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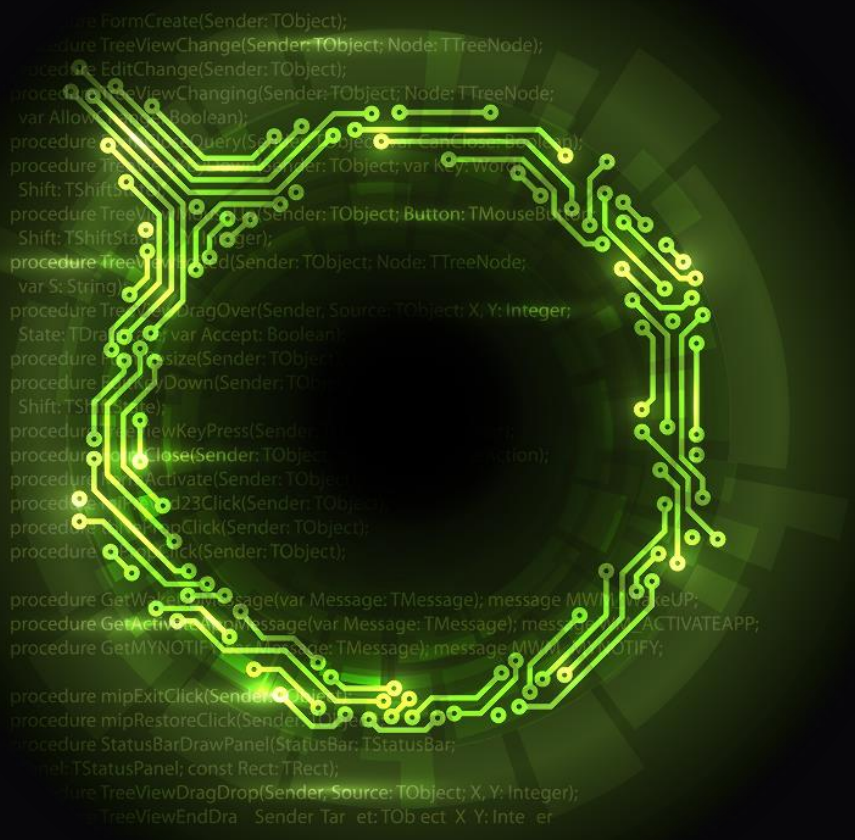

Digital Workplace Architecture

2023

Digital workplace architecture is a focus for all organisations today across different industries, primarily due to the shift to a hybrid workplace, increased cloud adoption, and importance of cyber security. Digital workplace architecture is made of several building blocks. It requires the right combination of multiple workplace technologies (including infrastructure and applications) to improve employee productivity and experience, secure hybrid working for all use cases, and maximise IT investments.

Background

In this article, we first consider the drivers of digital workplace architecture and the main benefits accrued from adoption. We then explore the architecture through three lenses: technology, people, and approach.

- Technology – building blocks of digital workplace architecture and technology states
- People – importance of people in workplace transformation
- Approach – key challenges and how to get started

Why do we need digital workplace architecture?

69 per cent of companies have recently reported talent shortages and difficulty in hiring, highlighting the importance of talent attraction and retention.[4] A combination of the right digital workplace technologies that are designed, implemented and supported appropriately is key to facilitate flexible working, enhanced employee experience and well-being.

Equally important is the heightened cyber security threat, with ransomware attacks being the most significant IT security risk in the UK today. Digital workplace architecture is a key enabler in a Zero Trust cyber security model which has now become essential to secure an organisations' identity, data and infrastructure in the new cyber threat landscape.

Our research shows that talent and security are major reasons for investing in digital workplace architecture. There are also other drivers, and these may differ for each organisation, depending on the situation, focus areas and industry. We list below some of the key drivers for modern workplace architecture that we have observed recently.

1. Talent

A renewed focus on **talent attraction and retention** that includes improved flexibility, well-being, employee experience, productivity, drives the need for digital workplace architecture.

2. Security

Increased **cyber threats** within the industry or **past ransom attacks** drive organisations to adopt and optimise digital workplace technologies to improve security posture.

3. External factors

COVID-19 caused organisations to react and adopt new workplace technologies in an accelerated pace to allow remote working. **Merger and acquisitions** also drive the use of modern technologies for ease of coexistence, separation and integration.

4. Organisational changes

Changes in business and **operating model** require businesses to adopt new technology architecture to enable the change.

5. Competition

The need to **gain competitive advantage** through innovation and improvements drive organisations to investigate and adopt new tools and technologies.

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Technology

To further understand the digital workplace architecture, we first explore the **different technology building blocks** and **architecture transition states**

Workplace technology building blocks

The digital workplace is made up several technology building blocks. Different organisations will have different requirements, but all are likely to require the right combination of tools to meet their needs. We have broken these down in to five key categories and shown a selection of representative vendors for each.

1. Unified Communications & Collaboration
Facilitating the hybrid workplace, modern capabilities including real time collaboration, whiteboarding, intelligent cameras, resource booking, and AI-enhanced employee experience platforms (including assistants, networking, learning, wellbeing and knowledge management).

Microsoft, logitech, vibe, zoom, SMARTSPACE SOFTWARE, CONDECO, Jabra

2. Business Applications
Business applications will become increasingly cloud based. Software as a Service (SaaS) adoption will continue to increase to improve business agility and reduce dependency on legacy apps. Some organisations will be evaluating use of process automation, citizen developer and modern business intelligence and data capabilities.

Power BI, mendix, SAP S/4HANA, salesforce, workday.

3. Identity
Robust identity provision, synchronised across services, providing Single Sign On (SSO) across the entire portfolio with single identity (including employees and third party). Advanced identity protection technology will be preferred to reduce risk of compromised user and identity. Privileged identity management and protection will be prioritised across all infrastructure.

okta, Azure Active Directory, ONE IDENTITY by Quest, SailPoint

4. Security & compliance
Comprehensive cloud-native and zero trust security tooling to control the risks associated with cloud services. Includes privileged access management, monitoring, detection and response, conditional access, modern web proxies and cloud app security.

CLOUDFLARE, zscaler, Microsoft Cloud App Security, netskope

5. Devices
Modern, portable computing will be widely available. Some organisations will invest in cloud-based Virtual Desktop Infrastructure (VDI). Systems will be provisioned and managed using cloud-native technology. Existing mobile management services will expand, providing a unified endpoint management service.

Azure, citrix, jamf

Architecture transition states

Most companies have progressed towards modernisation of their workplace architecture, driven by some of the factors discussed earlier. This, however, often starts with ad-hoc implementation of cloud products, without a long-term vision or strategy. Below we have considered what each of the technology building blocks looks like in a legacy, transition and modern architecture state.

	Legacy	Transition	Modern
 **1. Unified Comms & Collab**	• Email and file shares • Desk phones • Minimal asynchronous collaboration	• Mix of inner and outer loop channels available • Online meetings & teleconferencing available • Document management/SharePoint used	• Single platform used across the organisation • Flexible, integrated unified communication (UC) provision • Modern/hybrid meeting rooms • AI-enhanced experience platforms/assistants
 **2.Business Apps**	• Legacy apps, hosted and accessible only on-premises • All apps owned by IT	• Some SaaS and PaaS provision • Migration projects underway • Ad-hoc automation and data/intelligence projects	• Primarily SaaS/PaaS provision • Citizen development platform beyond IT • Mature, flexible support processes/op model • High quality data services & BI reporting
 **3.Identity**	• On-premises AD • Little/no external access • Possible multiple identities	• Synchronise identities to the cloud • Automated user provisioning • MFA implemented for some services/users	• Cloud identity is authoritative • Password-less authentication • Robust cloud B2B guest access controls
 **4.Security & compliance**	• Firewall/perimeter-based security • Ad-hoc/inconsistent logging and monitoring capabilities • Centralised egress/web proxies	• VPN for external access • Centralised endpoint monitoring • Initial implementation of zero trust • Some logging/monitoring implemented	• Proactive and predictive threat detection • Automated remediation/runbooks • Zero trust approach embedded • Comprehensive logs, monitoring and audit
 **5.Devices**	• No flexibility • Devices only available on site • Management only possible on-site	• Some laptop provision • Mix of traditional and cloud management • Devices running latest OS and productivity suite applications	• Range of provision to suit all work patterns, including VDI, DaaS, mobile/tablet, VR/XR • Devices are cloud-managed with user experience measurements

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People

The Digital Workplace architecture is only as successful as **the people** using and managing the technologies. In this section, we explore the importance of people and effective change management.

Don’t forget the people

A digital workplace architecture offers the opportunity to invigorate employee engagement and productivity and provides many benefits. However, it also represents a major change to users’ ways of working, IT and security operations. To maximise the chance of success, make sure to consider the human element of change across all areas.

Focus on your users

When planning a new workplace architecture, take the opportunity to really **understand how your users** are using systems today – uncovering hidden pain points in their experience can provide you with valuable information about where to **focus your modernisation efforts** and gain crucial **buy-in.**

Bring IT together

A digital workplace architecture spans across almost all the IT infrastructure domains. To truly embrace all these capabilities, it is essential that you bring people from across **IT and security** together to form a shared vision for the future. Colleagues may need to be trained and their knowledge updated – don’t assume everyone is already an expert.

Help people succeed

You are unlikely to see significant change in user behaviours unless you **help people to succeed** by providing high quality training and onboarding. Make sure to shout about exciting new productivity and time-saving capabilities – not just the technical aspects – so people want to get involved and learn more. Get into the business and find **power users*** to help **champion** new technology.

*Power User uses advanced features of software, programs, operating systems and devices.

Championing change effectively

When developing your change initiatives, make sure to consider the following areas to encourage a dynamic, adaptive programme – new technology should facilitate change, not drive it.

1. Have a clear goal

- Know what you're trying to achieve and articulate this clearly. Consider how you can break change down into manageable stages or phases.
- Be ambitious but be mindful that change can be difficult. People may not have time, desire or confidence with technology.
- Understand your organisation's appetite for change. If needed, first work on improving these underlying factors.

2. Don't forget the 'why'

- Change for its own sake is likely to fail, so make sure you have a clear reason why change is necessary.
- Change needs to benefit the business, but people are not likely to engage unless you can answer 'what's in it for me?'
- Understand the different roles in your organisation and what they need from their modern workplace. Summarise these into distinct 'personas' that drive your actions and guide your effort.

3. Nurture the grassroots

- Encourage organisational leadership to publicly embrace the change – leading by example will set the tone and encourage others to do the same.
- Develop a 'champions' network, made up of early adopters who can amplify and add richness to corporate comms channels.
- Encourage people to try things and experiment. Run a range of different events to spread the word and get people onboard with the change.

4. Show, don't tell

- People like stories, so show them the use cases of the new technology enhancements and how they could benefit them (guided by the 'personas').
- Develop formal training materials and consider how to link into your org's existing learning channels.
- People learn differently, so develop a range of different training and onboarding materials to suit all learning styles.

5. Create a positive feedback loop

- Consider ways to encourage and reward desired behaviours. There are a ranger of levers, including public recognition/appreciation, gamification and monetary awards.
- Be sure to communicate success stories widely – once people see others benefitting from the new technology, they are more likely to engage themselves. Develop strong working partnerships.
- Consult widely and listen closely to feedback.

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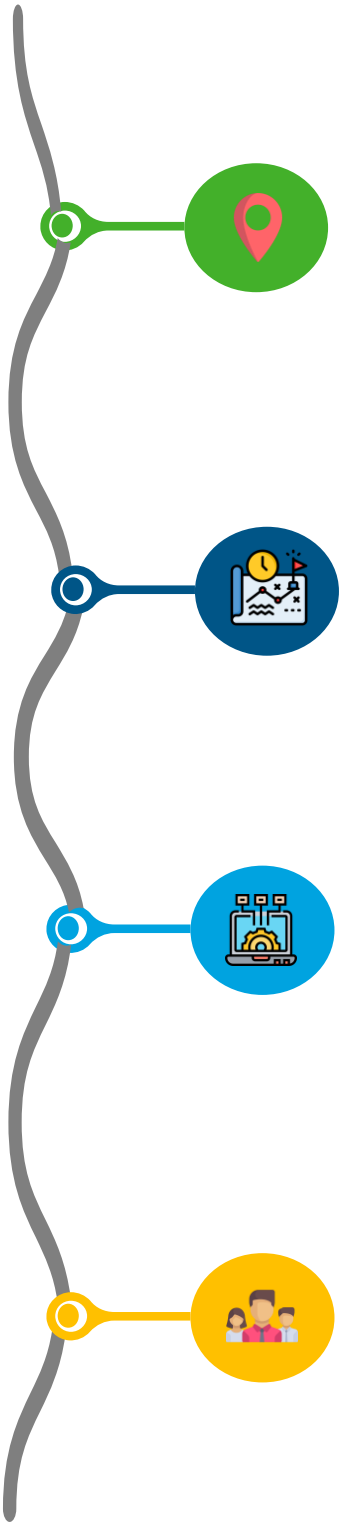
Approach

Next, we discuss successful approaches to adopt digital workplace architecture and key challenges faced by organisations throughout the adoption.

How to get started on the transition

To modernise your workplace architecture, the leadership first needs to have a strong knowledge and understanding of the current state of the organisation, its' strategy, vision for future, existing and future technology as well as who are the people working in the company and what are their workplace needs.



Current State and Vision

- Determine at what state your organisation is currently at : legacy, transitional or modern?
- Where do you want to be?

This is done by:

- Evaluating your needs and capturing requirements
- Organising workshops, interviews and surveys to understand your organisation
- Determining your goals for future growth and development
- Understanding the high-level timeline

Strategy

- Clarify your organisation's strategy and operational model.

This is done by:

- Collecting data on OP model, infrastructure, organisational structure
- Analysis of data gathered including OP model, infrastructure design, network requirements
- Highlighting specific areas of focus

Technology

- What technology do you currently have and what are the gaps to deliver the modern architecture?
- What technology do you want to use in the future?

This is done by:

- Analysing further the data gathered through interviews, workshops and surveys relating specifically to technology
- Understanding your technological needs and how these will change in the future to support your evolving strategy
- Plan technology deployment in an order that will benefit your org most quickly

People

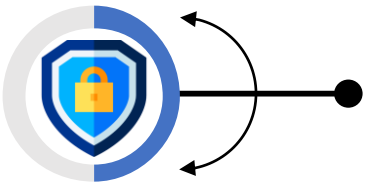
- What are the types of users you have in the organisation?
- What are their current needs and are they met from the workplace perspective?

This is done by:

- Engaging with employees through workshops and user experience surveys and digital workplace experience tools
- Creating use cases, user personas and baseline UX report to understand your people better and evaluate gaps in their UX satisfaction
- Highlighting specific areas of focus

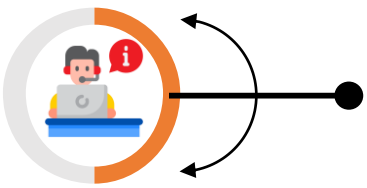
Challenges in moving from legacy to modern architecture

Below we have identified the most common challenges encountered from our experience when organisations transition to modern architecture. To ensure successful transformation and avoid technical debt, these should be considered during the transition to modern architecture, along with other organisation / industry specific challenges.

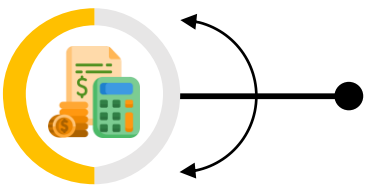


Security & compliance implications – moving infrastructure to the cloud requires different ways of managing data, as well as considerations for data residency and storage.

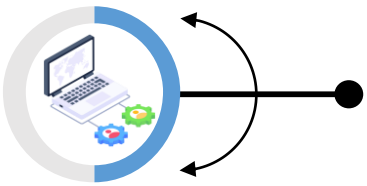
Design & integration – isolation can happen when implementing new technology, without considerations on how it integrates with wider tech stack and overall business model. Additionally, lack of user focused design thinking prior to technology implementation is a challenge faced by many organisation.



People & Culture – new technology and a new operating model requires cultural change management and provision of support to employees to ensure a smooth transition.



Cost & prioritisation – further challenges faced by organisations when transitioning to modern architecture is cost of new technology implementation, licensing, prioritisation of the wrong areas of improvements, not having sufficient budget to address key areas.



Device & App Management – flexible working implies usage of various devices, therefore companies need to have policies and resources for device management. Application rationalisation needs to be conducted to ensure cloud compatibility.

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Conclusion

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The digital workplace architecture is fundamental to enable modern ways of working securely as the adoption of hybrid working and cloud continue to increase. It will also play a key role in addressing organisations' challenges posed by the great resignation and ever-increasing cyber threats.

In this article, we summarised the different technology building blocks that make up modern workplace architecture and the importance of people in the modernisation of workplace. It is essential to remember that each organisation is unique and not all technology options are applicable for every organisation or even every department within an organisation. When considering modern technology options, it is important that a collaborative decision is made with different areas of organisations to ensure all business needs are considered.

When it comes to modernising workplace architecture, organisations should first understand where they currently are and validate the strategy and roadmap to achieve their goal. Whilst identification and prioritisation in areas that will bring the most business benefit is important, designing a workplace architecture that is future proof and can be integrated with future state technologies (for example, password-less identities, VR/XR technologies) should also be a main consideration.

Finally, the modern workplace architecture should continuously be reviewed and updated as organisations' business needs, modern technologies, and cyber threat landscape continue to evolve.

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