

ComputerWeekly

The technology behind the training

FOOTBALL ASSOCIATION IT DIRECTOR ROB RAY EXPLAINS THE ROLE OF TECHNOLOGY IN HELPING ENGLAND IMPROVE THE PROSPECTS OF ITS FOOTBALL TEAM [PAGE 7](#)

Will IT chiefs jump ship?

IT MANAGEMENT JOBS MORE SECURE BUT ADDED RESPONSIBILITIES PROMPT SALARY DOUBTS [PAGE 6](#)

The future of government IT

WE LOOK AT THE PROGRESS OF GOVERNMENT'S AMBITION TO USE OPEN SOURCE AND STANDARDS FOR PUBLIC SECTOR IT [PAGE 9](#)

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VIDEO



> Government Digital Service: Emer Coleman on open data

In this video, Emer Coleman, deputy director of digital engagement at the Government Digital Service, discusses the benefits of open data. Coleman says there are many benefits to opening up data, not just in terms of greater transparency, but also in supporting and boosting the economy.

VIDEO



> Video: Top 10 project management trends 2012

J. LeRoy Ward, vice-president of product strategy and management at ESI International, guides you through the top 10 project trends identified by a panel of industry experts.



> CW500: HMRC CIO Phil Pavitt on IT transformation

HM Revenue & Customs has one of the largest IT estates in the public sector. But like every area of government, HMRC is facing huge challenges to cut costs and be more efficient.

PREMIUM CONTENT

> Information security breaches survey 2012

This is the latest of the series of *Information Security Breaches Surveys*, carried out every couple of years since the early 1990s. This year's results show that security breaches remain at historically high levels, costing UK plc billions of pounds every year. A big driver of this is the continuing escalation of cyberattacks. The number of significant hacking attacks on large organisations has doubled over the past two years.

> Learning & development: Can it really help to motivate and engage staff?

Salary increases are extremely rare in today's downturned economy. Because of this, it has become increasingly important to ensure satisfaction and motivation of employees so your staff feel appreciated and engaged within your company. Investing in training and development initiatives can be an effective way of driving employee engagement and morale while also securing future leaders for your organisation.

> Delivering on high cloud expectations

Business demands for easier, faster and more flexible IT services are driving this behaviour, and IT organisations can't afford to respond sluggishly, even while pursuing simplification and cost reduction objectives.

OPINION

> The cookies monster: How to deal with the new cookies law

In May 2011, the law concerning the use of cookies and similar technologies for storing information on a user's computer equipment changed. Previously, you had to tell visitors to your website how you used those cookies and how they could opt out if they objected to them being used. Now, cookies can only be placed on devices where the user or subscriber has given their express consent. Henrietta Neate looks at what the law says and how to ensure that you comply with it.

> Government open standards proposal fails the 'so what?' test

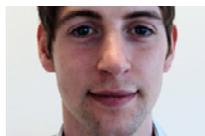
The consultation on open standards in government IT is generating a lot of discussion, much of which misses an important point: so what?

BLOGS



> Adrian Bridgwater: Software development in the global interconnected sandbox

Perforce has upped its software version management system with a new release featuring additional capabilities for "advanced distributed version control" to keep developers productive even when they are disconnected from the firm's shared versioning service. New replication technology is also said to improve system performance and scalability for remote teams.



> Matt Scott: Five of the weirdest phone patents

Following the publication of a patent filed by BlackBerry makers RIM back in 2010, I thought it would be fitting to compile a list of five of the weirdest phone-related patents filed in recent times. It's strange to think that right now companies could be working on and filing numerous patents for innovations and advancements that may not enter the market or even production until a couple of years from now.



> Karl Flinders: Freudian slip by union reveals outsourcing organisation's perception

I covered a story recently about job cuts at CSC. Within the story the union Unite has a real dig at the NOA about its attitude towards CSC's offshoring strategy. In the press release I was sent by Unite it refers to the NOA as the National Offshoring Association rather than the National Outsourcing Association. It is an easy mistake to make but is it a Freudian slip? Or was it deliberate?



> Mark Ballard: Labour IT mandarins make comeback bid for global transformation

The last Labour government's "Transformational Government" project has been reborn in California as a plan for world-wide reform of seismic proportions. Four leading emissaries of the initiative teamed up in London this month to argue against the UK's open standards policy and have tried to persuade the Cabinet Office to adopt their policy instead.

GOVERNMENT & PUBLIC SECTOR

Government publishes plans for £1.6bn of IT contracts

The Cabinet Office has published details of £1.6bn of IT contracts to be awarded by central government over the next three years. The spending is part of a total of £70bn of purchasing plans published across a variety of sectors on the Business Link Contracts Finder website.

PRIVACY & DATA PROTECTION

London Marathon organiser leaks 38,000 runners' details online

The personal data of 38,000 runners in the London Marathon were accidentally published on the organiser's website. A BBC report revealed that the details of runners – including addresses – were available on the website all day on Monday 23 April 2012. The thousands of runners included many celebrities.

CHIPS & PROCESSOR HARDWARE

Intel launches next-generation quad-core Ivy Bridge chips

Intel is set to release its much-anticipated, quad-core Ivy Bridge processor, based on 3D technology. The Ivy Bridge is the next version of Intel's multi-core processors. It will be initially aimed at desktop computing. Using a 3D transistor, Intel claims it can design more powerful processors with improved power efficiency over current processors.

CLOUD COMPUTING SERVICES

Amazon results demonstrate commitment to cloud

Amazon's AWS cloud business made \$500m in sales in the first quarter of 2012, up \$189m from the same quarter last year. The cloud operations represent just 3.79% of the online retail giant's overall business, which reported revenue of \$13.2bn for the quarter that ended March 31 2012, an increase of 34% over last year's first quarter results. However, AWS appears to be the fastest growing area of the business, reporting 61% growth compared to 43% in the electronics business, and 19% in media.

PRIVACY & DATA PROTECTION

Financial services companies cause most complaints to ICO

Banks have caused the most complaints to the Information Commissioner's Office (ICO) regarding data protection issues. A Freedom of Information request submitted by security supplier Axway has revealed the number of complaints per sector, with lenders the most complained about in 2011 and 2012 triggering 2,356 complaints over the course of two years. Local government organisations were second with 2,080.



Microsoft conflict delays hearing

The Cabinet Office has extended the public consultation over its ICT strategy of open standards and scrapped some previous proceedings after learning its independent facilitator was being paid by Microsoft, which was lobbying against UK policy.

Cabinet Office minister Francis Maude (pictured) put the open standards policy – the cornerstone of his ICT strategy – on hold in November after lobbying from Microsoft, and left the matter to be settled by a public consultation that was due to close next Thursday.

Andrew Hopkirk – a former director of technology at the National Computing Centre, who presented himself as an independent consultant – had facilitated a public consultation meeting that recorded an outcome in accord with Microsoft's position and which subsequently attracted accusations of bias.

GOVERNMENT & PUBLIC SECTOR

Government frameworks no good for SMEs, says G-Cloud director

The government needs to develop a frameworks policy that makes it easier for SMEs to do business with the public sector and Whitehall more efficient in rolling out its IT, according to G-Cloud director Chris Chant, who is to retire this week. Asked at the Socitm Spring Conference how the framework process could be simplified for SMEs, Chant said: "My advice is don't do anything with the other framework contracts – just do it with the G-Cloud."

BUSINESS APPLICATIONS

SAP grows sales 11% to €3.35bn in first quarter of 2012

SAP increased its sales by 11% in the first three months of 2012, with a set of results that sees the company continue where it left off after success last year. With total sales of €3.35bn in the first quarter of 2012, compared to €3.02bn in the same period last year, Europe's biggest software maker is continuing the progress it made in 2011, which was the best year in its 40-year history.

RISK MANAGEMENT

One in five Macs harbours malware, reveals Sophos report

One-fifth of Mac computers are carrying one or more instances of Windows malware and one in 36 are carrying Mac OS X malware, a study has revealed. Unless Mac users run Windows on their machines, the Windows malware will not affect them directly, but can still spread to other computers, according to a report by security firm Sophos.

EDUCATION & TRAINING

Open University unveils postgrad certificate in managing IT services

In a bid to address the most pressing skills gap in IT, The Open University and Global Knowledge have partnered to launch a Postgraduate Certificate (PGC) for IT service managers (ITSM). The PGC in Advanced Professional Practice (IT Service Management) is a combination of the existing Information Technology Infrastructure Library (ITIL) and modules developed by The Open University.

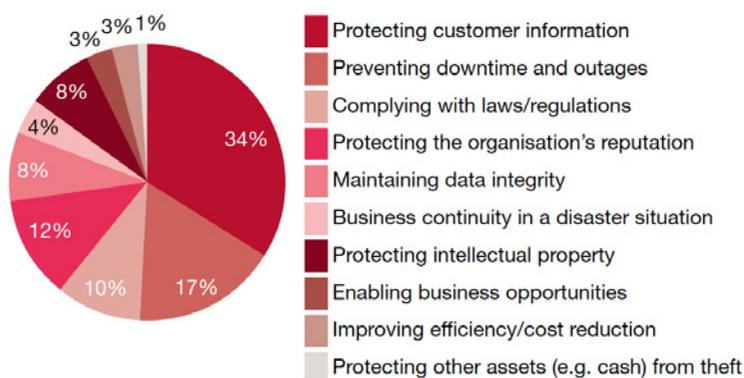
HOSTING SERVICES

Google puts 5GB free Drive storage in the cloud

Google is providing 5GB of free storage with its Google Drive cloud storage product, which aims to provide a shared online workspace for collaboration. The main features include integration with Google Docs so documents can be stored in Drive,

Why companies invest in security

The main drivers for organisations' information security expenditure



Source: Infosecurity Europe/PricewaterhouseCoopers

INFOSEC EUROPE 2012



"The ICO has got teeth and they are sharp, but they are aimed at specific offences"

Christopher Graham,
Information commissioner

INFOSEC 2012

Record security breach numbers cost billions as one in seven firms hacked

Infosec delegates told compacency is costing business dear in worst security year on record, writes **Warwick Ashford**

UK organisations are suffering a record number of security breaches, costing them billions of pounds a year, according to a survey published at Infosec 2012.

“We have been doing the survey since the early 1990s, which gives us really good trend data to be able to identify patterns,” Chris Potter, PricewaterhouseCoopers (PwC) information security partner, told attendees of Infosec Europe 2012 in London.

One in seven large organisations detected hackers in their systems in the past year, according to PwC’s *2012 Information Security Breaches Survey* – the highest level on record.

Some 70% of large organisations detected significant attempts to break into their networks in the past year – another record high.

Each large organisation suffered an average of 54 significant attacks, double the number in 2010. Some 15% had their networks successfully penetrated by hackers.

The average cost of the worst security breach for large organisations was between £110,000 and £250,000, while for small businesses the cost ranged from £15,000 to £30,000.

Potter said that, considering most businesses share data with their business partners across the supply chain, these numbers were startling and should make uncomfortable reading for business leaders.

The Universities and Science Minister David Willetts, whose responsibilities include cyber security issues, said the survey results were a timely reminder for UK businesses to make sure their information systems are protected to take full advantage of the online world.

“The survey demonstrates why the government is right to invest £650m to improve cyber security and make the UK one of the safest places to do business in cyberspace,” he said.

Some 93% of respondents from large organisations and 76% from small businesses reported a security breach in the past year.

The survey showed an increase in the number of outsider attacks, especially against large organisations.

On average, large companies faced



“Large organisations are more visible, increasing the likelihood of an attack”

Chris Potter, PwC information security partner

one attack a week, compared with one a month for small businesses.

“Large organisations are more visible to attackers, which increases the likelihood of an attack on their IT systems,” said Potter.

Large organisations also have more staff and more staff-related breaches, he said, which may explain why small businesses report fewer breaches than larger ones.

Overphishing

All sectors reported attackers on the internet trying to impersonate staff. Financial services and government bodies were worst hit, often reporting phishing attacks several times a day.

Customer impersonation and identity fraud remain high, up threefold from 2008, with all sectors affected. However, financial services compa-

nies have now overtaken retail.

Criminals find it easiest to make money by impersonating the customers of banks, the survey report said.

One in eleven respondents reported an outsider stealing confidential data, with financial services and utilities providers the worst affected.

In the past year, of the 45% of large organisations to have breached UK data protection laws, only 18% of organisations had an effective contingency plan in place; 20% of small businesses lost confidential data; and 19% of large organisations were hit by employee computer fraud.

Underinvestment

The root cause, the survey report said, was often a failure to educate staff about security risks, with 75% of organisations where the security

policy was poorly understood experiencing staff-related breaches.

Despite the prolonged economic slowdown, most organisations had spent more on security this year than in the year before.

On average, organisations spent 8% of their IT budget on information security, but those that suffered a very serious breach spent only 6.5% of their IT budget on security.

The survey report said there was evidence of complacency setting in among large organisations, with 20% of respondents saying their organisation spent less than 1% of the IT budget on information security.

A root cause, the report said, is that it is hard to measure the business benefits from spending money on security defences. Only 20% of large organisations evaluate the return on investment from security.

“The key challenge is to evaluate and communicate the business benefits from investing in security controls. Otherwise, organisations end up paying more overall,” said Potter.

The cost of dealing with breaches and the knee-jerk responses afterwards usually outweigh the cost of prevention, he said.

“If security is doing its job it goes unnoticed and it’s hard to measure the business benefits, so investment in security often ends up losing out against other competing business priorities,” said Potter.

The challenge for a business of any size is to make sure the money spent on security is well targeted, he said.

“Evaluating the effectiveness of your security expenditure is vital if you are to stay ahead of the emerging threats,” he said. ■

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› Costs of a data breach falling, but cost per record rising

› Understanding data security breaches eclipses preventing them

› IT security spending: How to spend less

NETWORK HARDWARE

Estate agent beefs up network for unified comms and multimedia apps

Running intensive files and plans for collaborative working led Knight Frank to boost its bandwidth, writes **Cliff Saran**

Property consultant Knight Frank has replaced its ADSL network with a high-speed network from Virgin Media Business to improve the performance of its applications and facilitate unified communications.

Knight Frank's IT network delivers large amounts of digital content, such as video tours of properties and graphic-intensive multimedia files. The existing ADSL network was unable to support the large number of multimedia applications required.

The replacement network, which uses a secure IP virtual private network (VPN) from Virgin Media Business, will provide the bandwidth to enable these applications and increase resiliency, with diverse routes to Knight Frank's two datacentres.

The network will be delivered as part of a Virgin's five-year contract to support staff in Knight Frank's 60 regional UK offices.

Running applications locally
Unlike firms that centralise desktops by virtualising PCs, Knight Frank is going the other way – deploying conventional PC clients to replace a Citrix-based thin client set-up.

"Prior to the implementation of the Virgin Media Business network, we ran Citrix over ADSL because there was insufficient bandwidth to run our applications across the wide area network," said Hardeh Degun, infrastructure manager at Knight Frank.

Improving performance of the Citrix infrastructure would have required an upgrade to the Citrix server farm and better desktop PCs.

"You need quite a fast processor on the local PC to enhance the Citrix desktop experience," said Degun.

Since the company was planning to refresh the desktops anyway, he said it made sense to run the applications locally on the new, more pow-



"We allow video conferencing and hope to consolidate telephony"

Hardeh Degun, infrastructure manager

Is VDI right for you?

As Knight Frank's experience shows, desktop virtualisation – or thin client computing or VDI as it is sometimes called – is not always the right answer.

Given PCs have large hard disks, powerful graphics chips and processors, users that run computationally intensive applications on their desktops, or are heavy users of multimedia, may struggle in a pure virtual desktop environment, which largely relies on server-based computing.

In a paper comparing a well-managed PC environment to a virtual desktop infrastructure (VDI), Microsoft noted:

- VDI reduces hardware costs by 32% but increases software costs by 64%, cancelling any savings;
- VDI redistributes IT labour costs, but total labour costs are almost identical in the PC environment;
- Users that move from a well-managed PC to VDI complained about a diminished user experience

As reported in Computer Weekly's sister title SearchStorage.co.uk, many organisations boot servers from network storage to ensure a common image, as well as simplify updates and maintenance. With standard HDD arrays, the resulting traffic jam during "rush hours", is a major headache for users and puts a strain on the back-end server and disk infrastructure. Businesses use expensive SSDs to overcome this issue, but the exceptionally high cost of SSD can wipe away any cost benefits of moving to a virtual PC environment.

HMRC CIO, Phil Pavitt, described thin-client computing as "the lie that the industry sold us" claiming it proves more expensive than the desktop PCs it replaces.

But a Forrester report commissioned by Citrix, concerning companies looking to implement Citrix XenDesktop, noted that the product offered savings in avoiding desktop refreshes and software costs.

erful PC hardware, rather than incur more costs upgrading Citrix to boost the virtual PC performance.

Citrix is still used for remote access for home users and business continuity, although Knight Frank has halved the number of Citrix licences it uses.

High-speed connections

The new network infrastructure has allowed the company to use new types of unified communications platforms, such as Microsoft Lync. Unified communications run across the wide area network (WAN).

"We allow personal videoconferencing using Microsoft Lync, and we hope to consolidate telephony into our two datacentres using a central system to remove the need for local telephony services," said Degun.

The company has started migrating the telephony of 15 regional offices into its datacentres, using Alcatel for IP telephony.

The Virgin Media Business fibre-based network connects the regional offices via two 10Mbps links to datacentres in Baker Street and Aldgate in London. It is being used to support all the company's datacentre-hosted applications, including Microsoft Ex-

change, SharePoint, file services, a property match system and a property database.

The network provides a 100Mbps access bearer network service, which connects into each office, supporting up to 40 users.

The two datacentres are connected to each other via a 20Gbps link, and also connected via a 1Gbps link into Virgin Media Business's Layer 2 Ethernet.

Degun hopes to pilot a Lync PABX, which he said promises good integration with Outlook. If the pilot is successful, its strategy would be to decommission the Alcatel system and move over to Lync, he said. ■

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- ▶ Network design & management for video and multimedia apps
- ▶ School district leaves legacy ATM network for gigabit Ethernet WAN
- ▶ Face-off: Thin client versus fat client computing

IT JOBS & RECRUITMENT

IT managers more secure in jobs but salary doubts prompt plans to move

Strategic responsibilities raise job security but executives say they can do better elsewhere, writes **Kayleigh Bateman**

Some IT professionals may be feeling unsatisfied with new responsibilities being added to their job roles this year, but overall most feel their jobs are safer, according to a survey from Computer Weekly/TechTarget.

The CIO/IT Strategy salary and career survey, which questioned 600 UK IT professionals, found that in addition to their usual duties as an IT manager, 42% of respondents now have to coordinate the integration of IT into the business and 35% said they had to take on new information management skills.

Other new responsibilities included training or developing staff, understanding the economic impact of IT on the business and managing a shared services environment.

Despite 38% admitting they are satisfied with these changes in their job role, 18% said they are not at all satisfied with how their position evolved throughout 2011.

Some 29% said that, over the next three to five years, they will look to either move to larger company or to a role higher up in their organisation. Only 1% wanted to move out of an IT role into a business one.

Job satisfaction

Phil Roebuck, chief executive of online recruiter Webrecruit, said: "I agree with most of the results of the survey, particularly the increase of IT managers looking to change roles. We've seen an increase in IT applications, particularly from management-level and above candidates, who are dissatisfied with their present roles."

Some 42% claimed to be more satisfied with their job security in 2011 compared the previous year. However, 20% said they are satisfied with their current job and see themselves staying there for the foreseeable future. Some 44% were open to new



While expanded job descriptions have made jobs safer, salaries have fallen behind

opportunities but said they were not actively seeking a new position.

Roebuck said the main driver of candidates' dissatisfaction was salary, which was perhaps anecdotal of increasing dissatisfaction with moves tangential to strategic activities.

"Interestingly though, there is another trend we are noticing from job seekers who aren't actively looking but are more open to hearing about opportunities, should the right role present itself," Roebuck added.

The CIO salary survey's results on job security contrasted service provider Star's recent survey finding one in five seeking new work, as they believed their current position would not be secure for more than a year.

Only about half of the IT professionals surveyed by Star were employed full-time.

Adrian Simpson, chief technology officer of SAP UK, said the low percentage of IT professionals satisfied in their role was an indictment of the pressure on IT managers.

Coping with transformation

George Ell, general manager of Europe at Yammer, an enterprise social network, said the high percentage of respondents coordinating business integration shows the role of the IT professional transforming.

"CIOs, in particular, are increasingly charged with demonstrating bottom-line business value, rather than simply making sure the technology works. CIOs say they have less time to spend on strategic activities, but there is a shift towards strategic thinking more focused on the business rather than technology," said Ell.

According to Ell, the current climate and trends such as bring-your-own-device schemes raise the oppor-

tunity for IT to be seen less as a necessary evil and more as a driver for business growth.

"These additional responsibilities will be less focused on the 'nuts and bolts' and processes of the technology and more about people," Ell said.

Robert Bowyer, director at Venn Group, emphasised the use of external skills to avoid overloading staff with too many duties in coping with the rate of globalisation and rapid technological advancements.

"As a specialist temporary consultancy, we have seen a big upturn in demand for interim IT positions over the last quarter, which is indicative of this trend," Bowyer said.

"The role of the IT manager will continually evolve, and at a time when the economy is performing below par, businesses will always need to rely on external skills to ensure work is carried out on time and by individuals who are highly skilled and can enter an organisation and hit the ground running."

Oliver Gibbons, director of the technology practice at Twenty Recruitment Group, said the economy had changed the IT manager's role and will influence how the role continues to change.

Gibbons said: "Without the UK seeing the level of economic growth we had all hoped for, organisations have had to become more robust with their forward planning.

"They need to be looking at how they maximise returns from their defined target markets and existing customer base to protect their business, while at the same time executing plans to maintain and further achieve a path of growth." ■

"CIOs are increasingly charged with demonstrating business value rather than just making the technology work"

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► Permanent IT job placements continue to rise

► IT skills shortage a global issue says recruitment firm Hays

NETWORK HARDWARE

Football Association's technology proves great advert for the IT game

FA IT director Rob Ray tells **Kathleen Hall** about the role of technology in sports coaching and an intranet of two halves



Technology is a new addition to the 139-year-old institution of the Football Association, says Rob Ray, the FA's group director of digital and IT. "There wasn't much to speak of over 10 years ago," he says.

But over the past decade, the organisation's websites and IT systems have evolved rapidly. As the governing body of football in England, the FA has a centre and associated website for each of the country's counties. The IT challenge for the Football Association lies in the breadth of what it now covers as an organisation.

"The technology function is significant, we support 1,800 IT users in 60 locations," says Ray, who joined the FA in May 2010, having worked as a business and technology executive for 20 years.

Key IT challenges include consolidating the core services to football, including the websites; and the soon-to-be-opened £100m development of St George's Park in Burton-upon-Trent, which will offer state-of-the-art training and coaching facilities.

St George's Park will become the FA's second major centre after Wembley, where operations are currently housed. The site will cover 330 acres with 12 football pitches surrounded by video technology.

It will be the base for England's football teams and coaching and development teams. As well as a football training centre, the FA hopes it will be used by other national and international sports professionals.

Two internet pipes will go into the site, one direct from Wembley, the



St George's Park under construction: When work is complete, the FA's Burton-upon-Trent site will offer state-of-the-art training and coaching facilities

other for the rest of the intranet. But as the site's network will be shared between the centre and a 228-bedroom Hilton hotel, it will need to be divided for security purposes.

Consolidating to cut costs

"This sets the agenda for my team for the next decade. We will have two sites which means we can consolidate services and share equipment and it will bring resilience to services across the country. We have to maximise what we have as we don't have the cash to spare," says Ray.

The FA hopes to take £1m out of its hosting costs through consolidation. As part of the plans, the FA signed a five-year deal with BT Business and its IP-based network services arm BT iNet, to become the organisation's main service provider.

"When looking at something like

St George's Park and what we need from a telecoms perspective, there are few people who we could go to for that."

Ray says the organisation may be looking to reduce the number of its IT partners. "The opportunity is there for BT to expand. It's in our interests to maintain competition, we don't want to have to manage too many relationships as we don't have the resources, 10 would be too many and one is too few."

Infrastructure rationalisation is the other big challenge, he says: "We have 300-plus servers, which we won't have in 10 years' time, two-thirds of those are already virtualised. We need to move to an on-demand model to scale up and down services. Something like Cisco Unified Computing and Services [UCS] helps us do that in terms of cost, footprint and flexibility.

"UCS is about having computer networks and storage in one environment and one management framework. We will gain a lot from that and look at how we expand capability and replace systems over the next five years," he says.

Ray manages an IT team of 72,

which oversees software development and web development for the organisation's different websites.

"We need to push more services online, such as affiliation, so clubs are not always having to fill out paper forms. We have to respect their needs and many are pushing us to bring it online, but others won't have resources and skills," he says.

Nearly 70% of Ray's budget is concerned with keeping the lights on. "I have committed to taking at least 10% out of that, such as cutting £1m in hosting costs over the next five years. We are looking at virtualising desktops and applications. We have a very flexible workforce and we need to be able to support all of them."

The organisation has around 90 systems which it wants to reduce to 30. "This is a general goal rather than a specific statement, we have too many systems that evolved over the last 10 years. We are modernising systems and I expect to see something in the order of a 66% reduction in the number of systems."

Examples include a content management system, payment gateways, football administration systems and CRM systems: "There are lots of little islands of systems," he says.

Reducing system expenditure will mean more money can go to where it is most needed, nurturing the country's next generation of football talent.

"Technology in coaching and sports science is at the front of everyone's mind, we can already see that in play in the US and Australia and it's becoming a major part of what do for sport in this country," he says.

"The facilities here are going to be second to none." ■

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► CIO Interview: Mittu Sridhara, global CIO, Ladbrokes

► CIO interview: Gerry Pennell, CIO, London 2012 Olympics

► CIO interview: Peter Ransom, chief information officer, Oxfam

"Technology in coaching and sports science is at the front of everyone's mind, we see it in the US and Australia"

BRYAN GLICK **LEADER**

Suppliers must be open about open standards

The Cabinet Office last week scrapped the output from a key part of its open standards consultation over an undeclared conflict of interest from a central participant.

The move came after Computer Weekly discovered the independent chairman of the first open standards public meeting was not as independent as it seemed, being paid by Microsoft to advise the software giant on that very open standards consultation.

As conflicts of interest go, it's a pretty big one, considering the extent to which Microsoft has been lobbying the government to include its own definition of open standards into Whitehall IT policy.

The issue is not the existence of the association, but the lack of disclosure about the association. It is also an example of how the relationship between government and its IT suppliers must change.

Microsoft's behind-closed-doors lobbying of the government over open standards is now a matter of record, but only as a result of leaked documents and freedom of information (Fol) requests.

The Cabinet Office has its hands tied – it was no doubt quite happy to receive an Fol to publish its correspondence with Microsoft, and if it could have done so without compromising stipulations of secrecy from Microsoft, it would probably have done so.

But it poses an obvious question: if IT suppliers are so keen to promote their idea of open standards, why not do so in the open?

Shouldn't Microsoft, Oracle, SAP, IBM, HP and every other supplier that has contributed to the consultation publish their contribution? Why can't we see, in public, what the position of each of these suppliers is?

Transparency matters in public life and, in IT at least, the government says it is committed to that principle. That same transparency matters to every supplier to government, whether a major multinational software firm or an individual.

So we call on every supplier contributing to the open standards debate to publish their consultation response, and to be open about their views on open standards. ■

Editor's blog
computerweekly.com/editor

MARK THOMPSON **OPINION**

Open standards is about the model, not the tech



The activities of some of the large software companies, abuzz with lobbyists and patent lawyers over the ongoing UK government open standards consultation run by the Cabinet Office, are strikingly similar to those of the record industry 10 years ago as it thrashed about during the death throes of a similarly old-fashioned business model.

Desperate to turn back the clock, the record companies realised their intellectual property rights (IPR) were fused with an architecture – physical media – that no-one wanted any more. Rather than separate the two and move on, they fought an ultimately unwinnable battle to persuade us that to access their IPR, we had to continue buying CDs. The very idea already now seems arcane.

And so it is with the government's open standards consultation. Looking around some of the strands of this debate, you would think that this was about this standard or that standard, this agreement or that law. But this is entirely to miss the bigger point. As with the record industry, development and consumption of software is undergoing a historically irreversible shift to a new business and commercial model that is enabled by technology – but where technology per se is increasingly unimportant.

Those prepared to componentise and standardise their businesses win in a number of ways

The open model is starting to grow out of its traditional roots in high-tech (think Amazon's EC2, Google's Android) and R&D innovation (think crowd-sourced success stories from YouTube) and is now knocking at the door of almost everyone. As the open model grows, it is beginning to challenge the commercial viability of traditionally organised corporate functions such as finance and HR, which will appear increasingly expensive if they ignore the emerging economics of doing things using common standards.

And this is why we're having this discussion. Open standards increasingly allow a disintegration of tradi-

tionally integrated business functions and technologies into discrete components. In turn, this allows you to buy the more standard of these components more cheaply as commodities: high volume, low margin.

If government is able to move away from its traditional, department-based, siloed design and cluster similar components together, it will be able to take massive commercial advantage of its unique scale as a volume purchaser to create platforms around which suppliers of many different kinds will innovate, much more cheaply.

In an open marketplace, those who are prepared to componentise and standardise their businesses win in a number of ways over those who insist on maintaining an integrated, "bespoke" way of doing things.

First, they free themselves from long-term, monolithic outsourcing/licensing contracts involving entire functions such as finance or HR, in which innovative activity usually remains frozen within contractual service levels for the lifetime of the contract: in other words, they become more nimble and flexible.

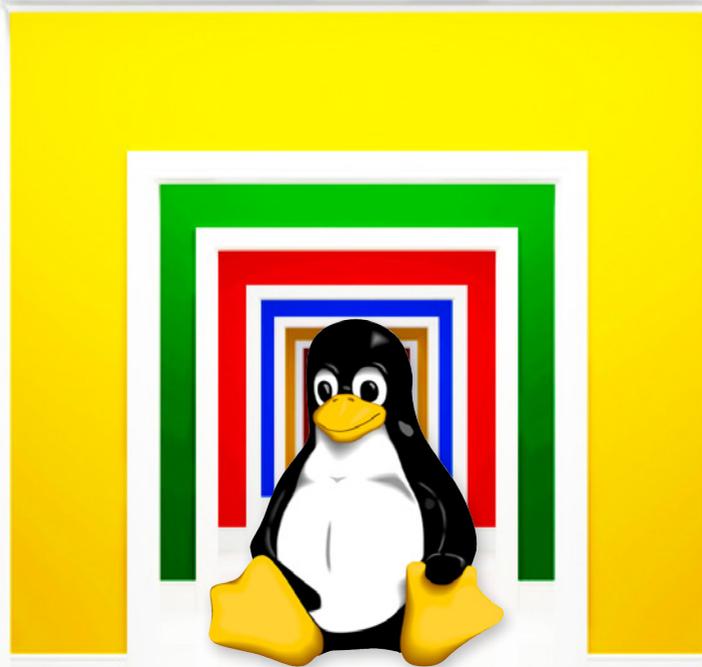
Second, by separating out those components that are standard and low-risk, and which should thus be purchased as a utility or even consumed for free, there are major savings to be realised across the organisation.

Third, and perhaps best of all, an open, component-based view of government offers unprecedented opportunities to build and deliver new services to customers, by literally reassembling or swapping out components like interoperable cassettes.

What is at stake is nothing less than the continuing viability of public services in a future era of unprecedented financial constraints; of digital-era, rather than physical-era, models of public service delivery. The Cabinet Office has embarked on an attempt to prepare this country for such a future – a fundamental transition in business model against which the current debate will one day be seen as a bad-tempered skirmish in the foothills. ■

This is an edited excerpt of the original article. [Click here to read the full version online](#)

Mark Thompson is a lecturer at Cambridge University and director of consultancy Methods



UK government's open source future

Kathleen Hall looks at the Cabinet Office's progress in realising its ambitions to move government IT to open source



part 1 of 3

While the pace of the move to open source in the public sector has been slow so far, a number of factors are converging to determine the blueprint for its future use in government IT.

One crucial area of change is the Cabinet Office's ongoing consultation to define the use of open standards in government. Phil Scott-Lewis, head of UK public sector at Red Hat, says

the consultation will be key in determining the future of open source in government. But there are concerns that the interests of open source vendors could be drowned out by the proprietary monopoly.

"On the supplier side there is still more resources in the proprietary software arena than open source, because it is still relatively new. There is a worry the response will be biased toward proprietary vendors and that's something the government needs to be careful about. Open source suppliers need to get their responses in," says Scott-Lewis.

"Open standards could mean different things to different people, but it must support open source. If stand-

ards are biased to proprietary vendors, the worst case is that open source could be locked out, and the best case is that there will be a limit to the use of open source."

Liam Maxwell, newly appointed deputy government CIO, is a vocal proponent of open source and intends to promote its use in government as a means to reduce IT expenditure. He told a conference earlier this year that open government based on open source is the future model to deliver IT.

"We took Cabinet Office minister Francis Maude to the US and showed him Hadoop, NoSQL, and PayPal. Big data will be open source, the future is to either buy as one

common government or go open source," said Maxwell.

His words follow Whitehall's intention to use open source, outlined in its ICT strategy to "create a level playing field for open source and proprietary software."

The government's ICT security arm CIESG recently stated there was no more risk in using open source than proprietary software.

While these moves are helping to shift perceptions about open source, key challenges remain, including: large departments changing their current buying practices; system integrators adapting to new models; and the absence of open source skills in government itself. »

“ Robin Pape, interim CIO for the Home Office and senior responsible owner for the use of open source in government, says awareness in government is improving.

“The central open source team is seeing higher levels of demand in departments for advice on open source options, attendance at awareness events and the number of external seminar and conference events which have been organised with government involvement or centred around the government market in particular,” says Pape.

Software investment decisions are now subject to wider accountability against the aims of the government's ICT strategy, including alignment with the open source level playing field policy, he says.

“Spending control processes are already having an effect by requiring projects to clearly articulate their approach towards the policy and particularly the consideration given to the use of open source solutions in options analysis,” says Pape.

“We intend to collect data on the number of software procurements, the proportion that align with the policy and the number of open source solutions implemented. We have developed an Open Source Policy Maturity Model, which is now being completed by all central departments.”

Cost savings

Although open source uptake in central government remains slow progress is being made in certain areas of the public sector – with the cost benefits acting as a major imperative for cash-strapped councils.

Anne Kearsley, ICT deployment manager at Oxfordshire County Council, recently opted for an open source content management system (CMS) over proprietary software for this reason.

“Initially we were on an IBM platform for web content management, there were benefits of being on a portal but it wasn't changing as quickly as other CMSs,” says Kearsley.

“We looked at the open source equivalent so we wouldn't have to incur large licence purchase costs.”

The council eventually opted for Drupal's CMS product.

“The community support that comes with the platform was an entirely different way from working with vendors,” she says.

The move involved an investment in staff training in web development on Java, with the council releasing its new site in September 2011.

Following the roll-out, the site maintained its three star website rating from the society of information managers, Socitm.

Proprietary lobby wins open standards showdown

Software patent heavyweights piled into the first public meeting of the Cabinet Office consultation on open standards on 4 April, conquering the meeting ballot with a resounding call to scrap the government's policy on open standards, writes Mark Ballard.

Open source and open standards campaigners complained they hadn't been invited to the round table event, the proceedings of which Cabinet Office will use to decide the fate of its beleaguered open standards policy.

Government supporters felt a growing sense of urgency over the consultation. Scattered and underfunded, they looked incapable of standing up to the big business interests that induced the consultation with backroom lobbying and have stepped forward now the debate has been brought into the open.

Computer Weekly understands Cabinet Office officials regretted they hadn't got the meeting call out to a wider audience. Open standards supporters who attended complained it was stacked with opponents who easily dominated a meeting motion against the government's open standards policy.

Linda Humphries, Cabinet Office open standards official, said in a blogged report of the meeting: “The consensus was that the proposed policy would be detrimental to competition and innovation.”

Graham Taylor, chief executive of Open Forum Europe, which has worked closely with Cabinet Office IT policy makers, said he was disappointed the meeting hadn't represented the full spectrum of opinion.

Malcolm Newbury, consultant director at Guildfoss, said: “It was me and Graham against the rest. The patent lawyers had the most to say and they definitely wanted to include royalties on standards. They don't want the government to maintain its current position.”

Heavyweights at the meeting included Steve Mutkoski, Microsoft's global head of standards, who flew in from Seattle for the meeting. He was backed in debate by patent lawyers and experts from telecoms industry bodies that hold many of the patents being wielded against government policy.

Matthew Heim, senior director and legal counsel for \$16bn US telecoms corporation Qualcomm, was present. As was Timothy Cowen, partner with Sidley Austin LLP, former general counsel for BT and founder of the Microsoft-backed Open Computing Alliance.

Behind them was Richard Kemp, senior partner at Kemp Little LLP, the global top 10 ranked lawyer who represents numerous telecoms firms; Keith Mallinson, founder of WiseHarbor, a telecoms industry consultant; and Harshad Karadbhajne, a paralegal patent expert with Innovate Legal.

Some commentators held that the debate swung wide of the truth as heavyweights complained government policy would exclude the patented software standards

supported by their preferred software licence, known as FRAND (fair, reasonable and non-discriminatory).

Government policy, withdrawn under organised pressure from the patent lobby last year, had however not excluded FRAND. It had proposed giving preference to royalty-free software standards in government systems, but conceded FRAND standards might be used when there was no alternative.

That is the matter now in consultation. The patent lobby swiped the initiative with arguments that will feed those who accused it of using misinformation to win similar debates in other places, notably Brussels, where a significant huddle of the heavyweights cut their teeth.

If they failed to expose genuine flaws in government policy, they at least focused attention on the points where government justification has appeared weakest. Cabinet Office's proposal for a mandatory list of open standards was unfair, they argued, because it would forbid standards encumbered with patents. This was however the whole point of the open standards policy, notwithstanding that it had, again, conceded patent-encumbered standards would be tolerated where no open standards were available.

These are the arguments with which the patent lobby induced government to withdraw its open standards policy last year and put it to consultation.

Open source campaigners said they had been left out. Gerry Gavigan, chairman of the Open Standards Consortium, complained the meeting had been held without his knowledge. Linda Humphries had shortly beforehand attended a British Computer Society meeting, where Gavigan delivered a talk about Humphries' policy consultation and had locked antlers with Microsoft's Mutkoski. But Humphries had not brought the Cabinet Office hearing to the attention of those at the BCS event, just days before.

Richard Melville, a member of the BCS Open Source specialist group, said: “No-one seemed to know about the meeting at all.”

Simon Phipps, former head of open source at Sun Microsystems, said he regretted missing the meeting. He said: “I hear that the Cabinet Office hasn't had much input from open source interests and is being lobbied extremely heavily by the forces of monopoly.”

Other people at the meeting included Peter Brown, secretary to the board of standards body Oasis, who argued in favour of patent-encumbered standards. Also attendant were Ajit Jaokar, founder of research company Futuretext, a telecoms expert with a self-professed leaning for open systems; Dr Andrew Hopkirk, an independent consultant, formerly of the National Computing Centre; and Aingaran Pillai, open source software engineer and founder of Zaizi, an Alfresco systems integrator.

The equivalent cost of a proprietary CMS product would be up to £80,000 with an additional 25% yearly licence cost, she says. Under Drupal's model, the council only pays for its support in training staff. She says the council has been working with Drupal's module co-ordinators to enable the next release to work off its Microsoft directory back end.

The council has also invested in Talend's Data Integration Suite,

which involves open source platforms for developers to use. All the code is open source but some of the scheduling features are licensable, she says. The tool connects with the council's SAP software, and comes with application programming interfaces (APIs).

“Formerly we had another product which had a licensing model twice the price of Talend's. We now run 65 data jobs on that, including our obli-

gations to publish all expenditure over £500,” says Kearsley.

“We will be looking to open source as each opportunity arises, and we will look at the whole market place. Price will be one of our requirements and that may be an advantage for open source products. We will soon be looking for an EDRMS [electronic document and records management system] platform and we'll look at the whole of the market place to pro- »

“vide that solution.

“Initially open source was met with caution, but having done evaluation and seeing the broad user base, and strong community support for development of key modules, we would look for a similar solution if we were looking for another product.

“But we wouldn't just go down that road simply because it seems like a good idea – if we didn't see a strong open source solution, then we'd go with a vendor.”

No real change

But Mark Taylor, CEO of small open source company Sirius, who has worked closely with the public sector, says progress has been woeful.

“The overview in my experience is there is no real change. After two years of the coalition government, I'm disappointed with the progress. It is still being led by individuals and we do work with some terrific people in the public sector,” he says.

“If there is any positive change, it's that people trying to promote open source are finding it slightly easier, but I've seen no evidence in a centrally led shift.”

Taylor believes the government can't afford to wait for civil servants to come round to open source.

“When I look at the private sector environment, we work with some really large companies that are using open source. Individuals and organisations change when the perceived benefits outweigh the pain in moving to open source,” says Taylor.

“For whatever reason, the incentives appear to remain with old ways of working in the public sector.”

Vendor lock-in

“Without naming names, a lot has been made of renegotiations with existing providers. Clearly the perception is that staying with the incumbents and getting a discount is of more benefit than a sea change,” says Taylor.

“That's something I saw in the previous government, which used open source as a negotiating tool with existing vendors.

“They're not really taking seriously the idea of a sea change. Comparatively we are seeing massive shifts in private sector organisations.”

Taylor says Sirius is doing open source work with system integrators, which means it will happen in the public sector via an indirect route.

“They are going to get the trickle down effects, but not the full undiluted benefits. And that is a huge shame,” says Taylor.

He believes just a couple of departments account for most of the government's moves to open source to date,



“Clearly the perception is that staying with the incumbents and getting a discount is of more benefit than a change”

Mark Taylor,
Former government SME panel chairman

including the Ministry of Defence. The Met Office is progressing toward an open source model, having recently installed hundreds of Linux servers, he says.

But Red Hat's Scott-Lewis, believes things are moving in the right direction: “There is evidence that it is getting traction but there is still a lot of work to be done.

“More people understand what open source is, and that it is able to support enterprises and mission critical systems. The perception that it is somehow not up to the task is changing. Cabinet Office and open source leads in the Home Office are doing a lot to dispel that myth.”

The procurement department needs a better understanding of how to purchase open source and what it means in commercial terms: that the immediate cost is much less expensive and there is no licence fee.

But the most important thing is that savings are achieved through avoiding vendor lock-in, says Scott-Lewis. Government has suffered badly from being locked into proprietary software when something in the user profile changes. With open source you don't get hit by those problems as much, and you don't get hit by additional licence fees.

Where there are greenfield require-

ments are the most obvious times to move to open source, he says.

“Around 80% of government IT is about keeping the lights on and 75% of that is based on proprietary software. So those vendors are going to be around for a long time, because government can't throw production systems out and are locked in.”

The other opportunity for government to move to open source is through hardware refreshes, which negate the disruption of moving from proprietary systems to open source.

“Where there is a case, government should consider open source. There are opportunities – but we need to look out for them,” says Scott-Lewis

“Our government business is significant, it's at a greater rate than the overall Red Hat growth, which is indicative of the fact there is serious take-up. We'd like to think this is an area of exponential growth. I think austerity is really causing people to look at open source seriously.”

Open source is already present in central government, with Apache and Red Hat in use in machine rooms and NoSQL databases in the security community, say government sources.

As departments buy more cloud products, open source economies of scale will increase in datacentres. At present, desktop offerings remain

limited to the Libreoffice package used by the Government Digital Service. But government stands to save the most by procuring open source products directly where it can, rather than through third-party suppliers.

Even a pragmatic approach of piecemeal open source migration will require departments to focus on a vision of open source, the right skills and understanding from procurement teams.

Once the government has collected and published its open source data, its intentions can be objectively measured. In the meantime, the open standards consultation period – which ends in May – will be crucial to laying out the groundwork for departmental use of open source in the future. ■

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NETWORKING

Preparing your network for the cloud

Companies must have enough affordable and reliable bandwidth to serve their users' needs, says **Antony Savvas**

The network is the weakest link in cloud computing because, without network access, staff are unable to connect to databases, e-mail or other applications.

While the cloud can store company data and deliver applications without the overheads of dedicated in-house servers and other hardware, the third party hosting the data or applications is not usually responsible for the network links from the customer to its facilities.

Companies must plan how they connect their corporate networks to third-party cloud providers to ensure they have enough affordable and reliable bandwidth to serve their users' needs.

They must consider cost, service-level agreements, security, network back-up/fail-over to the cloud provider, network management and any specialist "network to the cloud" service offerings on the market. The Cisco Cloud Index predicts that more than half of computing workloads in datacentres will be cloud-based by 2014. The index also predicts global cloud traffic will grow by more than 12 times by 2015, to a mammoth 1.6 zettabytes per year.

Understanding traffic patterns

Dr Graham Oakes is a consultant and author of *Project Reviews, Assurance and Governance*. Over the past 20 years he has worked on IT and networking projects for the likes of Sony Computer Entertainment, Vodafone, the Open University, Oxfam and the Council of Europe. He says: "Moving applications into the cloud clearly has an impact on network utilisation. But before buying more bandwidth, you have to do a couple of other things."

Oakes urges organisations to understand the traffic patterns associated with each application. Some applications are "surprisingly frugal" on the network, he says, while some are "surprisingly chatty". Making decisions based on data, not assumptions, is the key.

He recommends network managers keep track of data latency, or delay. Often it is not the amount of data being transferred that matters, it is the amount of time users have to wait while applications render web pages or are fully loaded onto desktops. High latency means data packets must rely on multiple round trip journeys across many network portions that make up an enterprise's cloud operating environment.

Oakes says good wide area network (WAN) optimisation between the cloud facility and the corporate network is key to cloud deployments. He urges efficient caching and protocol optimisation, for instance, as being established ways to improve both latency and bandwidth performance.

James Wright, of the infrastructure consulting group at Accenture, says: "Until you have flexibility at the infrastructure level, including local area networks (LANs) and WANs, you will struggle to realise the benefits of shifting parts of your operations to the cloud. Put simply, it can very quickly become impractical, expensive and complicated, not to mention inoperable, to proceed if you don't get these areas of the cloud project right."

Wright says large organisations should consider a multiprotocol label



switching (MPLS) network connection to link their corporate network to an external cloud provider. According to Wright, MPLS goes a long way to making sure the right people get access to the right applications at the right time, effectively addressing security, bandwidth performance, latency and availability requirements.

"This is why implementing voice over MPLS is a great entry point for the corporate cloud. Most organisations give all their people a [IP-based] desk phone which sits alongside their workplace applications. So once that voice is in the cloud, the CIO has confidence, from a network access perspective, that connectivity is robust."

Getting WAN right

One of Europe's oldest law firms, Thomson Snell & Passmore, is a good example of an organisation getting its WAN right in preparation for moving into the cloud. The firm recently optimised its IT infrastructure with Silver Peak's WAN optimisation technology to migrate quickly and efficiently to the cloud.

Thomson Snell & Passmore simplified its network infrastructure in its hosted datacentre, enabling it to reduce network traffic by 45% and take full advantage of the cost and organisational benefits of its cloud infrastructure. David Bennett, head of information systems at the firm, says: "As we moved all our applications into the cloud it became all the more imperative that our underlying network infrastructure was optimised to support the increased traffic demand."

"We can now take full advantage of our cloud infrastructure without having to invest in costly additional bandwidth or extra WAN capacity."

In addition, says Bennett, the firm was up and running in the cloud weeks ahead of schedule, which saved significant time and money.

Value Retail, a company that specialises in the development and operation of luxury outlet retail villages, of which it has nine in key European tourism markets, had its own network obstacles to overcome when it moved to the cloud, including ones related to timelines.

Its online presence is important to the business to promote existing retail villages and drive further growth. The company is currently using cloud hosting provider FireHost to manage all 17 of its websites, and is also using FireHost's Secure Cloud infrastructure-as-a-service (IaaS) model to supply infrastructure in the cloud.

Shazad Awan, digital development manager at Value Retail, says: "Although one of the providers we looked at had a satisfactory approach to support, we were given a quote of eight weeks to switch everything over, which didn't fill me with confidence. We'd also have to host everything on dedicated hardware."

Awan claims many hosting companies "just didn't seem to be set up for the cloud environment we required". In contrast, says Awan, the current provider told the firm it could move over to its cloud environment in less than a week.

"Another key advantage with our current provider is that websites are constantly monitored for security threats and malicious activity."

"For example, if a denial of service attack is detected, traffic is automatically offloaded, without causing downtime."

This means that customers aren't put at risk from security threats and don't experience any disruption when they visit Value Retail sites, says Awan. ■

Networks need to be tweaked

Whether it's timelines, security, cost, bandwidth or network protocols and performance to consider, Steve Salmon, principal adviser in KPMG's CIO advisory practice, says network administrators must tweak their networks to prepare for the cloud. "Once data reaches the customer network from the cloud, there is work to be done by the network administrators to ensure that the information reaches the users in time to provide a rich or enhanced experience."

He says the key to achieving this is reducing any latency in the network, which can be done by revisiting the network design to reduce bottlenecks and removing unnecessary switching or firewall infrastructures.

Salmon says the uptake of cloud has seen the rise of WAN acceleration services, where traffic can be prioritised, encrypted and sped through branch networks of the customer's distributed IT environments.

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BUSINESS INTELLIGENCE SOFTWARE

Predictive analytics tapped to cut costs in oil and gas sector

Using predictive analytics tools, equipment can be replaced based on its condition and not according to a manufacturer's timetable, says **Lindsay Clark**

In January, UK-based market research firm GlobalData estimated that capital expenditure in the oil and gas industry would increase by 13% during 2012 to reach \$1.03 trillion globally (£650 billion at current exchange rates).

As well as being a sign of the growing confidence about business conditions within the oil and gas sector, that level of spending demonstrates the scale of opportunity for using predictive analytics software to help extract maximum value from the high capital costs that mark out the industry.

Avoiding unplanned downtime

Warren Wilson, the US-based leader of analyst firm Ovum's energy and sustainability technology team, says avoiding unplanned downtime is the main driver for the adoption of predictive analytics by oil and gas companies for asset maintenance uses. "It's an extremely capital-intensive industry," Wilson says. "The kinds of problems that we're talking about have huge financial effects."

Many oil and gas equipment manufacturers and specialist services firms, including suppliers such as SKF, Rovsing Dynamics and General Electric, bundle analytics software as part of their product offerings. From their own laboratory data, the suppliers can build models to help predict component failure, explains Paul Wheelhouse, a lecturer at Manchester University and director of Red Wheel Solutions, an asset management and maintenance consultancy. Input data from sensors measuring physical characteristics, such as vibration, temperature or the condition of lubricants, is compared with the model to assess the likelihood of failure of the equipment being monitored.

"You need to look at the failure modes that you want to cover [and] put in place the parameters to see if that failure mode is taking place," Wheelhouse says.

With the help of the predictive analytics tools, equipment can be replaced based on its actual condition and not according to a timetable

set out by the manufacturer, potentially saving on replacement costs and eliminating unplanned downtime or catastrophic failure – for example, when the software flags components that need replacing ahead of schedule.

Prediction software

Canada-based oil and gas company Nexen develops energy resources in offshore oil fields in the UK North

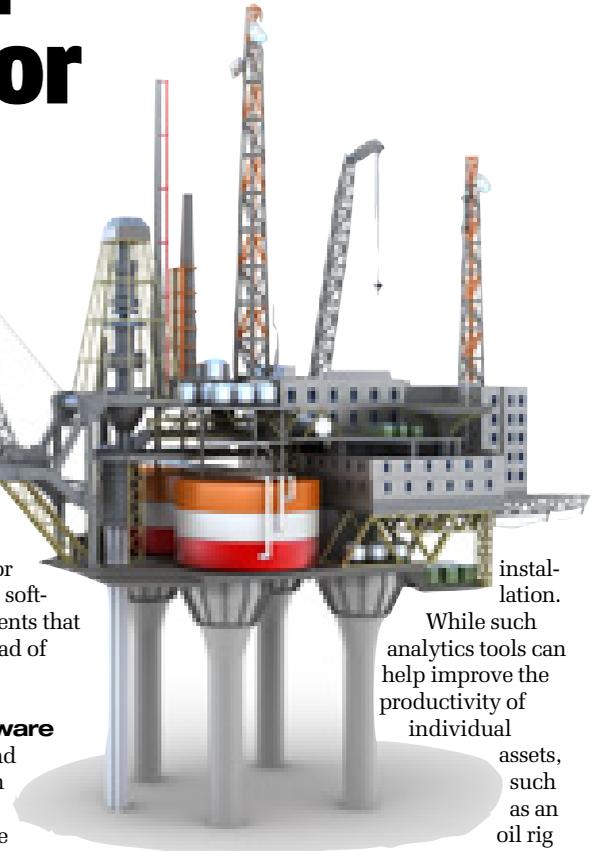
Sea, the Atlantic Ocean off the coast of western Africa and the Gulf of Mexico. It also drills for shale gas and processes "oil sands" in western Canada.

From a base in Aberdeen, Scotland, Marjorie Chamberlain, a reliability specialist at Nexen, uses analytics software to help predict when equipment needs replacing or cleaning, as an alternative to relying on a time-based maintenance schedule.

"With time-based maintenance, you might change a seal on a pump every two or three years so that it would not fail," Chamberlain says. "Instead, you can employ predictive techniques [for] condition monitoring to see when that starts to degrade, and then you can change it out so that you're not just pulling it apart for the sake of it."

Unnecessary maintenance not only adds extra cost to the business, it also can lead to equipment problems from introducing contaminants to the system or from parts being re-assembled incorrectly, she says.

The predictive analytics software that Nexen uses was developed by SKF, a provider of bearings and seals to manufacturers that supply the oil and gas industry. SKF offers the @ptitude product as part of a service package and will either host the software and do analysis work for customers or license it for on-premises



installation. While such analytics tools can help improve the productivity of individual

assets, such as an oil rig or refinery,

users implementing the technology often fail to take a company-wide view, says Duncan Slater, a manager at Accenture's information management services unit.

"However, what [Accenture is] starting to see is more of an enterprise way of thinking about this, an intention to exploit the data which large organisations have at their disposal. There is an intention to make this more systematic, to start to deploy analytics in a more coherent, cohesive way across all of the assets," he says.

When it's done properly, Slater adds, "predictive asset maintenance is a shining example of how looking more closely at the data you have got at your disposal can bring significant value at an enterprise level". ■

Minimising environmental damage

Statoil, a Norway-based oil and gas company, is also moving to deploy streaming and predictive analytics software. But it has a more environmentally minded application in the works for the technology.

Statoil has begun a three-year project with IBM, oil and gas engineering services provider Kongsberg Group and risk management company Det Norske Veritas to use analytics tools to minimise the environmental impact of drilling and exploration.

The project will result in a real-time monitoring system designed to capture, process and analyse large amounts of physical, biological and chemical data generated by sensors and cameras installed around one of Statoil's offshore drilling facilities, with a goal of making it easier for the company to predict, detect and respond to operational issues that could cause environmental problems.

Vidar Hepsø, principal researcher and project manager for environmental monitoring at Statoil, says officials think the monitoring and analytics programme could contribute to the company winning consent from regulatory authorities for proposed new drilling operations. "We firmly believe that this will increasingly become a way of doing business in the oil and gas industry," he says. "Those oil companies that are the first to take these kinds of measure into operations will be those that get the best acreage, for instance, in the Arctic waters."

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