



10 technology trends that will reshape businesses in 2022

How to make the most of your IT spend

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Introduction

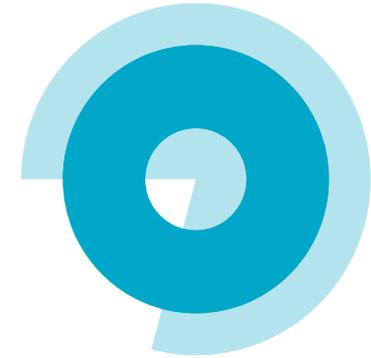
The past two years have been a period of immense change for all businesses, regardless of size or industry. Businesses and employees alike have adapted to these changes by harnessing technology to enable productivity, collaboration, and communication. For some businesses, this was the first time they truly embraced the cloud with Microsoft Teams, cloud storage and IT systems to enable remote working. For earlier adopters, making the move to remote or hybrid work was simple as they already had the necessary systems in place. Regardless of where your business is on the journey to digital transformation, 2022 will be an exciting year with new technology trends that will reshape the way business's function.

Looking Back at Technology in 2021

The Move to Hybrid Work

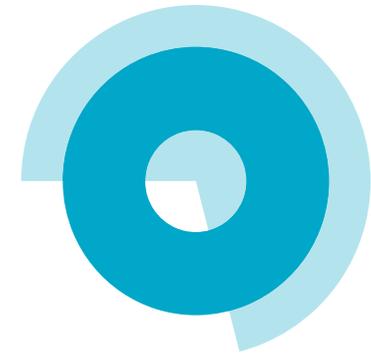
The greatest business change in 2021 was the move to hybrid work. There are many benefits associated with remote working, including a healthier work-life balance, improved flexibility, and for some employees, increased productivity. However, there are also some key benefits to office-based work, such as better workplace connectedness and easier communication and collaboration. To leverage the benefits of both models, many businesses are moving to a hybrid work model. [With 69% of employers expecting staff back in the office by February 2022, evidence suggests that 79% of businesses plan to, or already have, adopted a hybrid work model.](#)

For a hybrid workplace model to work effectively, many factors must work together. A major factor is the use of technology and IT systems, employees can only communicate and collaborate whilst working in different locations if there's a solution to enable it. Similarly, the move to hybrid work potentially carries significant security risks as businesses need to protect their own network and endpoints, as well as consider their employees' home networks.



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The Rise of Ransomware

Throughout 2021, [37% of all businesses were affected by ransomware](#). These attacks targeted small businesses, as well as major corporation and public infrastructure. One of the largest attacks includes the Colonial Pipeline attack, which caused a state of emergency in the United States. In Ireland, there was a large-scale attack on the Health Service Executive (HSE), which took over 4 months to regain full use of their networks, and the perpetrators released confidential medical information for 520 patients.

The majority of these attacks were carried out by an increasing number of high-profile ransomware gangs. These gangs demand an excessively high ransom, and in many cases the only way for businesses to receive the decryption software is to pay this ransom. In the attack on the HSE, they were able to decrypt the data without paying the ransom. However, overall costs associated with this specific attack is believed to have cost the Irish Government at least €100 million.

Widespread Adoption of Microsoft Teams

In Q3 of 2021, [Microsoft Teams surpassed 145 million daily users](#). This increased adoption was due to several factors, including the rise of remote and hybrid working, as well as the plethora of new features Microsoft has added to the product. Microsoft Teams is a communication and collaboration platform that allows employees to meet, chat, call, and work, all in one space.

In 2021, Microsoft introduced new features to the platform, such as a new whiteboard, breakout rooms and better integrations with other products in the Microsoft 365 suite. There's no doubt that throughout 2022 Microsoft will continue to evolve Teams to suit the changing needs of businesses and allow for even more effective communication and collaboration.

10 technology trends that will reshape businesses in 2022

Increase in Process Automation

To increase profitability, businesses aim to increase revenue whilst reducing costs. A growing trend to reduce costs is through automation. A recent study found that [45% of work activities could be automated using already existing technologies](#). When activities are automated, employees can spend more time being productive and working to increase revenue within a business. The tasks that are perfect for automation are repetitive, time-consuming tasks, and many of these can be automated with Microsoft Power Automate.

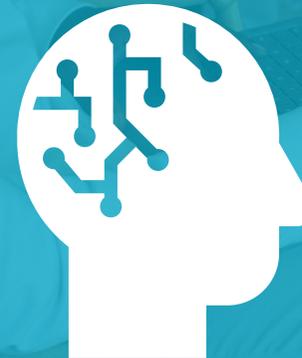
Power Automate allows businesses to automate processes quickly and securely. The product uses low-code, drag-and-drop tools that enable employees of all skill levels to automate repetitive, mundane tasks with ease. There are also hundreds of connectors for Microsoft applications, as well as many third-party applications and services. An example of a process that can be automated within Power Automate is the provisioning of an Azure Active Directory user. Once this process is automated an HR department can onboard new employees without needing assistance from an IT team, saving both departments significant time, and providing a better hiring experience for employees. In 2022, more businesses will use automation solutions, such as Power Automate, to drive business transformation and reduce costs, and increasing productivity.

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Continued Rise of AI and Machine Learning

Over the past 5 years Microsoft has invested heavily into AI and machine learning (ML). The advancements made are now being implemented into many Microsoft products. This has allowed businesses to take advantage of AI and ML without having to invest directly into the technology.

There are many uses of AI within the Microsoft 365 suite. In Microsoft Teams, employees can now communicate with colleagues in different languages by using real-time translation of chat messages. AI is also used within the Editor function across Outlook, PowerPoint, and Word. This assists employees by providing advanced proofing and writing style suggestions. Using PowerPoint Ideas users can quickly and easily design slides and animations through the use of cloud-based AI. Dynamics 365 has also been transformed by machine learning and can now give predictive analytics to improve business processes. Microsoft aims to continue to develop these innovative technologies and find new uses in its full product range throughout 2022. This focus on AI and ML aims to empower people and organisations to work smarter and more productively.



Widespread Adoption of BYOD Programs

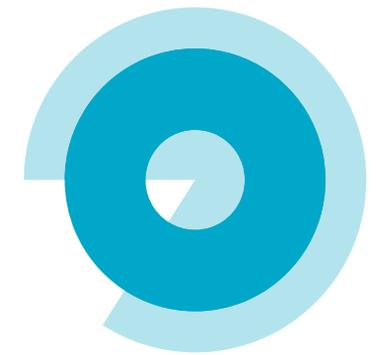
With employees returning to the office, [85% of businesses are enabling a Bring-Your-Own-Device program](#). Such a program has many potential benefits for both businesses and employees. If employees can use their own devices, especially laptops, the business can significantly reduce expenditure on hardware. For employees, being able to bring their own device allows them to use a phone or laptop they are already familiar with and have a single device for business and personal use. However, there are many security concerns associated with BYOD programs, and this is worsened as only [39% of businesses have a formal BYOD policy](#).

Due to advancements in virtual desktop and cloud PC technology, many businesses will be able to successfully implement a BYOD program, whilst still maintaining a strong security posture. The two key technologies to enable this are Azure Virtual Desktop (AVD) and cloud PCs with Windows 365.

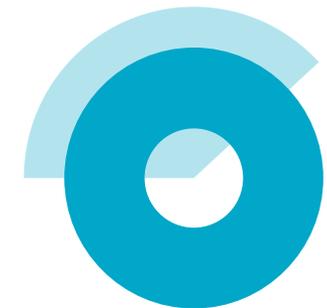
Azure Virtual Desktop is optimised for flexibility and suits businesses that require full control over the configuration and management of the virtual machines. With AVD it's possible to run multi-session Windows virtual machines, as well as remote app streaming. This is particularly useful when workloads require high levels of computing or are GPU intensive. AVD pricing is flexible and consumption-based and the level of computing and storage can be optimised for cost and experience.

If AVD is optimised for flexibility, Windows 365 is optimised for simplicity. It is a complete end-to-end Microsoft service with predictable per user, per month pricing. If a business wants to deploy cloud PCs, they don't need any VDI experience or skills, and if computing or storage requirements change, it's simple to scale each cloud PC to meet them.

Both these solutions are growing in popularity and 2022 will likely see a boom in businesses using them to leverage the benefits of BYOD programs, with AVD and Windows 365 enabling this trend.



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Passwordless Multi-factor Authentication

Many of the devastating cyberattacks of 2021 could have been prevented with the implementation of multi-factor authentication (MFA). MFA is an authentication process where a user must provide two or more forms of identification to login to their account. Azure AD Multi-Factor Authentication works by requiring two or more of the following authentication methods: something you know (typically a password), something you have (typically a trusted phone or hardware key), and something you are (typically biometrics, such as a fingerprint or face scan). There are many benefits to enabling MFA, but most importantly, it can [prevent 99.9% of account compromise attacks](#).

It may sound counterintuitive, however the next major advancement in password technology, is to stop using passwords. This is only possible due to recent innovations in biometrics, identity protection and the FIDO alliance. With phishing being the most common attack vector for cybersecurity incidents, passwordless authentication makes these attacks impossible as there's no password to phish. The security benefits alone make this authentication method an attractive option for businesses, however it's also more convenient to no longer require a password.

There are three options for deploying passwordless authentication within Azure Active Directory, Windows Hello for Business, the Microsoft Authenticator App and FIDO2 Security Keys. With these options growing in popularity, throughout 2022 more businesses will stop using passwords to increase security whilst improving the user experience.

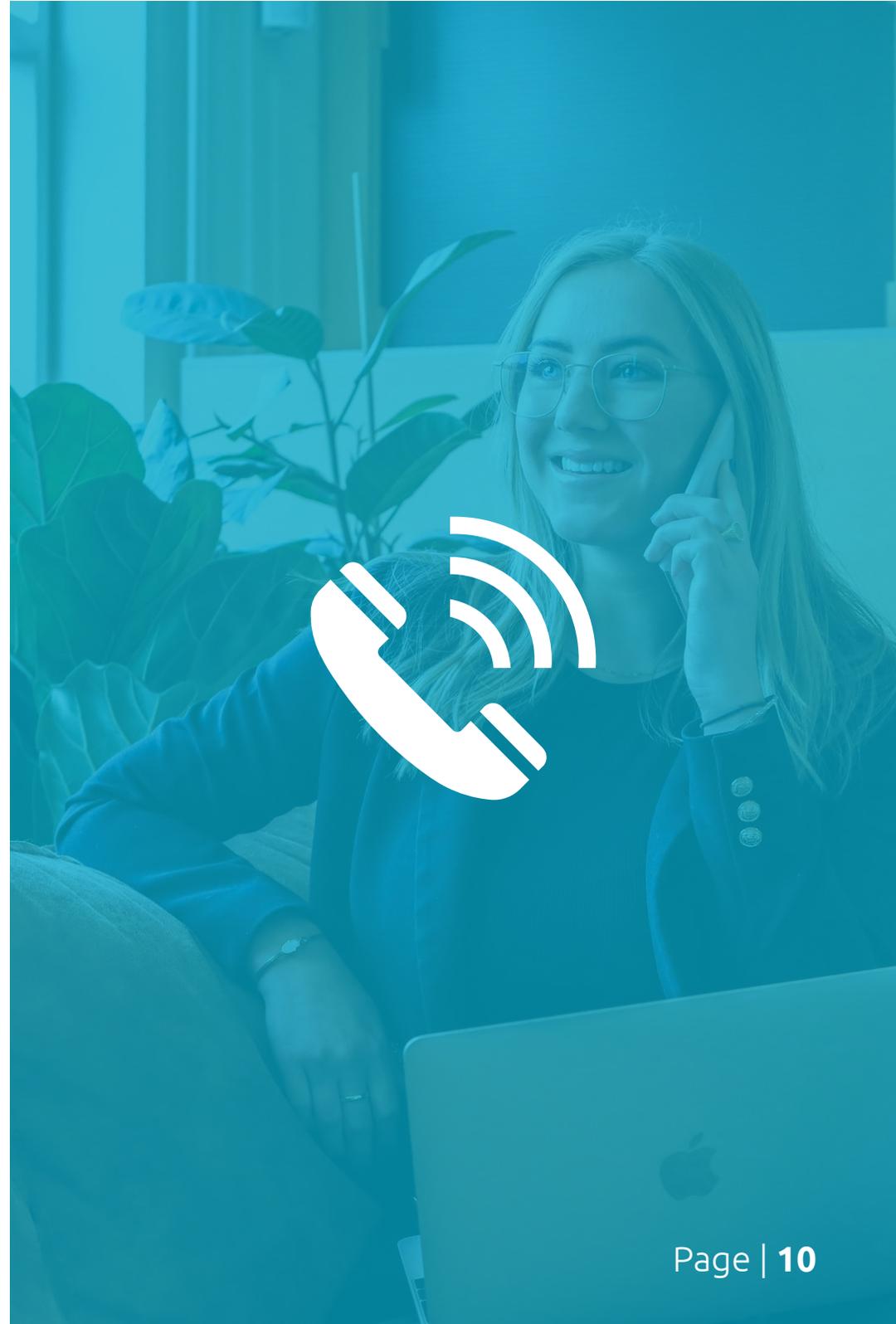
**99.9% of account compromise attacks
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authentication**



Widespread Use of Cloud-Based Phone Systems

Most businesses rely on some form of telephone system. Prior to the rise of remote and hybrid work, these were traditionally on-premises PBX systems. Companies using these systems struggled with the move to working from home, and many adopted cloud-based phone systems, such as Teams Phone which enables businesses to keep their existing phone number whilst allowing employees to make and answer calls from anywhere, on any device. This particular solution is also integrated with Teams, which means all calls, meetings, chats, and files are housed in a single application.

Moving phone systems to the cloud has many other additional benefits, including customised call queues, contact centre integration, and smarter auto attendants. Teams Phone makes use of AI to create better call experiences for businesses and their customers. In 2022, businesses that haven't already moved to a cloud-based telephone system will likely migrate to enable more effective hybrid working. Microsoft is also constantly evolving Teams Phone to suit changing business needs.

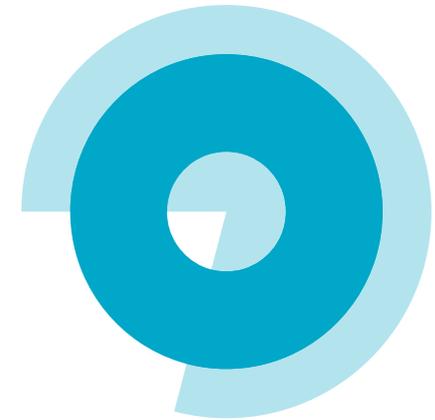


Use of Technology for a Sustainable Future

Across all industries and locations, businesses are working hard to become more sustainable to create a better world for future generations. This is evidenced as [80% of the world's top companies now report on their sustainability](#). As businesses move into 2022, a sustainability focus will not only help the environment, but also their bottom line. Sustainable business operations add brand value and a competitive advantage whilst reducing operational costs. Companies such as Microsoft have already become carbon neutral and have committed to becoming carbon negative by 2030.

At Microsoft Ignite November 2021, Microsoft announced the preview release of Microsoft Cloud for Sustainability - an extensible software-as-a-service (SaaS) solution that allows businesses to record, report, and reduce their environmental impact through automated data connections and actionable insights. The solution connects real-time data sources to provide accurate carbon accounting, measure performance against goals, and enable intelligent insights to make more effective action. This will aid businesses with accurate and transparent reporting on carbon emissions from the cloud, devices, applications, and other emission sources. It will also help businesses track their emissions to ensure they are on course to meet their sustainability goals, and if they're not, the solution will give actionable insights to help meet them.

As this solution approaches general availability, more businesses will be able to make 2022 the year of sustainability.



80%

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Emphasis on Security for All Businesses

In 2021, [4 in 10 businesses reported having some form of cyber breach or attack](#). The startling statistic is due to two main factors, businesses not being prepared, and cybercriminals evolving the tactics they use to target businesses. Businesses can't control how cybercriminals innovate, however, they can control how they prepare for a potential attack. With the continued rise of ransomware, it's essential that businesses have technology in place to prevent ransomware attacks, as well as a backup solution that can enable efficient disaster recovery if they do fall victim to an attack.

Email is still the number 1 attack vector, and this will continue into 2022, so it's important that businesses invest in a comprehensive email security solution, if they haven't already. An email security solution should be able to stop any malicious emails before they reach a user's inbox. The combination of an email security solution, zero-trust principles and multi-factor authentication will stop the majority of attacks. However, if a business is targeted by a sophisticated attack, it's essential to have a cloud backup solution to limit downtime and data loss. Regardless of the size or industry of any business, 2022 is the year to invest in a comprehensive cybersecurity solution, before it's too late.

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Innovative Workloads in the Cloud

Now, more than ever, businesses are running some form of workload in the cloud. For many businesses, moving to the cloud entails migrating legacy on-premises infrastructure, or bare-metal servers into the public cloud. However, recently there's been an increase in companies moving more advanced workloads to the cloud or creating entirely new workloads in the cloud. This increase is due to a growing trust in cloud computing, and innovations by public cloud providers, such as Microsoft Azure which currently offers over 6000 services, ranging from simple data storage, to quantum computing services.

A side effect of digital transformation and an increasing reliance on technology, is that businesses now collect an exorbitant amount of data. In 2022, more businesses will start harnessing the power of this with big data analytics. Azure has all the services businesses need to use big data analytics to make smarter data-driven decisions. The key service areas required for this are database storage, through Azure Lake Store or Azure Storage Blobs, and big data analytics services, through Azure Analysis Services, Data Lake Analytics and Azure Synapse Analytics. As cloud computing is becoming more cost effective, this allows smaller businesses to use the cloud to its full potential.



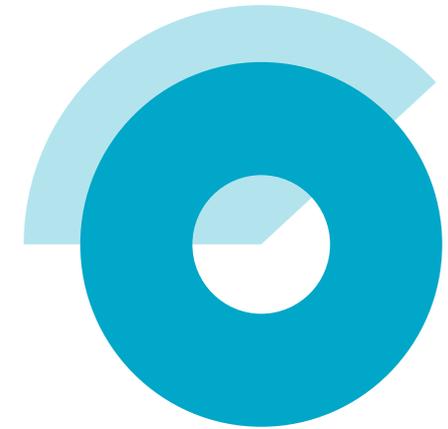
Widespread Adoption of Zero Trust Principles

With the everchanging face of cyberthreats the gold standard for cybersecurity is constantly evolving. For the greater part of the past two decades, business have used a castle-and-moat approach to security. This is where the security focus is on the network perimeter and the majority of security investment is in firewalls, proxy servers, and preventing intrusion from outsiders. In theory this approach seems logical, however it has some key limitations. The castle-and-moat approach allows those within the network, access to all data. This means that even if the moat is effective at keeping intruders out, it doesn't stop users with compromised identities or insider threats.

Due to these limitations, John Kindervag, from Forrester Research, created the zero-trust security model which assumes that there are malicious actors both inside and outside a network. Therefore, no users or machines are automatically trusted, and all requests must be authenticated and authorised. This verification is based on all data points, including user identity, device health, service or workload, classification, and anomalies.

Another key principle of the zero-trust security model is least-privilege access. This states that users should only be able to access the data they need to do their job, and nothing more.

Over the past few years, tech giants, such as Microsoft and Google, have adopted zero-trust architecture, and moving forward more smaller businesses are starting to adopt zero-trust principles. This trend is due to a combination of factors, the two major ones being changes in the global threat landscape, and the widespread availability of zero-trust functionality through Microsoft 365 and Azure innovations.



42%

of enterprise-sized companies are currently implementing a zero trust strategy

1010
1010

How to Make the Most of Your IT Spend in 2022

2022 will be an exciting year for many businesses as they continue their digital transformation journey. With recent innovations in productivity, collaboration, security, and communication, investing in a comprehensive IT solution can allow businesses to be more effective whilst improving the employee experience. If you want to make the most of your IT spend in 2022, contact us today and we will be happy to support your business through effective IT systems.



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