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# A Mobile-First Return to the Office

The Rise of Mobile Devices in Creating Safe and Secure Commercial Real Estate Environments

WHITE PAPER

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## 1. INTRODUCTION

This report explores the challenges and opportunities facing the European CRE (Commercial Real Estate) community in organizing a safe, secure and successful return to the office in the wake of the global pandemic. It is based on a study by WORKTECH Academy with workplace professionals in its network and draws on a range of comments and opinions from published sources, public webinars and a series of in-depth interviews. Organizations participating in the research included banks, pharmaceutical and professional service companies, with many operating at a global scale.

Based on this research, the report examines four areas: the emergence of a mobile-first approach to workplace, shifts in occupier patterns, safety in returning to the office and supporting the sustainability agenda, which has gained prominence during the pandemic.

The aim of this report is to explore the role of the office in the post-pandemic landscape of work and the type of experience the CRE leadership community is seeking to create. It looks specifically at building access control and the infrastructure required for successful implementation, and also sets the context for the next phase of the smart office as mobile applications and access control technologies come to the fore.



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## 2. MOBILE FIRST

Over the past decade, mobile phone applications have transformed all aspects of our lives – from the way we travel and shop to how we manage our health or personal finances. One area of life, however, remained curiously impervious to the growing influence of the mobile app: the workplace. Organizations resisted making the smart phone the central interface for office working. Employees simply accepted the difference between office systems and the more user-friendly consumer tech they use every day when not at work. Workplace apps, where they existed at all, provided a very basic mobile intranet to share company news.

But all that could be about to change. According to WORKTECH Academy's research with CRE professionals, companies and workforces are beginning to pivot to the mobile device to manage many aspects of the new world of work that are fast emerging. The chief reason for this acceleration towards a mobile-first and app-centric workplace is the global pandemic, which blurred the boundaries between personal and office life. In lockdown, people turned to their smart phones to juggle different responsibilities. When they return to the office, they will similarly require smart technology to navigate a hybrid model of working.

### From Mainframe to Mobile

To fully explore the mobile-first approach that is set to shape the near future of access to the office as we emerge from the Covid-19 pandemic, it's important to look at where we are now and where we've come from. While images of men in white coats standing beside a mainframe computer in a large, air-conditioned room are well and truly consigned to the history books, the desktop computer, which came next, is still a consideration in some parts of the real estate sector – albeit in a more slimline, flatscreen iteration.

For some companies, the introduction of the laptop, along with a more agile or activity-based way of working across a range of settings in the office building, is sufficiently fresh enough in the memory that they feel no requirement to go a stage further. But undeniably, the mobile phone is set to win the battle as the go-to tech for younger cohorts of workers,  and many companies now feel a mobile-first approach will support a more people-centric approach in the workplace as they plan a return to the office.

The mobile numbers bear this out: smart phone users have quadrupled since 2012 to a current total of four billion[1]. It makes one wonder why the corporate office has been relatively slow to see the potential of an app for employees. As we shall discover, a pivot to a mobile-first approach has the potential to enhance a building's whole service delivery ecosystem – and to transform access and security.

### Security of the Ecosystem

If we are set to use a mobile app to connect to the smart building to book a room or a desk, to find out on which floors colleagues are located or to order a coffee, then it makes sense that we might use our smart phone to gain access to the building itself. But when it comes to access, many organizations are still using outdated and vulnerable access control technology. Modern readers combined with cheaper cards and credentials is a false economy, as the reader is only as secure as the weakest credential it has been enabled to support. Ensuring the security of the entire ecosystem, including access cards, is not something that should be driven by cost alone. It's important to consider how we got to this point to better illustrate the importance of upgrading to the latest access control technology, including considering mobile-first options.

Controlling the physical access to buildings has been an essential component of many corporate security strategies. There have been several iterations since old-fashioned manual locks and

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keys were abandoned in favor of magnetic swipe technology. Technology dating back to the 1970s mimicked the physical swiping of a debit or credit card, which transferred the unencrypted credential's information to a reader. This was an adequate solution for the time, as hackers needed to physically obtain the card to read or clone it.

By the 1990s, contactless technology, notably the proximity or 'Prox', began to emerge, meaning fobs or tags could be used as well as a card. But again, because the credential is unencrypted, cards could easily be forged or cloned and couldn't be encoded with other data attributes. Also, the memory of this technology was limited to the access control identifier only.

**New-Generation Solutions**

The issues of unencrypted cards and limited memory were addressed with the next generation of smart cards which emerged at the turn of the twenty-first century, containing a set of cryptographic keys that must match in order for the credential to share the binary data within the reader. These cards had the capacity to store other information such as cashless vending debits or a biometric template. But despite the advances in security, these contactless smart cards still had vulnerabilities in mutual authentication algorithms which were discovered as the technology continued to advance.

Today's organizations want to create and manage secure identities not just on cards but on mobile phones, tablets and wearables connecting through NFC, Bluetooth and other communication protocols. These have the additional benefit of widely adopted standards such as ISO and NIST that are consistently updated and adjusted. HID Mobile Access®, for example, is powered by Seos® technology. This supersedes legacy and existing technology, offering more security and flexibility. It is based on ISO and open standards used by governments and other organizations globally to encrypt classified or sensitive data, providing unprecedented security and privacy protection of identity data.

**Belonging to the Individual**

A mobile-first approach to access security fits into the broader picture of a post-pandemic pivot to an app-centric workplace that connects users to an ecosystem of data-driven services. Mobile access is both cost effective and has increased functionality in terms of applications. Because mobile phones belong to the individual and are unlikely to be shared, they make an ideal device for authorization. Most if not all mobile phones require some kind of screen-based access whether that's a pin code, fingerprint or facial recognition, therefore delivering the two-step identity recognition that employers and/or the CRE team might require. By configuring the mobile credential to only work when the device is unlocked, users are required to perform their phone's own security check without using a shared keypad.

Few people go anywhere without their mobile device, which means forgotten or lost access cards become less of a security issue. When mobile access technology is harnessed within an app, this extends usability throughout the ecosystem of the building from printing to booking meeting rooms, accessing lockers, and even booking services like restaurant reservations and on-site exercise classes.

People are generally familiar with using apps. Covid-19 contact tracing has further shaped habits and behaviors around mobile devices — and because mobile credentials allow contactless access at a distance, users don't have to crowd around access control readers, an advantage which is particularly pertinent in the time of coronavirus.

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## 3. SHIFTING PATTERNS OF OCCUPATION

In terms of the return to the office, a good deal of evidence points to the hybrid workplace: a mix of work in the office, at home and in other spaces, all facilitated by a digital, cloud--based infrastructure. Home working was embraced positively by employees in the months since the start of the pandemic with one study from O2 Business[2], which questioned over 2000 UK adults. Only 10% want to return to the office full time and just under a third do not want to go back at all. However, the longer the lockdowns have continued, the more people have missed the opportunities to learn, innovate and socialize — all things that are hard to do via video calling — according to our research.

The hybrid model, which looks set to shape the pattern of occupancy European CRE managers must deal with, consists of more focused work being done at home with offices repositioned as face-to-face places for innovation, networking, learning, mentoring and socializing. Instead of the workplace being somewhere to get things done, it will be somewhere to share and discuss ideas, compare notes, and offer guidance and advice. CRE professionals who participated in our research described a shift to more of a social hub with fewer desks and more collaborative zones and café-style areas. A case in point: 53% of UK businesses surveyed by Knight Frank[3] would be looking to offer more collaborative space.

### A Nuanced Narrative

While one school of thought states that people will be productive at home and collaborative in the office, another way of looking at the hybrid model is a place for people to come into the office to concentrate if their at-home set up is too small, too noisy or otherwise inappropriate for focused work. The death-of-the-office rhetoric that filled social media feeds and thought leadership reports in summer 2020 has given way to a more nuanced narrative. Thoughtfully implemented hybrid working has the potential to allow organizations to recruit the best talent, innovate, build culture and social capital, and create stakeholder value.

Like many in the WORKTECH Academy network, Phil Kirschner, an independent workplace consultant who has worked with Credit Suisse, JLL and WeWork, explains: 'The pandemic accelerated, not altered, the course that many people were on in their journey to new ways of working.' Many of the elements of hybrid working — more time at home, using the office more collaboratively — are not new, but employers have been forced by the pandemic to offer them. Our research reveals that informal local agreements on remote work are now officially sanctioned at the highest level. Kirschner adds that employees have wanted flexibility for years, but organizations didn't want them to have complete control over it: 'Before, organizations could tell employees when and where they could work; now the power is with the people.'

### Tracking the Move to Hybrid

WORKTECH Academy's trend reports have been tracking the move towards hybrid working by major corporations. HSBC is set to cut a major swathe of office space over the next few years, abandoning 40% of its offices as part of a commitment to reduce costs and improve returns. The bank is reported to be getting rid of executive offices and instead creating more hot-desking spaces and communal facilities. BP, meanwhile, announced that 25,000 of its office-based employees will be asked to work from home 40% of the time. It is expected that the company will sell its headquarters in London's St James Square with the new hybrid model 'BP Work-Life' introduced. UK regional publisher Reach has gone even further closing all but 15 of its offices in the UK with most of its journalists working from home and hub offices in key regional cities such as Birmingham, Leeds and Manchester maintained.
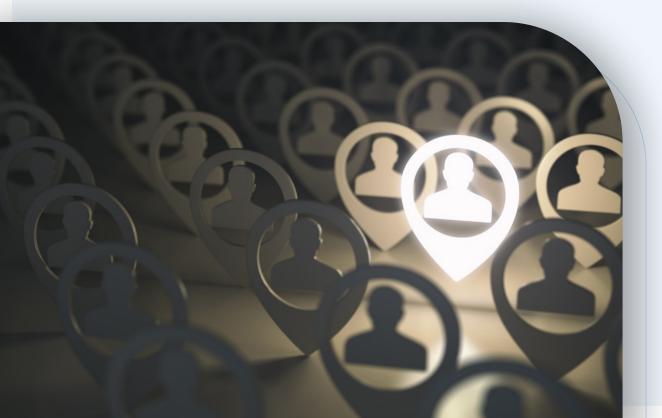
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Elsewhere, The Financial Times reported[4] that JP Morgan Chase's chief executive Jamie Dimon is looking at a utilization of 60 seats per 100 employees. Lloyds Banking Group has said it will take 20% less office space compared with pre-pandemic levels. Some companies in the pharmaceutical could be set to go even further and adopt a 50:50 split between office and remote work model, as many lab scientists now prefer to write up their experiments at home rather than in the workplace. GlaxoSmithkline CEO Emma Walmsley told Bloomberg[5] that 'the flexibility and efficiency we can bring from working with technology and allowing people to live their complete lives' will see a hybrid model emerge. Business Insider[6] reports that Deutsche Bank staff will work up to three days per week from home. Other big European banks, such as UniCredit, headquartered in Milan, are set to follow suit using a formula that could mean working remotely one week in four.

**Gateway to a Physical Social Network**

The challenges the hybrid model creates for the European CRE community are about who comes in the office and when. There will be sharp fluctuations in occupancy at different times, greater social distancing and a need for reassurance on the part of employees. There is no point attending an office if the people you need to connect with won't be there too. Mobile access technology offered up within an app can support a seamless return to work in terms of tracking people and managing space and services.

Occupancy data can be used by CRE managers, with the HR and FM functions working together, to manage the proportion of remote workers and office-based staff during any given working week. Not only that, an app-centric workplace will offer something valuable beyond wayfinding, room and desk reservations: the potential for casual collisions, for serendipitous or planned social encounters. The mobile will be a gateway to a 'physical social network', something remote workers have been denied during the pandemic. Apps can allow reconnection with colleagues, reinstating those crucial inter-personal relationships. And it all starts with mobile access technology at the entrance to the building.



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## 4. SEARCH FOR SAFETY

Employee safety is paramount if businesses are to manage a successful return to the office in the time of Covid-19. Our research with European CRE leaders revealed just how much organizations are currently focusing on health, safety and wellbeing. According to a BUPA Health survey from June 2020[7], office cleanliness came out at the top of the employee concerns upon returning to their places of work, along with social distancing, commuting and losing their work-life balance.

Nearly two thirds of businesses anticipate a greater post-pandemic use of new technologies in the workplace. These include scanners, sensors, building apps and facial recognition to understand activity, promote wellbeing and ensure safety. So, let's look at how these technologies can support a safe, sustainable and human-centric return to work.

Mobile-first and app-centric approaches can bring benefits in terms of a reassuring workplace experience. Mobile access minimizes high-touch interactions. By moving from legacy systems to mobile solutions, human contact is dramatically reduced, eliminating risk from contact with contaminated surfaces. As far back as April 2020, the British Council for Offices (BCO) was issuing advice[8] including use of automatic, revolving and sliding doors to reduce contact in typically high traffic entry and egress points. Touchless access clearly adds a secure layer to this advice.

**New Company Protocols**

It's important that in tandem with mobile technology, access points are regularly cleaned to keep them hygienic. The introduction of technology should be dovetailed with an effective company-wide policy detailing the new protocols including appropriate signage in the entrance and at key wayfinding points. To really embed confidence among end-users so that they know what to expect from their entry and exit experience, there may need to be a change of culture in some organizations.

Using entry cards as issued by a front-of-house person involves a much higher degree of human interactions, with members of IT and HR also possibly involved in the process. By replacing this high-touch operation with a mobile-first solution and credentials, contact is minimized, and the process is enabled by Wi-Fi rather than across the reception desk. As the BCO report predicted, 'Security credentials could be delivered to visitors' smart phones as QR codes or something similar.' HID Global's mobile access solution realizes a safer contactless experience for visitors and contractors.

Pre-registration allows the employee to enter their visitor's details ahead of time to speed up the check-in process and allows for the selection of mobile access for on-site building access. The visitor then simply downloads an app, and their credential is automatically sent to the mobile phone upon check-in. Access fields can be specific to the visitor's requirements in terms of how long and where they need to go.

Bluetooth Low Energy (BLE) connections also have their part to play given their capacity to deliver read performance at a distance, an important part of access at areas which might otherwise become crowded as people seek to touch in or out of a particular access point. Furthermore, location services can be activated by BLE beacons installed in places like soap or sanitizer dispensers, which track visitors' movements within a space to ensure social distancing and occupancy protocols are maintained. Visitor management track and trace is also made easier, building historical data on where that person has been.

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**Cutting Down Wait Time**

The ability to send credentials to any authorized device anywhere eliminates waiting times for guests as well as staff members, reducing physical contact and potential for surface transmissions. It cuts out the scenario of a crowded reception area and provides a level of reassurance for front desk and security staff as well as the general office worker population.

More generally, workplace apps could be said to create a new layer of experience in the office building, melding the physical world with the digital one. The more apps are used, the more data can be collected and analyzed to enable the CRE team to predict which days of the week are more popular and perhaps incentivize days or times of the days which are less popular.

All these points show how a mobile-first approach contributes to a healthier workplace along with things like deep cleaning the office, rotating staff, air conditioning checks and taking people's temperature on arrival.

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## 5. SUSTAINABILITY ON THE RISE

Alongside a shift to a more consumer-centric mobile-first approach, a move to repurpose office space as occupation patterns shift, and a more proactive focus on safety, our research with the European CRE community also identified sustainability as a key priority. There is wide acceptance that the Covid-19 crisis has masked the far larger challenge of climate change, and younger entrants to the workplace expect their employers to bring a green approach to their office buildings. Mobile access technologies form part of the sustainability story and can effectively support green credentials and contribute towards achieving sustainable certification in buildings.

Green consumer behavior, from the rise of hybrid vehicles to buying locally grown and organic foods to recycling and using eco-friendly products, points to a greater social consciousness than ever before. These consumer preferences have influenced the boardroom. Large corporations have been challenged with creating a sustainable future from building around nature to committing to a net zero carbon future[9]. Workplace standards such as BREEAM and WELL are increasingly recognized and demanded — and smart buildings including access technology have a significant role to play.

### Changing Political Context

While the Covid-19 pandemic stalled the sustainable momentum somewhat as companies dealt with more pressing problems, such as the mass migration to homeworking, 2021 is seeing a renewed focus. Any return to the office will need to be not just safe and secure but also green. The political sands are also shifting in sustainability terms with the US administration entering back into the Paris climate agreement and the UK government's green point plan focusing on issues such as driving the growth of low carbon hydrogen, investing in carbon capture, usage and storage and the development of green buildings.

The World Green Building Trends SmartMarket Report[10] shows that respondents who expected to do more than half of their projects in a green way rose from 27% in 2018 to 47% by 2021. Sustainable construction and design practices for both new builds and refurbishment projects include everything from using solar and wind power to installing LED light bulbs, rainwater harvesting systems and cycling provision. Physical access control systems can also drive more sustainable processes by reducing energy consumption and driving down waste levels. Power-saving card readers and controllers, such as HID Signo™ readers, can save organizations energy through utilizing the intelligent power mode, similar to the power saving mode found after a period of inactivity that is commonly found in laptops and other devices.

### Creating a Clear Picture

Building automation is another area of sustainable practice. By linking access control with building management systems such as heating/cooling systems, reductions in energy usage can be made. Access control systems help build a clear picture of what building occupancy looks like and, by having information on location services and how a building is being used, energy efficiency gains and consequential cost savings can be made. Senior management pressures to achieve greater operational efficiencies were a feature of our survey with CRE professionals.

Seeking out and applying for environmental certifications, standards and benchmarks provides a transparency and a reassurance on the part of stakeholders, from building owners and investors to tenants and end users. Overall awareness of these standards is growing. The current crop

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– Matthew O'Halloran, Head of Global Occupier Services of Smart Spaces

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of certifications includes Green Circle, an independent, third-party validation for sustainability claims, while the Environmental Product Declaration (EPD) is concerned with the standardization of material disclosure and impact.

The Life Cycle Assessment of the EPD looks at all stages from raw material, transportation, manufacturing, packaging use and end of life. LEED Certification Contribution, meanwhile, is the US-based, widely recognized benchmark for green buildings. Zero Waste to Landfill Certification looks at waste reduction through reuse, recycling, or other means of recovery, with the BREEAM sustainability assessment method beginning in the UK and now used in 86 countries worldwide.

**Healthy Buildings**

The International WELL Building Institute (IWBI) is all about the health of buildings and their occupants. In 2020, it launched the WELL Health-Safety rating which examines operational policies, maintenance protocols and design strategies considering Covid-19. Fitwel, which also looks at health and wellbeing, launched a Viral Response Module providing third-party certification on mitigating the spread of contagious disease. The Immune Building standard is one of the newest certifications and looks at the resilience of buildings in terms of present and future health challenges.

All these standards and certifications are important. As Jaroslav Barton, Product Marketing Director (PACS) at HID Global, explains, 'Transparency is critically important when striving to meet high levels of sustainability in business. Seeking out manufacturers that are in line with these values can help reach your goal of achieving sustainability on a larger scale within your organization.'



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## 6. THE WAY AHEAD

The key challenges for European CRE leaders around access control are concerned with the shift to a mobile-first approach, particularly as we return to the office in the wake of Covid-19. An app-centric workplace is all about convenience and amenity, removing friction or pain points, which is where CRE teams want to take the post-pandemic office — and where it is generally headed. People will choose to visit the office rather than attend by rote. But our research revealed that some employers, especially in the banking sector where there are special security concerns about handling personal data, have work to do to integrate mobile access with legacy systems in existing buildings.

Now is the time for a thorough appraisal of what CRE managers want in terms of building management and security as we look to the future. For some, that goes as far as automatic door opening or a self-service visitor management system. For others, that's looking to mobile credentials to reduce to need for person-to-person contact.

There's a chance to leverage mobile access technology such as HID Mobile Access®, powered by Seos, which is a trusted identity solution. If that is leveraged with a sound organizational policy surrounding the return to work, employees' legitimate safety concerns can be satisfied and employers can build on their own ESG (environmental, social and governance) targets through the sustainable benefits mobile-first brings.

'Access systems are integral to managing capacity and social distancing and allowing people to book and access space on demand is compelling in this era of hybrid working,' says Matthew O'Halloran, director of smart building workplace app provider Smart Spaces. 'CRE managers gain good governance and transparency whereas end users can benefit from a layer of self-determination and control. Our product offer along with HID's, provide the required interoperability from a secure virtual credential within the app, that works with the hardware.'

Insight from the WORKTECH Academy network suggests there are varying levels of readiness for a mobile-first approach. Kristine Wolsey, associate director at Boston Consulting Group says, 'Everything needs to be available on your phone. We are now seeing a consensus on the pivot to mobile.' However, the greater collaboration that occurred between CRE teams, HR, FM, IT and security during the pandemic will need to continue before widespread adoption of mobile access technologies can take place.

CRE professionals in our research are mindful of the technical challenges but also aware of the importance of mobile apps in bringing people together. Overall, they anticipate that a flexible, convenient, mobile-first approach could be the next frontier in access technology – fitting in with the choice-driven hybrid world of work we now entering.

*Now is the time for a thorough appraisal of what CRE managers want in terms of building management and security as we look to the future.*

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## RESEARCH SOURCES

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