source: PT.

Please note that for some scenarios, the times between the two test systems differed slightly in one direction or the other. This is most likely due to the different testers performing the tasks and does not imply any meaningful performance discrepancies between these systems. Additionally, the graphs in this report use different scales to keep a consistent size. Please be mindful of each graph's data range as you compare.

Taking notes during video conferencing

Mallory and her colleagues share the responsibility of taking meeting notes. This test scenario explored the difference between AI-enhanced Microsoft Teams meetings using Recap and Copilot versus traditional meetings requiring manual note-taking. In the non-AI approach, we executed a script that simulated a person taking notes during the meeting and then the script completed a clean-up pass on the content after the meeting ended. In the AI approach, we executed a script that started Recap at the beginning of the meeting and then used Copilot to summarize the notes this feature generated.

We performed the task three times using each approach and report the average time. The timing for both approaches includes the roughly 5 minutes it took to hold the meeting and the post-meeting activity of summarizing the meeting. Using AI with Recap was faster, saving an average of 40 seconds or 6.5 percent of the time the non-AI approach took (see Figure 2).

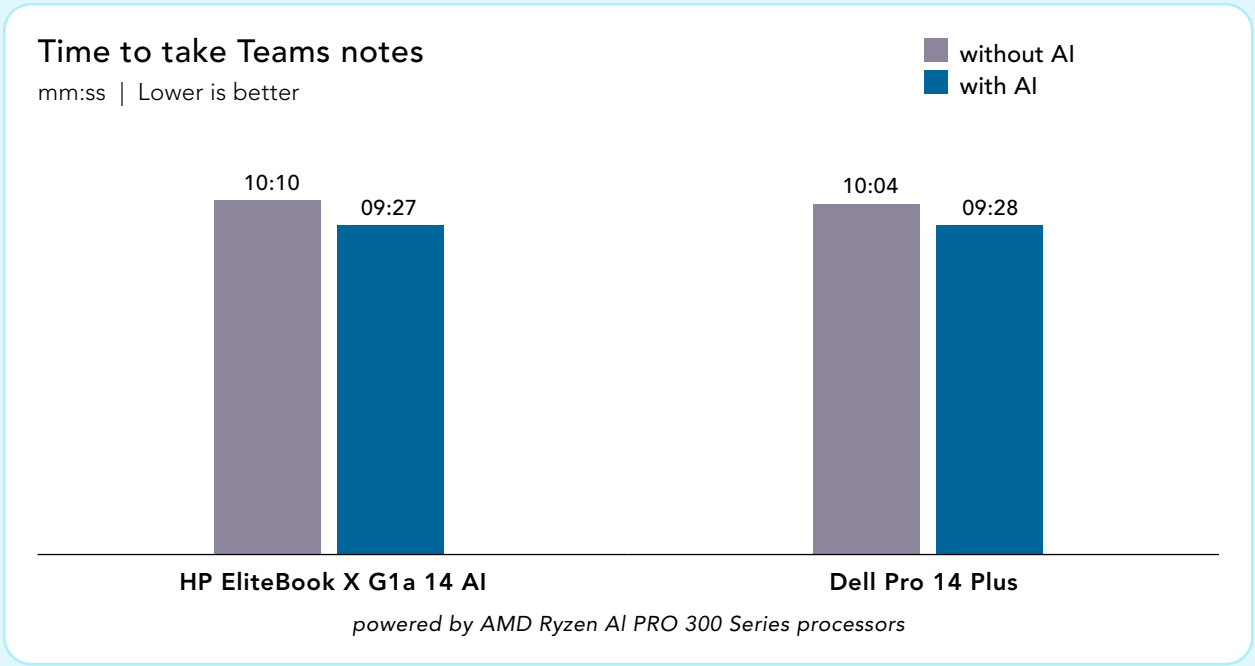


Figure 2: Time to take Teams meeting notes on two different systems with and without AI assistance. Source: PT.

Summarizing the comments in a Jira ticket

Mallory's firm uses Jira, a tool from Atlassian, for issue tracking and project management. Jira uses tickets to organize, track, and manage tasks throughout a project's lifecycle. Each Jira ticket includes a comment section for collaboration. The comments can be lengthy and written in a way that makes it difficult to grasp the big picture. Accurate, concise summaries of ticket comments improve efficiency and understanding of ticket context.

This test scenario compares two ways of summarizing Jira ticket comments: using Jira Atlassian Intelligence (AI) and using a manual approach. The manual approach involved opening the ticket, reading through the entire ticket and comments, and writing a summary of the ticket and comments in an email. Three individuals completed the activity manually, and we report the average of their times. Employing the AI feature cut the time required to complete this task by more than 8 minutes, a savings of 74.2 percent (see Figure 3). Using AI to summarize these comments not only saves time, but potentially increases quality of the analysis.

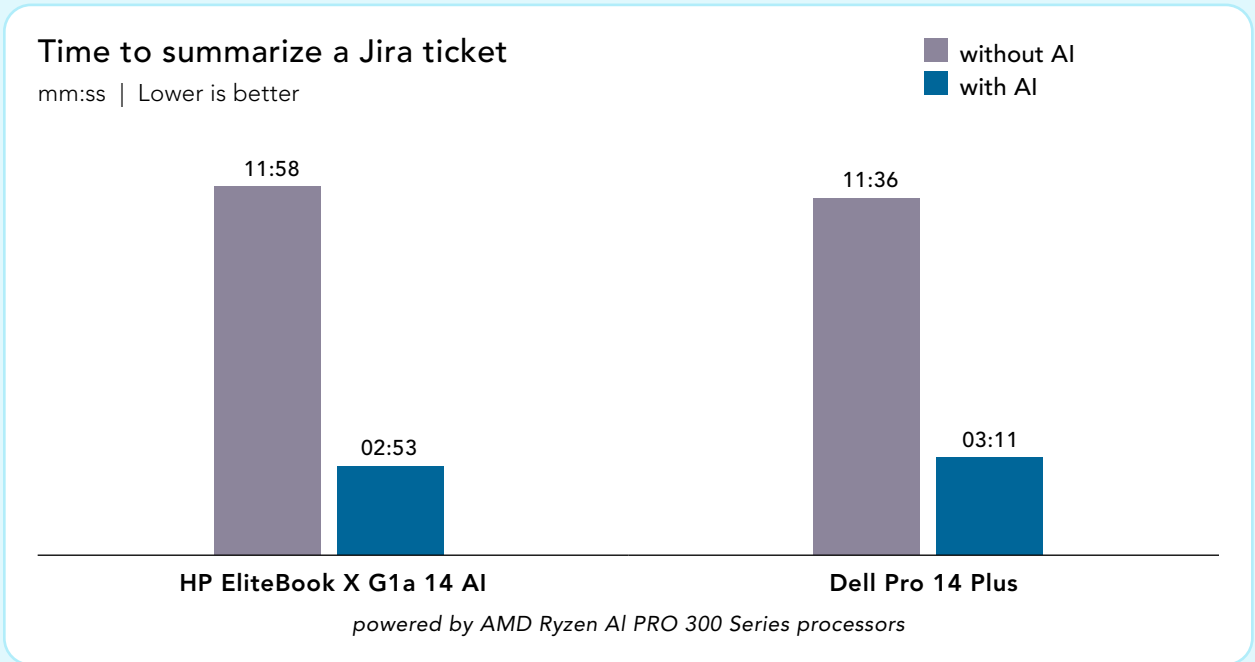


Figure 3: Time to summarize a Jira ticket on two different systems with and without AI assistance. Source: PT.

Building a predefined application

Vibe coding applications are AI-powered tools that use natural language prompts to generate code. They enable users to build software intuitively and have the potential to be great time savers. In the AI approach to this scenario, we used a local LLM hosted by Lemonade Server, accessed directly from Continue.dev in VS Code to build a predefined application. This provided AI-assisted code generation and error checking without switching applications.

For the manual approach, we asked three experienced developers to estimate the amount of time it would take them to develop a predefined application without AI assistance. The task involved researching, designing, and implementing a JavaScript HTTP server with basic routing, GET/POST support, JSON response handling, CORS headers, error/404 responses, and graceful shutdown. We report the average of their estimates.

As Figure 4 shows, our experts estimated that the task would take an average of 93.33 hours, the equivalent of more than two weeks of 8-hour workdays. In contrast, the AI approach took only 17 hours, less than half of a typical workweek.

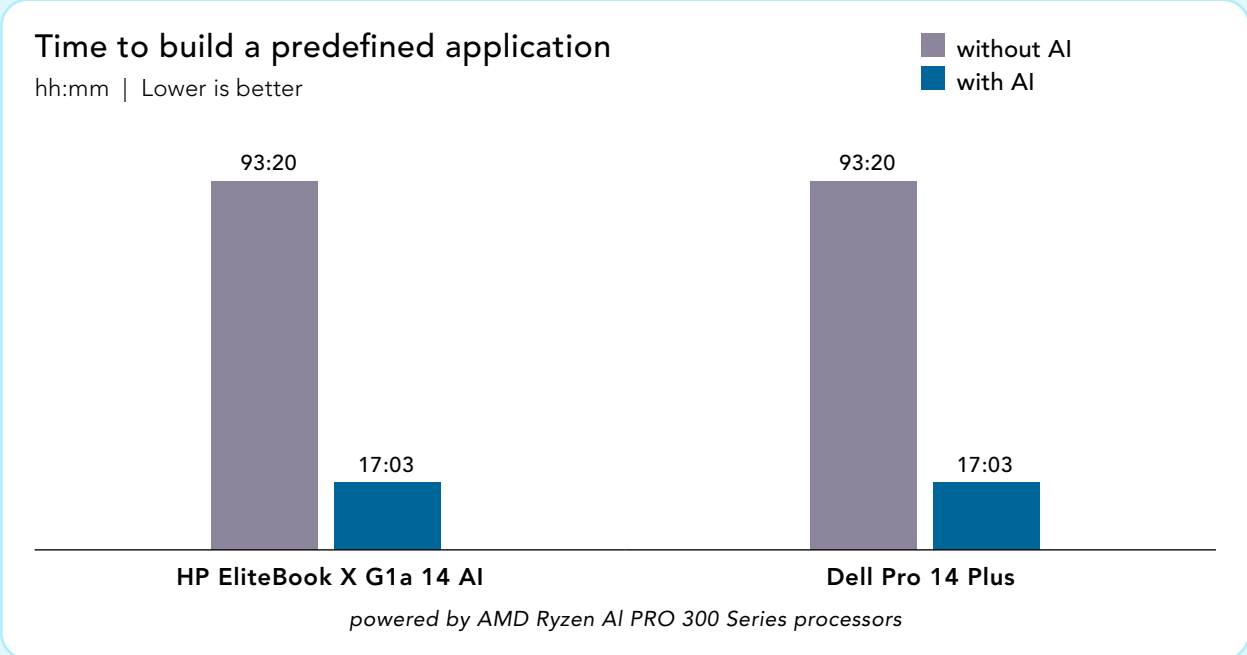
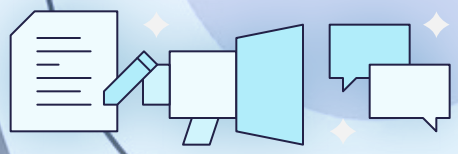


Figure 4: Time to build a predefined application on two different systems with and without AI assistance. Source: PT



Drafting and reviewing a document

In the course of her development work, Mallory frequently writes documentation such as release notes, changelogs, and project updates for clients. This test scenario explored the difference between AI-enhanced composition workflows and traditional manual drafting and editing processes. The types of documents that different professionals write varies, but the document creation workflow can be similar across roles. The AI approach involved launching LM Studio, loading a specified AI model, and generating a draft document using an attached reference document. For the manual approach, three individuals completed the task by reading the reference document and filling in a document template. As Figure 5 shows, using AI reduced the necessary time by an average of 41 percent, from more than 20 minutes to only 13 minutes.

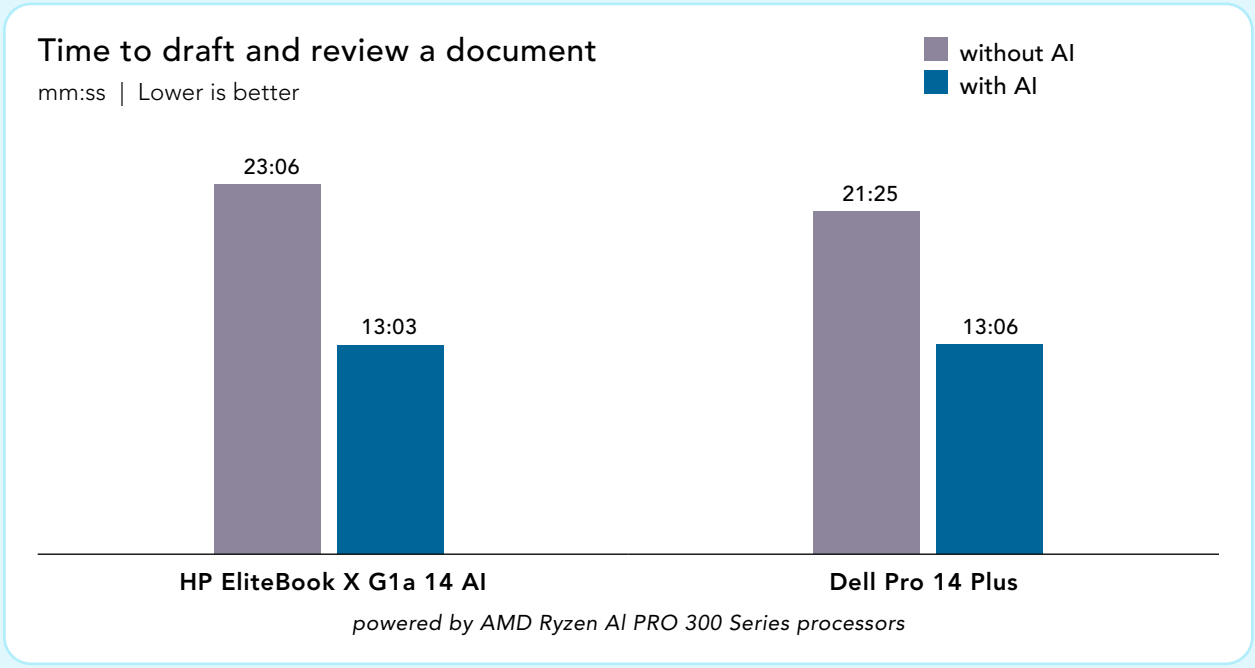


Figure 5: Time to draft and review a document on two different systems with and without AI assistance. Source: PT.

Time savings across the work flow

Figure 6 shows the total time it took to complete each scenario once. Using AI technologies cut the time dramatically, by an average of 81 percent. Obviously, the time savings on the application development activity accounts for the vast majority of this time, just as it would in the workweek of a developer like Mallory.

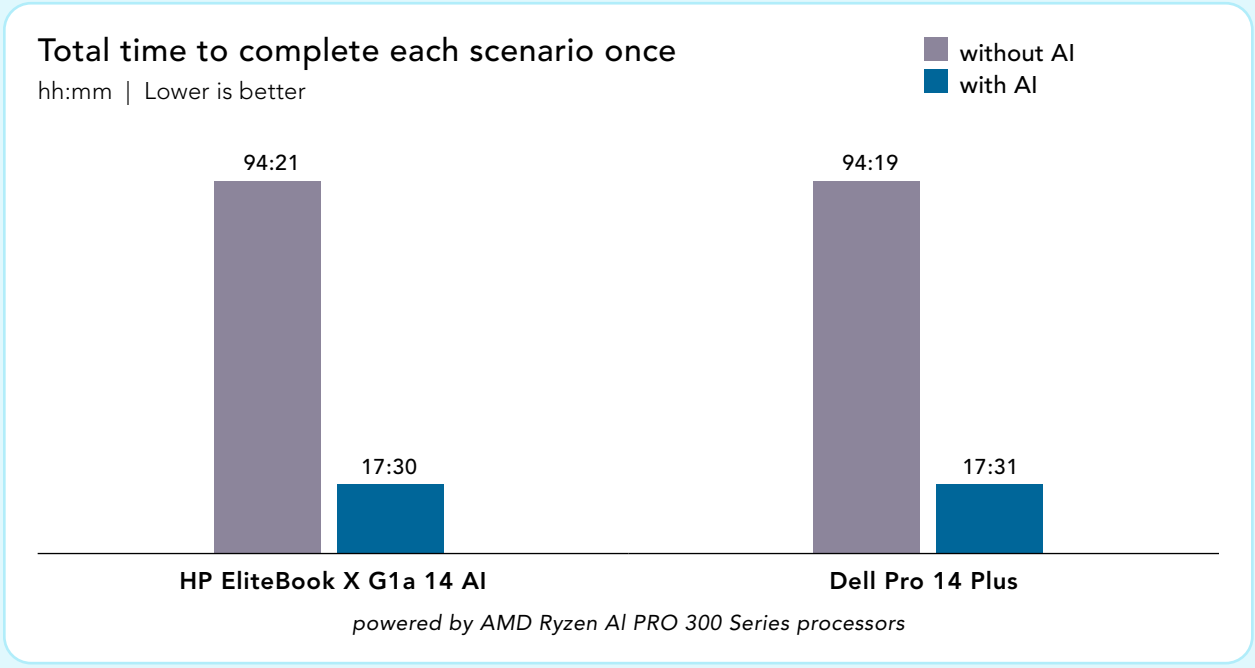


Figure 6: Estimated time to complete all six activities one time with and without AI assistance on two different AMD Ryzen processor-powered PCs. Source: PT.

Potential time savings across a workweek

To get a sense of the kind of time savings that a professional like Mallory could experience over the course of a typical workweek, we estimated how many times per week they might execute the tasks we investigated. For the purposes of this extrapolation, we define a month as four weeks. We assumed the following frequencies based on our developer team's real-life experience:

- **Summarizing an email chain** *5x daily*
- **Taking Teams notes** *2x daily*
- **Summarizing a Jira ticket** *5x daily*
- **Building a predefined application** *0.5x monthly*
- **Drafting and reviewing a document** *3x weekly*

Figure 7 shows the results of our estimations. Based on the frequencies we note above and the time that each approach required, employing AI features on the systems we tested could mean that Mallory would spend less than one-quarter of the time on these routine activities. Instead of an average of 26 hours and 19 minutes, much of a typical workweek, she could spend an average of 6 hours and 32 minutes, or less than a single workday. She could devote the time she saves to taking on more work and solving higher-level business problems, all while experiencing a calmer pace at work.

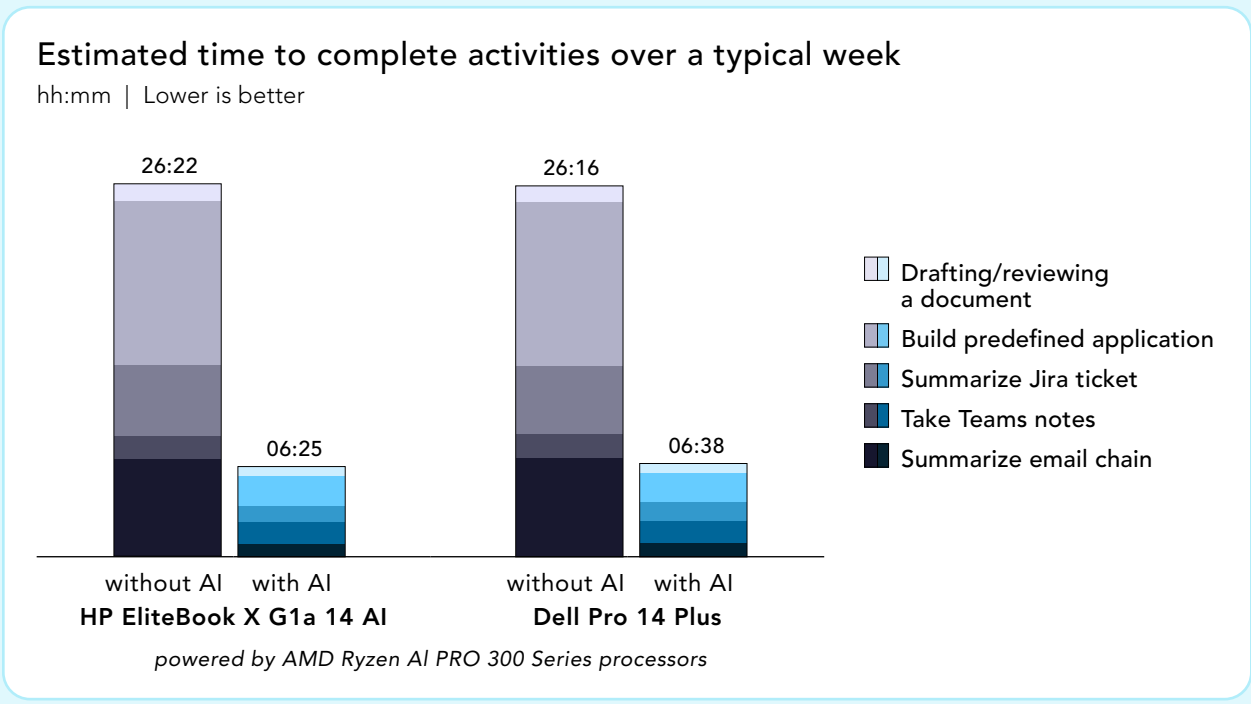


Figure 7: Estimated time to complete activities over a typical week with and without AI assistance on two different AMD Ryzen processor-powered PCs. Source: PT.

Conclusion

We investigated the time savings that software developers and other tech users could experience by taking advantage of AI technologies on AI-powered PCs with AMD Ryzen processors. In our testing with one HP and one Dell system, on-PC AI technologies reduced task completion times by as much as 81 percent, which allows professionals to reclaim valuable time. When we estimated the frequency with which the test tasks would occur, we extrapolated that using AI technologies on these PCs could reduce the weekly dev work time from an average of 26 hours and 19 minutes to 6 hours and 32 minutes on average—a savings of over 19 work hours, or more than two typical workdays.

With the time saved, workers can devote more time to higher-value activities, improve the quality and speed of their work, and mitigate the stress and reduce burnout risks associated with repetitive administrative work. AMD Ryzen AI PRO 300 Series processors are tailored for enterprise AI workloads. By encouraging their employees who use PCs featuring these processors to integrate AI into daily work, businesses could improve efficiency and promote healthier, more sustainable workplaces.

1. isolved, "isolved Research: Burnout Eroding Engagement as 8 in 10 Employees Struggle in an Uncertain, Changing Workplace," accessed September 23, 2025, https://www.isolvedhcm.com/media-center/press-releases/isolved-research-burnout-eroding-engagement-8-in-10-employees-struggle-in-uncertain-changing-workplace.
2. AMD, "AMD Launches New Ryzen AI PRO 300 Series Processors to Power Next Generation of Commercial PCs," accessed September 30, 2025, https://ir.amd.com/news-events/press-releases/detail/1221/amd-launches-new-ryzen-ai-pro-300-series-processors-to-power-next-generation-of-commercial-pcs.
3. AMD, "AMD Launches New Ryzen AI PRO 300 Series Processors to Power Next Generation of Commercial PCs."

Read the science behind this report ▶

Principled Technologies®

Facts matter.®

This project was commissioned by AMD.