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THE
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» Performance management

The word 'bureaucracy' has long held more negative connotations than positive. However, today's governments are putting technology to work for the taxpaying public, providing better access to information and services than ever before. In this special edition of sascom, you will have the opportunity to see how leading organizations are setting a new standard for transparency, accountability, efficiency and credibility and measuring their own performance for a greater credibility.

– Matthew Barnason Editor-in-Chief

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POLICY COSTS MONEY

What is the job of government? There are many possible answers to this question – particularly if you ask a politician – but my favorite response is, “to improve the lives of the governed.” If we accept this as a social contract, we are expecting the politicians to formulate policies that achieve this objective.

In one month alone in early 2005, for example, the UK government announced policies in areas such as caring for the elderly, extending maternity benefits and improving provisions for the disabled. On the face of it, these policies address different groups with different needs, yet they have one thing in common: they all require considerable funding.

The undeniable truth of government is that it is an expensive business. It's hardly surprising then that the second most powerful job in government, under the chief executive, is usually the head of the treasury. At some stage in policy making, all politicians will approach the treasury to make their bids for funding. After all, no funding = no politics! But the treasury has its own problems. Before it can allocate money to spend, it has to raise it. And there is a finite amount of revenue that it can generate – after all, none of us like paying increased taxes. This is why governments are often accused of giving with one hand whilst taking with the other – they are dealing with a finite resource, the public purse.

It is particularly hard for a government to raise taxes when it also is accused of being wasteful or of not being good stewards of the national budget. After all, the government is not spending its money – it's spending your money! Regardless of political persuasion, opponents will always seek to paint the government as wasteful, and those in government will have to justify their use of public money.

So, as a taxpayer, I've been very pleased to see a renewed focus from governments around the world on using information and intelligence to maximize efficiency in public sector finances. This focus allows a truly balanced approach: those who should pay do so, and those that should receive, benefit.

On the one hand, additional tax revenues are being raised to decrease fraud, to improve debt collection and even to identify loopholes in the law that can be closed. On the other hand, benefits and funds can be targeted to those members of society who most need them, and those benefits can be delivered with a minimum amount of cost or waste. Most of us agree that taxation is a necessary burden, but it is a burden that is easier to bear when we can see that the system is fundamentally fair.



In the case of the Peruvian Tax Authority (page 30), we see how the excise function could reduce government's intrusion into legitimate business and yet still achieve a dramatic 14 percent reduction in customs fraud and tax evasion.

In the UK, the National Health Service is able to get a more detailed understanding of fraud and use this information to both change the way the service operates, and to identify and pursue those that are committing the fraud. The monies being recovered are repaid directly into improving healthcare.

Even police and security forces are able to benefit as they bring more of their data together and make it available for analysis and interpretation. Straightforward projects like integrating data from disparate sources, in the way that Gloucestershire Constabulary has (page 32), show that big results can grow from relatively small initiatives.

So, whilst the nature of politics is about negotiation and compromise, the mechanics of politics are essentially about generating revenue and spending it wisely on the things that matter and make a difference. Probity, fairness and transparency are core values in effective democracies, and these values need to be protected from those who abuse public sector institutions and policies.

I believe some of the best practices developed within the commercial and private sectors are now being adapted and implemented in ways that are unique to the public sector. If we can build on these initiatives and disseminate these best practices and techniques, then we can return enormous sums of money back into the public purse without the burden of increased taxation – something I am heartily in favor of! ■

Peter Dorrington *Principal Strategy Manager, SAS*



Matthew Barnason
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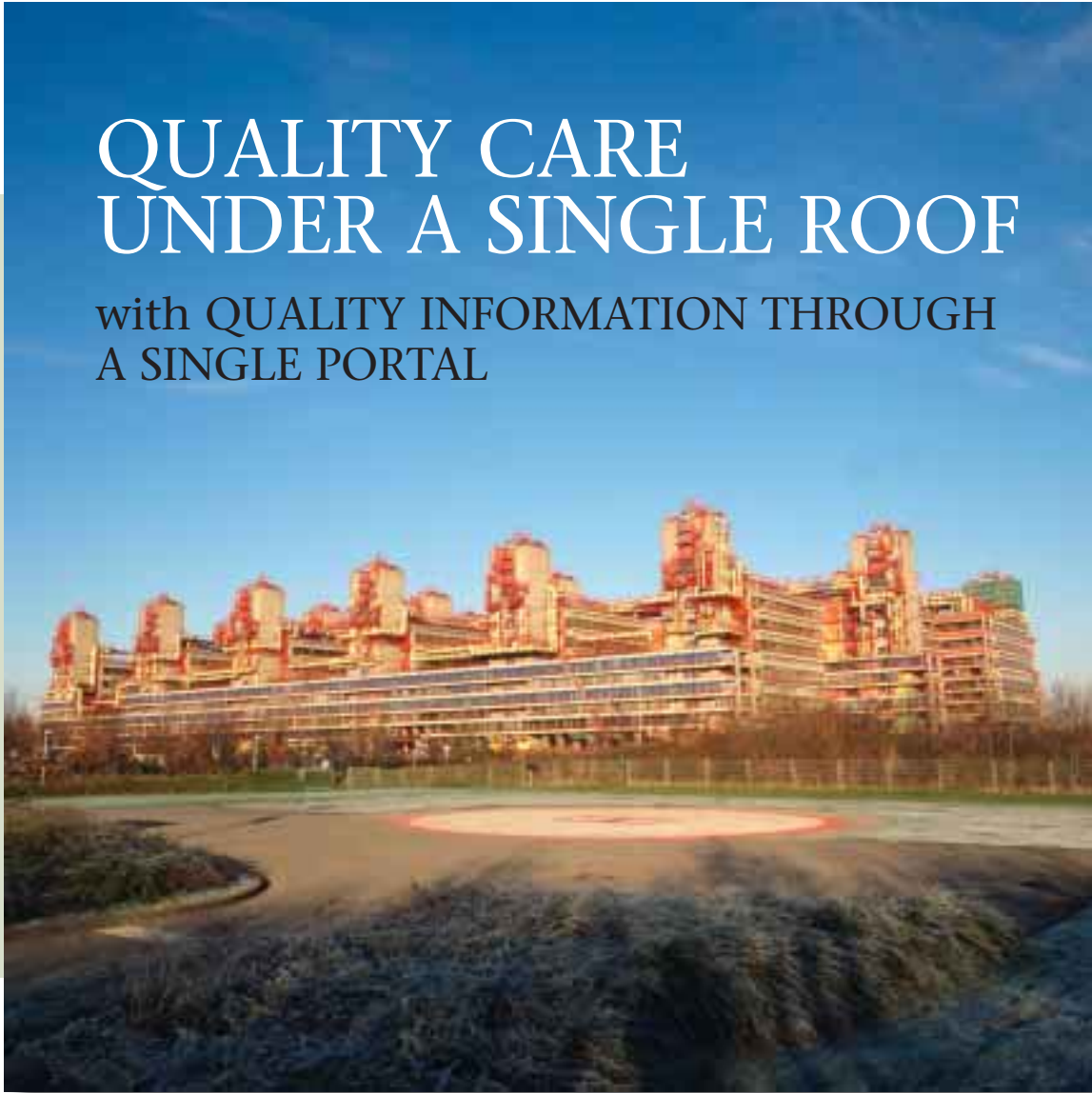
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QUALITY CARE UNDER A SINGLE ROOF

with QUALITY INFORMATION THROUGH
A SINGLE PORTAL



6,286 employees | 67 professors | 1,226 scientific
30 operating theatres | specializes outpatient care | 44,000

University Hospital Aachen

EdWalker

University Hospital Aachen (UKA) is unique in Germany: It combines every aspect of medical and dental patient care under a single roof. UKA also provides common research facilities for engineers, scientists and physicians. There are currently 6,286 employees at UKA, of whom 67 are professors, 1,226 are scientific and 4,994 are non-scientific workers in 33 clinics, 21 institutes and in hospital management. The central surgical department has a complement of more than 30 operating theatres, while a further clinical centre specializes in outpatient care. The hospital treats 44,000 inpatients and 112,000 outpatients annually.

Since moving into the new clinical complex in 1984, UKA has been responsible for coordinating the functions of almost all faculty of medicine services: clinical, theoretical and clinical-theoretical institutes, research establishments, lecture rooms, schools for specialized occupations of the health service, together with public utilities like pharmacy,

kitchen, laundry, central sterilization, archive and stock.

Training facilities at UKA are also state of the art, catering for medical and dental students, in-service doctors and general trainees. Some 2,700 students of medicine and dentistry study at the medical faculty of Aachen University of Technology (RWTH).

There are many advantages to colocating teaching, research and medical care under one roof, but of course it also presents many serious managerial challenges, especially at the higher levels of management. UKA represents a huge investment in public healthcare, bringing together an extensive network of services and specialist activities. Delivering cost-effectiveness – optimum return on the investment – depends above all on effective information flows and comparable information to answer questions like “Where is our organization strong?” “Where is it weak?” “What are the root causes of such weaknesses?” Only when you have answers to these questions can you set priorities and targets for corrective action.

| 4,994 non-scientific | 33 clinics | 21 institutes |
44,000 inpatients | 112,000 outpatients annually



Professor Dr. Walther Behrendt
accepts the 2005 SAS Enterprise
Intelligence Award on behalf of the
University Hospital Aachen.

Yet as is usually the case in any large enterprise, public or private, UKA had evolved with many heterogeneous IT systems. “We had noncomparable analyses based on different analytical systems and non-uniform terminology,” comments Volker Lowitsch, CIO at University Hospital Aachen.

Millions of records and many sources integrated

UKA stored data in a variety of sources, operational systems and file formats, with three key systems. First, the main hospital information system, Medico, was supplied by Siemens Medical Solutions and implemented in Oracle and Windows. Second, UKA used a laboratory information system, Swisslab, supplied by Frey. And third, UKA had made a very significant investment in SAP’s R/3 enterprise resource management (ERP) system, implementing the materials management, financial accounts, financial controlling and human resources modules.

“We are talking in terms of simply vast quantities of data,” says Lowitsch. Approximately 3.4 million records are updated daily in Medico. Swisslab generates approximately 10 million records per year, while in SAP R/3 there are already 4.3 million records and growing, with the rapid expansion of extractable data from the financial intelligence and human resources modules.

“When you have so much data in different systems you inevitably face data integration issues on a daily basis. Managers want to combine medical and financial data to analyse clinical effectiveness,” says Lowitsch. “In addition there are major data quality issues.” For example the Medico and Swisslab systems contain information about the same patients, and the Medico and SAP HR systems about the same doctors. Human

error and different formats create difficulties when matching these records.

However, the challenge for UKA was not simply one of reconciling information from incompatible systems. For example, a big problem existed within the systems

SAP and MEDICO. SAP R/3 and MEDICO were designed as an operational system, and it is notoriously difficult to extract data for high-level analytical purposes, especially if the data comes from applications (such as R/3 “instances”) written in different modules.

Reducing payment cycles, saving money

The recent German healthcare reforms introduced a new urgency to the challenge for UKA. In Germany, healthcare administration is split between the providers (such as hospitals) and the insurance companies (Krankenkassen) that pay the bills. Since the healthcare reforms, the two are required to settle their accounts on the basis of individual case episodes, and to make this possible doctors must record their treatments according to pre-defined categories. The quicker and more accurately UKA can do this, the quicker it can bill the Krankenkassen – and given that the amounts involved run to more than a million euros per day, reducing delay can save UKA huge interest losses.

So UKA could – quite literally – not afford to leave information in SAP or MEDICO, because of the limited analytical functions!

UKA therefore chose SAS to get control of its information resources, with the SAS Health Portal and SAS Business Intelligence solutions, including a balanced scorecard. SAS’ technology leadership in the sector, its long-term commitment in science and research, its proven analytical tools and multisupplier integration platform were all important reasons for choosing SAS, but Lowitsch says that the standard interface of SAS/ACCESS® to R/3 was critical.

“Before the introduction of SAS®, such queries required several weeks of effort – and often the queries could not be answered at all...

Implementation of the first interface required some effort, due to the internal complexities of SAP HR. But the creation of further R/3 modules was less demanding, and likewise for the Medico interfaces. Moreover, the maintenance requirement remains low.

Getting value from SAP data

So in early 2005, for the first time, decision makers were getting value out of their SAP R/3 data, thanks to SAS. Lowitsch says, "There was high user acceptance of the new solution, especially because of the improved data quality." These users include clinical directors, consultants, medical and commercial controlling managers, centre leaders and managing directors of UKA's business sectors.

They access information through uniform views provided by the SAS Health Portal, which was created within the framework of the pilot project, delivering end-user benefit in the minimum timeframe. Users can now get most of their reports in real time or almost immediately (for example 80 percent of R/3 enquiries are processed within a day) instead of having to wait for the monthly reporting cycle within SAP or Medico. Lowitsch explains why this has transformed management practice: "Routine reports in Medico are converted very quickly now, often one or two days after the initial request. Before the introduction of SAS, such queries required several weeks of effort – and often the queries could not be answered at all. As for SAP R/3, many queries could not be answered internally at all because of the inflexibility of SAP's ABAP query tool, so we depended on external consultants."

Optimizing patient care

In practical terms, the ability to produce reports means patients are more likely to be treated quickly and at lower cost. The planning of operations becomes more efficient if you can produce reports that show where the problems are

over the course of a long process. Reporting in SAS means that operating theatres, doctors and technicians are used optimally, minimizing waiting times for patients and maximizing revenue inflows from the Krankenkassen.

UKA has now brought all of its knowledge systems into a single enterprisewide balanced scorecard solution with SAS Strategic Performance Management, supporting strategic management and governance of the entire hospital. In addition to hard facts and figures such as case data, the balanced scorecard provides information including levels of patient satisfaction and the success of interdisciplinary cooperation.

"With SAS we have placed our hospitalwide information management on a completely new footing," says Lowitsch. "Thanks to SAS we are now communicating with a common language at UKA: We can see all the important performance data in virtually real time and we can have complete faith in the integrity and consistency of our information. The SAS System is highly reliable."

Professor Dr. Walther Behrendt, director of medicine at UKA, adds, "Without SAS, UKA management would not be able to make the rapid and goal-oriented progress that has already delivered demonstrable cost advantages." ■

BIO Ed Walker is a journalist, business analyst and communications consultant based in Germany. He is a regular contributor to **sascom**.



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Learn how SAS can help you get more value out of SAP:
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...As for SAP R/3, many queries could not be answered internally at all because of the inflexibility of SAP's ABAP query tool..."

– Volker Lowitsch, CIO at the University Hospital Aachen



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Protecting European healthcare

The European Healthcare Fraud and Corruption Network (EHFCN)

Resources available for the provision of healthcare are being lost to fraud and corruption in every European country. Fraud and corruption in healthcare can come in many different guises, involving patients, professionals, staff and managers, and supplier companies.

It is important to recognize that fraud and corruption transcend national boundaries. With a cost of more than €1 trillion annually for European countries, fraudulent behavior is conducted by a minority who will seek to defraud healthcare organizations for their own financial gain. No matter from what sector this minority originates, the fact is that they are putting the health of the people of Europe at risk and they must be stopped.

Already the NHS CFS has applied a comprehensive and distinctively professional approach to reduce losses by up to 55 percent over the last five years and produce a financial benefit of £671 million with a 13:1 rate of return on the investments.

With this in mind, the National Health Service Counter Fraud Service (NHS CFS), along with five European partners – The Ministry of Health (Poland); AOK (Lower

Saxony Branch – Germany’s largest public health insurance group); Bureau for Fighting Corruption (Slovakia); ZN, the Dutch Association of Health Insurers (Netherlands); and COFM (Spain) – secured funding from the European Commission’s AGIS justice program to host the first-ever European Healthcare Fraud and Corruption Conference in October 2004. The conference has since become an annual event.

At the 2004 conference, counter-fraud and corruption specialists, ministers and other leading healthcare officials from 23 EU nations, as well as Norway, Australia, Canada, South Africa and the United States learned how similar the problems are across Europe and discussed holistic solutions. Subjects ranged from tackling health tourism and ID fraud to issues in the pharmaceutical industry.

By the end of the first conference, agreement was reached on a declaration to take this work forward. The declaration sets out a number of objectives and commitments and covers areas such as development of common training, propriety checks, a secure intranet site for those who work in this field, the development of a common standard of risk measurement and the creation of an office to coordinate this work. It is envisaged that this office would be a not-for-profit center of excellence dedicated to coordinating healthcare counterfraud and corruption work, and ensuring that more resources are freed up for better patient care.

The success of the conference and the support received from so many countries has allowed the European Healthcare Counter Fraud and Corruption Network (EHFCN) to be created. Not only can best practices be shared, and skills and knowledge strengthened, but there is now support for new member and accession countries. EHFCN is determined that there will be real, practical benefits from this work in the form of reduced losses to fraud and corruption – resulting in action, not just words!

Practical work to implement these commitments and objectives – as set out in the declaration – is currently moving forward in more than 80 European counterfraud and corruption specialists from EHFCN. The work is overseen by a steering committee, as decided at the 2004 conference. Member organizations include:

- NHS Counter Fraud Service (England and Wales).
- IKK (Germany).
- COFM (Spain).
- Spanish Ministry of the Interior.
- Slovak Ministry of the Interior.
- Slovenian Commission for Preventing Corruption.
- Dutch Association of Health Insurers.
- Lithuanian Ministry of Health.
- Turkish Ministry of Health.
- CNAMTS (France).
- Zorg en Zekerheid (Holland).
- Moncloa (Spain).

Already the NHS CFS has applied a comprehensive and distinctively

professional approach to reduce losses by up to 55 percent over the past five years and produce a financial benefit of £671 million with a 13:1 rate of return on the investments. Because of its success in countering fraud and corruption in the NHS, the CFS is well placed to support organizations in other European countries as they tackle their own problems.

We in the public sector need to protect healthcare resources in order to safeguard the health of Europe, and I am proud that the NHS CFS has taken a lead on this. The establishment of the network is the beginning of a major movement to push healthcare fraud and corruption to the top of business and ministerial agendas.

I hope that it will prove to be the catalyst for the implementation of successful counterfraud policies and systems throughout the healthcare industry in Europe, which in turn will lead to a better level of care for patients.

Insurers seeking ways to more effectively retain their customers, and cross-sell and up-sell to them while also reducing their own associated costs of doing so, are already implementing business intelligence solutions to maximize their opportunities. To compete effectively in the industry as it changes, insurers are taking a close look at their distribution channels, including the use of agents, and are turning to the competitive advantages engendered by using the technology available to measure and manage productivity and increase profitability. ■

The UK's National Health Service (NHS) and its department, Counter Fraud Service (CFS), have entered into a partnership with SAS that will provide a much greater capacity to target fraud in the NHS. SAS is working jointly with the NHS CFS to develop software to detect and prevent fraud in all areas of the NHS, including pharmaceutical, dental and optical fraud. Using advanced data analysis and visualisation techniques, the software will be able to indicate where in the NHS fraud is most likely to occur in order to catch perpetrators, and predict and prevent future offenses. ●



BIO

Jim Gee

Jim Gee is the chief executive for the NHS Counter Fraud Service and director of Counter Fraud Services for the UK Department of Health.



View a Webcast on the topic of fraud in public healthcare:
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Clarifying prescription

CSI-Piemonte uses SAS® to enable better public healthcare decisions

Tania O'Connor

CSI-Piemonte (Consortium for the Information System) is the main body in Italy representing regional public administration in the field of information technology and telematics. It carries out research activities, develops technologically advanced products and services, and designs applications and information systems. The company is among the top 30 ICT (information and communications technologies) companies in Italy, and the third largest Internet consumer in Piedmont. CSI is also cooperating to build the “Piedmont System” to accomplish administrative decentralization through the use of information technology.

Says Nathalie Coué, who works principally on public healthcare system decision support, “Since 1996 we have been trying to implement an architectural change in the information systems in order to design an organic information layer, archived and periodically updated so as to build flexible and easy-to-use access functionality. One goal is to cease creating single programs oriented to the production of analytic reports, but to try to integrate all decision systems together.”

The basic topics that the decision support system supports are pharmaceutical, health indicators, oncological centers network, centralization of pathological anatomies, and cytological and mammographic screening programs. CSI-Piemonte chose SAS to execute these projects on the strength of SAS’ reputation. “We chose SAS because in the decision support area, SAS is one of the most important players in the field,” says Coué. “Also, SAS already had an application that suited our needs, particularly in terms of volume of data.”

“There are certain questions we want to answer,” says Coué. Those questions include:

- How is the expenditure growing compared with last year?
- Which population profile contributes most to the expenditure?
- What is the patient distribution in a certain geographic area compared with the expenditure?
- How does the average expenditure per patient vary according to the age bracket?
- Which diseases have the highest expenditures per patient?

These are large questions, and it is an ambitious project. “The government is concerned with the pharmaceutical expenditures of the region,” continues Coué. In Italy, local public health authorities regulate the public health services. In Piedmont, there are 22 different local authorities and in the city of Torino alone there are four different authorities.

“The budget allows a certain supply for the region, and it is necessary to check whether all the different territories of the region are the same. There is already an application from the operational system that transfers economic information from each local authority to the region, because at the end of the year each local authority must be able to claim the total amount of different types of drugs dispensed and claim reimbursement from the central government,” Coué explains.

“We are developing the business intelligence system to centralize our information in a data warehouse for all 22 local authorities,” she says. “We want to give the regional authority the ability to examine its data and create graphical



expenditures

reports for individual doctors. These reports show the doctors the prescription activity according to sex, and age and other demographics. The demographics influence whether the cost of the prescription is paid by the state or not. The doctor can compare his or her activity to that of the rest of the region.”

There is an element of the watchdog in the system as well. As Coué puts it, “A secondary benefit to having this system in place is that it lets the doctors know that we are monitoring their information. The drug companies sometimes market aggressively to the doctors, and the cost of the drugs is not always advantageous to the government.”

For instance, CSI-Piemonte conducted a study of hypertension treatment. “The first question we asked was, ‘Is the treatment recommended by the World Health Organization (WHO) for this condition being respected or not?’ We analyzed the specific drugs for hypertension for six months for the entire population. It turned out that treatment for hypertension accounted for more than 30 percent of total expenditure, which is quite high,” says Coué.

By doing cluster analysis on 4,000 doctors, CSI-Piemonte identified a group of doctors who did not follow the WHO guidelines. As a result, the region decided to organize a specific information action to explain the guidelines to the doctors, and to find out why they had not been adhering to them. Says Coué, “According to certain characteristics, we can now predict whether a doctor will adhere to guidelines or not, and potentially execute preventative measures to ensure that he or she knows the guidelines and understands them.”

“All prescribed drugs in Italy were free until a few years ago. Now the system for charging people for prescriptions is subject to applied restrictions, and it is proving a bit difficult to track these restrictions. The SAS system, with the superior data warehouse and reporting functionalities, helps us to do that,” says Coué.

“The OLAP interface is very important to us,” continues Coué. “We have five points of view in the interface: expenditure and volume analysis, territory and mobility analysis, exemption and pathology analysis, abnormality analysis, and pharmaceutical/drug analysis. We can use this to uncover patterns that signify irregularities in prescribing. For example, some people are eligible, for pathologic reasons, to receive all their prescriptions for free. However, if drugs that do not fit that individual’s profile are given to that kind of person, then we can see that they are receiving prescriptions for someone else who might not in fact be eligible for free prescriptions.”

Coué maintains that the flexibility and scalability of SAS is important to CSI-Piemonte’s success in this project, enabling it to get a better view of overall healthcare expenditures. “Being able to examine our data from different points of view – that of the patient, the doctor, the entire region – is very important, and SAS helps us do that.” ■

BIO Tania O’Connor is a freelance writer who lives and works in Ireland.



For more on how SAS is used in healthcare, visit: www.sas.com/success-healthcare



Taking the high road to success

South Dakota DOT saves millions with SAS®

Every year, executives for the South Dakota Department of Transportation (SDDOT) sit before the state's Legislative Appropriations Committee to answer questions regarding the spending of taxpayer dollars.

Alison Bolen



- The committee typically asks:
- What are the taxpayers getting for the money we appropriate to the SDDOT?
 - How do we know you are operating efficiently?
 - How can you do more with what you have?

Questions like these illustrate the No. 1 challenge facing many state government agencies today – namely, the constant struggle to do more with less. For SDDOT that means providing a transportation system that satisfies diverse mobility needs, addresses concerns for public safety and the environment, and maximizes the use of existing resources. SAS helps SDDOT meet these challenges with software for activity-based management and strategic performance management.

“SAS helps us accomplish our mission in a fiscally responsible manner,” explains Roxanne Rice, chief financial officer for SDDOT. “With SAS, we’re becoming more aware of what we’re spending on activities and how we’re performing, so we know where to make changes to improve and when we must request more funding.”

Rice is responsible for the agency’s \$430 million annual budget and its associated financial planning, which involves ongoing communication with the state legislature on issues of departmental performance and anticipated budget increases. “With SAS,” she says, “we’re able to identify opportunities for saving money, and we’re able to justify existing costs and

budget increases in the areas that need them.”

SAS® answers difficult questions

Before implementing SAS solutions, the agency maintained multiple accounting systems that tracked how much money was spent, but Rice says the information was not organized or optimized for answering important questions, such as:

- What does it cost to maintain a mile of secondary highway?
- How does this cost vary from one region of the state to another?
- How do our costs compare with those of other states and with private-sector contractors?
- Where are the best opportunities for reducing costs?

Now, with SAS Activity-Based Management, Rice and other managers within the agency can find those answers and share them with executives, team members and state legislators. The Web-enabled solution allows users to drill down into any project, customer or service area to identify the costs associated with underlying business processes. The next layer of the solution, SAS Strategic Performance Management, provides answers to more in-depth questions, including:

- Is our strategy in line with our mission?

- Are our resources going toward the right activities for accomplishing our strategies?
- What specific actions are required to execute each strategy?
- How can we redirect our resources to more productive uses?
- How does each part of SDDOT contribute to the department’s overall success?

The performance management solution helps SDDOT managers and executives focus on and monitor key activities, apply sophisticated analytics, and respond proactively to pressures and changes.

Saving millions annually

During process review sessions in 2004, SDDOT used SAS Activity-Based Management to identify true costs for all of the department’s activities. These findings allowed the department to focus on changing many high-cost, low-benefit activities – ultimately saving more than \$2 million annually.

For example, SDDOT’s finance employees recently identified a way to simplify a data-entry process with a new accounting template. “Along with other changes they were able to make, finance avoided hiring two new employees,” says Rice. “In government,

“We’ve already identified \$2 million in annual savings, and there’s so much more out there that we can do.”

– Roxanne Rice, Chief Financial Officer, South Dakota Department of Transportation



those full-time equivalents [FTEs] are gold. Managers are constantly asked to change processes to come up with an FTE from within so they don't have to request an additional FTE be appropriated. Now we're giving them a tool to do just that."

Another recent improvement, identified in the maintenance area, was the decision to spray for weeds around highway posts instead of mowing in those areas. As a result, the maintenance department has realized \$60,000 in annual savings and improved its safety measures as well. Rice says the process changes that managers have implemented in the last year range from large to small, but total savings add up to a substantial sum. "We've already identified \$2 million in annual savings, and there's so much more out there that we can do," she says.

Next, Rice says she plans to institutionalize the use of activity-based management and performance management, which will be made easier with the Web-enabled capabilities of SAS. "Managers will be able to see immediately whether they're heading in the right direction," says Rice, "so they can make changes to meet their goals and really take action."

Performance management adds value

While activity-based management forms the core of the agency's solution, Rice says performance management produces results throughout the organization that increase the value of the solution exponentially. Plus, she says, performance management was on the department's list of top initiatives in its

2004 strategic planning meetings. "Performance management encompasses a broad spectrum of needs: business improvement, process measures, performance measures and activity-based management, and the SAS solution met all of our needs," says Rice.

Overall, SDDOT employees now have a better sense of how their work contributes to the agency's mission, vision and strategic plan. "SAS gives everyone the opportunity to make changes to their jobs that will increase efficiency, and it helps everyone contribute to the strategic goals of the department," concludes Rice. ■

BIO Alison Bolen is a corporate communications specialist for SAS and a regular contributor to sas.com.



For more information on SAS Activity-Based Management, visit: www.sas.com/solutions/abm



eGovernment:

For the people,
by the people,
through the Internet

Rosalie Zobel

The public sector plays a major role in Europe's social and economic development, providing for citizens' welfare, social and economic cohesion, and a competitive market environment. However, Europe's public sector is currently at a crossroads, facing economic and social challenges, institutional changes, and the profound impact of new technologies.

Time to decide

First and foremost, the public sector is expected to support economic growth, in order to sustain Europe's model of a strong market combined with strong social solidarity. Public authorities must respond to the demographic change brought about by the ageing of the population. They must deal constructively with immigration, complete the EU single market –

including pan-European mobility of citizens – and safeguard security while protecting freedom and justice.

Europe's public authorities are therefore under considerable pressure to improve the quality of public services on many fronts at a time when, across Europe, the need to comply with monetary stability criteria and the general unwillingness to raise taxes are forcing progressive reductions in public sector spending. The challenge for public authorities is to meet rising expectations for the efficiency, productivity and quality of their services with unchanged or reduced budgets.

Not just about ICT

Information and communication technologies (ICTs) can help the public sector deal with these challenges, but ICT alone will not be sufficient. The full benefits of ICT solutions

are only obtained when public authorities are properly organized and when they have adequately skilled staff.

eGovernment is about modernization and innovation, but it involves more than digitizing and automating existing procedures. It requires the use of ICT in combination with organizational change and new skills to improve public services, increase democratic participation and enhance support for public policy. eGovernment is therefore not a goal in itself but a tool for public sector reform, enabling the public sector to strengthen good governance in the knowledge society.

Above all, it requires a public sector that is open and transparent, with administrations that are more understandable and accountable and are open to democratic involvement and scrutiny. Second, public sector services have to be accessible to all. By providing personalized services, a citizen-centered public sector will exclude no one from its services and will respect everyone as an individual. Finally, the public sector has to be productive in delivering maximum value for taxpayers' money.

eGovernment is one of Europe's foremost challenges. It plays a central role in the eEurope 2005 Action Plan and figures prominently in EU policy plans. Also, the European Commission's structural fund programs are encouraging Member States and their regions to give a high priority to the development of an information society.

Strong support from Member States

The first eGovernment ministerial conference was held in Brussels in November 2001, a joint effort of the EU's Belgian Presidency and the Commission. The conference formed part of the eEurope 2002 program, which was itself a direct follow-up to the Lisbon strategy, endorsed at the March 2000 European Summit, for Europe's economic, social and environmental renewal in the decade ahead.

At that time, the priority was to put eGovernment on the map – to make it visible by raising political interest and creating momentum for a massive drive to get public services online. Two years later, in July 2003, the Italian Presidency and the Commission organized the second eGovernment Ministerial Conference in Italy, as a key contribution to eEurope 2005. The focus there was on affirming political commitment to eGovernment as a means of modernizing public administration, using benchmarking to take stock of the extent of online services and establishing cooperation on issues with a Europe-wide dimension, such as interoperability and pan-European services.

Soon after, the Commission presented a communication on eGovernment, which was endorsed and reinforced by the Council of Ministers in November 2003. As an immediate response to the communication's call for action, a conference

was organized by the EU's Irish Presidency and the Commission in June 2004. The event brought together eGovernment policy-makers and academics to debate two key themes – the economics of eGovernment and its application to promote innovative organizational transformation. These themes are at the core of current work in the field. Between 2001 and 2004, the focus of eGovernment policy moved toward measuring the availability of online public services on the demand side – the delivery and measurement of real social and economic benefits.


Significant progress

The current status of eGovernment in the EU can be characterized in four ways. First, most European countries now have a strategy for modernizing their administrations, including eGovernment. In fact, eGovernment facilities in many EU Member States are equal to the standards of the current world leaders. Second, a recent study ordered by the Commission shows that much progress has been made in bringing public information services online, though more work is needed to develop fully interactive transactional services. Third, local and municipal authorities are often ahead of national governments in integrating different processes and information across administrative departments. Finally, most citizens support eGovernment, but some are skeptical about the proliferation and poor design of Web sites, the limited availability of services, and the lack of co-ordination between government departments. Actual usage of eGovernment needs, therefore, to be carefully monitored.

Problems that can limit widespread implementation include legal and regulatory barriers, cultural and bureaucratic issues, shortage of ICT skills, security concerns, limited funding, and low commitment from management. The implementation of eGovernment can be complex. A mix of social, socioeconomic, legislative and organizational issues must be addressed alongside the technological aspects. Moreover, the interrelationships between local, regional, national and European levels – and the differences between their respective legal and administrative competences – add to the difficulties faced by eGovernment initiatives. Experience seems to show that eGovernment can succeed if it starts small, learns from good practices used elsewhere and scales up quickly while listening to its users.

Simpler services for all

Actions taken to address these issues include benchmarking, exchanging good practice, support for R&D, piloting and implementation programs, and, above all, the initiatives and action plans of the Member States at national, regional and local levels. The Commission itself



has a program called eCommission that has been running since 2001. It aims to modernize internal administration and improve public services and communication with citizens and businesses. For example, all legislation and other official Commission documents are already online, and the Commission uses interactive Web sites for consultation and spontaneous feedback as an aid to policy-making.

There are a number of programs coordinated by the European Commission, which are promoting and supporting the introduction of eGovernment. These programs include Information Society Technologies (IST) research, Electronic Trans-European Networks (eTEN), Interchange of Data between Administrations (IDA), the MODINIS program supporting eEurope and others such as eContent and Structural Funds. Synergies are sought between these European activities and those of Member States to identify economies of scale, avoid duplication of spending and improve the visibility of overall investment. In practical terms, the main priorities supported by eEurope and European initiatives are interoperability with pan-European services and identity management, multiplatform access, and the modeling of eGovernment economics and the evaluation of its benefits.

Toward the single virtual administration

Interoperability means enabling several agencies at local, regional, national and European level to interact and exchange information so that citizens only need to go to a single agency. Several Member States have already specified a framework for interoperability such as eGIF in the UK, CCI in France and SAGA in Germany. For pan-European services, a European Interoperability Framework (EIF) was proposed in early 2004 and is the basis for continued improvement.

To avoid fragmented and incompatible solutions, it is important for the Commission to work with Member States in a coordinated way. Two specific studies on Member State initiatives are planned. One aims to pull together experiences with and lessons from good practice cases of interoperable applications at local and regional level. The other is studying the EU-wide compatibility of electronic identity management and authentication systems for eGovernment services.

Ahead of these activities, several collaborative projects in eTEN and IST are paving the way for more innovative solutions by trying out eGovernment applications and conducting specific research. For example, the eTEN project SPES has developed and deployed the same application for electronic signatures in four EU regions in Italy, Germany,

the United Kingdom and Denmark. In the research field, INTELCITIES is an integrated IST project that brings together 73 partners, including 20 municipalities, to develop interoperable municipal services and to interconnect geographical systems, virtual reality and other decision-making tools to aid complex urban planning tasks.

Personal preferences


An important objective of the eEurope 2005 Action Plan is to use ICT to combat social exclusion. In particular, the introduction of new online eGovernment services should not lead to a “digital divide” that creates disadvantages for certain groups because of their location, lack of skills (including digital skills), abilities or income.

A specific eEurope 2005 objective for eGovernment is, therefore, ensuring that basic public services are made accessible in a variety of ways, not only through personal computers, but also via mobile phones, digital TV and kiosks. For example, the research project SAFIR aims to give each citizen, public organization or business an equal opportunity to access and modify eGovernment information at any time. The project is building a software development kit for the creation of location-independent, voice-activated access modules using such devices as televisions, computers and mobile phones. An IDA study found that such information or services should be adapted to the characteristics of different delivery channels and should be able to interoperate seamlessly so that different channels can be used for a single transaction. The study also underlines the fact that well-balanced approaches can actually improve users’ satisfaction while cutting costs.

Costs and benefits

The value of services offered by public institutions is difficult to determine since their price – often zero – is not established by market competition. New approaches to benchmarking eGovernment are therefore needed, as well as research into its economics, to enable us to better assess benefits and performance. Given the current challenges to Europe’s economic growth and social cohesion, it will be important to demonstrate that eGovernment does indeed contribute to improving productivity, inclusion and openness, that innovative transformation of public administrations can contribute to Europe’s economic and social renewal, and that eGovernment plays a real role in achieving the Lisbon agenda.

From a commercial perspective, eGovernment already constitutes a sizeable market. In the EU, governments spent



about €30 billion on ICT in 2002 – a figure that excludes the necessary accompanying investment in organization and training. Experience from the business world suggests that investment in organizational capital can be at least four times greater than that in ICT.

In Europe, many public services have traditionally been provided by public authorities themselves. Nowadays, these authorities increasingly entrust service provision to public or private undertakings or to public-private partnerships and limit their own roles to specifying, monitoring, regulating and, where necessary, financing those services. The term “public-private partnership” (PPP) refers to forms of co-operation between public authorities and the world of business for the purpose of funding, building, renewing, managing or maintaining an infrastructure or the provision of a service. Experiences around the globe show that eGovernment is eminently suited to PPP – for example, in areas such as issuing driving licenses, collecting utility bill payments, managing land records and so on. These functions are undoubtedly the fastest growing area of public-private partnerships.

However, the success of PPP in different countries is not consistent. Unlike outsourcing, PPPs cover contractual arrangements where risks and rewards are shared between public and private organizations. For the private sector, the benefit is mainly in the profit to be made from the resulting service. But it is often difficult to assess in advance the potential return that may only materialize in the long term. The benefits to the public sector include increasing innovation and flexibility (when the public sector is too rigid) and acquiring technology, know-how and capital.

The private sector's growing role in eGovernment has been driven mainly by shortages of technical skills and expertise in the public sector for implementing new technologies. Less risk is expected when the eGovernment service is not built from scratch but rather adapted from existing systems or infrastructures such as those used in banking. However, the public sector remains accountable to citizens for transparency, inclusion, equity and best use of taxpayers' money when sharing service delivery with a private partner. Even when the private partner bears the financial risk, the political risk of failure therefore remains with the public partner, and it is important that before entering into a PPP agreement, public authorities identify precisely how they expect to benefit. Pragmatic decisions have to be made based on available skills, training costs, value for money, as well as the openness and interoperability of the planned system.

Implementation demands leadership

eGovernment can deliver many benefits, but its full-scale implementation is not easy. The considerable experience accumulated across Europe teaches, for example, that each state and region has its own very specific challenges and opportunities that it must meet and exploit on its own terms, considering local cultural, institutional and functional requirements.

Collaborating, exchanging, comparing, analyzing and transferring ideas and solutions across the EU need to be strongly encouraged among public authorities, industry and academia. A framework for sharing of good practices in eGovernment is being put in place to facilitate exchanges, accelerate transfers of experience and promote joint efforts.

Another condition for successful eGovernment is to avoid putting old bureaucracy online. Administrative processes must be reviewed to break down the barriers between departments and to upgrade civil servants' and citizens' professional skills. Appropriate legal and regulatory frameworks are a prerequisite for dealing with significant administrative changes.

Finally, full implementation of eGovernment is a complex process. It needs the commitment of all stakeholders, from the ICT supply industry to senior politicians and administrators, if citizens, both as taxpayers and as participants in democracy, are to benefit. ■

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For information on eGovernment, visit:
www.sas.com/govedu/federal/egov.html

Information on the European Commission's IST-eGovernment program: http://europa.eu.int/egovement_research

Information on the Commission's eTEN program:
<http://europa.eu.int/etenIDA>:<http://europa.eu.int/ipsa/ida>

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Protecting the public trust

**Performance measurement
as an ethical responsibility?**

**At least one U.S. military
leader sees it that way.**

KellyLeVoyer

To continue to meet America's 21st century maritime threats and challenges, the U.S. Coast Guard initiated the Integrated Deepwater System program, the largest and most innovative acquisition in the Coast Guard's history. Deepwater is not just "new ships and aircraft," but an integrated approach to upgrading existing assets while transitioning to newer, more capable platforms with improved systems for command, control, communications, computers, intelligence, surveillance and reconnaissance, as well as innovative logistics support.

Using business intelligence and analytics from SAS, Rear Adm. Patrick Stillman, the program's executive officer, and his team can monitor the performance and progress of the program, as well as provide the reporting required by the governing and oversight bodies in the U.S. government.

sascom Editorial Director Kelly LeVoyer recently spoke with Adm. Stillman on the virtues and challenges of performance management in the public sector.

Can you give us an idea of the breadth and depth of what you are tracking and reporting with Deepwater?

Deepwater is actually a system of systems that addresses the nation's abilities to contribute to homeland security and homeland defense as well as the execution of the Coast Guard's traditional missions. This comprises potentially a

\$24 billion investment by the U.S. taxpayer over the next 25 years. It includes not only the construction of new ships and the procurement of new aviation assets, but also the infusion of command and control information technology capabilities and surveillance capabilities that allow these assets to perform their designated missions. We are challenged with assessing performance, as well as predicting performance through predictive analysis over the course of the program's implementation.

We are also charged with assessing the support and operational requirements of these assets over their life span. So with that, we are looking not only at efficiency – as far as the cost of operation of these assets – but also effectiveness, in terms of the return on investment the assets provide to the nation's security and defense needs.

For all of this, we have developed a balanced scorecard approach that really lets us "live in the light," or operate with a greater sense of real-time knowledge.

Why is performance management important to government in particular?

I think that performance management in the public sector is as important, if not more so, than it is in the private sector. In the Coast Guard, the Department of Homeland Security and across the administration, people truly feel the responsibility to be attentive to the public trust, to leave it better than we found it. So, the commandant of the Coast Guard directed as a strategic precept this issue of stewardship across all dimensions of the organization. We feel that in the execution of the Deepwater enterprise, stewardship has to



be a fundamental prerequisite for success and execution.

The Department of Homeland Security has a strategic foundation built on organizational excellence, and we've worked hard to "operationalize" that concept. The U.S. taxpayer expects us to be both efficient and effective, and we take that very seriously. Also, the president and the administration tied budgeting and performance together so that better performance leads to more concrete funding support. Within this framework, and infused with the ethos of public service, we approach performance management not only as a necessity but as a calling.

You are known for having a unique passion for the discipline of performance management. How have you instilled this passion across your organization?

We greatly encourage the concept of constructive knowing: finding metrics and data that provide us with the business intelligence necessary to make the right decisions at the right time. We're measuring efficiency and effectiveness in tangible ways with a balanced scorecard, and we try to bring that scorecard to light so that it really becomes the fulcrum of a learning organization, for what I call inspirational awareness.

I can't think of a better environment than where truth and facts prevail – where collaboration, cooperation and awareness are commonplace attributes. It's about creating trust and relationships among colleagues and with our customers [the men and women of the Coast Guard] by truly giving people a sense of understanding so that they feel comfortable being held accountable and they can benefit from the information.

Equally important is the element of adherence to public law. For example, the Government Performance Results Act requires that outcomes be measurable and linked to the performance of the Coast Guard's mission: Have we been successful in attending to the maritime security needs of the nation? In seizing illegal drugs? In protecting our maritime borders from illegal immigrants? Have we been successful

in saving a person in need with our search and rescue capabilities? Have we been successful in protecting our fishery stocks such that our natural resources can serve the needs of a maritime nation? All of these measures are part of a learning organization and, I believe, are an important part of a healthy and constructive enterprise.

Is the performance management system helping you achieve your mission?

Most definitely. It provides the foundation to allow us to focus on the right things at the right time and make better decisions that help us achieve a better return on investment. That's not easy for a multimission organization that is confronting the challenges of a post-9/11 world.

The asset measures certainly help us, for example, keep on top of the acquisition and production of new assets. For example, we have earned value management metrics directly tied to the costs and schedules of the construction of new ships and aviation assets. This provides real-time input to both industry and the government about the state of the program, including elements of human capital management. We apply survey instruments to measure morale as it relates to the tasks at hand, and we measure the satisfaction of the men and women of the Coast Guard who operate the ships or aviation assets – to assess their perspective on the performance of assets that are being produced under the Deepwater umbrella.





“I can’t think of a better environment than where truth and facts prevail – where collaboration, cooperation and awareness are commonplace attributes.”

— Rear Adm. Patrick Stillman, U.S. Coast Guard

Long term, our desire is to use the balanced scorecard to focus on people, performance and partnership to help define the performance plan for employees. With the Department of Homeland Security leading the movement toward performance-based evaluations in government, we are right now looking at integrating the balanced scorecard as an input into performance evaluations. I’m convinced this is the right way to do business. I think it becomes a force multiplier in attaining superb execution and fostering a sense of accountability and knowing.

What is the role of performance management with regard to gaining and maintaining the trust of your organization and of the public?

I’m unquestionably accountable for the stewardship of the public trust, and the only way I can attain the public trust is to help the people of the Coast Guard be successful in their missions. How better to help than to give them a sense of knowing with the valuable construct of a balanced scorecard that allows them to embrace objectivity and awareness as it relates to their responsibilities? I feel it really becomes a tool that I am ethically obligated to provide my people because I’m blessed with the very best in that regard. The balanced scorecard and the discipline of business intelligence have provided a foundation that we hope to build on. It’s how we’re doing business every day. ■

BIO Kelly LeVoyer is editorial director of sas.com magazine.



Read more about performance management and download white papers: www.sas.com/solutions/pm

Follow in the footsteps of other successful public sector organizations using SAS: www.sas.com/success-gov

Read how the British Royal Navy uses SAS to predict staffing needs to allocate personnel efficiently: www.sas.com/success/royalnavy.html



SWAP OUT 'DEAN' FOR 'CEO' AND THE ISSUES ARE THE SAME. EVEN TOP-RANKED UNIVERSITIES NEED BUSINESS INTELLIGENCE AND THE ABILITY TO DISTRIBUTE INFORMATION TO PEOPLE WHO NEED IT. THAT'S WHY ERIC DONOHUE OF THE UNIVERSITY OF WASHINGTON IS USING SAS® TO 'FREE' THE UNIVERSITY'S DATA.

Alison Bolen



FREE THE
DATA!

What do managers of the information architecture for a public company have in common with administrators running a data warehousing program for a top-ranked university? The unceasing pressures to provide faster, better information to ever-growing numbers of business users, analysts and decision makers.

Eric Donohue, manager of the data warehousing program at the University of Washington, sheds some light on how his department deals with these pressures. Recently, he discussed his department's long-term goals and shared his vision for business intelligence (BI) with the editors of **sas.com**.

What are your goals for data warehousing and business intelligence at the University of Washington?

Donohue: Our vision statement is "Free the Data," which really means distributing the data to those people who legitimately have a reason to use it, and improving the data for those intended uses. We have many levels of business users at this university; all of them are screaming for more information to manage their local business requirements. We want to provide information to deans, academic planners and university administrators that will allow them to be creative in the ways they think about the future of the university's development, as opposed to reflecting on the past.

How do you see your ETL solution as the first step toward achieving your mission to "Free the Data"?

Donohue: It is the first step in making the data available for distribution. The more access an organization has to common information, the more likely it is that the organization will run efficiently and well with happy employees who do better work. I also believe that the second step – the data use – is one of the harder pieces of this whole process. If you don't have good BI solutions sitting on top of your data warehouse, then what you end up with are multiple reporting tools designed for purposes other than data analysis. It is very important to have a well thought-out business intelligence platform on top of a data warehouse.

Because otherwise it's just data, not information.

Donohue: Right. You can look around a room, and there are a lot of things that will never register as information. Information is anything you see that actually matters to you –

like the chair you want to sit in, the computer you want to use. But you may not notice the grain patterns in your door or the 48 different colors in the spectrum in your carpet. That may not matter to you at all. We have that kind of detail in our data, but you probably don't want to see it. So we have to have something in the middle that allows you to get to what you need.

What are the benefits of business intelligence?

Donohue: The goal is to put good tools into the hands of the people who need them to make sound decisions for their organization's future. Decision makers need to have common tools that allow them to get to the grit of what the organization is doing. BI speeds up the process of knowing more about the nature of your business. The best business intelligence tools on the market easily display information and insight to people who don't have deep analytic skills. A common BI solution set allows you, based on a common data set, to have one point of reference for your organization's data. So if a dean asked his department chairs to project future course offerings for the next five years, the faculty could go out and make independent judgments based on a common database and using a simple interface, without being forced into becoming real institutional information analysts.

At SAS, we like to talk about moving Beyond BI™, to actually providing deeper levels of analysis. Explain the importance of this to the University of Washington.

Donohue: What ends up happening – by virtue of having a good data set and a good distribution mechanism for displaying analyses – is that you are able to start thinking about what-if scenarios much more quickly than ever before. What if we wanted to do this differently? What if I need to change that? Those kinds of things are terribly valuable, because now I can just sit down at my desk to slice and dice the enrollment history for the last five years to determine the effects of an enrollment cap. Or I can explore financials to define baseline budgets for a curriculum that focuses more heavily on technology-based education. I can understand how that would affect the overall academic portfolio. Without a powerful BI solution, that question would not get asked and answered very easily, because it would take months to assemble that kind of information.

And having access to that information in the first place helps you to know what types of what-if questions to ask.

Donohue: Exactly! So analytics is also another piece of all of this, which involves looking for the patterns in the data that we wouldn't otherwise recognize. With analytic tools, we can set the data free and have the machine start looking for patterns that we wouldn't already recognize. Then we can have those things reported back to us so we can start investigating in whole new ways that we probably never thought about before.

Can you describe some of your long-term goals?

Donohue: I want the people who are responsible for making decisions about how the university operates to have the opportunity to make those decisions fully informed. I want them to be able to have valuable information available to them in a time frame and in a workspace that makes that information useful to them. I want the thinkers that are responsible for the university's future – the academic planners – to really be able to pose the questions that matter. Like how do we fund education? How do students participate in that funding? What kinds of opportunities could we make available? If we are going to handle financial aid, which we all do, what are the things that students really need – as opposed to what we just perceive they need? I want innovation and thought. I want to give them the ability to ask the questions they've always wanted to ask and to find answers to the things they never thought they would be able to ask.

I can tell that you are excited about these ideas. What about others at the university? What are their reactions to these plans?

Donohue: People are certainly looking for this. Ultimately, better information can improve outcomes for our students. That is really where this university and others who are interested in these things are focusing. How do we best serve our student populations? Through better financial management, better student management, better course management, better space management and more. ■

BIO Alison Bolen is a corporate communications specialist for SAS.

SAS® provides first stage of university's BI architecture

From state universities to international banks, today's data-rich organizations store information in different source systems and on different platforms. And that data is often maintained by many different departments. As a result, business users struggle to understand what data they have, where it is located and how to retrieve it.

SAS helps leaders at the University of Washington get the information they need with the newest version of the SAS Enterprise ETL Server. Part of the SAS®9 platform, this data management

solution includes features that simplify core functions in the extraction, transformation and load (ETL) process. Most importantly, it shortens the time required to move critical data into the university's business intelligence applications.



Read more about the SAS Enterprise ETL Server: www.sas.com/sascom-server

SAS® supports payroll, enrollment reporting

The Data Warehousing Program at the University of Washington supports many BI initiatives across the campus. Newly implemented reporting applications include:

- A Web-enabled check register report for the university's payroll office. New features within the report include row shading to highlight recommended actions and a historical report that provides 12 months of check register information.

- New "enrollment statistics cubes" that replace an older, one-dimensional enrollment profile report.
- New payroll reports that support the transition to providing direct deposit slips through the Employee Self-Service Web site.



Read more about the program's recent projects: <http://ucs.admin.washington.edu/dwp/newspubs/newspubs.aspx>



SAS® assists with ‘citizen relationship management’

EdWalker

MAKING THE AUSTRALIAN TAX SYSTEM EASIER, CHEAPER AND MORE PERSONALIZED

Relating to taxpayers as “customers” is a somewhat revolutionary concept, but the Australian Tax Office (ATO) has adopted a customer service model and is using SAS to understand customer needs, meet their expectations and improve overall compliance, ensuring government revenues.

Increased emphasis on client relationships

The ATO is the federal government’s main revenue collection agency. In 2001-02, its collections totaled more than AU\$165 billion (US\$128.5 billion), about 93 percent of all tax revenues collected in Australia. The ATO administers tax laws, with the aim of managing and shaping the revenue systems that sustain social and economic policy and fund services for Australians – an important task the agency seeks to do better.

The ATO faces two major challenges. The first is to improve the efficiency with which tax laws are applied and administered. The ATO wants to do business with clients electronically, enabling people to submit their statements and returns via the Internet and other channels. The ATO also wants to process taxpayers’ statements and returns in a timely and responsive manner, ensuring that they receive their refunds or pay their debts on time.

The second major challenge is to be seen as a more client-friendly

organization that helps taxpayers understand their rights and entitlements and see that they meet their tax obligations. The ATO is placing increased emphasis on client relationships and providing an “easier, cheaper and more personalized” service to clients. Client intelligence is vital to addressing these challenges, and this is one reason why the ATO is using SAS software to better understand clients and their characteristics.

In particular, the ATO is establishing procedures to give employees who interact with the public the intelligence they need to respond to clients in a friendly, helpful and timely manner. To this end, the ATO has set up call centers that enable any person or organization to contact the agency to obtain the assistance it required. Client intelligence enables call center operators to understand better the people they are interacting with and explain how the tax system applies to their particular circumstances.

SAS® improves personalization

As is the case in most developed countries, the Australian taxation system is very detailed and complex because of “black-letter law,” since the way it is applied is not always simple and straightforward. It is therefore important that ATO employees make the best use of technology and information to ease the burden on taxpayers in meeting their obligations.

Clients regularly seek tax rulings on whether certain obligations apply in their cases, which deductions they can make from their taxes and similar questions. SAS Text Miner mines tax ruling requests. It can be used to categorize requests for tax rulings based on their content so that the ATO obtains a better understanding of what people want from the agency, to determine whether a precedent exists and to establish the information needed to answer specific requests.

In particular, the ATO uses SAS software to profile clients in order to customize responses to each client's unique circumstances. In the era of e-government, it is now possible to tailor responses rather than use a "one-size-fits-all" approach with clients. The ATO has found that data collected from clients and other sources enables a more personalized and responsive approach.

SAS offers scalability, ease of use

Warwick Graco, a manager of the SAS project at the ATO, says SAS software offers several important benefits in this respect. One is its scalability: it can handle large data volumes. Those who do analytics in the ATO generally deal with entire populations rather than samples, so

industrial strength in the software is essential. Another advantage with SAS is the breadth of its suite of analytic tools. These tools are all tried and tested, which is important when it comes to choosing the most appropriate tool for a particular job.

SAS' ease of use is a third important asset for the ATO. "SAS is easy to use because it involves many point, click, drag and run operations. For example, SAS software has a library of ready-to-use algorithms, so you don't have to spend a lot of time writing the code; you just call up the algorithm you need to do the job," Graco stated. "When you are in the business I am, under pressure to produce results within deadlines, the quicker you can get things done the better." He added that the visual features of SAS^{®9} boosts productivity even further.

Finally, Graco said, the widespread use and market penetration of SAS in Australia and around the world are significant benefits to choosing SAS as a vendor. "In a large organization it is important to have standards, and SAS has become a standard for business intelligence. There are a lot of people out there with SAS skills



Warwick Graco,
Australian Tax Office

and experience, so it does not leave a gaping hole if you lose a key member of the staff. The extensive availability of people with SAS skills and experience gives us the confidence that we can replace staff that leave and can plan ahead with confidence while keeping costs under control."

Having worked as an organizational psychologist earlier in his career, Graco says he thinks the SAS organizational culture has been a benefit in making the company successful and establishing SAS software as an industry standard. "If you have a happy organization, then you are going to have a good product. This philosophy has paid off handsomely at SAS." ■

BIO Ed Walker is a freelance journalist, business analyst and communications consultant based in Germany.



For other uses of SAS within a tax authority, read: www.sas.com/success/philippinesbir.html

THE PERUVIAN TAX AUTHORITY REDUCES EVASION BY 14 PERCENT

SUNAT (Superintendencia Nacional de Administración Tributaria) is the Peruvian government's tax collections authority, responsible for administering, collecting and levying duties (including customs tariffs). Ensuring tax compliance has a direct and significant impact on Peru's economic and social development. SAS' solutions have enabled the national tax authority in Peru to reduce customs fraud and tax evasion by 14 percent, a significant success for the nation and its citizens.

Ruth Salcedo, SUNAT's IT division manager, said, "The idea to improve results using SAS came at the same time as we merged the tax and customs divisions. By processing both domestic and international information, we could generate a complete profile of taxpayers and foreign businesses, as well as profiles of tax evaders and of undervalued imported goods."

SUNAT is the first tax and customs organization in Latin America to successfully use analytic techniques in the fight against customs fraud and contraband. For its business and technology accomplishments, SUNAT received an award in 2004 from the Peruvian IT community. SUNAT is ranked among the top 100 IT organizations in Latin America. ●

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*Gloucestershire
Constabulary*

Cleans Up

Stephen Fenerty

Improving data quality for operational efficiency and freedom of information

In the United Kingdom there is no central crime database, any more than there is a single monolithic police force. It is up to county and metropolitan forces to take care of their own data resources, and they all face their own challenges.

Gloucestershire Constabulary, a UK police force with 1,280 officers (plus 786 civilian staff and 170 special constables), is responsible for policing 560,000 people in 270,000 hectares (approximately 1,050 square miles) of urban and rural countryside. Community policing is at the heart of Gloucestershire Constabulary, and in today's mobile society that depends on accurate and up-to-date information. However, criminals do not respect county boundaries, so Gloucestershire Constabulary also owes a duty of care to the other 43 police forces of England and Wales to ensure that the data in its records is accurate.

Freedom of information

Running any kind of organization with limited resources, in the public or private sector, depends on high-quality information, and in 2002 Gloucestershire Constabulary

embarked upon what it calls its Vision 5 program, which involves "... providing equipment, buildings and technology that promote effective and efficient services." Vision 5 could hardly be more ambitious in its aim to make the constabulary "the most operationally effective police force in the country." The Business Change Department in Cheltenham is working on several projects to improve operations, including IT infrastructure.

Moreover, since Jan. 1, 2005, Gloucestershire Constabulary has had new obligations to keep its data in good order under the Freedom of Information Act (FoIA).

"These are all good reasons to invest in a solution that would address our data quality problems," says Reg Barnard, who heads the Constabulary's Information Systems Development team in Cheltenham, Gloucestershire. "The trouble is that data quality is a bit like a healthy diet and regular exercise: We're all in favor of it, but we don't always find it that easy to achieve. Every organization faces data quality issues, but in the police force, we have all the usual problems such as bad spelling and

miskeying, magnified by the fact that many of the people we are dealing with are less than entirely honest. Criminals give us all kinds of false information that can't be verified on the street, such as wrong date of birth or misspelled first names."

Of course, many of these tricks have been around for years, but with electronic data systems, it should in theory be easier to cross-check records. In practice, however, it's not so easy when you have several incompatible legacy systems, each implemented to serve different purposes.

An expanding user community

What's more, the user community has grown over the past 10 years; small teams of highly trained inputters have been replaced with much wider access to nonspecialized users, most of them minimally trained. In other words, there are ample opportunities for inaccuracies and inconsistencies to enter the system. "With a flatter management structure, multiskilling and multiple data entry points such as the call center, we have lost the filtering system that used to keep data quality issues to a minimum," explains

Barnard. For several years the Constabulary's approach has been one of "fire fighting" the problems as they arose, but with Vision 5 and FoIA this was no longer an option.

Under the FoIA, public authorities have to produce a "publication scheme," and the Association of Chief Police Officers (ACPO) set up a national team to develop a model publication scheme for the 44 police forces. It involves delivering an open and transparent service whenever possible, publishing information that the public has an interest in viewing and making specific information available on request, so long as this does not prejudice ongoing operations.

The SAS® solution

SAS recommended that it deploy SAS Enterprise ETL Server, part of the SAS®9 Enterprise Intelligence Platform. "We wanted a solution that would not only enable us to address our immediate data quality concerns, but also lay the foundations for business intelligence," says Barnard. "After all, good policing is about quality intelligence: making the link between the crime and the offender."

That's a view echoed by Nick Churchill, who spent 31 years as a detective and is now the constabulary's database administrator. In 2003, he was given the task of shifting the data from the legacy systems into a data warehouse and making it available on the intranet. He chose SAS for a pilot project that would integrate three legacy systems: Unity, which is the core intelligence system containing data on crime and custody; VPFPO, which stores data on vehicle parking and fixed penalty offenses; and the domestic violence database, which contains details of offenders and victims. "We did not make things easy for SAS. All three systems are implemented with incompatible software: Oracle, Ingres and SQL," says Churchill.

All of the information extracted

from the source systems is subjected to SAS data quality procedures to profile, cleanse and standardize the data, using match coding. Gloucestershire Constabulary found that with SAS it can adjust the sensitivity on matching fields, such as name or street address. That way it can identify the biggest problems first and work downwards. SAS will quickly pick up obvious alternative spellings of the same name, such as Stephen and Steven or Uddin and Udden, but it will also pick up less obvious matches. For example, the surname Ferry might be accurately recorded on the street, but then wrongly entered as Perry back at the station. Likewise, car registration numbers might include one or two wrong digits. It would be difficult to find time finding such mistakes with other software, let alone manually.

Safety first

"However, there is an important caveat. One thing I dare not do is change the data in Unity, because how do I know for sure whether two very similar records relate to one person or two? It's a very risky business: If you get it wrong you could obstruct an investigation or you could make unjust assumptions about an individual," says Churchill.

Consequently, Gloucestershire Constabulary is using SAS to identify possible quality issues, but feeds the questionable records back to the owners for auditing and correction. A typical problem is wrong postcodes and addresses, which a police officer on the beat has no means of validating. It is relatively easy to identify mismatches, but then the question arises: Is the postcode wrong or the street address? One way of isolating such issues is to match coding between the different data sources. "Much to our surprise, a quarter of the vehicles on the VPFPO system were also on the Unity system, meaning they were used in a crime of some sort, with or

without the knowledge of the owner. Yet, very often, the least reliable and up-to-date information is on Unity, our main operational database."

"SAS is very powerful when it comes to clustering the near-matches to help us correct data and bring it up to date, so it saves a huge amount of time and resources," says Churchill.

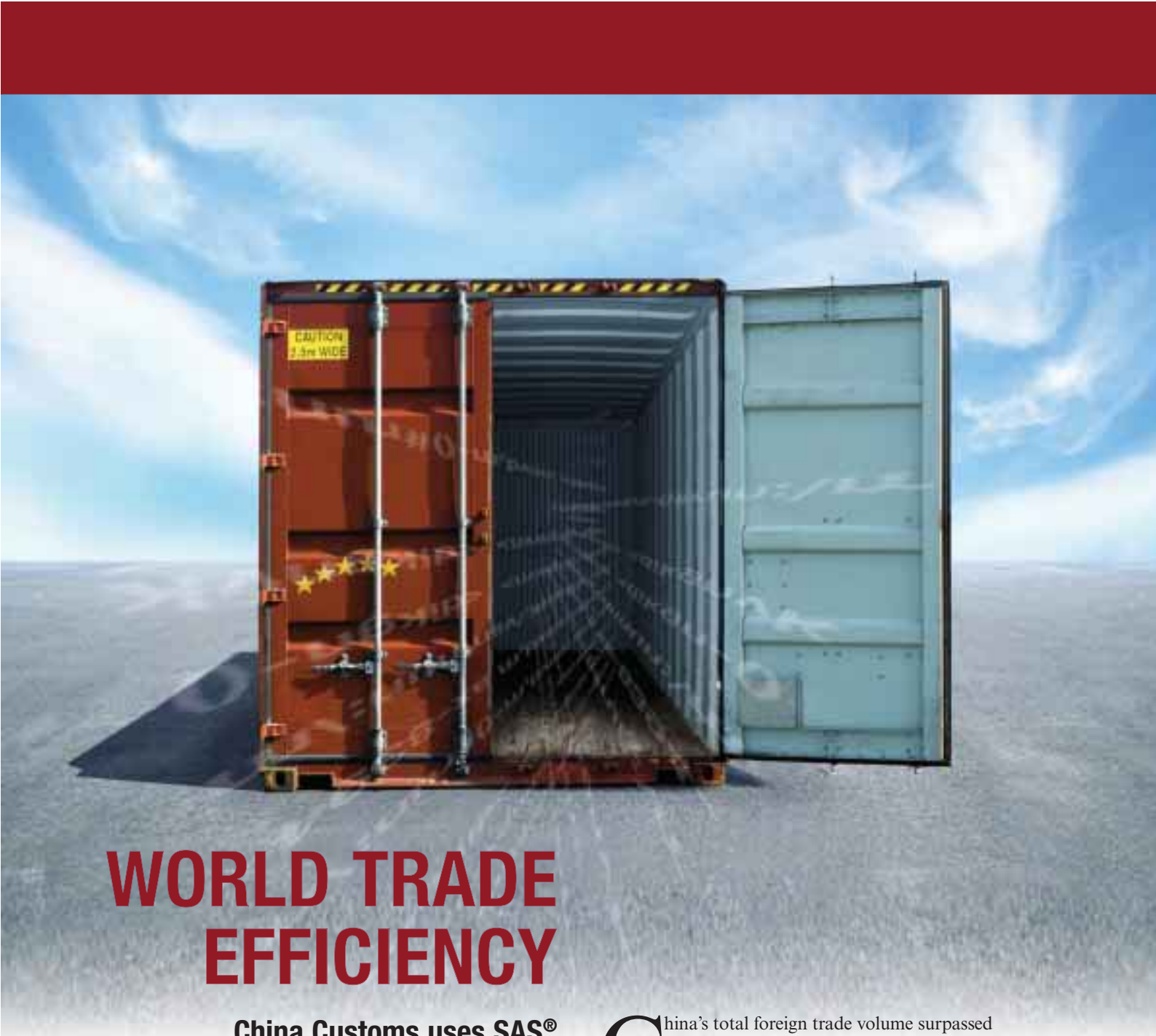
"What's more, SAS ETL Studio is really easy to use, considering how powerful it is. The drag-and-drop technology means you don't need any specialist programming knowledge, just some basic knowledge of the data you are interrogating. In no time you are producing reports that will amaze senior managers," Churchill continues.

Police officers typically work in difficult circumstances where mistakes are inevitable; mistakes that ordinary database software will not identify, even when it is working properly. SAS offers the additional layer of intelligence that will now enable Gloucestershire Constabulary not only to spot individual mistakes, but also to correct procedures and identify training needs. "With poor-quality data, we were wasting a lot of time trying to find out things we already knew. SAS is putting us on track to achieve the operational efficiency mandated in Vision 5 and to meet our obligations under FoIA. In practical terms, it could ensure that a police officer arrives at the right address when trying to apprehend a criminal," concludes Barnard. ■

BIO Stephen Fenerty, a freelance writer based in the UK, has been writing about SAS for more than 10 years.



Related stories include the Belgian Federal Police: www.sas.com/success/belgianpolice.html and the Oregon Department of Corrections: www.sas.com/success/odoc.html



WORLD TRADE EFFICIENCY

**China Customs uses SAS®
to retrieve duty losses,
guide local customs authorities
and control smuggling**

KarenBell

China's total foreign trade volume surpassed US\$1 trillion (€820 billion) by the end of 2004, making China the world's third-largest trading nation, up from fourth place at the beginning of 2004.

How does a country as large as China keep track of all the goods crossing its borders? What is the best way to crack down on smuggling and internal corruption? China Customs looks to SAS software to achieve such goals. China Customs built its highly customized Enforcement Assessment System (EAS) using the SAS Enterprise Intelligence Platform to analyze 34.6 million records. The results are undeniably impressive.

"Before we had SAS, we had problems with our separate data sources," says Zhang Li Chuan, director of the Statistics Department of Customs General Administration

of China. “There was so much hidden information, and we had to rely on empirical judgment. However, after just the first three years, the customs duty retrieved using SAS amounted to \$70 million (€57 million). We also uncovered hidden administrative risks and we have distributed the system to 41 regional customs districts. We also have an advanced new system in progress. This is the largest application of SAS in China’s governmental organizations, and represents the fifth and ultimate phase of China Customs’ modernization project.”

Moving from statistics to performance management

“For a long time, statistics only meant giving very specific facts,” continues Zhang. “A breakthrough idea for us was that customs data recorded not only procedures of external trade, but also procedures and results of customs management. This makes it possible for us to assess administrative performance by analyzing our data. As a supervision mechanism, SAS has to improve our enforcement standards. More than 4,200 illegal activities have been detected by the system so far, and these cases have since been delivered to the enforcement department. Through system refinement and sophisticated data analysis, the accuracy of the system is 54 percent better than before.”

Big country, masses of data

All customs offices in China are organized in a three-level hierarchy. The top level is the Customs General Administration, which is directly subordinate to the State Council. The second level consists of 41 regional customs districts. The third and lowest level has over 300 branches.

China Customs has four basic tasks: supervising cargo, collecting duty, cracking down on smuggling and compiling statistics. “We realized we must exercise law-based administration, make things easy for traders and operate in a highly efficient manner,” says Zhang. “Our statistics are official external merchandise trade statistics. China Customs is responsible for trade data collection, processing, compilation



“After just the first three years, the customs duty retrieved using SAS amounted to US\$70 million (€57 million). We also uncovered hidden administrative risks and we have distributed the system to 41 regional customs districts.”

– Zhang Li Chuan, director of the Statistics Department of Customs General Administration of China

and publication. Our figures must be comprehensive, reliable and internationally comparable.”

Since the 1990s, China Customs has made a great effort to establish a modern customs system by introducing the concept of risk management. As the country’s external trade value increased very rapidly, China Customs faced ever-greater administrative risks. “To ensure effective supervision and efficiency, China Customs strives for innovation in management and a high level of administration,” says Zhang. In 1998, severe circumstances in anti-smuggling fields drew attention from top leaders in China Customs. The head of the statistics department made plans to establish the EAS.

It’s ‘EASy’

“The purpose of the EAS is to have an objective reflection of the procedures and results of customs

enforcement – that is to say, to have an assessment of the quality of administration and management,” says Zhang. “The environment of China’s general external economy has been greatly transformed since the change in policy nearly 20 years ago. A rapid rise in our external trade value has meant a huge increase in data in recent years. Our observation of clearance has up to 50 million entries.”

The EAS system performs the following functions: duty collection evaluation, price evaluation, trade processing evaluation and customs logistics evaluation.

Zhang describes how the EAS works. “We have devised a series of statistical models according to historic data and using 12 indicators. For each new case, we compare it with the model we have established. The model shows us a range of what is acceptable. If a case does not fall within this range, we calculate the bias of the new case and judge whether it is suspect. We can then deliver the case to the local authority to investigate.”

China’s top leaders have seen demonstrations of EAS. The head authority of the Customs General Administration has praised the system, and local customs authorities have since been made aware of EAS and now use it to detect hidden risks in their own work.

Stabilizing duty collection

The system is helping China Customs to stabilize duty collection. “Although we were unable to detect it in the past, we used to have significant differences between the duties that should have been paid and the actual duties collected. Following the introduction of SAS, we have been able to narrow that gap tremendously because we can now pinpoint where our duty collectors should focus their efforts.”

China Customs also uses the SAS system to devise new methods to cover other aspects of the customs business, including all aspects of cargo supervision. Zhang gives an example: “For instance, in the importation of cigarettes, when we come across an individual case we cannot tell whether it is evading duty collection. However, if we use the EAS to compare the case on a national level with historic data, we can catch those cases that are evading paying the duty.”

Between China’s various districts, there can be dramatically different organizational structures. In order to ensure that commodity values are treated consistently nationwide, China Customs uses SAS to create a vector for each region to show the weight of commodity value in that tariff section. “Thanks to SAS, we can easily cluster the 41 customs districts to get different numbers of groups as we need them,” says Zhang. “Grouping is of great help to us in targeting customs districts with low administrative quality with more accuracy and fairness. EAS also gives us speed and convenience in interactive analysis.”

China Customs uses its intranet to disseminate information throughout the organization. On the intranet site, EAS uses a series of indicators, falling into four catalogs, to give quantitative assessment to customs districts. The site is also available for information publication, and quarterly alerts are published there as well. Users can also see a scoring system, consisting of 12 main indicators, which is used to provide comprehensive assessment to the 41 regional customs districts.

Effective and efficient customs management with SAS®

“We chose SAS because we have an enormous amount of data – 23 years’ worth of historical information,” says Zhang. “This data records not only external trade at a national level, but also the performance of the customs department.”

Before China Customs established the system, the agency surveyed the British customs system, which also uses SAS. This facilitated China Customs’ choice of the software. “We

also studied many other users of similar types of software and found that SAS is indeed the world leader in business intelligence,” continues Zhang. “Our SAS system plays a positive role in enhancing supervision and monitoring of China Customs’ administrative affairs. Incorporating SAS solutions and technology, EAS can effectively scale, explore and analyze the vast amounts of data generated through the clearance phase to produce useful information.”

Zhang explains that clearance data records not only the compliance of importers and exporters but also the effectiveness and efficiency of customs management, so China Customs can analyze the data to assess the administrative capability of local customs offices. “EAS can dynamically monitor various aspects of customs operations, such as duty collection, execution of restrictive trade measures and supervision of processing trade,” she says. “Henceforth, instead of empirical judgment, quantitative evaluation can be obtained with less artificial factors.

“With the help of SAS, many hidden administrative risks have been detected and substantial duty losses were retrieved. Apart from the direct financial effect, EAS has also contributed to indirect enhancement of the administrative ability of the customs,” says Zhang. “We even introduced EAS as a representation of the latest technological application to leaders of the State Council when they visited China Customs. Our system set became the standard for internal supervision and monitoring for other governmental organizations in China.” ■

BIO Karen Bell is freelance writer based in California and a regular contributor to **sas.com**.



Read how SAS is used in the Philippines to prevent VAT evasion: www.sas.com/success/philippinesbir.html

Read the article, “An End to Global Textile Quotas – Watch China Sew Up the Market”: www.bettermanagement.com/textiles



U.S. Census Bureau Counts on SAS®

BarryGay

It seems hard to believe that only 10 years ago results from the U.S. Census were analyzed and reviewed mostly on paper. How fitting, then, that results of the first census of the new millennium are being processed using the most advanced business intelligence software available.

The 2000 decennial U.S. Census incorporated the powerful business intelligence capabilities of SAS, giving the U.S. Census Bureau unprecedented access to microdata and summary information from its count of America's more than 280 million inhabitants. For the first time in the bureau's history, analysts can access all data from their desktops with point-and-click ease – collecting and analyzing in a matter of seconds information that could have taken days to gather and process.

Gone are the mainframes and minicomputers of the 1990 count, when analysts had limited access to the information they needed. With most of the data-review products on paper, thorough reviews were difficult because of time and resource limitations.

“That was a much slower process than what we now have online and available interactively,” says Rick Denby, assistant chief in the Housing and Household Economic Statistics Division of the U.S. Census Bureau.

Modern methods for a modern society

This time around, Census Bureau employees and their sworn census agents from partnering states enjoy access to more than 1 billion records stored online in a client-server environment. Using SAS, the Census Bureau has increased the number of records available and enhanced drill-down capabilities for the kind of depth that lets analysts compare 2000 census data for a specific city block with the 1990 data for the same block.

That's done by using SAS to create person-level and household-level files for each state and merging the records to look at components of a household with its occupants. By merging that data with geographical information, analysts have the ability to drill by geographical hierarchy. Access to such data will give states that are gaining congressional districts the population-shift and other demographic information their legislators will need to draw new lines.

Analysis and reporting in minutes

Unparalleled access to so much information also will help ensure the appropriate investment of about \$200 billion in federal funds with distribution formulas tied to census data, Denby says. But to the Census Bureau employees who once waited days on end for answers to their queries, time savings is the greatest return.

“You can run a query in a state the size of Wyoming, which has only about half million people, in no time,” Denby explains. “In a state as large as California, with

over 30 million people, the longest query may take only a few minutes.”

Flexibility and power

Another SAS strength is its ability to handle multiple users working on the same tools. Between October and December 2000, even as the Census Bureau was tabulating the short forms that most citizens and residents completed and returned, sworn census agents from partnering states were reviewing files, too. On average, 75 people were using the same SAS software – all at the same time. Census employees logged 13,900 person-hours of review over 11 weeks, with each file receiving 55 hours of review.

“I can assure you that's vastly greater than in 1990,” Denby says.

The bureau also used SAS to develop a multidimensional, benchmark database application used as a quality check. With that, the bureau took data from the 1990 census and merged it with the 2000 data as well as with

some independent data. That allowed analysts to see large and small geographic areas that had substantial increases or declines in population or housing units.

“It provided a quick, easy way for analysts to concentrate on the areas with the most change,” Denby says. “I'm not sure that our review could have been as strong without something like SAS.”

The 2000 census was no mere headcount of the U.S. population. It was an adventure in national self-awareness, a revealing personal inventory of who we are collectively and where we're headed culturally. For the first time in Census Bureau history, data is available with the click of a mouse, forever revolutionizing the way the nation accesses and interprets the hundreds of millions of answers to all those census questions. We'll continue learning the results in the years to come, thanks to hard work at the Census Bureau and the release of SAS®9 – just in time to help process the 53-question “long forms” that about one in six U.S. households received.

“We feel that's going to make us much more efficient,” Denby says. “Our programmers will save a tremendous amount of time, and it's going to dramatically improve our response.” ■

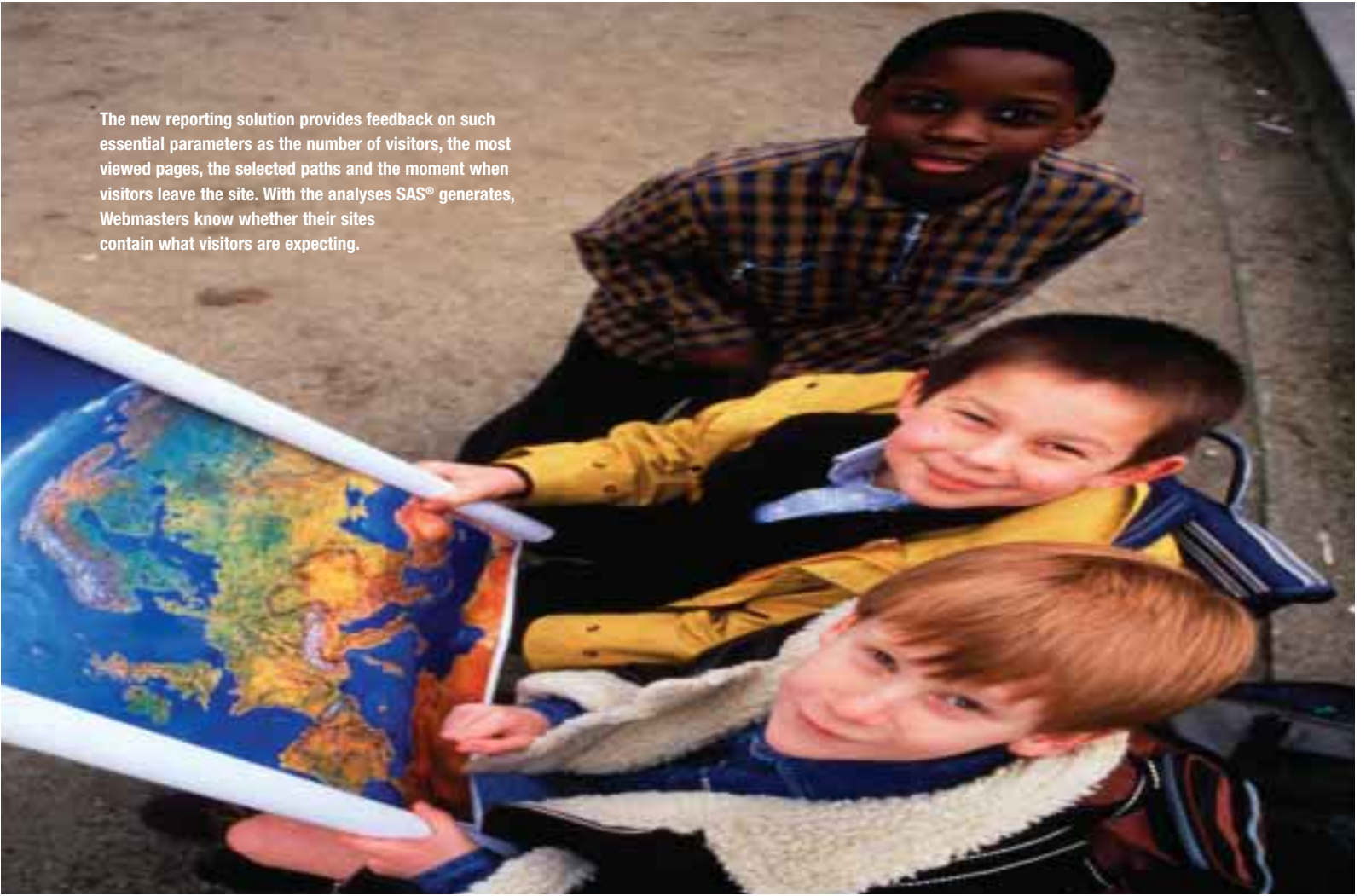
BIO Barry Gay is a corporate communications specialist for SAS and a regular contributor to sas.com.



Find out how the U.S. Census Bureau uses SAS to create school district demographics: www.sas.com/success/census_esri.html



The new reporting solution provides feedback on such essential parameters as the number of visitors, the most viewed pages, the selected paths and the moment when visitors leave the site. With the analyses SAS® generates, Webmasters know whether their sites contain what visitors are expecting.



Gateway to the EU

The European Union is growing, as is the popularity of EUROPA. One of the world's largest and busiest Web portals, EUROPA serves citizens well, making the information they need easily accessible and readily available.

Ten million visits per month. Two hundred official Web sites. These are the numbers that put EUROPA (<http://europa.eu.int>) among the world's biggest and busiest Web portals. It also provides a unique opportunity for the European Commission to continuously improve contact with the public – provided, of course, that detailed feedback on visitor behavior is available in a timely manner.

★ EUROPA accounts for more than 10 million visits each month.

One of the biggest portals and still growing

Given its increasing success, the Internet has become a key communication tool for the European Union (EU). EUROPA, the gateway leading to the Web sites of the European Commission (EC) and other European institutions, accounts for more than 10 million visits each month. It consists of about 200 main sites and involves more than 200 publishing teams. Every month, almost 100 million e-pages produced by the European Union are read in 20 languages. Final figures for 2004 exceeded 1 billion pages. Considering these figures, EUROPA is among the world's biggest and most frequently consulted Internet portals. With the addition of new EU member states, even these impressive figures are certain to grow over the upcoming years.

"Ten million visits represents only 2 percent of all EU citizens," explains Louis Georges, project coordinator for the EU Internet portal. "The growth rate over the last few years has been around 30 percent. This is an unprecedented opportunity for Europe to better meet the demand for information emanating from public bodies, citizens and businesses."

Managing such a site is a daunting process, and the need for a powerful software solution to process and analyze all the activity – and keep the site functioning seamlessly – became a priority for EU officials when they realized the existing system wasn't up to the task.

Analyzing visitor behavior

To achieve their communication goals, EU officials need to know how the Internet medium reaches its targeted audience. Both information and communication must be considered as a classic commodity; that is to say, they are subject to the law of supply and demand. Because the EC is responsible for the portal, the organization has to appraise its return on investment for every Web site housed by EUROPA. This means adjusting sites as necessary, the same way a well-run business handles changing demands. And it requires a complete knowledge of the site and audience – including the number of visitors, most popular URLs, visitor behavior, efficiency of IT infrastructure, etc.

However, compared to traditional methods, e-communication is much more complicated to assess. And the volume of data to be analyzed by EUROPA is among the largest in the e-world. Add to that the fact that the previous system was not able to support such a load and it becomes obvious why the EC decided to find a more satisfactory solution.

True partnership, autonomous solution

The requirements for the new system were demanding. Besides the capability of processing a huge amount of diverse data, the solution had to be able to work more precisely and much faster than its predecessor. The EC insisted on having all reports available within 24 hours – a new requirement. Moreover, the new

application had to work with the Web sites' existing applications for filtering and comparisons, central and local manipulations, global and detailed reports, among others. Furthermore, the EC was expecting a true support service from its supplier. At the end of the adjudication procedure, the EC signed a contract with SAS.

"SAS" proposal conformed to all our requirements," declares Georges, the project coordinator. "It furnishes 45 reports every day for each of our 200 Web sites. What's more, the reports are accessible as early as the next day, which is a great achievement." SAS also offers valuable technical assistance and the flexibility of its solution is particularly appreciated, Georges said.

Daily reporting

The new reporting solution provides feedback on such essential parameters as the number of visitors, the most-viewed pages, the selected paths and the moment when visitors leave the site. Reports cover all the Web sites accessible from EUROPA. They are available in either a standardized format or based on user queries. They are selected by area of activity, category and time span. All reports are accessible to offices across the EU through a simple browser. Moreover, the reports can be exported to other IT applications for further analysis. Today, the process provides 15,000 accurate and up-to-date reports each week. SAS transforms up to 15 gigabytes of daily Web log files into useful information.



“SAS® software generates precise reports on the surfing behavior of our Internet audience within 24 hours.”★

– Louis Georges, project coordinator for the EU Internet portal

From a technical point of view, the EC's new application is a central, self-running system. Input data is stored in proxy Web logs before it is processed. An extraction process loads the Web mart once a day. Reports on all the EUROPA Web sites and subsites are available within 12 to 18 hours. After analysis, the data is published on a dedicated Web server. Reports are then stored in a specific directory for every site owned by the various Webmasters.

Increased efficiency

With the analyses SAS generates, Webmasters know whether their sites contain what visitors are expecting. Based on the observed behavior of the audience, they can adapt the navigation schemes, eliminate unpopular pages or even correct broken links. These insights keep EC Webmasters informed about the reasons for success or failure. This valuable feedback helps IT managers within the EC plan the necessary telecom and hosting equipment and scale it properly.

The result greatly enhances the quality of daily reports, allowing the EU to better monitor its e-communications. According to Georges: “SAS has helped us reach our goal of offering the most appropriate service to each of our visitors, whatever URL they are consulting. The navigation indicators help the European Commission to manage its resources much more efficiently and obtain the desired results. Now, we are perfectly positioned to meet the information demand.”

Smooth project implementation

The project is the result of a close collaboration that began in July 2003. “From the beginning, our partnership with SAS worked smoothly and achieved consistently excellent results,”

explains Georges. “The relationship has always benefited from good communication and mutual confidence. SAS drew up a list of all the elements it needed to prepare the job properly. We knew exactly what was expected from us. Thus, we were able to hand SAS the precise data it needed. This included such things as configuration, memory features and deadlines. This was a tough job and involved an elaborate analysis of the EC's current and future needs.” The three-month development period was carefully and fully exploited by SAS to complete analyses, fine-tune and test the software before the migration. All this groundwork led to the creation of the secure and automated reporting application based on a central, self-running server.

Responsive and flexible

In spite of all the careful planning, after two weeks of processing, the system presented a memory shortage due to the gigantic volume of information it had to handle. SAS technical experts intervened immediately.

“For a few days, SAS specialists worked on the redefinition of a long-lasting solution. They put their time and knowledge at our disposal and offered to replace the 32-bit application with a 64-bit one. Such reactivity and flexibility is not only greatly appreciated, it is indispensable. They proved their capacity to face a problem and solve it efficiently,” Georges reports. “Today the software is totally reliable. And we have already started work on new developments.” ■



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Performance Management: Is it a priority?

On average, just 19 percent of Western European central and local government execs have adopted business performance management solutions.

Over the past five years, the eEurope Action Plan and the various national eGovernment plans have generated strong investments in information technologies in central and local governments across Europe. Despite the significant progress realized by multiple countries, public administrations need to do much more to fully harness the power of IT as a tool to achieve higher efficiency, effectiveness and transparency. A critical area of this effort is creating decision support systems – beginning with financial analytic applications and including business performance management solutions – all of which require increased investments in information technologies.

From financial accounting to financial analytics

Traditional government financial accounting consists, globally, of providing an out-turn report, comparing the actual payments and receipts with those authorized in the budget by parliament. While this approach provides assurance that fraud and other irregularities have been minimized, it gives little information on the performance of public administrations.

The need to produce and analyze more comprehensive accounting data became pressing in the mid 1990s. Finance ministries had lost control of spending growth. At the same time, the European Union – in preparation

of the introduction of the euro – imposed stricter limits, such as a deficit-to-GDP ratio below 3 percent, to harmonize the monetary and fiscal policies of member states. Responding to the need to provide more thorough surveillance on public expenditure, national parliaments introduced new regulations mandating the adoption of cost accounting. For instance, the Italian public sector accounting reform, which started in the early 1990s with the reform of administrative processes (Legge 241/90), was expanded in 1997 with the introduction of legislation that made cost and management accounting compulsory for all Italian government agencies (Dlgs. 7 agosto 1997, n° 279).

The introduction of those regulations kicked off investments in financial analytic applications. Technologies that progressively allowed spending to be measured at increasingly deeper levels of detail were implemented. In their annual departmental budgets, government executives now can drill down into activity-based costing, which guarantees higher transparency and provides better information for expenditure control.

Business performance management completes the set of critical tools

Cost accounting adds a vital element of knowledge compared to traditional financial accounting, but it only tells a piece of the story. Cost accounting

Cost accounting adds a vital element of knowledge compared to traditional financial accounting, but it only tells a piece of the story.

provides more transparency on expenditure control, but the real objective of modern public administrations is not simply reducing costs, but releasing the resources necessary for delivering more and better services to citizens. In other words, government agencies need to become more productive when executing their tasks, so that more money is dedicated to the services that mean the most to taxpayers. To guide decisions on how to achieve higher productivity, public administrations have to continuously measure multiple key performance indicators (KPIs), which track the progress against short- and long-term objectives set in terms of cost, revenues, and quality of internal and external processes. To do so, governments must invest not only in financial accounting and financial analytic applications, but also in comprehensive business performance management (BPM) applications, such as the balanced scorecard.

A recent IDC survey shows that, on average, just 19 percent of Western European central and local government executives have already adopted business performance management solutions; nevertheless a mere 20 percent of government executives plan to invest in BPM in the course of 2005. The only exception to this trend is the UK, where 45 percent of central and 58 percent of local government executives plan to make this investment in 2005.

Why are UK executives so keen

on BPM? Possibly because by setting clear efficiency and effectiveness objectives, the latent pain for KPIs measurement was converted in active pain. In mid 2004, an independent review of public sector efficiency, the Gershon Review, identified £20 billion of “auditable and transparent efficiency gains” to be achieved in 2007-08 across the public service. The study identified seven areas where the public sector should focus to gain this £20 billion: back-office functions; procurement; transactional services; policy, funding and regulation of devolved public services; policy, funding and regulation of the private sector; productive time; and relocation. This list gave the UK public administrations a clear target.

Governments must set clear goals to harness the full advantages of BPM

Public administrations need to achieve higher productivity to improve service delivery. As Sir Peter Gershon clearly indicated in the title of his study, the efficiency review is about “releasing resources to the front line.”

The deployment of financial accounting applications and financial analytics tools will help track expenditure more thoroughly, but they are only one part of the puzzle. By using BPM applications instead, public administrations will have – at their fingertips – a complete set of tools to support the entire decision-making process. These applications will be

essential to analyze KPIs in a structured and comprehensive way, so that better choices are made on resource allocation.

However, the definition of precise strategic objectives, which go beyond pure legislative compliance by embracing policy and business pain points, will be necessary to convert government executives’ latent pain into active pain, thus harness the full potential of BPM. If they merely add layers of BPM technology to the status quo, government executives run a high risk of making processes more rigid. ■



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