

The State of the Digital Workspace

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In September 2022, the Digital Workspace Ecosystem Alliance (DWEA) introduced its first annual survey to gauge the current state of digital workspace adoption, benefits and challenges. The survey was completed by 2,660 digital workspace professionals globally, making it one of the largest digital workspace-focused surveys to date.

Geographic Breakdown of Respondents

Rather than focusing on the location of the individuals responding to the survey, this survey aimed to identify the geographic breakdown of the location of the end users that each survey respondent manages. This approach provides a more accurate reflection of the actual workplace environment. That breakdown is as follows (many respondents manage users in multiple regions so percentages below do not equal 100%):

- 69% of respondents manage end users in the Americas
- 30.5% of respondents manage end users in EMEA
- 29.4% of respondents manage end users in APAC

Size of Respondent Organizations

- 47% of respondents represent small-to-medium enterprises (500– 999 employees)
- 30% represent enterprises (1,000–9,999 employees)
- 20% represent small businesses (less than 500 employees)
- 3% represent large enterprises (greater than 10,000 employees)

About the DWEA

The Digital Workspace Ecosystem Alliance (DWEA) is a consortium of technology leaders dedicated to helping organizations enable secure productivity for all of their people. Together we are committed to providing the vendor-neutral education and resources needed to empower organizations of all sizes to develop the Digital Workspace strategy that makes sense for their business. The DWEA is a 501(c)(6) not-for-profit organization dedicated to market education.



UMMAF > || | > As we enter 2023, a clearer picture of the last two turbulent years is starting to emerge. That offers an excellent opportunity to take stock of where we are, to briefly reflect on how we got here and to forecast where things are headed when it comes to one of the most powerful and versatile tools available to modern organizations: the digital workspace.

Unsurprisingly, the COVID-19 pandemic still looms large over current conditions. The rapid shift to remote and hybrid work upended the traditional workplace almost overnight and lent fresh momentum to the emerging work-from-home (WFH) and work-from-anywhere (WFA) movements. Organizations of all sizes and backgrounds were faced with the challenge of adapting established onsite practices to virtual workflows. They quickly discovered what worked and what didn't—as well as what would suffice for the time being. But the evershifting course of the pandemic didn't always afford them the necessary opportunities to optimize.

This DWEA survey therefore comes at a pivotal moment. The pandemic upheaval and the lessons learned are still fresh everyone's minds, yet organizations are also eager to begin solidifying the cloud and digital workspace strategies that will see them into the future.

So, what do the responses of the more than 2,500 organizations around the world who took part in the DWEA survey tell us about the current state of the digital workspace?

Here are the key takeaways:

- Hybrid and remote work are here to stay for a majority of organizations. However, the lack of consensus around the model for the post-pandemic workplace points to the clear need for organizations to develop and implement a digital workspace strategy that can adapt over time.
- Whatever their opinions on the path back to the office, organizations are now in agreement that developing a strong digital workspace strategy is paramount. Yet only a very small number of them have fully executed their plans so far.
- The biggest roadblocks to digital workspace adoption are concern over its impact on the end-user experience and the perceived complexity of any digital workspace initiative.

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- Issues caused by legacy technologies—specifically virtual desktop infrastructure (VDI) and the need to support legacy apps—are the primary source of the above concerns related to the end-user experience and complexity.
- In a stark departure from recommended best practices, companies are increasingly putting their end users' experience ahead of cybersecurity concerns.
- As BYOD adoption skyrockets, so have worries over the cost of supporting personal devices and the security vulnerabilities they might introduce. These worries go hand in hand with an increased focus on endpoint management.
- The commitment to long-term hybrid work has accelerated the need to move print management to the cloud, a migration that features heavily in organizations' overall cloud strategy.

This report will tease out each of these points with contextual information, statistics and brief analysis.

The overall picture that emerges may confirm some easy assumptions. For example, it's not shocking to learn that many organizations now view a more flexible hybrid workplace as a viable model going forward, yet they're also daunted by the mammoth task of securing and managing BYODs.

What's more eye-opening is that organizations may be prioritizing convenience at the expense of security—even as the frequency and cost of data breaches are on the rise. Another concerning trend is that organizations' negative experience with legacy technology, including virtual desktop infrastructure (VDI), could be holding them back from rolling out newer technologies like Virtual App Delivery (VAD) and browser isolation that balance Zero Trust security with ease of use. In turn, they're behind the curve when it comes to crafting and implementing more streamlined, cost-effective digital workspace strategies and initiatives.

Hybrid and Remote Work Are Here to Stay for Most Organizations



It's no secret that many organizations were unprepared for the rapid shift to remote and hybrid work at the start of the COVID-19 pandemic. That lack of preparedness was compounded by the assumption that, at least initially, the shift would be temporary. Why pour valuable time and resources into remote-work-enablement solutions when their use would be short-lived?

But as the pandemic dragged on, even the holdouts had to make accommodations at some point. The underlying strategy to remote migration varied significantly between organizations, as did the experience for their end users, yet ultimately most adopted some set of solutions that would allow remote users to communicate, collaborate and remain productive even in work-from-home scenarios.

Did all that change as pandemic protocols loosened? The results of the DWEA survey speak loud and clear: Supporting a hybrid and remote workforce continues to be a priority for a majority of organizations. More than 58% of DWEA survey respondents confirmed that they will offer their people the option to work either remotely or hybrid on a permanent basis.

All the same, the breakdown of that percentage reveals some valuable nuances. Just under 40% said that supporting a permanent hybrid workforce is a priority, whereas only 24.5% said that supporting a permanent remote workforce is a priority. Clearly, then, the preferred option among respondents is for users to balance remote with onpremises work, although one-quarter are more than open to the idea of fully remote users.

On the flip side of this is the nearly 42% of survey respondents who said that they



expected all of their users to be back in the office full-time "at some point." That result actually jives with some mid-pandemic surveys, such as PwC's "US Remote Work Survey 2021," which found that 39% of respondents felt that a minimum of 4–5 days of in-office work was necessary to maintain a strong company culture.

But these institutional perspectives may be at odds with users' views. GitLab's "Remote Work Report 2021" polled 3,900 individuals globally and found 82% of them to be in agreement that remote work was the future. One-third of them were prepared to quit their job if no remote option were available. These responses were captured during a time of flux, but the overall sentiment hasn't changed. Among workers themselves the desire for flexibility remains stronger than any longing for a pre-pandemic status quo.

The DWEA Takeaway

Although roughly 6 out of every 10 organizations are banking on remote/hybrid work for the long term, there's an undeniable division of thinking when it comes to whether workforces will eventually make a wholesale return to the office. Those that have committed to hybrid and remote work will benefit from being able to build a digital workspace strategy accordingly. And they will almost certainly benefit from those actions being more in line with employees' broad expectations of a remote work option.

For organizations that expect their people to be back in the office full-time at some point in the future, the roadmap to get there is murky. As a result, it will be vital for them to establish a sustainable and flexible digital workspace strategy that can support hybrid work right now and adapt over time. With the lesson of the pandemic still fresh in everyone's mind, whatever strategy they adopt will have to allow them to respond to rapid and unforeseen shifts in workplace environments.



The Tipping Point for Digital Workspace Strategy



Like any sound policy decision, digital workspace strategies should ideally be adopted after considerable research, reflection and real-world testing.

The sudden onset of the pandemic didn't afford organizations that luxury, which is why so many of them were forced to formulate digital workspace strategies on the fly. In 2020, Dell's biennial "<u>Digital Transformation Index</u>" found that 80% of the 4,300 global organizations surveyed had already begun fast-tracking some aspect of their digital transformation. Notably, however, that ad hoc approach suggests that their implementation was sometimes piecemeal and determined by real-time needs.

Two years on, it might seem reasonable to assume that these same organizations have finally had enough time to develop and implement a more stable and future-oriented digital workspace strategy. But that doesn't appear to be the case. The results of the DWEA survey suggest that organizations remain too busy putting out day-to-day fires to sit down and take the necessary time to solidify their digital workspace initiatives. The answers from a majority of respondents indicate that they're currently engaged in developing and refining their long-term digital workspace strategies, with very few having put them into action.

For instance, close to 45% of the respondents said that they were still in the process of developing their digital workspace strategies at the time of the survey. Around 37% claimed to have developed a digital workspace strategy, but only 10.7% had actually evaluated solutions and started to deploy them.



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Of all the organizations who weighed in on the DWEA survey, only 6.2% had fully executed their digital workspace strategy by that point. To put that in perspective, more than 8 out of every 10 organizations are either unprepared to properly realize their digital workspace strategy or even have a cohesive strategy to begin with.



Respondents' answers to the survey's questions on digital workspace strategy point to a single conclusion. Even though most organizations would acknowledge that a digital workspace strategy is absolutely critical to their operations, the vast majority are still in the early stages of crafting and implementing that strategy.

On the one hand, this is understandable in light of the turmoil and uncertainty of the past two years. Organizations around the world and across industries were concentrating on dealing with immediate emergencies rather than engaging in long-term visioning and planning. On the other hand, however, it highlights just how urgent and pervasive the need is for them to not only establish a cohesive digital workspace strategy but also put it into practice—particularly before another unexpected crisis hits.



Concerns about Complexity & User Experience Are Slowing Digital Workspace Adoption



Complexity and Concern for the User Experience is Slowing Digital Workspace Adoption



32.3%

38.5%

cited overall complexity as their biggest roadblock

of respondents said that their biggest concern was

the potential impact on their end-users

Given the obvious and pressing need for developing and rolling out a digital workspace strategy, what's holding organizations back from doing so?

First and foremost, organizations are concerned about the impact the implementation will have on end users' productivity. A full 38.5% of respondents said that this was the case. And it's not hard to see why. In the pursuit of greater agility and efficiency, organizations don't want to risk impeding both, even if only temporarily. The fact that "business as usual" has been disrupted by the pandemic also makes it that much harder to introduce changes because it magnifies the consequences of minor setbacks and adjustments.

Coming in a close second is the overall complexity—or at least as they see it—of a DW strategy. Nearly one-third (32.3%) of DWEA survey respondents cited this as their biggest roadblock to its adoption.

These concerns about user experience can be tied back to several trends that were identified in the survey results:

- Continued uncertainty over future workforce evolution. One-quarter of respondents predicted that their people would never go back to the traditional in-office environment. At the same time, 41% said they believe employees will eventually go back full-time. With so little consensus on such an important issue, organizations are still in "wait and see" mode.
- Negative perception of familiar DW solutions. Virtual desktop infrastructure (VDI) is reported as the primary cloud desktop solution, yet 48% of organizations cited VDI's performance as their number-one challenge, followed by 41.7% of respondents



- lamenting its high cost. This leads to the mistaken assumption that digital workspace solutions are inherently challenging.
- Software management and maintenance headaches. Nearly 37% of respondents said that keeping applications up to date—and therefore fully functional and secure —is their biggest app management challenge. A further 21.4% reported being hamstrung by too many legacy applications. As we'll see below, legacy software is a primary driver behind digital workspace migration but also influences which DW solutions are ultimately adopted.

At the end of the day, though, it may be reassuring to know that none of these overarching concerns is new. The impact of change on productivity and the resources involved in that change are not IT-specific considerations. They've existed since the dawn of commerce.



There's a noticeable disconnect between the known benefits of a strong digital workspace strategy and the perceived impact that its implementation will have. While most respondents signaled that they're fully aware of the need for an actionable DW strategy, they have valid concerns about a winding up with diminished user experience and being overwhelmed by too many moving parts. These concerns aren't particularly surprising in light of a typical VDI experience.

This disconnect highlights that there's still a significant need for both market education and practical tools to help organizations evaluate potential solutions and ultimately complete their digital workspace journey. This means equipping them with a suite of resources to define the optimal DW strategy for their organization and then identify exactly what they need to execute that strategy properly.



Searching for a Solution to Legacy Virtual Desktops & Apps



As we noted in the previous section, one lingering hurdle for organizations is legacy technology and the inevitable issues that it entails. This is worth exploring in its own right, given that VDI and legacy apps crop up as a sticking point throughout the DWEA survey.

When asked about the virtualization technologies they were utilizing to deliver cloud desktops to their users, more than half (51%) of the respondents stated that they were using VDI.

However, close to half (48.2%) of the respondents also said that the "performance of the solution" was the chief problem with their virtual desktop environment. Another 41.7% cited cost as a major concern. These figures are a clear indication that legacy virtualization technology like VDI may be relatively commonplace but in most use cases its positive impact on budget and productivity is questionable at best.

In addition, 36.9% of respondents said that keeping applications up to date was a critical concern in their hybrid desktop environment. Another 21.4% cited the management of legacy applications as a key challenge. What this points to is either a need to eliminate legacy software altogether or to find a way to offer it to users that actually streamlines that overall management and distribution. Given that legacy apps are still pivotal to many organizations' operations, the latter seems like the better option.



This combination of issues caused by legacy VDI technology and the need to give users access to all of their legacy applications might explain why we've seen such a spike in the adoption of Virtual App Delivery (VAD) technology. The DWEA survey revealed that 47.4% of respondents are utilizing VAD to deliver cloud desktops. That number is up from the 32.4% who said they were using VAD in the 2021 "VDI Like a Pro" survey.

What's more, the DWEA results confirm trends that were identified in that prior report. Of the respondents to the "VDI Like a Pro" survey, 17% of those who were using VDI at the time indicated that they would be making the shift from VDI to VAD within the next two years. With DWEA respondents reporting more than 47% VAD adoption just one year after the "VDI Like a Pro" survey, this predicated migration is already ahead of schedule.

The DWEA Takeaway

Organizations seem to be taking a hard look at the legacy technology they have in place and asking themselves if it's truly working for them. While there are still legacy apps that are vital to their workflow, other legacy software, like VDI, is not meeting expectations and needs to be supplanted. The question is, how can they streamline the management and delivery of legacy solutions they want to keep while seamlessly replacing the legacy solutions they want to eliminate?

Based on the DWEA survey results, they're finding the answer in Virtual App Delivery. The respondent breakdown (51% using VDI, 47% using VAD) shows that adoption of the two virtualization technologies is already close to parity, even though VDI has a multi-decade head start. When taking the 2021 "VDI Like a Pro" survey results into account, the roughly 15% year-on-year growth in VAD adoption is striking. That rapid uptake suggests that organizations are finding VAD to be more cost-effective, less complex and more capable than traditional virtualization methods.

What is Zero Trust?

As its name suggests, Zero Trust is an IT philosophy and practice that assumes every device is potentially compromised.

It mandates authentication and verification on every possible data point, and limits the scope of user activity to just-in-time and just-enough-access (JIT/JEA) behind the corporate firewall.

Best practices include separating apps from devices, preventing lateral user movement and avoiding direct access to sensitive networks and their data.

The Focus on User Experience Has Cybersecurity Implications



Security and simplicity are often treated like polar opposites. It's not uncommon for companies to view cybersecurity as an unfortunate but inevitable tradeoff as they work to provide their end users with the smoothest experience possible. During the pandemic, when organizations made a sudden and seismic shift to remote work, this was often the rule rather than the exception in order to ensure business continuity.

As the worst of the pandemic recedes into the distance, organizations are showing signs of self-correcting. Okta's 2022 "<u>State of Zero Trust</u>" report found that 55% of organizations now have a Zero Trust initiative in place. That figure has more than doubled from the prior year, which shows that IT departments and CTOs not only recognize the value of Zero Trust Network Architecture (ZTNA) but are actively seeking to implement it.

But some of the bad habits persist. The DWEA survey responses that cite challenges with keeping legacy applications up to date (36.9%) or managing legacy apps (21.4%) hint at serious security vulnerabilities that undermine ZTNA principles and practices. And with more than 87% of organizations allowing their users to utilize BYOD devices, the number of potential vulnerabilities increases exponentially—especially when those devices are granted access to corporate networks and data through VDI, virtual private networks (VPNs) or both.

Two technologies that organizations are using to balance security with a seamless user experience are Virtual App Delivery and browser isolation. The DWEA survey revealed that 47.4% of respondents are already using VAD, and 47.9% of those not using VAD today plan to implement it within the next two years. On top of that, an overwhelming majority (93%) of respondents are considering browser isolation technology to further increase security and optimize their infrastructure to reduce costs.

The DWEA Takeaway

There is no doubt that business continuity and a positive end-user experience are critical to the long-term success of any organization. Nevertheless, they shouldn't come at the expense of cybersecurity. Organizations simply can't afford to put their people, networks and data at risk—quite literally, as the IBM "<u>Cost of a Data Breach</u>" report pegged the average cost of a data breach at \$4.35 million in 2022 (up from \$3.86 million just two years earlier).

A viable digital workspace strategy must also incorporate Zero Trust, change management and infrastructure modernization. The upside is that these initiatives aren't necessarily at odds with one another. There are a growing number of solution providers who recognize that simplicity can actually bolster security, for example, or that Zero Trust doesn't preclude flexibility. Using the potential tools and resources we identified above, organizations will be able to pinpoint those forward-thinking solutions more easily.



As BYOD Skyrockets, So Do Cost & Security Concerns for Endpoint Management



There's been some understandable ambivalence around Bring Your Own Device (BYOD) policies ever since they first emerged as a trend around 2009. While many users find it easier to use their personal devices for some work activities as well, IT has historically been a little more wary of this crossover. It can be difficult to fully integrate BYOD devices into the corporate ecosystem, and the lack of both uniformity and oversight makes security a constant uphill battle.

In the previous section, we highlighted how a whopping 87.2% of DWEA survey respondents confirmed that they are currently allowing users to access work-related apps and data on privately owned devices. This marks a significant uptick in BYOD policy adoption. A 2013 report from Tech Pro Research on BYOD adoption found that only 44% of organizations were actively allowing BYOD practices.

Does this mean that organizations have suddenly found a way to balance BYOD with ease of management and Zero Trust security? Not necessarily. Judging from the responses, this isn't an increase in receptivity toward BYOD but what is likely an increased need to accommodate BYOD users.

Most organizations indicated in the DWEA survey not only that they're investing lot of money in managing endpoints but also that security of those endpoints is a source of worry. Over half (50.8%) of respondents said that their spending on endpoint OS management and updates was "high" or "extremely high." And a huge majority (86.5%) said that the security profile of their endpoints was of either medium to high concern.



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In both cases, organizations that indicated "low" spending or concern were a small minority of around 10%.

Once again, this shift in the face of such drawbacks may be explained in large part by pandemic pivots. As users began working remotely, they wanted to hold on to their familiar personal devices, and organizations didn't have modern device fleets large enough to fully equip them anyway. BYOD offered a convenient stopgap. But now organizations could be at the point where they're questioning whether BYOD is something they can continue to support in its current form.

The DWEA Takeaway

Enabling people to work on privately owned devices was often a necessity at the beginning of the pandemic. At this point in time, however, it's clear that this massive spike in BYOD device usage is taxing IT teams from a cost and complexity perspective. And it's also introducing valid security concerns.

Moving forward, digital workspace strategies must incorporate plans for securing endpoints and adhering to Zero Trust security models. Yet the answer does not have to entail abandoning BYOD devices or stripping support for BYOD users. Technologies like Virtual App Delivery (VAD) and Browser Isolation are capable of separating BYOD devices from the corporate network while still providing users with secure access to all of the apps and data they need to be productive.

What is Hoteling?

Hoteling (or hot desking) is a concept that arose out of coworking environments in which different sets of employees share the same desks on alternate days or are free to choose from a pool of available desks when they are in-office.

Increasingly common in hybrid workplaces, hoteling allows organizations to serve the same number of employees with a smaller physical footprint.

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Moving Printing to the Cloud Is Becoming an Essential Piece of Cloud Migration Strategy



Moving Printing to the Cloud

Moving Printing to the Cloud is Becoming an Essential Piece of Cloud Migration Strategy



93%

of orgs view cloud printing as part of their overall cloud strategy

For most tasks that make up the average user's workday, it's not too difficult to imagine how they might be translated to a work-from-home scenario. Printing is a different matter altogether. It's a technology that was designed to bridge the digital and the analog, so it's not something that can be replaced by a virtual alternative. Yet it remains an indispensable part of many workflows. A mere 3% of respondents in the DWEA survey said they <u>didn't</u> manage printing or scanning in-house.

In remote and hybrid environments, the complexity of network printing increases exponentially. BYOD is more commonplace, as are the driver compatibility issues that arise from device heterogeneity. Users outside the firewall need to print to both local and in-house printers, which raises questions of management and access. The same goes for users who might be *hot desking* or *hoteling* and changing locations every time they're in-office. If the print jobs they send execute immediately, there's now a risk that they will be left unretrieved for an extended period of time. All of this naturally feeds into security concerns as well.

The responses from DWEA survey participants confirm all of the above, as some organizations indicated that they grapple with multiple issues. Over half (53.5%) reported that managing printing or scanning at remote locations is a challenge with their hybrid workforce. A full 43.7% said that securing sensitive printed or scanned information was problematic. Nearly one-third (31.1%) noted that they struggle with printer and scanner driver management. And more than one out of every five (22.1%) stated that they have difficulty supporting end users' printing and scanning needs in the digital workspace.

At the same time, the vast majority of organizations do appear to view cloud printing as an attractive solution to printing challenges in hybrid and remote environments. More than nine out of ten organizations (93.1%) said their cloud strategy involved cloud



printing. After making the switch to cloud print management, 54.6% of survey respondents said their IT teams were either spending less time on print-related support or enjoying a combination of a superior print experience, lower costs and less time investment. Over 70% rated their current experience of printing and scanning a 7 out of 10 or above.



The advent of the work-from-anywhere (WFA) movement proved especially challenging to digital-analog bridge activities like printing and scanning. Along with the obvious difficulties in managing printing among a distributed fleet of remote and floating endpoints, printing from external or BYOD devices to in-house printers has profound security implications.

The survey results make it clear that IT teams need a single solution that allows them to take comprehensive control over their printing and scanning environment for the sake of visibility, security and convenience. Ideally that solution should optimize driver management, provide the ability to track consumables to save time and resources and fully support Zero Trust IT models, but the number-one priority should be efficient, robust endpoint management. While print may have been left behind in other areas of cloudification, the benefits of moving to print to the cloud are now clearer than ever in IT leaders' minds and are an integral part of their digital workspace strategy.



SUMMARY

Having examined key topics in detail and provided supporting data from the DWEA survey, we can summarize the overall findings as follows.

- However your own organization might feel about it, hybrid work isn't going anywhere. It will be an integral part of tomorrow's workplace models and should be accommodated in a way that's right for your users and your organization going forward.
- The development and execution of digital workspace strategies are being stalled by concerns about the impact on the user experience and the perceived complexity of such initiatives. IT teams and CTOs need to determine whether these concerns are surmountable with the right solutions.
- Future-oriented digital workplace strategies must address the cost, security and management issues that stem from legacy technologies (e.g., VDI, legacy apps). Organizations should leverage resources that show them how to eliminate or modernize legacy software.
- The focus on business continuity and user experience cannot come at the expense of the security of your people, networks and data. It is possible to adhere to Zero Trust while providing a seamless end-user experience.
- To support a secure hybrid work model that can be successful in the long term, organizations must implement a digital workspace strategy that allows work to be done independent of the device, OS and location. Virtual App Delivery, browser isolation and cloud print management are among the enabling technologies in this effort.

Although these bullet points are handy for a quick, big-picture perspective, we encourage you to reach out to us for more information on digital workspace solutions as well as advice on how to craft and implement your optimal digital workspace strategy.

NEXT STEPS

Visit us at <u>digitalworkspacealliance.com</u> and subscribe to our blog to receive updates on our latest research. And join the DWEA group on LinkedIn, or follow us on Twitter:

