



Burger Consulting Group's IT Infrastructure Guide to

Migrating the Remote Workforce



BURGER CONSULTING GROUP INC.

With the impact of COVID-19, the working environment has certainly changed. Companies have had little to no time to respond to the “shelter in place” or “stay at home” mandates that have impacted their employees’ office-based environments. In order to safeguard employees and meet various state guidelines, most workforces have had to migrate to a fully remote workforce. Our firm recognizes the challenges many companies are facing in this transition. Angus Frost, one of BCG’s senior consultants whose expertise is in IT Infrastructure, has been actively involved in sharing strategies and recommendations to migrate successfully from an office base to a remote workforce. Most recently, Angus was part of the seventh webinar of an eight-part series hosted by the Associated General Contractors of America (AGC) and a joint webinar with Plante Moran. The webinars were designed to help organization leaders successfully navigate the migration to a remote workforce at any stage of the process. Based on the success of the webinars and positive feedback from attendees, BCG has followed up with an in-depth step-by-step guide.

Short-term and Long-term Planning and Deployment

Although supporting remote users is not new for the construction industry, the sudden change in scale of provisioning remote users and the different working paradigm bring about new challenges. Other challenges include a crippled supply chain, the speed with which circumstances are changing and the uncertainty on how long the crisis will last. Many contractors may be making short-term decisions that have unintended long-term consequences.

Whether your company is just beginning in the provisioning stage, stabilizing an initial rollout, or in maintenance mode, BCG recommends the following approach for migrating your workforce:

1

Evaluate

2

Optimal Remote Access

3

Stay Connected

STEP 1: EVALUATE

As you begin the migration, it could be easy to dive right in with no clear direction. Start by developing an overall migration plan instead. It is best to evaluate the situation first, so you will know what you need to plan for. This will help you understand the needs of the workforce, the business processes that have been impacted and what is already available for use.

Establish a Team. Create a task force that is dedicated to putting together and enforcing a business continuity plan. The team will be tasked with outlining new guidelines, writing new policies and revising existing procedures as needed. The team should be comprised of individuals from various departments that possess a fair degree of knowledge about the business.

Document Impacted Processes. Identify business processes that will be impacted by employees working remotely. Particularly consider the back-office functions such as mail handling, phone calls, invoice processing, large format printing, etc. Look at the other businesses you interact with and identify where a process needs to be modified. For example, can invoices be sent electronically? Put together an action plan on how the modifications can be handled.

Survey Your Employees. There are a lot of survey tools available, like Microsoft Forms or SurveyMonkey, that are quick to deploy and cost-effective. Gaining knowledge of employees' current hardware and software needs and insight to their work from home environment can be helpful in understanding what will be required for success. Being specific in your questions to get clear understanding of needs, for example questions around the type of computer they use (e.g. laptop or desktop), type of home route(r?), or frequency of printing, etc.

Take Stock. Understanding the hardware and application landscape is critical. Determine what is available and in use.

- Do you have enough laptops? Are they powerful enough to meet the end-user's needs?
- What applications and equipment are end-users using that IT is not aware of? (Also known as shadow IT)
- What equipment exists in remote offices and on job sites that is not being used?

BCG Pro Tip:

Multiple tools exist for performing network scans to capture and inventory connected devices. Many are offering free 60 to 90-day trials during the current pandemic.

Track & Secure Assets. Before distributing assets to employees, implement a method for tracking them, which includes the type of asset, who it is assigned to and which applications are installed. Ensure devices are installed with backup protection and tools to remotely remove corporate data if a device is lost or stolen.

Some ERP (Accounting and Job Cost) systems in construction also support tracking assets; however, complete asset lifecycle management that includes the functions listed belongs to a group of tools called Unified Endpoint Management (UEM). These tools combine the functionality of mobile device management, mobile application management and other computer management tools into a single interface and platform. Microsoft, IBM and VMware, and MobileIron are some of the industry leaders in this space with Hexnode, Cisco Meraki, Citrix and others as competitors.

STEP 2: OPTIMAL REMOTE ACCESS

As you begin the migration, it could be easy to dive right in with no clear direction. Start by developing an overall migration plan instead. It is best to evaluate the situation first, so you will know what you need to plan for. This will help you understand the needs of the workforce, the business processes that have been impacted and what is already available for use.

Remote Application Access. Most contractors are using a combination of Cloud/SaaS-based as well as traditional on-premise applications. Employees who have migrated from on-premise Exchange to an Office 363 E3 or E5 plan have a significant advantage, particularly due to the breadth of additional applications that are included.

Typically, ERP (Accounting and Job Cost), Estimating and Virtual Design in Construction (VDC) are the main back-office tools that are still being deployed on-premise along with Network file shares and Active Directory. Making these available remotely will likely require a combination of VPN access combined with a remote desktop session (e.g. Citrix, RDS or similar technology). Scaling up on-premise data centers to support the additional users while still providing the necessary redundancy may be challenging, given certain equipment shortages in the supply chain. It can also be expensive to pay a premium for certain supplies. The availability of VAR to help with implementation can also be challenging.

Now is a great time to leverage the capabilities of Disaster Recovery as a Service (DRaaS) vendors that can provide a DR environment to support your initial needs and, in the future, provide a better ROI than building out the current data center.

Optimize Access Speed. The speed of file access can greatly impact end-user productivity. Many contractors who have leveraged VPN technology to provide remote access to corporate systems for WFH (work from home) users are discovering that network connectivity is significantly impacting the time it takes to find, access and save files.

To combat this, IT needs to look at solutions that can cache files locally on an end-user's device and manage the syncing of changes automatically with a central repository. SharePoint (provided as part of Office 365) can support this, but large files can still be challenging for application. Solutions such as Egnyte, Nasuni, etc. provide similar functionality, although cost more. Ideally, contractors would leverage an Enterprise Content Management (ECM) solution to provide a comprehensive set of tools that support local caching/offline access to content, better indexing and search tools, record retention, archiving, workflow, scanning and imaging and collaboration capabilities.

Without providing tools like ECM, end-users will rely on email to change and collaborate. This would greatly increase mailbox size and put a strain on this technology platform. With the increase in email scams, particularly through file attachments, adding additional email traffic increases the risk of a security breach.

Security. Deploy Two Factor or Multi-Factor Authentication (TFA/MFA) for application access, implement Security as a Service or SIEM-based tools that can monitor logs and identify malicious network traffic or activities quicker. The COVID-19 crisis has prompted an increase of scams and emails offering live maps that may be phishing attacks in disguise. It is important to educate employees on potential risks and establish guidelines around cyber security and social engineering awareness. Regardless of how good your security tools are, the weakest link is still the individual who may unknowingly compromise security.



Help Your Employees Get Online with Connectivity Tips. Sufficient bandwidth at end-users' homes becomes even more critical when everyone (including children and a partner) is at home competing for network resources. Online learning, increased video streaming, gaming, video/web conferencing and VPN activity all going on at the same time are straining WFH internet connections.

Help your employees optimize and improve their home services. Distribute bandwidth guidelines with minimum requirements that employees can use to evaluate their current services. The company will need to address the policy around cost reimbursement.

Home router software may need firmware updates or need to be rebooted regularly to maintain optimum efficiency. In some cases, deploying managed networking equipment, such as Cisco Meraki, may be required to provide better management and visibility over network traffic and streamline VPN access. Depending on where the user is working in their house, they may not have sufficient Wi-Fi coverage and will need advice on how to extend coverage by using Wi-Fi repeaters or Powerline devices.

STEP 3: STAY CONNECTED

As your organization goes through these changes, your remote workers will need to stay connected with the company stance and any policy and guideline rollouts. Use a regular web conference, an Intranet and/or SMS broadcast messaging system to send out corporate communications rather than email. Provide tools for two-way communication so that remote users can communicate any concerns or questions they may have to clearly defined respondents.

Team Collaboration. Use regularly scheduled web conferences with team members to catch up on business and personal activities. Instant messaging tools such as Skype, Teams, Yammer, etc. can be helpful for quick team interactions.

Task Management. Many people are not used to working autonomously. Typical project management tools provided in the construction field are too complex for tracking simple day-to-day or regularly scheduled tasks. Instead, look to Kanban tools such as Microsoft Planner (included as part of an Office 365 subscription), Trello, Monday or other similar cloud-based platforms.

Training. Employees need training as they transition from working in an office to working remotely. Most contractors do not have any kind of Learning Management System (LMS) in place. From using basic screen recording tools included in PowerPoint to fully interactive training videos that track end-user's progress, there are multiple solutions available for a range of prices that contractors can take advantage of. These tools will benefit the contractor now during the current pandemic and in the future.

Phone Usage. Most contractors have a VoIP-based phone system with unified messaging set up for calls to be forwarded from work phones to home or cell phones and voicemails can be sent as audio files or text transcripts to the intended recipient. When remote users have to use personal cell phones or home phones, guidelines will need to be provided for their use for company work as well as for expense reimbursement. If VoIP work phones are deployed to remote users' homes, the E911 information will likely need to be updated. For contractors who are not using a modern VoIP system, they can subscribe to single or multi-line cloud-based solutions from hosted VoIP providers. They can port their existing office numbers or leverage 1 800 numbers that can provide much of the same functionality of an advanced VoIP system for key office personnel.

Time Tracking. Most contractors do not need to track time for office-based personnel. However, with remote users, this might become a requirement. Many ERP (Accounting and Job Cost) systems have the capability to track time even if it has not been implemented. If not, there are a wealth of time tracking tools that integrate with construction ERP systems. Alternatively, the same tools people used to track time out in the field may be possible to leverage for internal users.

Support. Finally, a good support team will play a critical role for remote users. To avoid IT getting swamped by support requests, contractors will need to define guidelines and a support workflow methodology. Leave the internal support team to focus on specific business application-based issues by leveraging third parties (managed service providers/outsourced helpdesks) to help with the initial onslaught of trouble tickets mostly related to home connectivity issues. Having a robust helpdesk system, ideally one that integrates with your UEM (Unified Endpoint Management) or CMT (Computer Management Tools), will be critical. The ability for end-users to see the status of their support tickets, manage escalations, and provide trend analysis will benefit contractors both now and in the future.

KEY TAKEAWAYS

Takeaway #1

Communication, leadership, compassion and respect for individual needs and perhaps above all, a sense of humor will be needed during this transition phase. This is an excellent time to take communication to the next level, work together and collaborate – with your vendor partners, owners, and everyone involved. Regularly communicate internally and with your construction supply chain.

Takeaway #2

Organizations need to stay organized, outline their plan, and execute effectively for business continuity. Change is inevitable during this time and organizations and employees will have to be creative and flexible. Although there are technical elements that need to be addressed when supporting work from home users, please also keep in mind guidelines, training, communications and leadership that an organization provides.

Takeaway #3

Now is the time for digitization to happen – teams and organizations are now using tools they did not think they would need. Some contractors may find these changes will make them more productive and more open to trying new things in the future.

Takeaway #4

Give your employees breaks – they are experiencing a lot of change and distress. Support and provide them with the tools and resources they need.



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