



The science behind the report:

Reshape productivity and engagement with Copilot+ PCs

This document describes what we tested, how we tested, and what we found. To learn how these facts translate into real-world benefits, read the report [Reshape productivity and engagement with Copilot+ PCs](#).

We concluded our hands-on testing on March 14, 2025. During testing, we determined the appropriate hardware and software configurations and applied updates as they became available. The results in this report reflect configurations that we finalized on March 7, 2025 or earlier. Unavoidably, these configurations may not represent the latest versions available when this report appears.

Our results

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.

To learn more about how we have calculated the wins in this report, go to <http://facts.pt/calculating-and-highlighting-wins>. Unless we state otherwise, we have followed the rules and principles we outline in that document.

Table 1: Results of our testing. Average time in seconds.

	Copilot+ PCs	Win 10 non-Copilot+ PC	Win 11 non-Copilot+ PC	Apple MacBook Pro (14" M4)	Copilot+ PCs vs. Win 10 PC win percentage	Copilot+ PCs vs. Win 11 PC win percentage	Copilot+ PCs vs. MacBook Pro win percentage
Hand-timed tasks with and without improved Windows search							
Find and reorganize images	25.9	86.9	82.1	25.8	70.3%	68.5%	-0.2%
Find a device's About setting	7.2	20.2	16.5	4.0	64.3%	56.2%	-81.4%
Find a setting for users with color-blindness	8.7	43.88	32.57	21.83	80.1%	73.3%	60.1%

	Copilot+ PCs	Win 10 non-Copilot+ PC	Win 11 non-Copilot+ PC	Apple MacBook Pro (14" M4)	Copilot+ PCs vs. Win 10 PC win percentage	Copilot+ PCs vs. Win 11 PC win percentage	Copilot+ PCs vs. MacBook Pro win percentage
Hand-timed tasks with and without Click to Do							
Search the internet for an item you saw in an online video	5.9	14.1	13.1	20.0	58.5%	55.4%	70.7%
Edit an image in a PDF	23.6	52.9	51.8	39.8	55.3%	54.4%	40.6%
Hand-timed tasks with and without Recall							
Get back to your PowerPoint	14.0	48.8	43.7	36.0	71.3%	68.0%	61.1%
Get back to websites	11.4	45.6	43.7	34.5	74.9%	73.9%	66.9%
Hand-timed workflows on Copilot+ PCs vs. traditional PCs							
Productivity workflow	53.3	139.8	128.1	87.7	61.8%	58.4%	39.2%
Image editing workflow	197.3	268.9	249.9	283.2	26.6%	21.0%	30.3%
Spreadsheet workflow	89.1	225.0	206.2	N/A	60.4%	56.8%	N/A

Extrapolating our results

In the following tables, we calculated two things:

- We estimated how much time each task and workflow would take per week using the new Recall, Click to Do, and improved Windows search experiences on Copilot+ PCs versus manual workflows on traditional PCs.
- We extrapolated how much time users could save per week using the new Recall, Click to Do, and improved Windows search experiences on Copilot+ PCs versus manual workflows on traditional PCs.

Performing tasks with and without improved Windows search

Table 2: Estimated total time per week to find and reorganize images with and without improved Windows search. Average time in hours, minutes, and seconds. Less time is better. For our step-by-step process, see [How we tested](#).

	Copilot+ PCs	Win 11 non-Copilot+ PC	Win 10 non-Copilot+ PC	Apple MacBook Pro
Total time per week - performing task 3x per day	0:06:28	0:21:44	0:20:32	0:06:27
Total time per week - performing task 5x per day	0:10:46	0:36:13	0:34:13	0:10:45

Table 3: Extrapolated max/min time savings to find and reorganize images with and without improved Windows search. Average time savings in hours, minutes, and seconds. Higher time savings are better. For our step-by-step process, see [How we tested](#).

	Performing task 3x per day	Performing task 5x per day
Maximum time savings per week with Copilot+ PCs	0:15:16	0:25:27
Minimum time savings per week with Copilot+ PCs	-0:00:01	-0:00:01

Table 4: Estimated total time per week to find settings about this computer with and without improved Windows search. Average time in hours, minutes, and seconds. Less time is better. For our step-by-step process, see [How we tested](#).

	Copilot+ PCs	Win 11 non-Copilot+ PC	Win 10 non-Copilot+ PC	Apple MacBook Pro
Total time per week - performing task 3x per day	0:01:48	0:05:04	0:04:07	0:01:00
Total time per week - performing task 5x per day	0:03:00	0:08:26	0:06:52	0:01:40

Table 5: Extrapolated max/min time savings to find settings about this computer with and without improved Windows search. Average time savings in hours, minutes, and seconds. Higher time savings are better. For our step-by-step process, see [How we tested](#).

	Performing task 3x per day	Performing task 5x per day
Maximum time savings per week with Copilot+ PCs	0:03:16	0:05:26
Minimum time savings per week with Copilot+ PCs	-0:00:48	-0:01:20

Table 6: Estimated total time per week to find settings for users with color blindness with and without improved Windows search. Average time in hours, minutes, and seconds. Less time is better. For our step-by-step process, see [How we tested](#).

	Copilot+ PCs	Win 11 non-Copilot+ PC	Win 10 non-Copilot+ PC	Apple MacBook Pro
Total time per week - performing task 3x per day	0:02:11	0:10:58	0:08:09	0:05:28
Total time per week - performing task 5x per day	0:03:38	0:18:17	0:13:34	0:09:06

Table 7: Extrapolated max/min time savings to find settings for users with color blindness with and without improved Windows search. Average time savings in hours, minutes, and seconds. Higher time savings are better. For our step-by-step process, see [How we tested](#).

	Performing task 3x per day	Performing task 5x per day
Maximum time savings per week with Copilot+ PCs	0:08:47	0:14:39
Minimum time savings per week with Copilot+ PCs	0:03:17	0:05:28

Performing tasks with and without Click to Do

Table 8: Estimated total time per week to search the internet for an item you saw in an online video with and without Click to Do. Average time in hours, minutes, and seconds. Less time is better. For our step-by-step process, see [How we tested](#).

	Copilot+ PCs	Win 11 non-Copilot+ PC	Win 10 non-Copilot+ PC	Apple MacBook Pro
Total time per week - performing task 3x per day	0:01:28	0:03:32	0:03:17	0:05:00
Total time per week - performing task 5x per day	0:02:26	0:05:53	0:05:28	0:08:20

Table 9: Extrapolated max/min time savings per week to search the internet for an item you saw in an online video with and without Click to Do. Average time savings in hours, minutes, and seconds. Higher time savings are better. For our step-by-step process, see [How we tested](#).

	Performing task 3x per day	Performing task 5x per day
Maximum time savings per week with Copilot+ PCs	0:03:32	0:05:54
Minimum time savings per week with Copilot+ PCs	0:01:49	0:03:02

Table 10: Estimated total time per week to edit an image in a PDF with and without Click to Do. Average time in hours, minutes, and seconds. Less time is better. For our step-by-step process, see [How we tested](#).

	Copilot+ PCs	Win 11 non-Copilot+ PC	Win 10 non-Copilot+ PC	Apple MacBook Pro
Total time per week - performing task 3x per day	0:05:55	0:13:13	0:12:57	0:09:57
Total time per week - performing task 5x per day	0:09:51	0:22:02	0:21:35	0:16:35

Table 11: Extrapolated min/max time savings per week to edit an image in a PDF with and without Click to Do. Average time savings in hours, minutes, and seconds. Higher time savings are better. For our step-by-step process, see [How we tested](#).

	Performing task 3x per day	Performing task 5x per day
Maximum time savings per week with Copilot+ PCs	0:07:18	0:12:11
Minimum time savings per week with Copilot+ PCs	0:04:02	0:06:44

Performing tasks with and without Recall

Table 12: Estimated total time per week to get back to your PowerPoint with and without Recall. Average time in hours, minutes, and seconds. Less time is better. For our step-by-step process, see [How we tested](#).

	Copilot+ PCs	Win 11 non-Copilot+ PC	Win 10 non-Copilot+ PC	Apple MacBook Pro
Total time per week - performing task 3x per day	0:03:30	0:12:12	0:10:56	0:09:01
Total time per week - performing task 5x per day	0:05:50	0:20:20	0:18:13	0:15:01

Table 13: Extrapolated max/min time savings per week to get back to your PowerPoint with and without Recall. Average time savings in hours, minutes, and seconds. Higher time savings are better. For our step-by-step process, see [How we tested](#).

	Performing task 3x per day	Performing task 5x per day
Maximum time savings per week with Copilot+ PCs	0:08:42	0:14:30
Minimum time savings per week with Copilot+ PCs	0:05:31	0:09:11

Table 14: Estimated total time per week to get back to websites with and without Recall. Average time in hours, minutes, and seconds. Less time is better. For our step-by-step process, see [How we tested](#).

	Copilot+ PCs	Win 11 non-Copilot+ PC	Win 10 non-Copilot+ PC	Apple MacBook Pro
Total time per week - performing task 3x per day	0:02:51	0:11:24	0:10:56	0:08:38
Total time per week - performing task 5x per day	0:04:46	0:19:00	0:18:13	0:14:23

Table 15: Extrapolated max/min time savings per week to get back to websites with and without Recall. Average time savings in hours, minutes, and seconds. Higher time savings are better. For our step-by-step process, see [How we tested](#).

	Performing task 3x per day	Performing task 5x per day
Maximum time savings per week with Copilot+ PCs	0:08:33	0:14:14
Minimum time savings per week with Copilot+ PCs	0:05:47	0:09:37

Completing workflows with Copilot+ PCs vs. traditional PCs

Table 16: Estimated total time per week to tackle the productivity workflow. Average time in hours, minutes, and seconds. Less time is better. For our step-by-step process, see [How we tested](#).

	Copilot+ PCs	Win 11 non-Copilot+ PC	Win 10 non-Copilot+ PC	Apple MacBook Pro
Total time per week - performing task 3x per day	0:13:20	0:34:56	0:32:02	0:21:56
Total time per week - performing task 5x per day	0:22:13	0:58:14	0:53:23	0:36:33

Table 17: Extrapolated max/min time savings per week to tackle the productivity workflow. Average time savings in hours, minutes, and seconds. Higher time savings are better. For our step-by-step process, see [How we tested](#).

	Performing task 3x per day	Performing task 5x per day
Maximum time savings per week with Copilot+ PCs	0:21:36	0:36:01
Minimum time savings per week with Copilot+ PCs	0:08:36	0:14:20

Table 18: Estimated total time per week to tackle the spreadsheet workflow. Average time in hours, minutes, and seconds. Less time is better. For our step-by-step process, see How we tested.

	Copilot+ PCs	Win 11 non-Copilot+ PC	Win 10 non-Copilot+ PC	Apple MacBook Pro
Total time per week - performing task 3x per day	0:22:16	0:56:15	0:51:34	NA
Total time per week - performing task 5x per day	0:37:07	1:33:45	1:25:56	NA

Table 19: Extrapolated max/min time savings per week to tackle the spreadsheet workflow. Average time savings in hours, minutes, and seconds. Higher time savings are better. For our step-by-step process, see How we tested.

	Performing task 3x per day	Performing task 5x per day
Maximum time savings per week with Copilot+ PCs	0:33:59	0:56:38
Minimum time savings per week with Copilot+ PCs	0:29:18	0:48:49

Table 20: Estimated total time per week to tackle the image editing workflow. Average time in hours, minutes, and seconds. Less time is better. For our step-by-step process, see How we tested.

	Copilot+ PCs	Win 11 non-Copilot+ PC	Win 10 non-Copilot+ PC	Apple MacBook Pro
Total time per week - performing task 3x per day	0:49:20	1:07:13	1:02:28	1:10:48
Total time per week - performing task 5x per day	1:22:13	1:52:03	1:44:07	1:58:00

Table 21: Extrapolated max/min time savings per week to tackle the image editing workflow. Average time savings in hours, minutes, and seconds. Higher time savings are better. For our step-by-step process, see How we tested.

	Performing task 3x per day	Performing task 5x per day
Maximum time savings per week with Copilot+ PCs	0:21:28	0:35:47
Minimum time savings per week with Copilot+ PCs	0:13:08	0:21:54

System configuration information

Table 22: Detailed information on the Copilot+ PCs we tested.

System configuration information	Microsoft Surface Pro 11 th Edition	ASUS ProArt P16 (H7606W)	Microsoft Surface Laptop 7 th Edition (2108)
Processor			
Vendor	Qualcomm	AMD	Intel®
Model number	Snapdragon® X Elite	Ryzen™ AI 9 HX 370	Core™ Ultra 7 268V
Core frequency (GHz)	3.4–4.0	2.0–5.1	2.2–5.0
Number of cores	12	12	8
Number of threads	12	24	8
Memory			
Amount (GB)	16	32	32
Type	LPDDR5	LPDDR5x	LPDDR5x
Graphics			
Vendor	Qualcomm	AMD	Intel
Model number	Adreno X1-85 GPU	Radeon™ 890M	Arc 140V GPU
Storage			
Amount (GB)	1,000	2,000	1,000
Connectivity/expansion			
Wireless internet	Qualcomm FastConnect 7800 Mobile Connectivity System	Wi-Fi 7	Wi-Fi 7
Battery			
Rated capacity (Whr)	53	90	66
Display			
Size (in.)	13	16	15
Resolution	2,880 x 1,920	3,840 x 2,400	2,496 x 1,664
Operating system			
Vendor	Microsoft	Microsoft	Microsoft
Name	Windows 11 Enterprise	Windows 11 Pro	Windows 11 Pro
Version	24H2 (Build 26120.3360)	24H2 (Build 26120.3653)	24H2 (Build 26120.3653)
Dimensions			
Height (in.)	8.2	9.72	9.41
Width (in.)	11.3	13.97	12.96
Depth (in.)	0.37	0.68	0.72
Weight (lb.)	1.97	4.08	3.67

Table 23: Detailed information on the non-Copilot+ PCs we tested.

System configuration information	Apple MacBook Pro A1 model A3112	Lenovo ThinkPad X1 Yoga (3 rd Gen)	HP Spectre x360 2-in-1 Laptop 14-ef2023dx
Processor			
Vendor	Apple	Intel	Intel
Model number	M4	Core i7-8650U	Core i7-1355U
Core frequency (GHz)	2.9–4.4	1.9–4.2	3.7–5.0
Number of cores	10	4	10
Number of threads	10	8	12
Memory			
Amount (GB)	24	16	16
Type	LPDDR5X	LPDDR3	LPDDR4x
Graphics			
Vendor	Apple	Intel	Intel Iris Xe®
Model number	M4 Integrated Graphics	UHD Graphics 620	Iris Xe graphics
Storage			
Amount (GB)	1,000	500	1,000
Connectivity/expansion			
Wireless internet	Wi-Fi 6E	Intel Dual Band Wireless-AC 8265	Intel Wi-Fi 6E AX211
Battery			
Rated capacity (Whr)	72.4	54	66
Display			
Size (in.)	14.2	14	13.5
Resolution	3,024 x 1,964	2,560 x 1,440	3,000 x 2,000
Operating system			
Vendor	Apple	Microsoft	Microsoft
Name	macOS® Sequoia	Windows 10 Pro	Windows 11 Home
Version	15.3.1	22H2 (Build 19045.5487)	24H2 (Build 26100.3194)
Dimensions			
Height (in.)	8.71	9.02	8.68
Width (in.)	12.31	13.11	11.73
Depth (in.)	0.61	0.67	0.67
Weight (lb.)	3.4	3.08	3.01

How we tested

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.

Performing tasks with and without Recall

Getting back to your PowerPoint

In this test, we simulated a scenario where a user remembers a PowerPoint presentation on their system that included red handwriting on a slide, but they do not remember the name of the PowerPoint file.

Running the test on the MacBook Pro

1. Simultaneously start the timer and open Finder.
2. Navigate to the Documents folder.
3. In the Search bar, type *slide with handwriting*
4. If no documents appear, delete the search, and return to the Documents folder.
5. Open the Conscious Interior Design PowerPoint file.
6. Scroll through the slides to see if there are any slides with red handwritten text.
7. Close the PowerPoint file.
8. Open the Contoso Designs_Client Presentation PowerPoint file.
9. Scroll through the slides to see if there are any slides with red handwritten text.
10. Close the PowerPoint file.
11. Open the Contoso Electronics Sales Presentation PowerPoint file.
12. Scroll through the slides to see if there are any slides with red handwritten text.
13. Close the PowerPoint file.
14. Open the Contoso-Financial-Calendar PowerPoint file.
15. Scroll through the slides to see if there are any slides with red handwritten text.
16. Close the PowerPoint file.
17. Open the Eco House PowerPoint file.
18. Navigate to the slide with the red handwritten text and stop the timer.
19. Repeat steps 1 through 18 twice more.
20. Record the average of time across the three runs.

Running the test on the non-Copilot+ PCs

1. Simultaneously start the timer and open File Explorer.
2. Navigate to the Documents folder.
3. In the Search bar, type *slide with handwriting*
4. If no documents appear, delete the search, and return to the Documents folder.
5. Open the Conscious Interior Design PowerPoint file.
6. Scroll through the slides to see if there are any slides with red handwritten text.
7. Close the PowerPoint file.
8. Open the Contoso Designs_Client Presentation PowerPoint file.
9. Scroll through the slides to see if there are any slides with red handwritten text.
10. Close the PowerPoint file.
11. Open the Contoso Electronics Sales Presentation PowerPoint file.
12. Scroll through the slides to see if there are any slides with red handwritten text.
13. Close the PowerPoint file.
14. Open the Contoso-Financial-Calendar PowerPoint file.
15. Scroll through the slides to see if there are any slides with red handwritten text.
16. Close the PowerPoint file.
17. Open the Eco House PowerPoint file.
18. Navigate to the slide with the red handwritten text and stop the timer.
19. Repeat steps 1 through 18 twice more.
20. Record the average of time across the three runs.

Running the test on the Copilot+ PCs

1. Simultaneously start the timer and open Recall.
2. In the Recall search box, type `slide with handwriting`
3. Click the Eco House – PowerPoint file match that pops up with the handwritten text on the slide.
4. At the bottom, click the Jump back to PowerPoint button.
5. Stop the timer when the PowerPoint file opens to the slide with handwriting.
6. Repeat steps 1 through 5 twice more.
7. Record the average of time across the three runs.

Getting back to websites

In this test, we simulated a scenario where a user remembers a website that included a map, but they do not remember the name of the website.

Running the test on the MacBook Pro

1. Simultaneously start the timer and open Safari.
2. Click on History → Show All History.
3. In the Search bar, type `map`
4. If no websites appear, delete the search, and return to the History.
5. Look through the history, and click Wings to Waves.
6. Scroll through the webpage to see if the map is present.
7. If the map is not there, click back to return to History.
8. Look through the history, and click Wings to Waves – Checkout.
9. Scroll through the webpage to see if the map is present.
10. If the map is not there, click back to return to History.
11. Look through the history, and click Wings to Waves – Hotels.
12. Scroll through the webpage to see if the map is present.
13. If the map is not there, click back to return to History.
14. Look through the history, and click Wings to Waves – Activities.
15. Scroll through the webpage to see if the map is present.
16. Stop the timer when the map is visible.
17. Repeat steps 1 through 16 twice more.
18. Record the average of time across the three runs.

Running the test on the non-Copilot+ PCs

1. Simultaneously start the timer and open Edge.
2. In the upper right corner, click the three dots, and click History.
3. In the History popup, click More options, and click Open history page.
4. In the Search bar, type `map`
5. If no websites appear, delete the search, and return to the History.
6. Look through the history, and click Wings to Waves.
7. Scroll through the webpage to see if the map is present.
8. If the map is not there, click back to return to History.
9. Look through the history, and click Wings to Waves – Checkout.
10. Scroll through the webpage to see if the map is present.
11. If the map is not there, click back to return to History.
12. Look through the history, and click Wings to Waves – Hotels.
13. Scroll through the webpage to see if the map is present.
14. If the map is not there, click back to return to History.
15. Look through the history, and click Wings to Waves – Activities.
16. Scroll through the webpage to see if the map is present.
17. Stop the timer when the map is visible.
18. Repeat steps 1 through 17 twice more.
19. Record the average of time across the three runs.

Running the test on the Copilot+ PCs

1. Simultaneously start the timer and open Recall.
2. In the Recall search box, type `map`
3. Click the `wingstowaves.com` website match that pops up with the map on the website.
4. At the bottom, click the Jump back to `wingstowaves.com` button.
5. Stop the timer when the website opens and fully loads.
6. Repeat steps 1 through 5 twice more.
7. Record the average of time across the three runs.

Performing tasks with and without Click to Do

Searching the internet for an item you saw in an online video

In this test, we simulated a scenario where a user uses the Bing search engine to find an item they saw in a YouTube video.

Running the test on the MacBook Pro

1. Simultaneously start the timer and in Safari, open the YouTube video to your desired timestamp.
2. To open the screenshot tool, press `Command+Shift+5`.
3. Highlight the area of the video still you wish to capture.
4. Open the screenshot, and click Done.
5. Navigate to `www.bing.com/visualsearch`.
6. Click Browse.
7. Locate the screenshot, and click Upload.
8. Stop the timer when the visual search is complete.
9. Repeat steps 1 through 8 twice more.
10. Record the average of time across the three runs.

Running the test on the non-Copilot+ PCs

1. Simultaneously start the timer and in Edge, open the YouTube video to your desired timestamp.
2. In the top right corner of the browser, click the three dots.
3. Click Screenshot.
4. Highlight the area of the video still you wish to capture.
5. Click Visual search.
6. Stop the timer when the visual search is complete.
7. Repeat steps 1 through 6 twice more.
8. Record the average of time across the three runs.

Running the test on the Copilot+ PCs

1. Simultaneously start the timer and in Edge, open the YouTube video to your desired timestamp.
2. Hover over the video still, and to open Click to Do, hold down the Windows key and click.
3. Click Visual Search with Bing.
4. Stop the timer when the visual search is complete.
5. Repeat steps 1 through 4 twice more.
6. Record the average of time across the three runs.

Editing an image in a PDF

For this test, we simulated a scenario where a user removes an object from an image in a PDF and saves it as a new image.

Running the test on the MacBook Pro

1. Simultaneously start the timer and open the test PDF file in Preview.
2. To open the screenshot tool, press `Command+Shift+5`.
3. Highlight the image you wish to edit.
4. Open the screenshot, and click the share button → Add to Photos.
5. Open the Photos application, and double-click the saved screenshot.
6. Click Edit.

7. Click Clean Up.
8. In the image, highlight the object you wish to remove.
9. Click File → Export → Export 1 Photo.
10. Click Export.
11. Select where you'd like to save the image, and click Export.
12. Stop the timer when the image saves.
13. Repeat steps 1 through 12 twice more.
14. Record the average of time across the three runs.

Running the test on the non-Copilot+ PCs

1. Simultaneously start the timer and open the test PDF file in Edge.
2. Click the Windows Start button.
3. In the search bar, type Snipping Tool
4. Open Snipping Tool.
5. Click New.
6. Highlight the image you wish to edit.
7. Click Save.
8. Select where you'd like to save the image, and click Save.
9. Navigate to the folder in which you saved the image.
10. Right-click the image, and select Edit with Photos.
11. Click the Erase tool.
12. In the image, highlight the object you wish to remove.
13. Click Save options → Save as a copy.
14. Select where you'd like to save the image, and click Save.
15. Stop the timer when the image saves.
16. Repeat steps 1 through 15 twice more.
17. Record the average of time across the three runs.

Running the test on the Copilot+ PC

1. Simultaneously start the timer and open the test PDF file in Edge.
2. Hover over the you wish to edit, and to open Click to Do, press the Windows key and click.
3. Click Erase Objects with Photos.
4. In the image, highlight the object you wish to remove.
5. Click Save options → Save as a copy.
6. Select where you'd like to save the image, and click Save.
7. Stop the timer when the image saves.
8. Repeat steps 1 through 7 twice more.
9. Record the average of time across the three runs.

Performing tasks with and without improved Windows search

Finding and reorganizing images

In this test, we simulated a scenario where a user searches for paint brush and piano images and then copies them to a new folder.

Running the test on the MacBook Pro

1. Simultaneously start the timer and open the Photos application.
2. In the Search bar, type paint brush
3. Select the images that appear, and copy them.
4. Create a new folder on the Desktop, and paste the images into the new folder.
5. Open the Photos application.
6. In the Search bar, type Piano
7. Select the images that appear, and copy them.
8. In the newly created folder on the Desktop, paste the images.
9. When the images have finished pasting, stop the timer.
10. Repeat steps 1 through 9 twice more.
11. Record the average of time across the three runs.

Running the test on the non-Copilot+ PCs

1. Simultaneously start the timer and open File Explorer.
2. Navigate to the Picture folder.
3. In the Search bar, type `paint brush`
4. If no pictures appear, delete the search, and return to the pictures folder.
5. Scroll through the pictures folder, and find all the pictures that include a paint brush.
6. Select the images that include a paint brush, and copy them.
7. Create a new folder on the Desktop, and paste the images into the new folder.
8. Open the Pictures folder.
9. In the Search bar, type `Piano`
10. If no pictures appear, delete the search, and return to the pictures folder.
11. Scroll through the pictures folder, and find all the pictures that include a piano.
12. Select the images that include a piano, and copy them.
13. In the newly created folder on the Desktop, paste the images.
14. When the images have finished pasting, stop the timer.
15. Repeat steps 1 through 14 twice more.
16. Record the average of time across the three runs.

Running the test on the Copilot+ PCs

1. Simultaneously start the timer and open File Explorer.
2. Navigate to the Pictures folder.
3. In the Search Pictures search bar, type `paint brush`
4. Select the images that appear, and copy them.
5. Create a new folder on the Desktop, and paste the images into the new folder.
6. Open the Pictures folder.
7. In the Search Pictures search bar, type `Piano`
8. Select the images that appear, and copy them.
9. In the newly created folder on the Desktop, paste the images.
10. When the images have finished pasting, stop the timer.
11. Repeat steps 1 through 10 twice more.
12. Record the average of time across the three runs.

Finding settings about this computer

In this test, we simulated a scenario where a user accesses information about their device.

Running the test on the MacBook Pro

1. Simultaneously start the timer and in the top left corner of the screen, click the Apple logo.
2. Click About This Mac.
3. Click More Info...
4. Stop the timer.
5. Repeat steps 1 through 4 twice more.
6. Record the average of time across the three runs.

Running the test on the non-Copilot+ PC running Windows 10

1. Simultaneously start the timer and click the Start button.
2. Click Settings.
3. In the Find a setting search bar, type `Check info about computer`
4. If no options appear, click System, and scroll through the list of options.
5. In the pane on the left, click About.
6. Stop the timer.
7. Repeat steps 1 through 6 twice more.
8. Record the average of time across the three runs.

Running the test on the non-Copilot+ PC running Windows 11

1. Simultaneously start the timer and click the Start button.
2. Click Settings.
3. In the Find a setting search bar, type `Check info about computer`
4. If no options appear, in the pane on the left, click the System tab, and scroll through the list of options.
5. Click About.
6. Stop the timer.
7. Repeat steps 1 through 6 twice more.
8. Record the average of time across the three runs.

Running the test on the Copilot+ PCs

1. Simultaneously start the timer and click the Start button.
2. Click Settings.
3. In the Find a setting search bar, type `Check info about computer`
4. Click About your PC.
5. Stop the timer.
6. Repeat steps 1 through 5 twice more.
7. Record the average of time across the three runs.

Finding settings for users with color-blindness

In this test, we simulated a scenario where a user with color-blindness searches for personalized system settings.

Running the test on the MacBook Pro

1. Simultaneously start the timer and in the Dock, click the System Settings icon.
2. In the Find a setting search bar, type `Color Blind Mode`
3. If no options appear, delete your search, and click General.
4. Scroll through the list of options.
5. Click the Accessibility tab, and scroll through the list of options.
6. Click Display, and scroll through the list of options.
7. Turn on Color filters.
8. Select your preferred color filter option and stop the timer.
9. Repeat steps 1 through 8 twice more.
10. Record the average of time across the three runs.

Running the test on the non-Copilot+ PC running Windows 10

1. Simultaneously start the timer and click the Start button.
2. Click Settings.
3. In the Find a setting search bar, type `Color Blind Mode`
4. If no options appear, click System, and scroll through the list of options.
5. Click the back arrow.
6. Click Personalization, and scroll through the list of options.
7. In the pane on the left, click Colors, and scroll through the list of options.
8. Click the back arrow.
9. Click Ease of Access, and scroll through the list of options.
10. In the pane on the left, click Color filters.
11. Turn on Color filters.
12. Select your preferred color filter option and stop the timer.
13. Repeat steps 1 through 12 twice more.
14. Record the average of time across the three runs.

Running the test on the non-Copilot+ PC running Windows 11

1. Simultaneously start the timer and click the Start button.
2. Click Settings.
3. In the Find a setting search bar, type `Color Blind Mode`
4. If no options appear, in the pane on the left, click the System tab, and scroll through the list of options.

5. In the pane on the left, click the Personalization tab, and scroll through the list of options.
6. Click Colors, and scroll through the list of options.
7. In the pane on the left, click the Accessibility tab, and scroll through the list of options.
8. Click the Color filters.
9. Turn on Color filters.
10. Select your preferred color filter option and stop the timer.
11. Repeat steps 1 through 10 twice more.
12. Record the average of time across the three runs.

Running the test on the Copilot+ PCs

1. Simultaneously start the timer and click the Start button.
2. Click Settings.
3. In the Find a setting search bar, type `Color Blind Mode`
4. Click Color filters settings.
5. Turn on Color filters.
6. Select your preferred color filter option and stop the timer.
7. Repeat steps 1 through 6 twice more.
8. Record the average of time across the three runs.

Completing workflows with Copilot+ PCs vs. traditional PCs

Tackling the productivity workflow

In this test, we simulated a scenario where a user remembers a PowerPoint presentation on their system that included red handwriting on a slide, but they do not remember the filename of the PowerPoint. The user also remembers an image with the word “Contoso” in it but does not remember the filename of the image. The workflow consists of finding the PowerPoint, removing an object from an image in a PDF, and searching for an image to add to the PowerPoint. On the Copilot+ PCs, we used the Recall, Click to Do, and improved Windows search experiences to complete this example workflow in up to 61.8 percent less time than on the other devices we tested.

Running the test on the MacBook Pro

1. Simultaneously start the timer and open Finder.
2. Navigate to the Documents folder.
3. In the Search bar, type `slide with handwriting`
4. If no documents appear, delete the search, and return to the Documents folder.
5. Open the Conscious Interior Design PowerPoint file.
6. Scroll through the slides to see if there are any slides with red handwritten text.
7. Close the PowerPoint file.
8. Open the Contoso Designs_Client Presentation PowerPoint file.
9. Scroll through the slides to see if there are any slides with red handwritten text.
10. Close the PowerPoint file.
11. Open the Contoso Electronics Sales Presentation PowerPoint file.
12. Scroll through the slides to see if there are any slides with red handwritten text.
13. Close the PowerPoint file.
14. Open the Contoso-Financial-Calendar PowerPoint file.
15. Scroll through the slides to see if there are any slides with red handwritten text.
16. Close the PowerPoint file.
17. Open the Eco House PowerPoint file.
18. Navigate to the slide with the red handwritten text.
19. Navigate out of the PowerPoint and open the test PDF file in Preview.
20. To open the screenshot tool, press `Command+Shift+5`.
21. Highlight the image you wish to edit.
22. Open the screenshot, and click the share button → Add to Photos.
23. Open the Photos application, and double-click the saved screenshot.
24. Click Edit.
25. Click Clean Up.
26. In the image, highlight the object you wish to remove.
27. Click File → Export → Export 1 Photo.

28. Click Export.
29. Select where you'd like to save the image, and click Export.
30. Open the Photos application.
31. In the Search bar, type `contoso`
32. If no pictures appear, delete the search.
33. Scroll through the Photos application, and find the picture that includes the word Contoso in it.
34. Drag and drop the picture into the PowerPoint on the slide with red handwritten text.
35. Resize and move the picture to the desired location and stop the timer.
36. Repeat steps 1 through 35 twice more.
37. Record the average of time across the three runs.

Running the test on the non-Copilot+ PCs

1. Simultaneously start the timer and open File Explorer.
2. Navigate to the Documents folder.
3. In the Search bar, type `slide with handwriting`
4. If no documents appear, delete the search, and return to the Documents folder.
5. Open the Conscious Interior Design PowerPoint file.
6. Scroll through the slides to see if there are any slides with red handwritten text.
7. Close the PowerPoint file.
8. Open the Contoso Designs_Client Presentation PowerPoint file.
9. Scroll through the slides to see if there are any slides with red handwritten text.
10. Close the PowerPoint file.
11. Open the Contoso Electronics Sales Presentation PowerPoint file.
12. Scroll through the slides to see if there are any slides with red handwritten text.
13. Close the PowerPoint file.
14. Open the Contoso-Financial-Calendar PowerPoint file.
15. Scroll through the slides to see if there are any slides with red handwritten text.
16. Close the PowerPoint file.
17. Open the Eco House PowerPoint file.
18. Navigate to the slide with the red handwritten text.
19. Navigate out of the PowerPoint and open the test PDF file in Edge.
20. Click the Windows Start button.
21. In the search bar, type `Snipping Tool`
22. Open Snipping Tool.
23. Click New.
24. Highlight the image you wish to edit.
25. Click Save.
26. Select where you'd like to save the image, and click Save.
27. Navigate to the folder in which you saved the image.
28. Right-click the image, and select Edit with Photos.
29. Click the Erase tool.
30. In the image, highlight the object you wish to remove.
31. Click Save options → Save as a copy.
32. Select where you'd like to save the image, and click Save.
33. Open File Explorer.
34. Navigate to the Picture folder.
35. In the Search bar, type `contoso`
36. If no pictures appear, delete the search, and return to the pictures folder.
37. Scroll through the pictures folder, and find the picture that includes the word Contoso in it.
38. Drag and drop the picture into the PowerPoint on the slide with red handwritten text.
39. Resize and move the picture to the desired location and stop the timer.
40. Repeat steps 1 through 39 twice more.
41. Record the average of time across the three runs.

Running the test on the Copilot+ PCs

1. Simultaneously start the timer and open Recall.
2. In the Recall search box, type `slide with handwriting`
3. Click the Eco House – PowerPoint file match that pops up with the handwritten text on the slide.
4. At the bottom, click the Jump back to PowerPoint button.
5. Once the PowerPoint opens to the slide with red handwriting, navigate out of the PowerPoint and open the test PDF file in Edge.
6. Hover over the image you wish to edit, and to open Click to Do, hold down the Windows key and click.
7. Click Erase Objects with Photos.
8. In the image, highlight the object you wish to remove.
9. Click Save options → Save as a copy.
10. Select where you'd like to save the image, and click Save.
11. Open File Explorer.
12. Navigate to the Pictures folder.
13. In the Search Pictures search bar, type `contoso`
14. Drag and drop the picture that appears into the PowerPoint on the slide with red handwritten text.
15. Resize and move the picture to the desired location and stop the timer.
16. Repeat steps 1 through 15 twice more.
17. Record the average of time across the three runs.

Tackling the spreadsheet workflow

In this test, we simulated a scenario where a user remembers an Excel file on their system that included a pie chart, but they do not remember the filename of the spreadsheet. The user also remembers an image that includes a plant with an orange background but does not remember the filename of the image. The workflow consists of finding the Excel file, searching for a website that included a plant, searching for the plant visually with Bing, searching for the plant on Bing, finding an image of a plant and blurring the background, finding an image of a plant with an orange background in File Explorer, and adding the image to the Excel file. On the Copilot+ PCs, we used the Recall, Click to Do, and improved Windows search experiences to complete this example workflow in up to 60.4 percent less time than on the other devices we tested.

Running the test on the MacBook Pro

The MacBook Pro could not run this test as it does not have any built-in application to blur the background of an image.

Running the test on the non-Copilot+ PCs

1. Simultaneously start the timer and open Edge.
2. In the upper right corner, click the three dots, and click on History.
3. In the History pop up, click More options, and click Open history page.
4. In the Search bar, type `plant`
5. If no websites appear, delete the search, and return to History.
6. Look through the history, and click Buy In Fly.
7. Scroll through the webpage to see if the plant is present.
8. If the plant is not there, click Back to return to History.
9. Look through the history and click on Wings to Buy In Fly – Homegoods.
10. Scroll through the webpage to see if the plant is present.
11. If the plant is not there, click Back to return to History.
12. Look through the history and click on Buy In Fly - Petgoods.
13. Scroll through the web page to see if the plant is present.
14. If the plant is not there, click Back to return to History.
15. Look through the history and click on Buy in Fly - Garden.
16. Scroll through the web page to see if the plant is present.
17. In the top right corner of the browser, click the three dots.
18. Click Screenshot.
19. Highlight the image of the plant you wish to capture.
20. Click Visual search.
21. Click Open in New Tab.
22. In the Microsoft Bing search bar, type `pilea peperomioides`
23. Open the desired image in a new tab.
24. Click the Windows Start button.

25. In the search bar, type `Snipping Tool`
26. Open Snipping Tool.
27. Click New.
28. Highlight the image of the plant you wish to edit.
29. Click Save.
30. Select where you'd like to save the image, and click Save.
31. Navigate to the folder in which you saved the image.
32. Right-click the image, and select Edit with Photos.
33. Click the Background tool.
34. Click Blur.
35. Click Save options → Save as a copy.
36. Select where you'd like to save the image, and click Save.
37. Open File Explorer.
38. Navigate to the Documents folder.
39. In the Search bar, type `pie chart`
40. If no documents appear, delete the search, and return to the Documents folder.
41. Open the 2019 Expenses Excel file.
42. If there is no pie chart present, close the Excel file.
43. Open the Bamboo Campaign Marketing Budget Excel file.
44. If there is no pie chart present, close the Excel file.
45. Open the Business trip budget Excel file.
46. If there is no pie chart present, close the Excel file.
47. Open the Campaign Sales Data Excel file.
48. If there is no pie chart present, close the Excel file.
49. Open the Home maintenance schedule Excel file.
50. If there is no pie chart present, close the Excel file.
51. Open the LTP_Analysis Excel file.
52. If there is no pie chart present, close the Excel file.
53. Open the Mark8_workback Excel file.
54. If there is no pie chart present, close the Excel file.
55. Open the Material Production Tracker Excel file.
56. Open File Explorer, and navigate to the Pictures folder.
57. In the Search bar, type `plant with orange background`
58. If no pictures appear, delete the search, and return to the Pictures folder.
59. Scroll through the Pictures folder, and find the picture that includes a plant with an orange background.
60. Move the image of the plant with an orange background to the Desktop.
61. Navigate back to the Material Production Tracker Excel file, and click the Insert tab.
62. Click Pictures → Place over Cells → This Device...
63. Find the image of the plant with the orange background on the Desktop, and click Insert.
64. Once the image has been added to the Excel sheet, stop the timer.
65. Repeat steps 1 through 64 twice more.
66. Record the average of time across the three runs.

Running the test on the Copilot+ PCs

1. Simultaneously start the timer and open Recall.
2. In the Recall search box, type `plant`
3. Click the buyinfly.com website match that pops up with the plant on the webpage.
4. At the bottom, click the Jump back to buyinfly.com button.
5. Hover over the image of the plant, and to open Click to Do, hold down the Windows key and click.
6. Click Visual Search with Bing
7. In the Microsoft Bing search bar, type `pilea peperomioides`
8. Open the desired image in a new tab.
9. Hover over the image of the plant and to open Click to Do, hold down the Windows key and click.
10. Click Blur background with Photos.
11. Once the background has been blurred Click Save options → Save as a copy.
12. Select where you'd like to save the image, and click Save.

13. Open Recall.
14. In the Recall search box, type `pie chart`
15. Click the Material Production Tracker Excel file match that pops up with a pie chart.
16. At the bottom, click the Jump back to Excel button.
17. Open File Explorer.
18. Navigate to the Pictures folder.
19. In the Search bar, type `plant with orange background`
20. Move the image with the plant with the orange background to the desktop.
21. Navigate back to the Material Production Tracker Excel file, and click the Insert tab.
22. Click Pictures → Place over Cells → This Device...
23. Find the image of the plant with the orange background on the Desktop, and click Insert.
24. Once the image has been added to the Excel sheet, stop the timer.
25. Repeat steps 1 through 24 twice more.
26. Record the average of time across the three runs.

Tackling the image editing workflow

In this workflow scenario, we searched for images related to a barbeque, edited them to remove the backgrounds, and organized them into a new folder. On the Copilot+ PCs, we used the improved Windows search experience to complete this example workflow in up to 30.3 percent less time than on the other devices we tested.

Running the test on the MacBook Pro

1. Simultaneously start the timer and open the Photos application.
2. In the Search bar, type `barbeque`
3. If no pictures appear, delete the search.
4. Scroll through the Photos application, and find all the pictures related to a barbeque.
5. Secondary-click one of the pictures, and click Edit With → Preview.
6. Click the Show Markup Toolbar button.
7. Click the Instant Alpha button.
8. Select the picture's background area, and press the Delete key.
9. If a prompt appears that asks if you want to convert this document to a PNG, click Convert.
10. Click File → Export.
11. Select the folder where you'd like to save the image.
12. Click Save.
13. Repeat steps 4 through 12 for all the pictures related to a barbeque.
14. Stop the timer when the final image finishes saving.
15. Repeat steps 1 through 14 twice more.
16. Record the average of time across the three runs.

Running the test on the non-Copilot+ PCs

1. Simultaneously start the timer and open File Explorer.
2. Navigate to the Picture folder.
3. In the Search bar, type `barbeque`
4. If no pictures appear, delete the search, and return to the pictures folder.
5. Scroll through the pictures folder, and find all the pictures related to a barbeque.
6. Right-click one of the pictures, and click on Edit with Photos.
7. In the Photos application, click Background.
8. To remove the background, click Remove.
9. Click Save options → Save as a copy.
10. Under Save as type, select `.png`.
11. Name the edited image, and select the folder where you'd like to save the image.
12. Click Save.
13. Repeat steps 5 through 12 for all the pictures related to a barbeque.
14. Stop the timer when the final image finishes saving.
15. Repeat steps 1 through 14 twice more.
16. Record the average of time across the three runs.

Running the test on the Copilot+ PCs

1. Simultaneously start the timer and open File Explorer.
2. Navigate to the Picture folder.
3. In the Search bar, type `barbeque`
4. Right-click one of the pictures, and click Edit with Photos.
5. In the Photos application, click Background.
6. To remove the background, click Remove.
7. Click Save options → Save as a copy.
8. Under Save as type, select .png.
9. Name the edited image, and select the folder where you'd like to save the image.
10. Click Save.
11. Repeat steps 4 through 10 for all the pictures related to a barbeque.
12. Stop the timer when the final image has finished saving.
13. Repeat steps 1 through 12 twice more.
14. Record the average of time across the three runs.

Read the report at <https://facts.pt/ZH1ZaTE> ▶

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