

The Future of Work: Accelerating Innovation with Monitors to Drive Business Outcomes

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Introduction

The Future of Work is an extension of ongoing global digital transformation, radically impacting our personal and professional lives. According to IDC, Future of Work is a strategy to leverage digital technologies, attitudes, and behaviors to reinvent the way businesses engage with employees, partners, and customers. Done successfully, it will drive higher efficiencies and deliver superior experiences, ultimately creating competitive advantage and increasing revenue.

Digital-led innovations are now fundamental to business activity and essential to organizational-driven competitive differentiation. Ever-increasing digital content is also driving demand for better visual and analytical tools that empower employees to create value across the business.

At its core, to seize opportunities and deliver innovative business outcomes, organizations must respond, adapt, and adopt new devices, tools, and emerging capabilities. Essential to capturing the benefits of these technologies – including artificial intelligence (AI), data analytics, and augmented and virtual reality (AR/VR) – is the ability to collaborate, visualize, analyze, and act effectively with agility. By pursuing innovation-driven device refresh cycles, organizations can provide the tools to deliver faster, smarter, and more manageable and consistent improvements.

In this article, IDC has identified **six key Future of Work trends for 2020** that impact the monitor market, and which will continue to develop over the next few years:

- 1 Collaboration:** Changing employee expectations pertaining to ubiquitous access to resources anytime, anywhere will witness the emergence of new collaboration trends
- 2 Trust:** In an increasingly demanding regulatory environment, data sovereignty, endpoint security, and privacy will be critical for business growth and success
- 3 Sustainability:** Changing demographics and the desire to be associated with purpose-driven brands that advocate sustainability
- 4 Productivity:** Employees will demand better devices and technologies as new workloads emerge
- 5 Color:** New and immersive technologies will rely on better color precision to create and deliver high-quality visuals
- 6 Experiences:** Modern and aesthetically designed offices, along with advanced devices and technologies, will become pivotal to deliver superior user experiences

Each of these trends will accelerate innovation and impact an organization's monitor selection criteria. Before exploring these trends in more depth, let us first review the 2019 Future of Work trends.



2019 Future of Work Trends Scorecard

In 2019, IDC, in partnership with Dell, identified six Future of Work trends and their impact on the monitor market, with a focus on evolving technologies, demographics shifts, and new talent management practices. We recap these based on IDC's survey of IT and business decision makers,¹ as well as employees who use monitors for their work,² across various industries in the U.S., U.K., and China. It is worth noting that throughout the study, China exhibits quite different responses to the U.S. and U.K., due to a variety of market and cultural conditions.



1 | Monitors as a key enabler for superior digital experiences


Where things stand:

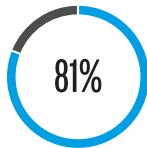
Employee experience has emerged as a key differentiator for building a more empowered and motivated workforce, with advanced monitors playing a key role.



74% of IT and business decision makers consider employee experience a top business priority.



 In China, however, more than half of organizations do not see this as an important organizational goal.



81% of employees believe that advanced monitors (higher resolution, better ergonomics, and color) will improve overall working experience.

IDC guidance:

21% of organizations refresh monitors when technologies warrant an upgrade, and **15%** do so based on employee needs. Almost **a third** of organizations surveyed only refresh after a monitor breaks.

While many organizations understand the importance of employee experience, and its contribution to the bottom line, more needs to be done to **narrow the gap between employee demand and management action.**


Organizations should also look into **funding and more appropriate monitor refresh cycles.**



2 | The rise of artificial intelligence, 3D tools, and the need for better monitor and visualization technologies

Workers increasingly need tools to visualize, analyze, and respond to exponentially growing data points from disparate sources. Effective visualization requires more screen real estate, better resolution, and the increased ability to interact and multitask.



 Organizations in the U.S. and U.K. agree the growing adoption of immersive technologies will drive demand for advanced monitors designed to support new workloads, with over 30% of organizations having deployed technologies like AI and AR/VR.

In the U.S. and U.K., where adoption of such technologies is high, organizations should focus on **identifying diverse use cases where AI can augment employees**, not just reduce mundane, repetitive data tasks.

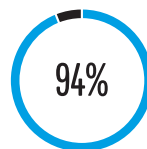
Successful organizations will increasingly create actionable insight from multiple sources. **Advanced monitors enabling employees to visualize, capture and share insights**, and quickly act on opportunities will be a key factor in creating new products, services, and experiences.




3 | New workspace trends, changing demographics, and how monitors are adapting

Most organizations follow a one-size-fits-all monitor strategy, often mismatching employee computing needs to monitor capability.

Globally, there is a clear divergence in organizations' approach to monitor provisioning and employee expectations.



 This is especially evident in China, where 94% of employees want to have a say in choice of monitors, but around 72% of organizations provision monitors as a standard offering.

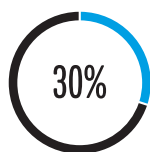
Organizations should adopt a more customized approach to computing by offering employees their **devices and monitors of choice based on working conditions and requirements** to improve productivity and efficiency, and to strengthen positive employee experience.



4 Employee well-being considerations and better ergonomics

Where things stand:

Despite government regulations around employee well-being, employee expectations around advancing workplace health and safety are not being met. Organizations rarely consider ergonomics in their future workspace model.



30% of global employees cite lack of monitor ergonomics as a top-rated factor that negatively impacts work productivity.



The healthcare, retail, and technology industries lag in providing employees monitors with relevant job-specific ergonomics.

IDC guidance:

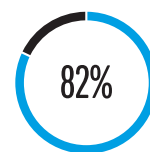
Organizations should develop improved workspace ergonomics plans to deliver a flexible, intelligent, and collaborative virtual/physical work environment (e.g., **open workspace designs, and monitors with better viewing angles and ergonomics**) that will improve employee experience and productivity, as well as talent attraction and retention.




5 The gaming gold rush, esports, and virtual reality: Consumer demand for richer content pushes content developers

The gaming industry has sparked an explosion of rich content. **Consumer demand has grown exponentially, helping energize content creation and resulting in demand for high performance monitors among content creators.**

Organizations are running pilots or planning to deploy advanced feature monitors to handle these workloads for data-centric, visualization, and design tasks.



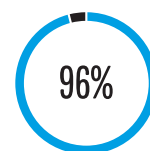
 In the U.S. and U.K., around 82% of organizations believe enhancing their data visualization capabilities is critical for future success.


Monitors are the primary medium to create and consume digital content.

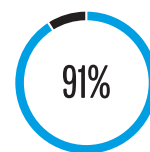
Organizations should adopt a **strategy focused on enhancing content creation and data visualization capabilities** for better experiences and higher productivity.



6 USB-C: Power to the user, simplicity to IT



 **Familiarity with USB-C and its benefits** is high in the U.S., where 96% of IT and business decision makers have some familiarity of the benefits of USB-C.



Among enterprises surveyed globally, this stands at 91%.

As organizations prepare for a future workforce, they must build flexibility and choice into their device strategies. **USB-C can help declutter desk space and minimize cable confusion.**



Six Key Monitor Trends to Understand for 2020

Monitors are the primary means of analyzing a wide range of data and information, arguably the lifeblood of the modern organization in the digital economy. But monitors are often selected based on outdated policies. We take a look at the six monitor trends for 2020 and how they contribute to a more efficient organization.



Collaboration: Changing employee expectations pertaining to ubiquitous access to resources anytime, anywhere will witness the emergence of new collaboration trends

IDC predicts that by 2024, 30% of the Forbes Global 2000 (G2000)³ firms will rely on a global, secure, intelligent, highly integrated, and collaborative ecosystem that enables enterprises to function as borderless organizations.⁴



The workspace and employee expectations are changing. With the convergence of personal and professional life, along with anytime, anywhere work, employees expect pervasive access to state-of-the-art devices and technologies for productivity and collaboration. Consumerization of technology has put pressure on IT departments to keep up with the need for more flexible device policies, with many organizations launching bring/choose-your-own-device programs, which have increased productivity.



Organizations are also increasingly exploring ways to create a more flexible and collaborative workplace, such as remote working policies, hotdesking, coworking spaces, and open-layout work areas. In this environment, it is critical for devices and technology to match the requirements of a specific task in a particular workspace.

What this means for monitors

Monitors are critical in this strategy and accomplish multiple goals for smarter and faster collaboration, and breaking silos. Large format monitors improve meeting room productivity by resolving issues like complex input/output settings. They also provide more space for interaction and support diverse collaboration needs, including communication over different applications, annotating on presentations and documents that can be easily shared on a single screen, and touch and draw features.

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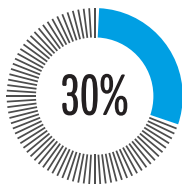
Trust: In an increasingly demanding regulatory environment, data sovereignty, endpoint security, and privacy will be critical for business growth and success

IDC predicts that with the business criticality of digital trust rising, 25% of spending on security services will be devoted to developing, implementing, and maintaining a “trust framework” by 2025.⁵

Data security has become an even more important topic as the value of personally identifiable information has grown significantly due to increased digitization, leading to multiple high-profile data theft and security breaches. Governments have reacted by setting guidelines for the authorized use and protection of data. In the wake of such legislation, organizations must implement a robust data security strategy.

Being trustworthy is imperative for business success today. Organizations developing their digital strategies must assess trust holistically and consider its impact on business reputation, and the financial and legal risks in violating it. Organizations must develop “trust programs” addressing trust across people (trust awareness/training), process, and technology perspectives to manage and minimize the risks associated with any breach of trust.





According to commercial real estate firm, JLL, by 2030, around 30% of the U.S. office market will be working from flexible spaces including coworking spaces.

What this means for monitors

Protecting visual privacy is as critical as safeguarding online data, especially as it leaves no trace of when, where, or how the breach happened, leaving organizations unable to prevent future attacks. For many organizations, sensitive business data is created and consumed on high-end monitors by knowledge workers, data scientists, and marketing teams. According to commercial real estate firm, JLL, by 2030, around 30% of the U.S. office market will be working from flexible spaces including coworking spaces.⁶

Organizations will therefore have to think about how this plays out not just in busy, well-trafficked offices, but also in shared or co-location spaces, where legal data and intellectual property may be at risk. Monitors with in-built privacy filters that mitigate visual privacy can help address this issue, if suitable training is provided, the right data management policies exist, and privacy filters considered when procuring new monitors.



3 | Sustainability: Changing demographics and the desire to be associated with purpose-driven brands that advocate sustainability

IDC predicts that by 2021, 35% of knowledge and frontline workers will consider social, environmental, and humanitarian actions as key criteria to employment decisions.⁷



Organizations need to be aware of the connection between corporate social responsibility and the ability to attract and retain top talent, especially millennials and Gen Z workers, for whom environmental and social awareness, as well as sustainability, are important considerations. As these generations emerge as a major component of the workforce, businesses are being urged to commit to certain environmental and social tenets, such as using energy efficient products, adhering to environmental certification and standards, and making efforts toward reducing their carbon footprint. Initiatives include using sustainable materials in products/devices, post-consumer recycled plastic, and energy efficient PC monitors, laptops, and devices, which meet current environmental standards and are easy to dispose of with minimal impact to the environment.

Unilever, for example, credits sustainability as a core factor to improving their employer brand and is a key differentiator when attracting younger talent.

There is also economic benefit to taking this approach. According to the U.S. Environmental Protection Agency, a single ENERGY STAR compliant computer and monitor can save between US\$7 and US\$52 per year (depending on the monitor type) in electricity bills.⁸

What this means for monitors

Having the correct low-emission, low carbon-footprint monitor strategy, which also focuses on recyclable materials and packaging, may make the difference when hiring and retaining the best young talent, while creating a more engaged workforce.



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4 |

Productivity: Employees will demand better devices and technologies as new workloads emerge

IDC predicts that by 2021, new Future of Work practices will expand the functionality and effectiveness of the digital workforce by 35%, fueling an acceleration of productivity and innovation at practicing organizations.⁹

According to IDC, the shipment of ultrawide monitors for the commercial segment grew by a compound annual growth rate of 6% between 2015–2019.



In the modern-day workplace, a high level of productivity is an imperative. Organizations must rethink how to better manage their devices, technologies, and overall workspace in order to optimize employee performance and drive productivity.

Demand for display real estate will rise as denser workloads and new work types create the need to see and do more. For example, automotive innovator, Tesla, uses AR tools in its electric car production facilities to enable employees to virtually experience design concepts, inspect accuracy of car components, calibrate vehicle parts, and evaluate materials, saving costs and making operations faster and more precise.¹⁰



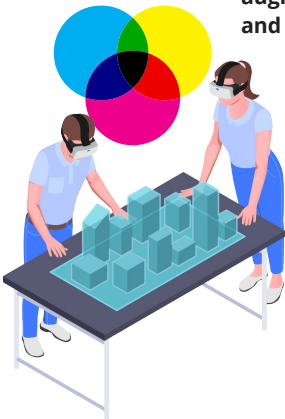
What this means for monitors

Ultrawide monitors support the use of multiple windows without scrolling or tab switching, satisfying the demands of multiple professions from a financial analyst’s need to scroll through columns of data, to an architect running a 3D/CAD software, or a designer using graphic design software. Ultrawide monitors offer cost benefits by eliminating the need for multiple monitors, which take up desk space and require multiple cables/connections. Newer monitors have evolved in terms of form factor, resolution, and sharpness, as well as display size, which has increased to meet the work requirements of a modern workforce. According to IDC, the shipment of ultrawide monitors for the commercial segment grew by a compound annual growth rate of 6% between 2015–2019.¹¹ Multitasking has also become the norm as a wide range of employees constantly switch between multiple tabs, windows, and business applications, something smaller monitors cannot do as seamlessly.

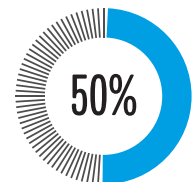
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Color: New and immersive technologies will rely on better color precision to create and deliver high-quality visuals

IDC predicts that by 2025, 20% of G2000 workers will have access to “fit for purpose” forms of human augmentation and assistance, merging physical and digital, including exoskeletons and robotics, AR/VR, and wearables.¹²



Creating engaging, high-quality content is critical for content creators. Those working with high resolution images, videos, color-sensitive content, and editing demand displays that are color-accurate and have a high pixel count. This trend is also seen in the shift toward in-plane switching (IPS) technology, which provides a better visual experience and better color reproduction as compared to twisted nematic (TN). According to IDC, monitors with IPS panels accounted for 50% of overall shipments globally in 2019.¹³



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Maintaining color fidelity and precision is relevant to many industries and is pivotal for tasks like creating presentations, mass marketing materials, banners, videos, and even heat maps. E-commerce company, Shopify, cites poor color as one of the key reasons for product returns as consumers find the actual color of the product mismatching the digital image.¹⁴ In medical imaging, color plays a critical role for accurate diagnosis, in some cases identifying anomalies that reveal early stage diseases.¹⁵

What this means for monitors

High-quality visuals with accurate color reproduction and precision are key to ensuring a positive user experience. Be it professional content creation, such as AR/VR and 3D content, or mass market content creation, such as printing brochures/banners, video creation, editing, designing, or publishing, monitors are the form factor of choice of today’s workers. As monitors evolve to support wider color fidelity and precision tasks, they also need to meet the latest industry standards to cater to broader application of color across multiple industries.

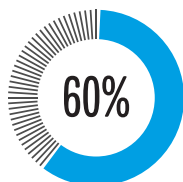


6 |

Experiences: Modern and aesthetically designed offices, along with advanced devices and technologies, will become pivotal to deliver superior user experiences

IDC predicts that by 2022, 35% of organizations will be running active employee experience programs that incorporate modern and enjoyable digital experiences and support brand affinity.¹⁶

By 2023,



of global CIOs will implement formal employee experience programs in their organizations.

Employee experiences are driving new expectations of the workplace, such as modern and aesthetically pleasing workspaces/office designs, state-of-the-art devices and technologies, and modern and ergonomic furniture and fixtures. According to IDC, by 2023, 60% of global CIOs will implement formal employee experience programs in their organizations.¹⁷ Academic and research studies have also highlighted a direct relation between employee experience and aesthetically designed offices, including modern and advanced devices.¹⁸ These factors also satisfy the needs of the younger generation, who consider design and work atmosphere as important components in the decision to join a company. Digital companies, such as Google, Facebook, and Apple, have amplified this trend using psychological research and ergonomics to promote agile working environments, open collaboration, and employee well-being.



Organizations need to intensify their efforts in empowering employees with modern workspace designs that attract talent, give a greater sense of freedom in their work, and provide visually appealing and innovative devices which meet the computing needs of diverse users.

What this means for monitors

Monitors should include form factors and designs that cater to both modern design requirements and usability. Visually appealing monitors with better resolution, wider displays, richer color, an ergonomic base, and ultra-thin narrow bezel designs provide a sleek and clean line of view, while offering a superior experience to users with better viewing experience and greater productivity.



As the Future of Work shifts to new roles, borderless collaboration, and employee empowerment, it is critical to equip this diverse, multi-generational workforce with the latest devices and capabilities that provide a smarter and faster working experience. To compete and thrive in this digitalized era, embedding a mix of physical, digital, and aesthetics will be key for driving successful business outcomes.

Understanding the different actors that interact in any particular system, then matching that role with a fit-for-purpose monitor to improve productivity will be crucial. A standardized one-size-fits-all approach is no longer useful. The first step is a clear understanding of how different roles in your organization can benefit from a more specific monitor selection. Measure the economic benefit of increased productivity from these new monitors and make future monitor decisions based on these economic facts.

The PC experience today goes far beyond form factors. Endpoint experiences and innovation are critical to differentiate, especially in a world of homogenous design. It is crucial to push the boundaries in monitor designs and innovate to improve functionalities that deliver superior experiences, empowering the workforce to complete their tasks in a faster and smarter way.

A standardized one-size-fits-all approach is no longer useful. The first step is a clear understanding of how different roles in your organization can benefit from a more specific monitor selection.



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