RESEARCH EXECUTIVE SUMMARY

PUBLIC SECTOR IT: ADJUSTING TO THE DISTRIBUTED WORKFORCE

IGEL

next-gen EDGE OS

for cloud workspaces

FOREWORD

Few events have caused a change in the workplace as significant as the coronavirus (COVID-19) pandemic. Our research shows that IT departments in the public sector have been incredibly quick and versatile in adjusting to the requirements and successful in keeping vital public sector services operational.

In less than a few months, work-from-home and remote working computing demands have gone from being occasional and for the few, to essential for almost all. As you would expect, many of the initial challenges included equipping home workers with the tools to work from home and providing secure access to their business-critical applications. Devices were moved from the office to the home, new laptops purchased, VPN licences acquired and subscriptions to Office 365 increased.

With this first phase now behind us, future strategies should focus on how to establish a resilient IT infrastructure to support the significant proportion of the workforce that will need to work from anywhere. This needs to include a transformation in how we manage our employees and their endpoints. Whether employees continue to work from home for the foreseeable future or return to the office, our research suggests that even senior managers that were once sceptical about the benefits of remote working have come to realise that the workforce can be more productive regardless of where work is being performed.

Additionally, security continues to be a top priority for organisations as they enable remote working. Recent news has sadly demonstrated that ransomware and an increased number of cyber-attacks are targeting organisations and their employees during the pandemic. In the UK NHS, 40,000 scam and phishing emails[1] were reported during the pandemic, with 21,000 in March alone. NetMarketshare also states that 23% of desktops are still running Windows 7 and with the 2nd year of extended support due in January, the cost of protecting the mobile workforce is increasing.

Distributed workforces and the resulting trend towards widespread cloud migration is transforming how the public sector manages and secures endpoints, fuelling demand for virtual apps, desktops and cloud workspaces. With the announcement of Microsoft Windows Virtual Desktop (WVD) last year, more organisations are looking to utilise Desktop as a Service (DaaS) to help support the future of work. Coupled with a Linux OS on the endpoint, IGEL is well-positioned to enable and accelerate a transformation in end-user computing and to continue to enable remote working in a secure yet cost-effective manner. I hope you find our report interesting and that it's an aid to clarify thinking over the coming months on the future strategy for Public Sector IT.

Simon Townsend, CHIEF MARKETING OFFICER, IGEL TECHNOLOGY

[1] IT Pro, 12/08/2020: https://www.itpro.co.uk/security/phishing/356742/nhs-flooded-with-40000-spam-emails-during-coronavirus-crisis

EXECUTIVE SUMMARY OF RESEARCH FINDINGS

The independent research was commissioned by IGEL Technology, provider of the next-gen edge OS for cloud workspaces, and undertaken by market researchers Question & Retain. The objective was to take a pulse check on the views of IT leaders from public sector organisations, across UK and Ireland, on the technology challenges they face as a result of the pandemic. Results were both qualitative and quantitative.

Verbatim quotes from the respondents have been used in "The word on" sections to provide more insight and colour to the research findings.

1. THE MOST SIGNIFICANT IT CHALLENGES

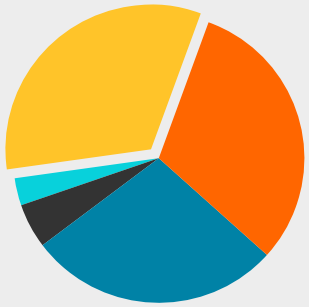
Providing access to business critical applications and suitable computing devices were the biggest challenges facing UK public sector IT teams, as employees rushed to work from home during the COVID-19 pandemic.

Whilst struggling to set-up employees at home, 33% reported their most significant IT challenge as providing access to business critical applications, while 28% said it was providing suitable mobile computing devices.

Other significant challenges identified included broadband and Wi-Fi connectivity issues at employees' homes.

IT CHALLENGES

What has been your MOST significant IT challenge, if any, as a result of your employees working from home?



- 33% Providing access to business critical applications
- 31% Other challenges, not listed
- 28% Providing suitable mobile computing devices
- 5% Ensuring security of data and information
- 3% Providing helpdesk support

The word on **PROVIDING ACCESS TO BUSINESS CRITICAL APPS**

> We use some significant pieces of software and have many staff. Providing access to all staff to allow the day job to continue was a challenge in the beginning."

> The majority of applications require you to be on the corporate LAN and with BYOD this is not feasible. We've therefore had to utilise VDI through Azure to provide this level of availability."

The word on **EQUIPPING STAFF WITH DEVICES TO WORK FROM HOME**

> **A distinct amount of staff did not have suitable equipment to work from home and therefore we had to loan all spare laptops out. Alongside this we introduced (inexpensive laptops) as a cheaper alternative to new equipment".**

> **Not enough equipment to start with, resulting in many officers using their own personal equipment to connect to the network."**

> **Not all mobile devices had all the software required."**

> **Some of the devices we provided, in what was about week 1, had non-functioning microphones and webcams, so separate devices had to be ordered from an ever decreasing global stock range."**

OUR TAKE

When the Office of National Statistics surveyed businesses back in 2019, just over 5% of the workforce said they worked from home for a day or more during the course of a week. A few weeks into the lockdown, its Business Impact of Coronavirus Survey[2] found that the average proportion of the workforce that was working remotely from their normal place had risen to 48%. With this rapid move to a distributed workforce, it's no surprise that connectivity, access to devices and broadband were initial issues.

Some respondents identified setting-up and supporting video conferencing and unified comms applications for employees as a particularly challenging aspect of the initial move to remote working. However, this connectivity proved invaluable not just for productivity but also for employee wellbeing. Professor Sophie Scott, Director of the Institute of Cognitive Neuroscience at University College London, told Sky News[3] that video calling had been proven to be just as good for your brain and happiness as being in the same space.

Prof Scott said that a study by Professor Robin Dunbar at Oxford University found that "you get the same bang for your buck, you talk for as long, you are as happy and you laugh as much whether the face-to-face interaction is on a computer or it's actually happening in front of you."

To help support these unified communication applications, Microsoft has reported that adoption of Windows Virtual Desktop (WVD) has tripled since the start of COVID-19[4], and it seems that many organisations see Virtual Desktop Infrastructure (VDI) as a potential solution for a distributed workforce to provide secure and bandwidth efficient connectivity.

Prior to lockdown, Falkirk Council implemented a virtual desktop infrastructure and cloud workspaces to provide workplace flexibility and mobility for more than 2,000 staff, as well as achieving major long-term operational cost savings.

The users have access to their visually familiar desktop and applications via a cloud workspace but without the restrictions of having to sit at the same hardware, in the same office location every day of the working week.

[2] Office for National Statistics, 13/08/2020: https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/bulletins/coronavirusandtheeconomicimpactsontheuk/latest
[3] Sky News, 30/03/2020: https://news.sky.com/story/coranavirus-is-video-calling-the-key-to-happiness-during-the-covid-19-lockdown-11963594
[4] Network Computing, 08/07/2020: https://www.networkcomputing.com/networking/virtual-desktop-outlook-trends-benefits-beyond-deployment

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"Although it might sound cliché, this has genuinely been a paradigm shift for us," said Tommy Evans, Falkirk Council's project lead for mobile and flexible working, speaking before lockdown.
"We're empowering our staff to work anytime anywhere, so they benefit from a good work-life balance."

Evans added, "VDI is also allowing us to review the buildings we currently have and exit old properties to lower our operational expenditure – helping towards making savings, which we hope will contribute to the approximately £60 million worth of savings which have to be made by 2023."

Learn more about how Falkirk Council saved money and mobilised their workforce.

Citrix helped to enable the technology transformation at Falkirk Council. **"Today's 'work from home' movement continues to remind us that being connected is more important than ever before,"** said Pratik Shah, Director of Product Management at Citrix. "For over 30 years, Citrix has enabled organisations to securely access business applications and data remotely, over low bandwidth connections thanks to our highly optimised, very mature HDX protocol that integrates directly within IGEL clients. As we look at the future of work, **Citrix in partnership with IGEL continue to enable our joint users with highly responsive access to their applications and data regardless of their location or network performance."**

2. AN INCREASED REQUIREMENT FOR END-USER SUPPORT

As the workforce settled into working from home, 60% of IT teams reported an increase in end-user support. Of those, 35% saw increases of up to 50% more end-user support requests, 6% up to 100% more, 12% up to 200% more and 6% up to 300% more.

However, 33% reported no noticeable change and 6% reported less support required than usual, likely to be as a result of furloughed staff.

END USER SUPPORT
What do you estimate the % increase in end use support that you have had to provide has been as a result of employees working from home?

- 36% Up to 50% more
- 33% No noticeable change
- 12% Up to 200% more
- 6% Up to 100% more
- 6% Up to 300% more
- 0% More than 300%

The word on **EXPERIENCING UP TO 50% MORE SUPPORT REQUESTS**

> “Mainly requests for supporting BYOD or Microsoft Teams following our COVID-19 migration to this approach and apps.”

The word on **EXPERIENCING UP TO 100% MORE SUPPORT REQUESTS**

> “Initially, until staff were set up and using devices from home, we had a significant increase in calls for support. Once early problems were resolved that support need has dropped again but not as low as when all staff were onsite.”

The word on **EXPERIENCING UP TO 200% MORE SUPPORT REQUESTS**

> “We have moved from being office based onsite to fully remote, now utilising softphones and remote assistance software.”

OUR TAKE

As employees adjusted to the new work environment of home, there was never any doubt that IT helpdesk calls would see a significant rise. But this appears to be just one element of a much wider set of increased pressures on IT departments, post-pandemic.

In a separate study[5], 81% of technologists said Covid-19 had created the biggest technological pressure for their organisations that they had ever experienced, and 61% said they felt under more pressure at work than ever before. Almost two-thirds (64%) of technologists said they were being asked to perform tasks and activities they had never done before.

As CIOs and their teams grapple with the challenges of an uncertain business environment, it will be important to reduce those support calls with the implementation of an IT infrastructure that is intuitive for users, secure and can be centrally managed.

One such infrastructure has been delivered by ICT NML, a technology and communications service provider owned by four Dutch municipalities in North and Central Limburg. ICT NML’s remit is to jointly run and manage the entire ICT infrastructure for the four local authorities who provide all public services to over 220,000 local residents.

The organisation recently completed an extensive project to refresh their entire end-user computing infrastructure.

ICT NML has implemented IGEL OS and installed powerful multimedia UD3 endpoints at various local government office locations replacing 2,400 end-of-life zero clients, with IGEL Cloud Gateway used to interconnect and manage devices located offsite.

[5] ComputerWeekly, 27/05/2020: https://www.computerweekly.com/news/252483731/Covid-19-Managing-spikes-in-website-traffic-now-IT-leaders-biggest-challenge

Joost Poulissen, ICT NML's team leader, explains, **"Historically the municipalities – which are each relatively small – had their own IT departments, budgets and infrastructure. Creating a shared ICT service for them has meant they can punch above their individual weight in terms of the quality of enterprise technology purchased. Day to day IT management has also been simplified and made more efficient."**

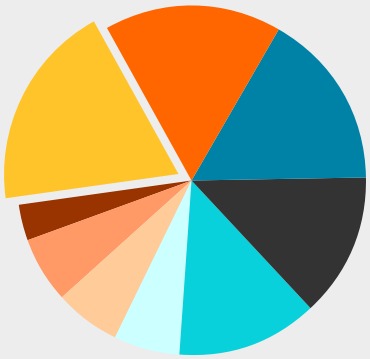
Learn more about how ICT NML simplified their management of distributed devices.

3. THE PERMANENT SHIFT TO WORKING FROM HOME

Despite the IT challenges, respondents reported that they thought working from home was here to stay. 45% of those surveyed believed that 70% or more of their formerly office-based employees would be allowed to continue to work from home in some capacity. Reasons given included proof that working from home was more – rather than less – productive, and that it allowed for a review of property use and the subsequent potential savings from reducing office space.

WORKING FROM HOME

What do you estimate the % increase in end use support that you have had to provide has been as a result of employees working from home?



19%	71-80%	6%	61-70%
16%	51-60%	6%	21-30%
16%	41-50%	6%	0-10%
13%	91-100%	3%	31-40%
13%	81-90%	0%	11-20%

The word on **THE ATTITUDINAL SHIFT**

> **"The higher level managers, who have been against remote working,...have been forced into the situation and have now realised that remote working is more productive and not less."**

> **“Business support departments have all reported an increase in productivity with staff working from home. As we gradually return to a ‘new normal’ we expect to have up to 50% of support staff working from home on a rotational basis.”**

> **“It is very unlikely that we will revert to our old ways of working and the new norm will be blend of working from home and time in the office for the majority of staff.”**

> **“It has proven itself and allows a review of property use.”**

OUR TAKE

The findings that IT leaders believe that the majority of their public sector colleagues will continue to work from home in some format has been underlined in many recent surveys. A Gartner HR Survey[6] revealed 41% of employees were likely to work remotely at least some of the time post coronavirus pandemic.

“Ultimately, the COVID-19 pandemic has many employees planning to work in a way that they hadn’t previously considered,” said Brian Kropp, Chief of Research for the Gartner HR practice.

The upshot will be a requirement for all employees to be able to work conveniently in multiple locations, whether in the office, at home or when travelling. It was a challenge familiar to Ayrshire College when they wanted to deliver a flexible learning environment for their students pre-pandemic.

Ayrshire College rolled out a modern VDI platform and cloud workspaces to deliver a truly flexible learning environment at its new £53m campus. The university invested in VDI and converted over 400 laptops to IGEL cloud workspace devices, as well as deploying thin clients around the campus to create an environment where students can log in from wherever they are to access their own personal desktop profile and applications.

David Keenan, Ayrshire College’s ICT Team Leader, said “Students love the new system. In the old Kilmarnock Campus, some of the PCs were nearing end-of-life and were about to be decommissioned. Now everything is a lot quicker and the students get the same experience irrespective of the device. This means they can jump from one to another and it’s the same experience. And if there is an actual rare unit failure, they don’t lose work as their data is stored on our central servers.”

Brad Johnstone, Ayrshire College’s Head of ICT concluded: **“Our job is to get students ready to go to university, into employment or wherever they aspire to be in their lives. Delivery of the right IT tools and software is integral to this. If someone wants to use AutoCAD on an iPad at 3am in the morning – because that’s their optimum work time – so be it, we now have the infrastructure in place.”**

Learn more about how Ayrshire College delivered a flexible learning environment and empowered students and staff.

[6] Gartner Inc., 14/04/2020: https://www.gartner.com/en/newsroom/press-releases/2020-04-14-gartner-hr-survey-reveals-41--of-employees-likely-to-

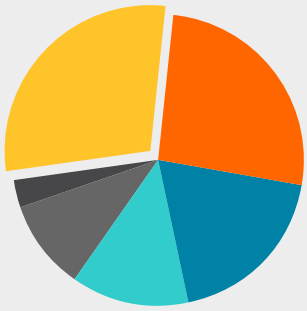
4. BIGGEST INCREASE IN IT INVESTMENT AREAS OVER THE NEXT 12 MONTHS

Investments in cloud (29%) and hardware (26%) were predicted to see the biggest spend increases over the next 12 months as organisations adjusted their IT infrastructure to reflect the new working culture, followed by security (13%) and virtual desktop Infrastructure (10%).

The objectives of the investment will be to create a more resilient IT infrastructure for the new flexible workforce and equipping employees with suitable endpoint devices for working from a location other than the office.

FUTURE INVESTMENT

As a result of coronavirus pandemic, which area of IT do you predict will see the biggest increase in investment in your organisation over the next 12 months?



- 29% Cloud
- 26% Hardware
- 19% Another investment, not listed
- 13% Security
- 10% Virtual Desktop Infrastructure (VDI)
- 3% Network

The word on **CLOUD**

> “Make ourselves more resilient and provide the ability for our employees to work seamlessly at home using a mix of Council provided, managed devices and BYOD. Also removes reliance on having to attend the office and the added bonus of increased Disaster Recovery/Business Continuity.”

The word on **VDI**

> “The way we work moving forwards will change and we have already started investing in portable devices and VDI.”

The word on **Hardware**

> **"Most extra spend is likely to be in new laptops for those that are using "occasional" devices (older, low spec units) as a daily driver and therefore really should be on something newer (although where that budget comes from is a whole other saga)."**

> **"I think we might end up with a lot more out of office endpoints and peripherals provided to users."**

OUR TAKE

IT departments will have to find a balance over the coming months. They must ensure that the necessary cloud, security and hardware is in place to support the new distributed workforce and methods of working against a tightening financial backdrop.

Recent international research, reported by ZDNet[7] has revealed that business leaders are bullish about their IT investments. In a survey of 3,000 business leaders across the US, UK, EU and Australia, by global ERP software provider IFS, they found the majority are planning to increase their investment in digital transformation.

There's some nuance to dissect, including geographical variance, but the headline is that greater economic and market anxiety caused by COVID-19 is actually increasing digital transformation spending.

The challenge will be delivering an IT infrastructure that supports the new ways of working and helps transform the services delivered for the better. This was the exact same challenge faced by pioneering blood cancer charity, Anthony Nolan, when it implemented cloud workspaces for more than 300 employees as an efficient way to migrate from Windows 7 to the Windows 10 operating system and to simultaneously create a rich multimedia capability for its workforce.

The new technology infrastructure at the charity's headquarters in Hampstead Heath, London, a laboratory on the Royal Free Hospital site and a Cell Therapy Centre located in the grounds of Nottingham Trent University has allowed users to boost collaboration and teamwork by enabling geographically dispersed staff to set up video-based conference calls and to work more productively.

"This IT project was really important as collaboration is key. Anthony Nolan needs to be at our very, very best to support the 2,000 patients with a blood cancer or disorder," said Amelia Chong, Policy and Public Affairs Manager at Anthony Nolan.

Learn more about how Anthony Nolan transformed their IT services and improved collaboration across remote staff.

[7] ZDNet, 30/06/2020: https://www.zdnet.com/article/technology-investment-post-covid-19/

CONCLUSIONS AND CONSIDERATIONS FOR THE FUTURE

For many organisations, the move to a distributed workforce was an enormous initial jolt but as the workforce and systems settle to a new way of working there will be time to consider the opportunities in the new approach to working.

As well as the technology needs of a distributed workforce, business and IT leaders can now consider the implications for their real estate. There may be opportunities to rationalise office space and make financial savings.

Business leaders will also need to consider the impact working away from a centralised office will have on staff work patterns and the different support they may need to provide users. Harvard Business Review[8] reported that Microsoft had analysed the changing work patterns of staff since they began working from home and found some startling changes in behaviour. The analysis looked at "aggregated, de-identified email, calendar, and IM metadata; comparing it with metadata from a prior time period; and invited colleagues to share their thoughts.

The data revealed that workers' days are getting longer, by around four hours extra per week on average as they carved out pockets of personal time during the day. To accommodate these breaks, people were signing into work earlier and/or signing off later.

A new 'night shift' had also developed with employees catching up on work and communications more during the evening. They also saw the rise of the 30-minute meeting. While weekly meeting time increased by 10% overall, meetings actually shrank in duration. Microsoft saw 22% more meetings of 30 minutes or less and 11% fewer meetings of more than one hour.

FACILITATED BY A FLEXIBLE IT INFRASTRUCTURE

These opportunities can only be capitalised on with a robust flexible working IT infrastructure that can support these changes. A VDI and cloud workspace infrastructure can be that solution. It can be an effective migration pathway to leapfrog to the latest technology platforms and enable workforce flexibility with centralised management and increased levels of security.

HOW IGEL CAN HELP

Business continuity, remote working and workspace agility have become a critical business priority as organisations look to enable their workforce access to desktops, applications, and data from remote locations. IGEL's Work-From-Home Kit provides everything you need to deploy, manage, and secure IGEL OS to thousands of users, regardless of where they work.

Virtual Desktop Infrastructure (VDI) and Desktop as a Service (DaaS) enables organisations to rapidly deploy Windows desktops and business line applications in a consistent, secure and performant way. VDI and DaaS is helping organisations not just enable work from home strategies but enable employees to work from anywhere. Solutions from Citrix, VMware, Microsoft and Amazon offer both on-premises and cloud-delivered solutions. While these solutions offer new ways to deploy desktops and applications, organisations still require a secure and easy way to manage the endpoints. IGEL OS provides this solution; even enabling old devices and those beyond end of life support to be quickly and simply converted to IGEL endpoints, with all the security and management advantages it brings. For more information on IGEL, visit igel.com.

[8] Harvard Business Review, 15/07/2020: https://hbr.org/2020/07/microsoft-analyzed-data-on-its-newly-remote-workforce

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