PROBRAND MAGAZINE







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Welcome to the latest edition of Probrand Magazine

As 2017 begins to unfold, we're already seeing how the big trends in technology are impacting day-to-day working lives. Businesses are continuing to embrace the cloud, mobility and data solutions in new and inventive ways.

The change this is bringing about is now clearly visible in our buying habits – highlighted in our market review conducted by analyst Gfk (p 6-7). We're not just seeing a difference in what businesses are buying, however. We've witnessed a fundamental shift in how people are buying IT, with the B2B market being increasingly influenced by online shopping experiences within the consumer market.

Whether it's for hardware, software or services, IT buyers are now looking for a simpler, more efficient way to acquire the tech they need. This is leading to a rise in user friendly digital marketplaces, such as Azure and AWS. In our lead article (p26-27), Danny Bradbury looks at how these digital platforms are evolving and why IT buyers and procurement professionals are moving over to these marketplaces. The growth of online self-service within procurement is something Peter Smith also picks up in his column (p 30).

It's a trend that has seen Probrand collaborating with sister company Mercato Solutions to adopt and run our business on its game-changing digital marketplace platform. Probrand is challenging the norm in the IT market, connecting buyers with our suppliers openly via a consumer shopping experience for business, and offering customisation for deeper procurement control and savings.

Our CIPS accredited marketplace connects over 40,000 registered users to 300,000 IT products and services from multiple suppliers, with price and stock checked every minute. It delivers complete transparency on

price, showing comparison across suppliers, as well as personalised discounts buyers are entitled to that often get swallowed up by the middlemen. Of course, our sector and technical specialists are there when buyers need help.

We're immensely proud of this development, which firmly sets our sights on enhancing the way the UK IT supply and services market works, for the benefit of both buyer and supplier communities.

Always with an eye on the future, this edition of the Probrand Magazine has also reviewed several areas of emerging technology. Rob Bamforth has examined the growing use of artificial intelligence within businesses (p 18-19), while Mark Samuels talks to CIOs embracing app development platforms within their digital strategy (p16-17).

There is also practical advice throughout the magazine on how technology can be incorporated within your business. This includes a section on audio visual equipment (p12-13) and Jenny Brookfield speaking with security experts to share the latest guidance on protecting against cyber threats (p38-39).

Technology never stands still and it continues to reshape businesses – not least our own. As it does so, we continue to offer the technical expertise necessary to support businesses innovating. We'll now also be supporting you with an expanded team and premises, with our new home in the iconic Alpha Tower of central Birmingham. So please feel free to drop by and talk to us anytime. Until then, we hope you enjoy this edition of the Probrand Magazine.

Porkain



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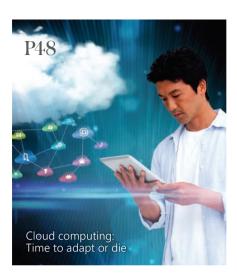
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Contact us 0800 262629

enquiries@probrand.co.uk

Probrand Magazine provides news, views, analysis and information on pivotal subjects relevant to IT, procurement and business leaders looking to thrive with technology.

Please get in touch and share your views on any of the subjects tackled or any you would like to read about.

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PROBRAND

Technology news in brief

Employees value mobile working more than company cars

Most employees would prefer mobile working options to a company car, research from BT has revealed.

The company's survey found two thirds think better technology would enhance their working lives, with employees looking for improved use of mobile devices and remote network access.

"It's important for companies to future-proof their business by investing in mobile collaboration technology to support a flexible working model. The more employees have a good experience of work on the go, the more benefits their organisations will see," said Andrew Small, vice president of unified communications at BT.

N 1

Cloud computing has become a 'mainstream powerhouse', says IDG

More than half of business applications and infrastructure will be hosted in the cloud by 2018, according to an IDG Enterprise report.

The research found that on average 45% had already been migrated to the cloud, while IT decision makers plan to spend a quarter of their budgets on cloud services in the next few years.

"The concept of cloud computing has transitioned from being an emerging technology to a mainstream powerhouse going beyond basic storage," the report said. "As digital enterprises continue to require agile solutions for their workforce and customers, the growth in cloud technologies has proven beneficial from speed, to cost reduction and access."

Three quarters of organisations have embraced BYOD

Almost three quarters (74%) of organisations have implemented some sort of BYOD (bring your own device) programme, research from Accusoft has found.

Only half of these organisations require employees to have personal devices approved by their IT department, however.

The report said this is leaving many businesses vulnerable to data breaches, either by hapless employees accidentally sharing data or by malicious cyber attackers gaining access to private networks.

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Ofcom says improved connectivity has boosted flexible working

Almost half of UK internet users think that being online has helped them to work flexibly, according to Ofcom's 2016 Communications Market report.

The study found the distinction between work and home was becoming less distinct as more employees check emails or finish off work at home. Nearly half (46%) of those surveyed said that the internet is enabling them to adopt these flexible practices.

"For those who have jobs which involve working on a computer and communicating with others online, greater connectivity has encouraged more working on-the-go in locations outside the workplace, such as at home or on public transport," the report said.

-

Shift to cloud computing set to impact \$1 trillion in IT spending

Widespread transition to cloud computing will directly or indirectly affect \$1 trillion in IT spent by 2020, according to research by Gartner.

The report said IT managers are shifting their spending priorities away from traditional IT to cloud-based services.

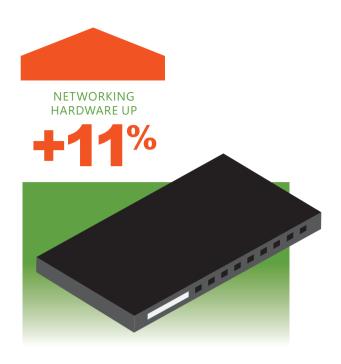
"As organisations pursue a new IT architecture and operating philosophy, they become prepared for new opportunities in digital business, including next-generation IT solutions such as the Internet of Things," said Ed Anderson, research vice president at Gartner.

TRACKING THE IT PRODUCT MARKET

Demands of modern business culture impacted the B2B IT market in 2016

> Dominic Ashford, of leading market research company GfK, takes a look at the IT product market to review the latest trends and forecast the future of product buying.





The IT business-to-business market was relatively buoyant in 2016 with the overall value of B2B markets tracked by GfK increasing by 2% compared with 2015 (NB: figures for December were not available at the time of writing). The decision to leave the European Union does not appear to have negatively impacted businesses' investment in this sector so far, with the value growth rate in the five months since the referendum increasing to 11%.

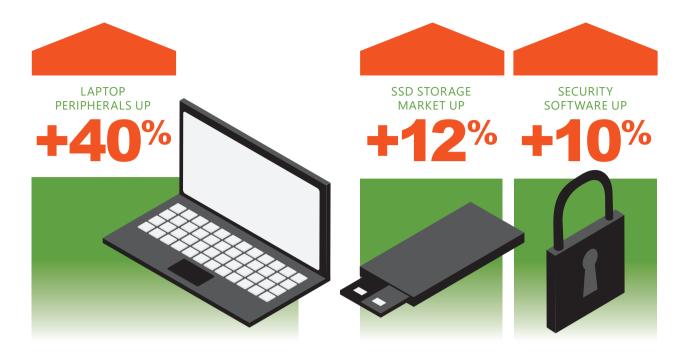
In general, the big winners of 2016 were networking, computing and peripherals, while the value for printers, storage and software all declined.

Computing

Within the computing market segment, laptop sales in particular have been strong, with the year-on-year sales value of these products increasing by 9%. This demonstrates the ongoing need that businesses have for mobile computing solutions. Organisations have been investing in more advanced hardware, demonstrated by the fact that the share of the laptop market for devices with 8GB of RAM grew 14%. Furthermore, the average price of laptops sold to businesses increased by 1% comparing the year-to-date, showing that the need for more comprehensive computing hardware is being recognised.

Networking

Networking hardware is another area that has seen positive levels of demand, registering 11% year-on-year value growth in 2016. This growth has come



from several areas including transceivers, routers, access points and switches. This comprehensive growth is the result of an across-the-board need for strong connectivity. Another area of growth within networking is docking stations, which links directly with laptop growth and this trend could result in IT suppliers looking to offer more comprehensive solutions

Peripherals & printers

Another area that has benefitted from the resurgent laptop market is peripherals, with both keyboards and mice seeing year-on-year growth rates higher than 40%. The average price of peripherals sold through B2B channels has also increased 21% during 2016. What is significant is that the increase in peripherals sales is much greater than that for desk or mobile computing, suggesting that these sales haven't just been replacement or attached sales, but an area that companies are investing in independently. As mentioned earlier, however, printing is an area of the IT market that is in decline. This is understandable given the move towards paperless offices and the use of managed-print services.

Storage

Storage has also seen a fall in demand in 2016. This is somewhat surprising given the amount of data and backup that businesses need. But it may well suggest that organisations are making more use of cloud storage solutions. Flash-based storage solutions are, however, an area of growth. The value of the B2B solid-state drive market increased by 21% year-on-year in 2016. There is

correlation here with businesses demanding higher specification computing hardware. It is a similar story for memory, a category which has declined in value by 22% in 2016. The value of the DDR4 market, however, has increased by 29% over the same time frame.

Software

The fact that the software market declined by 2% in 2016 is surprising. As with the storage market however, there are areas where demand is evident. The value of security software sold through business-to-business channels increased by 10% comparing Jan-November 2016 with the same period of 2015. This demonstrates that businesses are recognising the need to protect their IT assets. In a similar way, the direction that companies are heading can be seen in the fact that the value of the client-server software market has increased by 14% year on year. This is software that facilitates remote working and shows how companies are moving towards more flexible working cultures.

Overall

To summarise, the B2B IT market saw a lot of positives in 2016, and Brexit doesn't appear to have had a major effect on demand. It remains unclear how the decision to leave the EU will affect the markets when the separation takes place. What is clear is that businesses have demonstrated a clear need for more comprehensive computing hardware and networking infrastructure, as well as software that protects them and facilitates more modern working cultures.



TECH TRENDS

CONVERTIBLE 2-IN-1s BREAKTHROUGH TO THE MAINSTREAM

Ian Nethercott, Probrand Supply Chain Director, reviews trends in the current technology products market

We've been predicting for about 24 months that the convertible 2-in-1 is the computing form factor to follow closely – and in 2016 it appears they have finally made a key breakthrough.

In contrast to the traditional laptop where demand is waning, the popularity of the 2-in-1 is riding the crest of a wave – FutureSource predicts that 2-in-1s will grow from 6% of device shipments in 2015 to 18% in 2017.

This has been helped in no small amount by the huge sums being spent to promote these devices. You may have seen Microsoft's recent advertising campaign with Marvel Studios, featuring the Surface Pro 4.

This increase in popularity cannot be fully explained by marketing spend alone, however. Here are five strong reasons that explain the rise of the 2-in-1.

The hybrid concept

The key selling point of the 2-in-1 is the ability to replace two devices – the laptop and tablet – without losing functionality. Convertible 2-in-1s provide a full operating system, which allows the end user to be as productive as they would be on a traditional laptop. While the detachable keyboard means users can switch to tablet mode whenever they need to conduct presentations, collaborate with colleagues, etc. This offers convenience but it also makes sense economically, as you don't have to buy twice.

Evolution

When convertible computers first came on to the market in the form of the Lenovo Yoga and the HP Revolve, they were more cumbersome than the models we have today. Although innovative, they were hampered by heavy glass screens which made them difficult to use in tablet mode. But as these devices have become lighter and the keyboards have become fully detachable, they have become much easier to handle.

Price

Any new technology is expensive when it initially launches on the market. You'll pay a premium for the new functionality as R&D costs money. But as the technology becomes more standard, it also becomes cheaper to produce, hence the price will come down. Thanks to this, devices that were once considered out of reach for ordinary people are now accessible to all.

Enterprise mobility

Microsoft was a slow starter when it came to embracing tablet and mobile technology. Business users looking for this functionality had to resort to iOS or Android powered devices. This left IT managers with the pain of connecting different operating systems within the corporate infrastructure. However, with the convertible 2-in-1, business users now have mobile functionality with the added control and security afforded by Microsoft's operating system.

Continuum

With Windows 10 available on convertible 2-in-1s, business users can now have continuum across devices. If you want to use the Office 365 productivity suite for instance, users can now have familiar functionality whether they want to use a desktop, laptop, tablet or mobile device.

CASE STUDY

Reliance Precision saved three days each month on IT procurement

A specialist engineering company, Reliance Precision is focused on producing custom-built, highly reliable instrumentation to a range of global customers.

A specialist engineering company, Reliance Precision is focused on producing custom-built, highly reliable instrumentation to a range of global customers.

To ensure the smooth running of the business, the company requires more than 250 staff to have access to the latest IT equipment. The procurement team was finding, however, that kitting out the business with the most appropriate tools was taking a significant amount of time.

As the team was keen to achieve best price, they would conduct a series of price comparisons via webbased research, and have several conversations with multiple suppliers. "Even for routine, everyday items, we found we were spending a large amount of time going back and forth to different suppliers to navigate the best price," said Ben Sheard, IT Administrator at Reliance Precision. "This was a labour-intensive experience and not a good use of the team's time."

"Purchasing IT equipment now takes us about 30 minutes per week. I can't imagine going back to how we were operating before."

The procurement staff were also finding that, in some cases, suppliers would take too long to answer queries, by which time stock and price may have fluctuated. Other scenarios saw suppliers come back with equipment that was not in line with user needs.

Ben and his colleagues needed a more efficient method that would save them time while still

achieving best value. They found their answer in Probrand's Digital Marketplace. Europe's largest B2B IT marketplace, the platform helps save users time and money procuring IT by delivering price comparisons from multiple suppliers in one place.

Staff at Reliance Precision can also see pre-approved discounts personalised to their sector, including deals on everyday items such as laptops, desktops and servers or printers, for example.

In a fast moving market, the platform is allowing Reliance Precision to browse and buy direct from a catalogue of over 300,000 products from 2,500 brands, all updated with price and stock by the minute. With over 10 million automated price checks each day, it removes the need to call around and manually compare prices from three or more suppliers.

By using the Marketplace, Reliance Precision has streamlined the whole purchasing process and improved efficiency. The procurement team calculates that this is saving nearly three team days per month. As a result, staff can be more effective with their time, focusing on other priority tasks.

"The process we had in place previously was inefficient. We would typically spend a couple of hours each week reaching out to suppliers before collating all the information and manually benchmarking prices," said Ben. "With the Digital Marketplace, we're able to remove all of that; purchasing IT equipment now takes us about 30 minutes per week. I can't imagine going back to how we were operating before. For us, it is a no-brainer!"

EVOLUTION IN AV:

THE RISE AND FALL OF THE INTERACTIVE WHITEBOARD

The interactive whiteboard was considered a major advancement in audio visual (AV) technology 25 years ago. Yet, for all its promise and the investments made, from the education sector in particular, many were left under-used - becoming little more than expensive projectors.

Analysts have suggested that this was because the target audience simply wasn't ready for this type of technology, there was a lack of training and the software was limited in what it could achieve.

"In the early 1990s there was an initiative to get interactive whiteboards in to every classroom but problems existed. For example, if a teacher moved on you would often have someone come in next who didn't know how to use it," said Rob Xenos, business and marketing manager at Sahara, which manufactures flat panel displays and interactive whiteboards.



The technology did, however, enjoy a resurgence thanks in part to the prevalence of handheld devices – most people are now used to mobile and touchscreen technology and feel more at ease using interactive whiteboards too.

Yet, according to vendors, investments in interactive whiteboards are now beginning to wane in the UK as the technology has been overtaken by its glossier cousin, the interactive flat panel display. Xenos said: "People will now only buy an interactive whiteboard when they haven't got the budget for the interactive touchscreen. Interactive whiteboards certainly have their place but touchscreens have superseded them. It's more of an investment but you do get that investment back over the life of the screen."

The future is flat panel

Interactive flat panel displays are now expected to overtake projectors and interactive whiteboards in market share by 2019, according to interactive screen vendor Alpha Digital Networks. "The forecasted uptake is on an exponential curve upwards. Once you've seen an LED flat panel display you'll never want to put a projection-based system back in place," said Paul Vitali, managing director of Alpha.

"Extensive research and development is going on all the time and this has allowed us to use the screen as if it was a large Android tablet. We've also integrated Mirracast so you can cast up from a PC or laptop. In a classroom environment that means you can share information with other people, in other rooms and even other buildings around the world."

The vendors predict that, as interactive screens become the norm, users will end up demanding even more from this technology. Xenos paints a future picture that would not seem out of place in the sci-fi film Minority Report, with multiple users displaying desktops from multiple devices, all at the same time. For the time being, however, he says anyone wanting cutting edge AV features should ensure their devices offer the high level of connectivity needed to facilitate features such as Mirracast and Airplay.

> Jenny Brookfield **Business Journalist**

Making meetings work properly

Samsung takes a look at how the latest interactive displays can promote creative and collaborative problem-solving The best and most productive meetings are about collaboration, brainstorming and creatively solving problems. Unfortunately, traditional whiteboards have always been something of an obstacle to inspiring true teamwork, as they tend to encourage one person to lead a meeting and the rest to follow.

Too many meetings fail to stimulate and motivate participants to contribute their ideas and thoughts, for a variety of reasons. Presentations might be dull and lifeless, or there may be few opportunities for junior team members to share their opinions.

Thankfully, interactive displays now bring a touch screen experience to your large meeting room display. They allow you to browse the web, show documents, share ideas, and collaborate on the big screen.

If you're giving a presentation to your colleagues, you want to captivate their imaginations and engage their brains. You need your team to really think about and focus on your messages and arguments for them to respond with creative and constructive input. Otherwise, why bother having a meeting in the first place?

wireless technology allow presenters to access and share content from colleagues anywhere in the room.

Plus, they look utterly stunning. Clear and deeply immersive displays with a phenomenal 5,000:1 contrast ratio and an anti-glare touch overlay mean that your content – whether it's copy, infographics, videos or interactive applications - will be more eyecatching than ever before.

An intuitive PC-less "large tablet" experience

Samsung's PC-less interactive whiteboard has a pre-installed player built on Android that offers users an experience that they are comfortable and familiar with - it is essentially an intuitive "large tablet" experience. This means no more mid-meeting lulls while you fiddle around with awkward slideshows or temperamental presentation tech.

This user-friendly nature of the touchscreen means your meeting's participants are far more likely to interact with each other and become involved in sharing ideas. It turns a typical presentation into a two-way discussion, seamlessly merging visual content and essential data, and allowing teams to work together collaboratively.

Sharing transforms team communication

Samsung's AirScreen app also makes sharing simple. It allows you to connect up to four Windows devices to your interactive whiteboard at any one time. This way, colleagues and delegates can get far more productively involved in group discussions - sharing documents, multimedia content and anything else on their screen with everybody in the meeting.

Overall, better collaboration and innovation in meetings gives your business the edge. Sharing and engaging with ideas is the key to improved decision-making at every level. So why not transform your organisation from the ground up with a new interactive display?





The question is what AV device should you choose: a projector and screen, an interactive whiteboard or the new kid on the block, the flat panel display? There are several factors to consider depending on your budget, how often you plan to use the equipment and for what purpose. We take a look at the three options in more detail in order to help you decide.



Traditional projector and screen

Perhaps the entry-level AV device, the projector and screen may also be the cheapest option. It has the advantage of being simple to control for all users but may be more suited to occasional, rather than constant, use. If you are merely replacing an existing projector and screen, there is the added benefit that the same brackets, cables and accessories from your original equipment can be reused.

Top tips:

- Decide on your budget and balance that against the quality of display required.
- Judge how often you will be using the projector. If you require regular use, this option may not actually be that cost effective – replacement bulbs are not cheap.

- Decide where the projector and screen will be situated. Rooms that are too bright will interfere with the quality, and it may not be practical to go around closing blinds and turning off lights before every presentation. Shadowing on the screen caused by the user should also be considered.
- Bear in mind that maintenance will need to be carried out at regular intervals, with filters needing to be cleaned and bulbs having to be replaced after so many hours' use.
- Take into consideration the time and effort required to calibrate the projector before every use.

Interactive whiteboard

Mostly used in education but now growing in popularity for businesses, the interactive whiteboard has the bonus of having pre-installed software, which is used in conjunction with a personal computer and a digital projector. Navigation via pens or fingers allows you to write notes, drag, click and copy. Text or drawings can also be saved or shared

Top tips:

- Allocate time for users to receive the training required to use the whiteboard to its full potential. If you are not going to use all the functionality then this is perhaps not the right option.
- Whiteboards are heavy and large, so work out a preferred location and assess how you will physically install it on the wall.
- While this technology encourages greater creativity than the traditional projector, the interactive whiteboard is still operated via a projector so it can cause similar issues with image quality.
- Although initially more expensive than traditional projectors, they can actually work out cheaper in the long run when factoring in replacement parts.
- Whiteboards are not a stand-alone technology, so decide whether this will be right for all users.



Interactive flat panel displays

Interactive flat panel displays are an all-in-one solution, offering high quality LED images with multiple touch points to enable several users to work at the same time. The devices are pre-loaded with software so they can be used in conjunction with mobile or desktop devices. In-built connectivity means that attaching cables is also less of an issue.

Top tips:

- This is the most expensive option, so consider how often you will be using the device and what functions you will need.
- Despite the initial upfront costs, low wattage and low power output could keep running costs down and should see a display lasting 10 years.
- Screens are available in 4k or HD, so there is no need to alter the brightness of the room. Likewise there is no need for calibration.
- Allocate some of your budget to staff training to ensure users get the most out of your investment.
- Ensure your software enables all the features you require. There is no point of investing in multitouch technology or 4k if the software is only one or two-point touch or you don't have 4k playback technology.



Rob Xenos, business and marketing manager at Sahara, manufacturer of flat panel displays and interactive whiteboards, says that before committing to the more expensive options, buyers should be aware of some of the obstacles people encounter using interactive technology.

"Common issues include technologies not working together and the limitations of a badly set up wireless network meaning that products cannot communicate with each other. There are a lot of new options on the market and it can be confusing. Buyers should research the brand and evaluate what they are buying. They need to look at how they want to use the product, especially the software. Whatever the customer decides, it's vital they leave budget for training, training and more training."

CASE STUDY

Aston Manor Brewery gets support to tackle its growing pains

Like many expanding businesses, Aston Manor Brewery has experienced its fair share of growing pains. Formed in 1983, the company is now the UK's largest independent producer of own brand and labelled cider for supermarkets and wholesalers.

ItS success has seen its workforce increase to more than 185 staff, based in Birmingham and Devon, and supporting them had begun to create headaches for the company's IT department. But with the brewery's filtration and production processes also dependent on the IT infrastructure, the company needed assurance that its systems were reliable. This issue came to a head when Aston Manor's IT manager decided to leave the business.

With the company predicted to grow rapidly, finance director James Ellis recognised that a 24/7 IT support function was required. This support needed to provide business continuity that would insure against any potential IT disasters and future proof the company as it expanded.

Aston Manor's solution was to employ a fully managed support service from Probrand. On a foundation level this provided the organisation with a proprietary application that could identify IT issues before they could impact production, as well as the technical engineers needed to proactively deliver the maintenance needed to minimise potential incidents.

Further to this, the brewery also received anti-virus security and cloud-based disaster recovery via Probrand's remote storage vaults in Birmingham and Manchester. A reconfiguration of IT and networking equipment on site also significantly improved internal communication speed and quality. Crucially, the company achieved all this at a fraction of their previous IT support cost.

"With Probrand, IT has become a business enabler rather than a daily distraction," said James Ellis. "We have been able to reduce and control our IT overhead more efficiently, eliminate unnecessary downtime, maximise our IT estate and reduce cost of ownership. This is the first time we have used an outsourced and scalable IT support function and it is the best decision we could have made given our growth forecast.

"IT has become a business enabler rather than a daily distraction"

"As financial director I now have peace of mind that the cost-burden and operational overhead of IT has been brought under control. Fixed IT overheads mean we can plan and forecast more effectively. We get the creative, proactive approach of a full IT department without the cost. This means we can focus our efforts more strategically on growth knowing that our IT system will support us all the way."

Probrand was also able to help the brewery increase flexible working across the business. By providing employees with secure access to the network, staff can now work remotely.

"With our managed VPN, firewall and routing solution we have unlocked workforce capability. The remote access functionality is helping employees operate seamlessly from their desktop even if they are out of the office, opening the door for increased productivity."

THE GROWING DEMAND FOR **MULTIFUNCTION PRINTERS**





There was a time when offices had to be ready for anything, they would need to invest in several machines, from faxes to printers to copiers to scanners. A lot of time would be spent getting all these devices connected to a network and working well.

However, that meant tying up IT departments and calling support lines. Fortunately, technology has made life a bit simpler. And a bit more cost conscious.

Multifunction devices are by no means new, but they are really coming into their own. This is backed up by a recently reported 30% growth in the UK MFP market since 2011.

This growth is reflected in the need for businesses to find efficient, affordable solutions that are 'all singing, all dancing'. In addition to this, and rather practically now that office space is at a premium, space saving devices can make all the difference.

No one wants to choose between having desk space or a stack of devices. There's an even stronger case for this with workforce mobility on the increase, leading to the creation of more home and micro offices.

Staying ahead of the game

For decades, Ricoh has developed technologies such as office printers, production printers, duplication, conferencing devices, software and imaging. Production houses and print rooms of businesses have relied on these products, whether that's for small companies or large corporations. As a brand

Ricoh has certainly made a huge impact with SMEs and micro offices by building functionality into a range of A4 printer copiers.

A drive to innovate, while listening to customers and the challenges they faced, led Ricoh to create the UK's most indemand MFP. The UK market share for Ricoh multifunction printers is 22.4%, significantly greater than their closest competitor. What's more, 10% of the single function colour printer market space is taken up by Ricoh.

This market share has been achieved due to ongoing initiatives such as the Ricoh Quality Pledge. This pledge offers customers the chance to return their Ricoh printer, from a selected range, if they're not 100% satisfied with their purchase.

A vision for a flexible workforce

As a business, Ricoh is at the forefront of the development of print and copy devices, with in-built innovations and technology to make life as easy as possible for the user. These versatile machines are designed to offer a fullyrounded solution for any office space, as well as home offices.

Workforce mobility has been a key part of that development in recent years, building a portfolio that extends beyond printers and copiers. In receptions and boardrooms around the world you'll find Ricoh screens and projectors for clear, easily editable digital signage. A range of Interactive Whiteboards has also revolutionised collaborative working, allowing for real time editing and sharing.

It's innovations such as these that are helping to make Ricoh MFPs a future-proof investment, shaping the world around us for better productivity.

How are CIOs building their organisation's digital strategy?



Digital transformation is the new business constant. A confluence of trends – such as consumerisation, cloud and big data – continues to have a huge impact on the way organisations operate. The scale of change during the past decade has been remarkable, yet all the evidence suggests more is to come.

Half of chief executives expect their industries to be substantially or unrecognisably transformed by digital technology in the next five years, according to Gartner. The analyst says examples of digital changes include self-driving cars, the rise of blockchain in banking and the potential impact of the Internet of Things in insurance.

IT leaders, as the guardians of information technology within the business, will play a crucial role in building the digital strategy. Take Jaeger CIO Cathy McCabe, who is pushing digitally enabled change at the luxury retailer. She is running a range of transformation projects that are drawing on big data and mobility.

"Fulfilment is a strategic opportunity," she says. "Our customers have great access to technology now and retailers must look to meet ever-increasing service expectations. People are beginning to expect next day or same day delivery. Successful CIOs will piece all of those various elements together."

Wide scale availability of mobile devices is pushing similar rises in expectation within enterprise. Internal customers want to use their smart phones and tablets to connect and collaborate. CIOs and their trusted partners must work to develop applications that meet fast-changing customer demands quickly and cost effectively. However, meeting such demands is tricky.

Additional Gartner research suggests the demand for enterprise mobile apps will grow at least five times faster than internal IT organisations' capacity to deliver them through 2017. So how can CIOs help the business build a strategy that meets the demand for change in an age of constant digital transformation?

Delivering on heightened customer expectations

Camden Council interim CIO Omid Shiraji says it is crucial to recognise that, despite the huge focus on expectation during a digital age, customers continue to want the same things: high quality services that are accessible and convenient.

"The key change is that customers now want to access services on their mobiles or wearable devices," says Shiraji. "Your clients don't always know what they're looking for, but they do want organisations to offer unique services that they can play with and create value. As CIOs, it's our job to think about what our customers want today and to then focus on the future of experience."

Shiraji says the key demand is often to be able to access services as efficiently as possible via any mobile device. He says this kind of accessibility can provide great benefits. Yet CIOs should not make the mistake of mixing such advances in mobility with true innovation.



"That's simply giving customers what they want – which is access to as many channels as possible in order to deliver new kinds of experiences," says Shiraji. Real innovation comes when technology provides the tools for organisations to quickly automate their own business processes without having to invest heavily in application development.

Here low-code and no-code platforms can help. Such platforms allow non-developers to create and release business software to end-users, typically using visual, drag and drop editors. Shiraji says CIOs should lead business change and think about how their organisations can fully exploit the value of this technology.

"CIOs must think about how they can use these digital tools to build the kinds of experiences that customers might not have anticipated, such as communities of like-minded users for engagement and self-help," says Shiraji.

"In all sectors, employees can really learn from other people's experiences. It's an incredibly powerful concept in social care, for example, where using technology to enable those with complex needs to connect to people who have overcome similar challenges delivers a really positive social impact."

Understanding the role of low and no-code platforms

Mark Ridley, director of technology at online recruitment specialist Reed.co.uk, also recognises the potential power of shared experiences. He says low-code and no-code platforms are often held up as the next generation of application creation.

"Many enterprises have seen great success using these platforms to push applications to their staff and suppliers in substantially shorter timeframes than would be expected with typical mobile development," says Ridley, suggesting the speed of deployment can sometimes be days, rather than months.

He says the burgeoning low-code/no-code space offers the potential for wide scale change. Ridley says these platforms, like the cloud for hosting, offer a valuable tool when they are selected for the right task.

"Enterprises have shown great success with apps designed to collect and share information across geographically diverse and mobile teams," he says. "Low-code platforms are also valuable in enforcing and training business processes, especially in situations where the user interface can be implemented with standardised design elements that are visually pleasing and easy to use, rather than completely bespoke."

The rise of these platforms, however, does not mean the end of traditional developers. Ridley says consumer-focused applications, where app store ratings and satisfaction are critical, still often require custom development for Android and iOS devices.

Where customisation is required, he says other platforms - such as Xamarin and Ionic, both of which are used at Reed.co.uk – provide a great way of maximising developer efficiency. The basic premise, however, is that low-code and no-code platforms are here to stay and are opening application development to a whole new audience.

"These tools are showing us a direction that will put mobile app development within the reach of many more businesses," says Ridley. "Low-code represents the democratisation of business logic and application development."



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