

ComputerWeekly

How the credit crunch changed the face of banking IT

FIVE YEARS AFTER THE RESCUE OF NORTHERN ROCK, THE RBS FIASCO SHOWS INADEQUACIES REMAIN IN BANKING IT **PAGE 4**

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VIDEO



> IT in healthcare: Keep taking the tablets

The NHS is using IT to drive greater efficiency and improve reporting. Technological changes include replacing paper records with electronic health records and using tablets on wards instead of “computers on wheels”.

VIDEO



> BBC technology and the Olympics

The BBC has been widely praised for its Olympics coverage. The broadcaster's chief technology officer John Linwood talked to Computer Weekly before the Games about the IT challenges he expected to face.



> Women in IT: Sue Black

Academic and campaigner Sue Black talks about how technology is important for everyone, not just “geeks” and her work at the <GoTo> Foundation, set up to promote technology as a vital part of society.

PREMIUM CONTENT

> Research: Network purchasing intentions in 2012

Over 450 European network professionals took part in this in-depth research into the networking trends and spending priorities for organisations in 2012. Nearly 60% of respondents said their spending on networking products and services will increase. This research identifies the drivers for network spending in 2012 and the most popular IT suppliers used by European organisations.

> Virtual desktops in the enterprise

This buyer's guide to virtual desktops investigates the latency and bandwidth issues that arise with thin-client access, takes a look at cloud economics in the datacentre, reviews Citrix's XenDesktop 5 desktop virtualisation application and sees how virtualisation and business process optimisation work at the Co-operative.

> Special report on Microsoft

The company founded by Bill Gates and Paul Allen in 1975 has become one of the most successful software businesses in the history of computing. This special eight-page report from Computer Weekly analyses the challenges facing Microsoft, its financial performance, the services it offers, its place in the IT market and its future strategy. Packed with graphs and diagrams, the report is essential reading for any organisation working with, or thinking of working with Microsoft.

OPINION

> How cloud suppliers can sell to financial services companies

Clouds move slowly in the financial services sector. While most banks are looking at the cloud in some form or another, these are generally limited to small-scale private clouds or micro-projects. A large-scale migration of a core banking or trading system currently seems a long way off, but it needn't be.

> Six questions to ask about security and virtualisation

Virtualisation and other next-generation technologies are the new norm for traditional and cloud-based applications, but they expand the role of the network and require some rethinking on network security. The choices affect operational costs and uptime, but also the data passed over that network and the organisation's reputation.

BLOGS



> Caroline Baldwin: Review of Logitech's BCC950 ConferenceCam

For the flexible worker or in-office conferences, computer accessory giant Logitech has produced a ConferenceCam suited for small group video conferencing with the added bonus of a full HD camera. Setting up the device was generally straight forward, attach the camera, plug into a power socket and your USB port and away you go - no device software needed.



> Adrian Bridgwater: How “healthy” are your mobile application downloads?

Are mobile developers going to have to become more aware of the system resources their applications consume, and therefore feel compelled to program more efficiently? This is the question that arises in light of the increasing number of “system monitoring” tools being offered (generally free of charge) from App Stores such as BlackBerry App World, Google Play and the Apple App Store.



> Jennifer Scott: Acer needs to stop moaning and get back to developing

Acer has become the first PC manufacturer to square up to Microsoft about the launch of its Surface tablet. The company's CEO, JT Wang, warned Microsoft to “think it over” when it came to its entrance into the hardware market and claimed it would create “a negative impact for the ecosystem” if the software giant muddies the waters of the hardware vendor pond.



> Karl Flinders: Is the cloud driving IT outsourcing or frosting outlook?

Cloud computing is an increasingly significant segment of the IT outsourcing sector but has the tipping point really been reached or are we one large data breach away from an about-turn? According to Gartner's latest figures for 2012, cloud will be the fastest growing segment in a global market worth over \$250bn. This is 2.1% higher than the same period last year.

IDENTITY & ACCESS MANAGEMENT

Microsoft restricts RSA tokens with 1024-bit encryption

Microsoft is hardening security certificates as part of this month's Patch Tuesday update, which includes nine fixes. In the Microsoft TechNet security blog, Yunsun Wee, director of Microsoft Trustworthy Computing wrote: "Today we are announcing an update to Windows that restricts the use of certificates with RSA keys less than 1,024 bits in length."

IT OPERATIONS MANAGEMENT

Macmillan runs roadshows to tackle user resistance

Cancer charity Macmillan had to overcome user resistance when it upgraded its IT service management (ITSM) technology, after the organisation outgrew its previous technology and processes. Macmillan eventually overcame user resistance with a number of roadshows to highlight the benefits of the new technology.

NETWORK HARDWARE

Cisco boosts sales and profit in fiscal fourth quarter of 2012

Cisco has announced its fourth quarter and fiscal year results for 2012, showing a rise in revenues and profit. Sales for the quarter rose a modest 4% year-on-year to reach \$11.7bn, but over the entire year Cisco recorded a 7% increase from 2011 to hit \$46.1bn. Profit was \$1.8bn for the fourth quarter – up 56% from the same quarter in 2011, but down from \$2.2bn in the previous three months – and \$8bn for the year, a rise of 24% year-on-year.

UNIFIED COMMUNICATIONS

Car dealer improves customer interaction with web chat

Volkswagen dealer Parkway Motor Group has adapted the technology it uses to keep in contact with customers. The car dealership reacted to the changing demands of consumers who prefer e-mail and web chat to telephone calls. The software queues contacts regardless of the channel they come through and provides staff with the information they need to deal with them.

STORAGE HARDWARE

IBM acquires flash storage specialist Texas Memory Systems

IBM has announced it is buying Texas Memory Systems (TMS) for an undisclosed sum. TMS was founded in 1978 and has become one of the most prolific suppliers in the flash storage market, specialising in its RamSan range of rack-mounted SSDs and PCIe cards. IBM intends to integrate TMS's technology into its own server and storage ranges.



A-level ICT numbers drop 10%

The number of students sitting computing and ICT A-level exams fell in 2012.

Figures from the Joint Council for Qualifications revealed a near 10% decrease in students sitting the ICT exam for 2012.

This year, 872 fewer students opted to take the ICT exam, making the total number 11,060, compared with last year's figure of 11,960.

2012 was not the first year of decline in students sitting the ICT exam, but the drop between 2010 and 2011 was much smaller, with only 226 down in 2011 from the 2010 figure of 12,186.

Gayna Hart, e-Skills board member and managing director of Quicksilver, questioned how the government's vision of the UK as a technology centre for Europe could be realised with such a reduction in ICT A-level candidates.

"With a 7% drop in candidates since last year and the percentage of the top A* grades remaining the same, it's clear that ICT is taking a back seat in our schools and colleges," Hart said.

Despite the drop in ICT students, the number of students taking science, technology, engineering and mathematics subjects rose slightly.

EDUCATION & TRAINING

Cyber security boot camp to educate potential cyber spooks

A group of about 30 young people will attend a cyber security residential training course next month, set up by the organisations responsible for the Cyber Security Challenge. The course is receiving input and support from the Metropolitan Police Central E-crime Unit (PCEU), as well as suppliers HP and KPMG. It will run for five days at Lancaster University. "It will act as a proof of concept for a series of regional camps that the Challenge is looking to roll out across the UK to develop talent in the younger generation," said the organisers.

E-COMMERCE TECHNOLOGY

ONS reveals 16% of UK adults have never used the internet

Figures from the Office of National Statistics (ONS) show that 7.82 million adults in the UK – 16% of the total adult population – have never used the internet. The ONS statistics for the second quarter of 2012 show a 10% decline in the number of adults who have not used the internet. Almost all 16 to 24-year-olds (99%) have used the internet but only 29% of adults aged 75 years and over have used the internet.

GOVERNMENT & PUBLIC SECTOR

Government sees dramatic drop in co-ordination bid providers

Whitehall departments leading moves to break up large system integrator contracts into smaller components have seen a dramatic drop-off in suppliers bidding to co-ordinate the multiple providers.

OUTSOURCING

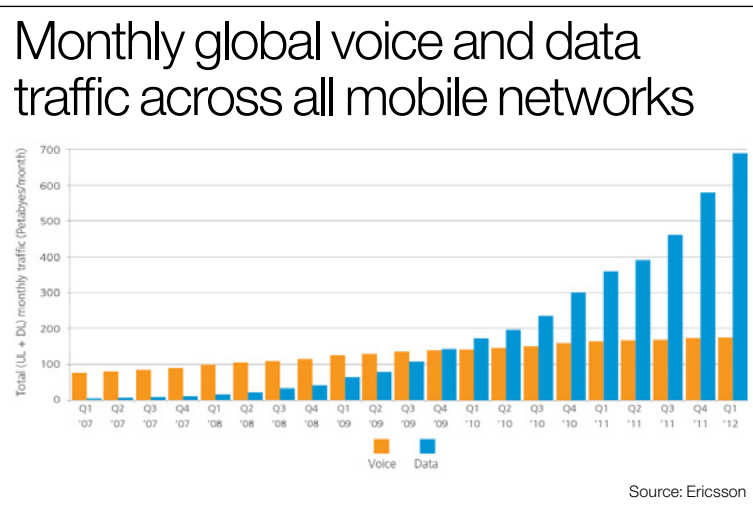
BP standardises finance and accounting in Accenture deal

BP has outsourced finance and accounting services to Accenture in a deal to standardise processes and harness analytics. Accenture will work alongside BP's in-house and captive centres. The value of the multi-year agreement was not disclosed.

PC HARDWARE

Lenovo reports record Q3 results despite PC slowdown

Lenovo reported record sales of \$8.4bn during its fiscal third quarter of 2012, an increase of 44% year-over-year, in its latest results. Lenovo said it experienced increased demand in commercial PC opportunities across Western Europe and North America, which resulted in year-over-year growth of 67% in PC shipments in mature markets during the third quarter, compared with an overall industry decline of 8% in mature markets.



LONDON 2012 OLYMPIC GAMES



"The technology for the Games required the organising committee and all our partners to work together as one team"

Gerry Pennell, London 2012 CIO

FINANCIAL SERVICES

How the credit crunch changed the face of IT in financial services firms

A report from industry body Intellect has highlighted the inadequacies in banking IT infrastructure, writes **Karl Flinders**

Five years ago, early signs of trouble brewing in the financial sector emerged when Northern Rock was rescued by the government after it ran out of money. A year later, investment banking giant Lehman Brothers crashed into administration. The news sent the City into meltdown and took thousands of IT jobs with it.

The credit crunch had already caused problems for US mortgage lenders Fannie Mae and Freddie Mac, which had been bailed out by the US government a week earlier.

IT workforces were decimated as banks fell over or cut costs to avoid collapse. Substantial regulatory overhauls took place as merger and acquisition activity went into overdrive.

So four years on from Lehman's collapse, what has changed in financial services IT?

According to IT industry body Intellect, very little. In its report, *Biting the Bullet*, Intellect said the UK finance sector's IT infrastructure is no longer fit for purpose and risks damaging the economy with glitches such as the recent RBS software outage.

"Banks are willing to spend money on cutting-edge technology for high-frequency trading or reducing the time to process a transaction in the capital markets – where every cut millisecond means more profit – but not on modernising the infrastructure that allows them to deliver better customer services, act as a catalyst for the economy or allow regulators to perform their roles," said Intellect.

Intellect said banks are currently spending 90% of IT budgets on managing legacy systems. Earlier this year, analyst firm JWG Group said



Intellect: "Banks are willing to spend money on cutting-edge technology for trading but not on modernising the infrastructure to deliver better customer services"

decades of ad hoc technology investment, combined with merger and acquisition activity, had left financial institutions with disconnected silos of data and duplicative processes.

Intellect called on the Financial Policy Committee and the forthcoming Prudential Regulatory Authority to take the lead on this issue.

Ring-fencing merchant arms

Perhaps the most significant change for IT departments is the plan to separate the retail and investment arms of the big banks.

Ring-fencing could protect the retail arms from problems in the high-risk investment sector. The government is forcing banks to separate investment and retail arms by 2015.

This decision followed the Independent Banking Commission (IBC) recommendations that banks separate retail and investment operations. As well as individual systems requiring separation, entire IT operations and outsourcing agreements might face restructuring before the recommendations come into force.

Integrating IT infrastructures

The chaos in the financial sector led to a wave of mergers, acquisitions and rescues. This meant the wholesale integration of IT infrastructures.

Probably the biggest of all integration challenges is Lloyds TSB's acquisition of HBOS for £12.2bn.

Now known as Lloyds Banking Group, the company targeted savings of £1bn a year. IT savings will contribute to the expenditure cuts as the combined bank closes processing units and callcentres.

Off-the-shelf software

Cash-strapped banks have also changed what software they buy, moving from mainframe, customised applications, with lots of integration and people, to off-the-shelf software.

Moving to supplied software marks a significant departure in financial services, where software is traditionally highly bespoke and created in-house. Much of it is also decades old, making the migration more of a pioneering change than the label might suggest.

Nationwide is transforming into a full-service bank, implementing SAP throughout the back office and Microsoft in the front office.

The bank's £1bn technology investment has transformed the IT department from a development shop into an integrator.

New players in the sector

Another consequence of the banking crisis has been the emergence of new banks. The long-held dominance of so few over much of the market has led to support for the new banks.

These institutions are taking a different approach to IT and operations. For example, Tesco selected an off-the-shelf core banking system from Fiserv as it moved towards becoming a full-service retail bank.

Virgin Money is also undertaking an extensive IT journey as it strives to become a full-service bank, boosted by its acquisition of Northern Rock.

In 2010, another new player, Metro Bank, outsourced its entire IT infrastructure. Banks are big outsourcers but substantial in-house capabilities are traditionally retained. Metro Bank opened its first three branches in London in the summer of 2010 and plans to have over 200 branches.

IT budgets and planning

Any major changes at banks require significant IT planning because the finance sector is so reliant on IT.

According to Gartner, banks spend about 6% of their revenue on IT. This compares with the retail and wholesale sectors that spend 1.1% of revenue on IT, utilities 2.8%, industrial manufacturing 1.8% and a sector-wide average of 3.6%.

The only sector that spends a larger proportion of revenue on IT is the software and internet sector, at 7.6%. Could banks close the gap as IT's role in post-crash banking increases?

It remains to be seen whether this will prove the case, or if it will just comprise a short-term increase in budgets, followed by reduced spending on IT as banks become more efficient and standardised. ■

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▶ IT rises from the ashes of the collapse of Lehman Brothers

▶ Regulators must force banks to overhaul IT infrastructure

MEDIA & ENTERTAINMENT

Preparation key to smooth delivery of the Olympic Games, says BBC CTO

John Linwood shares with **Kathleen Hall** the secret of the corporation's seamless coverage of the event of the year

“**T**here was a moment at the end of the closing ceremony where we breathed a sigh of relief,” says BBC CTO John Linwood.

It's not surprising, given the scale of Linwood's task, having delivered 2.8 petabytes of data on the busiest day of the London 2012 Olympic Games, along with the largest online mobile streaming ever, at 12 million video requests.

But Linwood says the operational running was remarkably calm during the event.

“As with any major complex technology piece, we were closely monitoring systems all the way through. There were a couple of little hardware problems, but nothing that impacted the audience,” he says.

“We knew this was going to be the largest digital event ever. But the 37 million visits to the site – that was certainly way bigger than we had banked on. But we had the right infrastructure to cope with it.”

Viewing figures are back to normal, but the organisation hasn't been left with a lot of empty equipment.

“On the broadcast side, we rented the extra equipment for the duration of the event, as we didn't want huge warehouses of equipment we are not using,” says Linwood.

The BBC also used third-party networks to take the strain and so didn't have to buy equipment that would subsequently sit idle, he says.

“Having said that, we always over-provide capacity, for a major news story and so on. But also in case of DDoS [distributed denial of service] attacks, so we tend to have lots of bandwidth and server capacity to

“The 37 million visits to the site – that was certainly way bigger than we had banked on. But we had the right infrastructure to cope with it”

John Linwood, BBC



deal with both scenarios, so we have more than we need day-to-day.

“In terms of overall focus now, there is clearly an interesting question about having had 24 live streams and whether that should set a precedent for future live events. That is something the BBC board would have to work out in terms of policy and affordability.”

The BBC's digital future

Other ongoing projects for the BBC include the full roll-out of HD across Scotland and Northern Ireland for local services and finishing off the digital switchover in Northern Ireland in October.

The BBC is also working on cloud and virtualisation projects – with some IT chiefs saying the moves can't come quickly enough.

“We are already using the cloud for software development and testing, and sharing documents and content. We've virtualised much of the BBC Exchange servers and local radio, moving the technology out of studios into a datacentre,” says Linwood.

“But we have to tread cautiously

and cloud is not a panacea. There are issues around security and around the Patriot Act [with data hosted by US cloud companies subject to extraction by the US government].

“And of course the reliability issues we've seen around some major cloud vendors' servers tripping up. So, at the moment, I do feel we are moving at the right speed”

Digital innovation

Does he see outgoing director general Mark Thompson's recent move to head up *the New York Times* digital content as a sign the BBC has become a world leader in digital?

“We've got to be careful, because I think a lot of the BBC's success is down to its amazing content. The iPlayer is a great piece of technology but if you don't have good content it doesn't matter,” he says.

“The BBC continues to be innovative, in the way we deliver digital output we continue to be at the front of setting standards. But, having said that, there are plenty of other people doing amazingly cool stuff, too.”

Linwood doesn't believe the budg-

et cuts at the BBC have curbed the organisation's ability to innovate, but says the way it comes up with new ideas is changing.

“Innovation is happening more and more through partnerships, and the BBC has many technology partners around the world. We work with a wide range, such as major vendors IBM, Cisco and Microsoft, as well as other broadcasters such as Japanese national broadcaster NHK, using its Super Hi-Vision technology.”

All in the preparation

Now it's all over, what are the key lessons Linwood has learned from the delivery of technology during the Olympic Games?

“I think a key thing is you can never be over-prepared, by constantly doing 'what if' scenarios,” he says.

“As always with these large events, people come up with new and clever things at the last minute. But you have to say 'no', and have a change freeze. That is hard when you are surrounded by so many creative people, but the priority has to be ensuring we stay on air.” ■

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IT IN EDUCATION

Can IT investment in schools keep pace with technology advances?

Kathleen Hall investigates how budget cuts and the rise of academies could affect technology provision in education

The profound changes in the education sector promise to cast long shadows over the future of IT investment in schools, prompting the question of whether the next generation is getting access to the right technology crucial to the digital world.

The academies programme – instituted by former parliamentary under-secretary of state for schools and learners Andrew Adonis under Tony Blair’s premiership – has been greatly widened in scope and ambition by current secretary of state for education, Michael Gove.

Consequently, an increasing number of schools are opting to become academies. This model means they will no longer fall under the control of local authorities, but will be funded by central government directly.

Academies will have more freedom over budgets and greater choice in where they source IT support and procurement expertise – areas traditionally supplied by councils, which now find themselves competing with alternative service providers.

But this comes at a time of comprehensive public spending cuts, which have affected and will continue to affect school spending.

Squeezed IT budgets

Tom Paes, network manager at Tomlinscote School and Sixth Form College, said the academy model could see institutions invest less money in IT. Paes’ school is not an academy, although it is considering whether to become one. “If money is not ringfenced for IT, it could get swallowed elsewhere. IT will suffer – it already has,” he said.

Tomlinscote has already seen a decrease in IT investment as budgets are squeezed, said Paes.

Because there is little money, there is reluctance to make further investment in IT, and now the government’s Harnessing Technology grant has disappeared – a fund which saw £600m distributed to schools between 2008 and 2011 – the school is struggling to make crucial IT investments, he said.

But Janine Bryant, head of school IT systems support at Hertfordshire County Council, said there are advantages to the new system, as previous top-down programmes, where IT implementations have been imposed on some schools, have gone awry.

She said the county’s schools’ IT procurements have been minimal with the shift to the academy model, as they have always taken an autonomous approach to their technology expenditure.

“The devolved approach will result in anomalies in terms of how much schools invest in IT – which is neither right nor wrong. It will be their choice,” said Bryant.

Robert David Bell, former permanent secretary at the Department for Education, said most schools had benefited from significant IT investment over the past decade, as one of the first priorities of the Labour government was to have the National Grid for Learning (NGfL), a government-funded gateway to educational resources, on the internet.

“Most schools had the benefit of putting in place a powerful infrastructure. This has meant schools in the UK are well catered for,” he said. “But the pace of change is such that we can’t rest on our laurels. Technology bought four years ago is already out of date. The year-on-year reduction in budgets was relatively modest in 2010. We are now in the second year – when get to the fourth year we will see budgets getting tighter.”

Buying power

The principle of devolved government in education means it will be up to schools to make judgements about IT investment. The education IT industry will also have to adapt.

“A number of providers will have to change their business approach, as they will have a new market of mini



Without local authorities buying IT for schools at scale, educational institutions will need to club together in consortia

WOODAPPLE/FOTOLIA.COM

contracts, such as chains of schools,” said Bell. “That could pose an interesting issue for the industry, as it’s arguably more efficient to deal with hundreds of local authorities than thousands of schools.”

Without local authorities buying IT for schools at scale, educational institutions will need to club together in consortia.

Individual schools must be canny when it comes to systems overhead costs. “They are small fry when trying to cut a deal with providers. But sometimes schools may say although they’re not getting the best deal in financial terms, they have a flexible and responsive agreement,” he said.

Bell is broadly positive about the changes underway: “The provision of IT services will continue to be an important area in our schools. It’s not a market that is disappearing, but changing.”

Will school IT suffer?

Research by Syscap, a finance company that has 16 years’ experience in the education IT market, found overall spending on IT has dropped significantly, with one in 10 schools in England and Wales spending less than £10 per pupil per year, and 395 schools failing to invest anything at all during the past year.

Syscap chief executive Philip White said the consequence is that

children are using far better technology at home than in school. “As a citizen, parent and someone who has spent a lot of time in this sector, that is cause for concern,” he said.

But the notion that some academies might fall rapidly behind others now IT spend is no longer ringfenced is too easy a conclusion to make, he said. “For the past 14 years we’ve already seen devolved budgets in local authorities, and the demise of central control has empowered some heads to make good decisions.”

Greater autonomy over budgets is not a bad thing in itself, and could, in theory, lead to more investment in IT for certain educational institutions. But to benefit from the best discounts, schools will need to club together to increase their negotiating muscle. This will mean a substantially increased workload for schools’ governing bodies.

Schools will also need to be wary of unscrupulous suppliers taking advantage of a lack of buying expertise.

One solution could be the suggestion made by Michael Wilshaw, the chief inspector of schools, to form a national network of school commissioners to support academies that no longer benefit from the guidance of local authorities. ■

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IT LEADERSHIP

Council invests in innovative ideas

Staffordshire County Council CIO Sander Kristel talks to **Jennifer Scott** about his forward-thinking approach to IT

CW500 INTERVIEW

Sander Kristel had a varied career in both the public and private sector before taking on the role of CIO at Staffordshire County Council. From the hotel industry and banking, through to working for the Equal Opportunities Commission, he knew a challenge when he saw one and jumped at the chance of taking over IT at a council in need of rejuvenation.

That was five years ago – now the experienced CIO has implemented a lot of changes when it comes to IT, taking a forward-thinking approach to tackle age-old problems.

“At the time, Staffordshire was really in need of a consistent approach to technology and to look at it from a customer perspective,” said Kristel.

He claimed all the separate departments within the council had their own IT teams and there was little co-operation between them, which created a disjointed environment. “This also [led to] budgetary issues, where IT had an overspend, but the council didn’t know what on,” he said.

As a result, one of Kristel’s main priorities was putting a governance structure in place to stop IT departments working alone and creating separate projects without the knowledge of the central management team.

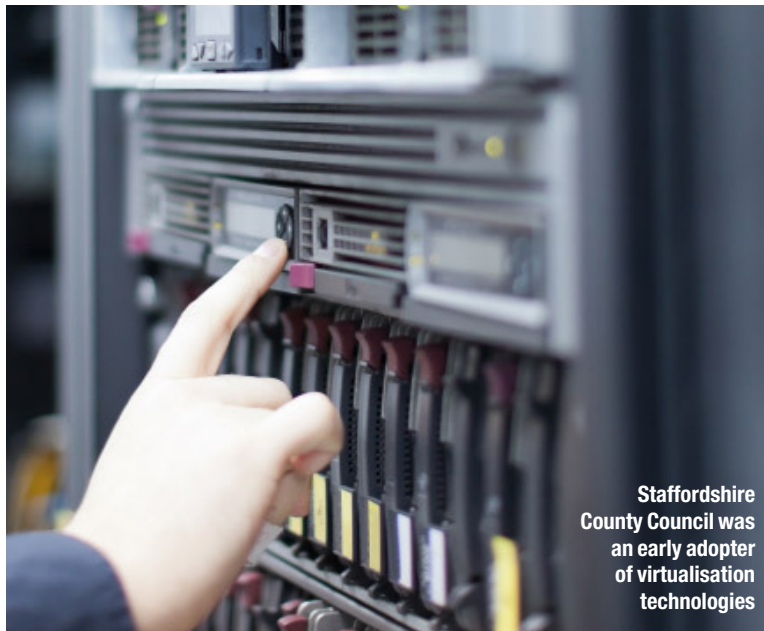
“What was most important was implementing that governance structure, and it killed off the majority of projects IT was allegedly working on,” he said.

Early virtualisation

The next task to tackle was the ageing infrastructure. It was 2007, and server virtualisation was only just beginning to sneak its way into the enterprise, let alone the public sector, but Kristel believed this was the right strategy for the council datacentres.

“At the time, it was very early days for virtualisation, but we needed the most flexible and redundant solution as big council projects need an agile server environment,” he said.

The first choice of supplier five years ago was Fujitsu, which provided Staffordshire with the blade server



Staffordshire County Council was an early adopter of virtualisation technologies

environment. However, the council is about to change it all to Cisco’s UCS portfolio.

“As with all IT buys, we looked at both cost and quality, but we also knew some of our partners were using Cisco and trusted the systems,” he said.

But it wasn’t just the datacentre that needed revamping. Kristel next looked to wave his virtualisation wand over the desktops. “The desktop environment had not been invested in for years, so we looked again to virtualisation and Citrix,” he said.

Since the roll-out began, almost 40% of PCs across the council have been exchanged for thin clients, and Kristel claimed one of the major benefits was the ability to utilise the software for flexible working methods.

“We have just opened a new headquarters in the centre of Stafford which amalgamates 17 of our previous council buildings. We now have six or seven desks for every 10 workers, so both hotdesking and home-working are encouraged,” he said.

“We are in the early days when it comes to bring-your-own-device [BYOD], but we are about to pilot a BYOD scheme for employees. We carried out a small-scale trial with iPads for senior managers, and we found a significant reduction in paperwork being printed,” said Kristel.

Although this was exciting from a

technology perspective, it meant a lot of upheaval for council employees.

“There were issues to start with for employees, as people are wary of change, but it has now been fully taken on board,” said Kristel.

Mobile applications

With the backbone of the IT in place and new methods being adopted by his employees, Kristel has now turned to even more innovative projects to improve the experience of Staffordshire’s key workers and residents.

His current passion is for mobile applications, and the first to be trialled in the region has been a resounding success.

“The app is called Patchwork,” said Kristel. “Simply put, it is a clever contact list particularly for public sector use, and it connects frontline staff working with what we would term troubled families.”

Rather than just deploying the app, Kristel and his team took an extra step by putting £125,000 of the council’s own money into the development process. Luckily, the investment has paid off, and both Kristel and the app users are really happy with its performance.

The council is now looking to create a customer-facing self-assessment application in conjunction with Coventry University.

Innovative thinking

The work Kristel has done at Staffordshire County Council is clearly innovative, and he is taking the type of chances you wouldn’t necessarily expect from a public sector organisation. But it seems Staffordshire is different from that popular misconception, and Kristel was keen to sing the praises of its staff.

“The public sector is significantly changing, but councils in particular are becoming much more forward-thinking,” he said. “Senior people within our organisation and the Lichfield Council are starting to understand the different types of business model, and are putting forward innovation. The world is changing so we have to change with it.”

So what is next on the roadmap for Kristel and Staffordshire County Council? It recently announced a partnership with Worcestershire and Shropshire, which will see the three councils work together to enable more shared services across the counties.

“ICT is involved [heavily] and we are scoping out what we can do together, such as sharing procurement, sharing systems, and the likes of the PSN [public services network],” said Kristel. “We wouldn’t look at sharing datacentres [yet], as there are a lot of quick wins we can get on with first, but we will definitely be looking at sharing datacentres in the future.”

We will be sure to check back in with Kristel to see how all his projects fair, as well as what new innovations he has up his sleeve for 2013. ■

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

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BRYAN GLICK **LEADER**

IT education needs radical change – still

Let's save some time. After this year's A-level results, read what we wrote about at the same time last year, and the year before – and probably every year for at least the previous five years.

We can regurgitate the same headlines: "IT student numbers fall again." We could almost use the same words in every story, just changing the numbers slightly.

It's beyond a joke, but the truth is that ICT and computing GCSE and A-levels are little more than a joke these days. Just 297 girls sat the computing A-level, for example. What's the point?

The curriculum for ICT and computing is so poorly perceived, IT employers pay it no attention. Hardly any companies look for recruits with those qualifications – maths, sciences, even languages are more likely to get you a job in IT.

The government at least recognised the GCSE curriculum is a waste of time, and duly scrapped it earlier this year – but hasn't replaced it, leaving a vacuum that will likely see students numbers drop even further.

Should we bother with IT education in schools? Why not just look for students who do well in science, maths or engineering and leave the IT training to employers?

Well, if IT employers still funded sufficient training, maybe we could. But lack of training remains one of the biggest skills issues facing the IT profession.

We are fed up of having to write the same story every year. Each time, the same experts bemoan the lack of progress, but nothing changes. We all know what needs to be done – IT employers need more outreach into schools; the IT profession needs to promote better role models to attract kids to a career in IT; the curriculum needs to reflect the digital skills we will need in 10 years, not those we had 10 years ago.

But it's hard to have any confidence that will happen. At the very least, let's do one thing now – recognise the current exams are a waste of time and scrap them. Perhaps that, at least, will spur employers, academics and politicians to make the radical changes IT education needs. ■

Editor's blog
computerweekly.com/editor

BRIAN BARNIER **OPINION**

440 million reasons to learn three IT risk lessons

ISTOCKPHOTO/THINKSTOCK



You might wonder when lightning will strike your IT shop, but it's easier to prevent than you might think. When lightning struck Knight Capital in the US, it hopefully was a one-time event. Yet, why has this bolt struck so many times elsewhere? To prevent a strike, leaders need to take three key lessons to heart.

On 1 August 2012, an installation problem in Knight Capital's software blasted out a gusher of erroneous stock trade orders. After trading out of all those orders, Knight suffered a pre-tax loss of about \$440m. That's an Olympic-sized loss, which happened almost as fast as a star athlete's stumble in London.

US Securities Exchange Commission chairman Mary Shapiro remarked: "Reliance on computers is a fact of life, not only in markets everywhere, but in virtually every facet of business. That doesn't mean we should not endeavour to reduce the likelihood of technology errors and limit their impact when they occur."

Endeavour how? Should we do more of the same? Recall high-profile software release errors – stock exchanges in Germany and Japan (twice), a bank in Canada (twice) and a leading wireless network. These headline-grabbing failures are just a fraction of broader IT-related business risks

Companies can change their game to better prevent incidents, enable faster business value creation, and avoid the wasted time and money that too often accompany risk management

that include investment/portfolio, programme/project and operational (operationally stable, available, protected and recoverable). What must change?

Olympic athletes change when a technique isn't working, and so must we. Companies can change their game to better prevent incidents, enable faster business value creation, and avoid the wasted time and money that too often accompany risk management.

Three lessons in managing risk

First, focus on the objective. Manage IT-related risk to business performance objectives. In team sports, it's not just about defence, it's about more safely moving on offense. This scores in sport and creates growth in the economy. Further, with focus on performance, risk management can more deeply engage the organisation, embedding in every decision and process needed to reach the objectives.

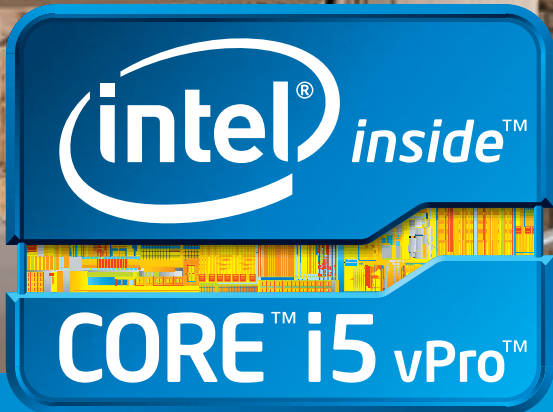
Second, learn from history. Companies caught in the frenzy of "now" ignore the methods and painful lessons of the past. For example, nearly 100 years of refined method in reducing both process and hazard risk is largely unknown in most risk management organisations. Instead, the wheel is reinvented, often drawing on post-Sarbanes-Oxley financial reporting and compliance-based approaches that structurally don't fit in changing and complex environments such as IT. That's like each year's Olympic swimmers starting with the doggy-paddle.

Third, properly frame the problem. IT is a complex and changing system. Dependencies must be understood. Typical collections of controls and compliance bandages leave companies forever shocked and rocked by the latest incident. The expectation should be that problems (malicious, natural, accidental and volume-related) will arise and plan B must be ready (if only London Mayor Boris Johnson had one of those for his zip wire act). In short, a systematic fix for a system is needed to avoid painful surprises.

In summary, leaders must shift from:

- Compliance/control-driven to performance/systems-driven risk management;
 - Reinventing the wheel to learning from history (situations/methods);
 - Conducting tick-box exercises to rigorously asking "what if?";
 - Compliance overlay activities to embedding risk awareness in daily decision-making and processes;
- To speed this shift, Isaca's Cobit 5 and risk IT guidance can provide a more systematic roadmap to avoiding gaps and focusing on risk to business objectives. ■

Brian Barnier is risk advisor with Isaca and principal analyst at ValueBridge Advisors



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2 No system can provide absolute security under all conditions. Requires an Intel Identity Protection Technology-enabled system, including a 2nd or 3rd Gen Intel Core™ processor, enabled chipset, firmware, software, and participating website. Consult your system manufacturer. Intel assumes no liability for lost or stolen data and/or systems or any resulting damages. For more information, visit <http://ipt.intel.com>.
3 Intel AES-NI requires a computer system with an AES-NI-enabled processor, as well as non-Intel software to execute the instructions in the correct sequence. AES-NI is available on select Intel Core processors. For availability, consult your system manufacturer. For more information, see <http://software.intel.com/en-us/articles/intel-advanced-encryption-standard-instructions-aes-ni>.
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Optimising IT assets

A full lifecycle management approach to hardware can help small businesses extract the greatest value from their IT purchases. **Clive Longbottom** reports



part 1 of 3

Most organisations are sitting on IT equipment that is not supporting the business optimally, yet the received wisdom is to sweat the assets to gain as much perceived lifetime value from them as possible.

This is particularly pertinent for small and medium-sized enterprises (SMEs), where the need to do more with less is an ongoing challenge as they struggle to remain competitive, and in some cases even survive, during the economic downturn.

However, IT assets have inherent value which can change significantly through each asset's lifecycle – whether through its hard resale value or its scrap value. By applying a full

IT lifecycle management (ITLM) approach to the complete IT platform, a business-optimised platform can be created – one where business value overrides the embedded concept of sweating assets.

Actively managing an IT platform enables an organisation to be flexibly and effectively supported by continuous replacement of IT assets as the balance between their business value and intrinsic residual value is managed to ensure that an optimum platform is in place at all times.

Organisations that try to sweat IT assets by extending their useful life will find that the business support provided by ageing equipment falls away rapidly to the point where IT becomes a constraint to the business. In contrast, those that attempt to always be at the leading edge by replacing equipment too often will find that IT costs will be too high for the business value provided. Finding the sweet spot is what ITLM is all about.

The idea behind ITLM is that all assets are looked at in the round. The costs of acquisition, operation, maintenance and disposal are all measured in conjunction with the cost to the business of a sub-optimal asset being in place. The value of the asset over its life is also monitored, and the best time to replace an item can be identified and managed to ensure that the business is optimally supported on an ever-changing platform that is maintained for all the right reasons – ensuring that IT is there to support the business, to reflect and

respond to the changing market conditions, and to provide the flexibility that an organisation demands.

The ITLM journey

Few organisations will be at the same point in their ITLM journey. To help them understand where they are on this journey, Quocirca has created an eight-step ITLM process that matches with a six-level maturity model.

The start of any ITLM assessment has to be with a full asset discovery. Once a full assessment of the IT estate has been carried out, there is a »

The key is to be able to optimise the value that can be gained from assets while managing the security and performance of the total IT platform

Why ITLM is relevant to modern businesses

During the good times, the positive cash flows and reasonable margins of many businesses, large and small, can hide a multitude of economic sins. For example, strong margins can mask the fact that those margins could be so much better if the business processes were more efficient – but business managers are not that worried if the profit and loss sheets look okay.

The problem is magnified when times aren't so good – margins get squeezed and business becomes more inwardly focused on what were previously perceived as minor problems turning into major issues. Projects get pushed back, expenditure is halted, and departments are told to do more with less and to sweat their existing assets as much as they can.

For IT departments, this can become a major issue. Organic growth with the need to maintain stability, along with the economic downturn, has meant that many organisations now have ageing equipment in place that is no longer optimally supporting the business.

However, many businesses are becoming more IT

savvy and are aware that utilisation rates of hardware in the datacentre are not where they need to be. Therefore, they feel a duty to push back hard on IT – stating that with excess resources available in servers, storage and networking equipment, they do not see why there should be any further investment in new equipment.

IT managers, however, know that datacentres have to change. New technical architectures are coming through that will require major changes to the hardware underpinning existing systems. Virtualisation and the use of cloud services can meet future business requirements, but will not provide the overall benefits expected if they are to be implemented only on existing equipment.

A dichotomy arises – how can the IT department provide a platform that keeps up to date with the requirements of a changing technology landscape, yet also ensure that it meets the demands of the business by ensuring that the best value for money solution is chosen?

This is where IT lifecycle management (ITLM) comes into play.

ting a magnetic disk with a hammer will break the platters, storage forensics have now reached the level where data can be recovered even from these. A good ITLM management company should offer a full range of disposal options, particularly for storage devices, or for small devices with built-in storage.

Outsourcing ITLM

Although IT lifecycle management can be carried out by an organisation itself, Quocirca recommends using external experts as trusted partners.

Good ITLM partners can source better deals on hardware and software licensing as they negotiate on behalf of multiple clients, they fully understand all the legal aspects around asset disposal (such as the UK's WEEE and COSHH legislation), and will have the wherewithal to ensure that data assets are dealt with in line with the organisation's corporate risk profile.

Such third parties will also have existing agreements for extracting the utmost value from old assets, through recycling, stripping for spares, or by selling on the residue of secure disposal (asset destruction) for the recovery of precious and rare metals. ■

Clive Longbotton is a director at analyst company Quocirca.

“need for the business and IT to be advised on what their options are. In many cases, this will not be a single leap from where they are now to a “Nirvana” state, but a set of incremental improvements set against the firm's own risk profile and spend capabilities.

Once the business has agreed a direction forward, the new equipment needs to be procured. For an organisation trying to carry out ITLM for itself, this will mean dealing with existing suppliers under existing contracts. Where an external ITLM management company is involved, they may have greater scale in their procurement deals, being able to source equipment at lower cost, which can be passed on to their customers. Also, an external ITLM management company should have greater visibility of what is happening in the market, so should be able to advise whether it is better to wait for a new technology or product that is just around the corner, and also where a single supplier or a multi-supplier approach makes sense.

The value of old equipment

Even old IT equipment has some level of value – whether it is as working equipment, as spares, or even in the precious and rare metals held within the equipment. The key is to be able to optimise the value that can be gained from these assets while managing the security and performance of the total IT platform.

With many organisations now having more than 80% of their data in electronic format, the value of that data to the organisation cannot be underestimated. The intellectual property of the organisation is tied

When an organisation wants to ensure that any item of equipment is disposed of securely, specific skills are needed

up in some of this data – yet not all data needs to be managed at the highest level of security. Being able to match different data types with an agreed corporate risk profile enables IT asset values to be optimised by managing how storage devices are dealt with at the point of decommissioning and disposal.

When an organisation wants to ensure that any item of equipment is disposed of securely, specific skills are needed. For example, it may be possible to use special storage media algorithms to erase data to a point where it is not economic for anyone to recover it. However, it has to be

borne in mind that there is no such thing as completely secure erasure – with enough time and money, data can still be recovered from a disk using forensic techniques.

For certain types of data, however, fully secure erasure may not be needed, but just enough to meet the risk profile of the business for the particular type of data involved. In this case, the storage media can be reused, adding to the overall value of the equipment under consideration.

Where the data type is regarded as requiring complete secure disposal, then the physical means of doing so has to be looked at. Again, while hit-



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What Ubuntu did next

Adrian Bridgwater reviews Canonical's latest operating system for Linux and assesses its fitness for business users

Ask a non-Linux user to name a Linux distribution and the most likely candidate for recognition will be Ubuntu. Currently on its 12.04 LTS release for desktop and server, the question now is whether this well-branded and well-supported free and open source operating system (OS) has truly come of age.

Ubuntu's legacy as a good operating system for old PCs may indeed be gone; the desktop version's "Unity" graphical user interface is argued to be well placed to convert Microsoft users who don't feel ready to stomach Windows 8.

That said, Ubuntu's commercial parent Canonical, which has a phone version in development, says the current desktop version can be optimised for what it terms "smart screens", meaning tablets, TVs, in-vehicle systems and even kitchen appliances.

Ubuntu 12.04 desktop (codenamed Precise Pangolin among developer circles) will soon move to 12.04.1, some time around the end of August 2012. This version is expected to garner more interest from enterprises than the initial release.

So while we wait for version 12.04.1 and then 12.10 (16 October 2012), users can currently download Ubuntu 12.04 LTS, where LTS stands for long-term support. In this case, that means five years' cover for certi-

fication, enterprise-level security, audit compliance and support for new hardware.

Search menu function

Before looking at Ubuntu Server, it is worth mentioning the desktop edition's new heads-up display (HUD) (figure 1, below). Reminiscent of Apple OS X "Spotlight", this transparent search function is a quick way to find files, applications and system functions on a machine as well as execute commands in an application.

The important thing about the HUD is that it lets you search the menus, so you don't need to know that, for example, "Value Propagate" is in Gimp's "Filters > Enhance" submenu, you can just type what you want to do and it searches for you.

It is interesting to note that Canonical has steadfastly stood behind the LibreOffice fork since moving from OpenOffice at the start of 2011. After Oracle officially ceased commercial development of OpenOffice in April 2011, LibreOffice has since cultivat-

ed an ecosystem to support the true lifeblood of the free productivity application suite.

Market success leads way

So to Ubuntu Server 12.04, which is currently enjoying pre-installed status on HP's latest line of ProLiant servers, as well as support from Dell and others.

As slick as the desktop version may be, has Canonical perhaps put even greater investment into the back-office version of its OS?

"It's common sense to follow where we find market success," says Davey Walker, engineering manager for Ubuntu Server Infrastructure.

"You could say that server technology is a specialist area for us in the sense that we first showed our support for cloud technology as far back as 2008 when we first shipped the Ubuntu cloud infrastructure – and today, if anything, we are on a journey to transition away from traditional servers towards cloud technologies and architectures in general."

What also marks this release as a key milestone is that Canonical has created an enterprise distribution that includes an option to use Open-

Stack (figure 2, page 14) for building and deploying a private cloud.

Prior to this point the company had aligned Ubuntu Server towards the Eucalyptus cloud platform.

This move comes close to the point when the open cloud standard has seen major affirmations put forward, not least of which is OpenStack founder Rackspace's launch of its first OpenStack driven cloud database and server offerings, also based on Ubuntu.

Canonical says it has taken a lot of care over the install process. As with the desktop version, Ubuntu Server gives the user an extremely wide range of language settings and is configurable to not just US English, and is not confined to Latin alphabet characters either.

An installation on new hardware (figure 3, page 14) can be performed in less than 15 minutes. Although the server version user interface is a lot less visual than the desktop version, it is pain-free and care has been taken to minimise the possibility of user error throughout the process. Of course it also takes up much less memory than any Windows version.

Automate service deployment

As we move to look at the real mechanics of the server installation and administration engineering Canonical has sought to improve, the firm's



Fig. 1: Unity's heads-up display

founder and product strategist CEO Mark Shuttleworth's vision is borne out in the "Juju" function (figure 4).

This orchestration tool was first introduced in version 11.10 as a test deployment, but now exists in its full-blown form in Ubuntu Server 12.04 LTS today.

Essentially, Juju automates service deployments, making it quicker and easier to get applications onto the cloud by using pre-written configurations of best practice that Canonical has called Charms.

Circumventing the need to repeatedly hard-code server tasks (such as rolling out WordPress to a number of user nodes for example), Charms exist to "distil the process of DevOps" by writing knowledge into a captured process template that can be re-used again and again.

Charms can be added to and augmented by upstream developers and changes may be submitted to the original Charm author, who can choose to release the extended charm (or not) onto the Jujucharms.com official repository. Charms are written in PHP, Python, ShellScript or any other language supported by Ubuntu.

"There are around 100 official Charms and as many as 400 forks to these original templates created by users who have shown a desire to tweak and tune the controls," says Canonical's Walker. "Any healthy open source project has a lot of forks, so we see this as a positive."

Metal as a service

Moving one final step deeper into this process, Canonical has created something it calls MaaS (metal-as-a-service, pronounced "mazz", figure 5) for IT administrators.

"Deploying to the cloud is great, but sometimes you still want to deploy directly onto bare metal for optimum performance," says Mark Baker, Canonical's product manager, server. "An instance of Hadoop or Cassandra for data intensive tasks would be a good example.

"Using MaaS controls is a good way of allowing the IT administrator to use declarative rules to establish how every server should run.

"Setting up hundreds of servers can be time-consuming and prone to error, but MaaS takes control of those variables and brings order to data management."

MaaS is capable of spinning up physical machines in the same manner as if they were cloud servers, in an on-demand format and then (as if they were cloud servers) also recycling them for use with different workloads at a later time. It provides dynamic allocation of workloads based on the capabilities of each server, plus even greater control over large-scale deployments.

Customers who require help with these processes can opt for Canonical's Ubuntu Cloud Jumpstart service and have an engineer come to their premises to provide training and deployment tuition.

The future of Ubuntu 12.04

So has Canonical really got its house in order with this release? There's much to say that it has and few industry analysts have found major holes to pick in either the desktop or server iterations of Ubuntu 12.04.

The company's wider operating system strategy has, as previously mentioned, also been widened and there is now an ARM version of the OS available. Canonical says it is prepared for a future in which low-energy, hyper-scale servers come to dominate for many workloads.

Looking into the humdrum of daily operation, Canonical has also provided a management tool, called Landscape, as part of the Ubuntu Advantage service package.

Landscape exists to try to solve common management problems, including building and maintaining software repositories, managing different machine profiles and accessing asset information in real time.

So in summary, Ubuntu Server 12.04 LTS appears to be a well-engineered (if not precision-engineered) beast; it is after all the reference platform for the OpenStack project. Canonical is now working to try and make a combination of Ubuntu and OpenStack represent the platform of choice for businesses building private cloud infrastructures.

Canonical says it has also worked with OpenStack contributors to offer certified and supported configurations for creating hybrid cloud solutions, spanning both the private and public cloud.

So as Windows 8 and OpenStack now send a few shockwaves through the collective corporate consciousness, will Ubuntu's already fairly slick branding see it rise to the fore like never before? The smart money is on "definitely maybe". ■

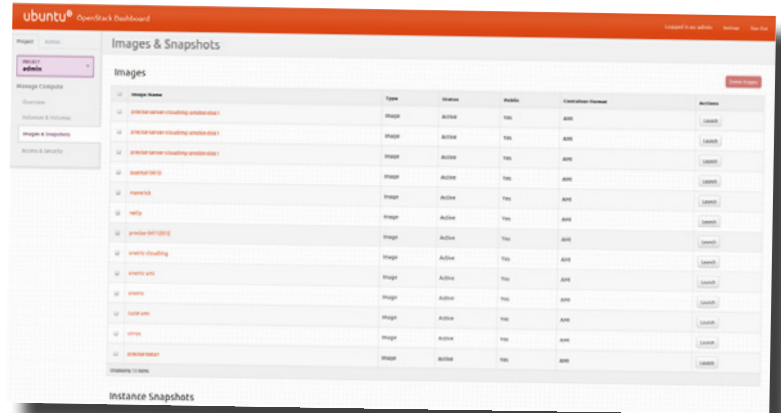


Fig. 2: OpenStack Dashboard (above)



Fig. 3: Server Installation (right)

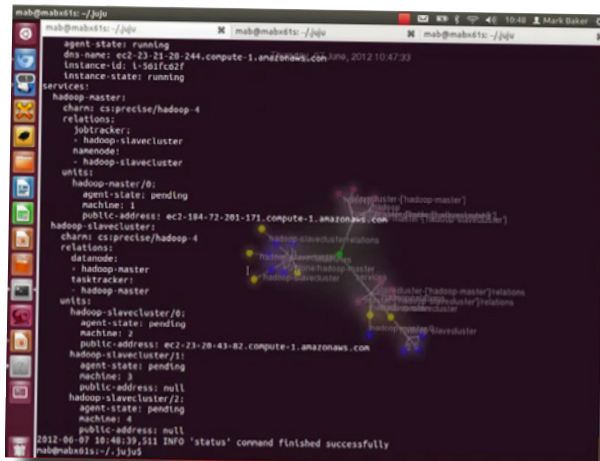


Fig. 4: The Juju abstraction tool (left)

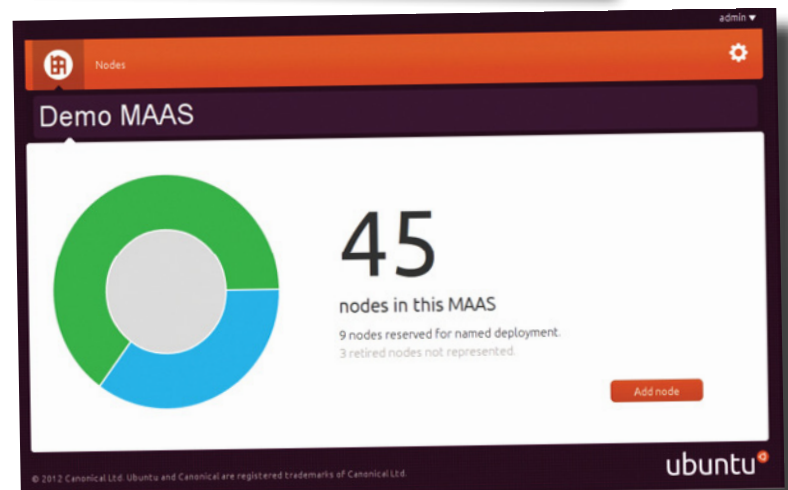


Fig. 5: The "metal as a service" feature (below)

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The business side of programming

Agile development methodologies can give programmers greater involvement in the business. **Bill Goodwin** reports

Software developers are not renowned for having the best people skills. In too many companies, developers sit in darkened rooms with headphones on. “We are in danger of creating teams of Morlocks – people who live underground with very dark eyes – and that is not good for anyone,” Gus Power, chief technology officer at Energized Work, told a recent meeting of Computer Weekly’s CW500 Club.

But increasingly, businesses are encouraging developers to come out of the basement and start talking with non-IT staff. Given the right opportunities, developers have a lot to contribute to innovation in the business, particularly with the growing interest in agile

development methods, IT leaders attending the CW500 event heard.

Jagdeep Singh, head of software development at the *Financial Times*, said things have changed a lot since he first started out in IT. “The place I worked was called ‘the dungeon’. Everyone was 30 years my senior,” he said. “It was more writing code than understanding what the code was meant to do.”

Building social skills

Singh tries to encourage his developers to build their social skills and self-confidence by leaving the basement when possible. “Go to conferences, talk about what you do. Don’t be shy. Collaborate. Go and see other people outside. Don’t sit in your silos,” he said.

Most developers feel nervous initially, but meeting like-minded peo-

ple can act as a big boost to their confidence, added Singh. “Some developers have very good ideas, but they don’t have the confidence,” he said. “Much of my role is trying to help people come out of their shell.”

In some cases, developers have great technical skills, but their confidence has been damaged through negative experiences with previous employers. “It’s a bit like working overseas – you spend a year there and you don’t realise you have picked up the accent,” he said.

Dave Heath, head of software engineering at The LateRooms Group, is only half joking when he suggests that IT and people skills don’t mix. “We have found that developers and anyone who is technical can’t »

Given the right opportunities, developers have a lot to contribute to innovation in the business

“communicate. Stick them in a room at a networking event and you find they are trying to hack the router in the corner,” he said.

Give them a technical challenge, however, and it’s a different story. Systems developers who normally don’t talk to anybody will quite happily talk to other people when they are working on a technical challenge.

With more businesses adopting agile development methods, where the focus is on keeping code simple, testing often, and delivering revised functions as soon as they are ready, there is a growing requirement for developers to interact with the business.

Agile programming is a way to get developers to talk to the business. They can have regular meetings with business people and work together on new project prototypes, adding some new functionality or improving existing functions based on feedback from each meeting.

Eliminating distractions

Striking the right balance between collaboration and getting the programming job done is a perennial problem for software developers.

Social media, smartphones and emails can turn into a distraction rather than a useful form of communication, said Energized Work’s Power. “We think that is collaboration, but it’s actually taking away their time from doing the work,” he said.

Videoconferencing and Skype can be particularly problematic. “Every time you use Skype and have a chat, it takes half an hour to get back into your work. If you are dipping in and out of meetings, you are actually missing out on development time,” said the *FT*’s Singh.

Developers at the *FT* have solved the problem by creating informal “no talking” times. “Everyone switches off Skype, Microsoft Messenger, email, etc, and gets on with development,” he said.

Agile communication

Maintaining complex legacy software systems is one challenge for agile programming. Every time you upgrade legacy software, there is a new risk to the business, said LateRooms’ Heath. “If you keep going, keep going, keep going, all you are doing is adding to the risk every day you leave it,” he said.

The answer, according to Heath, is not to allow software to become dated, and that means prioritising upgrades. In practice, it is easy for businesses to put upgrades on the back burner, as there is always something more pressing to do. “All of a sudden you have a system that becomes five years old, then 10 years

Agile programming at the Financial Times

For Jagdeep Singh, head of software development at the *Financial Times*, agile programming is less about formal development techniques and more a way of modern business life.

In the fast-moving world of the media, development teams have to respond quickly, according to Singh. “You have a tiny window. You need to be there, very quick, and very agile – and I am talking from a business perspective, as well as a technology perspective,” he said.

The *FT* has grown through acquisitions over time. This has left it with a “hodge-podge” of technologies, processes and methodologies, Singh told a meeting of Computer Weekly’s CW500 Club.

So while some development teams struggle with the agile philosophy, others behave in a very agile way, even without formal agile methodologies.

“They can get something done very quickly. Information is shared across the team, and it’s very agile, without any kind of scrum or Kanban, so it’s agile in the purest sense,” he said.

For Singh, agile should be a philosophy, rather than a prescriptive software methodology. Doing scrum by the book actually makes you less agile, he said.

The *FT*’s software development team uses a variety of approaches, depending on the nature of the project. For example, developers are using Japanese Kanban techniques to manage a project to improve search and discovery.

Technology can be implemented quickly, but implementing different cultures and thinking can take more time

In its simplest form, Kanban uses cards or Post-It notes on a board to represent each job. The process makes the work, and the interdependencies between jobs, visible.

Ultimately, it’s a quick way of identifying bottlenecks, allowing both the business team and the development team to see where the project is at a glance, said Singh.

The *FT* has taken a different approach with a digital publishing project, run by a team of 30 developers based in Romania and Milan. In this case, the newspaper is using a blend of different software methodologies, taking parts from Kanban, agile, and extreme programming.

old, so you have to invest and continually deal with things that are in technical debt,” he said.

Refactoring – reworking the structure of legacy code to modernise it – is one solution. Heath suggested that software developers spend 70% of their time developing, but set aside 30% of their time for refactoring, training and innovation.

“Introduce something like innovation time, where they can come up with an idea. That is how you get the team focused on things that make them happy, but you also make sure you don’t get technical death,” he said.

Power agreed. “Legacy systems are a real problem, and I see new ones being built every day. I have seen one case where they have seven systems that do 80% of what the other systems do, and they have never switched off the old systems,” he said.

And because of the way depreciation is calculated, Power said legacy systems fit uneasily on a company’s books: “They sit on the cost account book as a corporate asset when they are anything but a corporate asset.”

Ultimately, the way software is budgeted for and accounted for needs to change, said Heath. With agile techniques, it does not make sense to set software budgets two years in advance. “We need to fundamentally look at financing and the way we plan projects. We can’t really do that big-bang finance model up front because it does not work,” he said.

So with agile and more fluid development comes a chance for developers to work more closely with the business and become part of that crucial planning process. ■

▶ Click here to read more from the CW500 Club



CHRISTINE A. cFLICKR

The combination gives the developers flexibility, while still allowing managers to track the progress of the project. “It is basically risk assurance for the business, so we are working to some sort of process that they can track and monitor,” said Singh.

Selling techniques such as Kanban to the rest of the *FT* business can be a challenge. Some product owners are more comfortable with scrum than Kanban, and they need winning over, according to Singh.

He pointed out that businesses can implement technology quickly, but implementing different cultures and thinking can take more time.

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Smile and hang in there Boris – you're on candid camera

Where would today's news be without the public and their camera phones?

Citizen journalism has helped big news channels break stories when disaster strikes for many years now.

If an earthquake tragically destroys a city, instead of getting the heck out of a collapsing building, someone is guaranteed to pause for a moment to capture the catastrophe on their camera phone. The grainy, shocking images are then available to show the world first-hand what we are all desperate to know.

And not forgetting when a certain London Mayor gets stuck on a zip wire in Victoria Park, opportunity knocks and the crowd can share the hilarity with the rest of the population who were not there to witness the spontaneous entertainment.

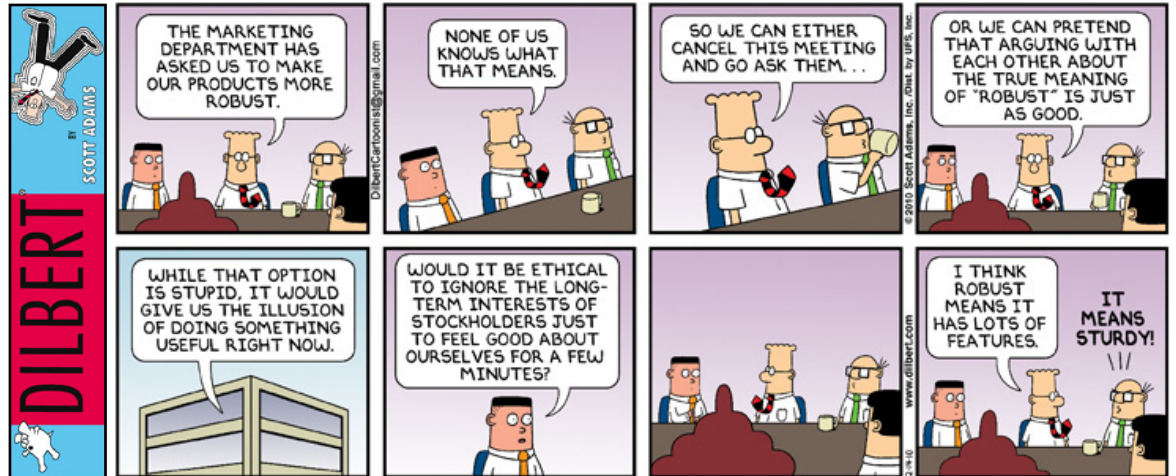
Cats comfort cancer patients

It is time for a nice, heart-warming story here at Downtime.

A 16-year-old cancer patient named Maga Barzallo Sockemtickem is currently residing within the Seattle Children's Hospital for treatment. Due to her very weak immune system, she must be isolated from friends, family and even her kitten, Merry.

However, staff at the hospital have managed to bring kitten comforts to her thanks to technology.

The nurses at the hospital asked Maga's friends to post their favourite cat pictures on Facebook and, with the addition of some photos of Merry, they created a video of all the pictures, accompanied by a purr-



Heard something amusing or exasperating on the industry grapevine? E-mail cw-downtime@computerweekly.com

ing audio, to project onto the walls of her isolation canopy.

They have called it the "cat immersion project" and plan to give such comfort to other patients in the future as part of the hospital's creative arts campaign for children with cancer.

[Click here](#) to view a video of the project on Wired.

Usain Bolt finger-twiddling celebration explained

Google's Olympic-themed homepage reminded Downtime of its wasted youth. One of the Google doodles during the Games featured a sprinter who could be controlled by the click flicking of the cursor keys to run and the space bar to jump hurdles.

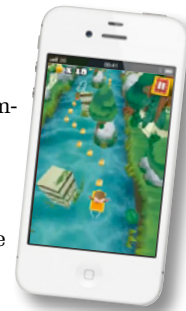
Perhaps this explains Usain Bolt's finger-twiddling celebration.

Sir Steve Redgrave back in a boat

After winning a gold medal in the 1996 Olympics, Steve Redgrave famously announced that if anyone saw him in a boat again they could shoot him. As we all know, that boycott didn't last.

Sir Steve is in a boat again – his virtual self appears in the app *Sir Steve Redgrave's River Adventures*, which is to be released imminently as a freemium on iTunes.

The aim of the game is to row the five-time gold medallist down the river, avoiding crocodiles, turtles and rapids, while collecting gold.



threats, such as spyware, adware, spam, phishing, viruses and other malware, than searching for any other UK sporting celebrity.

Football star Ryan Giggs is ranked as the second most dangerous UK sports celebrity in cyberspace, followed by gymnast Louis Smith, platform diver Tom Daley and road racing cyclist Mark Cavendish. ■

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Help! Help! There's a wolf about

Sheep in Switzerland could soon be texting SOS messages to their shepherds when under attack by wolves.

A special collar will notify the shepherd if a member of the flock's heart rate increases, which tends to happen when an animal is distressed.

But the collar cannot distinguish between different types of stress. Hopefully shepherds won't have to mountaineer up the Alps with a cup of cocoa and some Valium every time a sheep sees an attractive ram!

Murray tops web search danger list

Tennis player Andy Murray may have finally found victory on court at Wimbledon by winning gold at the London 2012 Olympics, but he has also topped a list of the most dangerous UK sporting celebrities to search for on the web, according to internet security company McAfee.

Cybercriminals often use the names of famous people to lure web users to sites that are full of malicious software designed to compromise personal details and disrupt devices.

Fans searching for "Andy Murray videos", "Andy Murray downloads" or "Andy Murray screensavers" are at risk of running into online threats designed to steal personal information.

Clicking on these risky sites and downloading files such as photos, videos or screensavers exposes consumers to the risk of downloading viruses and malware.

McAfee found that searching for the latest Murray content yields more likelihood of landing on a website that has tested positive for online