Reshape productivity and engagement with Copilot+ PCs

We explored the tangible productivity benefits of investing in Copilot+ PCs versus traditional PCs

On Copilot+ PCs, you can…

Find images and copy them to a new folder in up to 70% less time*

Search the internet for an item you saw in an online video in up to 70% less time†

Get to your PowerPoint in up to 71% less time††

Save up to 61% of the time you spend finding and editing content with Recall, Click to Do, and improved Windows search¶

Americans lose things an average of five items per month—and it can take us 16 minutes or more to find those phones, keys, chargers, and other items.[1] While nobody has stats on how often we search for links to that trinket we saw or scroll through albums to find old photos, we can all agree it's a frustrating part of daily life. Microsoft Copilot+ PCs are poised to change all that. With new Recall, Click to Do, and improved Windows search experiences, Copilot+ PCs can intelligently execute routine tasks and help you find anything you've seen on your PC.

What does this mean for you? With Copilot+ PCs, where processing can happen locally on the neural processing unit (NPU), you could save significant amounts of time every day. Not only that, you could also jump through fewer mental hoops remembering and searching for what you need. In a world where burnout lurks around every corner, Copilot+ PCs can help ease some of the burden.

In our hands-on tests, we found that Recall, Click to Do, and improved Windows search on Copilot+ PCs took less time to complete routine tasks than traditional, manual workflows on Windows 11 PC, Windows 10 PC, and MacBook Pro PCs. And, when we used all three experiences together in our workflow tests, we found that we could accomplish even more in less time. With innovative and instinctive new experiences, Copilot+ PCs can transform the way you get things done.

*Using pre-released versions of improved Windows search on Copilot+ PCs vs. traditional search on a Windows 10 PC
† Using pre-released Click to Do on Copilot+ PCs vs. an Apple MacBook Pro (14"M4) with manual workflows
†† Using Recall (preview) on Copilot+ PCs vs. a Windows 10 PC with manual workflows
¶ When searching for a PowerPoint, removing an object from an image in a PDF, and saving the image to the PowerPoint on Copilot+ PCs vs. a Windows 10 PC with manual workflows

Behind the scenes: Testing new tools

In a 2021 poll of 1,043 knowledge workers, 48 percent of respondents would forgo their morning coffee or tea if it meant they could "instantly find or have access to the documents and information they need at any given moment at work."[2] While we did not test every new experience in the upcoming Copilot+ PC features roll-out, we found that using Recall, Click to Do, and improved Windows search made it much easier to find what we were looking for. Coffee, anyone?

We tested the following devices:*

- Three Copilot+ PCs running Windows 11
  - Microsoft Surface Pro 11th Edition
  - ASUS ProArt P16
  - Microsoft Surface Laptop 7th Edition
- Two non-Copilot+ PCs
  - Lenovo® ThinkPad X1 Yoga (3rd Gen) running Windows 10
  - HP Spectre x360 2-in-1 Laptop 14 running Windows 11
- An Apple® MacBook® Pro (14" M4) running macOS® Sequoia

We performed hand-timed tests comparing time to complete a number of tasks on Copilot+ PCs and on traditional devices without Copilot+ PC features. See page 4 for time savings on individual tasks. It should be noted that we performed all of our tests using English text prompts and language. Then, we put tasks together into workflow examples of how you could save time in the real world. For example, how much time could you save searching for a PowerPoint file, editing an image, and then adding that image to the presentation? See page 11 for workflow results.

For complete results, methodologies, and hardware/software disclosures, see the science behind the report.

What is semantic search?

For anyone who remembers the earlier days when searching on your PC, you know how important the correct search terms were. Using traditional or **lexical search**, you needed to remember the exact file name or words in the content – and one incorrectly phrased word could significantly alter results.

Fast forward to today, internet search engines instead rely on **semantic search**, which is much better at understanding the meanings of words instead of exactly matching them with content. Thanks to the power of AI, you can get easily back the content you were looking for by using your own words. That's because semantic search does more than just match keywords— it can improve search accuracy, see through ambiguity and subtleties, and quickly give you back the content you were looking for.

With Copilot+ PCs, you can **get all this time-saving convenience and accuracy of semantic search directly on your device**.

* We ran each test three times and report the average of the times across the three runs. We tested the Copilot+ PCs with pre-release software. We preloaded all devices with the same corpus of Microsoft-provided data, which added up to a workweek of user history. Note that all results may vary by device, configuration, and usage—all the results we report reflect the specific configurations we tested.

Recall: Pick up right where you left off

We've all had the experience where we're working away, and suddenly we need to double-check information from a meeting or lecture—except it's been at least a month, and we've sat through what feels like thousands of calls or classes since then. A lot of us rack our brains before scrolling back through slide decks, notes, and messages. Sometimes a coworker or classmate can help, but it's probably not fresh in their mind, either.

Wouldn't it be nice if there were a search engine for your memory? With Recall on Copilot+ PCs, you get the next best thing: a smart search for everything you've ever seen on your PC. Once users opt-in to Recall, the feature captures user activity snapshots every 3 to 5 seconds and stores those snapshots based on available storage and user configuration, creating a searchable archive (see Figure 1). So, when you're looking for that morsel of information after days, weeks, or months, activating Recall gives you access to a visual timeline, or you can use a semantic search—your own words—to find exactly what you remember.

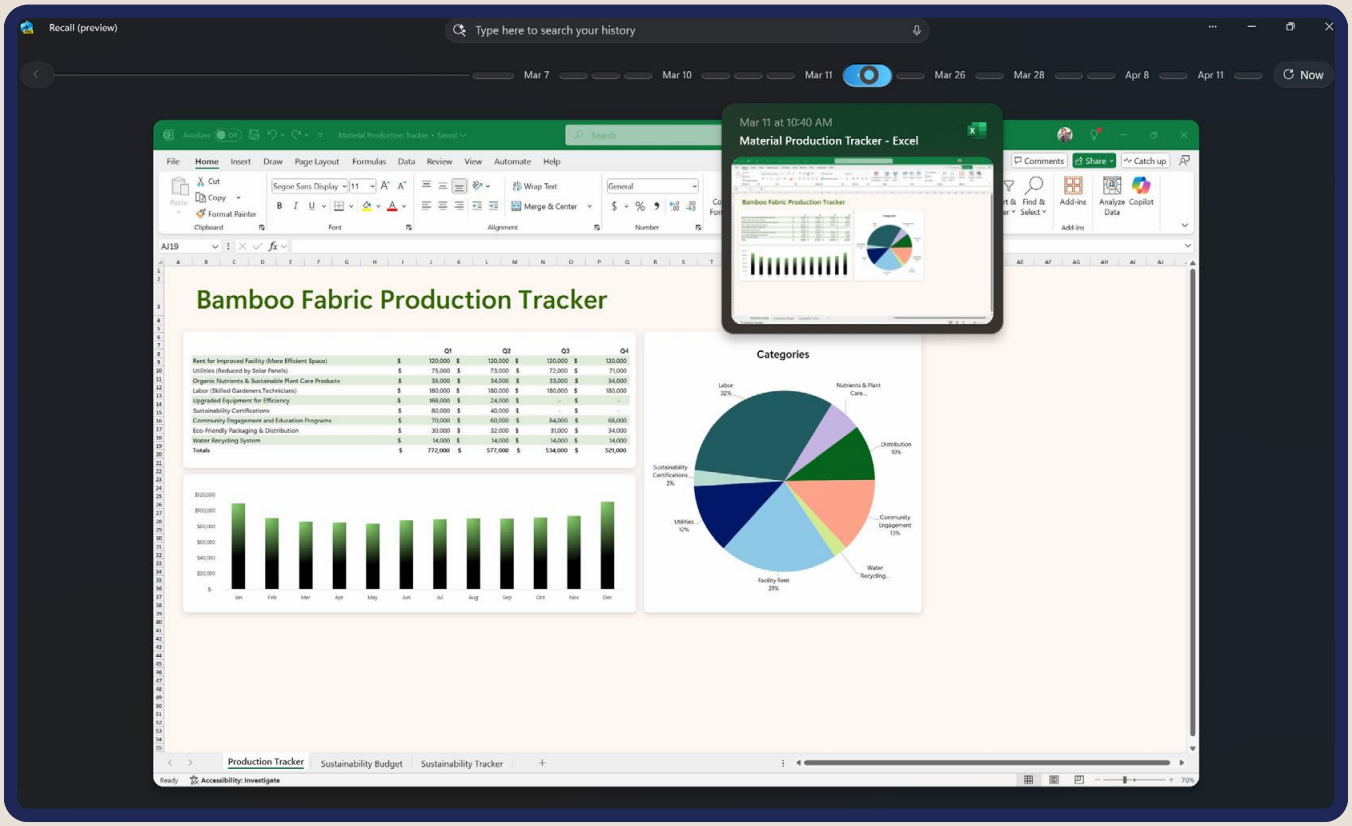

Figure 1: A screenshot of the Recall visual timeline we used in our testing. When a user hovers over the timeline at the top, they can see more granular snapshots. Microsoft provided the user content and data. Source: Principled Technologies.

Based on your preferences, Recall doesn't have to be limited to just files on your local system. Whether you need a PowerPoint file for work, a YouTube video to rewatch, or a social media post to show a friend, Recall can find anything you've seen, so long as you've given it the okay. Once you find the snapshot you're looking for, if you'd like to reengage with it—copying a slide, replaying a video, commenting on a post—Recall will take you right back to where you were so you can pick it back up. Whether you use it as a search engine for your memory or a time machine to leap back to where you were, Recall is like photographic memory for your PC—but better.

Test results: Find it faster and reengage

Remember that thing…with that person…? For those of us who can't even remember what we did yesterday, Recall is here to help. In our first timed test, we simulated a scenario where a user remembers a website that featured a map, but they can't remember the name of the website. The second scenario reflected a similar situation with a PowerPoint presentation, where a user remembers seeing a slide with red handwriting, but they can't remember the presentation's filename.

Because we were able to simply open Recall and search for what we needed in our own words—"map" and "slide with handwriting"—the Copilot+ PCs saved up to 74.9 percent of the time to find what we needed (see Figures 2 and 3) and supports reopening your snapshots to pick up where you left off. Note: Recall requires Windows Hello Enhanced Sign-in Security. Recall is coming to the European Economic Area later in 2025. This feature is optimized for select languages: English, Chinese (Simplified), French, German, Japanese, and Spanish. Content-based and storage limitations apply. For more information, visit aka.ms/copilotpluspcs.

What about privacy?

Microsoft assures users that you are in control of snapshots and Recall is:[3]

- **Optional:** To enjoy all the functions of Recall, you must opt into it. Then, you can disable or reenable whenever you wish.
- **Protected:** To access snapshots, you have to use your unique Windows Hello face, fingerprint, or PIN.
- **Customizable:** You can pause and resume when Recall takes snapshots or even schedule those periods ahead of time.
- **Filterable:** If you don't want Recall to take snapshots of certain apps or websites, you can select those in Settings.
- **Private:** If your employer or school manages your device, IT admins cannot access or enable snapshots without your knowledge (though they could remove or disable Recall altogether, among other options).

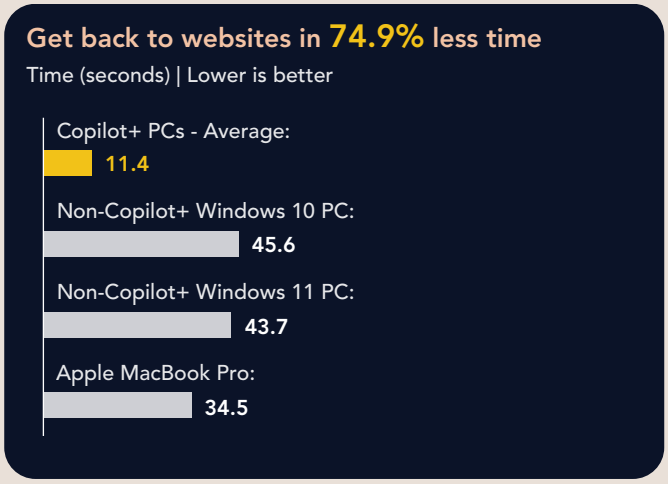

Figure 2: Average time, in seconds, to find a website containing a map and reopen it. Less time is better. Source: Principled Technologies.

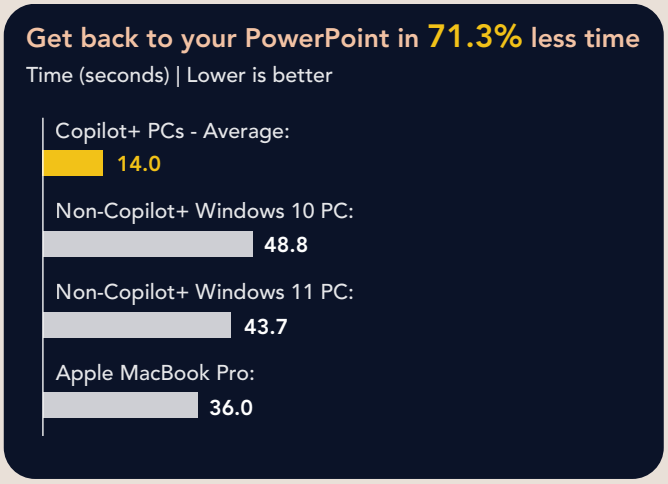

Figure 3: Average time, in seconds, to find a PowerPoint with red handwriting and reopen it. Less time is better. Source: Principled Technologies.

With positive implications for your work, social, and home life, what could you find and return to with Recall? Or, just as importantly, what could you do with the time and energy you save on searching? Whether it's finding that work email, that plan for Friday night, or reengaging with content, Recall on Copilot+ PCs makes it easier.

Click to Do: Expend less effort

According to computer scientist and best-selling author Cal Newport, there is an "epidemic of chronic overload that currently affects so many knowledge workers. The volume of obligations on our proverbial plates—vague projects, off-hand promises, quick calls, and small tasks—continues to increase at alarming rates."[4] In today's world, we've all felt the burnout from these countless obligations. Whatever our days look like, it can be easy to forget what's on our plate, much less find the energy to do it all.

With Click to Do, you can "do more with what's on your screen,"[5] offloading some of those small tasks onto your Copilot+ PC. You can use Click to Do either in conjunction with Recall—taking actions with snapshots—or on its own, taking actions with what you see live on your screen. In just a few clicks, you could search the web or even summarize and rewrite text. With images, Click to Do can perform visual searches, connect you with apps that edit photos, and more—starting with a single context menu.

Click to Do with text

Figure 4 shows a context menu that appears when you right-click text that Click to Do detects. Options include **copying** that text to the clipboard, **opening** that text in a text editor, **searching the web** for the pertinent text, or **asking Copilot** a question.[6] Click to Do also offers intelligent text actions that include **summarizing** text, **creating a bulleted list** of key details from the text, **rewriting** text in a casual or formal tone, and **refining the text with grammar corrections**. (Note: Click to Do image actions are now available across devices. Click to Do text actions, supporting select character sets, are available now on Snapdragon® processor-powered devices and available starting mid-2025 on AMD Ryzen™ and Intel® processor-powered devices. Functionality varies by device and market. Click to Do will be coming to the European Economic Area later in 2025.[7])

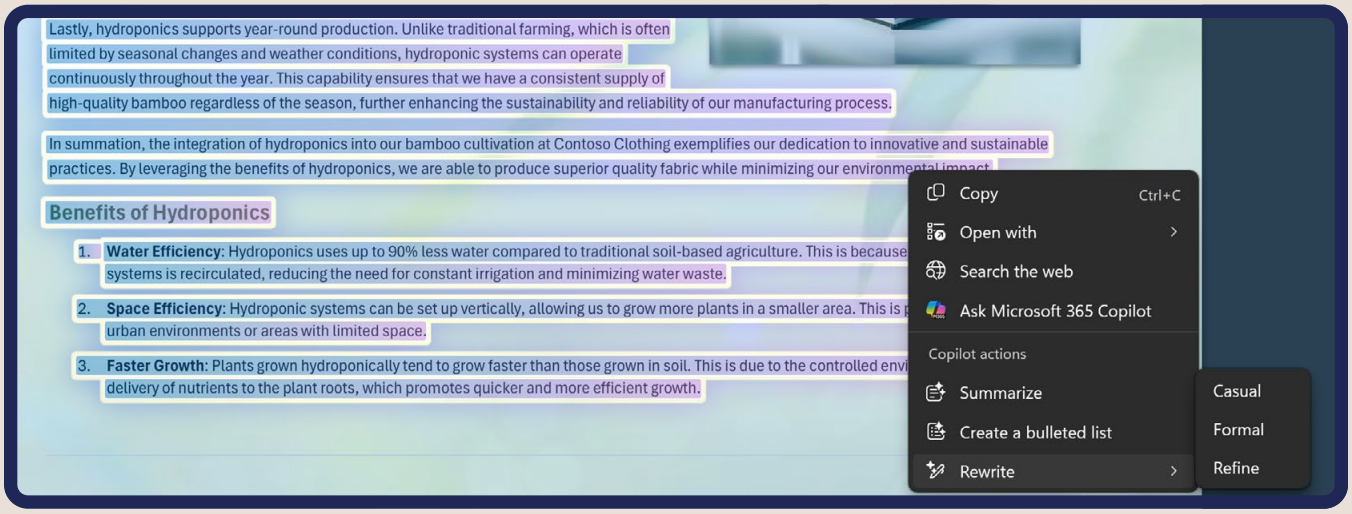

Figure 4: Screenshot of Click to Do intelligent text management options captured during testing. Microsoft provided the user content and data. Source: Principled Technologies.

Click to Do with images

When Click to Do highlights an image, the current menu of actions you can take allows you to **copy** that image to the clipboard, **save** or **share** that image to a specified location, **open** that image with an app, **ask Copilot** a question, perform a **visual search** with Bing, **blur the background** or **erase objects** with Photos, and **remove the background** with Paint (see Figure 5).[8]

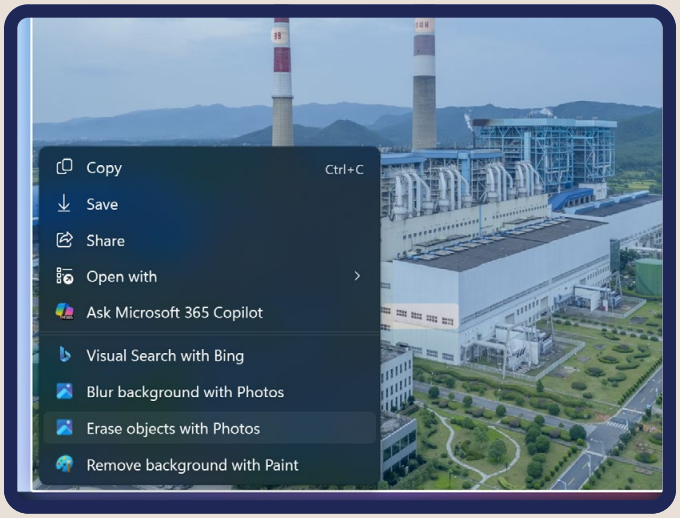

Figure 5: Screenshot of Click to Do image management options captured during testing. Microsoft provided the user content and data. Source: Principled Technologies.

What about privacy?

You can use Click to Do on both your live screen and your snapshots in Recall. According to Microsoft, "In keeping with Microsoft's commitment to data privacy and security, all saved images and processed data are kept on the device and processed locally. However, Click to Do allows you to choose if you want to get more information about your selected content online."[9] So, if you select Search the web, Open website, or Visual search with Bing, Click to Do will send necessary information over the internet to complete the task.[10]

If your Recall settings filter out information from certain apps or websites, Click to Do cannot access that information as it analyzes snapshots. Similarly, if you use Click to Do on your live screen, it will not analyze private browsing windows, filtered apps, filtered websites, or minimized windows.[11]

If you use Click to Do to start work in a local app, such as Paint or Word, it will create a temporary file to transfer the information. Your system won't save this file permanently, and Click to Do won't keep content from your screen after completing the task, but Microsoft does gather some diagnostic data to keep the feature up-to-date and functional.[12]

Test results: Do more in less time

For anyone who's ever glimpsed a product they wanted in an online video—and let's face it, who hasn't?—Click to Do can help you easily find exactly what you're looking for. In testing, we paused a YouTube video, and the Copilot+ PCs enabled us search for an item in the video in just two clicks with Click to Do. On the other devices, we had to screenshot the paused video and then upload it to Bing or Copilot to perform a visual search. As Figure 6 shows, Click to Do saved significant time.

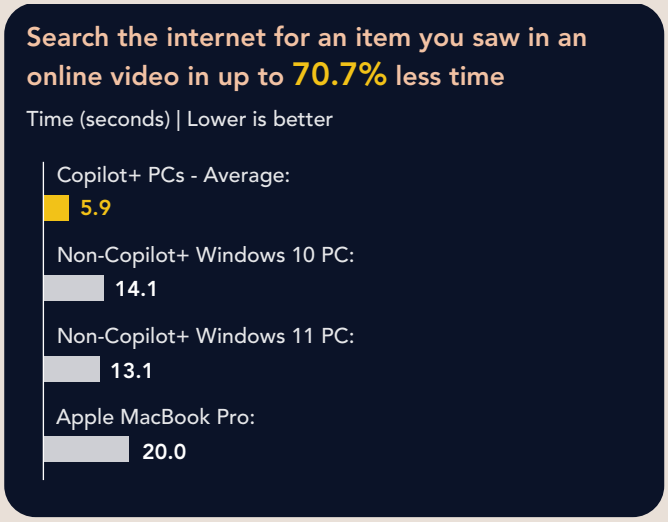

Figure 6: Average time, in seconds, to search for an item with Bing from a YouTube video still. Less time is better. Source: Principled Technologies.

If you edit photos for work or for fun, Click to Do can cut down on time and effort there, too. In the next test, we opened a PDF file with an image in it and used the Copilot+ PCs' Click to Do capabilities to right-click, remove an object from the image, and save the new image to a folder. Making the same edits with non-Copilot+ PCs and the MacBook Pro was much less straightforward, involving screenshots and manually opening apps. Figure 7 shows the time savings the Copilot+ PCs delivered with Click to Do.

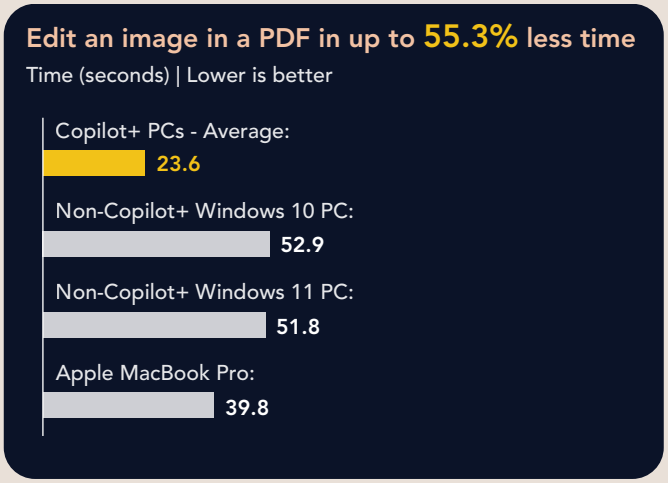

Figure 7: Average time, in seconds, remove an object from an image in a PDF file. Less time is better. Source: Principled Technologies.

Instead of our getting bogged down searching for specific items or editing images manually, Click to Do did the heavy lifting for us. And these examples are just the tip of the iceberg of creative, time-saving ways you could use Click to Do on Copilot+ PCs.

Improved Windows search: Rethink how you interact with search bars

You might remember the "show, don't tell" rule from a creative writing class, a technique that makes readers feel like they're immersed in a story rather than being bombarded with information. With Microsoft Copilot+ PCs, improved Windows search enabled us to describe the files and settings we were looking for in our own words. This semantic search allows you to show instead of tell, keeping you engaged in your workflows without breaking focus to remember exact phrases.

So, what might that look like? When you use improved Windows search—whether in File Explorer or Windows search on your taskbar—entering text such as "Hawaii vacation" would yield any relevant files on your Copilot+ PC, even if none of them literally say "Hawaii vacation" in them. You might see images of your recent trip to the islands, your vacation budget spreadsheet, and informational PDFs you downloaded. Using improved Windows search is the difference between entering the words that make sense to you and intuiting or remembering the exact keyword combo. (Note: Improved Windows search works with specific text, image, and document formats only; it's optimized for select languages (English, Chinese (Simplified), French, German, Japanese, and Spanish). Learn more at aka.ms/copilotpluspcs.)

What about privacy?

If you're concerned that the powerful AI behind semantic searches (also called "semantic indexing") may send data to the cloud for processing, you can rest assured that AI models run locally on Copilot+ PCs. According to Microsoft, "All data gathered from semantic indexing is stored locally on your PC. None of it is ever sent to Microsoft or used to train AI models. Semantic indexing is enabled by default on Copilot+ PCs"—and you have complete control on which file types and/or locations are made searchable.[13]

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Test results: Search made simple

With the countless images we take, save, and edit every day, of course it's easy to lose track of them. With improved Windows search on Copilot+ PCs, you don't have to scroll back through albums or worry about remembering filenames. When we tested the Copilot+ PCs, we simply searched for "paint brush" and "piano," and then copied all the images improved Windows search found into a new folder. With the other devices, we had to manually hunt through the images folder. As Figure 8 shows, improved Windows search could help you quickly find that reaction meme you saved or that screenshot of your coworker's post—before the group chat moves on.

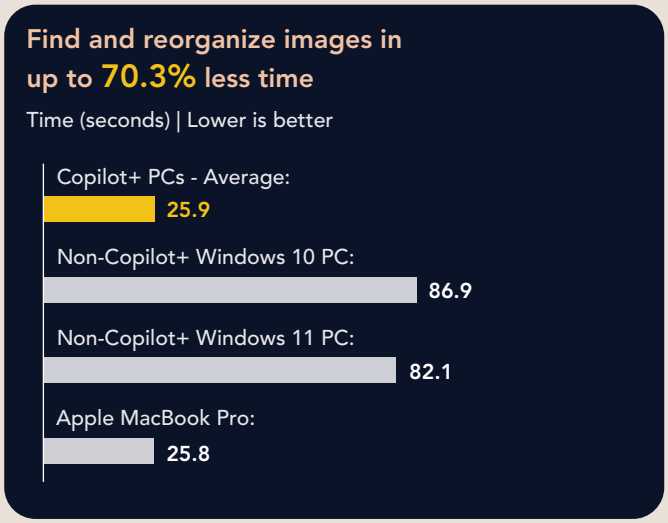


Figure 8: Average time, in seconds, to find images and save them to a new folder. Less time is better. Source: Principled Technologies.

Improved Windows search also works in your settings, helping you create a customized, accessible experience on your PC. In our tests, we easily found settings for users with color-blindness and accessed information about the device on Copilot+ PCs. The process was less straightforward—and took longer—on the other devices, with the exception of the MacBook Pro on the About settings test (see Figures 9 and 10).

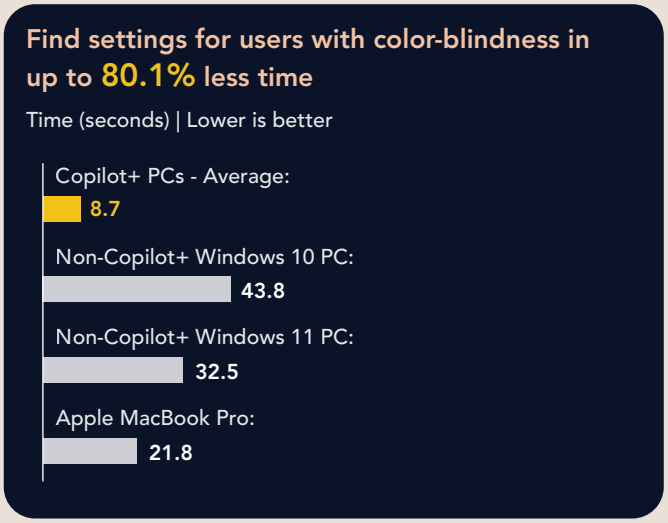


Figure 9: Average time, in seconds, to find settings for users with color-blindness. Less time is better. Source: Principled Technologies.

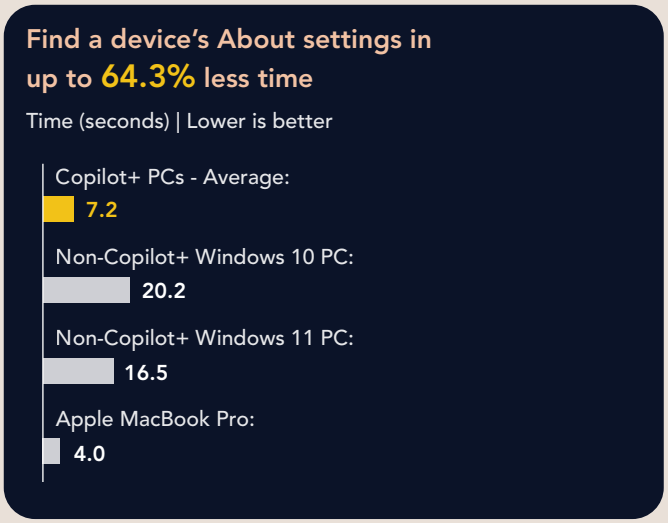


Figure 10: Average time, in seconds, to find a device's About settings. Less time is better. Source: Principled Technologies.

Putting your files and settings right at your fingertips, improved Windows search delivers exactly what you need without the hassle.

Putting it all together: Speed up your workflows

Whatever work you do, saving time and mental effort can free you up for more important things, whether that's tackling the next big project or—let's be honest—closing your laptop and getting back to real life. To see how these three Copilot+ PC experiences can work together to get you there quicker, we timed three sample workflows: one centered on productivity tasks, one involving an Excel spreadsheet, and the last focused on editing images.

In the productivity workflow, we

- Searched for a PowerPoint file with red handwriting without knowing the filename
- Searched for an image with the word "Contoso" in it without knowing the filename
- Removed an object from the image in a PDF
- Saved the image
- Searched for the image we edited
- Added the image to the PowerPoint

On the Copilot+ PCs, we used Recall, Click to Do, and improved Windows search to complete this example workflow in up to 61.8 percent less time than the other devices we tested. With intuitive actions and just a few clicks, the Copilot+ PCs saved significant time compared to completing the workflow manually (see Figure 11).

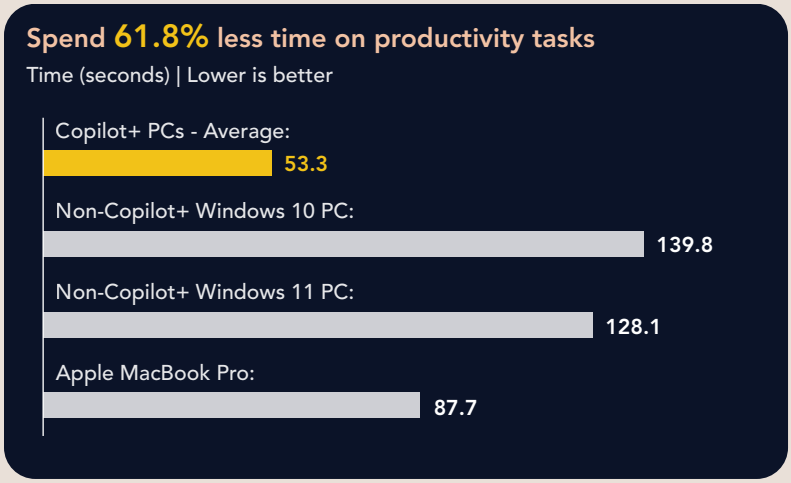
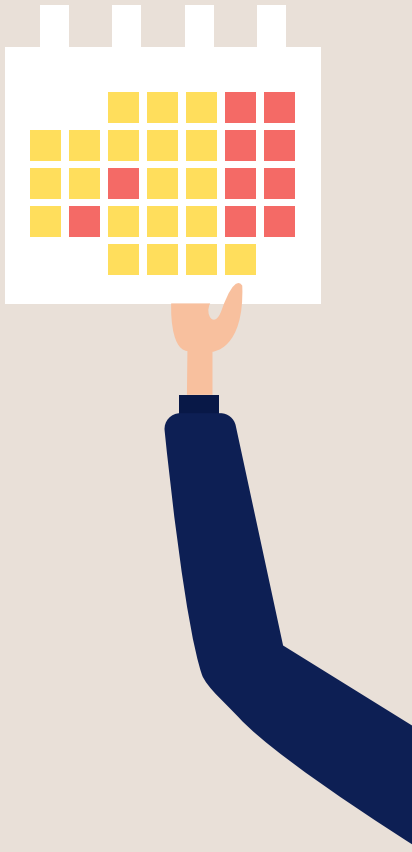


Figure 11: Average time, in seconds, to search for a PowerPoint file, search for an image, remove an object from an image, search for the image, and add the image to the PowerPoint. Less time is better. Source: Principled Technologies.



In the spreadsheet workflow, we

- Searched for a website from our user history that featured a map
- Found an image on the website
- Searched for an item from the image
- Opened the image
- Blurred the background of the image
- Searched for a specific Excel file
- Found and moved the image to a new folder
- Added the image to the Excel file

In this example scenario, Recall, Click to Do, and improved Windows search again worked together to quickly get us to our goal. The MacBook Pro could not complete the task because it couldn't blur the image background with built-in applications. With native tools and Copilot+ PC experiences, the Copilot+ PCs saved up to 60.4 percent of the time to finish the workflow (see Figure 12).

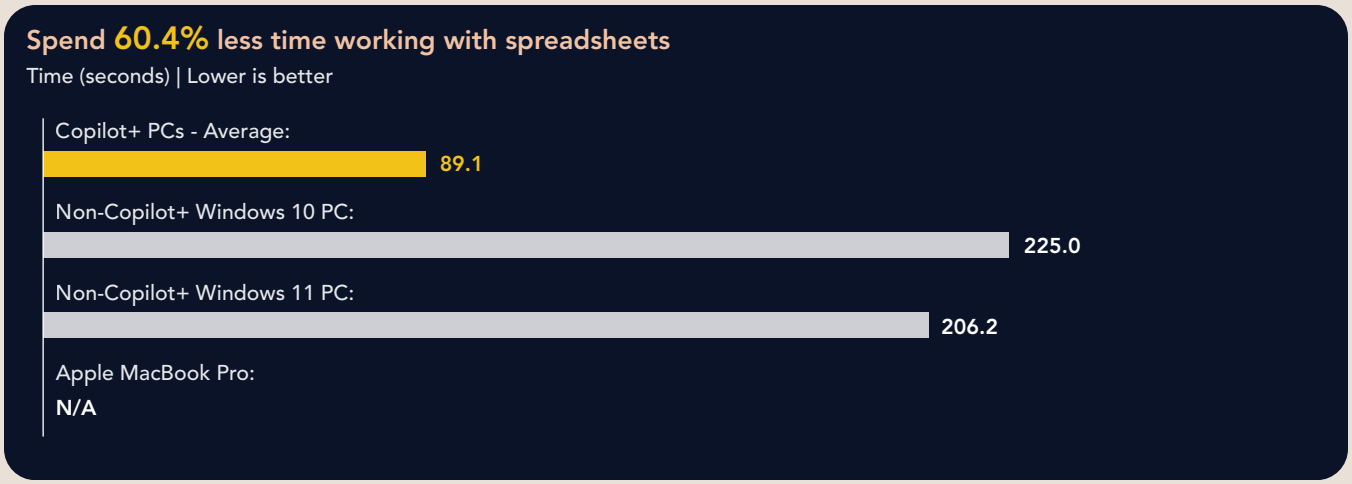


Figure 12: Average time, in seconds, to search for a website, find an image on the site, search for an item in the image, open the image, blur its background, search for an Excel file, move the image to a new folder, and add the image to the Excel file. Less time is better. Source: Principled Technologies.

Finally, in the image editing workflow, we

- Searched for images related to a barbeque
- Edited images to remove the backgrounds
- Organized them into a new folder

With improved Windows search on the Copilot+ PCs, we completed this task in up to 30.3 percent less time than the other devices we tested (see Figure 13).

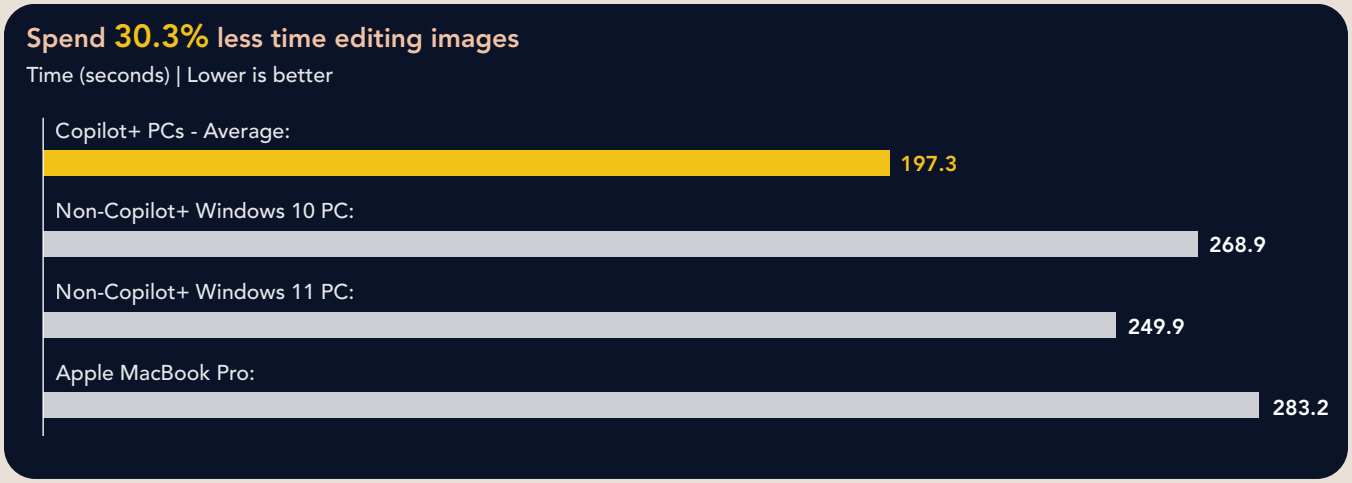


Figure 13: Average time, in seconds, to search for images, remove backgrounds, and organize them into a new folder. Less time is better. Source: Principled Technologies.

The formula for workflows with Copilot+ PCs is simple: Recall + Click to Do + improved Windows search = real, tangible time savings for the things you do every day.

Conclusion

In a world where seemingly everyone aims for innovation, Copilot+ PCs could actually change the way you interact with your system—and save the time you spend on work, play, and everything in between. When we tested Recall, Click to Do, and improved Windows search, we could more quickly finish everyday tasks and workflows, such as editing photos and locating our files, compared to devices without Copilot+ PC features. Copilot+ PCs even enabled us to perform searches in new ways, such as finding an item from a YouTube video still in just a few seconds or using our own words to find files and settings. For a new experience that can save time and energy across your workflows, choose a Copilot+ PC.

1. Rachel Nipp, "The Items Each State Loses the Most, " accessed April 25, 2025, https://www.shaneco.com/theloupe/articles-and-news/stuff-each-state-loses-the-most/.
2. Glean, "Hybrid workplace habits & hangups," accessed April 25, 2025, https://get.glean.com/rs/626-JWX-444/images/2022_Hybrid-workplace-habits-hangups_Glean-report.pdf.
3. Microsoft, "Retrace your steps with Recall," accessed April 25, 2025, https://support.microsoft.com/en-us/windows/retrace-your-steps-with-recall-aa03f8a0-a78b-4b3e-b0a1-2eb8ac48701c.
4. Cal Newport, "The Neuroscience of Busyness," accessed April 25, 2025, https://calnewport.com/the-neuroscience-of-busyness/.
5. Microsoft, "Click to Do: do more with what's on your screen," accessed April 25, 2025, https://support.microsoft.com/en-us/windows/click-to-do-do-more-with-what-s-on-your-screen-6848b7d5-7fb0-4c43-b08a-443d6d3f5955.
6. Microsoft, "Click to Do: do more with what's on your screen."
7. Microsoft, "The fastest, most intelligent Windows PCs ever," accessed May 8, 2025, aka.ms/copilotpluspcs.
8. Microsoft, "Click to Do: do more with what's on your screen."
9. Microsoft, "Click to Do: do more with what's on your screen."
10. Microsoft, "Click to Do: do more with what's on your screen."
11. Microsoft, "Click to Do in Recall: do more with what's on your screen," accessed April 25, 2025, https://support.microsoft.com/en-us/windows/click-to-do-in-recall-do-more-with-what-s-on-your-screen-967304a8-32d1-4812-a904-fad59b5e6abf.
12. Microsoft, "Click to Do in Recall: do more with what's on your screen."
13. Microsoft, "Search indexing in Windows," accessed April 25, 2025, https://support.microsoft.com/en-us/windows/search-indexing-in-windows-da061c83-af6b-095c-0f7a-4dfecda4d15a.

Read the science behind this report at https://facts.pt/tUPzn11 ▶

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