



WHITE PAPER

Windows Phone 8.1: Positioned for the Enterprise, as Approaches to Mobility Become More Mature

Sponsored by: Microsoft

John Delaney
May 2014

IN THIS WHITE PAPER

A great many consumer smartphones have come into use by UK enterprises. This trend has been driven in large part by the need to accommodate employees' use, for work purposes, of technologies that they have adopted in their personal lives, rather than attempting to block such use and see the blocks bypassed. Additional impetus has arisen from the increasing number of enterprises standardised on BlackBerry that are seeking alternative mobile devices.

Android and iOS have both benefited from this trend towards consumer smartphones. In IDC's most recent *Enterprise Mobility Survey*, conducted in February 2014, we found that of the mobile devices in use by enterprises in the UK, 35% are running Android and 32% are running iOS. However, both of these platforms have significant shortcomings, from the enterprise standpoint. iOS is only available on two devices, both of which are expensive to purchase, and which also tend to run up higher mobile data bills. Android is very fragmented and inconsistent between different device brands, and even between different models in a single brand's device range. There are also concerns about the security of Android, such as its high level of exposure to malware.

Windows Phone scores on both of these counts. The platform runs on a wide range of devices, some at low price points, and the user experience is completely consistent on all of these devices. It is also consistent with the desktop and tablet experience provided by Windows 8. Windows Phone has already made inroads into the enterprise: our survey found that 10% of the smartphones in use within UK enterprises are running the platform. However, its adoption by enterprises has been hindered by some limitations, such as the extent to which it can support mobile device management (MDM) systems and the use of VPNs. With Windows Phone 8.1, Microsoft has addressed the limitations of the OS as an enterprise platform; at the same time, Microsoft has enhanced the advantages that Windows Phone offers to enterprises in comparison with iOS and Android.

For this white paper, we have interviewed some of Microsoft's implementation partners and some vendors of mobile enterprise management (MEM) solutions. We have also interviewed some of Microsoft's large-enterprise customers: a light-engineering firm, a regional NHS Trust, and a professional services organisation. In this paper, we set out the interviewees' views about what enterprises are looking for when they evaluate a smartphone platform for prospective adoption, and about how the four main smartphone platforms stack up against those requirements. And we assess the strengths of Windows Phone as an enterprise platform, as well as the challenges that Microsoft needs to address in order to foster adoption.

TABLE OF CONTENTS

	P.
In This White Paper	1
The Adoption of Mobility in Enterprises is Rapidly Evolving	1
<hr/>	
Enterprises Vary in the Maturity of Their Approaches to Mobility	1
Personal Use of Work Devices, and Work Use of Personal Devices	3
Windows Phone 8.1: Microsoft Strengthens its Position for Enterprise Adoption	5
<hr/>	
The Opportunity for Windows Phone Among Enterprises Striving to Optimise Mobility	5
Windows Phone 8.1 Boosts Microsoft's Proposition for Enterprise Buyers	6
Improved Competitive Positioning of Windows Phone 8.1	7
Choosing a Mobile Device Platform: What Do Enterprises Want?	8
<hr/>	
Security	8
Cost	8
Compatibility With Existing IT Systems	9
Manageability	10
End-User Pull	11
Regional Support	11
Sizing Up Windows Phone for Enterprise Adoption	11
<hr/>	
Strengths of Windows Phone as an Enterprise Proposition	12
Challenges That Remain to be Addressed for Windows Phone	13
The Impact of Microsoft's Acquisition of Nokia	14
Customer Case Studies	15
<hr/>	
Customer A: Light-Engineering Manufacturer	15
Customer B: Regional NHS Trust	17
Customer C: Professional Services Firm	19
Conclusion	20
<hr/>	

LIST OF FIGURES

1	The IDC Maturity Model for Mobility in Enterprise IT	P. 1
---	--	---------

THE ADOPTION OF MOBILITY IN ENTERPRISES IS RAPIDLY EVOLVING

Enterprises Vary in the Maturity of Their Approaches to Mobility

Mobility of communications has been a widespread feature of working life since the turn of the century, first in the form of mobile phone calls, and then in the form of mobile email. In the context of enterprise IT, however, mobility is a relatively recent trend, so there is wide variety in:

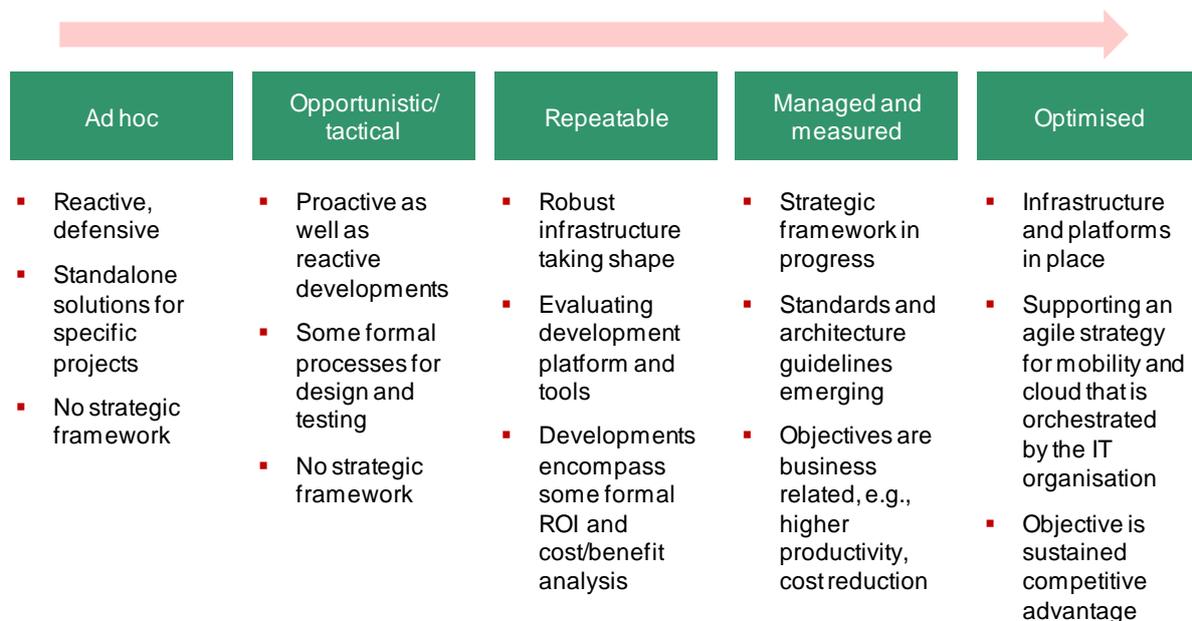
- The extent to which enterprises are adopting IT mobility
- The purposes for which they are adopting IT mobility
- The processes and organisational structures that underlie IT mobility developments

At one extreme, a few advanced organisations are starting to treat mobile as the primary access mode for enterprise IT applications. These organisations have embraced mobility as part of the whole life cycle of processes governing application development, testing, deployment and maintenance. At the other extreme, in some organisations IT mobility is happening as a result of uncoordinated activities by line-of-business departments or individuals, without the IT department being involved, or perhaps even aware. In between these extremes lies a large swathe of enterprises at various stages of maturity in their adoption of mobility for enterprise IT.

IDC's Mobile Maturity Model defines five stages of maturity, characterised by the ways in which mobility is being implemented in the organisation. These five stages are summarised in Figure 1.

FIGURE 1

The IDC Maturity Model for Mobility in Enterprise IT



Source: IDC, 2014

Our *European Enterprise Mobility Survey* indicates that the majority of European organisations are in the "repeatable" stage of maturity. Mobility ranks as a "very high" or "essential" ICT priority for around 75% of organisations, and almost half claim to have a mobile strategy in place. However, mobility projects are still commonly initiated by the line-of-business departments, rather than IT. Forty-three percent of companies claim to have implemented a MEM solution, although only a quarter of them are interested in advanced features such as business analytics.

Most UK organisations have a long journey ahead before they reach the "managed" and "optimised" stages:

- Nearly half stated that their biggest mobility challenges are OS/device management and cost control. Fewer organisations are coming to grips with issues like IT integration and app development/management in the context of mobility.
- Only a quarter of organisations are working on advanced mobile initiatives such as application life-cycle management, business processes and workflows.
- Only 15% of organisations have rolled out two or more mobile apps.

During the research for this IDC White Paper, we asked four Microsoft implementation partners and two providers of MEM solutions where, on the basis of their experience with customers, they would place UK enterprises in the IDC maturity model. The consensus was that although there are examples of enterprises in all five stages, the bulk of UK enterprises are distributed between the "opportunistic/tactical" and "repeatable" stages of maturity. In most cases, UK enterprises are aware of the benefits of a more mature approach to mobility, and are striving to achieve it.

MobileIron believes that around three-quarters of UK organisations are in the "opportunistic/tactical" phase, with IT departments still struggling to keep pace with the speed at which line-of-business departments are moving in their adoption of mobility. Most have not yet had the chance to put in place the kinds of governance and management processes that characterise organisations in the "repeatable" phase. AirWatch notes that it is starting to see some formal ROI cases underpinning mobile developments in industry sectors with less demanding regulatory requirements. Some companies in those sectors are in the "repeatable" stage and edging towards the "managed/measured" phase, because there are fewer things they have to measure.

Atos sees the majority of its UK customers in the "opportunistic/tactical" phase. In most cases, mobility is still fundamentally something that happens to organisations, rather than something that organisations have harnessed and are driving. Enterprise IT has had to focus on reacting to a series of external impacts, in an environment in which the rate of change in mobility has outstripped their development/implementation cycles. Similarly, Avanade sees few UK customers at the "managed/measured" or "optimised" stages. More customers are at the "repeatable" and "opportunistic/tactical" stages, but there are also some in the "ad hoc" stage – despite a good level of awareness, in some cases, about the potential of mobility. Companies in the banking sector, for example, are quite forward in their thinking about mobility, but are constrained in their implementation by considerations of regulatory compliance. In Black Marble's experience, most customers are trying to bring some structure to their mobility developments, and if they are not yet at the "repeatable" stage, they have at least recognised that it's not simply a case of "picking a phone and putting an app on it": an underlying infrastructure is needed too.

TBS Mobility sees considerable variation in maturity among its customers, depending on the industry sector that they are in. Its customers in the energy sector are highly mature, typically at the "managed and measured" level. Companies in the fleet/automotive sector have been using mobile

devices for the past decade, for tasks such as fleet delivery and car rental check-in. But they haven't yet got to grips with things like managed maintenance and real-time analytics: generally, their adoption of mobility is not "elegant" yet. Companies in the manufacturing sector tend to be at less advanced levels of maturity: some might be trying to base their approach on ROI, but they don't understand how to do it well enough yet. In construction things are starting to take shape at the "repeatable" level. Public sector organisations are mostly at "the opportunistic/tactical" level.

Personal Use of Work Devices, and Work Use of Personal Devices

Mass-market adoption of smartphones and apps has transformed the ways in which consumers communicate, get entertained and access information. Consumers have been taking these benefits into their working lives too, in many cases because their own devices and apps are more powerful and easier to use than those provided by the enterprise. Some enterprises have responded to this phenomenon of "consumerisation" by adopting systems that enable employees to use their smartphones for both personal and work purposes, with controls to prevent adverse impact on the enterprise in areas such as content security and usage costs.

In this section, we discuss our findings regarding the extent to which UK organisations have adopted. We also examine the question of enterprises' preferred approaches to the protection of corporate data on devices that are used for both personal and work purposes.

Bring Your Own Device

There is a general shift away from the rigidly prescriptive ways in which enterprises used to select and issue employees' mobile devices. It is now typical for enterprises at least to take employees' preferences into account in selecting mobile devices, and it is increasingly common to offer employees their choice from a list of approved devices. Some enterprises have even implemented BYOD (bring your own device) – that is, systems and policies that support the use of employees' own devices for work purposes. However, BYOD can prove to be somewhat thorny in practice, both for IT departments and for employees. For example, even something as simple as having work contacts on a personal device could breach data protection laws. Conversely, people are often unhappy about buying a device that they need for work, and about giving IT people control over devices that are their own property. Enterprise procurement still accounts for most of the smartphones in use by employees, with full BYOD confined to a minority.

AirWatch believes that globally, only around 30% of the organisations using its MEM solutions are doing full BYOD. Similarly, MobileIron estimates that about a quarter of devices under its system's management are BYOD, with the UK proportion probably somewhat lower. However, MobileIron also notes that the influence of employee preference on the choice of mobile device platform is very substantial. These days, if a device platform is not successful in the consumer market, then it will not be successful in the enterprise market either, outside of certain areas such as retail which may require a more locked-down approach.

Atos' view is that BYOD has not caught on in the UK as strongly as some people think. Many people still carry two phones, one personal and one business. This is partly because people are reluctant to spend £500+ of their own money on a device they'll use for work, and also because an increasing number of enterprises are issuing the more desirable smartphone models, removing some of the motivation that has driven BYOD to date. But despite the resurgence of enterprise selection, consumer trends frequently affect the device choice in aggregate: for example, if many of a company's employees are already using Android, the company might be more inclined to select Android as its standard. At the other end of the scale is a top-down choice driven by the

personal preference of a few very influential individuals. Some of Avanade's customers have gone along with aspects of BYOD, in order to provide a level of flexibility for employees. But most of them are keen to preserve a level of standardisation in mobility implementation, rather than moving to a fully employee-driven device environment. Black Marble notes that BYOD is often driven by the desire to get away from having staff carry two phones – although at present, the lack of suitable devices with dual-SIM capability is an obstacle. More generally, in the UK the BYOD question is affected by what the company is trying to do with mobility, rather than by issues like employee freedom as in the US. Rather than BYOD, TBS Mobility sees CYOD (choose your own device) emerging as a more successful model. In CYOD, the company sets up a shortlist of devices, from which employees choose one.

None of the Microsoft customers that we interviewed for this white paper has implemented BYOD. In all cases, employees' mobile devices are selected and procured by the organisation.

- The light-engineering firm has considered BYOD, and has concluded that the model would not be appropriate. Problems include employee resentment about corporate "Big Brother" controlling their phones, and the fact that it invariably ends up costing more than expected.
- The NHS Trust has not implemented BYOD either, and has no plans to do so. Not many of its staff have asked for BYOD, and the few that have asked tend to be put off when they realise the extent of management and control over their device that they would have to accept.
- Nor has the professional services firm implemented formal BYOD. Some employees are allowed to use their own devices, if they have a particular reason for needing to do so, but no corporate support is offered. The majority wants and values this support, and so they use company-provided devices.

Dual Persona Versus App-Based Policies

When it comes to handling the use of the same device for both personal purposes and work purposes, two main approaches have emerged. The first approach involves the use of separate "personae" on the device, with different apps, functions and content available depending on which persona is active, and with no interaction allowed between the two personae. The other approach uses a single, integrated user interface, with policies applied to different apps – for example, restricting ability to copy and paste content out of an app, or requiring a VPN to be active when an app is running.

In MobileIron's view, IT departments sometimes choose to go with dual-persona containers because they think their end users will like it. Generally, though, end users prefer integration to a dual-persona set-up. MobileIron can support either approach to data protection, but it notes that an integrated user interface is increasingly the preferred route for its customers. AirWatch, too, is finding that rather than striving for the "corporate walled garden," enterprises are now more interested in securing the platform with policies to restrict what can be done on the device, such as sharing of data only between accredited applications. But AirWatch still sees some demand for containerisation, at least for some subsets of an enterprise's users. In some cases, for example, containers are required for auditing reasons.

Some of Atos' customers, especially in the construction industry, refer to "TYOD" (take your own device), meaning that the device is configured to function as a work device in some circumstances and as a personal device in others. For example, users can access company resources at the workplace, but not at home, and they can watch Sky Go at home, but not at the workplace. The role of the device can be determined in a variety of ways, including geofencing, time of day and

address of the WiFi router to which it is connected. Avanade cites a large investment bank as an example of a company which has had to adopt dual personae, because of "vulnerabilities" in its iOS and Android devices. This compromises some of the usability of the devices, and incurs additional cost. Avanade contrasts this with Windows Phone, where the question of unified or separate personae is a decision for the end user, with all of the lockdown features available in either mode. The investment bank found this idea appealing, as a solution that was both better and cheaper than running containers on top of iOS and Android. Black Marble says its customers are looking to reduce the amount of overhead involved in locking down applications. "Walled garden" container-based approaches have been adopted because of insufficient management functionality in the native platform.

In TBS Mobility's experience, people still tend to carry separate devices for work and personal use. A single phone with separate "hubs" for work apps/content and personal apps/content is still "a bit of a Utopia." When the mobile solution is centred on an app, all the enterprise control can be in the app itself. What happens outside the app is none of the enterprise's concern, and doesn't need to be.

Microsoft's light-engineering customer says that it takes a fairly relaxed attitude to the personal use of work phones: "We don't mind the odd personal phone call." But when it comes to applications and services, a less laissez-faire approach is indicated: the company will probably look at implementing MDM at some point. These are corporate devices and will need to be locked down to corporate standards, ensuring that they are not used for porn, gaming, etc. But the company is unlikely to buy a third-party solution: "We are very much waiting for the Microsoft world to give us an MDM option."

WINDOWS PHONE 8.1: MICROSOFT STRENGTHENS ITS POSITION FOR ENTERPRISE ADOPTION

The Opportunity for Windows Phone Among Enterprises Striving to Optimise Mobility

As enterprises strive to take a more mature approach to mobility, there is a strongly growing opportunity for Microsoft to target enterprise IT buyers with Windows Phone. The OS offers enterprises some attractive benefits, including:

- Consistency with the user experience and development environments provided by Windows 8 on PCs and tablets
- Availability in a wide range of smartphones at a wide range of price points
- Good compatibility with the Microsoft applications, IT infrastructure stacks and development environments that are widely deployed in enterprises

As a result, Windows Phone has gained some ground in the enterprise. Telefónica and Caixabank are examples of companies standardising on Windows Phone as their primary smartphone. However, more widespread adoption of Windows Phone in the enterprise has been hampered by:

- Some significant shortcomings against enterprise requirements, especially in the areas of security and manageability.
- Gaps in the availability of apps for Windows Phone. Regarding consumer apps, this weakens user pull for the platform, which is an increasingly important criterion for

enterprise device selection. Regarding enterprise apps, it is difficult to choose Windows Phone if an app that the enterprise needs to deploy on its devices is unavailable.

Windows Phone 8.1 Boosts Microsoft's Proposition for Enterprise Buyers

At its Build event in San Francisco on April 2, 2014, Microsoft announced the new release of its smartphone operating system, Windows Phone 8.1. From the enterprise perspective, Windows Phone 8.1 encompasses substantial changes in both the platform itself and in the business model that underlies it:

- Device makers will no longer be charged for the licence to use Windows in devices with screens smaller than 9 inches. For Windows Phone specifically, the removal of licensing fees is a bold move, and one representing a major departure for Microsoft, which has always made most of its money from licensing software. Microsoft's hope is that this will foster end-user uptake of Windows Phone devices, by making the platform available from a wider variety of brands, and by driving drive down the price of Windows Phone devices through a cheaper bill-of-materials and through increased competition between brands. The eradication of licensing fees may also give existing licensees that have been fairly inactive, such as Huawei, more reason to produce and sell Windows Phone devices.
- Windows Phone 8.1 includes enhanced support for the security and management of Windows Phone devices in enterprise deployments. These new enterprise features are detailed in the following section.

Security Enhancements in Windows Phone 8.1

The device itself can be made more secure under Windows Phone 8.1, in a number of ways. Device storage can be encrypted, using Bit Locker technology. New to Windows Phone 8.1 is the ability to install apps on a secure digital (SD) card. Other device protection features include secure/trusted boot, remote lock and PIN reset. Certificates can be used for user authentication, with support for SCEP (Simple Certificate Enrolment Protocol). S/MIME support enables the mail client to do signed and encrypted email.

Windows Phone 8.1 introduces support for IPsec and SSL VPNs. VPNs can be applied automatically to specific apps, and can also be triggered by location.

Authentication to enterprise WiFi is made smoother and more secure by the introduction of support for EAP-TLS, including the ability to limit access and to default to WiFi automatically when in range.

Auditing support is improved by increasing the amount of information that can be collected from devices, such as phone number, IMSI (including dual SIM support) and any other data (such as location) that has been put under the control of an MDM system.

Control Enhancements in Windows Phone 8.1

Windows Phone 8.1 makes it quicker and easier to enrol devices into an MDM system, by using Web Authentication Broker to allow the process of enrolment to be driven by the MDM server. The MDM server can then push out (and remove, when necessary) a full device configuration including accounts to be used, authentication certificates, and WiFi and VPN settings. Apps can be managed using an enterprise app store and/or by setting up blacklists and whitelists for the

Windows Store. Enterprise apps can be set as mandatory, and can be pushed to the device, updated and removed.

The Assigned Access feature enables enterprises to define the apps and settings on the device's home screen. The device can be locked down to a single app, if required, enabling a Windows Phone smartphone to be deployed as a dedicated device, such as a point-of-sale terminal.

Windows Phone does not take the "dual persona" approach to managing personal and corporate usage of the same device. Instead, it provides IT people with policies that enable them to restrict the sharing of corporate information, to control the hardware and to restrict user access to "consumer" functionality such as the use of Live ID accounts and OneDrive.

Improved Competitive Positioning of Windows Phone 8.1

As we explained earlier, enterprises are evolving towards a more mature approach to mobility, in which mobility becomes integral to the enterprises' main IT systems, and in which mobile devices become the primary (rather than an auxiliary) means of accessing those systems. Windows Phone offers a number of advantages to enterprises that are striving to achieve this mobile-optimised IT paradigm. These include:

- The consistency of the Windows user interface across different device types
- The cross-device compatibility of Windows with enterprise development frameworks such as .NET
- The compatibility of Windows Phone with the Microsoft application and infrastructure software that are in widespread use among enterprises

Previously, these advantages were tempered by the shortcomings of Windows Phone's security and manageability features. With the release of Windows Phone 8.1, however, we believe that Microsoft now offers enterprises an attractive and fully viable smartphone proposition.

Microsoft does still have some challenges to address with the competitive positioning of Windows Phone. Foremost among these is the "app gap": the widespread view that the availability of apps for Windows Phone is limited. This is an important drawback in the enterprise market for two reasons:

- Consumers' belief that Windows Phone is deficient in apps prevents user pull for the platform from building up. User preference is an increasingly important criterion in enterprises' assessment of device platforms.
- If an enterprise needs to deploy a particular application, and that application is not available for Windows Phone, then Windows Phone must be excluded from consideration regardless of its merits.

To quite a large extent, the app gap is now a matter of reputation, rather than reality. Microsoft says that there are now over 250,000 apps in the Windows Store, and these include most of the most popular consumer apps, recent additions including Instagram, Vine and Waze. This means that vigorous marketing is a viable means of addressing the "app gap" challenge. However, Microsoft must continue its efforts to build the portfolio of Windows Phone apps, as the app gap is not entirely a matter of reputation. There are still some important absentees from the Windows Store: an example on the consumer side is Snapchat; an example on the enterprise side is Salesforce.com.

CHOOSING A MOBILE DEVICE PLATFORM: WHAT DO ENTERPRISES WANT?

We asked the interviewees for this white paper to name the most important criteria that enterprises use when they are considering mobile device platforms for selection. No pick-list of possibilities was provided. In this section, we summarise the criteria that were mentioned as being significant, as well as providing some assessment of how the four main smartphone platforms stack up against those criteria:

- Security
- Cost
- Compatibility with existing IT systems
- Manageability
- End-user pull
- Regional support

Security

Only one criterion was cited as important by all interviewees without exception: security. Several aspects of security were considered important:

- Support by the platform for security functions (for example enterprise certificates, WiFi authentication, VPNs)
- Security of the functions used to push apps out to end users
- Security of the device against damage by third-party applications

It was generally felt that BlackBerry is still the most secure of the smartphone platforms, but that its advantage over the other platforms in this area is eroding. Given the status quo at the time the research was conducted, iOS was considered to be the next most secure platform after BlackBerry, followed by Windows Phone, followed by Android. However, several interviewees felt that release 8.1 would put Windows Phone on par with iOS, or even ahead of it, with regard to security.

Cost

After security, cost was the next most commonly mentioned criterion for appraisal of smartphone platforms. Like security, the issue of cost comprises a number of distinct aspects, including:

- The purchase price of devices
- The price of any systems required to apply required management capabilities that are additional to those provided by the device OS
- The price of additional apps required
- The cost of integrating the devices with existing IT systems
- The cost of providing ongoing support and maintenance

Depending on individual circumstances, there may also be additional aspects to consider, such as the comparative lengths of the warranty offered on different devices, the different amounts of

mobile data network traffic they generate, and existing commercial relationships with device manufacturers and/or suppliers.

The question of the purchase price of devices is determined in part by another aspect of the platform: the range of available devices running that platform, in terms of:

- The number of competing brands
- The range of price points available within each brand's range

With so many potential aspects to consider, the question of comparative costs between the smartphone platforms can be a complicated one to assess. iOS is generally considered the most expensive to purchase: it is available on only a small number of high-priced devices from a single supplier. Android, by contrast, is available on devices from a large number of different suppliers and at a wide variety of price points. However, the requirement for supplementary capabilities in areas such as security tends to be higher for Android than for iOS. In the case of Windows Phone, the brand alternatives are limited, but there is a wide range of different price points available within Nokia's Lumia range, and because there is hardly any variation in the platform between different devices, the cost of support and integration would tend to be lower than for Android. With Windows Phone 8, the requirement for supplementary capabilities is quite high; most interviewees, however, felt that this requirement is greatly reduced by the enterprise features in Windows Phone 8.1.

Overall, Android was felt to be the winner on device purchase price, with Windows Phone coming next (although some interviewees felt that the two platforms are more or less on a par in this regard). Conversely, Android was considered the most expensive platform in terms of support and management costs. Taking an overall view of costs, several interviewees felt that Windows Phone emerges as the leader with the release of version 8.1.

Compatibility With Existing IT Systems

A criterion that was considered important by most of our interviewees, at least in some of its aspects, is the extent to which a smartphone platform can work with the devices, applications and infrastructure that already form part of an enterprise's IT set-up. This is a complex and multifaceted issue, and one for which it is difficult to provide a meaningful overall ranking for the four main smartphone platforms. Their relative strengths and weaknesses vary both according to the different aspects of compatibility and according to the specific circumstances of individual enterprises. Aspects of IT compatibility that need to be considered include:

- Compatibility of the smartphone platform with applications and software infrastructure that are in place in the enterprise
- Applicability to the smartphone platform of the software development skillsets in place in the enterprise IT organisation
- Consistency/commonality of the smartphone user experience with other computing devices used in the enterprise
- Potential to leverage existing relationships with IT suppliers, in procuring and implementing devices based on the smartphone platform

Easy compatibility with the existing estate of applications is an important factor in platform selection. The availability of a native app front-end for SAP, for example, can be a very powerful advantage for some enterprises. The ranking of the smartphone platforms in this area depends on which specific applications an enterprise is using. Windows Phone would tend to score less well

than iOS and Android in cases where non-Microsoft applications are an extensive requirement. Avanade cites an example of a multinational organisation that cannot consider adopting Windows Phone because it lacks apps for Salesforce.com and for Cisco's Jabber client. However, there are application types such as email and office productivity in which Microsoft is ubiquitous: "We don't get asked for anything else," in the words of Atos. Microsoft's Lync and SharePoint are also widely used in enterprises, and the ability to offer a good experience of using these applications would be a further advantage for a smartphone platform. In these application areas, Windows Phone scores higher in terms of availability and ease of integration. AirWatch, for example, is in discussion with a large European bank which wants to give a tablet to all of its employees, and which would strongly prefer Windows Phone because of the ease of configuring and managing corporate email and office applications,

MobileIron says that all of its customers have substantial Microsoft back-end infrastructure. Generally, it believes that this gives Windows Phone an advantage – for example, it has direct access to the protocol in Exchange Active Sync. However, MobileIron also notes that with Active Directory/single sign on, iOS is ahead of Windows Phone regarding integration of systems such as Kerberos.

Regarding ease of application development, MobileIron believes that Windows Phone 8.1 will bring the tablet and smartphone closer together, from the developer's viewpoint – about 85% of development effort in an app can be used commonly by the devices. It considers Windows Phone and iOS more or less on par regarding ease of application development. Atos notes the importance of cross-platform development, citing the example of a customer with a large installed base of devices programmed in C# and C++, that wants to continue using those languages in a BYOD/CYOD environment. For customers using Windows 8 desktops, Atos believes that the consistency of Windows Phone with what people have on their desktops will work in Microsoft's favour.

AirWatch notes that the commercial aspects of an enterprise's existing IT estate could be significant in assessing smartphone platforms. There could be an "incumbent advantage" in an enterprise's ability to avoid the risk of dealing with new suppliers, and to leverage existing supplier relationships, contracts and purchasing channels.

Manageability

Ease of management, and the extent of management functionality, was cited as important assessment criteria for smartphone platforms by one of the Microsoft partners we interviewed, and by all of the Microsoft customers.

In Black Marble's view, manageability is an important consideration when selecting a mobile device platform. Functions like enrolment, management and remote wiping of devices are table stakes – and then the winner is the one that offers the most flexibility on top of that. It considers BlackBerry to be the leading platform for manageability, followed by Windows Phone, then iOS, then Android.

This view of the platforms' relative strengths regarding manageability is shared by one of the Microsoft customers we interviewed, which is looking for a wide variety of features including remote find/wipe, MDM support, application store protection, email security, information rights management, internal storage encryption, secure boot, secure app data storage on removable SD cards and the ability to disable the removable SD card.

The regional NHS Trust that we interviewed sees Windows Phone as attractive in terms of ease of management, because of the potential the platform offers to enable a "single pane of glass" approach to managing the whole of its device estate. For the next batch of tablets it is about to deploy, the Trust has decided to go with a Windows device: one reason for the selection is that it can manage Windows tablets in the same way it manages its laptops.

End-User Pull

Both of the MEM vendors that we interviewed said that their customers frequently take the preferences of their end users into account when assessing smartphone platforms. AirWatch believes that other things being equal, enterprises generally prefer a platform that its end users would be happy with. In some cases, users' opinions are formally solicited as part of the assessment process. The influence of employee preference on the choice of mobile device platform "is huge," according to MobileIron, because of IT departments' experience of the consequences of trying to dictate. These days, if a device platform is not successful in the consumer market, it is difficult for the platform to succeed in the enterprise market outside of certain areas such as retail which require a more locked-down approach.

This criterion varies a lot by country, but generally the MEM vendors rate iOS and Android as being strongest in this regard. The number of end users wanting Android tends to be larger, but the end users who want iOS tend to be more vociferous. Windows Phone comes next, followed by BlackBerry. MobileIron remarks that in Europe, people who have had a chance to try Windows Phone generally prefer it to Android, finding that it works more easily. But the inevitable objection is: "It doesn't have all the apps I want." Microsoft has to change this in order to drive up user preference for Windows Phone.

One of the customers we interviewed, the NHS Trust, also said that end users' views are an important consideration when selecting a device platform. The IT department gave some of its people Windows Phone devices to try out, and the feedback was generally very positive. People found them easy to use. In terms of user preference, the Trust believes that iOS and Windows Phone are about on par with each other, with Android somewhat further behind.

Regional Support

One of the Microsoft partners we interviewed, Avanade, says that extent of available support in different geographical regions is important for some of its multinational and global customers. Avanade believes that Windows Phone is strong in this regard. The platform runs on a wide range of devices, all offering the same user experience consistently and without variation by OEM, by operator or by country. iOS offers a good, consistent consumer experience, but there is quite a lot of variation in availability by country. The full BlackBerry range is not available in every country, either. The availability and consistency of Android vary widely by country, because of operator and OEM customisation.

SIZING UP WINDOWS PHONE FOR ENTERPRISE ADOPTION

Having asked about the most important criteria for smartphone platform selection, we then asked the organisations interviewed for this IDC White Paper to consider Windows Phone specifically as a contender for enterprise adoption. We asked what, in their view, are the main strengths of

Windows Phone as an enterprise smartphone platform, and what challenges Microsoft still needs to address in order to improve the proposition that Windows Phone offers to enterprises.

Strengths of Windows Phone as an Enterprise Proposition

Security

In Atos' view, security is the standout strength of Windows Phone 8.1. The platform now offers IT departments robust security which can be applied across the whole range of Windows Phone devices, regardless of brand and price point. This contrasts with Knox, for example, which is only available for higher-priced Android devices from one brand (Samsung). An especially important feature of Windows 8 on desktop, tablet and phone, in Atos' view, is that it includes strong, inherent security against malware out of the box.

Cost

Several of our interviewees cited the range of devices running Windows Phone as a significant strength. There is a wide choice of form factors at a wide choice of price points, enabling IT departments to equip staff who do not need the higher hardware specs with cheaper devices, while retaining consistency of user experience and manageability.

Compatibility With Existing IT Set-Up

Several of the Microsoft partners referred to what one of them described as "Microsoft's unified enterprise ecosystem." Many enterprises have invested significantly in Microsoft infrastructure software, and the compatibility of Windows Phone with Microsoft infrastructure is considered best-in-class. This will work increasingly in Windows Phone's favour as the number of organisations looking to integrate mobile applications with back-end systems grows. Microsoft's .NET is widely used by enterprises as their development environment, which it was felt will also work to Windows Phone's advantage, as will the fact that developers can write an application for Windows desktops, and run it on Windows Phone smartphones with only minor tweaks.

Manageability

Several specific aspects of manageability were mentioned as being strengths of the Windows Phone platform. MobileIron mentioned one capability of Windows Phone 8.1 that is generating a lot of customer interest: its support for app whitelists and blacklists. With the other smartphone platforms, it says that workarounds using an MDM system are needed to implement similar capability. MobileIron also mentions device control as a strength of Windows Phone: for example, Microsoft has added APIs that will help to manage costs, such as disabling VPN when the device is roaming, or disabling cellular data roaming altogether.

One of the interviewed companies mentioned the live tile-based app access as a strength of Windows Phone, enabling IT to deploy required content onto the first screen, without needing multiple clicks to access it. Atos also mentioned the ability to have only one application start up on boot.

TBS Mobility believes that its support for rights management on email is a significant strength of Windows Phone. It is important to be able to put controls on emails that then follow through onto the phone, such as preventing the accidental forwarding of a confidential email to someone that shouldn't receive it.

User Experience

Most of the Microsoft partners and customers that we interviewed mentioned, as a key strength of Windows Phone, the consistent interface and user experience across the whole smartphone range, and also across device types, even extending to the Xbox. Commonality between what people experience at home and what they experience at work is a significant advantage. The consistent user experience across device types is also important for application developers. Consistency of the platform within the smartphone range makes Windows Phone devices easy to manage, one customer contrasting it with Android "which is much more of a moving target: umpteen versions from umpteen vendors."

Black Marble also mentioned the hardware quality of Nokia's devices as a strength of Windows Phone: they are well designed, attractive and resilient.

One customer remarked that Windows Phone is very easy to use, "which is absolutely key for us – our users are mostly not techies."

Challenges That Remain to be Addressed for Windows Phone

Before version 8.1, Windows Phone fell short of enterprise requirements in some important areas. One customer who has decided to standardise on Windows Phone remarks that having used them for the past year, it has become very clear that Windows Phone devices are very much driven by consumer requirements. This has led to some drawbacks, ranging from the irritating (such as the inability to read attachments in calendar appointments) to the more seriously problematic (such as shortcomings in encryption and in linking to corporate wireless networks). This customer believes that the enterprise feature improvements promised in Windows Phone 8.1 will fix most of the issues that have held back the platform from enterprise deployment. One of the Microsoft partners we interviewed, however, said that Microsoft has been slow in making Windows Phone fit for the enterprise: "What is about to come was needed 12 months ago."

Besides the issues that have been addressed in Windows Phone 8.1, our interviewees mentioned some other things that they believe Microsoft must address to improve the proposition that Windows Phone offers to enterprises.

Security Details

MobileIron believes that more granular control over copy and paste is needed. At present, copy and paste can only be allowed or disabled on the whole device, not according to the apps being used. MobileIron also believes that the VPN implementation in Windows Phone falls somewhat short, remarking that most enterprises use SSL VPNs, and in order for these to work the user will have to download a plug-in.

Compatibility With Existing IT Set-Up

As detailed earlier, gaps in the availability of enterprise apps are still a drawback of Windows Phone. Another challenge for Windows Phone, mentioned by Avanade, is the increasing tendency for MEAP developments to go down the hybrid HTML5 route in order to enable cross-platform support. This works in favour of iOS and Android, because on these platforms it is possible for hybrid development to produce a very similar experience to pure native OS in many cases. The Windows Phone UI paradigm is harder to engineer into HTML5 because it's not designed that way – even on the level of simple things such as swiping left-to-right versus swiping up-and-down.

Manageability

AirWatch remarks that having improved the management and control of enterprise apps in Windows Phone, Microsoft should now focus on improving the management and control of public applications. It believes that further improvements are also needed in the process of enrolling Windows Phone devices into MEM: "It's better in 8.1, but still not as good as what iOS can do."

Atos says that Windows Phone needs stronger support for "force on/force off" and lockdown policies, for example, preventing users from disabling particular features.

TBS Mobility believes that multitasking and multithreading of apps still needs to be fixed. Enterprises need more than just a foreground app and multiple background apps. For example, if an application is using GPS to track employees (say for lone-worker protection, or for compliance), running something else in the foreground will disable the tracking function. "The other smartphone OS platforms have already fixed this."

User Pull

All of the Microsoft partners we interviewed believe the main weakness of Windows Phone to be its relatively low adoption in the mass market. This means that enterprise IT people are not experiencing strong demand for the platform from their end users. One of the main reasons for this is the perception among consumers that Windows Phone is "a desert of apps," as detailed earlier in this paper. This is something that Microsoft still struggles with. It inhibits user pull for Windows Phone, which is an increasingly important selection criterion for enterprises.

The Impact of Microsoft's Acquisition of Nokia

We asked our interviewees what they, and their customers, felt would be the potential impact of Microsoft's acquisition of Nokia's devices and services business. There is a great deal of uncertainty about this issue. Most of the feedback was tentatively positive, although some important concerns were also aired.

AirWatch noted that "the launch of Nokia's X Series devices has really muddied the waters," so far as Windows Phone in the enterprise is concerned. MobileIron says that Microsoft needs to improve its communication around the acquisition, remarking that its customers are asking lots of questions that Microsoft isn't answering. Such questions include, for example: Will multinationals be able to buy direct from Microsoft? Will updates need to go through the mobile operator approval process? Can updates be controlled and staged in the same way as they are on desktop devices? Generally, however, MobileIron feels that the Windows Phone proposition should be improved as a result of the acquisition. Microsoft will have full control and ownership over the whole package: hardware, software and services. But the acquisition might also limit the choice of device brand, which some enterprise customers might see as a negative – especially in Asia, where local suppliers are often preferred.

Atos says that the acquisition of Nokia is generally seen as a good thing by its customers. It brings Microsoft devices enhanced cachet in the enterprise, despite the erosion of Nokia's brand pull in recent years. Microsoft could make "the Lumia 520 effect" operate more widely – offering people a very low entry-level price into the Windows Phone experience, and by extension into the cross-device Windows experience.

Avanade has not heard any opinions from customers one way or the other concerning Microsoft's acquisition of Nokia, "perhaps surprisingly." Its own view is that the acquisition is a good thing: it gives Nokia sustainability, and cements the Windows Phone/Nokia combination, which means the engineering will get better. There may be some concern, though, about diluting the level of innovation that Nokia has been bringing to Windows Phone, for example through the Amber and Black firmware releases.

TBS Mobility is not sure yet what the impact of the acquisition will be. Google confused everyone when it acquired Motorola, but with Microsoft/Nokia the fit looks less odd. In fact 10 years ago, it would have been a natural pairing. It could work really well, provided the Nokia people continue to have some control over the mobile elements in Windows Phone development: "Those guys really know mobile."

Black Marble has not heard any negative views from its customers about Microsoft's acquisition of Nokia. From its own point of view, the acquisition looks like a mixed bag. On the one hand, it's a good strategic choice for Microsoft, buying in a huge amount of mobile domain knowledge and making Microsoft an end-to-end mobility supplier, which is more important than it is in the world of desktop PCs. On the other hand, "It won't be Nokia any more." Nokia has a track record in phones and a reputation for quality. On balance it looks like a good move, so long as Microsoft doesn't mishandle the acquisition. The worst mistake it could make would be "to ditch Nokia's designs and churn out Surface phones." That would be throwing away a lot of good work that can be profitably built upon.

The Microsoft customers we interviewed believe that Microsoft's acquisition of Nokia is a good move, with a rationale that they can recognise and understand. The situation will be as clear with Microsoft as it is with Apple, with one company steering both the software and the hardware. The Android situation is much more diffuse. However, there are some concerns that the acquisition could hamper Nokia's ability to bring out innovative devices, and that Microsoft might find it hard to compete and execute well on both software and devices.

CUSTOMER CASE STUDIES

To round out this white paper, we present brief case studies of the three Windows Phone customers that we interviewed, exploring their attitudes to smartphone procurement and deployment, and their views about Windows Phone.

Customer A: Light-Engineering Manufacturer

Overview

This global business supplies products such as fans, compressors and heat exchangers to customers in a diverse range of industry sectors including power generation, petrochemicals, mining and cement. It has 6,000 staff and turns over £1.4 billion. The company is growing both organically and through M&A to improve its product line, volume and geographical coverage. It spent £350 million on three acquisitions last year, which are currently in the process of integration.

Maturity of Mobility Adoption

About 1,500 of the staff are mobile workers, and that will grow when the current acquisitions have been completed. The company has mandated that tablets will not be used until products are available that can be used as a genuine replacement for a desktop device. ("The likes of Dell are nearly there, but not quite there yet.") Apart from laptops, mobile workers are issued with a smartphone. BYOD is not supported.

The company's general IT design and testing processes now include mobile device access as a routine element. However, mobile applications per se are not being supported yet. Maintenance and upkeep of a mobile application suite can become very costly owing to factors such as device firmware upgrades. Mobility for applications like ERP and CRM is not much in demand – this has already been put in place to some extent using Citrix, so that travelling staff can access the systems on laptops, and it works fine but it's not used very much. By contrast, mobility is a key element in one of the company's strategic objectives, which is to improve collaboration. The company expects mobile access to Lync and SharePoint to be well received and widely adopted. These systems are already widely used on the desktop: for example, in January voice minutes exceeded 1 million for the first time ever, driven by Lync, and when people value a system that they access at their desks, they want mobile access to it as well.

Selection of a Mobile Device Platform

Historically, the company has been a BlackBerry shop. Rock-solid security has always been BlackBerry's forte, but although security is important it is not as crucial as it would be to, say, a bank. Eighteen months ago, the company decided to switch from BlackBerry to Windows Phone as the standard OS platform for corporate-issued devices. The case for Windows Phone rested on two main points: the platform's functionality and cost/commercial considerations. Android was ruled out because of concerns about version management and security. Initially, the board's view was: "Don't waste time, let's get on with the iPhone." But the IT people did a three-month due diligence exercise which determined that it would cost at least £100,000 per year more to go with the iPhone than to go with Windows Phone. (And note that at this time, the cheapest Lumia model, 520, had not yet been released.) The extra cost arose from the purchase price of iPhones, the additional apps that would be needed on it, the likely increase in mobile data costs (especially on international roaming) and the extended warranty – Lumia's warranty is two years compared with iPhone's one year, and the failure rates for iPhones are reputed to be relatively high.

Windows Phone scored especially well on support for the most important applications that this company uses, including Exchange, Lync and SharePoint. There are also current initiatives in progress to:

- Build a global intranet based on SharePoint architecture
- Expand the use of Lync to include voice and video, enabled for mobile as well as desktop

These initiatives increase the attractiveness of Windows Phone's application support still further. The company was not at all concerned about the relative dearth of consumer apps in comparison with iOS – if anything that was something of an advantage from the company's perspective.

A phased replacement of BlackBerry devices is now under way: when a BlackBerry goes out of service, it is replaced with a Windows Phone device. The company monitors about 1,500 devices, and at present 900 are on Windows Phone, 500 on BlackBerry and the remainder on other platforms. At some stage, the cost associated with maintaining the BES is likely to make it sensible

to replace all of the BlackBerrys that remain in use with Windows Phone devices – that is not likely to happen for a while, though.

The most important criteria used in the selection of a mobile device platform were:

- Good performance for the most important applications: voice, email, Office
- Financial goals (i.e., cost)
- Social goals – enabling "personal" activities such as Facebook, LinkedIn, sat nav
- Device security/risk management

Employee preferences have not featured directly in the criteria for selecting a mobile device platform. The voice of the customer was clearly saying: "We want Apple." But people tend to like the Windows Phone devices once they've started to use them.

Customer B: Regional NHS Trust

Overview

This regional NHS Foundation Trust grew from around 4,000 to around 7,000 employees two years ago when it took over running community services from the former Primary Care Trust. Before that, it was primarily concerned with mental health. Increasing the mobility of its staff is a goal of the Trust, and mobile devices are widely used. A rollout of 1,300 Samsung Galaxy tablets has recently taken place, to community nurses from the Primary Care Trust who were previously not using technology – they were using paper-based diaries and forms. The app on the tablets is a scheduler, which pushes out appointments and associated information to the nurses, and enables them to log visits and order items if necessary. A similar app will be rolled out to the Children & Families team.

Another phase of tablet rollout is planned for the near future, this time replacing people's laptops in many cases (which will be reused elsewhere). A lot of the nurses who have been given laptops in the past found them too cumbersome, so they ended up not being used. Tablets are smaller and lighter, and are therefore more likely to be used.

So far as mobile phones are concerned, the Trust's policy has been to provide cheap, basic phones to those who need devices primarily for calls, and BlackBerrys to those who need a more functional device. However, a decision has been made to move away from BlackBerry, primarily because of the cost of the BES and BlackBerry licences, and also because the Trust feels BlackBerry has fallen behind other smartphones in terms of functionality and app availability. Trust staff are now being issued with Windows Phone devices. These devices will be running the same apps that are being put onto the tablets, including the visit scheduler, access to the eprescribing system for doctors on home visits, and the "patient-at-a-glance" board in ward offices.

Maturity of Mobility Adoption

The Trust believes that broadly speaking, it is in the "repeatable" phase of IDC's Mobile Maturity Model. ROI/business case considerations are very much a feature of planning for mobility deployments. For example, if each clinician can see one extra patient per day as a result of using mobile technology, the financial benefit is fairly straightforward to quantify. Other benefits are important but less easy to quantify, such as improvements in the quality of service provided to

patients, and more accurate recording of data. The NHS Nursing Fund is a pot of money for which NHS Trusts can bid to fund worthwhile projects, and this Trust has bid for money to buy 500 mobile devices – a strong business case was put forward and the Trust was successful in its application.

What the IT organisation struggles with is that in mobile the technology is constantly changing, and the changes are mostly consumer-led. On desktops, the Trust has been quite successful in standardising technology (its Microsoft Premier Customer questionnaire rates the Trust as "standardised and rationalised"). But it is very difficult to get into the same mindset with mobile. Instead, the aim is to standardise the infrastructure rather than the device, in areas such as 3G/4G security and MDM (MobileIron is in place at present, and talks are also happening with Microsoft).

On the development side, the team is getting used to the requirements of developing for mobile as a primary access device, even on the level of things like developing for Internet Explorer 11 because that's the version on Windows Phone devices.

Support is an area where mobile requires considerable adjustment to IT processes. The location of PCs is known, so IT knows where to go in order to repair them when necessary. But users of mobile devices move around a lot, have the devices with them, and often don't know where they're going to be tomorrow. It is acknowledged by the Trust that traditional IT support will have to change with an ever-increasing mobile workforce.

Selection of a Mobile Device Platform

Windows Phone has been selected as the primary replacement for BlackBerry, but although the IT department would have liked to standardise on a single platform, it cannot be completely prescriptive about it. Some people need apps that are available only for Android, or for iOS. The default case will be to issue a Windows Phone device, with other types of device issued when exceptional circumstances dictate.

There is no BYOD in the Trust. It has not been definitely ruled out, but there are no plans to implement it. Very few people have asked for BYOD, and the few that have asked tend to be put off when they realise the extent of management and control over their device that they would have to accept. People generally prefer to be given the tools that they need to do their job.

When the Trust selected the tablet used in the first round of deployment, the Samsung Galaxy Tab was really the only one which met all of the criteria. These included 3G connectivity, hardware encryption, ease of management, compatibility with the NDL development tool and with the apps that the device would need to run. There were no Windows tablets available at that time, and iPads were not able to run all of the necessary apps. For the next batch of tablets that are about to be deployed more alternatives were available, and the Trust has decided to go with a Windows 8 tablet, although it has not yet decided on the brand. One area in which the Windows device scores is ease of management, because they can be managed in the same way as laptops. This means that on the tablet side, the IT department will need to deal with a mixed estate for the foreseeable future. The Android tablets are being managed by MobileIron, and the Trust is currently considering what system would work best for a mixed Android/Windows environment. (There are also a few executive iPads to be dealt with.)

When it came to smartphones, the evaluation did not go as deep as for tablets. The mobile contract was coming to an end, and the Trust wanted to avoid renewing the contract for another

two years, so the replacement was decided fairly quickly. "Windows Phone ticked most of the boxes." Important criteria in the selection of a smartphone platform included:

- Security
- Staffs' views
- Cost
- Compatibility/consistency with IT environment

Customer C: Professional Services Firm

Overview

This global professional service firm employs 2,500 people, most of whom are based in the UK. 1,600 of the UK staff have company-provided smartphones. Formerly, BlackBerry was the company's provider of smartphones, but it is now halfway through a three-year programme to migrate to Windows Phone devices. The aim is to have everyone migrated to Windows Phone by the end of 2015.

Maturity of Mobility Adoption

The concept of mobility is deeply ingrained into the company's working culture, with staff frequently posted at clients' locations.

The company thinks about mobile strategically rather than tactically, and it has a mobility strategy that is set for three years by the IT department. The aim is to have flexible IT, whereby employees choose their laptops, tablets (with and without keyboards) and smartphones. Employees can choose one "primary device" plus one phone. Tablets are provided by Microsoft or Lenovo. The intention is that they all have a common operating system: i.e., Windows. However, some people can have iPads if they are working on something involving that technology, or with Apple. The company mainly runs IT on premises, but some cloud solutions exist. These are deployed on a case-by-case basis – for example, the commercial Travel and Expenses solution is a SaaS implementation of Concur.

The company's mobile strategy is founded on:

- **Consistency.** It is fully aware that iOS and Android dominate in the consumer market, but believes that standardising on Windows Phone will bring user benefits such as common log-ins across device types, and providing a common platform for apps.
- **Security.** The company holds a lot of confidential data and intellectual property, both its own and that of its customers. It believes that consistency of device platforms will reduce the risks of security breaches.
- **Cost control.** The company has an enterprisewide agreement with Microsoft, and using Windows Phone helps it to get more out of this Microsoft-shop approach.
- **Applications.** Employees want to use their main apps, such as the time-recording system, on their mobile devices. Being able to input this on a mobile rather than a laptop is a great boon. Tile-based apps can be used to provide employees with the information they need easily and quickly.

BYOD has not been adopted. Some employees are permitted to use their own device, but if they do this they do not get corporate support, which the majority desire and value. Employees are allowed to use their company devices for "reasonable and fair" personal purposes. Controls are in place to stop file sharing, but employees are allowed to use Facebook and Twitter.

Selection of a Mobile Device Platform

The most important criteria used to select the new mobile device platform were:

- Total cost of ownership
- Security
- Apps platform
- Consistency across devices, making it easier to integrate with the rest of the back-office systems
- Not having to use different processes for MDM
- Availability of a range of devices, both today and in the future

Windows Phone 8 scored well against these criteria. Its most compelling strengths are the ability to integrate with the rest of the company's IT, the familiarity of the user experience and the ability to deploy content on the home screen. However, Microsoft has been slow in leveraging the opportunity to link smartphones and tablets so strongly with the rest of the corporate IT. The new enterprise features enhance the position of Windows Phone 8, but they have taken far too long to deploy.

Android has plenty of devices available, but the OS does not fit well with the company's wider IT architecture. iOS devices are good, but also expensive, and they don't fit well with the company's wider IT architecture either.

CONCLUSION

From the perspective of enterprise IT departments, Windows Phone 8.1 is a very important release of the operating system. It encompasses substantial changes in both the platform itself and in the business model that underlies it.

Some commentators have described Windows Phone 8.1 as "playing catch-up with Apple and Android." To a certain extent, one can see why: both iOS and Android have had voice-driven interfaces for some time; Apple added a suite of important new enterprise features in 2013 with iOS7; and device makers have never been charged a licence fee for using Android. But in our view, this limited characterisation of Windows Phone 8.1 as a "catch-up" release misses the point. With Windows Phone 8.1 Microsoft has addressed all of the issues that has hampered its uptake by enterprises, and at the same time it has enhanced the advantages that it offers to enterprises in comparison with iOS and Android.

There is a strongly growing opportunity for Microsoft to target enterprise IT buyers with Windows Phone, driven both by general uptake of consumer-oriented smartphones and tablets in the enterprise, and also by two specific near-term factors:

- The wave of enterprises that have been all-BlackBerry shops, and that have decided that they need to seek an alternative.
- The increasing tendency for European enterprises to take a CYOD approach to device procurement, in preference to the full BYOD model, thus leaving platform selection in the hands of IT rather than end users.

Windows Phone 8.1 puts Microsoft in a strong position to take full advantage of this opportunity.

True, there are still some challenges for Microsoft to address. In addition to the "app gap" perception, and the consequently tepid end-user pull for Windows Phone, challenges also include the need for better management of public applications, and for stronger lockdown of features and settings. However, with the release of Windows Phone 8.1, we believe that Microsoft can now offer enterprises a fully viable smartphone proposition, and one which means that enterprises no longer need to choose between:

- The consistency, ease of use and strong security offered by iOS devices, and
- The variety and wide range of prices offered by Android

With the availability of Windows Phone 8.1, consistency and variety are no longer an "either/or" proposition: enterprises can choose to have both.

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1000 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For more than 48 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

IDC U.K.

Chiswick Tower
389 Chiswick High Road
London W4 4AE, United Kingdom
44.208.987.7100
Twitter: @IDC
idc-insights-community.com
www.idc.com

Copyright Notice

This IDC research document was published as part of an IDC continuous intelligence service, providing written research, analyst interactions, telebriefings, and conferences. Visit www.idc.com to learn more about IDC subscription and consulting services. To view a list of IDC offices worldwide, visit www.idc.com/offices. Please contact the IDC Hotline at 800.343.4952, ext. 7988 (or +1.508.988.7988) or sales@idc.com for information on applying the price of this document toward the purchase of an IDC service or for information on additional copies or Web rights.

Copyright 2014 IDC. Reproduction is forbidden unless authorized. All rights reserved.

