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BUSINESSES TAP PUBLIC CLOUD POTENTIAL

LARGE CORPORATIONS ARE NOW CONSIDERING THE TYPES OF APPLICATIONS THEY CAN BEST EXPLOIT WITH PUBLIC CLOUD

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BROADBAND COMMUNICATIONS**EE 4G now covers 50% of UK**

A further 12 towns have 4G connectivity after EE continued its roll-out across the UK. Aylesbury, Berkhamsted, Billericay, Blackpool, Brentwood, Dewsbury, Huddersfield, Lytham St Annes, Marlow, Pontefract, Thame and Windsor are all now part of EE's 4G network, which brings mobile internet speeds of between 8Mbps and 12Mbps to smartphones.

IT RISK MANAGEMENT**Technology fail during US 2012 election day averted by practising failure**

A potentially catastrophic IT failure was avoided on the day of the US presidential election, due to rigorous testing of the IT infrastructure beforehand, says former Obama campaign CTO, Harper Reed.

IT FOR THE PUBLIC SECTOR**Barnet outsourcing campaigners appeal judge ruling**

Campaigners will appeal a decision by a high court judge not to allow a judicial review against the Barnet One outsourcing programme. A high court judge ruled their objection to Barnet Council's £320m outsourcing contract with Capita came too late.

MOBILE NETWORKS**University of Cumbria is set for cloud**

The University of Cumbria is undertaking an IT project to develop a cloud infrastructure and has signed a multimillion-pound contract with Manchester-based managed services and cloud specialist ANS Group. Following a tender process, the academic institution selected ANS Group to implement a fully-managed IT infrastructure that can support its 12,000 students and 1,100 staff over 10 locations.

HACKERS AND CYBER CRIME**Another online firm hit by data breach**

Online deals service LivingSocial is the latest company to report a breach of its systems that may mean attackers accessed customer details. The company confirmed that more than 50 million accounts may have been affected by the attack.

IT OPERATIONS MANAGEMENT**Primitive IT impeding police efficiency**

Primitive technology is impeding police efficiency, according to Tom Winsor, Her Majesty's chief inspector of constabulary. In a speech at the Royal United Services Institute think tank, he said the use of "primitive" police technology was a routine complaint by officers.

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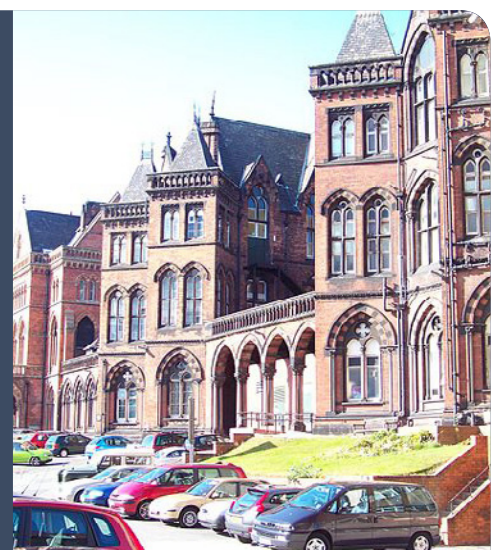
MP CALLS FOR INVESTIGATION INTO NHS DATA MISUSE

An MP has called for an independent investigation into the suspension of children's heart surgery at Leeds General Infirmary after Computer Weekly revealed claims that the decision had been based on a misuse of data.

Medical researchers say the data used by NHS medical director Bruce Keogh to justify the closure was incomplete and was quickly proved inaccurate.

It has also emerged that Leeds General Infirmary was asked to suspend the heart surgery unit without seeing the full data that purported to show a dramatic increase in deaths of children undergoing surgery at its specialist heart unit.

Computer Weekly has learned that Keogh pressed hospital managers and surgeons to stop children's heart operations immediately, on 28 March 2013, after showing them a paper graph he had extracted from a report of health data that insiders claim was incomplete.



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IT FOR GOVERNMENT

Fujitsu lock-in makes DECC only department incapable of cloud

The Department of Environment and Climate Change (DECC) is the only Whitehall department unable to adopt cloud computing on a strategic level, because of a lock-in with system integrator Fujitsu. DECC is the only government department unable to adopt cloud computing as part of its overall ICT strategy, according to a series of freedom of information requests sent to 25 departments.

CYBER CRIME PREVENTION

Most UK SMEs ill-equipped to deal with cyber threats, study finds

A minority of UK small and medium-sized enterprises (SMEs) are giving high priority to cyber threats, research has revealed. Although cyber threats are gaining recognition among SMEs, there is a clear need to raise awareness and protection, according to the Institution of Engineering and Technology (IET).

MOBILE NETWORKS

O2 hires BT for 4G backhaul

BT has been chosen by O2 to build a new high-capacity network capable of running its future 4G services. The 10-year contract will see BT Wholesale manage the network for the operator, which will also include additional transmission links between O2's existing mobile base stations and the new network.

NETWORK SOFTWARE

Infosys partners IPsoft as automation trend shakes offshore model

Indian IT services giant Infosys is using IPsoft technology to automate the IT and business process services it provides to its global customer base. Software which automates IT and business processes is maturing and becoming attractive to businesses looking to reduce the costs associated with low-level tasks with the aim of freeing up money to spend on more strategic activity.

MOBILE NETWORKING

Employees expected to bring own devices to work

The acceptance of bring your own device (BYOD) in the workplace will lead to employers expecting their staff to provide their own technology. This was the prediction of analyst firm Gartner, which claimed 38% of companies believed they would stop providing devices to workers by 2016, rising to half of all firms by 2017.



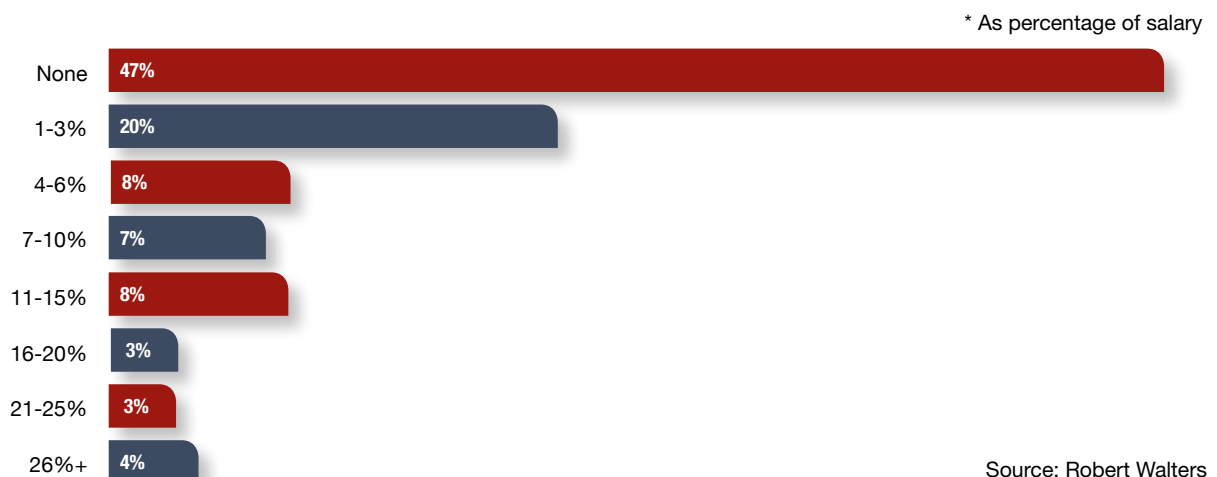
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IT FOR RETAIL

Schuh takes first steps to in-store Wi-Fi

Customers of high street retailer Schuh will soon be able to enjoy Wi-Fi connectivity while shopping. The footwear chain has signed a deal with The Cloud, owned by BSkyB, to bring wireless connections to all of its 83 UK stores. ■

SIZE OF SALARY INCREASE RECEIVED IN 2012*



Source: Robert Walters

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Public cloud edges towards tipping point for full enterprise deployment

Large corporations are now considering the types of business applications they can best exploit with public cloud, write Archana Venkatraman and Cliff Saran

Cloud computing is moving beyond small companies, start-ups and software development to full-scale enterprise deployments.

Software giant Microsoft provides evidence of this. Curt Anderson, chief financial officer at Microsoft's server and tools division, recently said the company's Azure cloud service had made \$1bn sales in 12 months.

Cloud is now a serious business for Microsoft. The company is aggressively targeting competitor Amazon's share of the infrastructure as a service (IaaS) market. It recently reduced the general availability prices on Linux and Windows Server virtual machines and cloud services by 21-33%, to match Amazon's Elastic Compute Cloud (EC2) prices.

Earlier this year Macquarie Capital predicted Amazon Web Services (AWS) would generate \$3.8bn in sales this year.

The attractive pay-per-use pricing on processor cores and storage infrastructure services has made Amazon a popular choice for software development, where code can be built and tested on the Amazon cloud.

Organisations are also using Amazon's infrastructure to support on-premise software during peak demand and for business continuity. Recently the Rail Settlement Plan – the company that provides IT and retail services to UK rail operators – selected AWS for its on-demand infrastructure to enable train operating companies to handle peak demand for tickets.

GOOGLE'S CLOUD OFFERING

Google is the third major cloud provider in the public cloud market. It offers enterprise cloud services such as Google Cloud Storage, Google App Engine and, more recently, infrastructure platform Google Compute Engine.



Microsoft claims its Windows Azure cloud platform reached the \$1bn milestone in 12 months

But Google Compute Engine is still not generally available, although it is thought to be imminent. "We cannot reveal exactly when it will be but the next milestone for Google enterprise cloud division is the general availability of Compute Engine," said Barak Regev, head of Google's cloud platform in Europe.

"CLOUD USE IS NO LONGER HIDING IN THE SHADOWS, IT DEPARTMENTS ARE NO LONGER DENYING IT'S HAPPENING"

JAMES STATEN, FORRESTER

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The Google Compute Engine platform enables enterprise users to run their large-scale computing workloads on Linux virtual machines hosted on Google's infrastructure.

It gives developers access to Google's computing infrastructure, Regev said.

Earlier this year, Forrester analyst James Staten wrote a blog, stating: "Cloud use is no longer hiding in the shadows, IT departments are no longer denying it's happening in their company and legitimate budgeting around cloud is now taking place."

"ENTERPRISES ARE PICKING WHAT TYPES OF WORKLOADS TO MIGRATE, SUCH AS WORKLOADS THAT HAVE ERRATIC DEMAND THAT NEED ELASTICITY; AND WHERE THE RISK IS LOW"

GREGORY PETRI, GARTNER

PUBLIC AND PRIVATE CLOUD USAGE

In March 2013, the IT director group, The Corporate IT Forum, conducted a survey which showed IT workers are more confident with the public cloud.

Some 43% of the organisations surveyed said they were using public cloud, representing an increase of 30% since 2010. However,

private cloud use is expected to increase from 40% in 2010 to 64.1% in

2013, suggesting IT departments still prefer private to public clouds. But IT directors are becoming more open to the prospect of using public cloud.

"Only 3-5% of IT spending is in the public cloud," said Gregory Petri, research director at Gartner. The analyst firm's research found

IaaS to be the fastest growing segment in the public cloud market, growing 40% year-over-year. In March 2013, Gartner forecast that, by 2017, public cloud IaaS services would grow to \$31bn, from \$6bn in 2012.

Petri said: "Enterprises are picking what types of workloads to migrate, such as workloads that have erratic demand that need elasticity; and where the risk is low, such as software development."

However, the greatest potential for public cloud services lies in the business services and applications market. Petri says the sector is introducing higher level services such as scheduling measurement and monitoring services. There are also industry-specific services such as high-performance computing for the insurance industry, which has been validated by regulators.

"In our public cloud forecast we predict business process as a service will be the biggest area for the public cloud," he said. Companies are accustomed to using third-party service providers for processes like payroll. Petri expects this market will expand, covering other business processes such as expenses. Companies already use software as a service providers for expense reporting, but the whole approval and payment process could be powered by third-party providers over the public cloud.

For the time being, the public IaaS market is gaining momentum. Launched in April 2013, Microsoft's Azure Infrastructure Services come at a time when public cloud providers - including Amazon and Google - are launching price wars, new services and management tools to attract customers. ■



Google Compute Engine will become available soon



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Banking CIO career expectations hold up legacy system replacements

The difficulty of replacing legacy banking platforms and short-term nature of CIO jobs means many will not try to replace their systems. Karl Flinders reports

CIOs at banks lack the job security required to transform IT by replacing legacy systems that have been in place for decades.

IT heads at banks rarely get more than two or three years in the job, so to take on a multiyear project as complicated as legacy replacement is seen as professional suicide.

As a result, UK banks have legacy systems that have been in place for decades. Meanwhile, extensive merger and acquisition activity means some banks have dozens of different legacy systems. One source told Computer Weekly that one of the UK's main banks has 40.

What's more, replacing core systems is risk-laden and would not necessarily look good on the CIO's CV, because you would be replacing systems with other systems that do the same thing.

LIMITED CIO LIFESPAN

Chris Skinner, chairman at the Financial Services Club, said bank CIOs usually don't last long in the job: "In the first year they spend their time trying to work out what their predecessor did wrong," he said.

"In the second year they try to sign contracts with suppliers and plan how to fix what is wrong. In the third year they implement the changes and then – by the following year – there will inevitably be problems with the project and the CEO gets angry and fires the CIO."

But it is possible. Skinner referred to Michael Harte, CIO of Commonwealth Bank of Australia (CBA). He said that, over the past five years, Harte had replaced the bank's core systems, moved much of its services to the cloud and created many apps and innovations. He achieved this through creating the right partnerships with suppliers, Skinner said.



JENNY KEMPSTER/NEWSCAST

Santander bucked the trend by making core platform replacement part of its acquisition strategy

REPLACEMENT RISKS AND COSTS INCREASE

Rik Turner, analyst at Ovum, said two features of the banking industry add to the complexity of core banking renewal: "During economic booms and downturns, executives at banks regularly move on, so taking on a five-year project they will not be able to complete will not look good if they are judged on it," said Turner.

"UK banks in particular have acquired businesses over the years and not replaced these individual core systems and, as a result, they have lots."

He said replacing core banking systems is akin to changing the engines on a Boeing 747 while in flight.

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"These systems work, so bank IT leaders think, 'Why rock the boat?'" he said.

Currently banks will use middleware to enhance systems and replace the hardware that supports them, but the risk won't go away. Eventually banks will have to replace core systems or they could see costs increase dramatically and face pressure from more agile competitors.

The longer banks leave it, the more difficult and costly it becomes to replace legacy

The bank has undertaken a major acquisition spree in recent years. In the UK it acquired finance organisations such as Abbey National and Alliance & Leicester. A key part of its strategy has been to migrate acquisitions' systems to its own in-house developed system, known as Partenon.

The system enables Santander staff to be able to access all customer information from one point, rather than having to access multiple legacy systems. This is known as straight-through processing.

As part of its acquisition of Abbey National, Santander moved 10 million savings accounts, four million current accounts and eight million card accounts to the new platform from Abbey's systems.

Santander expected to make £300m cost savings after integrating Abbey National with Partenon. It plans to make efficiency savings of between £30m and £50m by integrating Alliance & Leicester with its Partenon core banking system.

"The fact that core platform replacement is part of its acquisition strategy means it does not have a problem getting CIOs to do the projects, because everybody has to do it - whether they like it or not," says Turner.

Nationwide building society is another finance firm to take the brave step of putting IT transformation at the heart of its strategy. Nationwide embarked on a £1bn IT transformation in 2008 just before the financial sector entered crisis.

This involved replacing legacy systems with off-the-shelf systems from SAP and Microsoft. By making the IT renewal part of its strategy, Nationwide ensured the entire company was behind it, rather than a single CIO staking their career on its success.

David Sherriff, CEO at banking system supplier Microgen, said there is a lot of activity in banking IT departments as they attempt to meet new regulations. But he said this is largely being done piecemeal and is likely to have to be changed again in the future, at extra cost.

He said banks are taking a "Pac Man" approach and replacing systems bit by bit.

"No finance CIO will take on a programme to replace legacy systems. You have to keep taking bits out and building new bits," Sherriff said. ■

"THAT CORE PLATFORM REPLACEMENT IS PART OF SANTANDER'S ACQUISITION STRATEGY MEANS IT DOES NOT HAVE A PROBLEM GETTING CIOs TO DO THE PROJECTS, BECAUSE EVERYBODY HAS TO DO IT"

RIK TURNER, OVUM

technology. In 2008, when German banks Commerzbank and Dresdner Bank came together as part of an £8bn deal, legacy proprietary systems made it more complex.

One example was Dresdner's fund accounting system, Paladign, which it used

to balance the books at the close of business. It was old and had been modified so

often that few IT people could work with it. Dresdner's trading platform, called Imagine - which covers parts of the bank's investment business - is another such example.

LEGACY REPLACEMENT PIONEERS

One European bank replacing legacy systems at pace is Spanish giant Santander.

› SANTANDER'S ABBEY EXPERIENCE PAYS BACK
› FINANCIAL SERVICES REPORT:
RESHAPING ICT, RESHAPING BUSINESS



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- Reducing IT cost
- Big data and its impact on I&O
- Futures of process frameworks (Dev Ops, ITIL, Cobit)
- Mobile devices management and BYOD: challenges and strategies
- Next generation virtualization and cloud computing
- Disaster recovery — strategies and best practices



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Insolvency firm Griffins speeds up fraud forensics with IBM analytics

Investing in a database capable of big data analytics has cut investigations at an insolvency agency from months to minutes. Brian McKenna reports

Insolvency firm Griffins is using analytics software to reduce the cost, time and complexity associated with fraud and forensic investigations for litigation.

Griffins has a team of around 50 investigators, covering insolvency and financial investigation in the UK.

The company has been using IBM i2 Intelligence Analysis software for three years. Stephen Hunt, insolvency practitioner and partner, says the firm has learned from police and government use of the technology and taken it beyond its use as a reporting tool for court, what he calls the “analyst notebook” element.

Hunt recalls he was doubtful about the tool’s value in the beginning, but says he saw how it could be adapted to help with pattern analysis. “You can write huge structured queries to suit any forensic question,” he says.

BIG DATA STRUGGLE

Griffins’ investigators glean critical insights when investigating complex incidents, through the software’s visualisation of people and events. It is also used to document results for potential litigation.

The IBM i2 iBase database application has relieved Griffins from struggling with more than 10TB of data stored in Excel spreadsheets to what he calls a faster, more accurate, intelligence-led approach that helps solve cases related to money laundering, missing trader fraud and corporate theft.

When tracing the proceeds of crime, the firm uses the software to analyse structured and unstructured data sources such as bank statements, PDF files, emails, invoices and spreadsheets. It establishes patterns and relationships, making non-obvious connections between disparate sources of data.

Hunt gives the police analogy of “consequential transactions”, where, for example, a



THINKSTOCK

Griffins has been using IBM i2 Intelligence Analysis software to analyse evidence of fraud for three years

person makes a telephone call, then makes a payment immediately, on a regular basis; or when a mobile telephone call is made near a specific cash machine, time and again.

“You can take separate data stores and put them together,” he says.

Griffins is applying that approach to “dull accountancy packages”, in tandem with telephone records, bank transactions, and so on, related to a company under investigation.

FROM MONTHS TO MINUTES

The firm recently imaged a large amount of data from a bank in the Caribbean with a largely fraudulent turnover of \$1tn. From the partial data available to them for civil claims, they were able to extract highly accurate patterns and make connections during investigative analysis, which led HM

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**“PRACTICES SUCH AS
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PROBLEMATIC”**

**STEPHEN SWOYER,
THE DATA WAREHOUSING
INSTITUTE**

Revenue & Customs to query how they had obtained their information, he says.

“It would take months to do that

evidentially - it can be done in minutes with our database. That has been revolutionary”.

Hunt believes this type of software could develop into a problem-solving package of algorithms that will answer the top five questions that often go unasked in insolvency investigations, due to cost.

“You could apply those algorithms to an accounting package, stand back and it will do the investigation for you” – at least in seeing where fraud is, or is likely to be.

“Imagine where a firm goes bust owing millions of pounds, with no assets when it goes into liquidation. Who will pay for the investigation of that? The creditors?” And so technology of this kind can help insolvency practitioners get quick leads, he says.

“Fraud is ever present and is far more widespread than you can possibly imagine,” he says.

“And there is more focus now on it at a governmental level, in terms of tax fraud. Certainly, looking for ways to recover money is in vogue, and software is part of that.” ■

BIG DATA PREDICTIVE ANALYTICS FIGHTS FRAUD

Data analytics software has been used to combat fraud for quite some time. It has, though, mostly been trained on structured data and on samples.

Fraud forensics firm Griffins has been using IBM's i2 analytics software to reduce the cost, time and complexity associated with fraud and forensic investigations for litigation. When tracing the proceeds of crime, the firm uses the software to analyse structured and unstructured data sources, such as bank statements, PDF files, emails, invoices and spreadsheets.

The firm has learned from the police's use of the software, applying its capacity to reveal connections between people and events. Law enforcement in the US is using such technologies to predict and prevent crime. Text and predictive analytics have been used by law enforcement in North Carolina, Virginia, and by the Department of Defense, on so-called unstructured data, including phrases tattooed on the arms of persons of interest.

Fraudulent insurance claims are also rich ground for predictive and content analytics software. As SAS CEO Jim Goodnight explained, in an interview with Computer Weekly: “Warranty claim analysis is another area for text analytics. This is where a company carries out a repair under warranty and bills the manufacturer. We are using text analytics on these claims to add variables that help determine whether they are fraudulent. We take all the claims made fraudulently by hand, collect the data and build a model to detect fraud instantly”.

As well as ingesting unstructured data, big data analytics makes it possible to avoid sampling. Stephen Swoyer, from the Data Warehousing Institute, says: “It used to be that organisations couldn't meaningfully process – that is, mine, analyse and in some cases, report against – all of the data that they were collecting. That's why practices such as sampling came to be viewed as pragmatic necessities, even if almost everyone conceded that they were inherently problematic, to say nothing of capricious.”

But now the hardware and software exists to ingest and analyse masses of varied data, including unstructured data. Likewise, the newer data visualisation tools operate on big data.

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NEWS

How Cancer Research UK is using IT to bring fundraising ideas to life

The charity's IT director talks to Angelica Mari about boosting revenues by embracing technology advances to support innovation and drive efficiency



Despite being one of the highest-profile charities in the UK with annual revenues exceeding £480m,

Cancer Research has felt the impact of the recession on fundraising, so the need to innovate and drive efficiency through technology is more important than ever.

Since joining the charity a year ago, IT director Mary Hensher has devised technology plans with mobility and data analytics at the fore, as well as ensuring the infrastructure is capable of coping with mounting demands and the IT team is sufficiently skilled to respond.

"When I joined, I wasn't starting from scratch. Cancer Research UK is a very driven organisation, and you don't need huge internal marketing strategies to enthuse people. So the IT strategy had to be aligned very closely with what everybody else was doing and support internal customers in bringing their ideas to life, properly and efficiently, and bringing in more revenue," says Hensher.

"It's a strategy across 10 different themes, from internal customer service to the mobility piece, social media, security and business intelligence. Everything we do is based on those principles."

MOBILISING THE ORGANISATION

Hensher says a core part of her team's work is ensuring the charity can take full advantage of mobile computing to bring in donations.

"What we found out is the importance of mobile in how people donate to us. We were surprised with the interaction people have over those devices – not just in looking for information, but also for donations. So when it comes to emerging technology, mobility comes right at the top. It is a critical part of how people are interacting with us," she says.

Making web interfaces more simple and mobile-friendly was an important consideration during a rebranding exercise the charity underwent last year. Creating mobile-friendly microsites for campaigns such as the Stand Up For Cancer telethon and Race for Life has also become standard practice. But mobility is also seen as a vehicle to improve internal processes and increase productivity.

"We are looking at what we do for staff regarding mobility. For example, we are analysing how effective a bring your own device (BYOD) approach would be, so we can support people securely – and having our virtual desktop infrastructure (VDI) setup really helps, as data doesn't need to be carried around and can be tapped in from any device," says Hensher.

"A lot of organisations say they are doing BYOD in a big way, but they are actually only allowing mobile phones. Supporting any device by having very secure hooks and



Hensher: "When it comes to emerging technology, mobility comes right at the top"

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STAFF TO BRING
THEIR OWN

applications is really an aspiration we would like to see. So long as the data is secure, it would be entirely appropriate to mobilise – in every sense of the word – our workforce.”

REUSING THE INFRASTRUCTURE

As well as information on its 40,000 regular supporters, Cancer Research UK has built up a database of millions of records. This is managed by its core system – a Siebel customer relationship management (CRM) platform – coupled with Oracle’s business intelligence reporting tools.

Hensher says enhancing the CRM can be quite complex, given the number of supporters and data being handled by the system. Making sure the infrastructure is as efficient as it should be – and also reusable – is one of her goals. “We are commoditising some of our IT so we don’t need to be continuously reinventing the underlying infrastructure when colleagues come up with ideas for fundraising campaigns. With SharePoint, Drupal and our existing Oracle platform, we can reuse components to be more agile in bringing ideas to market,” she says.

**“SO LONG AS THE DATA
IS SECURE, IT WOULD
BE ENTIRELY APPROPRIATE
TO REALLY MOBILISE
OUR WORKFORCE”**

**MARY HENSHER,
CANCER RESEARCH UK**

“On what you would call ‘normal infrastructure’ – such as HP, Cisco networks and EMC storage – it’s all about getting more efficiency and capacity, matching our capacity for data and getting more of that archived onto cheaper storage.”

Data analytics is another area where Hensher wants to make improvements. The goal here is to use existing supporter data to run more effective fundraising efforts and also to provide relevant and reliable information about cancer to the general public.

“We do a lot of analysis with our Oracle tools and use a lot of Google Analytics functionality for our external-facing channels. We analyse how people interact with us, how and when they donate. That way, we can match our technology with how people interact with us,” she says.

“We want to position ourselves as a trusted source of advice on cancer. When diagnosed, people go straight to the web to find out more about their condition, but there is a lot of misinformation online. So analysing the information we have, anonymising it and feeding the findings back to the public is something valuable we want to improve.”

REAPING THE BENEFITS

Hensher’s predecessor, Paul Feldman, implemented a major virtualisation and consolidation programme, which accompanied Cancer Research’s move from multiple sites to central headquarters in London. She says that initiative enabled it to move on to further technology-enabled improvements.

“When I came in, I thought the amount of virtualisation that had gone in the process of moving from eight buildings to one and to colocated datacentres was high, compared with other organisations,” says Hensher. “Cancer Research went into desktop virtualisation in a big way, using Cisco and VMware. We had a lot of new technology being thrown at people in one go – a new building, new datacentres, new virtual desktop. That is a lot of change in a short period of time.”

The way to handle the change was to first make tweaks in network performance to ensure the VDI would handle user volumes, as well as getting people used to the idea they were not going to have a desktop any more, but a unit on their desks – and that no data would be managed by them.

“The VDI concept was great for IT, as it improved data management and security, but it takes users a while to get used to,” says Hensher. “We are now in a stable VDI environment, some people like developers still use laptops, mainly because they need high-spec processing, but increasingly they won’t need that as the VDI platform is fast catching up with the processing power of laptops.” ■

This is an edited version. Click to read the full interview online.

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Government IT reform has but two years to ensure a lasting legacy

The next general election comes two years from this week. Unless the coalition collapses, the election date is fixed and that means there are just 24 months left for IT reformers in government to make their changes equally immovable before the political will behind them dissipates.

They have a lot to do.

In the three years since cabinet office minister Francis Maude set about the IT oligopoly of big suppliers that dominated Whitehall IT, much has been achieved.

We have a mandatory open standards policy; the first ever preference for open source built into the Digital Strategy; a cloud-first policy, through the G-Cloud; and significant savings made from existing, long-term contracts with that oligopoly. Just last week, all government departments completed their move to the open-source, agile-developed Gov.uk website.

But it would be easy for critics to claim that it would not be difficult to see a return to the bad old ways if the political clout enforced by Maude were to disappear.

The big system integrators are quietly confident the irresistible force of change will not become an immovable object. Several big outsourcing deals come up for renewal between now and the election and it will be instructive to see whether they will be extended.

Already advisors close to government CTO Liam Maxwell are forging links with Labour in the hope of gaining cross-party support to ensure the reform process can continue regardless of the electoral victor.

But the biggest challenges for reform lie ahead.

A static, informational website is one thing but online transactions are another. The flagship of "digital by default" was to be Universal Credit, yet many of its digital initiatives, such as identity assurance, have been stripped out. And open standards have yet to be tested in a major project.

But there's an undeniable buzz around Whitehall IT and the digital reforms, and that in itself is a measure of the achievement so far. The target has to be that, by 7 May 2015, we no longer call these "reforms" but business as usual. ■

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Why IT contracts are bound to fail

Archaic principles are still driving modern contracts and are unsuitable to a dynamic IT environment. Susan Atkinson and Gabrielle Benefield report

For too long the poor track record of IT projects has been blamed on the suppliers or the project management. The contract model has been largely ignored.



project starts; and, secondly, that nothing will change before the product is built.

However, traditional contracts are based on outdated principles that can be traced to the Industrial Revolution. They are ill-suited to today's dynamic and consumer-driven business environment. And the effects are disastrous.

As a result, the contract encourages the parties to embark on an exercise that is bound to fail. And to compound the problems, the contract fails to respond adequately to changing conditions.

This is of concern not just for IT projects which have been outsourced to an external provider. Even where a project is resourced internally, the organisation tends to set up quasi-contractual relationships between its internal departments for the purchase of IT services. And we find the principles of the contract model in evidence here too.

BUSINESS RISK

The business risk, overlooked by the contract, is far more serious.

Traditional contracts require the customer to specify all the requirements for the product upfront. These are developed in a single pass using the discredited waterfall model. If any changes occur during the development process, they are regulated by the formalised change control mechanism and require an amendment to the contract.

There is no attempt to link the resulting product to the business outcomes that the customer wishes to achieve. It is not uncommon for the supplier to build the "wrong product". It successfully executes against the contractual requirements, but the customer is still disappointed because the product does not do what it needs it to do.

In its desire to create certainty, the contract model courts dysfunction and increases the risk of the project failing. This risk can be categorised into three types: delivery risk, business value risk and existing business model failure risk. The contract model ignores the second two categories and actually increases the risk in all three categories.

To make matters worse, the single pass approach means the supplier builds the full product straight away, without learning along the way what the customer actually needs.

EXISTING BUSINESS MODEL RISK

The existing business model risk is arguably the most insidious of the three risk categories.

DELIVERY RISK

The focus of the contract is on getting it right first time, on time and in a narrow margin of error from the original budget.

The contract does not address how the new product will be assimilated into the customer's existing business operations. For many organisations, it is simply not realistic to launch the entire new product all at once. The risk of any of the customer's existing business processes falling down under the enormity of the change is huge.

No one can predict all of the requirements for the product before the project starts. This assumes, firstly, that the customer knows precisely what it needs and the supplier knows exactly what to build before the IT

The traditional contract model for software development is in need of a total overhaul. With our increasing dependency of IT and escalating costs of IT spend, an overhaul cannot happen soon enough. ■

Susan Atkinson is a consultant solicitor at Keystone Law and Gabrielle Benefield is a coach at Evolve Beyond.

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HOW IMPROVED USER EXPERIENCE YIELDS RETURNS ON INVESTMENT

The consequences of poor customer experience are widely acknowledged but resolving such issues still divides opinion in businesses, writes Chris Howard

User experience (UX) is most often seen as relating to e-commerce or at least public-facing websites and applications. Of course it is much more than that and not even limited to software. Physical devices of all types produce a UX and many companies invest a lot in it; such examples are found with Apple's iPod and Sony's PlayStation. One area far less talked about is UX inside the enterprise.

Large organisations the world over depend on software and that software is often developed internally for specific, internal purposes. The average enterprise employee will probably use numerous applications during the working day, all built especially for their company's needs. In many cases, those employees will tell you how poor those applications are to use and how that negatively affects their productivity.

So why is this and why do companies with such extensive resources fail to fix it?

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EXPOSING THE UX ISSUE

The primary reason is that organisations do not understand the user experience. They view what are fundamentally usability issues as problems of a specific business function. With the enterprise operating as a collection of almost autonomous cost centres, it is not surprising that this is how such problems are viewed.

Here is an example: Company X has a call centre which comprises the first point of contact for customers. The call centre uses a number of applications developed by the company's own development team, which produce a poor user experience. This results in slow call times; backlogs that leave customers waiting; customers being given incorrect information; and increased customer complaints.

Company X recognises these problems but views them as a failing in customer service. Of course customer service staff cannot solve the problem because only the internal development team can do that, by changing the applications. Customer service managers do what they can, which is usually to employ more people in the call centre to handle calls, support staff to help the people handling calls and more training. All of which costs money. You will often find in such organisations a small industry built up around dealing with what is basically a usability problem.

Not only has customer service spent more money but it has not really addressed the issue. Calls are still taking too long, customer satisfaction is still low and their complaints too many. Company X has spent money to deal with the symptoms but not the root cause.

Let's look at this example further and the implications of poor usability. Consider the negative impact on sales, from both new and existing customers, caused by the poor customer experience and the impact on the company's reputation or brand. Company X may put more pressure on call centre staff and that can lead to extra head count churn with the attendant knock-on effect on human resources costs. Poor standards of data collection by those taking calls can lead to incorrect strategic business decisions taken, with long-term implications for costs and profitability. The picture now is of a problem that is not specific to a function of the organisation but a problem of the organisation.

IT OWNING UX

These problems will most likely feed back to the IT department, which is in a position to address them. Of course IT decision-makers need to recognise the root cause as being poor UX and decide to do something about it. Critical to this is the department's understanding of the importance of UX and the value it brings to the business.

IT departments are under threat with the growth of cloud-based services and the proliferation of groups in large organisations buying in such services without involving them. One of the key drivers for this behaviour is the UX provided by such applications. Employees are far less accepting of bad experiences now they use so much software in their personal lives – from social networks to internet banking – that provides great usability.

The IT leaders must recognise this and take ownership of UX. In so doing, they can realise the value of UX to the business and fend off the bring your own device culture. Let's say this

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happens, what is next? With each function operating as its own cost centre and with its own budget, who is going to pay for a UX programme? IT will claim it has built an application that meets the requirements set and does not want to pay for a UX programme that will raise its costs, even if it makes customer service more profitable. This is especially the case where IT acts as a service provider to the business and must keep its provisioning costs down.

The solution lies in a cross-departmental approach where cost is shared or allocated separately to the departmental budgets of those who will benefit from the solution. At Company X, customer service, sales, human resources and IT can all expect to see a positive impact from UX.

THE REAL VALUE OF UX: IMPROVING PROCESSES

So how does such a programme get up and running in this environment?

The first issue is typically to address how UX is viewed in the organisation. Too many people still see it as a creative service and related solely to functions such as marketing communications. For public-facing websites that can be fine, as marketing communication functions are familiar with design and creative processes and how they benefit the business, mainly in sales and brand promotion. UX is not design and, for the purposes of internal business applications, the definition is vital. UX is about making a change to software-led processes to improve their efficiency and effectiveness (as outlined in the usability International Standard ISO 9241-11).

In the IT world, UX should be seen as providing a business process improvement service. The definition of such a service is an approach aimed at improvements by means of elevating efficiency and effectiveness of the processes in and across organisations, terms that should be familiar to UX professionals.

However, it is important to see how UX changes the way business applications and processes work, such that it brings cross-departmental benefits. UX enables change in a business transformation programme – some could even say it represents the change itself.

UX-DRIVEN CHANGE

With the current market conditions it is not unusual to find that applying the labels “change” or “business transformation” is the only way to get any new programme up and running. Businesses are keen to change the way they operate to push down costs and increase profitability, given the low levels of market growth being experienced in most industries. UX does exactly that, through improving efficiency and effectiveness, as well as enhancing employee and customer satisfaction.

From the example of Company X, it becomes clear how an investment in UX can realise returns across multiple business functions. With a return on investment of 6:1 or greater, it can be extremely appealing to any organisation.

So as someone in enterprise IT who sees the value of UX, presenting UX as an enabler of change in a transformation programme will help the IT leader achieve the necessary cross-departmental buy-in from senior stakeholders. This will be vital to get a UX programme running and especially when, as UX matures in the organisation, you start looking to implement a more holistic UX strategy. ■

“PRESENTING
UX AS AN
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HELP THE
IT LEADER
ACHIEVE BUY-IN
FROM SENIOR
STAKEHOLDERS”



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Chris Howard is co-founder of web consultancy Howard Baines

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THINKSTOCK

PUBLIC SECTOR BACKUP FINDS IT HARD TO KEEP PACE WITH CHANGE

Changing regulations and increased heterogeneity have brought new difficulties to an already challenging landscape. Antony Adshead reports

Nothing struggles to keep up with change in IT more than backup and data protection. Public sector backup strategy is a complex beast that must operate in large and heterogenous IT environments, amid ever-increasing compliance requirements.

Over the course of a mere decade, backup and data protection built on the best practice of the time has soon begun to look like an artefact from the distant past.

And in the public sector this has been particularly acute, as generations of backup strategy have been layered on top of each other then come up against the drive to virtualised environments, contemporary disaster recovery and legal and regulatory compliance.

First there was tape. You backed up to it at main offices. You did the same locally at remote sites and, if something went wrong, maybe there was someone who could fix it, otherwise that day's work went unprotected.

Hopefully the tapes got taken off site too, but in many cases they didn't and if disaster ever struck there was no way to get your data back.

And what backup product was in use? If you were lucky, it was just one - at one main office. More likely there were more, perhaps the legacy of organisational consolidation where new and remote sites brought their own backup strategy into the mix.

The result was often a dizzying array of backup methods and products, each demanding

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different skills, onerous administration demands and their own quirks and failures. Hopefully, you were – or are – on top of all this and getting everything backed up outside production hours.

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COMPLIANCE AND VIRTUALISATION COMPLICATE BACKUP STRATEGY

During the past decade, the effects on data protection of legal and regulatory compliance have become ever greater. No longer can effective backup and disaster recovery be an after-thought.

Now the Data Protection Act, the needs of legal e-discovery, credit card privacy requirements and Freedom of Information requests, among others, demand a first-class data protection and backup strategy, in which you must be certain of backup and recovery effectiveness across redundant sites. To add to this, the virtualisation revolution has sent shock waves through the datacentre and backup strategy that continue to this day.

Virtual server backup has undergone a rapid and confusing evolution. Backup for virtualisation market leader VMware quickly cycled through several iterations of best and not-so-best practice – from an analogue of physical server backup with an agent per virtual machine, through the awkward two-stage process of VMware Consolidated Backup (VCB) to today's use of VMware APIs that is now supported by all mainstream backup product suppliers.

Besides VMware there's also Microsoft's Hyper-V, which has its own peculiarities in backup terms and is not supported uniformly by all backup software products. Then there are Citrix, Red Hat and other players with small percentages of the virtualisation market that have even less support among backup software suppliers.

All this makes for massive heterogeneity in the landscape in which backup strategy must operate. Newer data protection methods have supplanted predecessors while rapidly diversifying IT environments and increasingly stringent legal and regulatory compliance requirements have placed increasing demands on their effectiveness.

But now, effective backup of physical and virtual environments that achieves compliance is perhaps simpler than ever – on paper – while more difficult than ever in real life.

Where the environment lends itself to a relatively speedy consolidation, organisations have

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KENT POLICE QUICKLY UNIFIES BACKUP STRATEGY

Kent police last year completed a revamp of its backup strategy that saw multiple backup and recovery platforms including Asigra, CA ARCserve, Symantec Netbackup and Syncsort replaced with Acronis Backup & Recovery across physical and virtual server estates.

The result has been a reduction in the backup window from several days to 16 hours and data recovery times down to less than one hour from three days. This is in an environment of around 500Tb of data across a mix of more than 500 physical and virtual servers.

The force evaluated backup products that could do physical and virtual server backup from one interface with DR capabilities and granular recovery of files, said Andy Barker, ICT director at Essex and Kent Police.

"We required a tool that could back up all our infrastructure with one common interface and could support VMware, Linux and Microsoft platforms and also perform bare metal restores," he says.

Kent Police bought 140 Acronis Backup & Recovery 11 physical server licences and 25 virtual edition licences to back up around 20Tb a day from the virtual machine hosts and the VMs on them at its main datacentre and DR site using data deduplication functionality in Acronis that shrinks backups by up to 80%.

Kent police's experience demonstrates the achievement of best practice in backup strategy; achieving compliant data protection in a mixed virtual and physical environment from a starting point of very diverse backup arrangements.

It may also demonstrate what an organisation with an effective command structure and relatively few sites linked by adequate network connections can achieve.

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achieved the goal of a unified backup regime with best practices in disaster recovery provision quite rapidly. For many public sector organisations however, negotiating complex IT environments and the needs of legal and regulatory compliance means a longer path.

STAFFORDSHIRE COUNCIL ON A LONG ROAD

Staffordshire County Council had to deal with a massively dispersed and a diverse IT environment. It has, nevertheless, made great strides from a heterogenous backup strategy environment to a unified physical and virtual backup regime, but still has decisions to make.

The council has 10,000 IT users and delivers web apps, electronic document management, SAP, Exchange and office software from two sites in Stafford to hundreds of council offices throughout the county.

Currently, it is part way through a major infrastructure refresh that will consolidate to mostly Microsoft Hyper-V on Cisco UCS servers and NetApp storage at one primary datacentre at Eastgate Street in Stafford linked to a secondary disaster recovery site at the Kingston Centre, just outside the town, via a 20Gbps link.

But in terms of backup strategy this refresh marks only the latest stage on a journey that stretches back several years and is set for completion in the next year or so.

The council consolidated to IBM Tivoli Storage Manager (TSM) in 2005 from an environment where many backup products were in use, including Veritas BackupExec and CA ArcServe at its main centres with dozens of local backup solutions at remote sites.

Paul Hewitt, infrastructure manager at the council, said: "There were big advantages in consolidating to TSM. Working with so many backup products and solutions meant we had technical difficulties in backup and recovery, infrastructure failures and costly support and maintenance. We just wanted to make it all easier to manage."

Now the council is on TSM version 6 with full monthly backups and uses Predatar, a backup analysis and reporting tool from Oxfordshire-based supplier, Silverstring.

But, despite consolidating onto TSM, Staffordshire council has still to bring all backups under its wing. TSM can do virtual machine backup but the council is yet to utilise that functionality. Currently virtual machine backups are carried out by Microsoft Data Protection Manager for Hyper-V and using vSphere Data Protection in VMware.

Clearly there are disadvantages in running multiple backup environments and the council is undergoing a revision of backup strategy to overcome that. The discussion is not completed but key aims include placing TSM at the centre of the backup strategy, including for virtual machines, with some data still going to tape.

Hewitt's team must also consider newer methods of backup, namely disk-based, for use cases where quick recovery of data is at a premium.

"We want to bring management of backups into one environment and at the moment we're still working with backups within Hyper-V and VMware. We will move to TSM as the exclusive backup tool and we will still use tape in some cases. But we have to decide now to what extent we will use, for example, NetApp's SnapMirror and Hyper-V Replica to backup to disk." ■

"WORKING WITH SO MANY BACKUP PRODUCTS AND SOLUTIONS MEANT WE HAD TECHNICAL DIFFICULTIES IN BACKUP AND RECOVERY, INFRASTRUCTURE FAILURES AND COSTLY SUPPORT AND MAINTENANCE"

**PAUL HEWITT,
STAFFORDSHIRE COUNTY COUNCIL**

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CIO TURNOVER DELAYS LEGACY IT UPGRADES IN BANKS

HOW ANALYTICS SPEEDS FRAUD INVESTIGATIONS

CANCER RESEARCH USES TECHNOLOGY TO INNOVATE

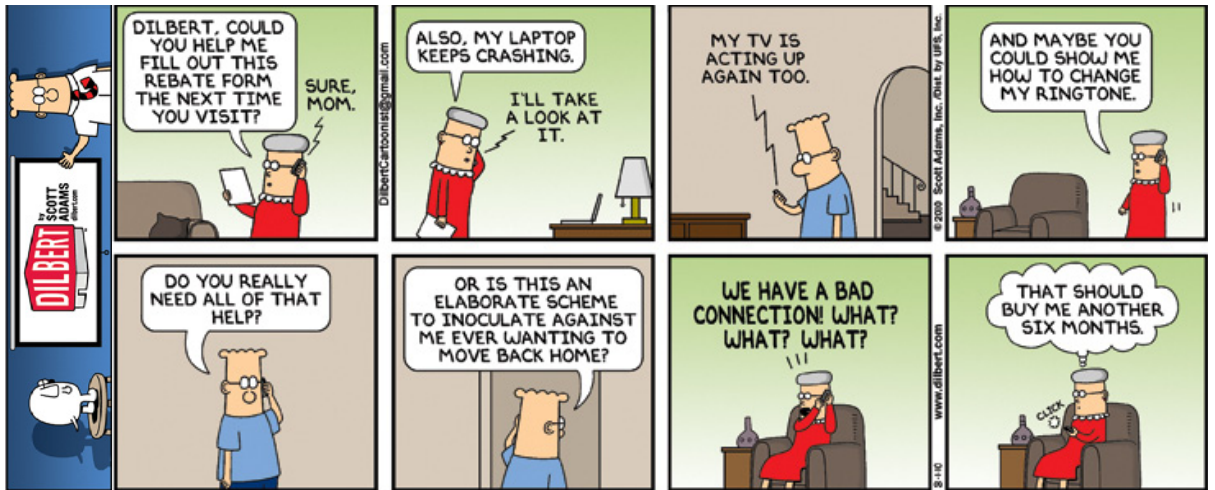
EDITOR'S COMMENT

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DOWNTIME



A case of mistweeted identity

When the immediacy of Twitter clashes with the “passion” (other words are available) of sports fans, there’s a recipe for delightful mix-ups.

In January 2011, American Ashley Kerekes (@theashes) was bemused to find herself on the receiving end of a lot of banter between English and Australian cricket fans. To this day her Twitter profile still carries the memorable lament, “I’m not a freaking cricket match!”

On 14 April, Olympic cyclist Chris Hoy tweeted, “I guess Chris Foy’s having a shocker again today” – a reference to him regularly being mistaken for the Premier League

referee who is very unpopular in certain parts of north London.

But, the new kid on the sudden Twitter celebrity block is 52-year-old Indian IT consultant Ravi Visvesvaraya Sharada Prasad (@rvp), who found himself bombarded with messages when Robin van Persie scored a hat-trick to secure the league title for Manchester United on 22 April. Prasad’s attempts to clear the confusion did not slow the messages, but his witty responses have made him a Twitter sensation in his own right.

However, Downtime hopes Prasad was armed with fully-charged phone and tablet when van Persie returned to his old club Arsenal last month, on what was no doubt a rather busy day. ■



THINKSTOCK



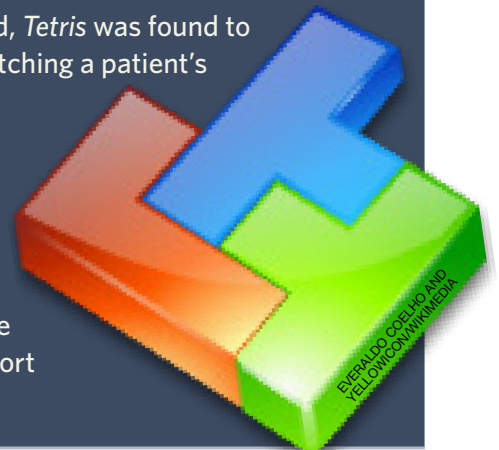
THINKSTOCK

GIVE LAZY EYES THE TETRIS TREATMENT

Canadian doctors have discovered that playing the video game *Tetris* can be used to treat a lazy eye. During an experiment, in which 18 adults participated, *Tetris* was found to be a more effective treatment than the traditional method of patching a patient’s good eye to make the weak eye work harder.

The study found that the puzzle, where players have to fit different shapes together to clear a row, could relieve children of the trauma of wearing an eye patch.

One of the *Downtime* crew, who spent most of her childhood playing *Tetris* – and still plays the game to this day – said that while her lazy eye had not been cured by the game, it might have been a lot worse had she not dedicated so many hours to the sport during her youth.



ERIALDO COELHO AND YELLOWCONK/MEDIA

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