The Future of Work: Embracing New Dynamics, Creating New Experiences

Introduction

IDC’s “Future of Work” framework prescribes an evolutionary journey of how emerging technologies and demographic changes are impacting work and the way it is done. Forward-thinking organizations that are preparing for these changes need to move from the traditional IT approach of command and control to offering more choices to their employees and empowering them with new technologies, designs and talent practices that boost productivity and foster innovation. In this article, IDC has identified seven key Future of Work trends that are impacting monitors in particular, which will continue to evolve over the next few years.

Monitors as a Key Enabler for Superior Digital Experiences

Employee experience (EX) is defined as the range of interactions employees have with their employer, from a single interaction during the recruitment process to an ongoing relationship over many years. It is about how employees perceive their employer and their role in the organization. Multiple elements influence EX — the structure and culture of the organization, its commitment to employee wellness and success, the physical and virtual work environment, and the tools and technology employees are provided with. Many progressive organizations are already exploring or deploying new metrics such as employee net promoter score (ENPS), digital user experience monitoring tools and real-time feedback management systems to monitor and improve employee engagement and performance. IDC predicts that by 2021, at least 60% of Forbes Global 2000 (G2000) companies will actively monitor and manage EX and utilize EX as a key differentiator to build and maintain business to business (B2B) and business to consumer (B2C) relationships.

As the war for attracting and retaining the best talent intensifies, organizations are increasingly exploring various ways to create better employee working experiences. These include flexible working policies, better workspace designs and offering a choice of devices to employees that can help improve productivity and efficiency. For most workers, the devices they are offered at work have a strong bearing on their ability to do their tasks effectively as they spend most of the time on their devices. In recent years, the rapid digitalization across sectors has led to a phenomenal increase in the use of digital content such as videos, webpages, pictures and animations by both employees and customers. And for all digital content, monitors remain the primary gateway to view, create and interact with content. Therefore, a robust monitors strategy that keeps in mind the future needs of employees and customers can deliver critical outcomes such as better experiences and higher productivity. Monitors are also a critical touchpoint for delivering better customer experiences in certain sectors, such as financial services and healthcare, where professionals utilize monitors at their desk to explain product features or guide discussions.
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The ongoing maturity and adoption of analytics, artificial intelligence (AI) and 3D printing and designing technologies will reshape the roles of information and knowledge workers across industries and company sizes. These technologies create opportunities beyond automation, providing new levels of productivity, accuracy, quality, decision making and optimization. IDC forecasts that 3rd platform technologies will drive information and communications technology (ICT) spending to more than US$6 trillion by 2022 with growth accelerating through the end of the forecast period to more than 6% per year as new categories, such as drones, sensors, AI, augmented reality and virtual reality (AR/VR), and 3D printers, account for an increasing share of the market. Adoption of these technologies will drive business innovation, leading to competitive differentiation and disruption. We will also see the rise of new job categories, including AI algorithm specialists, 3D designers, visualization experts and immersive content creators. According to the World Economic Forum, 133 million new roles will emerge that will witness the reclassification of work between humans and machines; AI alone is expected to create 58 million net new jobs in the next few years.

Most organizations now recognize mobility as a strategic technology and are moving away from tactical mobile device discussions to a broader mobile-first approach across their operations. This is a welcome change as mobility is an approach that offers employees greater freedom to work anywhere and empowers them with technologies to be more productive.

The unprecedented growth of AI and 3D tools, as well as the use of AR/VR technologies, will impact the use of monitors as most of the digital content creation, 3D modeling and data visualization continue to be done on desktop monitors by employees. Several business intelligence, content creation and product design technology vendors, such as Dassault Systems, Tableau, Microsoft, Adobe and Autodesk, are adding AR/VR functionalities or 3D features, models and drag and drop functionalities natively to their products to improve the designing of products and presentations. Many organizations in oil and gas exploration, product and architecture design, medicine research and financial modeling are already utilizing a combination of new 3D visualization technologies and high-end monitors to create product designs, test and simulate the performance to accelerate the product development process and decision making.

Mobility discussions are also fueled by the rapid growth of hotdesking trends, coworking and increasing shared spaces in organizations. Several leading global organizations, such as Deloitte, CBRE, National Australia Bank and UBS Bank, have completely done away with fixed desks at some of their locations and many large global corporations, such as HSBC, Accenture, Microsoft, GE and Boeing, are already utilizing coworking options. Some organizations are even offering detachables or mobiles as the only corporate-supported device that can be connected with monitors for a full PC-like experience while providing the desired mobility. At the heart of these trends is the need to create a work culture that helps attract and retain the best talent, is contemporary with modern workforce priorities and meets the expectations of the changing demographics at work. This is particularly so for millennials — who will soon form a majority of the global workforce — and Gen Zs entering the workforce, who are demanding better aesthetics, compact designs to fit the shrinking desk space, and new form factors that look nice and sleek. IDC predicts that by 2021, demand for top talent will have resulted in 65% of G2000 companies offering coworking and remote-work options that leverage pervasive access to enterprise and collaboration applications.

The Rise of Artificial Intelligence, 3D Tools and Need for Better Monitor and Visualization Technologies

New Workspace Trends, Changing Demographics and How Monitors are Adapting
Monitors are also aligning with these trends, as they become slimmer, lighter and easy to connect and even carry around. We have seen several concepts emerge in recent years that include foldable displays, to modular designs and even lightweight, easy to connect monitors with USB-C support that can be carried around and adjusted for size of room or content. These trends will continue to drive growth of slicker displays, rise of new form factors and more specialized monitors based on tasks or other mobility and collaboration needs.

4 | Employee Well-Being Considerations and Better Ergonomics

The digital transformation imperative has had profound impact on human resource policies and new practices at workplaces. The European Commission’s Strategic Framework on Health and Safety at Work 2014–2020 identifies important challenges and objectives for member states. In November 2017, the European Parliament formally proclaimed the European Pillar of Social Rights, which reflects a joint commitment to providing a healthy, safe and well-adapted work environment for workers in the European Union and includes provisions on protection of workers’ health and safety at work, as well as adapting the working environment to enable longer participation of the ageing workforce. Similar regulations around worker safety are being considered or previous protections strengthened across several markets globally. For instance, in the U.S., the Protecting America’s Workers Act would strengthen and modernize the Occupational Safety and Health Act of 1970 by giving the Occupational Safety and Health Administration (OSHAct) tools to ensure that employers promptly correct hazardous working conditions, protect workers from retaliation when they blow the whistle on unsafe working conditions, and hold employers accountable for violations that cause illness, death or serious injury to workers.

IDC forecasts that by 2021, 60% of G2000 companies will have adopted a future workspace model — a flexible, intelligent, collaborative virtual/physical work environment — to improve employee experience and productivity. Due to similar regulations across several markets, organizations are now increasingly focusing on employee well-being for compliance and improving talent attraction and retention. This has led to the use of new practices and technologies to improve health and safety at work. Initiatives include the use of new devices and form factors, simulated trainings especially for hazardous situations in industries like mining and energy, open workspace designs, standing desks, curved monitors for better viewing angles and better ergonomics in monitors, such as height adjustability to support better posture and blue light emission reduction for a more comfortable viewing experience.

Employees are also starting to expect more from their employers. This in turn will reshape the entire workspace design and use of technologies to usher in an era of best practices around well-being considerations that are impacting even monitors.

5 | The Gaming Gold Rush, eSports and Virtual Reality: Consumer Demand for Richer Content Pushes Content Developers

The popularity of PC and console-based gaming has been growing rapidly over the past decade with the advent of social gaming, gaming broadcast platforms and faster graphics processors, as well as the rise of professional esports competitions supported by leading technology vendors. Between 2017 and 2019, IDC expects the number of active PC gamers to grow by 10%, approaching one billion gamers, while the gaming PC market and the PC games market are expected to grow to 25 million (+19%) and US$35 billion (+7%), respectively. The gaming boom has spurred innovation urgency on the part of PC original equipment manufacturers, chip makers and content studios alike to tap into this lucrative and rapidly growing base that is the foundation of an overall gaming sector emerging as a prominent multi-billion-dollar industry.

In conjunction and parallel to the gaming boom is the birth of the immersive computing age. Virtual reality promises an audience of gamers, learners, sports enthusiasts, trainers, surgeons, etc., a world of advanced interface and intricate interaction previously only imagined in science fiction. IDC forecasts worldwide spending on AR/VR to be nearly US$20.4 billion in 2019, an increase of 68.8% over the US$12.1 billion in 2018. The spending over the next few years will be driven by commercial sectors, which will witness its share of overall spending grow from 64.5% in 2019 to more than 80% in 2022 when the overall market is expected to reach US$122 billion.
To prepare for a future workforce, organizations must increasingly build flexibility and choice into their device strategies — something at odds with the tradition of standardization. Based on IDC’s U.S. Consumer Devices Survey 2018, 47% indicated a preference to work on a PC of their selection, compared to 27% who indicated “company selected” and 26% who were “neutral”. In a follow-up question, that 47% averaged a 7.3 when asked to rate on a scale of 1 (no impact) to 10 (highly significant impact) how impactful choosing their own hardware would be to their utility, with 56% answering an 8 or higher. Additionally, a 2017 survey of U.S. consumers showed that device preference in regard to office productivity is much more widely dispersed for younger users than older ones. Nearly 70% of respondents aged 66 and above preferred to work on a tower desktop. In contrast for the 21 to 25 age group, no one product type reached 30% share with five separate product types reaching 10%+. Summarily, preparing for a future workforce entails a wider, more flexible device portfolio. Wider device portfolios likely spell happier and more productive employees, but they also spell massive I/O port, cable and dongle disruption, which in turn incurs significant cost and headache for IT. USB-C not only delivers a higher throughput and faster speeds and supports many protocols, but it can also help organizations simplify on accessories and cabling.

In 2018, USB-C was embedded in nearly half of all notebooks shipped. By 2022, IDC expects this number to grow to 86%. Additionally, around one in seven notebooks only feature USB-C and no other type of port. However, IDC expects this number to be closer to one in three by 2022. The consolidation of ports and protocols to one can help IT manage what has historically been clumsy I/O transitions. Once an organization is fully transitioned to USB-C devices and monitors, IT can experience a dongle-less, adapter-less and uniformly cabled future.

It would be wise for organizations looking to enable new, more powerful workloads for their end users — while avoiding headache for IT — to start thinking about USB-C monitors, PCs and peripherals this year.

Consequently, richer content will play an important role in shaping the future end-user experience. The consumption of richer content is predicated upon the creation of said content, and the pace of content creation should only accelerate. Social media platforms have also exploded the scale of amateur content creators. In effect, the content creation ecosystem continues to expand outward affecting everyone from device makers, to content developers, to advertisers, and even consumers. The explosive growth of gamers and the rapidly expanding universe of creators are expected to drive the demand for higher performance monitors, from graphic artists and photographers who require precise color accuracy and high pixel count, to game developers who must develop at the highest supportable end for AAA titles, to data scientists who must monitor multiple data streams in real-time simultaneously.

These trends are also expected to have a positive impact on monitors as new gaming and content studios emerge, and with the use of richer content by knowledge workers and marketing teams across sectors. In 2017, only 7% of monitor shipments were above US$300. By 2022, the US$300+ end of the monitor market could approach 20%. This will be driven by the following:

- Curved-ultrawide, which is expected to grow >50% approaching 1.5 million in unit shipment in 2019.
- QHD and higher, which is expected to grow from 5% share in 2017 to over 15% in 2022.

USB-C: Power to the User, Simplicity to IT

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Device as a Service Disrupts the Game

Device as a service (DaaS) boasts benefits of cost savings to the organization, workload reduction to IT and broader portfolio at a faster cadence to end users. To date, interest has been incredibly high and adoption is picking up, as early adopters provide feedback of material returns. According to IDC’s 2018 DaaS Multi-Client Study Survey, current adopters averaged 22% cost savings per device, reduction of desktop and notebook refresh cycles by four months and five months, respectively, with 64% of current adopters saying enrolling in DaaS helped them reduce their workload.

In 2018, there were nearly 35 million PC as a service (PCaaS) seats globally. About 13% of all DaaS adopters include monitors in their DaaS agreement per the aforementioned survey. IDC expects this number to nearly double to 61 million in 2022. Monitor adoption could very well shoot over 50% as the late majority follow.

Monitors mostly fit neatly into the DaaS model save for the fact that low-priced technologies which don’t represent intense CAPEX investment show generally poorly for long-term financing/leasing/subscription models. Getting past the economics, including monitors into DaaS offerings and agreements makes much sense. The choice of monitor dictates a significant amount of an end user’s computing workflow — how they view data, what they can do in parallel, how they collaborate, etc. Having the flexibility that DaaS offers could help ensure more employees get the monitor they need to effectively do their work.

Additionally, while a monitor generally will outlive its PC counterpart, the monitor market is experiencing tremendous advancement right now. From 2014 to 2018, unique screen specs (screen size + resolution) grew from 100 to 125. IDC expects this number to eclipse well over 150 by 2022. Beyond screen size and resolution, curved-ultrawide, USB-C and ergonomics improvements are creating significant new value in the monitor market at the top. So, while a monitor might last longer than your employee’s PC, sticking to a speedier upgrade cadence ensures they have access to the latest and greatest in a rapidly evolving industry. Consequently, including monitors in a DaaS package helps employees work better on their terms.

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Conclusion

The “Future of Work” means supporting a future workforce and powering future workloads. Driving future workloads necessitates better tools, specifically better ways to capture, visualize, process and collaborate on the impending data deluge. Supporting a future workforce entails democratizing the device chain to better allow employees to work on their terms, drive productivity and focus on employee experience and well-being, beyond just cost considerations. Forward-thinking companies at the forefront of these considerations will witness productivity and employee satisfaction gains simply by putting a little bit more care and flexibility into their monitor strategies.

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