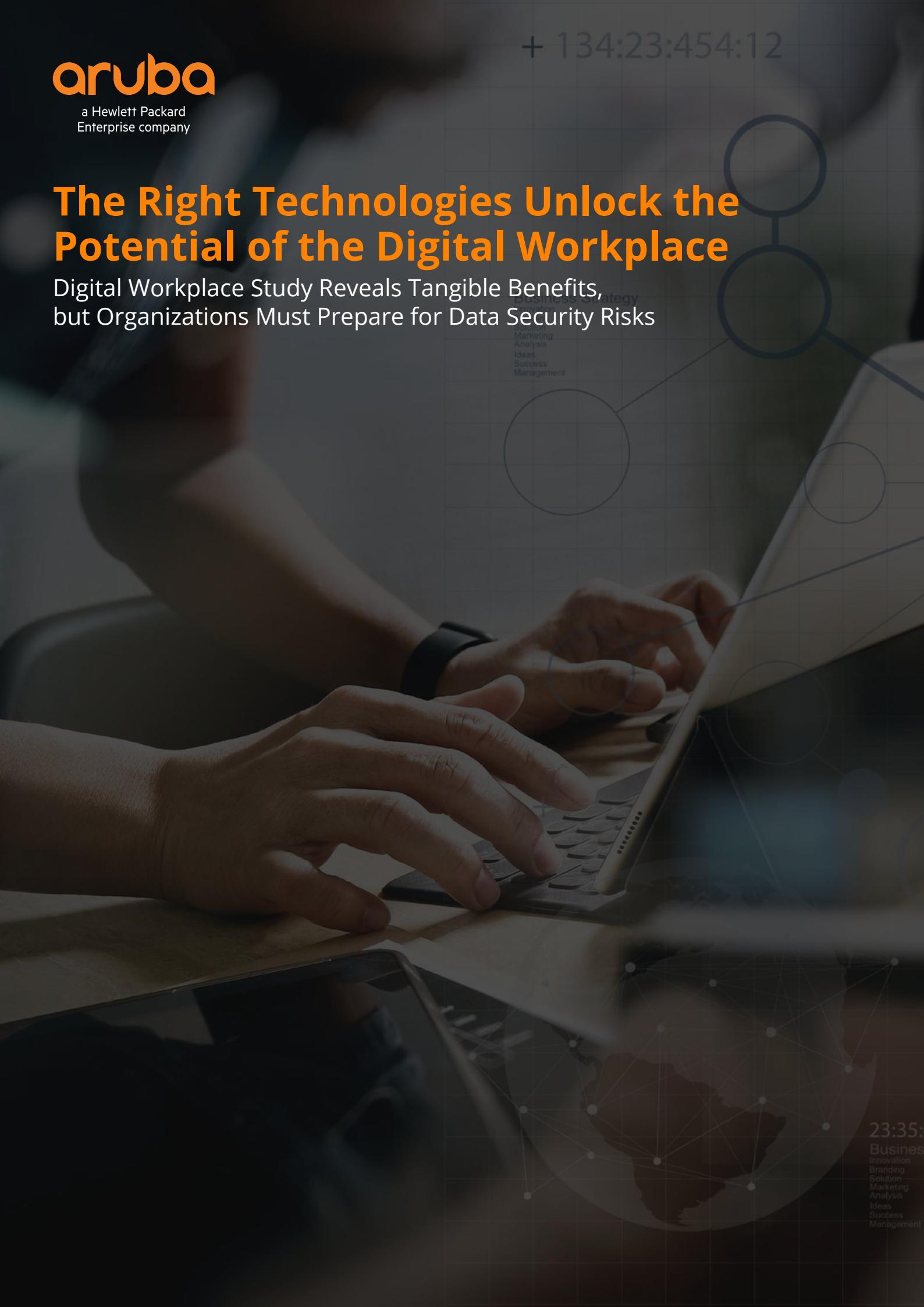




a Hewlett Packard
Enterprise company

The Right Technologies Unlock the Potential of the Digital Workplace

Digital Workplace Study Reveals Tangible Benefits,
but Organizations Must Prepare for Data Security Risks



23:35:
Business
Innovation
Branding
Solution
Marketing
Analysis
Ideas
Success
Management

Business Strategy

Innovation
Solution
Marketing
Analysis
Ideas
Success
Management

Executive Summary

What is the future of work? No matter the answer, it's a given that technology will play a significant role. Advancements in mobility, the Internet of Things (IoT), cloud, and artificial intelligence hold a tremendous amount of promise, but how can organizations find the right formula? How will investments pay off? This study looks at the technology and human aspects of the workplace to aid business and IT decision makers who seek to understand the benefits and risks of a digital workplace.

Today's workforce isn't just driving the consumerization of IT, but also accelerating the consumerization of the workplace. These changing employee behaviors and expectations are shaping the way organizations think about the role of technology in the workplace. As the research in this report suggests, more digitally-driven workplaces not only foster productivity, but employee wellbeing, motivation and job satisfaction. The organizations that capitalize on implementing a digitally-enabled workplace will gain a competitive edge; indeed, the advantages of deploying new workplace technology go beyond helping employees finish tasks quicker, but also make the process more collaborative and enjoyable.

Simultaneously, companies need to be aware of the growing information security threats that are now a routine problem for increasingly connected organizations. Our findings suggest that the problem is as much about human failures as it is digital workplace design.

To understand the factors of employee-driven changes in the workplace, and to help companies navigate these changes to gain a competitive edge, Aruba conducted a global study of 7,000 employees across 15 countries. The study explores current levels of and attitudes towards digital working, its benefits and how it affects worker behavior.

This report examines four trends that emerged from the research:



Trend #1

The promise of the digital workplace is here and driving the future of work: Propelled by advances in consumer technology and smarter spaces powered by IoT, the physical workplace is becoming more interactive and personalized, thereby unlocking significant efficiency, collaboration and productivity gains for employees.



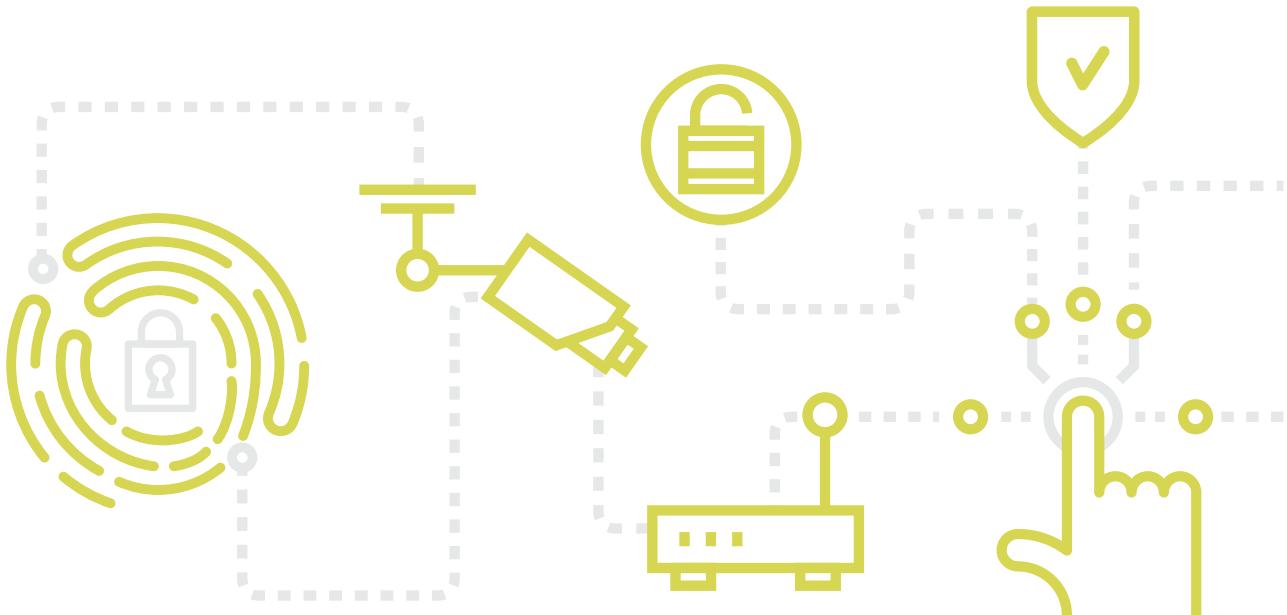
Trend #2

The rise of Digital Revolutionaries: Delivering more than productivity, digital tools also unlock a series of human benefits: Beyond efficiency and productivity gains, companies making greater use of workplace technology and IoT are seeing an increase in employee job satisfaction, wellbeing, professional development and personal satisfaction. Our research also reveals a divide between people we define as Digital Revolutionaries – employees who work in fully-enabled digital workplaces where new workplace technologies are in widespread use – and Digital Laggards, those who work in less engaged workplaces that risk falling behind.



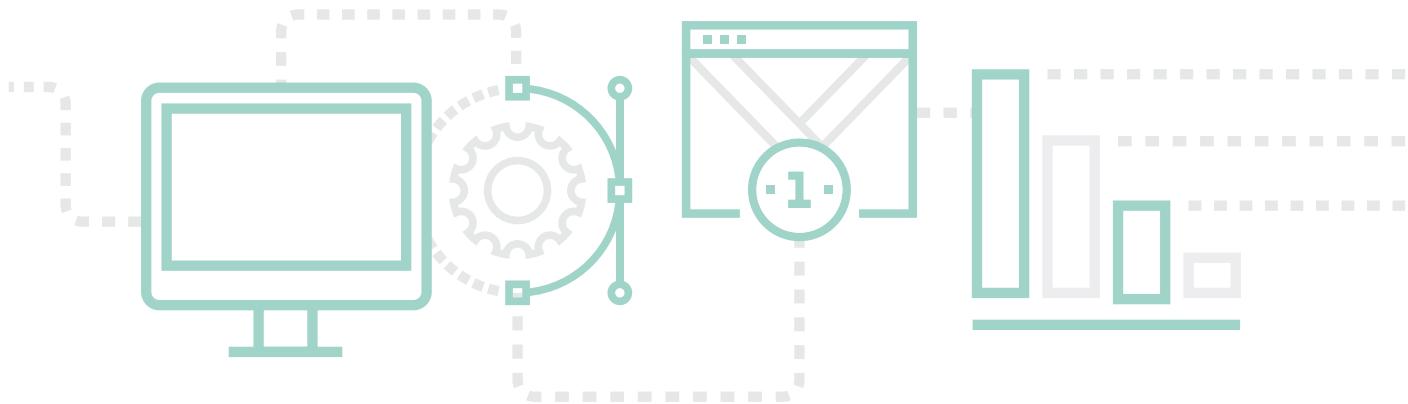
Trend #3

Security risks emerge through employee actions: New digital tools and IoT-driven environments introduce new cyber security risks. To protect themselves, employers must focus not only on their workplace infrastructure and network security, but also on the behavior of their employees. Our research reveals that employees continue to take risks around connectivity and information security, despite being highly aware of cyber threats.



Trend #4

The future is bright: Continued advancements in digital technology and automation pave the way for better workplace experiences: While automation can be perceived as threatening job security, our research found that there was widespread enthusiasm for the benefits that it can create; particularly in building smarter, more intuitive working environments that allow people to focus more on doing their jobs effectively.



As well as examining these attitudes and behaviors, this report provides recommendations for how IT leaders can act on the opportunities of emerging digital technologies. Above all, it calls for businesses globally to closely evaluate what inspires and empowers their workforce, and to reimagine the role the IT function plays in building technologically advanced working environments that allow employees to be more productive, and satisfied.

How did we detect and identify the 'Digital Revolutionaries'?

The two groups, 'Revolutionary' and 'Laggard', were identified in the study by those that reported having a completely digital workplace, where new technologies are in widespread use throughout the organization, against those who said technology was in limited use or not used at all.

TREND #1

The promise of the digital workplace is here and driving the future of work

Workplace technology is no longer just about the tools that a company provides, but the entire working environment it creates



The trend

As organizations increasingly communicate and do business through digital channels, the nature of work is diversifying. It is not just about smartphones and secure Wi-Fi connections any more. Today's digital workplace is moving beyond a traditional office environment with technology bolted on, to one in which the entire infrastructure and physical space are designed around, and optimized through, digital tools.

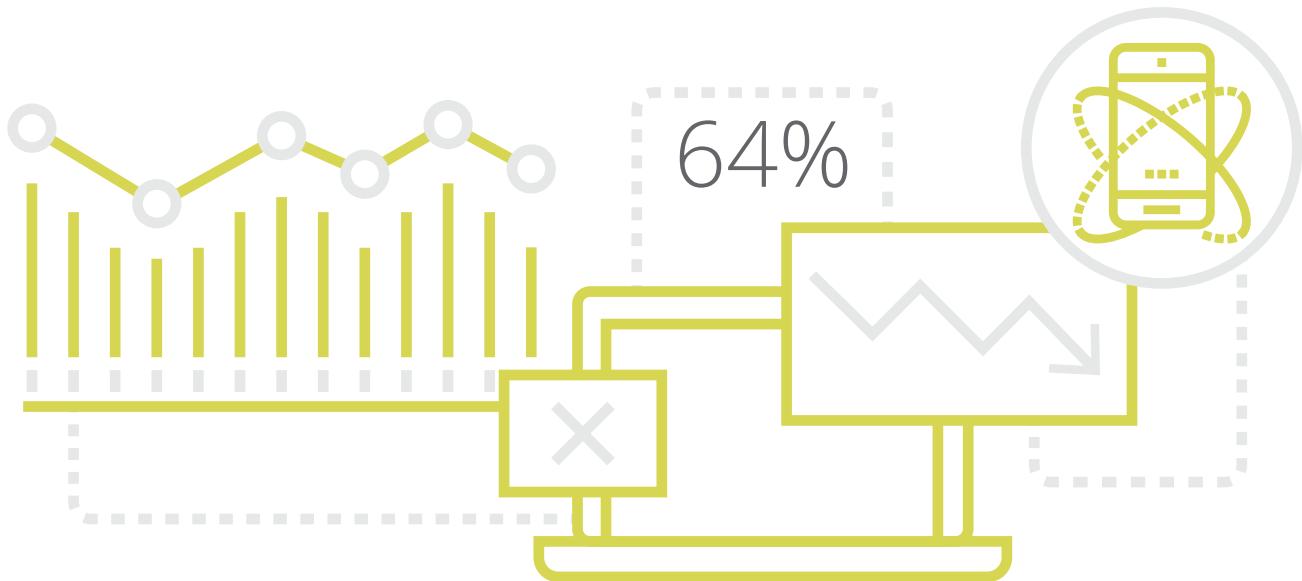
Our study revealed not only high adoption of standard technologies, from Wi-Fi (supplied by 82% of organizations surveyed) to cyber security (67%) and cloud applications (43%), but traction with a new generation of technologies. Blurring the lines between facilities- and IT- managed functions, these IoT-driven technologies automate temperature controls and lighting (24%), voice-activated and wireless conference room AV technology (23%), and bespoke corporate mobile apps (23%) offering location-based information.

The consumerization of technology is reflected by a clear appetite from employees for a workplace that is digital by default. Almost two-thirds of employees in our study (64%) said that they thought their organization risked falling behind if new workplace technology wasn't integrated. In addition, 71% said they think the workplace of the future should be fully automated, with 72% stating that the workplace should become a completely interactive environment that automatically updates and adjusts itself, while 61% called for virtual and augmented reality to play a stronger role.

Increasingly, people are looking for a digitally-powered working environment that makes everything – from controlling office climate to booking a meeting room – more efficient. As ever more advanced consumer technologies, such as home automation products, become a feature of most employees' personal lives, they will expect the same benefits in their place of work.

The results from the study could not be clearer: Organizations and workplaces that fail to get ahead of the curve on the new generation of workplace technologies will limit employee results and lose their competitive advantage.

"Almost two-thirds of employees in our study (64%) said that they thought their organization risked falling behind if new workplace technology wasn't integrated."



"No matter the industry, we're seeing a move toward human-centric places as enterprises strive to meet rapidly changing expectations of how people want to work. This depends upon combining advances in technology - which includes furnishings - with the cognitive sciences to help people engage with work in new ways. This will not only mean singular, premium experiences for individuals, but also the opportunity for organizations to attract and retain the best talent.**"**

Joseph White, Director of Workplace Strategy, Design and Management, Herman Miller

What does this mean for IT?

- **You're on the track to success:** IT leaders that are investing in new digital workplace technologies are aligned with the evolving needs of the workforce.
- **You need a roadmap and partners:** Given the majority of workers globally (64%) believe traditional offices will become obsolete, there is a clear mandate for IT to work with business managers, employees, and other stakeholders, to create a roadmap toward the interactive digital workplace.
- **Preparing for the future starts today:** Start investigating whether your underlying technology infrastructure is flexible enough to support emerging use cases to come. If it can't, start planning now, so IT becomes a supporter, not a barrier, to the future of work.

TREND #2

The rise of Digital Revolutionaries: Beyond productivity, digital tools unlock a series of human benefits

As workplace technology becomes more prevalent, the modern workplace is dividing into those who are seizing the benefits of digital technologies and those who are falling behind



The trend

Unsurprisingly, attitudes toward technology in the workplace and its adoption vary among employees and across different organizations. In our study, we identified two distinct groups within today's workforce: The Digital Revolutionaries, employees that work in fully-enabled digital workplaces where new workplace technologies are in widespread use; and the Digital Laggards, employees who reported their working environments lack digital tools.

Workplace technology is often associated with efficiency and productivity, but that is just one level of benefits unlocked by implementing a digital workplace. We discovered that there are significant personal satisfaction and wellbeing advantages for Digital Revolutionaries as a result of working in more digitally-enabled workplaces.

The Revolutionaries are those who both get, and expect, a digital infrastructure from their employers, and are more open to the benefits it can deliver. In our study, 75% said that their employer allows them to use their own personal technology at work, and, of those whose organization has invested in digital technologies over the last 12 months, 73% said that digital technology has increased their productivity (compared to 51% of Laggards).

From work-life balance to personal motivation and professional development, Revolutionaries recorded significantly higher levels of personal and professional gains. Almost three quarters (74%) said their job satisfaction is good or very good, while 70% reported their work-life balance to be good. Revolutionaries were also 59% more likely than Laggards to say that they were learning new skills in the workplace, 61% more likely to say that they effectively accomplished multiple tasks during the day, and 65% more likely to believe their role is strategic to their organization.

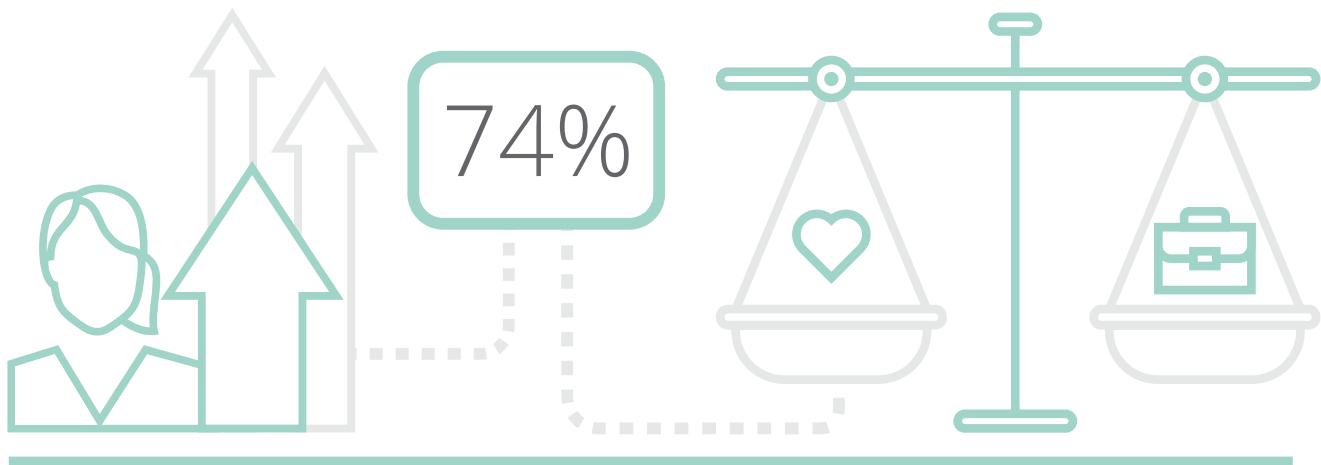
Among Revolutionaries, three quarters report positive wellbeing in the workplace, compared to 50% of Laggards. A similar proportion (73%) praised their company's employee culture, with only 39% of Laggards reporting the same.

An important broader conclusion from the study is that Revolutionaries are also more likely to be positive about their work environment, and organization, in general. The vast majority (73%) praised their company's vision, compared to just 38% of Laggards; while 78% were positive about the environment at work, 75% about work culture and 67% about levels of creativity.

When implemented correctly, our research reveals the significant dividend that well-designed and well-implemented technology can deliver for today's companies, by not only helping people to do their jobs better, but to be happier and more fulfilled at work. Technology does not have to limit or undermine the role of people; in fact, it can support and enhance it. Recent advances in technology provide a catalyst for organizations to jump-start a more productive relationship between people and technology in the workplace and elsewhere.

Workplace technology has the opportunity to be the leading force for wellbeing at work. The study found that 80% of all workers say personal wellbeing and job satisfaction is important to them; addressing this need should already be one of the most pressing concerns for any organization. Given the premium that most employers now place on employee wellbeing and job satisfaction in a highly competitive labor market, the need to invest in creating the connected, digitally-enabled workplaces that can enable those things becomes essential.

Almost three quarters (74%) of Revolutionaries said their job satisfaction is good or very good, while 70% reported their work-life balance to be good.



What does this mean for IT?

- **Worker wellbeing and comfort are not fads:** The study reveals that workers overwhelmingly indicate that employee wellbeing and job satisfaction are important. Therefore, investments in high quality digital workplace experiences are justified.
- **A digital workplace directly relates to a more competitive workforce:** The data shows that Digital Revolutionaries are 59% more likely than Laggards to learn new skills. This suggests that the benefits of building a properly designed digital workplace not only has immediate productivity benefits but is an investment in employee development, which has lasting positive effects for companies.
- **Design your solutions around great user experiences:** The study revealed the technology investments that benefit Digital Revolutionaries the most (such as upgraded conference rooms, mobile-cloud apps and smart building services) are well-designed and well-implemented. This means that network engineers need to spend more time with their endpoint, application developer, and line-of-business counterparts to co-develop great solutions.

TREND #3

Security risks emerge through employee actions

A more connected workplace is inherently more vulnerable to cyber-attacks, a risk that is compounded by the behavior of employees



The trend

Although the digital workplace brings clear benefits to both companies and their employees, it also introduces new challenges. A more connected organization that runs on digital platforms and applications is also more open to security breaches. As companies invest in greater digital and connected physical infrastructures, they must also do more to ensure compliance around information security and data privacy. Employers need to understand the mindset of the employees who are driving change towards more technological workplaces.

Our research found that the approach of employees can be problematic for employers who are looking to limit their cyber security liability. The good news is that employees are thinking about cyber security, with 52% saying they consider it continuously or often.

However, despite being in-tune with and aware of their companies' security and privacy protocols, employees still engage in risky behavior that may circumvent traditional security measures. A quarter (25%) have connected to potentially unsafe open Wi-Fi in the past twelve months and 17% have allowed someone else to use their device. Overall, 70% of employees admitted to some kind of risky online behavior over the past year, whether that is sharing or duplicating their password, copying work files onto a personal device or connecting to an unknown network.

All these behaviors occurred despite the fact that 92% of employees said they are aware of the potential impact of a company data breach, while 77% said they consider cyber security to be 'very' or 'extremely' important. The gap between thought and action on cyber issues becomes even more apparent when you consider that just 53% said they use the cyber security software provided to them by their employer.

Given the significant cost that comes with any kind of cyber security breach, companies need to address the problem of employees who are more lax in their everyday security behavior than their stated attitudes would suggest. It is not enough for organizations to invest in secure networks and cyber software; they also need to acknowledge the risks posed by human error, and to understand the irony that it may be the more digitally inclined employee who poses a greater risk than the one who knows and cares less about the cyber threat.

"70% of employees admitted to some kind of risky online behavior over the past year."



What does this mean for IT?

- **More connected things create more points of entry:** Security policies must follow users and things regardless of where they are or how they enter the network.
- **Security must adapt with ever changing, unpredictable behaviors:** IT professionals cannot assume that workers at any level will adhere to security best practices just because the workers are more trained or aware of cyber security risks. Thus, IT must plan to protect its users with advanced security tools that are user friendly, leveraging behavioral analytics.
- **Poor design leads to risky business:** Badly designed security technologies or policies that interfere with worker productivity tempt digitally-savvy workers to circumvent corporate protective measures altogether. Fortunately, a new generation of technology solutions, from the network level to the application layer, are making the "usability vs. security" balance more attainable.

TREND #4

The future is bright: Digital technology and automation pave the way for a better workplace

Digital technology will continue to create better workplace experiences, and workplace automation should be embraced



The trend

Automation, enhanced with machine learning, has the opportunity to significantly improve workplace productivity and enable employees to expand into more strategic roles.

Our research found that there was almost a unanimous belief among all employees (93%), both Revolutionaries and Laggards, that increased use of digital technology will lead to improvements in the workplace. A large number of respondents believe that the future workplace will be more efficient (56%) and more collaborative (52%) and create a more appealing work environment (47%), while a majority (57%) said they would be happy to share more personal data in return for more personalized tools and experiences.

“ The very nature of the term “workplace” is being transformed, as companies begin to realize that effective space is experience-centric, and must accommodate work styles spanning generations and personality types. This ushers in new processes where IT solutions, building systems and furnishings interact harmoniously with humans to create such spaces. Regardless of your enterprise’s specific situation, when spaces become active participants in the user experience it benefits the bottom line. After all, workers who feel comfortable in a space get their tasks done. Those who don’t will eventually move on to a more inviting option. ”

Francisco Acoba, Managing Director for Deloitte Strategy & Operations.

This general optimism towards technology and the workplace it can create extends to the topic of automation. Almost three quarters (71%) of respondents said they would welcome a fully automated workplace, so that working conditions such as light and temperature could be adjusted in real time to individual preferences. Similarly, 72% thought all office equipment (such as the height of desks) should be automatically adjustable, and 71% say that biometric data should replace passwords. Considering the repetitive, uninteresting, manual or semi-automated tasks in many of today’s organizational workflows, it is not difficult to see why Digital Revolutionaries envision automation as an opportunity to learn new skills and move into more strategic roles.

Automation can also play a significant role in balancing the need for productive employee experiences and risk-taking, by proactively combatting unknown security threats as they appear. Approaches such as UEBA (User and Entity Behavior Analytics) can scan continuously for threats or risks on an individual profile basis, detecting anomalies in the network and taking preventative action before the risk spreads, and before human IT teams become aware.

While automation is often discussed in terms of what it might do in the medium to long-term future, our research is a reminder that there are tangible benefits to be unlocked through the automation of equipment and the office environment today. It found both that the vast majority of employees are enthusiastic about this prospect, and that they are willing to make trade-offs such as personal data for personalized tools. Almost all welcome the idea of a workplace that is powered by technology in every regard, in a way that can help them to focus on the high-value elements of their job, and to work both more happily and effectively.

“Almost three quarters (71%) of respondents said they would welcome a fully automated workplace, so that working conditions such as light and temperature could be adjusted in real time to individual preferences.”



What does this mean for IT?

- **Invest in programmable and open systems:** Core infrastructure that is inherently programmable and open will support continuous digital workplace innovation and automation well into the future.
- **Partner with lines-of-business early and often:** Groups outside of IT may champion the next digital workplace use case requirements. Getting to know other stakeholders, such as real estate, early on brings IT into the initial design and strategy discussions.
- **Invest in tools that are data and analytics ready:** Recognize that the network, with its potential for secure connectivity along with location and identity context, is the “central nervous system” for the digital workplace. Look to pair the network with other systems rich in data APIs to create next generation experiences.

Conclusion

Today's business world is increasingly shaped and driven by digitally savvy, digitally demanding employees at all levels, whom our study calls Digital Revolutionaries. The expectation is that employers will not just provide computing and communications tools and a dumb physical workspace, but a digitally-powered workplace that is increasingly smart, interactive, personalized and automated.

Workplace technology is no longer simply a plug-in enablement tool to help people do their work; it is a defining set of adaptive and interactive experiences that help shape the identity of a company's culture.

Companies need to embrace this new reality, not just because it is what their current and future employees want, but because there are clear advantages in doing so. Our research has demonstrated the wellbeing and job satisfaction dividend of a more digital workplace, beyond the more obvious benefits of efficiency and productivity. As employers battle to recruit and retain the best talent, technology will increasingly become a core area of competitive advantage.

At the same time, companies must not lose sight of the security threats inherent in being a more connected organization. The relatively lax attitude of employees towards cyber security exposed by this research presents one of the most pressing challenges. It suggests that people will not always act in accordance with their level of knowledge about cyber threats, and that more advanced behavioral security tools may be required.

The goal for every organization must be to maximize productivity without compromising security in any way. This requires inter-group cooperation throughout IT, and greater focus on end user experiences as well as system capabilities.

The report conclusions point to the need for companies to empower their IT leaders with the budget and authority to invest in new technologies, develop cyber awareness and best practices, and provide employees with the workplace and tools that they increasingly demand.

This empowerment makes the IT function of any business a strategic as well as technical player, one that has a crucial role to play in creating the conditions for employees to thrive. The companies that thrive as digital workplaces will be those that start to see technology less as a series of tools and more as fundamental ambient infrastructure. And to do that, they have to start seeing the role and purpose of their IT departments in a new light too.



Research methodology

A total of 7,000 employees were interviewed in April and May 2018. The respondents were from organizations of all sizes, across both public and private sectors, but with a focus on the industrial, government, retail, healthcare, education, finance, and IT/technology/telecommunications sectors. Interviews were conducted both online and via telephone using a rigorous multi-level screening process to ensure that only suitable candidates were given the opportunity to participate. Respondents were interviewed in the UK, Germany, France, the Netherlands, Spain, UAE, the US, Singapore, Japan, Australia, India, Brazil, Mexico, China and South Korea.

IT cheat sheet

IT recommendations for a better digital workplace

Create a digital workplace roadmap and identify partners

Inspect underlying technology infrastructure for flexibility

Invest in new digital workplace technologies in line with the evolving needs of the workforce

Design solutions around great user experiences

Create IoT-ready security policies that follow users and things

Deploy analytics to ensure security can adapt with ever changing, unpredictable behaviors

Invest in programmable and open systems

Partner with lines-of-business to agree open and collaborative digital workplace design

Pair the network with other systems rich in data APIs to create next generation experiences