BRING YOUR OWN DEVICE

The mobile computing challenge



BRING YOUR OWN DEVICE
THE MOBILE COMPUTING CHALLENGE

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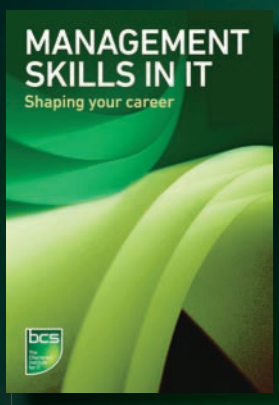







1 BYOD: THE PROS AND CONS FOR END USERS AND THE BUSINESS

Without a doubt, 'bring your own device' (BYOD) has become one of the industry hot topics. IT professionals are wary of it, end users are embracing it and vendors are trying to market it. It's a subject that's dividing opinion, with the security implications alone causing IT managers to wake up in a cold sweat. Alex Wood, Marketing Manager at Point to Point, reports on this growing trend.

There is one very obvious and visible benefit of the 'bring your own device' phenomenon – productivity increases. Quite simply, users work better and increase productivity while feeling more content with the freedom to use their own devices.

Also, with a greater degree of personal ownership and personal finance involved, employees take the time to maintain their beloved gadgets. From a corporate perspective, there's the clear cost savings attributed to decreased hardware replacements.

However, the most positive aspect of BYOD is entirely intangible. Fundamentally, BYOD allows employees to interact directly with IT in a positive sense. It reflects a proactive approach from IT departments, working with the end user rather than against them.

Employees want to use the most appropriate device to help them do their job. You're the marketing manager? OK, use a Macbook. Work in sales? Make the most of your tablet for taking notes in meetings.

When you think about the negatives surrounding BYOD, the issue of security is never far away. Data leakage and the risk of malware are the obvious problem areas that spring to mind. Additionally, although very few people will deliberately steal corporate data, there's always the risk of leaving a tablet, laptop, phone and so on in the back of a taxi. Importantly there is some great mobile device management software around that seriously mitigates the risk of data theft.

One might think this issue is as simple as deciding whether to allow BYOD or not, but unfortunately it's not as straightforward as that. Organisations need to decide whether to embrace fully the BYOD ethos or restrict it ever so slightly. For example, are you going to allow Android devices or just Apple? Some organisations suggest that Android's open format makes it more susceptible to attacks, thus rendering the Google-owned platform out of bounds.

Equally, where do organisations draw the line around the management and maintenance of personally owned devices? Parameters need to be clearly defined. If a device breaks, does IT fix it or is it a case of 'taking it to PC World'?

Similarly, if people have their own devices, there seems to be an increased impetus to work outside traditional hours. As a result of this, employees expect 24/7 support when they can't log in on a Sunday afternoon. In addition, there is reluctance from some employees around mixing 'business and pleasure'. Whilst the majority of workers seem enthusiastic to embrace BYOD, it must be noted that some individuals are happy just to log on to their work device at 9.00 am and to log off at 5.30 pm.

In this case, it's crucial for organisations to consider who should be included in any BYOD pilot. You wouldn't necessarily want task workers in a call centre working off iPads, but you may want your presales team to have that degree of flexibility.

One thing becomes increasingly clear when you ponder the implications of BYOD. Having some type of strategy, even if it's relatively vague, is essential. Otherwise you're going to start running into all sorts of issues. Slightly worryingly, recent research is suggesting that two thirds of organisations don't have any BYOD strategy in place. Guidelines and expectations need to be set, as well as a degree of accountability.

To achieve this, it's safe to say that BYOD and mobile device management (MDM) software need to go hand in hand. MDM needs to be more than a desirable add-on; it should be a prerequisite. Any sane IT professional should have some serious reservations about a company even considering BYOD without any type of MDM security tool.

When working with clients, vendors and resellers need to help manage expectations and formulate a realistic strategy. From the customer's perspective, it's crucial to understand whether BYOD is achievable, necessary and scalable.

There are risks around BYOD and IT organisations need to help customers weigh up the pros and cons. BYOD is a change in mentality: not just from the user's perspective, but also to any organisation's IT hierarchy.

Add your comments at **www.bcs.org/content/conWebDoc/47519**

2 TECHNOLOGY INNOVATIONS FOR TODAY'S WORKSPACE

Jim Henrys, Principal Strategist at Intel, discusses the implications of the consumerisation of IT on business users and the IT department.

We have seen a fundamental shift in the way in which technology innovations become part of our business lives. Only few years ago, new hardware and software would be first adopted in the enterprise and then trickle down to consumer computing. The situation is now reversed whereby consumer computing innovations lead the charge in business computing. Driving this shift is the fact that technology has become so affordable, and it is now seen as a necessity as opposed to a luxury in all aspects of our lives. As a result, technology manufacturers have refocused their efforts on the consumer market, making products in a huge range of form factors with millions of applications available that provide users with ease and convenience in their private lives. Now consumers demand this same ease and convenience in their business lives too.

This is what the consumerisation of IT is all about, driving big changes in the workplace. In fact, arguably because of an increasingly mobile workforce, the term workplace is becoming obsolete, giving way to a workspace that offers users access to applications and data anywhere, anytime, via the connected device of their choice.

DO EMPLOYEES ALWAYS WANT TO BRING THEIR OWN?

The 'bring your own device' (BYOD) trend goes hand in hand with the consumerisation of IT, whereby more and more businesses are exploring the pros and cons of allowing staff to use their personal tablets, smartphones and laptops for work purposes. Some companies have realised early on the opportunities around BYOD. Yet, although many employees are using their own tablet or smartphone for work purposes, it seems that few are willing to use their own PC as their primary office device.

A recent internal survey of 5,000 employees globally investigated if a stipend-funded programme for BYO PCs would help to optimise the annual PC refresh budget for a company by allowing staff to choose their PC for work use with financial support from their employer. Encouragingly, the survey found that 72 per cent favoured a stipend-funded PC supply model. The greatest benefit cited was a faster refresh cycle, so employees could upgrade to the latest and greatest systems more quickly. Other benefits highlighted included more choice than the IT department tends to offer and the ability to choose a specific brand.

Yet, the study also revealed that just four per cent would prefer to bring their own computer to work – whether or not the company pays for it – and that 40 per cent of those interested in the stipend programme did not want to be responsible for hardware support. From our IT department's point of view, while increasing choice remains a priority, the cost of the stipend programme proved prohibitive. To illustrate this, a gross stipend amount of US$1,700, a net US$1,000 payment to the employee, would end up costing the company US$11 million more than the current PC refresh programme.

NEW USAGE MODELS IN THE NEW WORKSPACE

There is a widespread misconception that companies will be able to hire the best and brightest people only if they are willing to provide them with the fanciest devices. This is not necessarily the case. I have found that people simply want the technology that allows them to use it in their way; which might or might not be the way envisaged by the IT department. To illustrate, a group of people employed by the same company in different parts of the world may decide to form a Facebook group for a project they are working on together, to share ideas and collaborate more effectively. While this might not be the intended usage model of Facebook, it shows that people want to work in an environment that they are most comfortable in. It is the responsibility of the IT department to ensure that they provide employees with the type of workspace that helps them to fulfil their potential and gets the most out of them for the benefit of the business.

This trend has generated new technology usage models for the adoption of smartphones, tablets and ultrabooks or ultra-thin laptops (and everything in between) in the enterprise. These usage models wouldn't be possible with a traditional PC or chunky laptop, and they are predicated by certain technical capabilities and features such as touch, Global Positioning System (GPS), camera, instant-on and enhanced portability. The four new usage categories are:

- **Companion devices:** In this usage model, people use tablets and smartphones as companion devices to augment the functionality delivered by their primary device, such as a PC. This is the category where the BYOD trend is most prevalent.
- **Presentation devices:** Particularly common in sales environments; for example in retail, a sales assistant in a clothing store may use a tablet or a smartphone to check if an item is in stock or to even photograph people in-store and superimpose images of clothes on them to save them a trip to the fitting room.
- **Digital workflow devices:** In paper-based workflows, we are seeing increasing digitisation. To illustrate, nurses may have previously relied on clipboards to keep track of medication records. In some hospitals they are now given tablets to connect this process to the rest of the IT system, increasing efficiencies.
- **Context-aware devices:** This future-orientated usage model is characterised by the adoption of emerging technologies that have traditionally been used by consumers in business class devices. For example, an estate agent might use an augmented reality application to give prospective house buyers a tour of an empty property to demonstrate a possible furniture layout or to show where the nearest train stations and schools are located in relation to the property.

CONNECTING EVERYTHING TO MAKE OUR LIVES EASIER

What these usage models have in common is that devices are becoming more and more like proactive personal assistants that anticipate what you need, rather than simply react to your commands. Increasingly, your device will know more and more about you and use this knowledge, for example, to set up a conference bridge for you and your colleagues when it sees in your calendar that you are scheduled to have a meeting. Or your tablet or smartphone might alert your car that there is flooding along your planned route, and your car's dashboard will suggest an alternative using this weather data and a GPS.

We are moving from connecting everyone to connecting everything. Some might find this increasing machine-to-machine communication a little bit disconcerting, but I believe that your device should know more about you and use that knowledge to make your life easier.

IT'S ALL ABOUT CHOICE

To adapt effectively to this evolution, IT departments need to change their mindset and focus on the user instead of on the technology in the decisions they make. The IT department will live or die by how good a user experience it is able to deliver to employees, and by how it is able to support (not manage!) users as they move from Windows, iOS and Android to BB10, for example.

While giving users the freedom to choose whichever device and software they find most convenient will undoubtedly make the IT team very popular amongst employees, this fragmentation is bound to cause many headaches when it comes to maintenance, licensing and security – and the additional costs associated with each. In many cases the additional costs of licences to support and secure an employee's own device is far more expensive than buying them the same device from the corporate purse, because it adds hidden costs. Research published by the Aberdeen Group in April 2012 found that a company with 1,000 mobile devices spends an extra $170,000 per year on average when they use a BYOD strategy.

So, if there are a dozen different devices with variations of three operating systems used within the business, what is the most effective way for the IT department to navigate this minefield? Writing a native application for each platform is prohibitively expensive. Another option is virtualisation, but because a desktop app won't be optimised for touch, there are likely to be issues with the user experience. The best option in this instance, both from the IT department and the user's point of view, is to make the app web-based and platform-neutral using HTML5, which works on any web-enabled smartphone, tablet, laptop or PC.

In the end it's all about choice. By taking advantage of a combination of technology trends and emerging computing models, such as ubiquitous internet connectivity, virtualisation and cloud computing, IT departments have the opportunity to address proactively the changing user requirements and redefine the way they provide services for employees. The workspace of the very near future will give users access to corporate information and applications from any device, whether personal or owned by the company they

work for – without compromising security. To optimise user experience and improve efficiencies, multiple personal and corporate devices across the computing continuum will work together seamlessly. As computing manufacturers introduce new, sleeker and lighter consumer devices with improved functionality, such as an all-day battery, wireless charging, next-generation voice control and facial recognition, IT departments should embrace these developments and see how they can benefit the business, while delivering users the workspace they crave.

3 A LITTLE CHAT ABOUT BYOD

This is a blog post by Rob England, an IT consultant and commentator. He consults in New Zealand on IT governance, strategy and processes. Internationally, he is best known for his blog The IT Skeptic and half a dozen books on IT, and he speaks widely at conferences and webinars. Rob was the NZ IT Service Management Champion for 2011 and his blog was voted the best 'IT consultant and analyst' blog in the UK's Computer Weekly IT Blog Awards for 2010. He is an acknowledged contributor to ITIL (2011 Service Strategy book). Reproduced with permission of the author.

We need to talk about BYOD. Step into my office please.

Now I know it is a changing world, and you now carry fabulous power and productivity in your pocket. And I know that at work you want to use the platform you control and are familiar with and have configured to your tastes. I can see that. I feel the same way.

What you need to bear in mind is that we are running a business here and the first priority of that business is to stay in business, not to maximise your personal experience of being here. When you come in here, whether as employee or consultant or client or visitor, you play by our rules.

Those rules have been adopted to strike a balance between protecting the company's existing value and taking the company forward. It is a trade-off of risk versus new returns.

In that context, this company makes certain decisions one way or the other. New opportunities present themselves to save or improve or grow, and this company – the governors and managers – makes a decision on whether to take the risks involved in those new opportunities or not. You don't, not unilaterally.

So if the company decides that the risks of BYOD to our organisation exceed the benefits (at least for now), you are expected to abide by that decision like any other. In different organisations the balance will be different and they may embrace BYOD right now with open arms. Good on them. We can't, not without unacceptable risk to the existing business. We have high sensitivity of our data; we are vulnerable to negative PR right now; and we have complex legacy systems that are taking some untangling to virtualise and to expose them to the web. We play the cards we are dealt.

There is no point throwing a tantrum and saying you want your iPad. You can't have it... for now. And don't be threatening to go work somewhere else. If your only interest is what personal toys you are allowed rather than how we can work together for

mutual benefit within the conditions that exist here and now – if your perspective is so self-centred that you would leave over an issue like BYOD – then you'd be better off someplace else for sure.

We'd love to adopt BYOD but that isn't going to happen until we have four things in place:

- Adequate protection of our existing data assets, especially against viruses and hacking.
- Adequate control over BYOD devices, especially the ability to trace and disable them when you lose them. This needs to be available across the breadth of all supported BYOD (which means pretty much everything if it is really BYOD), at least to the same standard as the company's existing mobile desktops and possibly more since the proliferation of devices will increase the risk.
- Virtual desktop. This is the biggie: if we can't deploy our apps to a wide range of devices, then BYOD is of much less value.
- And finally, clear well-considered policy: standards, rules, bounds, expectations.

No this isn't IT's fault. This isn't IT's decision either, just as it isn't yours. This question has been escalated to the highest levels in the company, to those authorised to make the call, based on the advice of IT, HR and the lines of business. So stop blaming IT if you don't get BYOD.

You aren't allowed to bring unauthorised visitors on site; to share company information without approval; or to speak on the company's behalf. I want you to be very clear when you walk back out that door that it is equally unacceptable to connect an unauthorised and uncontrolled device to the network. We aren't going to waste resources trying to make it impossible for you to do that: we expect you to behave in a professional manner as part of the company's community. Just because you can make it work technically does **not** mean you have permission, any more than the fact that you can open the doors means you can bring in who you like.

Equally you should understand we are not stupid (I'd appreciate it if you desisted with observations to the contrary). We understand the benefits of BYOD. We understand that the biggest benefit is to improve your experience and productivity. We're not denying you that because we like to, but because we have to for now. Accept that: it is part of the rules of working here. And accept that IT are working as fast as they can within the conflicting constraints we put on them of reduced funding and high expectations. They know they have to deliver to BYOD. You need to be patient.

In the meantime IT can do certain things to give you 'partial BYOD', such as the new internet-only Wi-Fi. But we know that's not what you want.

BYOD is a great thing, and we'll get there. If only business could change as fast as the home consumer experience eh? But it doesn't. Stop trying to equate the two. You're at work now, not playing.

Hey, but keep asking. BYOD is important, and you have a good business case: there are benefits to this business as well as to you. Just don't expect the world to change in a day ok? It might at home but it doesn't here.

To BYOD or not to BYOD

How will it affect your business and your people?

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By 2015 there will be almost **15 Billion** network-connected devices

By 2016 **350,000,000** People will use their smartphones for work

52% **88%**

In 2013, **52%** of IT professionals in the UK see BYOD as positive compared to **88%** in China

IT departments are keen to embrace the trend

75% of companies allow **BYOD**

- **61%** of companies that allow BYOD have higher employee satisfaction
- **65%** believe it can help attract and retain talent
- **66%** of employees want to use any device

240 HOURS MORE A YEAR

Those who use mobile devices for both work and personal matters put in 240 hours more a year

There are challenges

- **1 in 20** mobile devices were stolen in 2010
- **29%** distribute unauthorised data
- **46%** who use a personal device for work have let someone else use it
- **31%** who use a laptop for work will connect to the company's network via a free or public Wi-Fi connection
- **81%** use a personal electronic device for work-related functions

So is BYOD for you?

Is your IT department in a position **to make decisions about BYOD?**

In an industry that's constantly changing, you need to help them stay ahead of the game

As The Chartered Institute for IT, we're always up-to-date with the latest trends

We can develop your employees' skills so they can make decisions critical to your business

Call us on **+44 (0) 1793 417755** and help your team meet the demands of tomorrow or visit **enterprise.bcs.org**

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Sources:
Cisco Systems, Forrester, Aberdeen, Dell Quest, ICP Networks, Harris, Juniper Networks Malicious Mobile Threats Report May 2011

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