

RESEARCH PAPER

The agile web - part i

Why considering users' different device types is essential for future success

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Executive summary

The methods and platforms that people use to access the internet have changed dramatically in the 21st century. That change is evident within every organisation, as employees bring their own smartphones, tablets, convertibles, ultrabooks, laptops and media players into the workplace, often leaving them by their desktop computers as they boot up for the morning's work. The trend towards non-desktop-based devices is clear, and reflected on the buy side in the more flexible working practices and behaviours that they enable.

The change is taking place on a scale not witnessed since the first wave of mobile phone popularity in the late 1990s. For example, mobile analytics company Flurry estimates that 17 million new Apple and Android devices were activated on Christmas Day 2012 alone, with more than half of them being tablets. Many of these will connect to the internet via mobile networks, and the rest via wi-fi. In either case, the conclusion is inescapable: web access, applications and content consumption have left the desktop for good.

However, an exclusive *Computing* survey of nearly 200 IT leaders and senior IT strategists across every sector of the UK economy – three-quarters of them in organisations employing more than 1,000 people, and 52 percent employing more than 5,000 – reveals that these now-established usage models are not being considered by many of the teams responsible for the content and design of organisations' websites or the downloadable applications that have replaced them.

The survey also finds that significant numbers of IT managers have little or no input into these presences, nor into the kinds of experience they offer to users.

Push and pull

In the 1990s, internet access introduced a new model of information consumption, one based on 'pull' rather than 'push'. Timeframe-based broadcast and periodical print appeared to be sidelined by content that could be pulled from portals and consumed on demand. Ironically – and despite being available on demand – information became valued by the speed at which it became available rather than by its depth or accuracy.

In retrospect, this 'fast food', 'pull media' aspect of the internet was always going to be short-lived. Users increasingly want depth and, again, content that is pushed to them – content that is designed for their chosen device and the ways in which it can be used, such as in specific locations. People consume the internet on the move via different devices and screen types, but in many cases, the experiences they are presented with are designed for static desktop computers.

Organisations should beware of this phenomenon, especially of the speed at which users make choices and change their minds about products and services. For example, the first wave of iPhone and iPad popularity had swift technology consequences. Websites based on Flash, for example, were not supported by iOS devices and swiftly declined in popularity. Although Flash will now run on iOS if users download the appropriate browser, Flash-based mobile development has largely evaporated. The swiftness of this change should be a lesson to all IT specialists as it reveals how technologies that seemed full of potential for the desktop have become yesterday's news almost overnight in the mobile environment.

One challenge that organisations face should be obvious from their own employees' desks – spaces that are cluttered with all the different devices they place at the centre of their own private networks: smartphones, tablets, hybrid ultrabooks or convertibles, web-enabled media players,

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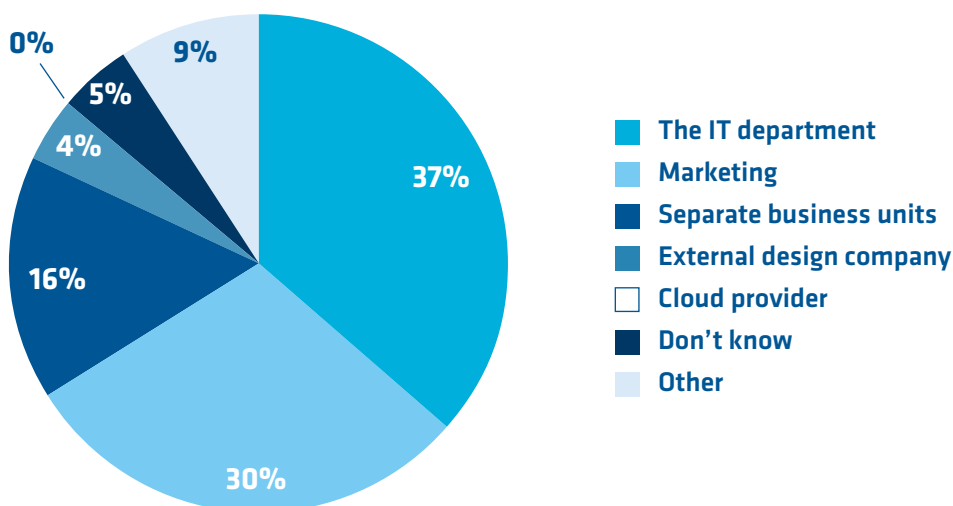
and so on. The same phenomenon is mirrored in most organisations homes across the land. Many organisations' own internet presences, however, are still rooted in a 20th century desktop approach, in which information is designed for consumption via a monitor on the user's desk.

Disconnected from the process

Another challenge is apparent from the *Computing* survey, which sought the views of 194 senior IT specialists in organisations of every type. This challenge is to do with management responsibility for the organisation's web presence. In many cases, the survey found that this falls outside the remit of the IT department, which, in other cases, is only involved to some degree.

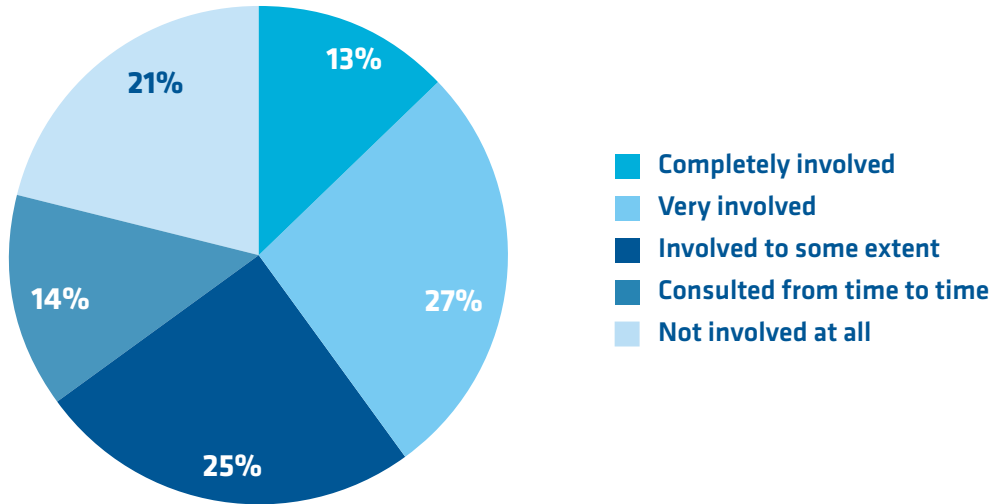
The survey found that in only 37 percent of cases is the IT department mainly responsible for the company's web presence (Fig. 1). In 30 percent of cases, it is left up to the marketing department – often the first part of the organisation to suffer cuts in a recession – and in 16 percent of cases, to separate business units. Incredibly, five percent of respondents did not know who was responsible for the corporate website.

Fig. 1: Who is mainly responsible for your organisation's web presence?



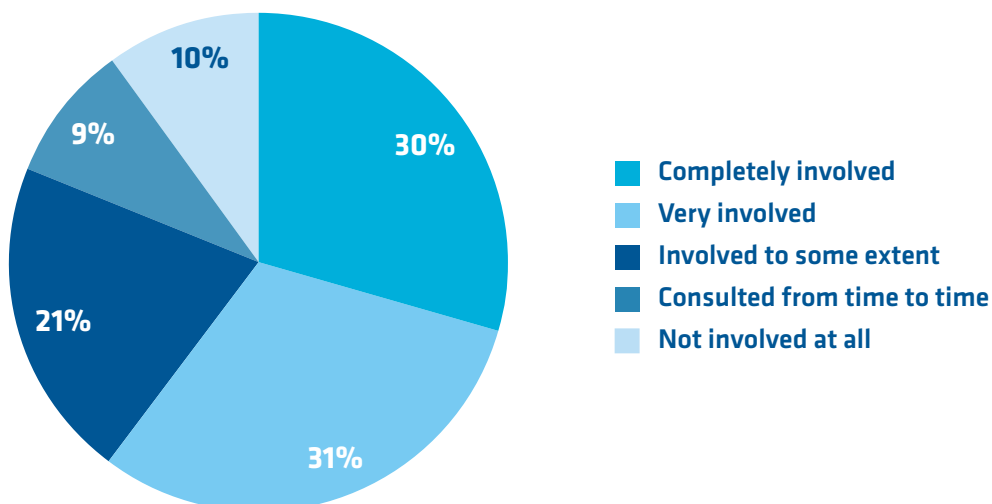
Asked to what extent they or their departments were involved in the design of the organisation's web presence, only 13 percent of IT leaders described themselves as "completely involved" (Fig. 2). A further 27 percent answered "very involved" and 25 percent said they were "involved to some extent". However, over one-third of all respondents said they were either not involved at all (21 percent) or merely "consulted from time to time" (14 percent).

Fig. 2: How involved were the IT department in the visual design of the website?



While the design of a website’s *appearance* might not be a core skill for many IT strategists, the underlying technology and functionality ought to be in terms of its place within an overall IT strategy. Just over 60 percent of IT specialists said they were either “completely” or “very” involved with these decisions (Fig. 3), leaving just under 40 percent involved either to some extent (20 percent), occasionally consulted (nine percent) or not involved at all (a troubling 10 percent).

Fig. 3: How involved were the IT department in the underlying technology and functionality of the site?



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The findings have serious long-term implications for UK business, especially given that 75 percent of respondents said they worked in organisations employing more than 1,000 people and 52 percent in organisations of more than 5,000 staff. In other words, many large organisations' web presences are being developed and built with little reference to the skilled, internal IT department.

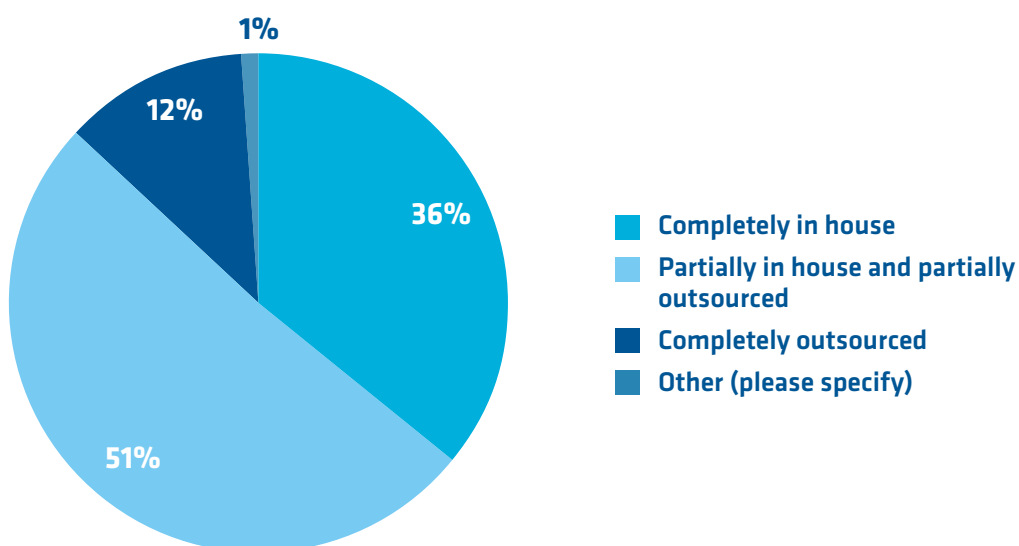
This is important for a number of reasons. As more and more aspects of IT work are transferred to cloud services providers, many IT leaders and managers are already finding their traditional roles dwindling and that they are working outside their comfort zones. The need for IT teams to become more business focused may be one reason why IT leaders who are not so business-minded may be being excluded from web-related decisions.

However, as the organisation's web presence and the back end that drives it becomes more integrated into other application, such as cloud-based business platforms, infrastructures and services, IT leaders' exclusion from these decisions may come back to haunt both them and the organisations that employ them.

This may have serious governance implications for senior IT decision-makers, if they find themselves lacking basic information about how web presences have been set up, how they connect with other applications and services, and how data is shared, managed and secured across the entire infrastructure.

So are IT leaders in the driving seat of other aspects of the organisation's web development? In short: No, not in many cases. Asked whether the web presence was created in house, 36 percent answered "yes, completely..." (Fig. 4). Just over half of all respondents (51 percent) said it was created partially in house, while 12 percent said that it was entirely outsourced to external developers.

Fig. 4: Was the organisation's web presence created in house?



The leadership gauntlet, then, is down for IT leaders to pick up.

But is the problem really that serious? After all, on the face of it, the challenge of how users interact with organisations online is simply one of hardware and platform choice.

Each different device – be it an Android phone, an iPhone, a Windows phone, a web-enabled media player, an iPad, a Kindle Fire, a Google Nexus 7, a Microsoft Surface, and so on – runs on a different operating system. It may also support a variety of different browsers and applications, and present slightly different screen sizes or formats (whether touch-sensitive or not). Some of those devices – the original iPad, for example – may offer pixel real estate that is similar to a laptop’s screen size and shape; others – such as the iPad Mini – present a different visual challenge, despite being fundamentally the same device.

Essential standards

For developers – whether in house or not – the ‘vanilla’ solution is to always use a standards-compliant approach to the web presence. All browsers that are fully W3C compliant will understand a fully standards-compliant website. This means that a corporate web presence will always work, regardless of the operating system, platform, browser, screen size and format at the user’s end.

Importantly, however, it might not offer the best possible *experience*. Indeed, at worst, it might offer one that is second rate compared with a competitor’s. So, while standards-compliant web development is essential, it is not always sufficient.

The survey’s respondents were asked some simple questions about device types and usage habits. Asked whether the organisation’s website is optimised for smartphone access and usage, a staggering 31 percent of IT specialists said that they had no idea (Fig. 5), while a further 14 percent simply answered “No”; mobile phone usage has not been factored into the website’s design.

Fig. 5: Is your organisation’s website optimized for smartphone access and usage?

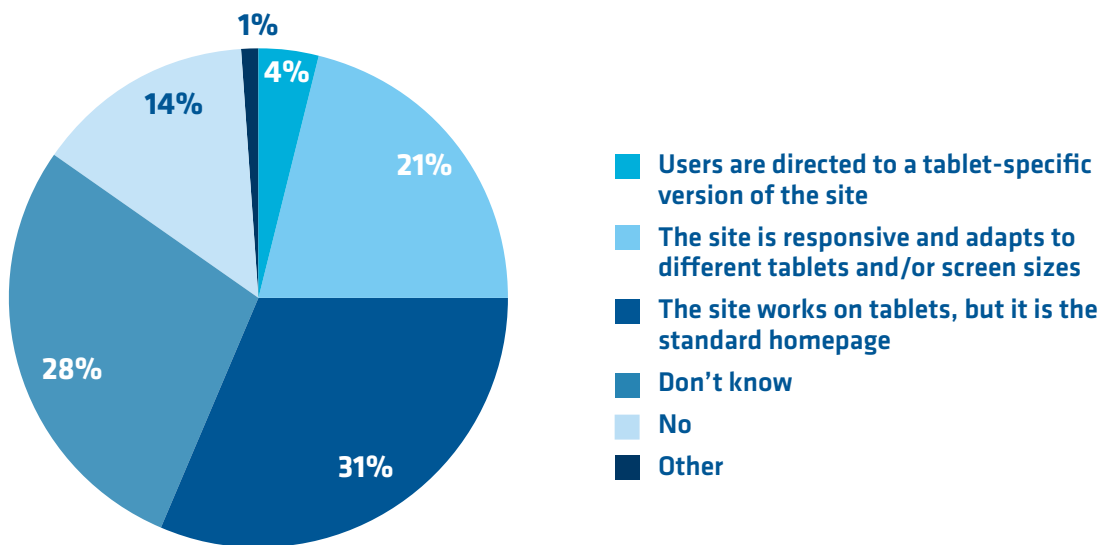
Users are directed to a mobile-specific version of the site	9%
The site is responsive and adapts to different device types and/or screen sizes	17%
The site works on mobile devices, but it is a minimised view of the standard homepage	27%
Don’t know	31%
No	14%
Other	2%

Nine percent of users identified themselves as being at the other extreme, saying that users are directed to a separate, mobile-specific version of the website. Seventeen percent said that the site is responsive and adapts to different device types and/or screen sizes, while 27 percent said that, on a mobile device, the site presents a minimised version of the standard homepage – a solution that can be perfectly adequate for some types of website.

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Asked whether their organisation's website is optimised for tablets or similar hybrids, the responses were broadly similar, while revealing that fewer organisations have considered the full potential of tablets, despite their massive growth in popularity. However, slightly more have considered their impact in very general terms. Just four percent said that users are directed to a tablet-specific version of the site (Fig. 6), while 21 percent said that the site adapts to different tablets and screen sizes/formats.

Fig. 6: Is your website optimised for tablet computers?



Again, the "Don't know" and "No" camps were worryingly large: 28 percent of IT managers and leaders have no idea how their organisation's website responds to different tablet devices, while 14 percent said that the site is not optimised for this fast-emerging device type.

Designing the experience

The key question that *all* developers and IT strategists should be able to answer technologically, is what experience the organisation wants its users to have, based on users' device type, location and situation. After all, if competitors give these factors greater consideration, then they may offer mobile users a more useful and intuitive experience online. That could have serious consequences in terms of rivals winning business and loyalty from the organisation.

For any web presence, access is the bare minimum requirement, so removing all non-standards-based material should be the bedrock of web development. A fully standards-compliant website solves perhaps 90 percent of the information access requirements of users who consume web content via different platforms and devices.

Multilingual information is a must for some organisations, and this can be intelligently linked to users' geolocations – although they may still require English language access wherever they are in the world.

Web accessibility is another vital consideration, making information as accessible to someone who is visually impaired as it is to everyone else. In theory, a fully standards-compliant approach means that a website will be as accessible on a basic informational level via a braille terminal connected to a Raspberry Pi as it will be on a 27" desktop display. In any event, all organisations should factor in these considerations when thinking about how people will experience their website on small-screen devices.

In short, all organisations need to ensure information access regardless of the user's technology choices, because the customer – or, in the case of public sector users, the citizen – may choose to access the website from any device, from the latest tablet or hybrid device, to a five-year-old desktop. Even if their browser is not fully up to date or running the most recent plugin, the core information that the website presents still needs to be accessible, even if it might not always be beautiful to look at.

Conclusion

The corporate web presence is becoming more and more central to many different types of organisation. Increasingly, it is the nexus of a variety of different, supporting applications, services and infrastructures as business moves deeper into the cloud.

However, for many types of business, the web presence is still being considered in a very Web 1.0 fashion: something that the marketing department and an outsourced web team to manage, perhaps with reference to the internal IT department when it comes to the supporting back-end systems.

IT leaders need to put themselves back into the driving seat of web development and design, and see it as a core part of what they do. But this means taking a much more active interest in the frontline web presences of their own organisations and how they are designed. Users, in the meantime, have no knowledge of internal organisational politics. They simply want a web experience that is well designed – in every sense.

IT leaders have an opportunity to be in the driving seat of a more enlightened approach to web development. Failure to be in that driving seat could have serious long-term consequences, and so they should ensure that the right tools are at their disposal to manage the process effectively.

About the sponsor, IBM

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