

# TOUCH

"Cloud creates new possibilities and new efficiencies, and will be a driver for growth in the public sector for the foreseeable future"

**Stephen McGibbon, Microsoft**

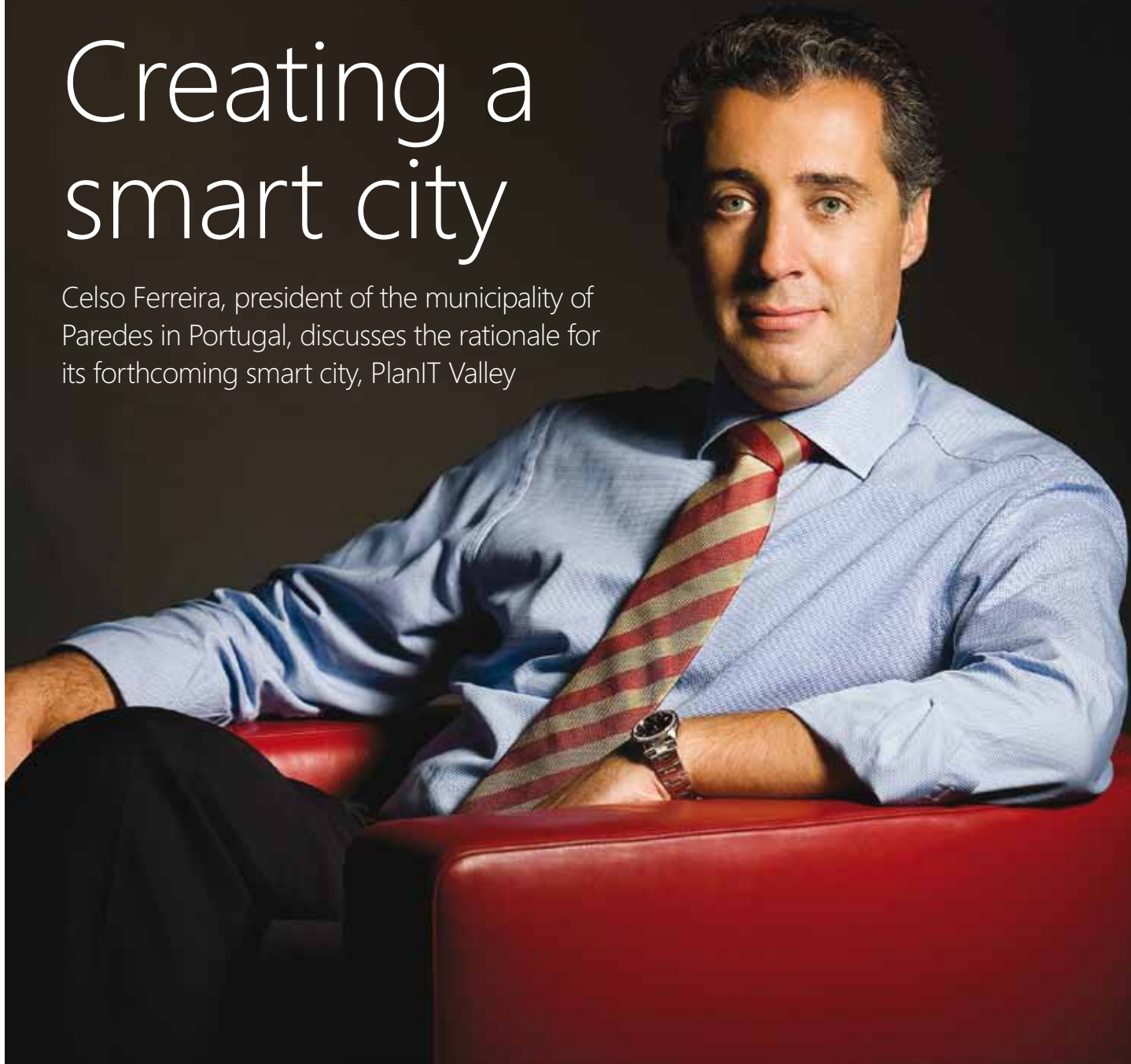


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## FOREWORD SPRING 2011

# To the skies

Welcome to the first edition of *Touch*, created specifically for the public sector in Europe, the Middle East and Africa.

With *Touch*, we aim to bring you the latest news and insights into the incredible potential of Microsoft technology for those tasked with delivery of innovative services within the fields of government, healthcare, public safety and national security. We'll also be showing you exactly how technology is being leveraged by our ecosystem of partners to present public sector agencies with leading-edge services and solutions.

The public sector stands at a point where challenges have never been greater. In a connected world, where the expectation is that citizen services should take full advantage of technology to open up new forms of user experience for the citizen at large, every single element of the public sector is also having to face-up to the harsh realities of our current financial landscape. The question on everybody's lips right now is "how do I offer more while spending less?", and here at Microsoft we're confident that we have an answer to that question.

With the advent of our move to cloud computing, Microsoft is opening up entirely new ways of working to the public sector, with potential levels of efficiency, flexibility, security and, above-all, affordability, which will lead the market and drive profound change in the way the entire sector works. Add to this the passion and commitment being demonstrated daily by our partners, and the future looks brighter than one might suppose.

With *Touch*, we're looking to bring you compelling illustrations of the ways in which our technology can be an agent for change, with real and tangible examples of Microsoft and our partners working alongside public sector practitioners committed to enriching the communities for whom they work.

I hope you enjoy the issue.



Niels Soelberg  
VP Public Sector EMEA  
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# TOUCH

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## HP joins Clinton initiative to tackle infant HIV in Kenya



The Clinton Health Action Initiative aims to improve testing and treatment for infants exposed to HIV

HP has formed an alliance with the Clinton Health Access Initiative (CHAI) to improve testing and treatment of more than 120,000 infants exposed to HIV in Kenya each year. With support from CHAI and the Kenya Ministry of Public Health and Sanitation, HP is providing technology that will capture, manage and return early infant diagnosis (EID) HIV test results within a day or two. This is a significant improvement on the previous paper-based system, which took

two to three months. The faster turnaround time dramatically improves survival rates for infants diagnosed with HIV, allowing them to receive early anti-retroviral treatment (ART).

"Our efforts with CHAI and the Kenya Ministry of Health demonstrate the critical role technology can play in improving access to healthcare worldwide and driving positive change for millions of people," remarked Léo Apotheker, president and chief executive officer, HP.

As part of the programme, HP is supporting students from Strathmore University in Nairobi, Kenya, who have developed a database application that uses cloud computing to improve the tracking process and make test results available online, as well as via SMS/GSM-enabled printers in real time.

The HP Office of Global Social Innovation has completed the installation of two data centres in Nairobi at the Kenya Medical Research Institute (KEMRI) and

the National AIDS/STI Control Program (NASCO) headquarters. Three additional sites will go live next year. The US\$1 million HP investment includes servers, storage, PCs, networking equipment, SMS-enabled printers, and local IT training and support. All aspects of the initiative run on Windows, using Microsoft Windows Server Enterprise 2008, Team Foundation Server 2010, Microsoft Visual Studio 2010 and SQL Server 2008.

## New BI service comes to hospitals



Dell and Microsoft are collaborating to improve hospital patient information

Dell is collaborating with Microsoft to develop a subscription-based analytics, informatics and business intelligence (BI) solution that will provide community hospitals with a consolidated view of patient information. The BI offering is aimed at helping further promote compliance with local and regional reporting requirements. It will combine the Microsoft Amalga health intelligence platform with Dell's cloud infrastructure and informatics, analytics and consulting services. This is the first time the Amalga platform will be available as a cloud

service. Dell's BI solution will provide hospitals with a quality indicator system (QIS), which is designed to deliver advanced alerts and reduce the likelihood of missing metrics.

The QIS will capture data as a patient enters the hospital, determine which quality measures apply to the patient, and enable the hospital to track and measure compliance to those quality metrics throughout the patient's stay. It will also simplify quality-of-care reporting required for maximum health insurance reimbursement.

## E-mail for connected healthcare

As pressures increase on governments to reduce the cost of health provision, Microsoft's HealthVault solution has won accolades for revolutionising communication within the healthcare system. HealthVault builds on the success of the Direct Project, a protocol that uses e-mail as a secure way to share health information.

In February, Microsoft released a new HealthVault functionality that allows every HealthVault account to use online encrypted patient e-mail based on Direct Project security rules. Initially, this will enable physicians

to transmit a copy of a patient's clinical information to a new e-mail address created within HealthVault. This information can be read or saved to a patient's account to build their personal health record.

In future, Microsoft expects to make this functionality available to providers and to enable secure messaging for consultation between medical personnel and for transfer of patient records. These functionalities will release data that was previously trapped in unconnected systems.



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## Microsoft drives cloud innovation in Brussels



The Microsoft Executive Briefing Center in Brussels facilitates technological innovation for the public sector

Microsoft has launched a new platform for sharing technological innovation and engaging more closely with European government officials, public sector and education customers, and industry partners.

Located in Brussels, the Microsoft Executive Briefing Center for European Innovation (EBC) promises many benefits for the company and its partners. EBC is designed to allow Microsoft and its European partners to showcase innovative technology solutions that enable governments and the education community in Europe to create richer and

more effective information technology infrastructures and services to benefit businesses, educators and citizens.

The EBC is divided into three distinct sections. The first, the Center of Excellence for Public Services and eGovernment Solutions, demonstrates strategies and solutions and shares best practices to help governments develop strong, sustainable information technology infrastructures.

The EBC's School Technology Innovation Center provides a hands-on demonstration and learning laboratory for educators,

allowing for sharing of innovative teaching practices and provision of information, training and equipment to enhance the use of information and communications technologies in classrooms and curricula.

Finally, the Cloud and Interoperability Center demonstrates strategies and solutions and shares best practices to help governments understand the concept of cloud services and interoperability and to implement cloud services solutions. The centre also provides a platform for discussion on key policy issues related to both cloud computing and interoperability.

## Large data centres promise big cost savings

Cloud computing brings the benefit of unprecedented economies of scale to IT operations. That's one of the key conclusions of a new whitepaper released by Microsoft that assesses the economies of the cloud for the public sector. The paper uses in-depth modelling and analysis to help assess the economics of the cloud and enhance understanding of long-term IT trends and what they mean for European governments.

In *The Economics of Cloud Computing for the EU Public Sector*, Microsoft argues that large data centres are 50 per cent more efficient than small ones. The whitepaper also says that pooling of computing resources can improve utilisation and reduce costs by half. In addition, multi-tenancy (multiple customers sharing the same application) can lead to cost savings of a further 20 per cent. The combined impact of these economies of scale can result

in long-term savings of up to 80 per cent when comparing large and small clouds. This allows government leaders to better deliver on key priorities such as fiscal responsibility, serving citizens and lower emissions.

The paper encourages IT leaders to partner with organisations that are firmly committed to the cloud and its opportunities.

The white paper is available to download at [microsoft.eu/cloudeconomics](http://microsoft.eu/cloudeconomics)



Local government, health and community safety organisations in the UK will benefit from proposed cuts to audit fees. **The Audit Commission in the UK** plans fee cuts of between 5 per cent and 20 per cent for qualifying organisations in 2011/12. The decision is linked to a reduction of costs arising from the transition to International Financial Reporting Standards (IFRS), which first applied to local government bodies in 2010/11.

**Microsoft's Worldwide Government Solutions Forum 2011** will be held in Rome, Italy from 6-7 April this year. Through presentations and roundtable discussions, attendees will examine the new challenges that the current economic climate brings to delivering effective citizen services. The event will also showcase a wide range of solutions from partners for the public sector and highlight the governments using them to deliver real benefits to their citizens.

Portuguese Microsoft partner **Vortal** has released statistics that show public sector procurement departments in Portugal are not only meeting but exceeding targets to conduct procurement electronically. According to the report, nearly all Portuguese public procurement above EU thresholds were carried electronically in 2010. Public contracting that year accounted for about €11 billion, involving 79,739 procedures (covering tender procedures performed through electronic platforms and direct agreements notified to the BASE Portal). Out of €3.8 billion related to direct agreements alone, €1.1 billion was awarded through electronic platforms.

The **Third Annual Cloud Computing World Forum** will take place in London on 21-22 June 2011. The forum, which will feature all of the key players within the cloud computing and software-as-a-service (SaaS) market, will introduce and discuss cloud options and consider future trends for the ICT industry. Attendance is free at the forum, which will feature more than 120 speakers and showcase the global cloud computing and SaaS industry.

## Public sector sizes up Dynamics CRM Online



Microsoft CEO Steve Ballmer launched Dynamics CRM Online in January 2011

The release of Microsoft Dynamics CRM Online promises cost reduction, better citizen engagement and increased transparency for governments using the new cloud-based customer relationship management (CRM) services. In January, Microsoft CEO Steve Ballmer launched the solution, which can be tailored to help government agencies attain flexibility, scalability and cost savings in the cloud, in addition to improved access to real-time data. It enables greater efficiencies in many government activities, from grants management to Freedom of Information Act requests and intra-agency tasking. Users benefit from mobile access to their information and advanced user personalisation.

"Often, our government customers' first experience with the Microsoft Dynamics CRM Online platform sparks the imagination and appetite to tackle other business challenges," said Amir Capriles, senior director for Public Sector at

Microsoft. "The return on investment is realised very quickly due to the ease of user adoption and the ability to invest once and leverage the many applications available to government."

Several Microsoft partners and customers are already building customised solutions using Dynamics CRM Online to address key challenges facing government agencies. One of the tailored products to be launched is Microsoft's Grants Manager Accelerator, an application that helps government agencies streamline the grants process from initial solicitation through application, review, scoring, award and progress reporting. Jim Townsend, president of InfoStrat, and one of two partners who helped Microsoft build this solution, remarked, "The availability of Microsoft's Grants Manager Accelerator on Dynamics CRM 2011 will transform how agencies manage, review, process and track billions of dollars of government grants."

### Dates for your diary

6-7 April 2011 – Rome, Italy  
**Worldwide Government Solutions Forum 2011**

12-14 April 2011 – Krakow, Poland  
**eris@ Annual Conference 2011**

13-14 June 2011 – London, England  
**4th Annual Data Protection in the Public Sector Conference**



## Polish EU presidency partnership

Microsoft Poland has been chosen as official partner of the forthcoming Polish presidency of the European Union. A Partnership Agreement and Declaration of Co-operation was signed in January by Microsoft Poland general manager Jacek Murawski, Microsoft's general counsel and senior vice president of Legal and Corporate Affairs Brad Smith, and Polish deputy foreign affairs minister and secretary of state Mikolaj Dowgielewicz, who is responsible for the Polish government's preparations for the presidency.

The agreement commits Microsoft to supporting the Polish EU presidency with time-limited lending of software (Office 2010 and Windows 7 licenses) as well as with joint communication and promotional activities.

EU presidency presents significant logistical challenges, but Microsoft is well positioned to help the Polish government, having previously supported and co-operated with the EU presidencies of Spain, Czech Republic, Slovenia, Portugal and the current holder of the title, Hungary.

## EU data security framework top of the agenda in Paris

In January, Brad Smith, general counsel and senior vice president of legal and corporate affairs at Microsoft, met with government leaders and European policy makers in Paris to discuss key issues related to cloud computing.

He addressed customer concerns over privacy and security with cloud adoption, the role of industry in providing innovative solutions to address these concerns, and the necessary collective action required to modernise existing regulatory frameworks and provide greater legal certainty for cloud services.

A central question he tackled was whether enough action is being taken to create a coherent EU-wide framework governing the flow, use and protection of data stored in the cloud.

Smith said that there were three ways in which governments could help innovation: providing better legal certainty for companies providing cloud services, creating a new generation of laws and regulations that are focused on outcomes, and enhancing the ability for data to cross borders.

"The need for legal reform is not something that should be considered separately on a country-by-country, or even continent-by-

continent basis," said Smith. "The Internet is obviously a global medium. Cloud services are a global phenomenon. As a result, there's a real virtue and even need for governments to start to move their laws forward more closely together."



## Harnessing citizen power for climate research

Microsoft Research has teamed with the European Commission to support an Oxford University project in which citizens will gather weather data on their computers. The information produced (using a regional climate model developed by Microsoft Research and able to run on personal computers anywhere) will help scientists track regional and local weather events caused by climate change.

The 'Weather at Home' project will produce three regional climate models – Southern

Africa, Europe and Western United States – to provide information on weather events in finer detail than is typically provided by global models. Scientists specialising in the climates of each region will analyse the results.

The international five-part study will allow researchers to better understand the implications of global climate change, said Tony Hey, corporate VP, Microsoft Research Connections. "Microsoft Research is committed to helping solve tough societal challenges, like climate change, through data-intensive

research. The 'Weather at Home' project is a great example of how you can use technology to involve and engage people in this imperative research. 'Crowdsourcing' is being brought to support serious academic research."

Because the project relies on the engagement of volunteers, it is natural that it will take advantage of the trend toward social networking, he added. "It's been a successful and collaborative project and we're hoping this evolution will further our understanding of global climate change."

£18.27bn  
The amount that public sector ICT spend will top by 2015-2016, with strongest growth in outsourced and managed services.  
Source: Kable

**Microsoft COO Kevin Turner** recently visited customers and partners in Milan to discuss the benefits of Microsoft's cloud computing technologies. Joining Turner in the conversation were CIOs from two Microsoft cloud services customers, Giulio Siccardi of **Bambin Gesù Hospital** and Marco Rulent of **European University Institute**. The group discussed how the cloud increases the ability for organisations of all sizes in the public sector to remove barriers to IT usage.

Police forces are part of an emerging trend towards adoption of **shared services** for IT in government departments in the UK. Cheshire Constabulary recently announced its decision to opt for shared services, to include finance, payroll and procurement, asset management, logistics, analytics, document management, service management and enterprise content management. The country's National Policing Improvement Agency is supporting this move, and the framework will be available for all forces in the UK.

Findings from an ongoing EU-wide consultation on the use of **public sector information (PSI)** will be discussed at a meeting of the **European Thematic Network on Legal Aspects of Public Sector Information (LAPSI)** in Milan. The event, which will take place on 5 and 6 May 2011, will look at how technology can enhance PSI re-use. The first LAPSI Public Conference, PSI at the Crossroads, will take place during the meeting.

The annual **eris@** conference will be held in Kraków, Poland over 12-14 April and will introduce its members to an entirely new event format. Delegates will attend workshops that not only define the current and future state of the European digital agenda but will also focus on imparting practical skills required to move regional resources from the relatively safe environment of policy development through to final implementation and beyond.

## EU supports mobile growth

Neelie Kroes, vice president of the European Commission responsible for the Digital Agenda, is calling for member states to increase their investment in regional broadband networks.

Speaking at the 2011 Mobile World Congress in Barcelona on 14 February, Kroes said that the Digital Agenda had set ambitious targets for fast and super-fast broadband coverage and take-up in the region. She urged Europe to act fast, fearing it will continue to lag behind its international counterparts if action isn't taken soon.

"The domain we can influence most directly is our networks, and if we do not get that right, the future for all digital business in Europe will be bleak," she argued. Now that the Commission's proposal for a Radio Spectrum Policy Programme is on the table, she said the mobile sector must play a role in conveying the importance of this policy to member states and to the European Parliament. Authorisation conditions conducive to the rollout of broadband in a competitive environment should be applied in a coherent manner across Europe, she added.

A pan-European inventory, Kroes explained, would reveal common trends, show potential socio-economic impacts of policy changes, identify bands where greater efficiency is possible and help to match future

needs to the right frequencies.

Kroes also criticised high roaming charges within the EU, following a Microsoft consultation on the subject. "Most stakeholders believe that competition is not yet sufficiently strong. Wholesale data roaming charges have fallen significantly but consumers aren't seeing that matched in lower retail prices."

Initial indications from the consultation suggested strong support for continuing price regulation, added Kroes. "Proposals for price regulation vary from the current model of price capping to other approaches involving direct links between roaming tariffs and actual domestic prices."

She said competition might be stimulated by allowing customers to easily purchase roaming services independently of other mobile services. Another idea was to further increase the level of retail competition by mandating wholesale roaming access to allow the emergence of new pan-European roaming operators.

Kroes also said that, regarding the possibility of establishing a trading market for roaming services, most respondents also doubted the effectiveness of wholesale options such as exchange trading.



Neelie Kroes called for industry input and assistance to improve European mobile networks

## Windows Azure datacentres to help Fujitsu deliver services to UK citizens

Fujitsu is to open the first UK-based Windows Azure data centre, as part of a cloud computing partnership with Microsoft. The company plans to introduce Azure capabilities in its Stevenage Tier 3 data centre in the first half of 2011, allowing British software providers to migrate applications into Azure. Work has already begun on replatforming services for trial customers. This follows a partnership formed between Fujitsu and Microsoft in July 2010, aimed at joint provision of services and hardware for Windows Azure. Andrew Braban, chief technology officer in Fujitsu's applications division, commented: "This announcement says for us that we're very clearly aligned with Microsoft."

Fujitsu recently signed a Memorandum of Understanding with the UK Government to help tackle the UK deficit. The agreement was reached following discussion with Minister for the Cabinet Office, Francis Maude, as well as the Efficiency and Reform



Fujitsu's data centre was announced at The Government Leaders Forum in November 2010

Group and Government departments. Roger Gilbert, chief executive officer, Fujitsu UK and Ireland, commented: "With the signing of this agreement we are looking forward

to continuing our partnership with the UK Government through successfully exploiting technology to deliver ever more effective public services for the benefit of UK citizens."

## Dutch prosecutions office outsources to Atos Origin

The Office of Public Prosecutions (OPP) in the Netherlands has outsourced the management of its IT infrastructure to Atos Origin. The five-year contract marks the first phase of the OPP's outsourcing strategy and includes the management of around 6,500 workstations (fixed and mobile), office automation, VoIP and hosting services.

The architecture features Windows hosting, using Windows 7, Office applications, Exchange and SharePoint, with Microsoft Management tooling. The project's Roadmap for Unified Communications is Lync-based.

Organised nationally with branches across the Netherlands, the OPP ensures that criminal acts are investigated and prosecuted. Atos

Origin won this European tender on the basis of quality, strategy and price. "This contract puts the OPP in the position of being able to make substantial savings in IT management and to drastically improve the performance of its IT systems," said Henk van Brummen, CIO of the Office of Public Prosecutions. "The OPP has a future-proof infrastructure which complies with very high standards in security, availability, innovation and flexibility. In Atos Origin, we have found an IT service provider that can deliver these improvements without disruption to our service."

Rob Pols, CEO of Atos Origin in the Netherlands, said the contract would enable his company to further strengthen its position

in the government sector, which is a significant growth market in the country. "Our efforts will be concentrated on managing and improving the OPP's infrastructure while ensuring that our IT service contributes to a reduction in operating costs."

Atos Origin has already begun to take over management of the IT infrastructure. It will implement its Adaptive Workplace services, which combine legacy, utility-based and cloud infrastructure so that any application can be used anywhere and on any device, as well as Atos in a Box, Storage on Demand, Cloud Infrastructure Service and Application Technical Management, which utilise virtualisation and encryption, amongst other things.



## TfL moves to Microsoft Azure cloud

Transport for London (TfL) has moved its Developers Area and new Tracknet data feed to the Windows Azure platform. This is the first major step forward in TfL's comprehensive digital strategy and open data policy initiative. Tracknet provides a real-time display of the status of the London Underground network, displaying the locations and destinations of trains as well as the status of individual trains at any given time. Data feeds are taken from TfL's servers and made available to developers and the public via the Azure platform.

The Developers Area contains TfL's data feeds and allows developers to create applications for mobile and other devices for use by the public. Feeds available include information on the location of cycle hire docking stations, timetable data and real-time traffic and roadworks information throughout the entire TfL transport network in and around London.

Mark Taylor, director of Developer and Platform Evangelism at Microsoft UK said: "TfL asked for a system able to handle in excess of seven million requests per day, as well as being able to scale to handle unpredictable events like snow days. Windows Azure is ideal for this kind of task and provides a great basis for the programme of innovations that TfL has planned over the coming years."



## St Andrews chooses brightsolid e-enablement solution



The University of St Andrews will benefit substantially from its new Exchange mailboxes

Scottish IT services company brightsolid has won a five-year contract to provide 5,100 mailboxes for all staff and postgraduate students at the University of St Andrews. Installation work has begun on the hosted mailbox contract. The secure system allows users, including all academic staff, to manage calendars, e-mail and directory services at their desks, remotely or via mobile devices.

"This is a prestigious and important contact for brightsolid, and it was won against intense competition from the industry heavyweights," said Richard Higgs, managing director of brightsolid Online Technology. "Staff at St Andrews need a solution that is suitable for a modern university, which in many respects is similar to a large company. I think the

university appreciated our understanding of the various end-user scenarios in which mailboxes will be used."

The installation is an early UK application of Microsoft Exchange 2010 in a hosted environment, and utilises the latest virtualisation technology.

"It is reassuring to know that the system is managed and monitored at all times, and university ICT staff can focus on delivering other business solutions as part of our ambitious e-enablement and ICT enhancement programme," said Steve Watt, chief information officer at the University of St Andrews. "The solution is already delivering significant benefits and easily integrates with our desktop and server environments."

## Keeping the cloud open

Open source cloud computing platform OpenStack marked its first six months in operation in January. The platform, launched by hosting specialist Rackspace and NASA, aims to tackle the threat of private cloud emergence. It has the support of more than 40 cloud computing industry leaders, including Microsoft,

which is working in partnership with Cloud.com to provide integration and support of Windows Server 2008 R2 Hyper-V to the OpenStack project. This solution provides organisations and service providers running a mix of Microsoft and non-Microsoft infrastructure with greater flexibility when using OpenStack.

## Kofax takes SharePoint to the next level for content management

**Document processing company Kofax is celebrating strong results after making some big changes to the company structure. Newly appointed chief marketing officer Martyn Christian, a veteran of IBM's UK and US content management divisions, talked to Touch about plans for the business.**

Based in California at the global headquarters of Kofax, Christian was in London in February to announce excellent half-year earnings on the London Stock Exchange (revenues are up 27 per cent and profit up 192 per cent). The conclusion of last year's move to sell off the hardware division will allow the company to invest further in its software operations.

Kofax is a globally managed Microsoft Gold Partner and over its 20-year history, the company has undergone significant change. With more than 30,000 customers worldwide, the business was purely channel-based until a couple of years ago, when the new CEO decided to grow the company substantially by creating a direct sales and services operation in partnership with the channel business.

The company has come a long way since its genesis as a document scanning and capture software company, benefiting from the rise of Microsoft SharePoint, which is now integral to much of its software. "We have a very broad set of products that allow customers to capture any sort of information coming into an organisation," said Christian. "This includes scanning and capture of Microsoft Office documents, high volume faxes, SMS, MMS and XML. It's eminently scalable – the way we handle those documents in a scanning and capturing process is easily met by the performance characteristics of the Windows platform."

Starting in the late '90s, Kofax integrated its scanning and capture capability into all of the major document and content management platforms, including FileNet, Documentum,

IBM, Oracle and Open Text. Initially, Microsoft was not a major target for this kind of integration as it did not offer an equivalent platform, but the release of SharePoint changed all that. Today, Kofax is closely aligned with the Microsoft vision for SharePoint. "From the research that we've done, about 60 per cent of our customer base have SharePoint and are deploying it actively in some capacity," remarked Christian. "It is the fastest growing content management platform ever – people see the value in it and there is huge opportunity."

Kofax research has identified three ways that people typically deploy SharePoint: as a smart file share; for collaborative applications to collate documents, projects, ideas, thoughts and websites; and as a content management platform.

Although the company can support all of these types of deployment, it's the third of these uses that is of most interest to Kofax. The value of the company's SharePoint solution has been proven in a major project for British Waterways, which needed help managing the one and a half million documents distributed throughout its system (including an asset management and maintenance system featuring a staggering 50,000 folders). Together with partner Deltascheme, Kofax has enabled British Waterways to dispense with much of this paper load, allowing remote workers to access documents from their laptops wherever they are. "This project is a great example of a Microsoft partner and a Kofax partner working together to solve a substantial problem. The solution is now a critical part of the British Waterways infrastructure," said Christian.

To date, the most enthusiastic adoption of Kofax implementations with SharePoint has been amongst local government agencies, cities, towns and county councils, he explained. "Multidisciplinary agencies and government entities are moving towards this type of



"SharePoint is the fastest growing content management platform ever," says Martyn Christian from Kofax

solution because it's cost-effective and runs on the familiar Microsoft platform."

Kofax plans to continue building its public sector portfolio during this time of unprecedented belt-tightening. "Even though budgets are being cut, money is available for projects that save money," said Christian. "Research on our customer base shows that return on investment for our solutions is less than 12 months. So over the next two to three years, it's our intention to focus heavily on cost-saving applications for both local and central government, alongside the affordable SharePoint platform."

See page 47 to read more about Kofax's SharePoint project with British Waterways





# Assurance: the new security

Organisations throughout the public sector can benefit from the technologies developed for groups where 'national secrets' are at stake. Robin King of Deep-Secure explains more

Development of secure information exchange technologies has so far been driven by the very specialised requirements of government security agencies, military forces and their commercial partners, particularly in aerospace and defence supply chains.

Now, however, the issue is becoming one of 'assurance' rather than 'security' as new customers emerge from other markets where the agenda is one of governance or compliance and information assurance has become a core requirement. These include the 'blue light' services, local authorities, health services and private sector organisations supporting public sector bodies.

All are looking to improve the way sensitive information and high-value data assets are secured while at the same time facilitating secure release of data via wireless laptop, mobile phones, smartphones and other handheld devices with e-mail capability.

This trend is taking place against a more stringent legislative background, with much heavier financial penalties liable to be imposed on those organisations which fail to meet their compliance and governance obligations.

A major consideration in serving compliance and governance requirement is the extent to which the culture of the organisations differs from the defence and security environment, but there are also ways in which the requirements are similar.

Where the civilian environment differs markedly is in the cultural dimension – involving people who do not instinctively think 'security' when handling information. Developed to support the defence and intelligence communities, our technology

is designed to enforce data sharing policy to a highly configurable level so that users are subject to built-in policies. Before they transfer the information, it will consider the question, through automated operational processes, of 'are you sure?' or 'no, you cannot perform this action'. So if the business itself is aware of data sharing policy obligations, then we can help users take responsibility for meeting those policies.

Deep-Secure has a flexible, responsive and collaborative approach to helping customers meet requirements for handling sensitive information.

It means that our technical expertise in the area of secure information exchange can be applied to networks on varying data sharing platforms at different levels to protect sensitive information, including e-mail, web and chat, all supported with the use of XML-based validation.

But the market for secure information exchange services has grown considerably in recent years to accommodate a wider range of organisations and environments. The focus for the Transglobal Secure Collaboration Programme (TSCP) is a good example of this.

The TSCP delivers standards-based interoperable specifications for controlled, secure information sharing between aerospace and defence contractors and also acts as a forum and focus for technical and international regulatory challenges.

Members of TSCP have unrivalled knowledge and expertise in developing products that meet global requirements in mitigating IT security risks within aerospace and defence supply chains.

The extension of military and aerospace programmes to include contractors in

“Where the civilian environment differs markedly is in the cultural dimension – involving people who do not instinctively think 'security' when handling information”

emerging economies across the world has opened up the market for information assurance to even more potential customers with a requirement to quickly and securely enable a global supply chain.

At Deep-Secure, we have a strong track record in providing such high assurance solutions where movement of protectively marked information across security boundaries must meet the most exacting standards, particularly in the world of defence and security.

Our products meet those requirements by providing: robust technology (EAL4 standard); policy-based on sender and recipient, defined to ensure a 'closed sharing environment'; support for the use of encryption to protect data on the move; formal use of protective markings of information to check for 'sensitive content'; and the ability to look for 'cleverly' leaked information based on content that is sent.

*Robin King is head of sales and marketing at Deep Secure and formerly a senior client manager within the QinetiQ Trusted Information Management team*



# Choosing which plates to spin

Effective IT can help manage the changes associated with cost cutting while improving control and satisfaction. Adam Collins discusses the benefits of a wider business focus

**The last eighteen months has demonstrated unprecedented change in the economy, and as a consequence, every tangible asset, process and member of staff is under scrutiny.**

With this change, some organisations will close, some will ride the storm and others will flourish. So what differentiates those successful and stable organisations from the rest and how do we start to turn the negatives into a positive?

The answer, quite simply, is by taking time to define what value means to your organisation and, more importantly, how and when it can be delivered. To help put this into context, it is worth dispelling some common misconceptions.

**Misconception one: Finance directors only have cost cutting on their mind.** Everyone has a responsibility to maintain an acceptable level of cost and/or value creation. The finance director is increasingly concerned with business value, its definition and what it means for the organisation.

**Misconception two: The smaller the organisation, the quicker and more intense the pain will be.** Whether you employ thousands of people across multiple countries or just a handful, change – whether cost reduction, mergers or delivering a new plan – will have the same impact. Mitigating this impact is critical to business sustainability and long term growth.

**Misconception three: Medium to large organisations cannot be agile.** It usually becomes increasingly difficult to retain agility and quick decision-making the larger a department or organisation gets, often solely on the number of people you have to consult before anything gets done. Personalities, organisational culture and leadership styles are some of the hurdles to overcome. However, with the right approach and

consistency in plan, it's possible to retain and improve agility.

So now we know that we all experience the same problems, how do we create a plan to resolve them? Well, the start of the plan must have some means of defining and measuring value.

The Business Grade Value Scorecard builds on the Balanced Scorecard framework that has been popular since the 1990s. The principles remain the same. Categorise those areas that both the business and IT agree upon to be in a position to baseline and measure on an ongoing basis. Historically, the business (outside of IT) has always been good at this. However IT, where more than two-thirds of the budget is typically dedicated to keeping the lights on, has a different set of challenges. A common model, where the use of technology can support both tangible and intangible value, is critical.

The scorecard areas (financial, operational efficiency, governance, customer satisfaction, innovation, agility and sustainable/green IT), are supported by metrics that help you reduce time effort and money, deliver customer satisfaction, market differentiation and innovation, and help control budgets, ongoing activity and your reputation. By understanding your perceived priorities in each area across both IT and the business, you are well on your way to having a consistent and understandable plan.

By very definition, the balanced scorecard equally supports both private and public organisations. Risual recently supported a leading police force in its objective to protect front-line policing from the impact of government cuts. Delivering immediate tactical cost priorities should never be at the expense of long-term strategic value.

Now we know what we mean by value and what we should measure, the next question is 'how do we deliver it?'

The last five years in the world of technology has seen some significant advancements, allowing previously complex requests from the business to be delivered in an integrated and sustainable way. Broadband availability, business social networking, communications tools, mobile devices, the list continues as adoption by both the old and new workforce increases exponentially.

This consumerisation of IT, coupled with new service delivery models such as cloud computing, creates confusion and further pressure on an already stretched resource that currently is bound by historical tactical investments in infrastructure, security and applications, in the days where buying point solutions to meet business demand was the norm. However, in contrast, today's reality is that cloud options and the building of flexible, standards-based architectures will allow the short, medium and long term requirements to be realised as part of a phased transition to a simpler world.

The easiest starting point is the acceptance that some things won't change. Organisations will continue to make demands on IT to 'maximise technology investments' and deliver 'more for less', but one thing is clear, spinning plates is all about balance. Deciding how and when you join the two worlds therefore is fundamental to the choice of plates to spin; there are those you need to keep spinning and those you simply let fall.

*Adam Collins, Strategic Consultant at Risual, is an expert on the business value of IT*



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**Commit; EIS** is the workflow management system for follow-up of diabetic retinopathy offering tools for sending invitations, re-scheduling, enrollment, worklist for cameras, ophthalmologist's report, follow-up and statistics.

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# VIEWPOINT

## CLOUD PERFORMANCE

Sven Hammar

Chief Executive Officer, Apica

# Reach for the skies

Public sector organisations face increasing demands for the uninterrupted delivery of online services. Sven Hammar from Apica explains how cloud performance services can help

Last winter was an extended nightmare for many public sector websites in Sweden. Harsh weather that never seemed to go away held the transportation infrastructure and its operators in a stranglehold. As if this was not enough, an Icelandic volcano then decided to throw some fuel on the transportation fire.

As weary travellers were desperately trying to find solutions to their problems, transportation industry websites started to shut down too, because of the massive traffic surge.

Swedavia, the country's largest airport operator, was prepared for this type of situation. It had implemented a cloud-based offload service, which could be activated at any time. When the ash cloud struck, Swedavia's web traffic was redirected, within minutes, to a cloud-based high performance delivery network, without logging a single second of downtime.

There are two things to emphasise. Firstly, a force majeure type of event in real life does not have to become a force majeure incident on your site. There are proven, ready-to-go solutions for these types of situations. It's only a matter of setting your service level targets and your delivery capacity to fit those targets – performance and cost – just like any other IT decision.

Secondly, web performance can be considered a service. Many seem to think that enhancements can only be achieved by making massive investments in software and hardware for their web hosting/application environment. But it is possible to add capacity, tune settings and monitor performance – all without adding a single piece of software or hardware to the web platform.

Apica takes a three-faceted approach to cloud services: sustain, enhance and service delivery.

**Sustain:** We help clients migrate to the cloud – with sustained performance. Concerns about performance in the new environment are addressed as we plan, test and monitor the client's web performance.

**Enhance:** We use the inherent flexibility and scalability of the cloud to take the client's web performance to new record levels.

**Service delivery:** Apica's own testing and monitoring services are deployed in the cloud. This means that we'll be able to create wildly fluctuating load test and web monitoring scenarios, mimicking the nature of today's volatile internet traffic.

Many of our clients have a Microsoft platform at the core of their web application infrastructure. We do too, and our experience in tuning and enhancing our own Microsoft-based, high capacity testing services helps us understand and identify the client's performance bottlenecks.

Nevertheless, today's websites are vibrant hubs of content, links and interconnected systems with a heavy reliance on third-party services and content. So even if your Microsoft platform is under control, the complete experience delivery to your end user might not be.

Web performance has moved far beyond measuring if a website is available or not. It has now become the question of 'under a particular condition, which component has become the weakest link in my delivery chain, how is it affecting overall performance and what action can I take to strengthen that link?'

At Apica we help organisations with high demands on uptime and availability to find a modular and granular approach to web performance testing and monitoring. We create test scenarios that mimic real user behaviour, such as logging in to an authenticated session on an e-government site. Often, tests reveal that a connection to third party services or content will be the limiting factor. A move to the cloud allows you to put yourself back in charge of your own web performance.

*Sven Hammar is CEO of Apica, a Microsoft partner that provides web performance solutions*

"Web performance can be considered a service. It is possible to add capacity, tune settings, monitor performance – all without adding a single piece of software or hardware to the web platform"



A sustainable smart city may sound like science fiction but, as Jacqui Griffiths discovers, it's quickly becoming a reality in Portugal

Something momentous is happening in the Portuguese municipality of Paredes. A 4,000 acre Greenfield site is about to be transformed into PlanIT Valley, a sustainable city where residents are completely connected to the services they need; where waste is processed and recycled on-site, generating energy resources to power homes and businesses; and where buildings can be erected within weeks, with technology built into their very fabric.

PlanIT Valley will provide a living laboratory that develops and showcases sustainable urban technology solutions. It will enable new approaches to design, construction, operations and maintenance, and set new standards for the integration and delivery of sustainable city technologies.

The journey to PlanIT Valley began when Celso Ferreira, president of Paredes, met Living PlanIT founder Steve Lewis. Given Paredes' close proximity to Porto's growing metropolis, Ferreira saw the opportunity to transform the municipality's economy by attracting more companies and sectors. Lewis was in Porto to look at a mobility project with Microsoft's then managing director of the Worldwide Automotive Industry, Manuel Simas. Inspired by the efficiencies the manufacturing sector has achieved through enabling technologies and the integration of Formula One sensor technology to create a truly interactive urban environment, they developed a vision of a smart 'technology city'. The PlanIT Valley concept was born.

"We saw tremendous opportunities in the business model Steve presented to us and in the relationship of Living PlanIT with anchor partners like Microsoft," says Ferreira. "Creating a living laboratory is a great opportunity to transform not only the local economy, but also to project this economic capacity in the global economy."

That business model entailed a Microsoft technology-focused approach that would enable a diverse and scaled network of partners to develop applications on an urban scale. "Our approach aligns strongly with the way Microsoft works, building underlying platforms and technology with a set of tools on top that enable developers from different fields to create innovative applications using their specific domain expertise," says Lewis.

For Microsoft, the venture held great potential. "PlanIT Valley presents an exciting canvas for a new generation of smart city applications built on the Microsoft Citizen Service Platform," explains Gordon McKenzie, government solutions



"Creating a living laboratory is a great opportunity to transform not only the local economy, but also to project this economic capacity in the global economy"

Celso Ferreira

President, Municipality of Paredes, Portugal



## COVER STORY

### PLANIT VALLEY, PORTUGAL

lead, Worldwide Public Sector at Microsoft and a strategic advisor on the Living PlanIT board. “This will enable Living PlanIT and Microsoft to showcase to the world how a smart city can really come to life.”

“We’re very proud to be part of this project,” says Hugo Cartaxeiro, Microsoft Portugal business developer manager. “We had the good fortune to join forces with a highly innovative partner, with a visionary municipality and president, and some unique infrastructures and human resources. PlanIT Valley is an extraordinary opportunity to innovate on a scale never seen before. It will provide a significant opportunity for Portugal to create value and export abroad, and enable local and international partners to build their own solutions and expand their markets in a variety of sectors. It’s a whole new ecosystem that can accommodate new ideas and new business models on a large scale.”

PlanIT Valley embodies a logical progression arising from both need and opportunity. Cities occupy only two per cent of the planet, yet their residents consume at least 75 per cent of its resources. At the same time, innovations in platform and cloud technologies are offering a way to achieve this.

“Sustainability is no longer an option – future generations demand it,” says Cartaxeiro. “Several studies show that people will be increasingly attracted to live in urban spaces over the coming decades, and some regions need to speed up development in response to huge demographic demand. Information technology, in particular, will play a key role in significantly improving urban living conditions in terms of work, leisure, public services and management.”

For example, computerised design and simulation are used to increase the efficiency of many vehicles in terms of manufacture and performance. Why wouldn’t you apply those techniques to building a city?

“By applying the techniques of other manufacturing sectors and continual improvements in software, we’re bringing all the industries together and enabling each of them to perform better,” explains Lewis. “Buildings are often designed using

simplistic computer-aided techniques, but after that, constructors have to figure out which materials to use, where to source them and how they will be put together.

“With PlanIT Valley, we’ve applied design and simulation processes like those used to design Formula One cars or aircraft. We’ve simulated scenarios to see how building materials will function in extreme weather conditions, how they will react with other materials and so on. We are looking at every outcome, working out how to break the building into prefabricated parts for construction, and to efficiently orchestrate the supply chain and logistics. This means that when we come to building the city, we can do it much more quickly. Our first hotel will be constructed and fully fitted, in just ten weeks. It’s fundamentally changing the way we think about construction and how buildings deliver increased productivity to users while operating more efficiently.”

At the heart of PlanIT Valley lies the Urban Operating System (Urban OS), a technology platform that ensures the sustainable management of resources while enabling partners to provide innovative solutions and applications (PlaceApps). As the former general manager of market development for Microsoft .NET, Lewis has applied its lessons here.

“To make intelligent cities work, you need to be able to monitor and control everything from energy and water supplies to waste, logistics and human telemetry systems,” says Lewis. “The key problem in construction is that the systems that have been deployed don’t communicate well with each other and can be difficult to manage. We acquired sensor technology from McLaren Electronic Systems, which is used in Formula One cars. It allows us to control sensing and actuation technologies in a very robust way, and we’ve embedded it in Cisco’s routers so the network can touch everything below it. It’s analogous to what we did with Web Services at Microsoft, allowing a very simple way for lots of things to communicate.”

“Cloud-based computing will be central to orchestrating all the technology,” explains



Cláudia Goya, Microsoft Portugal general manager. “This extends from building infrastructures to mobile phones, computers and servers; from cars and buses to city traffic management; from waste bins to waste services routes and management services; and from furniture, ovens and fridges to supply chain management. PlanIT Valley will maximise collaboration between people, application interoperability and service-oriented solutions.”

The communication made possible by the Urban OS is key to PlanIT Valley’s green credentials. Nothing is wasted: data is used to manage resources and improve processes; new applications are built on reusable technology; and smart metering and sensor technologies enable the Urban OS to monitor and manage resources so that each building has the energy and water it needs. Hot air produced by the data centre will be recycled for heating, rainwater will be collected and filtered by the green roofs, and lagoons will use plants to filter waste water for use in toilets and irrigation. The city will process its own waste, using it to generate electricity and products such as amino acids and vitamin B12.

If technology is built into the city’s structure, you’d better be sure you won’t need to tear down buildings every time you need to make changes – and that’s why reusable technology makes PlanIT Valley so smart.

Joe Dignan, director of local and regional government, Worldwide Public Sector at Microsoft, explains: “Because much of the Living PlanIT platform is embedded through sensors in the fabric of the city as it is constructed, it enables cost-effective and sustainable development throughout its operational life. The vast amount of information created by these living buildings will be interpreted using the interoperable and open standards inherent in the Microsoft technology stack.”

“The way to ensure diversity and longevity is to drive a large community of software developers who do new and interesting things with existing technology,” adds Lewis. “Look at a smartphone: there are only a small number of gadgets, but on top of that a software platform allows people to write applications using those gadgets. Imagine that on an urban scale where you have 100 million

gadgets, a common way to program using Microsoft software tools and platforms, and a huge community of software developers that can deliver technology to every sector within a city. It allows us to think about citizens’ lives from beginning to end, so those applications can make life simpler and more productive.”

For example, a PlaceApp might help find a lost child using the city’s CCTV cameras, transfer an injured person’s medical records securely to an ambulance or hospital, or make sure the traffic management system allows the ambulance to travel quickly through the streets.

“The opportunity to build a set of prototype PlaceApps that will exploit the inbuilt intelligence of the Urban OS along with the Microsoft Citizen Service Platform will enable us to create new scenarios for citizens and businesses alike in the model city,” says McKenzie. “We’ll be using the whole Microsoft technology stack, centred upon what we have invested in with the Citizen Service Platform. PlanIT Valley will have many online services as well as mobile and cloud-based applications that will help to create a sense of continuity for residents,

“We saw tremendous opportunities in the business model, and in the relationship of Living PlanIT with anchor partners like Microsoft”



COVER STORY  
PLANIT VALLEY, PORTUGAL

automatically-gathered metrics that will measure the economic, social development, environmental and institutional aspects of PlanIT Valley. “We’re also gathering building data on an ongoing basis,” says Lewis. “Once the buildings are constructed, the Urban OS will work with the sensing network to measure performance against the original design. Over time, we’ll build up a collection of examples of how buildings function, and this data can be plugged back into simulations to make better buildings. Quality will improve, costs will be better managed, and the reporting of the real behaviour of buildings will become automatic.”

By sharing its findings, PlanIT Valley will undoubtedly prove a valuable model for future cities. But what about existing ones?

“This partnership is not just about new cities,” says Dignan. “There is an equal need to retrofit existing cities and regenerate areas within cities. In new urban developments such as Wembley and Greenwich in London, Living PlanIT will be implementing its technologies and business models within a working city, and it’s currently working on retrofit solutions to apply to heritage and existing developments.”

“Redevelopment provides a similar scenario to a new development,” explains Lewis. “For example in Wembley, where we’re working with Quintain, there’s a full regeneration plan that involves building from the ground up. That’s the same as PlanIT Valley, except that it has to integrate more intimately with some of the things that sit around it and conform to more challenging legislative environments.”

For retrofit situations, a holistic approach to the business model shows the benefits that can be gained despite any need for compromise. “Existing buildings do have limitations because you have to deal with existing building physics – such as poor glass or insulation – which can lessen the impact,” explains Lewis. “But you can still orchestrate the electronics and systems to provide greater interaction, making the building much more efficient in terms of life, energy, water, waste and the other things

that impact operating costs and emissions. “We can go into a building, talk to the existing sensors, take out the existing building control system and very simply deliver Microsoft technology running on a Microsoft operating system. We’re taking technologies like Microsoft Surface applications to walls, tables and floor systems so the building can interact with people fundamentally differently. This improves the productivity of the building and the workplace, whether that’s in education, healthcare or general office space.”

The efficiencies that can be gained make sustainability surprisingly affordable, says Lewis, and the PlanIT Valley Urban OS will help to prove this. “The big urban myth is that sustainability costs too much,” he says. “But it provides a different way to monetise urban areas. If you’ve constructed buildings for 30-40 per cent less, you can afford to spend ten per cent more on technology to reduce your long-term operating costs. If you’re retrofitting and you can reduce the operating costs by 50-60 per cent, then you can afford to finance the technology. We’ll be able to prove that with our financial models and by measuring the real results and publishing them to the world.”



“The efficiencies that can be gained make sustainability surprisingly affordable,” says Living PlanIT’s Steve Lewis

Construction of PlanIT Valley is due to start later this year, but a great deal of work has already been done in the design and simulation phases, which ensure that the buildings themselves can be erected in a short timeframe.

The road to PlanIT Valley has presented many challenges, not least in terms of convincing others that this vision can become a reality. It’s taken commitment and teamwork, and Lewis is keen to stress that it wouldn’t have been possible without tremendous support from Ferreira, both in political and practical terms. But it’s working. PlanIT Valley has been designated a Project of National Importance by the Portuguese government, gaining crucial political support. And even as the living laboratory becomes concrete, its principles are being applied across the world. In addition to regeneration work in London, Living PlanIT is working on a host of projects in places such as Silicon Valley, Turkey and Korea.

“Elements like the technology, the need for sustainable, intelligent urban spaces and the positive attitudes of people like Celso Feirrer have come together to enable us to achieve this now,” concludes Lewis. “It’s been a challenging journey, but an extremely fulfilling one.”

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# PATHWAY TO THE CLOUD

Cloud technologies offer a way for governments to address the key challenges of cost, interaction and transparency. *Touch* finds out how



Cloud computing – where infrastructure and services are delivered over the Internet – offers a number of ways for governments to reduce costs, improve efficiency and communicate better. But many organisations have already invested significantly in their IT. They can't afford to be left behind, but how can they take advantage of the benefits the cloud has to offer while maximising value from their existing investments?

"Governments face three major challenges," says Ritse Klink, Microsoft local and regional government lead for Western Europe. "There's huge pressure on them to reduce costs while offering facilities that enable citizens to participate in decision-making, sharing ideas and views. There's also a huge demand for transparency, both in the community and on a regulatory level".

The cloud offers governments a new way to consume and deliver services, enabling them to address these issues while

benefiting from huge economies of scale. "By moving some operational services or applications to the cloud you can make a significant positive impact on IT's currently stretched resource, financially and from a time perspective," says Adam Collins, strategy consultant at Risual, a Microsoft Gold Certified Partner that develops consultancy and technology solutions.

Delivering technology in this way also moves the cost of providing services from a capital expenditure model to one of revenue expenditure, helping organisations to budget more efficiently. "In terms of spending, this means that customers don't have to go through complex commercial processes regarding cost, bidding and so on, or the administrative burden associated with them," explains Gordon McKenzie, government solutions lead, Worldwide Public Sector at Microsoft.

It sounds ideal – but what about those existing technology investments? "Most organisations have spent a considerable

amount on IT over the past few years," says Collins. "It would be unwise to simply ignore the investments they've already made – but that doesn't mean they can't benefit from the cloud. Many organisations are adopting a hybrid model using cloud services that can integrate with their existing investments to increase agility and efficiency while enabling them to get better use of their existing assets."

In fact, there are several ways for government organisations to harness the power of the cloud now.

Citizens are central to government, and they play a central role in realising the benefits the cloud has to offer. Most citizens already use a variety of cloud-based applications and services – from Facebook and MySpace to Bing Maps – and this is one area where immediate gains can be made.

In many cases, citizens don't want yet another dedicated portal. "Citizens want access to information where they are on the Web," says Kirsti Kierulf, director of Innovation,

Learning and Technology at Accenture, which was involved in the development of Norway's Altinn e-government portal. "Governments are beginning to understand this, and we're now seeing more user-friendly, citizen-centric solutions being made available through social networking applications."

"Citizens want more involvement in how public information is used and the cloud can give them that," says McKenzie. "We're now seeing government agencies using social media to keep people informed – it can be as simple as using Twitter to tell people when the snow ploughs will be clearing their streets. There was a period when organisations were spending a lot of money on creating their own versions of MySpace or Facebook-type applications, but now we're seeing customers using what's already there so they don't have the cost of building those tools. Social media is a valuable tool when used in this way and it delivers huge cost benefits."



FEATURE  
CLOUD COMPUTING IN GOVERNMENT

“Executives have begun to understand that if they trust social media sites with their personal information, there’s no reason why that trust shouldn’t extend to cloud-based business applications and services”

Kirsti Kierulf  
Accenture

Governments have a responsibility to keep data secure. In addition, they must comply with regulations on issues such as data sovereignty, which might differ between countries and regions. The cloud is a global phenomenon, so how can organisations be sure that their data will be safe and compliant?

In some respects, it’s a matter of changing attitudes, says Kierulf: “Over the past three years or so, executives have begun to understand that if they trust social media sites with their personal information, there’s no reason why that trust shouldn’t extend to cloud-based business applications and services. That realisation has triggered their curiosity about what the cloud has to offer, and we’re starting to see more people moving in that direction.”

Using secure, standardised technologies to create a tailored solution means that compliance with relevant data regulations can be built in. “Microsoft builds its software products to integrate securely with organisations’ IT systems, and they’re tightly aligned with a whole range of security requirements,” explains Risual’s Collins. “Cloud services based on Microsoft technologies therefore offer the easiest way

to integrate existing technology investments securely with the cloud.”

“The cloud gives organisations access to bleeding-edge technology without having to spend large amounts of money on equipment or training upfront; they move from a capital expenditure model to operational expenditure,” adds Klink. “For example, Microsoft’s Citizen Service Platform is a platform that partners can use to create different tools, applications and solutions to help with the issues governments need to address, such as identity management or security solutions.”

For Collins, these are among the objectives that can be addressed through careful planning. “Government organisations need to make sure they have a clear picture of how they define value and efficiency as they approach the cloud,” he says. “In order to achieve this, it’s crucial to evaluate their existing services and technology to see how the cloud can help them to maximise those investments in the longer term. It’s a matter of looking at the shape they’re in now and what they want to achieve to support future business objectives, and evaluating how they will achieve those benefits.”

A platform for innovation

Spanish Microsoft partner Spenta worked on the development of the Citizen Service Platform (CSP) for Microsoft, using SharePoint and the xRM business application framework to build on top of the Microsoft Dynamics CRM platform.

Spenta also created the CSP Extended Edition to meet unique public sector requirements like citizen case management, accessibility compliance, e-forms and secure transactions from a shared services platform.

“The main goal of the solution was to empower government to serve citizens in a cost-effective way, while engaging with them by embracing new social trends,” says

Jordi Plana, CEO of Spenta. “By developing on the xRM platform, we reduced development efforts by about 50 per cent. We leveraged out-of-the-box components that the xRM platform brings us like entity management or workflows, so we could focus on developing the functionalities that our customers were asking for.”

“Ninety-five per cent of local governments in Spain have less than 5,000 inhabitants, so they don’t have any IT budget and it’s impossible for them to have any IT infrastructure. Offering our solutions on a software-as-a-service business model from Microsoft’s cloud is much more convenient for our customers, and the



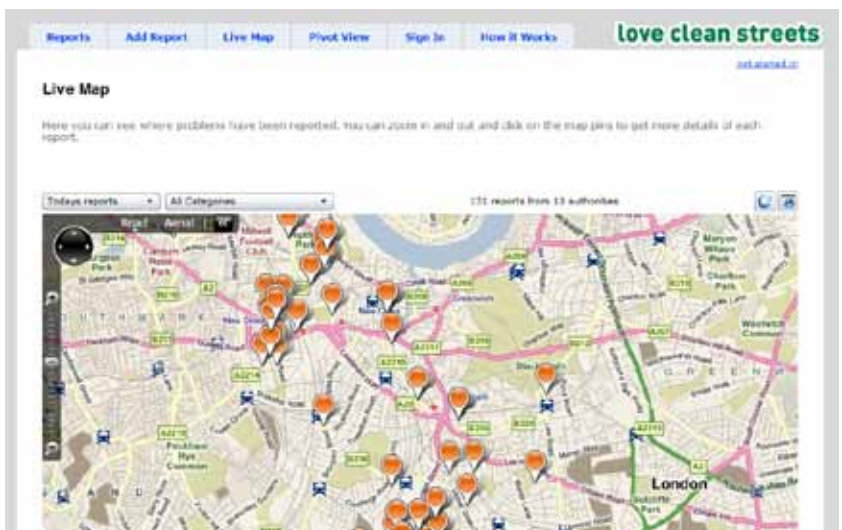
value for us is that it increases our target market by several orders of magnitude.”

Today, more than 200 local governments are using the solution, enabling 1.2 million citizens to have access to online services from the government.

A well-thought-out approach to the cloud gives many organisations the opportunity to innovate and share smart solutions without dramatic upheaval in terms of IT. “Instead of each organisation or region developing its own solution, the cloud enables open innovation, where applications and services can be made available to other organisations quickly and at low cost,” observes Kierulf.

Across the Europe, Middle East and Africa (EMEA) region, cloud applications developed by Microsoft partners are proving the point. For example, Spain’s StreetCare application, developed by Spenta, and the LoveCleanStreets portal developed by the London Borough of Lewisham and bbits, are both award-winning crowdsourcing applications that enable citizens to collaborate in the care of their environment. Citizens can upload photos of issues like graffiti, litter or potholes, which can be viewed on high-tech maps using Microsoft Silverlight and Bing Maps. Citizens can then monitor how local councils act on the reports.

“Building StreetCare on the Microsoft Windows Azure cloud platform reduces time to market and offers a high level of reliability, availability and scalability,” says



London Borough of Lewisham’s LoveCleanStreets portal

Jordi Plana, CEO of Spenta. “The licensing model for StreetCare is based on a monthly fee according to citizens’ usage. Government organisations only pay for what they use, removing upfront software and hardware costs so that return on investment is almost immediate and total cost of ownership is dramatically reduced.”

“Delivery of services like StreetCare is as simple as ordering a new channel from your television provider,” says McKenzie. “We have a model application store which showcases applications and, if someone wanted to try one out, we could provision it in another city in less than a minute.”

Sharing public information through the

Altinn delivers security and savings

Altinn is Norway’s central government collaboration platform and e-government portal developed by Microsoft, Accenture and Avanade and built on the Microsoft .NET Framework. It can be integrated with enterprise IT systems through Web Services and is designed for any security level, with restricted access to data and secure storage and tracking of data.

The portal has a two-terabyte database and can handle many versions of the same form simultaneously. A service development toolbox enables government officials and system integrators to design forms with workflows and integrate them to the portal.

Altinn at a glance:

- Altinn has 150,000 unique users
- More than 50 million forms have been submitted through Altinn
- More than 90 per cent of submissions from Norway required shareholder documentation through Altinn
- The number of VAT reports submitted electronically increased from five per cent in 2001 to almost 80 per cent in 2008
- 2.3 million registered users deliver their tax declaration through Altinn
- More than 10 million new forms are added to the portal every year
- Altinn is expected to deliver savings of €1.5 billion between 2010 and 2020.





## FEATURE

### CLOUD COMPUTING IN GOVERNMENT

cloud delivers another key benefit, helping to ensure the transparency that is now more important than ever to government organisations.

For example, a recent whitepaper by Microsoft Gold Partner and e-procurement specialist Vortal noted that public procurement currently accounts for more than 16 per cent of EU gross domestic product. Services are increasingly delivered by multiple third-party providers, and it's vital that governments can ensure trust between agencies and consumers. Vortal says that cloud-based applications for e-procurement could help governments to promote sustainable development and guarantee the equity and transparency of procurement processes and decisions.

Indeed, technology as a service has enabled movements against the lack of transparency and inclusion in some regions. It's a subject many feel passionate about: "Cloud platforms have the potential to solve transparency issues," says Kierulf. "Because solutions can be provisioned across the world at low cost, they offer a level of transparency that could make any corrupt behaviour impossible to hide."

"Technology as a service enables the most efficient and low-cost way to insert the highest possible degree of transparency into government," says McKenzie. "Traditionally, organisations have demonstrated transparency and freedom of information by producing a lot of reports for customers – for

example to show how green or ethical they were. That all takes resources and can result in significant publication costs. A resource like the European Open Government Data Initiative provides a more transparent, low-cost way to achieve transparency."

OGDI is a free, open-source, cloud-based collection of software assets developed by Microsoft. It enables organisations to load and store public data in a reusable format using the Microsoft Windows Azure platform. It gives citizens more visibility on government services and enables ISVs to develop new applications that create more economic value locally. "Information can be queried in any way shape and form, by all the different parties and agencies that need it," says McKenzie. "It means that governments can offload the publication costs associated with those reports."

The combination of benefits and opportunities offered by the cloud makes it inevitable that e-government will move towards these technologies. "The cost of computing has fallen dramatically," observes McKenzie. "The cloud can streamline information, and governments can make the best of it now to respond to the pressure in terms of transparency and citizen trust."

"The future of e-government is in the cloud, because of the capabilities and economy of scale that the cloud offers," says Kierulf. "The cloud will enable the vision of a single market and a true global economy, as well as introducing transparency for the taxpayer. It will also push user-centric driven

solutions that citizens will love, and we will soon see a large number of application stores for e-governments empowered by the cloud."

This is certainly a period of great opportunity for government bodies to create dramatic efficiencies. While some projects, such as developing a private cloud environment, might be longer-term goals, there are immediate gains to be made from the public cloud. But whatever their approach, governments need to carefully plan the path connecting their existing IT to the cloud.

Ultimately, making the best of the cloud is about finding the right path, using existing technologies and developing new solutions to address the issues facing government organisations today. By providing a comprehensive technology stack that is familiar to end users, and enabling an expansive network of partners to develop innovative applications using the Citizen Service Platform, Microsoft is helping public sector organisations across the region to find low-cost solutions to pressing issues. Microsoft's Citizen Service Platform Engagement Framework includes information tightly aligned with the business challenges that governments face, with details on how Microsoft and its partners can help government organisations to plan and deliver their roadmap to the cloud.

"If I was in government IT," concludes McKenzie, "I don't think there could be a better chance or better reasons to do something radical and different."

#### Ensuring interaction: Microsoft partner ups performance via cloud

With increasing demand for 24/7 e-government services, it's important to ensure that online availability isn't compromised. Microsoft partner Apica specialises in website load-testing and performance management to ensure increased uptime.

Apica helps customers migrate to the

cloud and uses cloud-based deployment of its Microsoft-based services to test, analyse, monitor and improve Web performance.

"It's crucial that citizens and businesses can access government information and services whenever they need them," says Apica CEO Sven Hammar. "Using the cloud means we can create fluctuating load test

and web monitoring scenarios that mimic the nature of today's Internet traffic.

We create test scenarios that mimic real user behaviour – such as logging into an authenticated session on an e-government website – so we can provide a true picture of any issues and help customers to resolve them."



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# A picture of HEALTH

As healthcare providers plan connected health strategies, they can look to cloud-based services and emerging standards to achieve cost containment and help clinicians treat more patients. Mark Webb finds out more

**The challenges to the healthcare sector are fairly consistent across the world, with the developing world needing to catch up in terms of service levels but facing the same problems in the long term. Birth rates are increasing and people want a high standard of healthcare. We are living longer and old age brings disease.**

Governments are encouraging healthcare providers to manage this situation. For example, the pilot European Innovation Partnership on Active and Healthy Ageing has the triple aim of enabling EU citizens to lead healthy, active and independent lives while ageing; improving the sustainability and efficiency of social and health care systems; and boosting and improving the

competitiveness of the markets for innovative products and services. This will respond to the ageing challenge at both an EU and global level, thus creating new opportunities for businesses.

Healthcare providers understand that they need to help people 'live well' into old age so that they don't place demands on scarce resources. They are also being nudged by insurance companies and governments through the reimbursement models to develop connected health strategies. These providers, whether public or private, are therefore developing ways of enabling citizens to take responsibility for their own well-being.

The EU leaves health policy to individual states but it has taken a role in coordinating



actions for interoperability of systems and standardisation, and promoting electronic health records (EHRs).

“Without enhanced collaboration, a lot of effort would be wasted. Advanced software that connects a wide range of medical technologies and data sources into a seamless whole will give patients, providers and funders of care a complete picture of health,” says Elena Bonfiglioli, director of Corporate Citizenship at Microsoft, advising that healthcare service deployment is becoming mobile and global. She points to a newly launched memorandum of understanding (MoU) by the European Commission and US

Department of Health as “an opportunity for enhanced transatlantic cooperation.”

Microsoft’s Peter Neupert, corporate VP of its Health Solutions Group, welcomes the memorandum: “The MoU offers a preferential avenue to further explore the idea of a ‘universal exchange language’. This will enable healthcare providers to share health information in real time, in order to modernise and coordinate diagnosis and treatment while incorporating privacy and security of personal data.” In such a diversified and fast-moving sector as health, standards clearly have an important part to play. There is also recognition that a top-down approach won’t

work and that a self-service model should be embraced.

“Compared with manufacturing or retail, the healthcare sector has historically under-invested in technology and vendors have failed to innovate,” says Paul Smolke, senior director of Worldwide Health at Microsoft. Cloud-based services offer an opportunity to rethink IT provision to focus on outcomes, not processes. The business of health, carried out by e-mail, office productivity applications and enterprise resource planning programs, can be rented as cloud services.

Technologies that are beginning to make a difference include unified communications



“As patients become more mobile, we need more data liquidity, with privacy and security of course”

Elena Bonfiglioli  
Microsoft

for the distributed work environment, mobile devices to free clinicians from their desks, CRM for patient management, and search to organise the otherwise overwhelming quantity of information. These technologies are increasingly available in cloud-based versions.

The healthcare universe has traditionally revolved around the physician, whom we have relied on to make health-related decisions. Similarly, health information systems have centred around the facility – whether the hospital, doctor’s office, or care-management protocol. But we are now starting to see a ‘Copernican shift’: the patient is moving to the centre of the healthcare universe, requiring individuals to navigate the healthcare system and make key health decisions.

“This doesn’t mean doctors are less important but it does mean consumers know they must now be actively involved in their own care,” says Bonfiglioli. “This shift drives personalised medicine, as consumers take more ownership and provide more input to their health and wellness plans. With individuals as the catalyst for change, health services must compete for their attention – resulting in a system that one, increasingly competes on quality of care; two, is more

transparent; three, has lower costs; and four, enables greater access to and portability of health information. Cloud computing is pivotal to these transformations.”

One healthcare institution using these technologies in combination is the Penza Federal Centre for Cardiovascular Surgery in Penza, Russia. Doctors from different clinics work together with professionals at the Federal Centre to get online consultancy and reach a correct diagnosis faster.

The centre is using cloud computing to speed up the sharing of test results and improve its decisions on treatment and surgery. Audio, video, web conferencing, instant messaging and telephony are integrated via Microsoft Office Communications and SharePoint.

“This takes us to a different level of technology,” says cardiologist Nadejda Galtseva. “It enables us to keep up to date with state of the art diagnostic requirements.”

“Doctors can contact their colleagues quickly and discuss treatment options, and make decisions about further treatment, surgical decisions and rehabilitation,” says Oleg Anisimov from Lotsman Plus, which developed the system for Penza. “Location is not an issue for making decisions, because all communication is done over the internet.”

Colleagues from remote areas can now be involved in decision-making. The system also provides the security and confidentiality that people expect for medical records.

In the hospital environment, practitioners will surely be early adopters of natural user interfaces, such as touch and gesture technologies like Microsoft Kinect, not only to enable their own use of devices but also for their patients, for example to take part in home-based fitness programmes. Wireless is also set to change the look of the hospital ward, with connected tablets taking over from wired trolley-based instrument and PC combinations.

Some patient representatives argue that patients own their own data and should control it. Some medical professionals argue for an element of expert oversight. Perhaps technology can let both camps have what they want by adding metadata to EHRs to show their provenance and their privacy regime.

“As patients become more mobile, we need more data liquidity, with privacy and security of course,” explains Bonfiglioli. The most recent meeting of Microsoft’s European Health Users Group focused on health and cloud computing and tackled issues related to health data privacy. It concluded that one component of the solution is having providers and consumers feel comfortable that the regulatory framework enables uptake of the technology while maintaining the controls consumers demand and deserve. In that regard, the summit discussed several policy recommendations. These included fostering the economics of cloud computing; awareness raising and capacity building; security, privacy and data protection on the cloud; and interoperability and standardisation. Some ideas around these have been encapsulated in a new white paper entitled *Health and Wellbeing – faster, better, broader and cheaper*, available at [www.microsoft.eu/health](http://www.microsoft.eu/health).

“There is good news in that progress is being made at the EU level on these and other policy aspects that hinder the adoption of cloud computing,” says Bonfiglioli, giving as an example the strong support in the Digital Agenda for facilitating online innovations,



for example measure 13 (enabling online access to medical data) and measure 14 (interoperability of health records). Another example is the European Innovation Partnership, which strives to increase the active and healthy part of citizen’s lives by two years. Member states are also taking note and participating with their own initiatives. Health considerations should be taken into account in the process of revision of the Data Protection Directive 95/46/EC. Bonfiglioli concludes: “We are nearing a ‘tipping point’ where we see this technology moving to broader adoption.”

The Health Solutions unit at Microsoft, whose staff include clinicians has built a personal health platform by combining Microsoft technologies. Called HealthVault, it’s a place where the individual can store and control his or her health data, allowing health professionals to gain access as necessary.

“HealthVault addresses the shift in focus from transactional care to real-time, life-time health management,” says Bonfiglioli. The individual enters the data but healthcare providers help with analysis and suggestions for healthy living. HealthVault technology can be made available in different ways to engage the public and an ecosystem of health service providers can develop applications on top of the basic platform.

In Germany, Siemens IT Solutions and Services has introduced a HealthVault-based offering called Assignio, starting with a suite of four applications. Three help patients with fitness and wellbeing, prevention, and the management of chronic disease. The fourth application allows the patient to involve hospitals and doctors that they trust, by sharing the information with them. German health company Asklepios, which runs a network of more than 100 clinics, is developing Meine Gesundheit (My Health), a service linked to

## E-procurement promising

A big part of cost-containment in health provision will be the implementation of e-procurement. The EU is supportive on the grounds of good value and fair competition for businesses large and small in its different regions. A recent EU green paper on e-procurement concludes that overall take-up, both within most countries and across the EU as a whole, remains low and is estimated to be less than five per cent of total procurement by value.

The exception to this low use is Portugal, where the use of electronic means to conduct the procurement phases up until contract award has been mandatory since 1 November 2009 for most public purchases. IT company Vortal has used Microsoft technology to develop and deliver an electronic public contracting platform for health, which provides centralised management

of public tenders, facilitating the required interactions between public entities and suppliers.

The browser-based platform helps public healthcare providers observe the necessary e-procurement procedures, such as publishing procedure programmes and specification documents, requesting and providing clarifications, delivering proposals and applications, issuing notifications on the acceptance or exclusion of given bidders and, finally, the contract award itself.

The numbers from Portugal are encouraging. The EU green paper quotes a study that compared the best bids for public works contracted by 50 Portuguese public hospitals in 2009 (using paper based systems) and 2010 (using e-procurement). It concluded that a cost reduction of 18 per cent had been achieved in 2010, due to the increase in competition generated by e-procurement.



“We are able to offer an e-health solution for all stakeholders within the healthcare industry – but one where the citizen is at the centre”

Roland Neuhuber  
Siemens

Assignio that will support patients in managing their own health with an application that makes medical information – on their appointments, medication or treatment plans – available in their Assignio account.

Roland Neuhuber, who is responsible for Assignio at Siemens, comments: “With Assignio we are able to offer an e-health solution for all stakeholders within the healthcare industry – but one where the citizen is at the centre. The basic principles of Assignio are trust and security; this is extremely important for us and will allow us to add true value to all users.”

In the UK, Microsoft has partnered with MSN Life & Style and Nuffield Health to provide an application called My Health Info that enables well-being management, giving individuals insight into how to improve their health. My Health Info helps them monitor their blood pressure, calculate their body mass index and measure the amount of steps they take as exercise.

In the information-intensive environment of a surgery or hospital, clinicians need tools to select records – patient histories, prescribed drugs, x-rays – and view them in a useful way. “It’s a holistic science and IT tools can help clinicians look at a patient’s overall

condition quickly, as a holistic view across disciplines,” explains Bonfiglioli. Variations on business intelligence (BI) technology, such as Microsoft’s Amalga, can drill down to individual patient records, as well as perform wider analysis so that managers can view trends in healthcare requirements.

Quality of information is an issue when the public can access health information from various sources. Microsoft partner Mongoose IT has developed a search function for the UK’s National Institute of Clinical Evidence to help health professionals find accredited documentation on different health topics. They achieve this through a website that is also open to public use.

The volume of patient data, from lab, pharmacy, scanning room and wearable devices, will continue to increase and the secure virtualised servers that make up the cloud are handily placed to provide the necessary storage at the lowest cost. “The cloud is elastic so you can offload to the cloud and pay only for what you use,” says Paul Smolke. On a broader scale, information for the public can help stem pandemics. The servers hosting a public website in the cloud can scale to meet peaks in demand, just as retailers scale up for Christmas shopping.

## Tighter integration between IT and services

By Dr Ian Denley, Chief Executive, System C

A particularly exciting area for the healthcare community is the erosion of territorial boundaries between types of provision: hospital-based care, care in the community and care at home. Joined-up or connected services could deliver real benefits in terms of quality of care and efficiency. For example, when you discharge someone from hospital into the community, you can build a longitudinal record of their care – pulling together ongoing outpatient treatment, for example, with social services provision. You would reduce the risk of readmissions for patients who have been discharged but do not have the right level of support available to them at home/in the community.

I think we can expect to see the pace accelerate in this area. Under the UK government’s reforms, acute hospitals are going

to be taking community hospital functions from PCTs, so the link between community and acute care is starting to come through. At the same time, there are definite political moves to bring social care and health care much more closely together.

This will obviously require much tighter integration between IT systems. In the UK, the Connecting for Health’s Interoperability Toolkit (ITK) project is part of this process of starting to weld systems together by creating a library of ‘standard interfaces’ relating to a specific business process or service. These interfaces are accredited by the Department of Health and made available to any interested NHS Trust. System C, Microsoft, Orion Health and Liquidlogic last year joined forces to produce the first health and social care link under the ITK project.

The H1N1 Flu Response Center, built and deployed on Windows Azure (for applications in the cloud), allows users to take an Emory University-designed flu self-assessment, and then receive appropriate advice. Users can give explicit consent to share the anonymous information they provide during self-assessment for public health, education and research purposes. Users with HealthVault accounts can store the results of the assessment, combine them with their existing information (such as health history, allergies or chronic conditions), print a summary, or share the results electronically with their chosen doctor.

Microsoft’s technology base includes on-premise and cloud-based services that can be used in combination, enabling an IT evolution, not revolution. This helps deal with related issues that come with storing potentially sensitive data in the cloud. For example, some countries prohibit data of citizens to be held outside the country. E-mails containing patient information may require authorisation. Although it may be deemed necessary to store data in a dedicated infrastructure (private cloud) to meet regulatory requirements, Microsoft warns in its *Cloud and Health* whitepaper, this can be ten times more expensive than using shared infrastructure (public cloud).

Whatever the exact configuration, the cloud computing model usually impacts favourably on the practical business of running complex healthcare organisations, offering flexibility to a work force that requires it more than most. Dutch hospital Ziekenhuis Amstelland has brought 650 employees online to comply with new health and safety reporting requirements. Most of the users are nurses, who are usually on their feet and moving around a good deal of the day. Their ‘desk’ is typically a nurses’ station where they can monitor patient health with a computer hooked to telemetry instruments.

Now the nurses can use Microsoft Outlook Web Access to send and receive mail. No extra hardware or software is required on the computers already in place throughout the hospital. The information contained in



the e-mails needs to stay within the domain of the hospital and this is achieved through Microsoft Online Services. Even though the mail servers the deskless nurses interact with are not on hospital premises, they appear to be part of the hospital infrastructure and are set up to provide the same levels of security and confidentiality.

Getting the benefit from the ICT tools now permeating the health sector will require increased training for healthcare professionals, and collaboration on standards to liberate EHRs and promote rapid uptake of cloud-based services to keep costs in check.

Craig Mundie, Microsoft’s chief research and strategy officer puts the value of e-health in a global context: “As we follow the trend towards wellness and prevention, I think the only way to give scale to the kind of health care quality we have is to embody it in computers. We can’t really scale the number of doctors and healthcare professionals to

extend this care to another five billion people. Computers can package up the existing knowledge of elite healthcare systems and deliver it elsewhere.”

## The big picture

The primary issues being considered by ICT managers in healthcare are:

- Case management
- Health shared services
- Health portals
- Caregiver collaboration
- Health intelligence & information management
- Patient experience
- Connected health platform.





# GIVING SHAPE TO THE CLOUD

The development of cloud computing has witnessed massive feats of engineering, requiring significant changes to the way we think about data centres and their infrastructure. Chief technology officer for Microsoft Europe, Middle East & Africa, Stephen McGibbon, traces the rise of the cloud

**I was delighted to be asked to contribute a viewpoint piece to the inaugural edition of Touch magazine. In my role as chief technology officer for Microsoft Europe, Middle East and Africa, I spend a lot of time with customers and partners, as well as with policy makers and academics. One topic that's never far from most people's minds these days is cloud computing, and I am often asked what I think the impact of cloud computing will be on the public sector and academia, as well as in a more broad sense. So I thought I'd spend some time discussing that here. It's a viewpoint, and if you want to comment feel free to write in to Touch or drop me an e-mail at [stephenm@microsoft.com](mailto:stephenm@microsoft.com).**

The term 'cloud' is almost inescapable at the moment, but this omnipresence can make it harder to discern any substantive definition of the term. Ultimately, the most important point is that the cloud enables IT to be delivered more cost effectively. But to understand how, it's worth considering what the fundamentals of cloud are, and at the top of the list is scale.

If cloud's about anything it's about scale. Indeed it's my view that cloud technology principally arose as a response to the demands of scale – the unprecedented scale that arose with the emergence and growth of the web. Of course services like Hotmail and Messenger weren't referred to as cloud services, but they were available to almost anyone with a web browser, and rapidly achieved a scale beyond

anything ever seen before in the era of enterprise IT. Delivering services at this scale required a new and different approach from the way enterprise IT was delivered previously. The demands of scale put pressure on all aspects of service design and delivery, from architecture to security to data centre operations.

It's hard to appreciate the scale I'm referring to, so let me quote a few statistics released in late 2009 by the Hotmail engineering team:

- Hotmail is a worldwide service, delivering localised versions of Hotmail to 59 regional markets in 36 languages
- Hotmail hosts well over 1.3 billion inboxes
- Over 350 million people actively use Hotmail on a monthly basis
- Hotmail handles over three billion messages a day and filters out over one billion spam messages
- Hotmail's storage grows at over two petabytes a month (a petabyte is 1,000 terabytes or one million gigabytes)
- Hotmail currently has over 155 petabytes of storage deployed – 70 per cent of that storage is taken up with attachments, typically photos.

Clearly, this scale is significantly beyond anything seen in an enterprise environment. To deliver services at this scale required new engineering approaches and it is these that led to cloud computing.

There were broadly three major engineering changes, the first of which relates to the data

centre itself. Operating at such scale required a new approach to provisioning, and the unit of deployment moved from individual servers, to racks of servers, to pre-assembled containers of servers. This drove modularisation and supply chain efficiency, which increased overall efficiency. Price per kilowatt per hour was a key metric and new approaches to cooling delivered major efficiencies, so that Microsoft's cloud data centres use only 50 per cent of the power and one per cent of the water of a typical data centre. These and other similar developments led to Microsoft receiving several awards such as 'Best European Enterprise Data Centre Facility', 'Data Centre Leaders Award for Innovation' and the 'European Code of Conduct for Data Centre Sustainability Best Practice'.

The second broad change was in the management of the infrastructure inside the data centre. To operate efficiently at scale requires automation, and effective automation requires models. Virtualisation is an important enabling technology for this, but whilst necessary it is by no means sufficient. The combination of a virtualised compute and storage-enabled dynamic infrastructure, and when coupled with provisioning and billing interfaces, provided the capability for infrastructure to be delivered as a service, commonly abbreviated to IaaS.

Similarly, the management and operations of server software could be automated, and offered as a service. Microsoft's Office 365 is a good example of software-as-a-service (SaaS),



combining the familiar Office desktop suite with cloud-based versions of our next-generation communications and collaboration services: Exchange Online, SharePoint Online and Lync Online to business of all sizes.

But IaaS and SaaS are only part of the story. Bill Gates once famously remarked on a tendency for people to overestimate the short-term impact of technology and underestimate the long-term impact of cumulative changes. It's your writer's opinion that the biggest impact from cloud computing will come from treating the cloud itself like a computer. This requires that developers be able to write programs that are able to take advantage of the scalability and fault-tolerant features of the cloud itself. This is often referred to as platform-as-a-service or PaaS. Microsoft has developed the Windows Azure Platform for exactly this purpose – to allow developers to write programs that run in the cloud and automatically take advantage of some of the advances I've written about. The main components of this third broad change include:

- **Windows Azure**, the development, service hosting and service management environment for the Windows Azure platform. It provides developers with on-demand compute, storage and bandwidth, and a content distribution network to host, scale and manage web applications through Microsoft data centres
- **Microsoft SQL Azure**, which offers the first cloud-based relational and self-managed database service built on Microsoft SQL Server technologies
- **Windows Azure AppFabric**, which provides cloud-based access control and service bus capabilities to applications. These capabilities are important in bridging the cloud and on-premises environments, allowing solutions that are inevitably referred to as hybrid clouds
- **Windows Azure Marketplace DataMarket** is a one-stop shop for data. Sometimes referred to as data-as-a-service or DaaS, developers and information workers can use the DataMarket to easily discover, purchase, and manage premium data subscriptions in the Windows Azure platform.

The important point about all of this, though, is that it enables IT to be delivered more

cost effectively. Indeed Microsoft's analysis has suggested that the hardware model I've referred to is ten times more efficient, that the applications model is ten times faster to market, and that the operations model is ten times cheaper to operate. Figures like these indicate something significant is happening that has the potential to change the economic model of the industry. Microsoft recently released a whitepaper, The Economics of the Cloud, which discusses this in more detail.

The new economics of IT arising from cloud computing will change the cost base for many applications, and importantly will enable new innovation, reducing start-up costs and fixed costs, and matching costs to growth. This efficiency in turn will, over the medium to long term, contribute new growth to the overall economy. As such, cloud computing is very much on the radar of governments and policy makers.

So will every application move to the cloud? My view is that there will always be a place for on-premises storage and applications for a variety of reasons. Certainly the economics of cloud computing will mean that these reasons will be tested, and in many cases new solutions will be found that enable hybrid optimisations.

The cloud data centres I've described are not like the traditional data centres used by outsourcers, and policy will have to adapt to fit the model of high efficiency, highly standardised, highly automated provisioning, which doesn't allow for case-by-case rules.

Public sector organisations, for example, are looking very closely at how to determine what data that they hold can be moved to the new model. It's possible that some organisations will always prefer to hold sensitive information within their own four physical walls. Some organisations may prefer to keep their physical IT infrastructure on-premises too. Nothing about the cloud is going to prevent these choices – although the reality of economics may mean that decisions become more rational.

There's much that enterprise IT can learn and adopt from the hardware, applications and operating model I've described, and so we see the wave of optimisation that's transforming traditional data centres to the dynamic data

"It's your writer's opinion that the biggest impact from cloud computing will come from treating the cloud itself like a computer"

Stephen McGibbon

Microsoft EMEA

centre model – virtualised, automated, end-user provisioned and consumption-based charging. The reality will remain, however, that the fundamental driver is scale, and organisations that move to a private cloud model will inevitably move to pooled IT resources in a shared-service model. This means that adopting private cloud will often entail significant organisational change; indeed I am often reminded of how the move to client server in the 90s was accompanied by a wave of business process reengineering.

As always with technology, new solutions will continue to emerge that will ease or alleviate many of these issues. One that will have a big impact over the next few years in the public sector is Windows Azure Virtual Network, which, as the name suggests, allows the virtualisation and automation of the network itself. This will allow software architects to design solutions where data remains on-premises but is accessed from the cloud securely through encrypted virtual private networks – much as most people today connect to their internal networks when out of their office.

So cloud is certainly here to stay, and it is changing the economics of our industry. Cloud creates new possibilities and new efficiencies, and will be a driver of growth for the foreseeable future.

# Beam them up, Scotty



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# Council adopts IT software benchmarking

## Overview

**Solution:** TrustBenchMarque benchmarking and negotiation service

**Benefits:** Savings of £494,000 over a three-year period and 26 per cent saving on the previous licensing arrangement

**Technologies:** Windows 7, Office 2010, Lync Server 2010, Enterprise Voice

**Partner:** TrustMarque

When Plymouth City Council was looking for help with planning a range of complex Microsoft technology implementations, it needed a robust and flexible solution. In particular, the chosen solution would have to work with existing systems while ensuring cost savings and more efficient delivery across a range of essential services.

With a population of 256,000, Plymouth is one of the largest cities on England's south coast. Plymouth City Council employs a workforce of over 14,000 people and delivers more than 300 services for Plymouth residents including transport, social care, leisure, education and schools.

In February 2010, Plymouth City Council contacted Trustmarque for help with planning a number of Microsoft technology implementations over the next three years. For two years prior to this, Plymouth had been buying software through a Microsoft Select Agreement. For a project of this size and longevity, the council wanted to ensure the most cost-effective purchasing for the software licensing required by these implementations.

Trustmarque recommended its TrustBenchMarque service – a commercial benchmarking service that would provide the council with a full review of the way in which they were currently using Microsoft software, and help with the formulation of future adoption plans. The service included in-depth long-term cost modelling, taking

into account budget priorities and costs.

By using TrustBenchMarque, the council gained access to a full commercial benchmarking and negotiation service that laid out both current usage and future licensing options. In particular, Trustmarque's negotiations with Microsoft allowed for the implementation of non-standard product mixes that were crucial to meeting the council's strategy goals.

Among the outcomes that the council wanted to see were the analysis of its current licence entitlements, an assessment to minimise the number of licences required and an analysis of any compliance risks for the organisation. After providing more than ten possible licensing routes to consider, Trustmarque continued with the benchmarking process by presenting the council with an in-depth breakdown of three pertinent options for its strategy. This allowed the council a great deal of flexibility in choosing how to move forward.

The detailed breakdown, known as TrustPAK, worked alongside Trustmarque's consultation to give Plymouth City Council the confidence to make a long-term licensing decision, backed by a solid business case and the ability to show cost savings of 26 per cent.

To achieve its targets, the council has continued purchasing under the Microsoft Select Agreement, but has also signed up to an Enterprise subscription. In addition,



TrustMarque helped Plymouth City Council make the most out of a fixed budget

Trustmarque's negotiations with Microsoft have allowed for a range of different product mixes and concessions to complement the use of Microsoft technology within the council. Overall, this service has demonstrated savings of £494,000 compared to current software licensing policies.

The implementation went extremely well, as Tom Unwin, technical architect, Plymouth City Council, comments: "The

consultancy was very productive and it helped Plymouth City Council make the most out of a fixed budget. In particular the benchmarking service paved the way for an agreement that meets our requirements, after openly discussing all the licensing options available to us. Trustmarque were friendly and efficient, delivering the work they promised on time."

After implementing some small-scale uses

of the updated licensing system (for Systems Center Configuration Manager), Plymouth City Council is now moving to a phase of rapid deployment across the organisation. This includes Exchange 2010 in the next few months, followed by Windows 7, with App-V and Office 2010 plus Lync Server 2010 for unified communications and Enterprise Voice to replace the obsolete telephone systems currently in place.



# Information boost for hospital

Vaasa Central Hospital, Finland, serves a population of 167,000 inhabitants. Divided into performance areas, the hospital offers medical, psychiatric and surgical services in a total of 16 specialities.

In 2009 Vaasa Central Hospital started a procurement process for a new enterprise resource planning (ERP) system for surgical operations. The new operating room information system (OIS) from Commit replaces an outdated system that ran on a VAX/VMS platform that is soon to be supplanted. Growth in volumes and requirements for modern leadership in medical operations led the hospital to acquire a new system.

The OIS system is linked to the hospital information system (HIS) and the electronic

patient record (EPR) systems. Medical appointments are registered in the HIS and transferred from there to the OIS. Information about medical operations is transferred to the HIS. The EPR can be opened with desktop integration, so there is a direct connection from the OIS to the EPR.

With the new system, patients can be monitored in real time at different ward units and clinics, making the whole process more visible. The hospital also expects to see improved communication between different ward units and clinics. For example, a preoperative clinic could use its own view to monitor patient progress during the day. Correspondingly, the operation unit could see a real-time situation of all operating rooms. This will help create more efficient

and realistic surgical schedules and also predict forthcoming situations in the operation unit.

The estimated duration for each operation can be seen in the OIS and this helps with the planning of surgery schedules, allowing the operation teams to benefit from well-made plans. Direct links from the HIS to the OIS accelerate the process of finding patient records so that it occurs in real time – there is no longer a need to interpret handwritten text. Intra-operative patient records are registered in the OIS and from there they are automatically transferred to the EPR. Electronic registration of data leads users to register all necessary data and serves both the patient and medical staff.



## Overview

**Solution:** Internet browser-based operating room resource management

**Benefits:** Paperless, internet-based, efficient processes, resource planning, flexible connectivity

**Technologies:** Microsoft Windows Server 2008, SQL Server 2008, IIS 7, .NET Framework, Visual Studio, Reporting Services

**Partner:** Commit

# A platform for public e-purchasing



**When the body responsible for public purchasing in Portugal needed help with provision of its electronic public tendering platform, e-marketplace operator Vortal won the contract.**

Established in 2007, Portugal's National Agency for Public Purchasing (ANCP) runs the National System for Public Purchasing. In this capacity, it manages purchasing and management of the state's vehicle fleet. Its mission is to merge and relocate the various ministry fleet and parking facilities, with a view to cutting costs and reducing red tape in public provision processes.

With responsibility for signing framework agreements, the ANCP considers and selects providers qualified to supply public sector services and goods. Suppliers are qualified

according to defined rules within the relevant framework agreement.

As part of its role in managing the National System for Public Purchasing platform (SNCP), the ANCP promotes purchasing by electronic means (e-purchasing), which is mandatory within the legal framework of public contracting in Portugal to improve standardisation of processes.

The ANCP identified a need for help with the provision of its electronic public tendering platform for all SNCP members. This has been contracted out to government-to-business-to-business e-marketplace operator Vortal.

SNCP entities typically use framework-agreement purchasing procedures that follow strict rules, particularly at the level of suppliers to be invited to tender and

the technical specifications of the products to be purchased. The platform provided by Vortal is currently used by more than 700 entities belonging to the SNCP, with around 7,250 registered users and 1,850 procedures having been launched. Adoption of the platform has streamlined activities and simplified purchasing procedures.

Vortal serves more than 20,000 companies on three continents and 2,000 contracting authorities, with a mission to help organisations achieve superior performance in a collaborative cloud-based platform. Founded in 2000, the company supports its customers through offices in Portugal, Spain and the UK, with a team of 120 staff.

As the market leader in Spain and Portugal in the public e-tendering market, the company's contracts in 2010 were worth about €4 billion. Its information security and quality management systems are certified according to ISO 27001 by BSI (The British Standard Institute) and by the CEGER/GNS (Portuguese National Security Office).

## Overview

**Solution:** Provision of purchasing platform for the National System for Public Purchasing

**Benefits:** Cost saving and streamlining of processes

**Technologies:** Microsoft .NET Framework, SQL Server, Visual Studio, Dynamics CRM

**Partner:** Vortal



# Pioneering online healthcare

NHS Direct has launched a groundbreaking project to enhance its web and digital health services by implementing a suite of online Health & Symptom Checkers (HaSCs). The project, which takes place in partnership with Rackspace and software company InferMed on a Microsoft platform, will benefit users of NHS services, from clinical practitioners and administrators to patients.

The advanced system has been developed by InferMed in conjunction with partners Eduserv and Sitecore, and is hosted in the UK by Rackspace Hosting. The new platform allows the delivery of online assessments, providing greater choice for the patients making 1.5 million visits to access the core NHS Direct services via the internet every month. The service will be syndicated via online channels such as NHS Choices, Directgov and selected consumer health sites, and eventually via IPTV, mobile devices and even games consoles. In the long term individuals will interact with the system to manage chronic conditions as well as for the detection of diseases such as cancer.

InferMed specialises in software for healthcare and the company's Arezzo workflow and inference rules engine is the basis of the NHS project. Arezzo enables the design and execution of NHS-authored guidelines and patient care protocols in real time, presenting patients with a range of treatment or next step options based on their personal history.

Users can move seamlessly from the web to a telephone helpline if needed, to access clinical help. This frees up the NHS Direct helpline and creates cost savings by reducing the incidence of callouts for ambulance and paramedics, or unnecessary visits to GPs and A&E departments. In December 2010 alone, the HaSCs were accessed 700,000 times.

A key factor for any online service is guaranteed uptime and availability, especially where patients' lives are on the line, so it was critical to have the right hosting partner. The hosting contract was awarded to Rackspace, which offers a fully integrated portfolio of services, managed devices and best practices.

The Rackspace Intensive hosting package is the backbone of the solution delivery, providing 24/7/365 network uptime with guaranteed hardware replacement and rapid scaling to meet new demand. Rackspace facilitated a direct link to the secure NHS N3 network which holds all NHS sites and patient records.

"This intensive hosting package has proven to be remarkably cost-effective," says Duane Lawrence, CEO of InferMed. "Rackspace not only delivered in time for the final contract presentation, but also made last-minute changes and wrote in service guarantees that enabled the contract to be finalised immediately."

InferMed products fully leverage .NET technology to offer secure and scalable solutions, whilst the hosted platform from Rackspace utilises SQL Server 2008 and Windows Server 2003.



## Overview

**Solution:** Rackspace Intensive hosting package

**Benefits:** New platform enables delivery of online assessments

**Technologies:** Microsoft .NET, Microsoft SQL Server 2008, Microsoft Windows Server 2003

**Partner:** Rackspace

# Automated processes for canal operator

British Waterways is a government agency responsible for protecting and maintaining approximately 2,200 miles of canals, rivers and waterways in England, Scotland and Wales. With more than 2,000 employees, the company is also the third largest proprietor of listed structures in the UK.

British Waterways recently chose to relocate its headquarters to a corporate office in Watford, England. Due to the physical limitations of this new office, sufficient storage space was scarce. With a huge volume of paper records being stored in 100 large file cabinets and growing each day, the company needed a solution to cost-effectively archive its backlog of paper documents and electronically capture, archive and retrieve documents at a moment's notice.

In addition, many employees were relocated to multiple offices throughout the UK and needed quick access to customer documentation. But with the company's records department based in Watford and its licensing and administrative departments based at the other end of the country in Leeds, employees were unable to locate documents efficiently. This was hampering their ability to deliver prompt customer service.

British Waterways needed to remedy the situation and turned to Kofax, a global document management systems provider, to implement a business process automation solution that would address each of its challenges. In order to provide the hands-on support required for the project, Kofax



assigned its UK certified solution provider Deltascheme to integrate the solution.

Deltascheme implemented Kofax Capture, an industry leading document capture software system, and VirtualReScan (VRS), Kofax's patented image enhancement and perfection software. Microsoft Office SharePoint Server 2007 was also integrated as the document management repository.

To date, the solution has been rolled out to 11 sites across the UK and has enabled British Waterways to save more than US\$15 million annually in document and records management costs and realise vast improvements in its efficiency and productivity.

"The Kofax solution is extremely cost effective and easy to use," says Keith Lester, project manager at British Waterways. "It is important for us to be able to quickly access

and retrieve key pieces of vital information from a wide variety of documents, and the combined Kofax and Microsoft solution enables us to do so in a fast, accurate manner. Plus, we can now search for individual words and text within each scanned document, which makes document retrieval quicker and more efficient."

## Overview

**Solution:** Automated document capture and management

**Benefits:** Increased productivity and efficiency, automated document processes, cost savings of more than US\$15 million

**Technologies:** Kofax Capture, VirtualReScan, Microsoft Office SharePoint Server

**Partner:** Kofax



# From policy to practice

In June 2010 Charles Watt became the CEO of eris@, an ICT-focused network of regional administrations in Europe. Here, he reflects on the experiences of a busy nine months

Having worked outside Europe for five years immediately before joining eris@, I was quickly struck by a number of aspects of the ICT for development sector here. Europe has tended to build on a solid foundation of regulation and legislation first, almost over-engineering this element. Many other regions around the world have fast-tracked projects and taken greater risks in doing so.

There was also an almost tangible feeling that many programmes are at a tipping point. Of course, many of the pioneering regions have already shown progress, but others just need that little bit of encouragement. The main thing lacking was a framework to provide help and skills to regions and municipalities to assist them in moving from the planning stage to the potentially higher-risk stage of implementation.

The key sectors, in terms of size, readiness and impact, included next-generation networks, education, health and government. These latter three are typically becoming unaffordable in terms of percentage of GDP, so something has to be done. We were wedded to technologies – not just those of today but also ones that hadn't even appeared on the horizon – rather than the results, outcomes and social impact from existing applications.

It was with these observations in mind that I set about creating priorities for eris@. My ethos, or the paradigm within which I wanted eris@ to work, has taken inspiration from business thinkers, like Konusuke Matsushita, the founder of Panasonic, who promoted the concept of the 'untrapped mind'. This he described as "open enough to see many possibilities." Add to this the business advice of Charles Revlon, who is reputed to have said: "In the factories we make cosmetics – in the shops we sell hope." And when faced with the stark reality of a cash forecast I was reminded of consultant W. Edwards Deming's statement: "It is not necessary to change. Survival is not mandatory."

With these words ringing in my ears, I established the first six first priorities for the business:

1. Stabilise our finances. A company exists by generating cash
2. Attract and keep talented people
3. Deliver value-added services to our regions; simple at first and more specific later
4. Devise a brand, by which I mean aspect of our customer experience, that meets the needs of the anticipated market
5. Increase our market share of regions and private sector companies who wanted to network with others to share a common voice
6. Develop a simple communications plan that conveyed not only that we were surviving and thriving but that also summarised what we stood for.

We quickly put some actions in place. We developed a new strapline – 'Where policy and practice meet' – reflecting the need to help planners out of their comfort zone and into implementation. Our annual conference will focus on this requirement.

To increase our market share we reduced our annual subscription and adopted a new

Microsoft Dynamics CRM system, enabling us to most effectively meet our customers' requests.

We initially concentrated on the delivery of a series of roundtable events in Brussels and have also improved communication with our stakeholders, using a broader footprint of channels, from newsletters to social networks, such as Twitter, Facebook and YouTube.

Nine months on, eris@ has a strong and growing membership based on the delivery of quality services; we are financially stable and our reputation for delivery of successful projects on behalf of the European Commission (such as [www.broadband-europe.eu](http://www.broadband-europe.eu)) is growing. The enhancements we have planned for our websites and upgrades to our basic infrastructure all provide solid support for our new people-focused organisation dedicated to helping our regional members move 'from policy to practice'.

*The European Regional Information Society Association, eris@, is a network of regional administrations from Karelia in Finland to Extremadura in Spain, which share a vision that the quality of life of citizens can be improved through the use of technology*

"The main thing lacking was a framework to provide help and skills to regions and municipalities to assist them in moving from the planning stage to the potentially higher-risk stage of implementation"

Charles Watt



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UBIFRANCE is dedicated to assisting French companies with their international development. Six interregional departments provide local guidance to companies with great export potential, in partnership with the Chambers of Commerce and Industry (CCI) network.

Through its Economic Missions in 44 countries, UBIFRANCE facilitates the discovery of foreign markets and identifies business opportunities for French companies. With such a wide geographical spread, as well as the very nature of the services offered, activities lead to high demands for long-distance communications. During 2009-2010, UBIFRANCE implemented a Unified Communications strategy based on Polycom solutions.

"We want to facilitate collaborative work and improve communication between teams in France and abroad, make savings on travel expenses and offer new services, but also fully embrace the communication tools of the future" explains the UBIFRANCE IT Director.

Statistics provided by the Polycom CMA™ server show a tenfold increase in communications since the UC solution was implemented. "The exceptional increase in traffic has led us to think of UC as a visual communication method rather than a videoconferencing tool. It is used for more frequent and shorter communications."

In addition to using Polycom UC solutions for its own day-to-day operations, UBIFRANCE facilitates business between companies in different countries by providing access to Polycom® HDX® 4000 self contained desktop units. This is an innovative way to save time and costs for its business clients, providing faster access to opportunities as they become identified.

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