

Users and Applications

The evolving deployment of
wireless remote access technology



Contents.

1	Key Findings	4
2	Introduction	5
3	Mobile in the business strategy	6
4	From Pilot to broader adoption	7
5	Expanding the user community	8
6	Email and other applications	9
7	Return on Investment	11
8	Conclusions	13
	Acknowledgements	14

1 Key Findings

There are many reasons used to justify the deployment of technology, but ultimately it has to address the commercial needs of the business. It can be quite easy to embark in a particular direction, trying out the latest technologies being promoted by vendors, only to find that these do not really add value to the business. Running pilots is an effective way to test ideas, but taking the next step and deploying the technology can have a larger impact on the business – either positive or negative. The risk is especially high with deployments that have a mobile component – is the risk justified? Larger companies in particular use wireless remote access technology quite widely, but has it yet reached the employees who can benefit the most? Enterprises need to use their business strategy, not the availability of technology, to determine where and how to invest.

- **Wireless remote access sits between application and infrastructure investment**
Wireless remote access is deployed more widely for more senior levels of employees, with 50% of senior executives using the technology widely, dropping to only 13% for field sales teams and less than 10% for field service personnel. This is mirrored by application deployment which is still more angled towards generic professional applications led by mobile email for senior employees, rather than the business specific applications for blue collar workers.
- **Adoption has two distinct directions, more users and more applications**
Almost one third of business managers believe an increasing number of employees would benefit from access to IT and business communications while working from home, traveling outside the office, or from a flexible location within their organizations premises. Despite this, IT management and purchasing dictate the approval processes, with one third ignoring the views of business management and around half ignoring the views of facilities or operations management.
- **Business need and role dictates which employees get access, but seniority predominates**
A specific business need or the overall job role is cited as important for deciding where wireless remote access is actually deployed in the majority of cases, and fewer than one in five businesses claims to ascribe much importance to seniority. However, when looking at actual deployment, senior executives and other management have greater official deployment, with other groups seeing more unofficial ad hoc deployment.
- **Larger enterprises have wider usage, smaller ones see more white collar application benefits**
Almost half of larger enterprises have some wireless remote access usage widely spread across the organization; this is over three times the figure for smaller businesses. They in turn have started with applications mainly for white collar professionals, as this requires less IT infrastructure or integration investment, however even here, smaller enterprises are likely to be overwhelmed by the variety of options, tariffs and devices on offer.
- **Linking IT thinking to the business need is the way for businesses to get widest buy-in**
While the cost of remote or mobile communications is still a major concern, the lack of an available network or inconsistency is no longer an important issue. Finding the right connector for telephone sockets, modems and power leads has been replaced by finding the right roaming plans or a hotspot provider with a peering arrangement.

2 Introduction

The widespread use of wireless and mobile technologies to extend the business use of IT outside the office has been widely predicted, and research has shown the strong potential. However in reality adoption has been patchy, with many pilots, limited deployments, and with wide variety between industries and companies of different sizes.

This does not mean the whole idea is wrong, but that there are different business requirements and drivers, which expose different challenges, and timescales. Any approach must be founded on the needs of the business, and how to best fit the available technology to further those needs so that the investment can be justified.

The aim of this report is to look at the emerging adoption of mobile communications in small, medium and large enterprises. As background to this, 150 business and IT managers were interviewed.

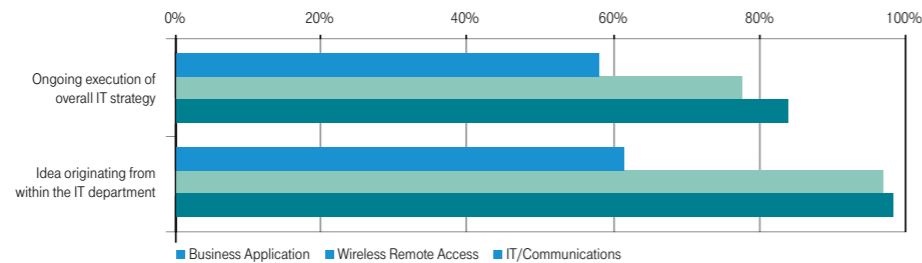
The report examines the issues involved in dealing with the adoption of mobile technology, and is intended to be read by those with responsibility for sourcing mobile technologies and dealing with mobile suppliers. It offers them a peer review and background information for their discussions with vendors.

3 Mobile in the business strategy

The first thing to understand is where does investment in wireless and mobile technologies sit alongside other IT projects? Most companies already have significant investment in network infrastructure and business applications, and established procedures for deciding what to invest in. Sometimes these are driven and funded by business requirements, where they are seen as adding value to the business. Other times they come from within the IT function, and are often seen as only adding cost to the business.

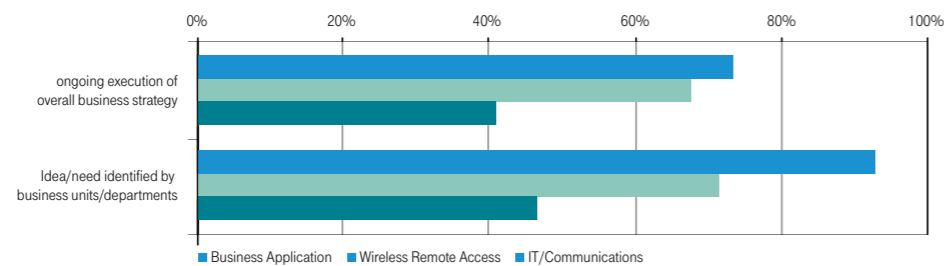
The perception is that wireless remote access falls somewhere between these two. Partly infrastructure, so the value is hidden, but the cost is visible, and partly something that can change the business and add value by extending existing applications. Like other communications projects, the idea still often originates in the IT department (Figure 1).

Fig 1. IT Drivers - Which of the following are significant in prompting investments in these project areas?



However the business drivers for wireless remote access are significant. It offers more flexible working patterns and usage of applications for a wide variety of workplaces, the prospect of increased productivity and more responsive communications with customers. Many companies are recognising the business value, and tying wireless remote access into their overall strategy for the business (Figure 2).

Fig 2. Business Drivers - Which of the following are significant in prompting investments in these project areas?

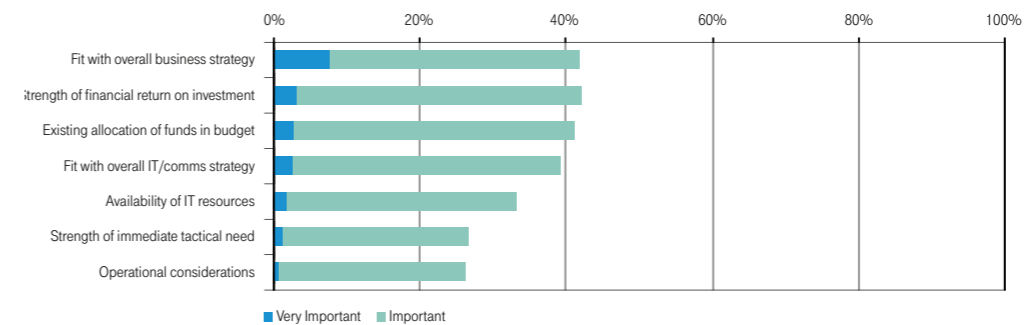


The challenge for companies faced with the wireless remote access opportunity is how to best link business and infrastructure strategies and thought processes, to ensure the best solutions are adopted for the organisation.

4 From Pilot to broader adoption

Many companies have run wireless remote access pilots and trials in an attempt to decide on whether to embark on a broader deployment. This is a good idea, and even simple pilot projects should be run professionally and with the same rigour as full scale deployments. Few companies attach great importance to justifying a pilot purely on financial or strategic reasons, highlighting open-mindedness and a willingness to investigate further (Figure 3).

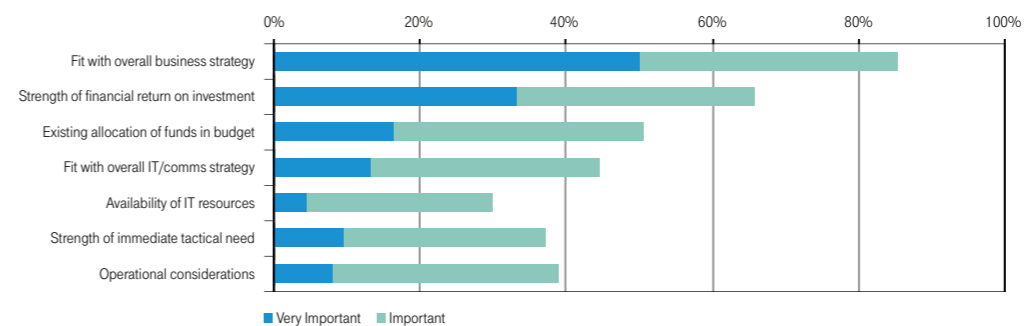
Fig 3. For wireless remote access investments, how important are these factors when considering an initial pilot?



After the pilot phase however it becomes far more important to keep a critical eye on further expansion to a broad rollout. The view of the impact on the IT department does not alter much. Fit with overall IT strategy, availability of IT resources and even operational considerations, do not really increase from looking at pilots to planning significant rollouts.

The two areas where most importance is attached are strength of return on investment and alignment to business strategy and significantly these are considered more important than having existing funds available (Figure 4). Budget and resources can be found to invest if sound business reasons justify them.

Fig 4. For wireless remote access investments, how important are these same factors when considering a significant rollout?

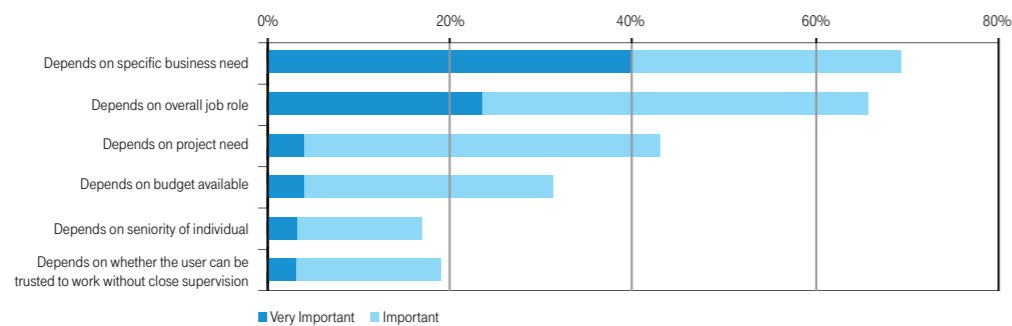


5 Expanding the user community

There are two dynamics for increased adoption of wireless remote access: which groups of employees will benefit, and what applications are most relevant.

There are numerous ways to try to decide where to deploy first, and how to extend a deployment. Although most organisations claim the seniority of an individual is not that important a factor, senior executives and other management are the employees to whom the technology is most commonly deployed (Figures 5 and 6).

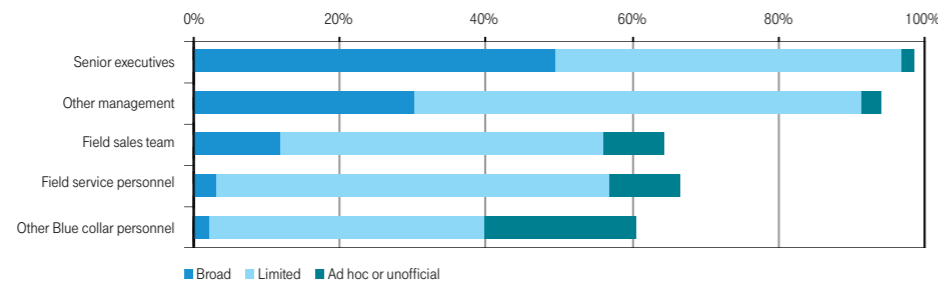
Fig 5. Lots of users might ask for wireless remote access, how important are the following criteria for deciding how this will actually be deployed ?



The key priority has to be based on business need, but while this is a good criteria for limiting deployment to only those who really need wireless remote access, it does little to assess the business value of wider deployment. For example, the business need for mobile email for senior executives was (and still is) difficult to quantify, but the value, most often noticed when the service is removed, is visible – hence the high levels of interest.

This might be more intangible than pure, measurable productivity gains, but the effects of faster decisions, individual control and increased communication, together with peer pressure and apparent prestige have led to broad deployments among senior executives (Figure 6).

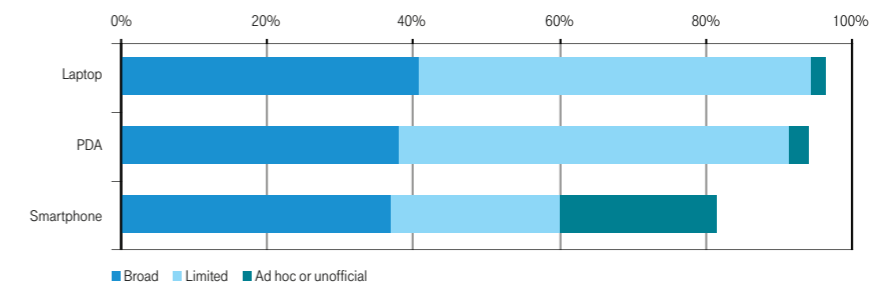
Fig 6. How widespread is wireless remote access currently within the organisation for different employee groups?



Field sales and service personnel seem an obvious place for using mobile technology to enhance productivity, but here deployments are still more limited and sometimes more ad hoc.

Availability of budget is only a moderately important factor, and the growth of lower cost off-the-shelf mobile devices capable of serving wireless remote access users, bodes well. The suitability of one device or another depends on the applications it has to perform. Laptops are clearly the most useful platform for the widest range of uses, with many sporting the full capabilities of a desktop computer. But start-up and shutdown time, and the need to find somewhere to sit, mean that for an instant alert to incoming email a pocket-able device makes more sense.

Fig 7. Looking forward over the next couple of years, which of the mobile devices listed above do you expect to deploy to Senior Executives



Historically the laptop has been the mobile device made available for many levels of users, and while this is unlikely to be completely replaced any time soon, there are alternatives that offer specific mobile application access at a much lower cost. Today, many senior employees already carry PDAs as well as laptops, and as these become better supported and integrated into the IT infrastructure they will impact on laptop deployment (Figure 7).

6 Email and other applications

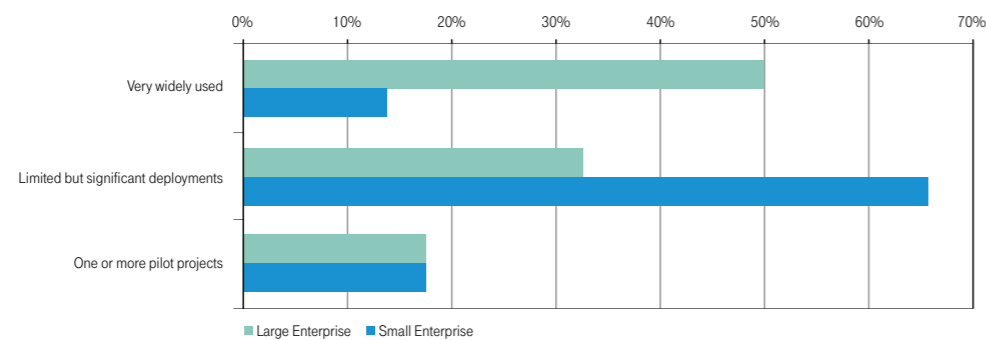
Although remote or mobile access to email is only one aspect of access to IT systems, it has, through devices such as the BlackBerry, gained both fame and notoriety as the application most executives crave.

However important email has become, there are many other IT applications required to support the running of any business – access to patient records, sales force automation, customer service details, professional time recording – which would benefit from being placed into the hands of employees while out of the office.

This is not just about increasing individual productivity, but also extending the benefit of existing investments. Many enterprises have invested massively over a number of years in collecting and managing information about their customers and the business. It is typically the larger companies where this investment has been highest and where the need to justify and take advantage of these information systems is more pressing.

The resources required for investing in new technologies are easier to find in larger companies, with dedicated IT support, and perhaps historically some spare capacity to explore new ideas, after the large investments in the past. Widespread use of wireless or remote access technologies has grown in larger enterprises, with around half noting very wide usage (Figure 8). Of the three categories used in the research, the results for medium sized companies, which fall between large and small, have been left off for clarity.

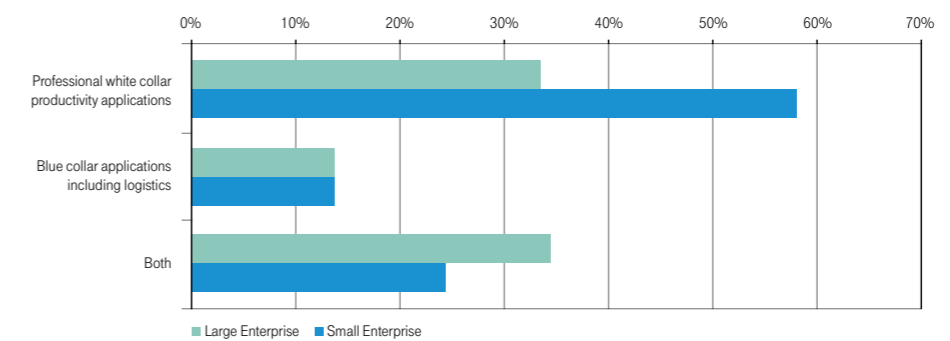
Fig 8. What is the level of usage with wireless remote access today in the organisation – large and small enterprise



Trials, proof of concepts and experimentation have not been as easy for smaller enterprises, but with the commoditisation and cheaper entry points for much wireless and remote access technology, many more smaller companies are taking the plunge with limited, but significant deployments.

One area where this is clearly of value for any business is supporting professional or white collar workers. This is more keenly felt in smaller companies, where smaller numbers mean more individuals are critical to the success of the business. Keeping them informed has even greater value than it does for large enterprises leading to greater adoption of these applications (Figure 9).

Fig 9. Which of the following mobile applications have been deployed in the organisation – for large and small enterprises



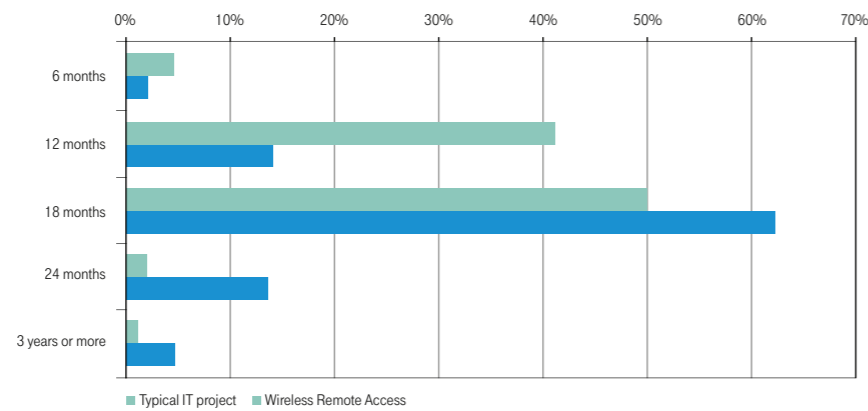
The difficulties remain however in integrating this with broader applications in the business, and the challenge even here is to extend the personal productivity benefits into wider returns for the whole business through extending to a larger percentage of the work force.

7 Return on Investment

Rapid return on investment has been the mantra for many in the IT industry leading to misguided attempts to expect a return in 6 months, when in reality 12-24 months is a more realistic target.

Despite that desire to quickly gain a return on any technology investment, UK enterprises do take the longer term view of wireless and remote access, compared to other typical IT projects, with around a third expecting a return after 18 months (figure 10).

Fig 10. When considering return on investment – how do Wireless Remote Access projects compare with typical IT projects?

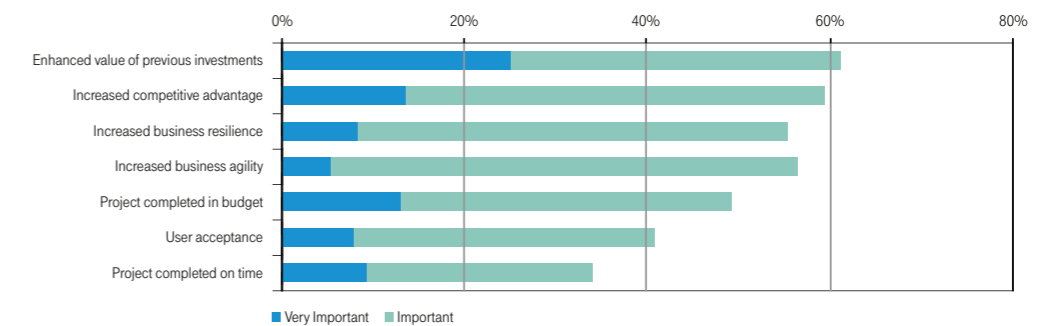


This is not generosity to the mobile vendor community, but a reflection of the wider impact on working practices and changes in business processes that accompany any wide scale wireless or remote access deployment.

It also reflects some of the high prices of new technology and the difficulty in predicting future costs due to rapid advances in handset and device technology, and the lack of clarity in mobile data communications costs.

There are also other considerations to take into account due to the potential for increased flexibility of the business; even timely project completion is not viewed as importantly as enhancing competitive advantage (Figure 11).

Fig 11. How important are other factors beyond return on investment for a wireless remote access project?

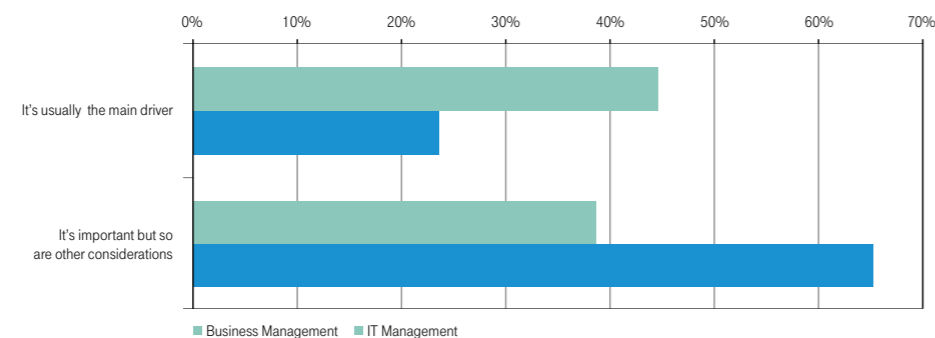


The potential for wireless and remote access to unlock the value of earlier investments is crucial, making it clear that new technology is not there to be adopted for its own sake, but to extend and enhance current systems. For the IT manager this helps justify earlier spend and the need to increase resources, but for a line of business manager, it is all about improving businesses processes to maximise return.

8 Conclusions

The mismatch in views is clearly illustrated by the disparity in how return on investment is viewed so differently between business management and IT management (Figure 12).

Fig 12. How important is financial return on investment in the overall scheme of things for a wireless remote access project – for different job roles



Wireless and remote access adoption is growing. Many businesses have run pilot projects, learned the capabilities and pitfalls of the technologies, and have build relationships with technology and communications infrastructure partners.

However the linkage between technology and business remains a problem. Users are often not involved and consulted early enough, the more complex high value business applications are overshadowed by the easier to deploy mobile email, and the technology is being viewed separately to the needs of the business.

This is not a problem unique to this particular technology area, but as wireless remote access demonstrates its importance to both an ongoing IT as well as business strategy, it must be addressed. Defining the total value of wireless remote access is something that involves a wider decision making group than many other applications.

An approach that addresses the total value proposition must look at broader benefits, and take into account their value with respect to the area of the business affected:

- **Company.** How does the company benefit? There are only three areas of benefit: value, risk and cost. The impact on each of these needs to be assessed in a business context.
- **Competition.** There may be costs associated with not adopting a particular solution, and an impact from the wider market depending on what the competition is doing. This needs to be quantified and understood.
- **Financials.** Precise return on investment or total cost of adoption calculations often fail to take into account the costs of existing processes, or how these might change. These need to be understood and quantified.

While some benefits will have directly attributable financial value, others will not, and these can then be 'scored', so that financial and non-financial benefits can be ranked and compared. This allows for a wider view of the impact on the business, and allows values beyond those which are purely financial, to be presented clearly and understood.

8.1 Acknowledgements

This kind of research is crucial to all of us in the business and IT community – suppliers and customer organisations alike. We would therefore like to thank all of those participants who contributed so generously, with patience and good humour, towards a better understanding of issues in this important area, and to the sponsor of the research behind it.

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