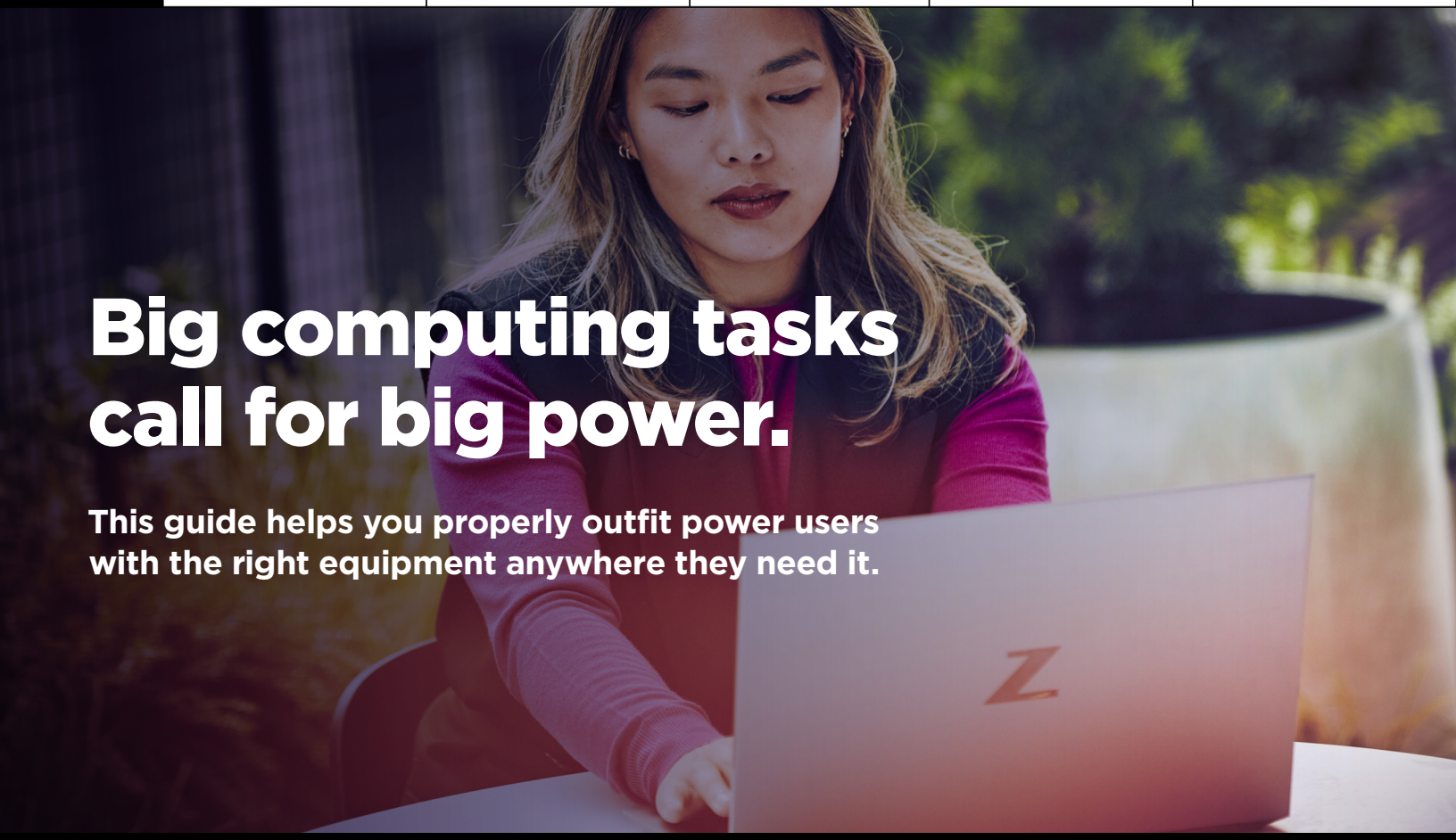
The Power Users Guide

It isn't hybrid work anymore, it's just work. Now technology and IT have to be everywhere.



Big computing tasks call for big power.

This guide helps you properly outfit power users with the right equipment anywhere they need it.

22%
want to take command of their work in a fulltime office place.[1]

44%
want to wield their talents from any workspace.[1]

100%
want to be understood and fully supported in their work quest.[1]

The IT department needs to provide the right equipment to each employee to ensure they can get their work done. Do you know what they need?

The future of work is not about a sense of place. It's about total command of work in any space.

The win or lose in modern IT strategies will pivot on how well they arm their power users to battle for more profit and bigger marketshare. This guide explores their needs to help IT decision-makers choose the right systems to optimize budgets while giving power users the tools they require.

The new world of work

Remote work also has multiple meanings. It can mean working from home, a co-working site, a branch, or even a park bench. As IT realigns its technology investments to new hybrid work realities, it can begin with a few solid takeaways from the lockdown experience. Doing so starts with the employees who have demanding computing needs: the people who can justify the most powerful equipment the company can afford.

One important lesson learned is that temporary stopgaps are just that: temporary.

Power users managed to produce through the crisis with stopgap solutions and subpar experiences, but continuing that way is unsustainable.

Important lessons learned include:

- **Pay attention to XOps.** Hardware investments for power users can be leveraged to spur IT's efforts in XOps, an extension of DevOps concepts to IT operations. XOps is the new quarterback play in the IT playbook.
- **Choose hardware designed for the task.** There is value in leveraging hardware to improve workload performance and optimize budget spend. Case in point: most laptops use integrated graphics cards which are not as powerful as desktop GPUs and cost much more. But laptops are mobile and can balance well in cloud strategies. Either way, hardware is a significant factor. Strategizing specific workloads against hardware capabilities and costs is a smart move.
- **Security is critical.** Hardware-based security is more important than ever in everything from ensuring hardware vendors lockdown security in their supply chains to providing baked-in security features to help protect data in use.

IT decision-makers now are focusing on building new strategies to mitigate expanding risks, capture more productivity from power users, and orchestrate everything from AI to DevOps across a flexible and everchanging workplace.

Top goals include strengthening the company's resilience, and providing top-performing tools for power users wherever they may work. IT leaders are seeking ways to strategically balance the ecosystem, budgets, market competitiveness, and the demands of the business.

As for power users, many will prefer to return to the office, where high-powered desktops produce quickly and flawlessly. However, it is certain that remote work will continue.

For power users, work-from-home (WFH) benefits include increased productivity due to fewer distractions and no need to commute, and more flexibility in work schedules.

There are different types of power users, each with unique needs.

Data Scientist is one of the most in-demand jobs on the planet.

Top computing needs

- Scalability
- Dual operating systems
- Reduced complexities
- Faster processing speeds
- Tons of memory

Required software

- Python™
- Jupyter™
- Power BI™
- RStudio®
- SQL
- MATLAB®

Data scientists are revered as everything from the captains of the data-driven enterprises to the heroes in the unfurling of the human genome, tracking tropical deforestation, and enabling self-driving cars. These professionals are highly self-motivated. They love to solve problems others fear to take on.

From a technology perspective, data scientists' computational dependencies are high, and they require seamless and speedy access to data and systems. Their primary work needs are flawless performance, whether in cloud applications or local computations. Top of mind issues include scalability, dual operating systems, reduced complexities, and faster processing speeds.

Roughly 80% of their time[2] is spent scrubbing, cleaning, labeling, and understanding the data's context.

Data scientists appreciate tools that make these necessary duties easier and less of a time-sink, freeing them to work more on problem-solving and less on housekeeping.

However, data scientists predominantly prefer remote work, so they quickly embraced virtual workstations. Their preferred tool is a high-performance laptop computer with plug-and-play accessories and consistent multiscreen displays at the office and at home, so unnecessary issues don't disrupt their workflows and thought processes.

Frustrations in the transition to long-term hybrid work include inconsistencies in displays and accessories between home and office devices. As a result, data scientists prefer to use a single device. That makes it easier to keep everything current and at their fingertips, no matter where they may be working.

Regardless of the final workstation setups, data scientists require high-performance computing (HPC).

Prioritized features

- 13- to 15-inch diagonal display
- 16 to 32 GB of RAM for memory-intensive, heavy applications
- 500 GB to 1 TB of storage (SSD to store data, visualizations, and intermediate results)
- Conferencing features, such as webcam
- NVIDIA® RTX™ GPU: a low-end GPU is sufficient for data visualizations; high-end is preferred for local computations

Recommended HP devices

- ZBook Studio
- ZBook Fury
- Z4 Workstation
- Z8 Workstation
- Z40c Curved Display

Engineers manage complex visions, encompassing both the current reality and future possibilities.

Top computing needs

- Rugged devices
- Mobility
- Faster processing speeds
- Baked-in security
- Remote connectivity assurance
- Sophisticated conferencing tools

Required software

- AutoCAD®
- Autodesk®
- Pipe Flow®
- Rockwell Automation®
- AspenTech
- MicroStation
- Vectorworks

An engineer's workday is typically a mix of individual work in the office and project on-site collaborations and communications. It's common to find them working with project management software, design and planning software (e.g., computer-aided design [CAD] and vertical applications such as pipe design and sea-bed mapping), document management systems, conferencing tools, and collaborative tools to facilitate group reviews of plans and blueprints.

High performance is essential.

Mobility is a top concern as engineers' jobs require frequent, remote-project site visits. Engineers prefer one portable device with consistent displays and accessories no matter where they're working. Top of mind issues include rugged devices, multiple UIs from voice commands to touchscreens, connectivity in remote locations, and scalability.

Reliability is a big deal for these power users, because field work in challenging environments can render repair or replacement options null. Because engineers typically work in large teams, they also need sophisticated conferencing tools.

Initially, most engineers' workplace journeys in response to COVID included taking their work laptops to their home offices, using a VPN to remotely access the office desktop, and buying additional high-performance laptops to create a suitable home workstation. The results were mixed, due to underpowered laptops and disruptive equipment malfunctions.

Secure VPN connections and endpoint security are a must because engineers often work in places with spotty connectivity and security options. Therefore, IT needs secure remote access to install or upgrade security programs.

Given the exacting demands of their work, engineers are specific about the hardware features they want.

Prioritized features

- Intel® Core™ i9 processors (3 GHz+ clock speed for CAD)
- Extensive memory (16 GB for CAD or 32 GB for high resource use or multi-application performance)
- NVIDIA® RTX™ GPU (for 3D modeling)
- 15- to 17-inch diagonal displays for on-site use
- 360° vertical rotation capability
- Extended battery life (at least 6 hours of stored power)
- Touchscreen

Recommended HP devices

2D/3D concepting

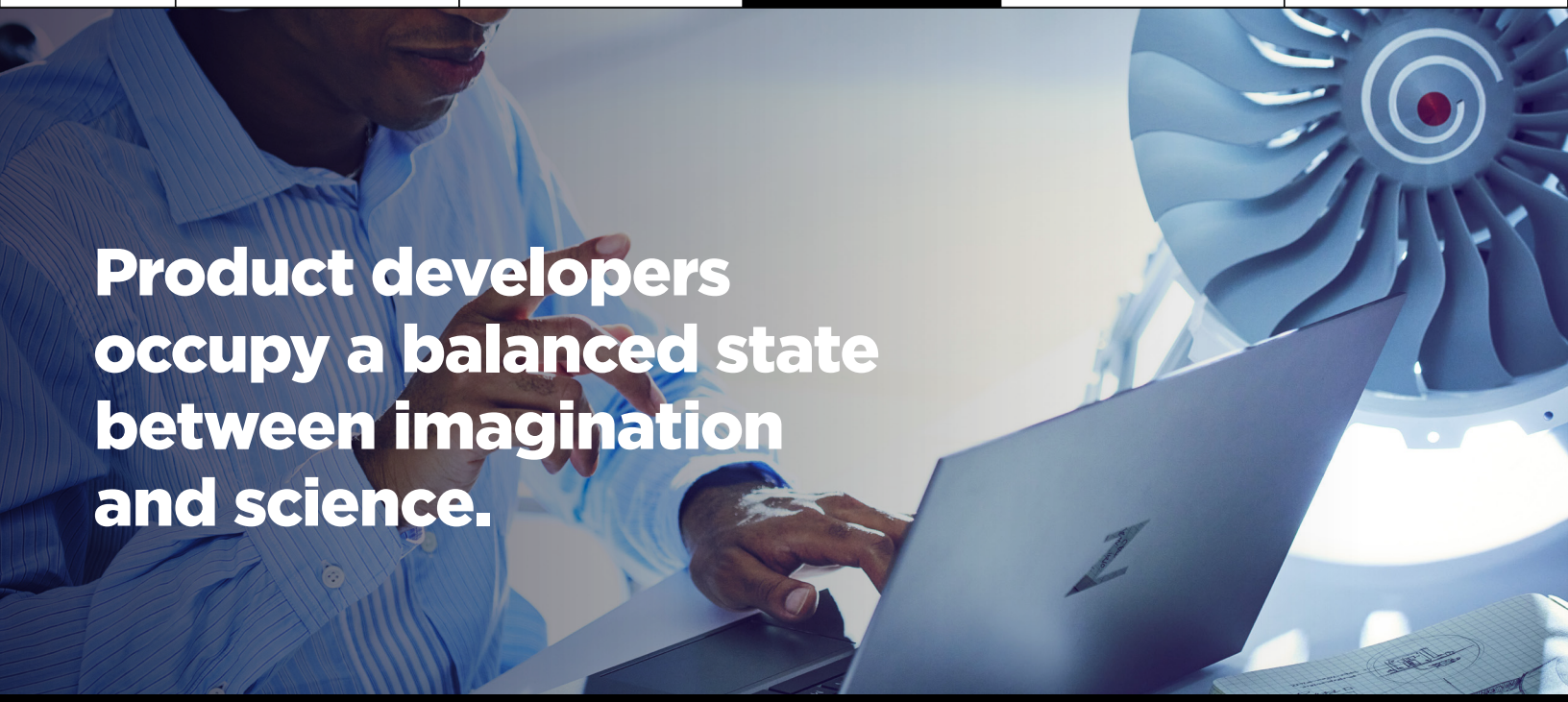
- ZBook Firefly
- Z2 Mini Workstation
- Z27 4K Display

3D modeling and rendering

- ZBook Studio
- Z2 Tower Workstation
- Z32 4K Display

Visualization

- ZBook Fury 15
- Z4 Workstation
- HP Reverb G2 VR Headset
- Z38c Curved Display



Product developers occupy a balanced state between imagination and science.

Top computing needs

- Sophisticated collaboration tools
- Immersive computing experiences
- Ease of use
- Faster processing speeds
- High levels of built-in security

Required software

- Design software (CAD and Solidworks™)
- Project tracking software
- Conferencing tools

Product developers want collaborative conversations to stress test ideas, break through occasional mental blocks, and get recommendations to improve their solutions. Their fast-paced environments are based on an iterative style, a commitment to improving on previous designs, and a process of regularly trading factors such as efficiency versus safety.

Reliability and high performance are absolute necessities for this group of power users.

Their computing systems need to be powerful but portable, so they prefer laptop workstations, virtual workstations, shared desktop workstations, and server farms as needed. This group prefers immersive computing experiences such as curved screens and virtual reality headsets to prompt their creativity.

Their work journey in response to COVID required a trek home with their company laptop or desktop, VPN access to the office desktop, and the purchase of new laptops to muscle-up their at-home workstation. When trips to projects in the field resumed, old problems rose anew too. The results were largely subpar. Product developers struggled with weak laptops, rugged environments, connectivity issues in the field, inconsistent equipment experiences, and a space shortage for hastily assembled and often bulky home workstations.

They want a single mobile device, consistent displays and accessories, high-performance PCs, and great conferencing tools. All devices need built-in microphones, webcams, and good quality speakers with appropriate kill switches (as classified scenarios are common requirements). Product designers prefer one portable device for ease and convenience in presenting their ideas to collaborators, managers, suppliers, agency overseers, and other audiences.

In short, product developers are looking for seamless experiences, high performance everywhere, close collaboration capabilities, and high levels of built-in security.

Prioritized features

- Portable devices with Intel® Core™ i9 (3 GHz+ clock speed for Autodesk)
- 16 GB of RAM (for CAD) or 32 GB of RAM (for Solidworks simulations and rendering)
- NVIDIA® RTX™ GPU (for 3D modeling)
- 15-inch diagonal display
- A battery life of six hours or more

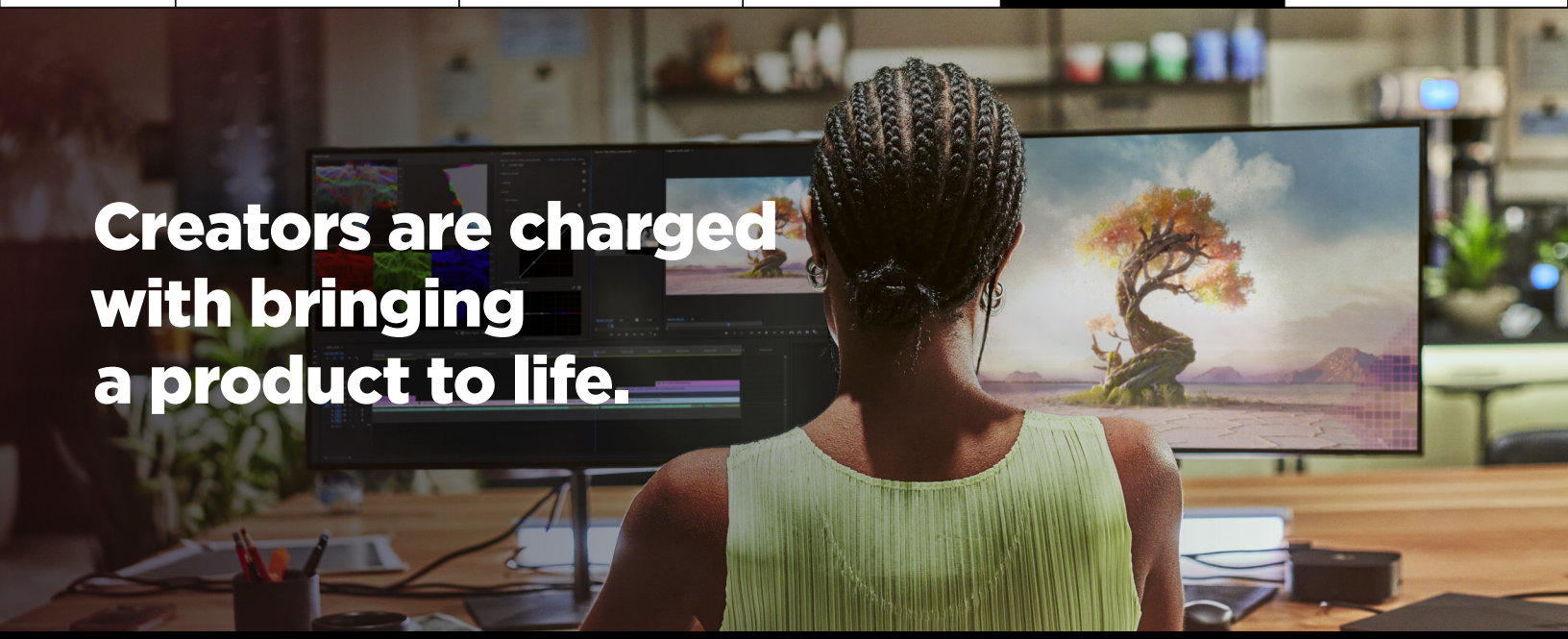
Recommended HP devices

Render, surface, and visualize

- ZBook Studio
- Z2 Tower Workstation
- Z34c Curved Display

Prototype simulation

- ZBook 17 Fury
- Z6 Workstation
- Z34c Curved Display



Creators are charged with bringing a product to life.

Top computing needs

- Scalability
- Sophisticated collaboration tools
- Reduced complexities
- Faster processing speeds
- High levels of built-in security

Required software

- Design
- Rendering
- Post-production
- Sound editing
- Large file and asset sharing
- Collaboration tools

These highly creative individuals work primarily in the high-end of the entertainment industry and balance their talents between imaginary and technological creations. They are visual thinkers who typically work in large production teams and are able to create ideas in the real world through methodical means.

This group works in advanced graphics roles such as 3D, vFX, motion graphics, and video editing, and often for big production houses. Their jobs are high pressure; they must rapidly turn big, high-impact work with massive files and demanding requirements.

These creators share similar computing needs with product developers. However, this group works on products so complex and original as to involve entire teams of eclectic minds, diverse talents, and boundary-breakers. And their computing needs are positively massive.

In this world, portable computing devices are a must, but so are powerful, custom-built, on-site workstations.

Unlike other categories of power users, creators often cannot work remotely. Their work sometimes requires them to collaborate on-site with other creative professionals, particularly because of the size of the files they manipulate, which makes data transfer problematic. (For example, a two-hour movie at full bandwidth EXR files is about 4 terabytes, which would strain any home internet setup.)

The workplace journey for creators was more disruptive than for many other user groups.

Creators need seamless experiences, high performance computing everywhere, remote work software, and close collaboration with members of large teams. They need built-in security to protect the studios' intellectual property, as breaches can cause massive damage to profit and professional reputations.

Prioritized features

- A mix of laptops ranging from mid-range to very high-end, depending on the use case
- Server farms or virtual workstations for complex tasks such as rendering
- Advanced peripherals such as multi-displays and sound equipment
- HP Remote Work solutions
- Home studios

Recommended HP devices

- ZBook Studio
- Z4 Desktop
- Z8 Desktop
- Z27XS G3 4K DreamColor Displays

Why choose Z by HP?

Power users are enthusiastic about their roles and depend on their technology to get their work done. They are passionate about their jobs and stimulated by demanding tasks in fast-paced environments.

This is what we do.

Let us help you choose the right equipment for your users' jobs. Z by HP delivers the power and the nuanced capabilities that these power users need. The benefits cover all of the important requirements, including:

- High-performance workstations to suit their demanding computational needs
- Extreme reliability for mobile uses to prevent equipment damage
- Built-in security, because the last thing anyone wants to worry about is security vulnerabilities[3]
- Remote access to office desktops for the hybrid work style
- High-resolution monitors powered with NVIDIA graphics to enable users to see data and graphics in optimal detail

Many power users surely will return to their high-powered desktop computers in the office. However, remote work certainly will remain relevant. Many prefer to keep work-from-home benefits such as increased productivity due to fewer distractions, the lack of a commute, and work schedule flexibility.

It's critical for IT decision-makers to understand each type of user and to deliver the tools they need. Doing so helps these power users ensure their organizations remain safe, competitive, resilient, and responsive to citizens and stakeholders. Z by HP is here to help IT support power users in performing their important tasks—no matter the circumstances or the physical location.

LEARN MORE

[1] PwC, "Future of work: what boards should be thinking about," https://www.pwc.com/us/en/services/governance-insights-center/library/covid-19-returning-workplace-boards.html

[2] "Which of the Six Major Data Personas Are You?" September 4, 2020, https://towardsdatascience.com/which-of-the-six-major-data-personas-are-you-8dbf434b7c9e.

[3] HP Wolf Security for Business requires Windows 10 or higher, includes various HP security features and is available on HP Pro, Elite, RPOS and Workstation products. See product details for included security features.

4AA8-0717ENW, February 2022