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# IT's Critical Role in Enabling Mobile Work

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A White Paper Prepared for Citrix By the Work Design Collaborative

## Introduction/Executive Summary

The “anywhere office” is a reality in corporate America today – whether senior executives realize it or not. Indeed, it’s now safe to say that office-bound knowledge workers are, by and large, a vanishing breed.

This report focuses on the critical role being played by IT professionals who are now on the front lines in this corporate revolution. After all, it’s the explosion in IT capabilities and portability that has enabled the emergence of the anywhere office.

With Citrix Online’s active guidance and support, we conducted an online survey<sup>2</sup> to learn how IT is supporting flexible work, what challenges that support creates for IT organizations and what kinds of policies and practices are in place to enable IT to meet their employers’ business needs. Over 400 IT executives and professional responded to a series of questions about how their organizations supported mobile work and what challenges mobile work presents to IT organizations.

*WDC research has shown that for the last several years over two-thirds of the knowledge work being done in the United States today takes place outside of corporate central office facilities. Some of it naturally occurs in home offices, while the rest takes place in coffee shops, public libraries, airport lounges, hotel rooms, conference centers and in trains, planes and automobiles.*

We found, quite simply, that mobile work *is* the norm today; only 6% of the survey respondents work in organizations that prohibit mobile work. This new reality presents IT organizations with a number of technical challenges – in particular, the need to maintain corporate data and network security standards in a far more flexible and dispersed environment. However, it’s clear that IT organizations are more than up to the task; only about 4% of the survey respondents reported that any individual IT difficulties were preventing remote employees from working effectively.

One of the more surprising findings (for us, at least) was that having access to an office PC and/or company server (55%) was almost identically as important to remote workers as having a cell phone (56%). In contrast, it was no surprise that laptops are the most important technology for remote workers (90%). Only 29% of the respondents believed that Web conferencing software was important for occasionally mobile workers.

This paper summarizes the findings from the survey and several in-depth interviews of Chief Information Officers. It also paints a picture of mobile work today, highlighting the strategies that leading IT organizations are following to make mobile work as easy and productive as possible. It closes by offering guidelines for keeping end users productive and focused on their work.

## Why Does Flexible Work Make Sense?

Before we summarize our empirical findings, we want to step back a bit and look at the business benefits that result from enabling flexible work. After all, we really need to know why this emergent new way of working is growing so rapidly.

There are at least six solid reasons why we believe organizations *should* establish flexible work programs that enable some or all of their employees to work in and from multiple locations:

1. Reducing basic workforce support costs
2. Increasing workforce productivity
3. Attracting and retaining talent
4. Increasing organizational agility
5. Reducing the business risk of disruption from terrorism and natural disasters
6. Reducing traffic congestion, air pollution and environmental impact more generally

Let’s consider each of these factors briefly before we report on the survey results.

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<sup>1</sup> This white paper, along with the survey we conducted as background for the paper, was funded by Citrix Online.

However, the ideas and conclusions herein are entirely our own. To their credit, our sponsors at Citrix bent over backwards to avoid influencing both our perspectives and our conclusions. At the same time, their comments on the survey results and earlier drafts were both insightful and constructive.

<sup>2</sup> A detailed report of the survey findings, including summary charts for each of the twelve principal questions, is available on request from Citrix Online.

## **Bottom-Line Economic Benefits**

Our own research and a number of real-world company experiences confirm that enabling employees to work in many locations away from the central office can make it possible to achieve significant reductions in workforce support costs by shrinking the office footprint, sharing workplaces and moving into a “free address” office layout. And there are other savings opportunities driven by the increased self-sufficiency and productivity of mobile workers.

### **Increasing Workforce Productivity**

While the measurement of knowledge worker productivity is a difficult and complex subject, we are convinced from our own research and consulting work with individual organizations that distributed workers are consistently more productive than their office-bound colleagues.

*WDC has conducted numerous studies over a fifteen-year period of the productivity differential at both the individual and the group level, and they have consistently shown gains of 15% or more for mobile workers relative to their office-bound counterparts.*

### **Attracting and Retaining Talent**

Our original research on working patterns (conducted over five years ago) was driven by our conviction that knowledge workers today want – no, demand – extensive control over where and when they work. And flexible work arrangements – getting things done from wherever they are or want to be – gives them exactly the kind of control they are looking for.

Not only that, but knowledge workers are also choosing where to live before worrying about what company to work for (see [“In Our Humble Opinion: Reality Bites,”](#) *Future of Work Agenda*, July, 2006; [“Attracting the Young, College-Educated to Cities,”](#) *CEOs for Cities*, June, 2006).

### **Increasing Organizational Agility**

Any business is inherently more flexible and agile with a large number of mobile workers (see [“The Agile Workplace,”](#) Gartner Group and MIT, July 2001; [“Enabling Work in a Networked World: Must-Have Intelligence on the Emerging Global Workplace,”](#) CRE2010, CoreNet Global). Agility means the ability to adapt rapidly to changes in the business environment; with a highly mobile workforce you can move much more quickly in response to moves by competitors, customers, suppliers or other external pressures.

### **Reducing Business Risk**

We all know that one of the primary original design objectives of the Internet was to create a redundant network with no mission-critical “center.” If some portion of the Internet is down because of hardware or software crashes, the rest of the Net picks up the slack by rerouting messages and data. Similarly, a distributed/dispersed business model is far less susceptible to disruption from any kind of disaster, whether it’s terrorism, a hurricane, a snowstorm, an earthquake or an old-fashioned power outage.

### **Minimizing Environmental Impact**

This too is an obvious benefit to having your workforce operating in a distributed fashion. The arithmetic here is simple: if every company in a major metropolitan area encouraged or required its entire workforce to work from home or a in neighborhood satellite facility just one day a week instead of commuting to the central office, the number of cars on the road (and their energy consumption) would drop by almost 20%. (There is, of course, some traffic that is not directly related to commuting.)

The National Environmental Policy Institute<sup>3</sup> estimates that a 20% reduction in commuting would save the United States 1.2 millions of gasoline every week. At a conservative price of \$3.75 a gallon, that translates into over \$45 million a week in fuel savings for the workforce – another financial benefit directly attributable to flexible work. For an individual, a reduction of even 100 miles a week in commuting mileage represents an average cost savings of well over \$1,000 a year.

## **Mobile Work Is Real – and Here to Stay**

Our long-term Work Design Collaborative Workforce Survey research has clearly demonstrated<sup>4</sup> that, on average, knowledge workers spend just over one-third of their work time in their “assigned” workplace (what many companies call a “home base,” which is often not a specific cubicle or desk but a corporate office building that the individual employee treats as his or her “place of work” or primary work location).

<sup>3</sup> <http://www.nepi.org/>

<sup>4</sup> We’ve administered the Workforce Survey in various forms over the last eight years; it has now been completed in one form or another by over 2,000 knowledge workers.

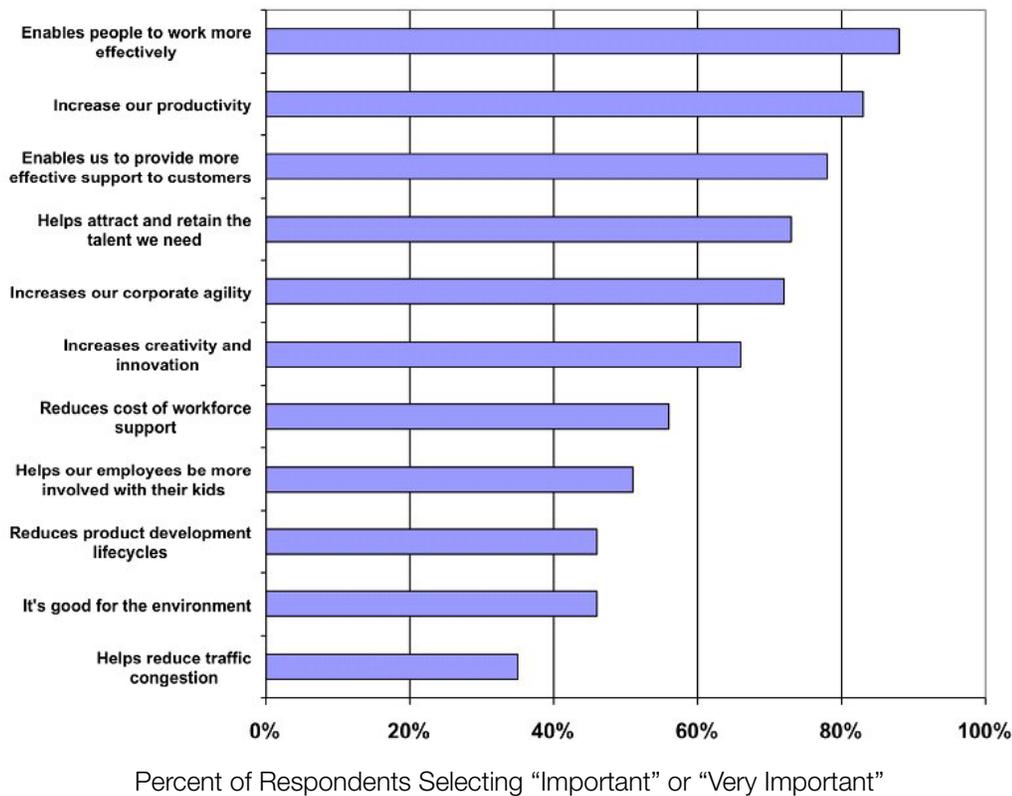
Given the technology capabilities we have today, it is hardly surprising that so many business executives and professionals are conducting a significant portion of their work remotely. And even though it's taken longer for many senior executives to embrace and support mobility than we had expected, there's no question that in 2008 its frequency and popularity is virtually exploding. With rising gasoline prices, concern about global climate change and the increasing power of mobile IT devices and networks, mobile work is rapidly becoming the norm.

The simple fact is that any vision you might have of a central corporate facility where all employees "go to work" is clearly outdated and hopelessly out of touch with the current reality of how work gets done.

### Why Do Companies Support Flexible Work?

Earlier we noted six key factors that we believe make flexible work compelling. The survey respondents by and large agree with us:

**Figure One: Reasons for Supporting Mobile Work**



It is worth noting that these are very high numbers; IT professionals overwhelmingly understand that flexible work makes good business sense.

And we find it both compelling and encouraging that the top four reasons for supporting flexible work all focus on organizational effectiveness, including providing better customer support. In fact, cost is almost not an issue at all. "Reduces the cost of workforce support" is ranked way down at number seven.

Yet for all the front-page news about "road warriors," telecommuting, portable technologies, wireless networks, VoIP, GPS systems, WiFi, WiMax and virtual private networks, most of us take the reliability, security, ease of use and ubiquitous access far too much for granted.

Thus we are focusing here on those all-but-forgotten heroes who keep the IT networks, databases, firewalls and end-user systems up and running 24x7, 52 weeks a year. Whatever else we might say about IT as a profession, the core fact is that IT is more than meeting the challenges of mobile work; in many organizations today IT is actually leading the charge. IT workers themselves are often among the most flexible and mobile workers in their companies, and they are finding all kinds of creative ways to support a widely dispersed workforce that is "at work" somewhere almost 24 hours a day.

Where are those knowledge workers when they're "out of the office"? Our surveys have repeatedly shown that they work out of a home office about 30% of the time (that's 12 hours during a 40-hour workweek, though most of our survey respondents clearly spend lots more than 40 hours "at work" in a typical week). And what about that last 30% - 40% of their time? We've found that it's typically spread across a wide variety of "third places" – coffee shops, libraries, airports, hotels, trains, planes, busses and even cars.

Our most recent version of the Workforce Survey, conducted in Spring 2008 (also sponsored by Citrix Online) was completely consistent with our longer-term findings.<sup>5</sup>

We've also been tracking the demographics and geographics of work for many years. Our compilation of statistics from the Bureau of Labor Statistics and the Census Bureau suggests that today there are at least 24 million people working outside of a corporate office facility

*"The number of mobile workers in our organization is going to more than double in the next five years."  
- High-Tech IT Executive*

<sup>5</sup> See "Flexible Work: Rhetoric and Reality," Spring 2008, available on request from Citrix Online.

at least two days a week – and that number is rising by 15% or so a year. In short, flexible and mobile work – tasks being completed in many locations and people moving from one location to another throughout a workday or a workweek, is just the way things are in 2008.

And the good news is that more and more organizations recognize this new reality and are either actively supporting it or preparing to. In fact, only 6% of the survey respondents work for companies that actively prohibit flexible work (that is, their policies require the entire workforce to be in a corporate facility every day). To put that more positively, well over 90% of the companies surveyed currently have policies that support flexible work. One of our CIO interviewees put this way: “Our employees simply expect that we will support flexible work options.”

And we’d put some good money on the proposition that even in that small minority of companies “prohibiting” flexible work, there are a reasonable number of employees working at home or somewhere else almost every day. In fact, a recent survey of research on mobile workers reported in *Information Knowledge Systems Management* shows that fully 83% of global organizations have work groups working in “virtual” environments connected with each other or the central office with Internet technologies.<sup>6</sup>

### ***IT Is Taking Care of Business***

The really good news, though, is that IT professionals are on top of the challenges of supporting those mobile workers. They know they have to enable employees to work remotely and “on the go,” and they’re doing it with gusto. At the same time, however, they are deeply concerned about the security issues that mobile/remote work naturally brings with it.

One of the major themes that emerged from our executive interviews is that IT management is totally on-board with supporting mobile work. That wasn’t true even five years ago, when strenuous arguments were presented to prohibit this type of work, often citing the cost-prohibitive nature of mobility options. No more. In fact, it appears that line managers now bring their needs and concerns to IT and ask for help. In our interviews we found the lingering resistance to adopting mobility technologies centered more in the corporate real estate function than anywhere else. In the words of another CIO: “Those guys in real estate just don’t get it.”

*One CIO we talked to is pushing hard to get all his company’s employees on “thin client” laptops with almost no local data or applications storage capacity.*

Data security and network management remain high on the list of priorities for IT executives. The top two IT challenges reported in our survey were “providing data and network security” (62%) and “maintaining the corporate network” (49%). But these issues are not seen as insurmountable.

A repeated theme we heard from just about all the CIOs we spoke with is the drive toward connectivity standards. We know that connectivity at the different levels of network management is a complex technical issue. However, it’s one that IT managers are more than capable of handling when they work in collaboration with line managers who simply need to get the job done.

The challenge of working with end users is a major one, however. As the CIO of a major national law firm put it, “The TV ads make all this stuff sound simple. People believe the ads and then want to know why it takes us so long. Their expectations are just unrealistically high.”

The IT professionals who completed the survey also told us that, as far as they could tell, mobile end users are doing just fine. When asked what kinds of challenges prevent end users from getting their work done, no more than 4% of the survey respondents cited any one difficulty (their choices included “Getting online,” “Accessing my company’s network and servers,” “Accessing the team’s work files” and “Staying in touch with individual team members.”

Bottom line: IT is not a barrier to making mobile work programs effective. While there may be many technical issues involved in supporting mobile work, the fact is that in general IT professionals are doing their job so well they make it appear easy.

Those occasionally remote employees depend – no surprise – on laptop computers and either a VPN (Virtual Private Network) or an Internet-based remote-access solution to access their email records and other data files on company servers. Interestingly, there is almost an even split between those who rely on a VPN (59%) and those using a lower-cost but even more reliable remote-access solution (55%).

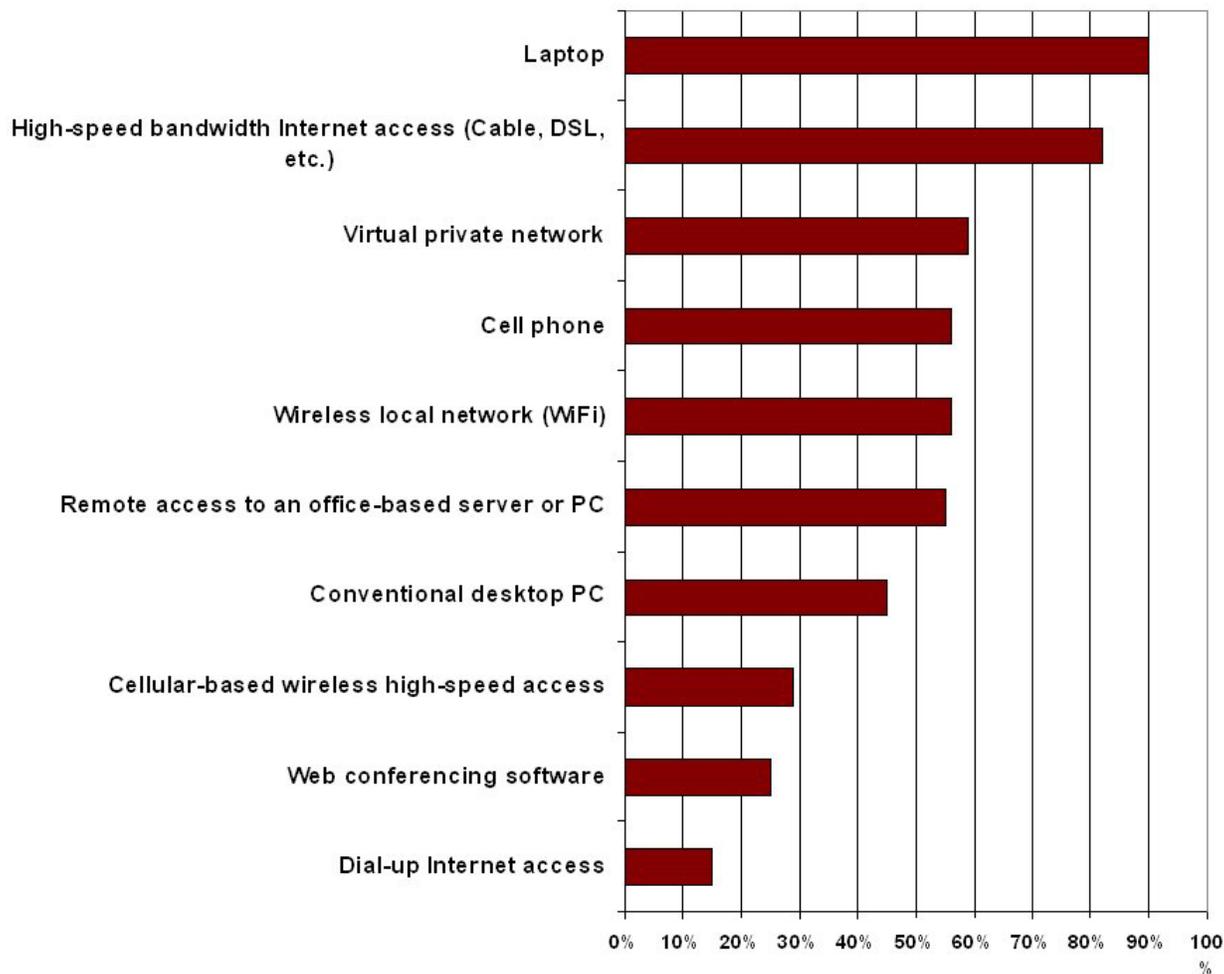
### ***Technology Effectiveness***

We also asked which technologies mobile workers rely on. It is no surprise that laptops are at the top of list; 90% of survey respondents reported that their end users rely on laptops when working remotely.

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<sup>6</sup> “Designing productive work spaces for mobile workers: Role Insights from network analysis,” C. Venezia, V. Alle and O. Schwabe, *Information Knowledge Systems Management* 7 (2008) pp. 61-75.

**Figure Two: Technologies Used By Remote/Mobile Employees**



Percent of Respondents Using Each Technology for Remote Work

What really jumped out at us in this section of the survey was the startling fact that software providing remote access to in-company servers and data files is almost as popular (55%) as cell phones (56%). And remote access is almost as effective as email in improving employee productivity; 95% see email as enhancing productivity significantly, but fully 83% also reported that remote access to data and servers is an important productivity booster.

Given the broad popularity of cell phones, it is remarkable that remote access is almost as popular – and has such a powerful impact on personal productivity. We have to conclude that, as wonderful as it is to work remotely, it's still critically important to be "in touch" with home base – to be able to access both data and enterprise applications from wherever you happen to be.

Looking at these kinds of data over the last several years, we've noticed that having access to a "shared document workspace or repository" appears to be climbing in importance. It's hard to make a direct comparison, but our last survey (conducted six months ago) showed about 61% of respondents finding shared repositories useful, while this survey showed slightly over 70% reporting that particular technology as an effective tool.

The data here also shows that the technologies that receive a lot of attention in the popular press – such as blogs, wikis and chat rooms – simply don't yet seem useful in supporting mobile work. We can only surmise that those particular technologies are more socio-emotional in nature and don't provide meaningful support to the tasks that are directly related to mobile work.

### ***Driving Innovation***

We also asked the survey participants to tell us who in their organization was driving or sponsoring the introduction of new end-user technology into the organization.

Not surprisingly, the most prominent sponsor of new technologies is the IT organization itself (43%). Senior executives came in second at 31%, with business-unit heads in third at 16%. Again, not surprisingly, first-line managers are the instigators of IT innovation only 10% of the time. We presume that's largely because those first-line managers have their hands full just getting the job done on a daily basis and are most likely the least informed about new technologies and their possible value to the business.

The senior IT executives we spoke with almost universally expressed the attitude that, “Tell me what needs to be done and we’ll find the end-user tools and implement a system to support it. But first tell us what functions need to be supported.” Knowledgeable IT executives increasingly see their organizations as the appropriate source of standards and IT policies; they’ll determine which tools to provide (i.e., define IT standards) once they know what the end users’ requirements are.

We also sensed that a realization is developing among IT professionals that mobile workers’ roles across their organizations vary significantly. And, depending on those differences, the type of technology support required varies just as dramatically. So, the secret is to first define roles and technology support needs, and then develop an appropriate technical solution – fitting, of course, within the company’s IT standards and budgets.

## Conclusions and Recommendations

In sum, the full-time corporate office where everyone is in the same building all day, every day, is clearly a thing of the past. IT is fully engaged with supporting mobile work and, in many respects, is leading the way in helping the organization to increase productivity, enable more effective customer support, attract and retain talent and increase corporate agility.

However, ensuring data and network security – as well as reliability and access – remain IT’s top priorities. Mobile work is a powerful means of enhancing corporate competitiveness.

IT departments that are not actively supporting mobile work arrangements are putting their organizations at serious risk. So what should you do to ensure that you are providing world-class support to your organization’s flexible work programs?

First, there is no question that supporting work wherever and whenever it occurs is a prime requirement for modern corporate IT organizations. Be sure you are linked closely to the HR and Facilities flexible work programs and have the “right” to contribute to corporate policies affecting mobile workers.

You don’t have to let security and connectivity standards be compromised. The one thing that keeps effective Chief Information Officers awake at night is the fear of having the corporate network or databases compromised. Our survey data shows that IT organizations are maintaining security while enabling mobile workers.

Second, focus IT support for mobility on enhancing customer service capabilities. We believe this perspective is essential because mobility options provide an efficient direct path from customer to employee. While general employee productivity is also important, it usually takes care of itself as mobile workers learn to use technology effectively and adapt it to their personal needs.

Finally, remember that providing remote access to data and company servers is just as important to your mobile workforce as having a laptop and a cell phone. And it has almost as powerful an impact on productivity.

The full-time corporate office worker has almost become an exception to the general “rule” of working anytime/anyplace. Technology today enables flexible work, and an increasing proportion of the “new professionals” are moving around frequently, accessing the Internet, their colleagues and company files from wherever they happen to be at any point in time. Like a cell phone number, an Internet email address connects you to a *person*, not a place.

*IT departments that are not actively supporting flexible work may be doing their companies great harm and creating insurmountable barriers to productivity and competitiveness.*

That new reality is only happening, however, because IT has bought into the concept, is actively supporting it and is implementing the platforms, networks and infrastructures to make it real.