

The electronic bureaucrat

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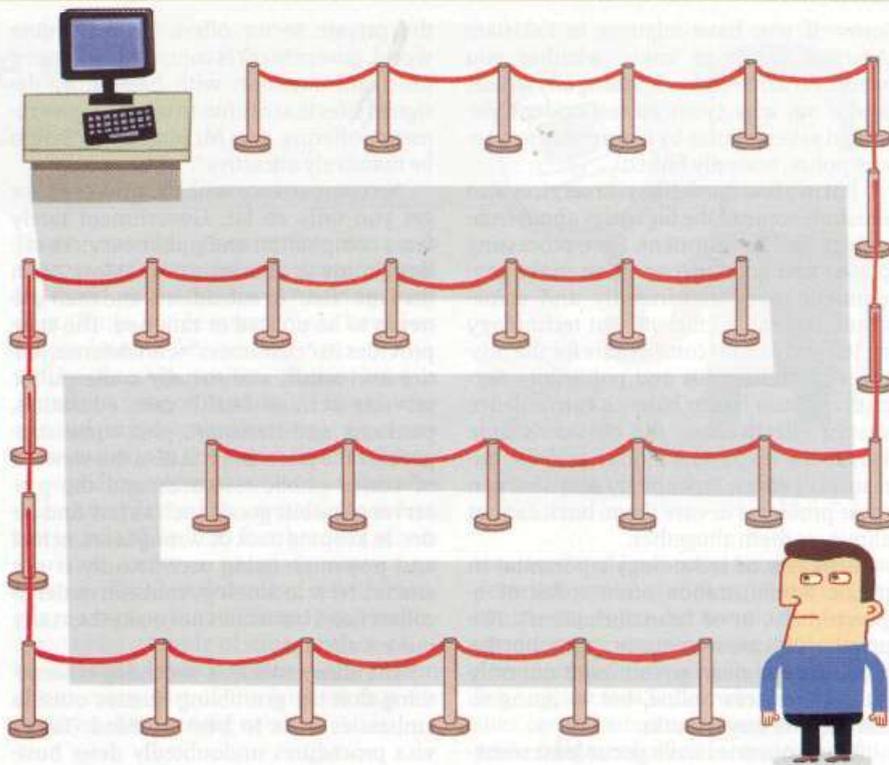
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Putting their services online should allow governments to serve their citizens much more effectively. But despite heavy spending, progress has been patchy, says Edward Lucas

At 6.15AM on a December morning the streets of central London are cold, dark and offer little for the omnipresent CCTV cameras to record. But outside the Indian High Commission 109 people are sleepily waiting for the visa section to open. David Robb and his friend are first in line, huddled in sleeping bags behind a windbreak since 3am, to ensure visas for a planned holiday in Goa. Nearly all his fellow-sufferers in the queue have booked their air tickets and sometimes their entire holiday on the internet, paying with a credit card. Those electronic signals move information almost at the speed of light—billions of times faster than the shuffling, shivering humans in the visa queue. "In this day and age? Bleeding disgusting," is Mr Robb's pithy comment on the Indian visa system.

It is not just that the passport and its owner must be physically present. The £30 (\$60) fee must be in cash; the visa form must be filled in by hand and authenticated with a signature and a photograph (a hard copy, not a digital file). The procedure has scarcely changed in 60 years. The 500 people waiting at 8.30am, when the visa office opens, should get their visas by noon, though on busy days stragglers may

be told to collect it the next day. Applying by post is possible, but may take weeks.

Compare that with another queue forming in Grosvenor Square, a brisk 20-minute walk across London. Procedures at America's fortress-like embassy are even more stringent, requiring all visa applicants to present themselves in person, with no postal option. But here the procedure is backed up by intelligent use of electronics. Applications must be submitted online, accompanied by a non-refundable \$131, paid electronically. In return, the applicant receives a confirmation e-mail, which includes a barcode with the information from the completed form. Printed out, it is also the entry ticket to the embassy, controlling outsiders' access to one of the main terrorist targets in London.

Inside, the barcode is scanned, putting the data onto the visa officer's computer. Fingerprints are digitally recorded. The visa itself, collected shortly afterwards, has banknote-style security features, plus a scanned picture of the applicant.

In some ways the differences are smaller than they seem. Under both systems, absurd questions are asked but the answers are never verified. India wants to

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A list of sources is at

www.economist.com/specialreports

An audio interview with the author is at

www.economist.com/audio

know if you have relatives in Pakistan; America wants to know whether you were ever arrested for anything anywhere, and if so, why (your correspondent, detained several times by communist-era secret police, brazenly fibbed).

But in a few nutshells, visa services also illustrate some of the big issues about technology and government. First, processing power and good software can make government more user-friendly and sometimes also more efficient, but technology on its own cannot compensate for the mistakes of bureaucrats and politicians. Second, the state has to balance convenience against effectiveness, the outsider's time versus the taxpayer's money and the bureaucrat's effort. Technology may sharpen these problems or ease them, but it cannot eliminate them altogether.

Believers in technology's potential in public administration often speak of e-government, or of "transformation". The practicalities are sometimes vague, but the big picture is clear: government not only puts its services online, but in doing so changes the way it works.

Most countries have got at least somewhere on this, chiefly in what might be called i-government: the provision of information. India's downloadable visa application form represents that stage. Progress is also being made on using the internet's potential for interaction. America's visa system goes some of the way by getting the applicant to key in the data.

The internet is also being used inside government to share data among departments. That is easier to do with non-citizens than with voters, who may be touchy about their privacy being invaded. The next stage will be to provide the whole service online. For visas, that would mean something printed out by the applicant, downloaded onto a smart card or even stored in a mobile phone (an example of "m-government"—same service, different delivery). At the same time, technology should also make it easier for politicians to connect with their voters ("e-democracy").

George Markellos of PA Consulting, a British-based consultancy, says that government needs to start by making three big changes. First, it needs to personalise what it offers, rather like online shopping services which record customers' preferences, making their next visit easier. Second, it has to provide round-the-clock access. People want to deal with government not only in office hours, but also in the evenings and at weekends. And lastly, public services have to be as easy to use as anything

the private sector offers. In the online world, government is competing for users' time and attention with beautifully designed sites that are fun to use. The government's offering, says Mr Markellos, "has to be massively attractive".

Yet comparisons with the private sector get you only so far. Government rarely faces competition and public services seldom come at market prices. More often they are "free" or subsidised, and their use needs to be policed or rationed. The state provides its "customers" with defence, justice and roads, and usually some public services such as health care, education, pensions and transport, plus some support for the poor. But it is also the steward of scarce public resources and the preserver of public goods such as law and order. In keeping track of wrongdoers, actual and potential, being user-friendly is not crucial. New technology makes it easier to collect taxes but it does not make them any more welcome.

The state's role as a watchdog is something that the grumbling queues outside embassies have to bear in mind. Tough visa procedures undoubtedly deter businessmen and tourists from visiting, but the visa is the way that the state protects its citizens from undesirable outsiders. Similarly, issuing passports and driving licences is never going to be as easy as getting a loyalty card from a retailer.



This report will argue that technology can give politicians and officials a better idea of what the public wants and how to provide it, just as it has done in the private sector. But just as the private sector's adoption of new technology involved a number of pitfalls, some e-government ventures have been ill-starred. Citizens are right to be suspicious about technology that can make government all-encompassing, and they should demand a lot more of government as a monopoly provider of public services.

Technology on its own will not bring reform, but it can make changes easier, cheaper and more effective. The learning curve has been not nearly steep enough, but governments are getting better at buying and using computers and software. The benefits are mounting and the costs are coming down.

The benefits will be biggest in countries where officials and politicians are open to pressure and where the citizens are public-spirited to start with. E-government is no magic bullet, but it gives citizens and lobby groups more power to scrutinise government and highlight waste and dishonesty.

It's everywhere

Although hopes have been high and the investment has been huge, so far the results have mostly been disappointing. That reflects a big difficulty in e-government (and in writing about it): it touches on so many other things. What exactly is it that public organisations are trying to maximise, and how can it be measured? Ask the economists. What motivates officials and politicians to make government honest and competent? Bring in the political philosophers. And who decides on the highly contested trade-offs between privacy and security, efficiency and equity?

This report will explain that gloom, fear and optimism are all justified. It will look at the return on investment so far, the hoped-for gains and the neglected drawbacks of e-government. It will show how good leadership, openness and competition can bring spectacular gains, and how bad planning and political interference can make technology in government an expensive disaster. It will look at the dangers of government-run databanks and how to lessen them, and the way in which poor countries such as India may be able to leapfrog rich ones in their use of technology. It concludes by asking if e-democracy makes politics more participatory, or merely noisier. But it starts with an incontestable success: i-government. •

Look it up on the web

The growth of i-government

EVEN the most curmudgeonly critic would have to admit the one great benefit of e-government: it comes twinned with i-government, where i stands for information. As readers under the age of 30 may be only dimly aware, before the internet age simply getting hold of information on any aspect of government was often far from straightforward. Getting the right form and finding out how to fill it in might involve going to a post office, writing a letter (sometimes enclosing a money order or a stamped self-addressed envelope) or visiting a government office and often queuing. Government printing offices sold official documents to cover their costs and sometimes to make a profit.

All this meant that information came at a price in time, effort and fees. In poorer countries it might require more than that. The forms might not be available, or they might have to be bought from profiteering officials or their friends. The layout would change regularly, so that applicants with the wrong form could be fined or encouraged to pay a bribe to have their mistake overlooked. Being in charge of publishing the latest regulations used to be a lucrative niche: a business would pay handsomely for information about a new standard that its products had to comply with.

These days, governments in advanced countries put virtually all documents intended for public consumption online. That gives the citizen-consumer everything he might want, along with much that he probably doesn't. Even e-backwaters such as Turkmenistan or Myanmar provide things like visa application forms on the web, although in other respects they may be invisible online.

It goes without saying that simply providing information is no guarantee of good government (being able to download a form does not mean that the embassy will be efficient, let alone that the applicant will get a visa). All the same, it marks a huge change. Just as scarcity favours corruption, knowledge brings power. Making the right forms freely available is only part of it. More broadly, putting laws, regulations, parliamentary debates and the details of state budgets online makes maladministration harder.

Those outside government can ask sharper questions about its decisions and be more confident about making their own. Those inside government have less excuse for misrule.

The flagship project of this kind is America's usa.gov, a multiple award-winner and probably the best single e-government website in the world. It sticks chiefly to providing information. Although it also offers loo-plus online services, these turn out mostly to be links to other sites where you can renew a passport, contact an elected official or download a Polish-language visa application form. It is complemented by a family of other sites, such as benefits.gov, which offers information about every part of the largesse that the taxpayer directs to the needy.

My country, right or wrong

Yet even in this relatively straightforward task of making public information properly public, technology offers plenty of scope for blunder. In its most recent annual report on the world's government websites, America's Brown University catalogued an array of mishaps found last year. For example, the website of Chad's embassy in Washington, DC, had been taken over by a cheeky business, as had that of Libya's mission to the UN and Timor-Leste's ministry of justice. In Nepal, the ministry of industry and commerce, mentioned on the main government site, had no active links. The latest "news" story on the site of Laos's embassy in Washing-

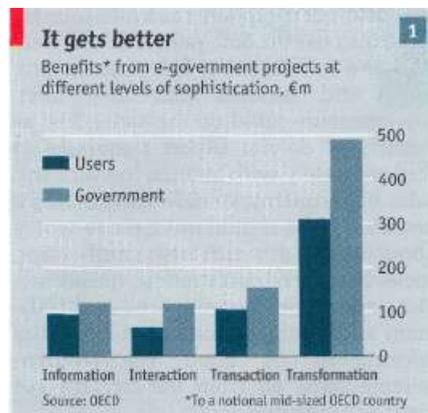


ton, DC, dated from 2006. Tonga's national portal offered links such as "about us" and "quick facts" that did not work. Mexico's site for "agriculture/hunting/fishing/rural development" provided links to an "English" option that led nowhere. And some sites carried advertising suggesting a surprising degree of official entrepreneurship: Bolivia's portal, for instance, had a banner ad for passion.com, which promised "sexy personals for passionate singles".

Even if government websites are not actually wrong or dysfunctional, they are seldom designed with the outsider in mind. For a start, they are often far too numerous and poorly linked. In Britain, Alex Butler, an e-government chief, has closed 551 of the 951 central-government websites that existed in early 2006. No new ones are permitted. The aim is to shift content onto directgov, the British government's central information point, and to a sister site offering online public services to business.

But directgov has its critics too. William Heath, who runs a witty blog on government reform, idealgovernment.com, describes the website as a "random generator of self-referential public-service information". That may be a bit unfair. [Directgov](http://directgov)'s managers agree that the site's search engine needs improving, but argue that its main role is to package information into useful clusters: "coherent citizen-focused topics", in e-government-speak.

Yet government websites rarely fit the way that people actually use the internet. A Google search for "UK" "government" "childhood" "obesity" and "help" brings up a site that links to some mildly interesting statistics, but the excellent "children and healthy weight" page on directgov does not come up among the first 100 re-



suits. France, which prefers the term "transformation" to "e-government", has put impressive swathes of government information onto a well-presented and well-designed website.

Companies have mostly understood that visitors to their sites do not necessarily come through the front door. Their websites cater for the fact that consumers often start internet shopping by searching for a particular product or going to a price-com-

parison site. Governments, by contrast, do not "optimise" their websites to make them easily readable by outside search engines; indeed some actively discourage the idea—for example, by making information available only to registered users.

So even the apparently simple task of publishing well-presented and logically arranged information on the web turns out to be surprisingly difficult—and remains incomplete. The Organisation for

Economic Co-operation and Development has defined four stages of e-government, each more demanding than the last. After information comes "interaction", then "transaction" and eventually "transformation" (see chart 1, previous page). The more transformational the change, the bigger the benefits. But it turns out that, at all stages, the biggest beneficiaries will be governments, so they may have to work at persuading users to accept the changes. •

The good, the bad and the inevitable

The pros and cons of e-government

APRODIGIOUS amount of money has been spent worldwide on putting government services online, but the results so far have been hard to measure and often disappointing (see chart 2). Accenture, a consultancy that pioneered the business of selling technology services to government, has been publishing reports on the subject since 2000. The titles give a flavour of the industry's struggle to balance promise and performance. In 2001 it was "Rhetoric vs. Reality: Closing the Gap", followed by "Realising the Vision" in 2002 and "Engaging the Customer" in 2003.

By 2004 the term "e-government" was becoming stale. Greg Parston of Accenture says the company now places "much greater emphasis on outcomes for citizens". The series of reports has been renamed the "Government Executive Series", but the titles remain as aspirational as before: "New Expectations, New Experience" (2005), "Building the Trust" (2006) and "Delivering on the Promise" (2007).

Many other companies are publishing similar reports—and trying to make the most of public-sector technology contracts, which Fadi Salem of the Dubai School of Government wryly calls "the goose that lays golden eggs". Not-for-profit bodies such as the United Nations, the World Bank and the OECD, a raft of universities and think-tanks and most rich-country governments also offer their thoughts on the subject. Most of them make similar points, and almost all use the same jargon.

Accenture's 2007 report, for example, highlights four "pillars of leadership in customer service": a "citizen-centred perspective", a "cohesive multi-channel service", "fluid cross-government service" and "proactive communication". Trans-

lated, the message is pretty sensible. The "citizen-centred perspective" is shorthand for the good point—so far largely ignored in e-government design—that setting up new electronic systems only to mimic the old offline ones is a bit of a waste of time.

The big advantage of new technology is that it can turn bureaucracy inside out. Well-run businesses, for example, do not see customer complaints as a nuisance; instead they use the data gathered from websites and call-centres to fine-tune the products and services that they offer. Governments could do the same. Just as businesses do not expect customers to deal separately with finance, logistics and sales departments, someone registering a newborn child should not have to worry about the way in which the tax authorities, social-benefit administration, health service, education system, census department and local government may use the information. A good e-government scheme starts off from the citizen's eye view, not the bureaucrat's one.

Similarly, a "cohesive multi-channel service" simply means that whether you make contact by internet, telephone, letter or personal visit, you should get the same efficient service. That is something the private sector already does pretty well: you can shop by looking at a catalogue or browsing in a bricks-and-mortar store, then order online, phone with a query, receive your goods by post and take them back to a shop if there is a problem. But governments still find that sort of integration difficult to achieve.

In principle, there is not much argument about the desirability of putting government online. Technology helps to make public administration more open, more responsive and cleaner. Taxpayers save money. Citizens get better services. Democracy is revived. Rich countries already have the broadband penetration, computer literacy and skilled bureaucrats needed for sophisticated e-government, but poor countries may gain even more: technology may allow them to vault into the modern age, shedding the wasteful, incompetent and corrupt public administration that is often the greatest barrier to their development.

Name and shame

Samia Melhem, a senior World Bank official, explains that i-government does not just mean more user-friendly services but can also make the "lack of governance an unsustainable act", at least in countries where corruption is not completely pervasive. "People cannot steal public funds for too long when some system is put in place to control and disseminate the information about the theft. Shame is a powerful deterrent and often overcomes greed, es-



►pecially when you have children and friends who read newspapers."

So far, though, the story of e-government has been one of quantity, not quality. It has provided plenty of reason for scepticism and not much cause for enthusiasm. Whereas e-commerce has been a spectacular success, transforming industries as diverse as travel and book retailing, e-government has yet to transform public administration. Indeed, its most conspicuous feature has been a colossal waste of taxpayers' money on big computer systems, poorly thought out and overpriced.

Britain, for example, has wasted £2 billion in the past seven years on projects that have ended up being cancelled and written off. The failure of government computerisation projects is so routine that it no longer excites much comment. In January, the British government sharply cut back a programme to merge the 200-plus databases used by the 80,000 staff in the criminal-justice system. Called c-Nomis, the project was originally supposed to cost £234m. By the time it was scaled back to cover the prison service alone, its cost had doubled to £512m.

More often, though, big government projects stagger into operation but work badly. Surprised that they work at all, few people ask whether the money was well spent. Only rarely do the promised benefits materialise. Some of those who have studied e-government call it a "dangerous enthusiasm": a technological quick fix that distracts from the real tasks—hard and slow—of reforming government and running public services properly.

Digital have-nots

But even where e-government works efficiently, it does not automatically bring more fairness and openness. Putting public services online is no use to those who cannot afford a computer or will have nothing to do with technology. The phrase "look on our website" is a turn-off for a significant chunk of most countries' population. Where the internet is used to increase public participation in democracy, the problem is sharper still: the articulate and—literally—well-connected have an even louder and more effective voice; those at the margins go unheard.

E-government also comes at another cost. Stripping out lots of low-paid, low-skilled jobs in government adds to the problems of a section of the workforce that, especially in rich countries, already resents the march of progress. Just as technological change has stoked protectionist



sentiment in the private sector in rich countries, modernisation of government can seem threatening and unfair to those who work in the public sector.

Moreover, efficient government can be repressive government. In Germany, and many other countries, the law says that people must tell the government where they live. In America, that would be an outrage. Face-recognition software, remotely readable chips in passports, recognition technology for car number-plates and biometric identity checks offer endless possibilities for controlling the citizen. George Orwell's "1984" is an example of malign e-government: a screen in every dwelling monitors the inhabitants' doings with an efficiency that would thrill today's operators of CCTV systems. Similarly, the use of electronic media to refine and project Big Brother's message is the envy of spin-doctors in Whitehall or Washington, DC. Technology may have given citizens a bit more information about government, but it has given government a lot more information about them, for good or ill.

Perhaps the biggest worry of all is that bad e-government is worse than useless. When humans make mistakes, you can argue with them. When a computer insists that you owe the government money, your car is illegally parked or you do not exist, unscrambling the problem is much harder. Similarly, when records were kept on paper by real people, the scope for error was limited. At worst, a drawerful of confidential information might be thrown away by accident and end up on a rubbish dump. Data might be wrongly entered or incorrectly filed and never found again. That was unpleasant for the individuals concerned, but usually nothing worse.

Digital mistakes can be much more serious. In November 2007, for example, the British government managed to lose two discs of data containing the (unencrypted) personal and financial details of 25m households. Nobody has been able to ex-

plain why the data—which were being sent from one part of the public sector to another—were not transmitted using the secure government intranet, a computer network specially designed for this sort of job and established at the cost of tens of millions of pounds. In the hands of fraudsters and identity thieves, the sort of data that a government can collect by law could be misused with disastrous results.

Those most closely involved in e-government are aware of the problems. As the 2007 Accenture report points out, they have become extremely cautious about what they can deliver in the short term. "After the splash of creating exciting visions and promises of truly citizen-centric government services, many governments now...find themselves...playing catch-up on a promise that citizens expect to be fulfilled...The essential infrastructure work that comes next is unlikely to capture the imagination of citizens and the media. It is hard work, plain and simple."

Bang for the chip

The world of e-government is eagerly awaiting a hefty tome that the OECD is planning to publish in 2009. "Government at a Glance" will be the latest addition to a range of international comparisons that the organisation publishes every year. The OECD'S sharpest analysts and statisticians are now trying to crack a question which seems blindingly obvious yet which hardly anybody to date has tried to answer properly: what are the costs and benefits of e-government?

Australia is one of a small handful of countries (which also includes Britain) that have tried to assess the aggregate effects of e-government. The answers were mixed. Australia's National Office for the Information Economy in 2002 found that the majority of 38 e-government projects surveyed were likely to make things cheaper and more convenient for officials, users or both. But for the 24 projects that were expected to result in specific cost reductions or higher revenues, the total in-

Cheaper through the ether		
Services of Tameside Borough Council, Greater Manchester, Britain, 2004-05		
	No. of customer visits, '000s	Cost per visit, £
Face-to-face	105	14.65
Customer contact: call-centre	315	1.39
Self-service on website	680	0.25

Source: Tameside Borough Council

Notional Health Server

A flagship service adrift

TO SEE how frustrating the wrong kind of e-government can be, look at "Choose and Book", the flagship project of Britain's £12.4 billion (\$25 billion) programme "Connecting for Health"—the world's biggest non-military government computerisation programme. The aim is bold and inspiring: to allow patients in the National Health Service (NHS), advised by their doctors, to choose the treatment they want, and book an appointment when they want it.

Three years into the programme, the reality is proving rather different. The British Medical Association, the trade union for most British doctors, calls it a "gimmick". Most doctors dislike it (see chart 4).

At the Lavender Hill Group Practice in south-west London, a general practitioner (GP), Dr Helen Lucas (who happens to be your correspondent's sister), is dealing with a baby suffering from a potentially serious abnormality. The practice is a typical "gatekeeper" in the NHS. Most patients are treated on the spot. Those requiring specialist help are referred onwards, so the practice is both a service provider and a steward of scarce resources. In other countries, access to specialist doctors is rationed by price, or by insurance companies. In Britain, the patient chooses—at least in theory.

The practice's own software is work-

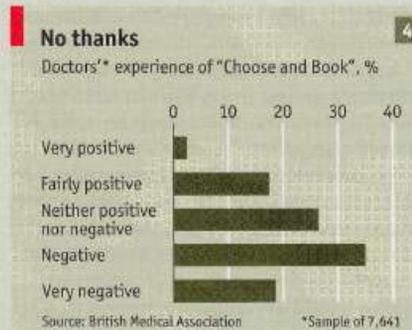
ing fine, but the logon to Choose and Book is painfully slow, taking a full minute. The menu of ailments, from Allergy to Urology, includes nothing that neatly fits this patient's problem, even if the doctor knows who the right specialist is. In the old days, she would have sent him a letter explaining the problem and providing the details, and the patient would be given an appointment. That system was not perfect, but it generally worked.

The Choose and Book screen should now offer a comprehensive list of medical specialisms so that the GP can choose either a named consultant or a particular hospital. But at this particular surgery it presents a series of choices that cause problems rather than solving them. Psychiatry is offered, for example, but no online

appointments are ever available. And whether the appointment is booked as "urgent" or "routine", the result is exactly the same. Sometimes the computer says the waiting time is "unknown", meaning that the patient will have to call the hospital directly.

With some laborious trial and error and a lot of waiting, it is possible to make Choose and Book work, more or less. Dr Lucas reckons that about one in ten of the appointments she makes this way turns out fine, but even then the process consumes two minutes of a typical ten-minute appointment with a highly paid and expensively trained doctor who is acting, in effect, as a secretary.

NHS insiders admit that Choose and Book had a difficult birth, but reckon that most of the problems have been resolved. Critics agree that the system has improved, but think it is far too dependent on everything going right—for example, that the local Primary Care Trust, the bottom and most underpowered layer of the NHS bureaucracy, installs the right hardware, and that hospitals present their menus properly online. Articulate middle-class patients may be able to make their own appointments, but the confused, timid or disorganised may not. They will simply return to the GP a month later with the ailment still untreated.



• vestment of A\$108m produced a saving for the government of only A\$100m. That is not disastrous, but does not suggest that e-government is an easy way for the state to balance its books.

E-government rankings are thick on the ground: at least a dozen are produced, including one on "e-readiness" by the Economist Intelligence Unit, a sister organisation of this newspaper. But they have their limitations. The OECD (which has an interest in carving out its own niche) calls them bean-counting exercises that measure the number of web pages, level of internet penetration and the like, but without assessing whether the online activities make any sense for the country concerned. Depending on the weighting given to factors such as online privacy policies, the rank-

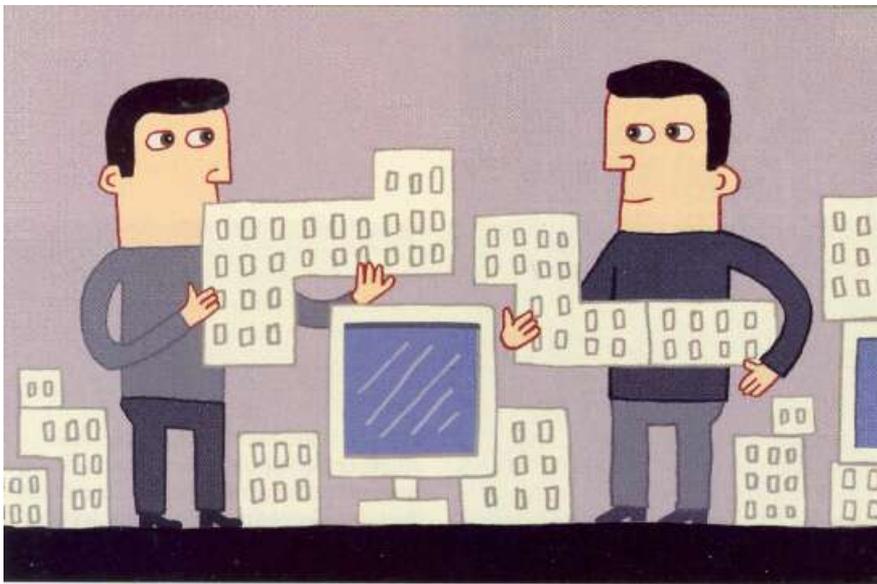
ings can look ludicrous. The study from Brown University, for example, puts Sweden in 60th place, behind Kazakhstan, which rates 57th.

The costs of e-government are not all that difficult to pin down. Taxpayers fork out for new computers, software and (often most expensive of all) consultants. Individuals and businesses have to get used to the new system and deal with the inevitable teething troubles, which leaves them less time to do other, more productive things.

But what of the benefits? The most obvious one is to reduce the burden for citizens, taxpayers and so on of dealing with government. All of these groups gain a lot from the provision of information online, for example.

However, when technology not just distributes information to the public but collects and uses it as well, the issues become much more complex. Where data-sharing laws permit, individuals and businesses may save money and effort by having to provide information about themselves to the authorities only once rather than many times over. And on the government side, dealing with people via automated online systems is much cheaper than face to face or on the phone (for a British example, see table 3, previous page).

But whereas private-sector organisations can insist that all their customers use the internet, governments have to keep all channels of communication open. Even in countries with high rates of computer literacy and deep internet penetration, a mi-



minority of people will want to go on using other means. And in most countries the heaviest consumers of public services, the old and the poor, are the least likely to use the internet. If all services have to be provided both on- and offline, the saving may not match the cost of the new technology.

The main exception to this is in tax administration, particularly with businesses, which have no vote and, at least in rich countries, can be assumed to have internet access. Some countries, including Britain and France, require most businesses to file tax returns online and pay electronically, and there have been few complaints. But governments should not hang their hopes too high. Edwin Lau of the OECD cautions: "Even when governments are able to demonstrate likely financial returns from potential e-government projects, there is no guarantee that such benefits will be actually realised, or that they will be available for allocation to other priority areas, spent

internally or returned to taxpayers."

Fortunately there are also non-financial benefits to e-government. Simply demonstrating to the public that government works cleanly, quickly and efficiently could pay off in votes for the politicians who have pushed through the necessary reforms, and perhaps in the public's greater willingness to pay taxes. It is likely to increase trust and reduce perceptions of corruption. Such measures play an important part in countries' global competitiveness rankings, and a good performance in this area makes a country more attractive to foreign investors.

E-government also creates new businesses by giving firms the chance to add value to government services. In India, for example, so-called "e-touts" have taken up the role once played by village scribes. In Finland, an industry of data brokers has sprung up. Originally contracted by the public authorities to collect financial data

from businesses, they have turned to selling data-management services to the private sector.

But so far, governments have mostly been using technology for projects where public support is likely to be strong and opposition low: putting information online, simplifying tax administration, sprucing up a country's image. Few have even started to tackle the really big task: reshaping government in order to take advantage of the immense possibilities that technology now permits.

Deep reforms are likely to be painful and expensive in any organisation, and doubly so in the public sector with its entrenched interests and often weak management. The risk for policymakers is that they may have squandered goodwill by their mistakes at the beginning and will now find it hard to convince people both inside and outside government that new investment in big changes is justified. As the OECD noted in a report, "E-Government for Better Government", published in 2005:

The next stage of e-government activity is likely to involve more e-government initiatives that develop services and solutions based on the redesign and joining up of back-office business process and IT systems. This will be more complex and challenging, possibly more costly, and potentially more risky, especially because required changes may be quite disruptive of established public-sector structures, culture and management arrangements. Benefits of these initiatives are likely to be less readily apparent to policymakers and outside observers. •

Making it happen

Technology is only half the battle

THE municipal administration of America's District of Columbia was once a byword for bad government, with a cocaine-snorting mayor, corrupt police and incompetent and demoralised bureaucrats. Now, under a go-ahead mayor, Adrian Fenty, it has become a model practitioner of e-government. The public face of this is a single portal, dc.gov, which allows residents to do almost anything that in the past would have involved either picking up the phone (and hanging on and on) or going to an office and waiting. The site not only lets them find out about every imaginable aspect of the city, but also pro-

vides them with a means of acting on the information. This is not just a matter of printing out forms, but often of filling them in and submitting them online too. It is possible to renew a driving licence, pay a parking fine, report broken traffic lights, request a visit from the rubbish-collection service, get all manner of permits, see planning applications and pay local taxes.

In his "war room", the size of half a tennis court, Vivek Kundra, the district's Indian-born, African-raised chief technology officer, points to some of the woes that the new administration inherited: hundreds of computers bought for the schools

in the district but never used (and now obsolete) because the inventory managers lost track of them; 4.6m unsearchable paper records of DC employees, some of them in a total mess. By contrast, his display of the state of the administration as it is now seems sheer magic. The day-to-day work of the DC government is shown on simple spreadsheets, with new tasks requiring action appearing on panes with a yellow background. When the tasks have been accomplished, the panes go green. If a job is not done by a set deadline, the pane goes red and the employee's supervisor is automatically notified.

A typical entry records a problem with the head teacher's e-mail at a school in the north-east of the district. A named technician has been to attend to it and repaired a faulty cable. The head teacher is satisfied. Green reigns.

Running the district in this new way is not expensive, except perhaps for the huge plasma screens on which Mr Kundra displays his wizardry. "A little bit of money can go a long way in terms of technology," he explains. DC owns no servers. Instead of paying \$50 a month per head for commercial software, its employees use the word processor, spreadsheet and e-mail provided free in seconds to anyone who signs up with Google. With extra storage space, security and a different label stuck on it, that costs \$50 per employee per year. Everything—including those millions of records, all now scanned and indexed—is in what Google calls the "cloud": stored somewhere on its vast farms of powerful computers rather than at the DC offices. Using off-the-shelf software marks a big difference from traditional e-government in which security-conscious, risk-averse officials start by commissioning consultants to draw up a tender and go on to buy an expensive tailor-made system running on costly in-house computers.

Mr Kundra applies the same ruthless approach to hardware. The DC police officers are now trying iPhones in place of police radios, crackly and temperamental, that cost \$6,000 apiece. By integrating the cellphone signal with the free map and satellite picture provided by Google, the control room is also able to keep track of the patrol cars. Landlines are being ditched: employees are given a budget and told to buy their own cellphones. Mr Kundra cites Adam Smith's "invisible hand": just as in the private sector, technological innovation works only when the market wants it. His office must "demonstrate value", he says, not simply force other agencies to use new technology by administrative fiat.

Rethink from scratch

One big lesson is that e-government is not just about computers; it involves redesigning the way government works. When he started the DC job, Mr Kundra was puzzled to find that it took four weeks to take on a new employee. Once the decision to hire the candidate had been made, the paperwork trundled back and forth between finance, human resources and other departments until everybody had signed off on it. By redesigning the process and tracking it through his system of coloured

panes—Mr Kundra has cut the time taken to a mere 48 hours.

Now he is putting the procurement process online. The first project is a new warehouse for the police to store evidence collected at crime scenes. The centre of the tender is a Wikipedia-style page on which potential bidders (and the general public) can download information about the project as well as ask questions.

It is far too early to declare the DC system an all-round success. Putting a user-friendly front end on a bureaucracy is good news for citizens, as is using cheap software to monitor it more effectively, but neither solves underlying problems. Much of what Mr Kundra has done so far involves measuring the district's problems more precisely rather than solving them.

His next big task, sorting out the often appalling public-sector schools, will be tough. Using technology to get janitors and maintenance staff to deal with leaking roofs and broken toilets will help, and thousands of new computers have already arrived at the schools (bought cheaply direct from Dell, rather than through a dealer). His systems will give a far more precise picture of truancy rates, security problems, teachers' absences and incompetence and the way all these factors interact. But they cannot make the problems disappear.

A number of other American cities have made similar efforts, but scaling this up to a national level is difficult. For a start, municipal governments have a natural advantage in not having to worry too much about security. If a hoaxer sends the dustmen to the wrong address, little damage is done. And residents have a lot of dealings with local governments, so they know

how the system works. For most people, central government is a lot more remote: the OECD reckons that the average citizen in advanced countries conducts business with it only about twice a year. That is not enough to build familiarity. Moreover, transactions with central government tend to be more serious and involve a higher degree of confidentiality.

Small bureaucracies are also a lot easier to refashion than large ones. Mr Kundra's task looks positively pocket-sized compared with the job facing Karen Evans, America's e-government tsarina, a few blocks away at the Office of Management and Budget. Instead of plasma screens, she uses a large cardboard chart on which each of the 18 federal agencies she monitors is scored with two coloured circles, one for effort, the other for achievement. For her annual meeting with the federal government's chief information officers, she bakes cupcakes and ices them with the appropriate colours: green for excellent, yellow for adequate, red for bad.

She says America has not done badly on "e-government 1.0", providing its citizens with information. Making the rest happen, she admits, will be a lot harder. That is because the use of technology by large-scale government runs into big questions: what data should be held on citizens, with what level of consent, how the data should be stored and shared, and how people should identify themselves when connecting with the system.

Tread softly

"E-government", says the canny Mr Lau of the OECD, "works best by stealth." He is only partly joking. Probably the worst way to put technology into government is for politicians to announce a revolutionary scheme with a loud fanfare, after which inexperienced and timid civil servants hurriedly draw up a tender and award it to the lowest (but probably not the most competent) bidder. Work starts, but political pressure causes the specification to change, so costs spiral and disillusion grows. The project either limps into life, infuriating everyone by its poor performance, or is expensively buried.

What is clear is that e-government works best in rich countries where government is competent to start with. The business of dividing the affairs of government up into their component parts, reassembling them to suit the users and building in effective self-criticism is something that even highly trained, paid and motivated bureaucrats in advanced countries such as I



• Singapore and Sweden do not find easy. It is a huge struggle for less privileged countries whose bureaucracies are barely up to running their existing system.

Still, the experience of the past ten years suggests a common pattern of which all countries, rich and poor alike, should take note. Centralised schemes tend to work much less well than decentralised ones, and competition is vital. In Dubai, the star of e-government in the Middle East, central government provides some of the building blocks, such as a secure electronic payment system or digital identities, but does not mandate particular standards or technologies. The only central stick is that wielded by the country's ruler, Sheikh Mohammed bin Rashid Al Maktoum, who hands out rewards to the successes and public rebukes to the laggards.

Other kinds of competition are at work too. Within the United Arab Emirates, Abu Dhabi, for example, is jealous of Dubai's success in attracting foreign investors, who like e-government for its simplicity and ease of use. So Dubai itself has to run fast to stay ahead. The UAE, for its part, competes with up-and-coming regional rivals such as Qatar and Oman, as well as with laggards such as Saudi Arabia and Kuwait and with the wider Muslim world.

Fadi Salem, of the Dubai School of Government, highlights two further reasons for his country's success. One is that it has a young, technology-friendly bureaucracy. Dubai in its present form has not been around long enough to have inherited an established public administration with its own ways of doing things. Because of its rapid development, technology is used not as a way of making old things work better but as part of government innovation, such as the introduction of toll roads. Dubai pioneered e-voting in the Arab world in elections for half the members of the UAE's consultative assembly. "Government departments act like private companies: efficient, reliable and accurate," says Mahmoud Bastaki, chief technology officer of Dubai World, which is responsible for running the country's port (as well as 40-odd others elsewhere).

The other reason why Dubai has done well is what Mr Salem calls a "large reservoir of public trust" in the government's competence and good faith. That has come about partly because the majority of Dubai's residents are expatriates who work there by choice. If they do not like what the government is doing, they can always move elsewhere.

The minority of native-born Dubai citi-

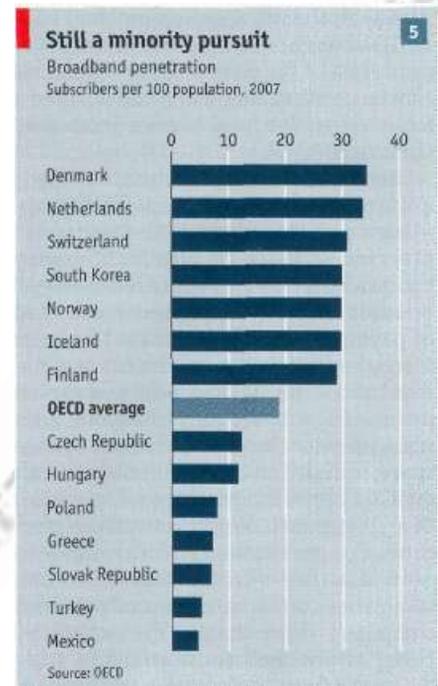
zens, for their part, lead pampered lives and have little reason to complain. Even unpopular moves by the government—such as banning Skype, a free internet-telephony service that would benefit expats calling home but hurt the local telephone cartel—have aroused little protest. It is a similar story in Singapore, where a carefully managed political system has produced a version of e-government that ranks among the most effective in the world. Using a high-strength password, the Singpass, residents can conduct most of their dealings with government online or by mobile phone.

Singapore highlights another factor vital to e-success: the right relationship with the private sector. The Singpass is useful not only for dealing with government but also as a secure digital identity for electronic commerce. It can be used for a range of activities from banking to shopping. In London, the Oyster card, introduced as an electronic ticketing system for public transport, is now available as an add-on to a credit card. In Scandinavia, governments are considering the use of online banking passwords and logins as a way of authenticating users of public services. Another example of successful hybrid e-government, using the kinds of identification that private-sector companies are happy with, is moving.com, which allows Americans to manage all aspects of moving house, from redirecting mail and switching utilities to buying boxes and booking removals.

But all this requires a lot of public trust. Presented with the right incentives, an easy way to opt out if they do not like it and a reasonable assurance of security, citizens jump at the chance of greater convenience by sharing data in this way. But for this trust to develop, governments have to show themselves to be reliable and to act much more flexibly than they have done in the past.

Reaching out

The hardest question for government is how to deal with the part of the population that will not or cannot go online. Glyn Evans, who runs the e-government effort in Britain's second-biggest city, Birmingham, says he has to deal with a portion of households that are "transient and chaotic", whereas central government in Whitehall imagines a world of "middle-class nuclear families" who move as a single unit. One possible solution would be to give up on this section of the population. If e-government enables the most articulate



and productive members of society to save time and money and enjoy better public services, that may be worth having. It may even free officials' energies to take more trouble over the rest. Many governments have adopted that approach by default, although few would admit it.

A second possibility is to try harder to harness technology. Even the poorest of the poor may be able to use a smart card or a mobile phone, giving them a louder voice and a fairer deal. Some time this year the world will pass the point where more than half its population will have a mobile phone. Although mobiles are used mainly as phones and for text messages between customers, they are also powerful computers, offering the previously dispossessed a way into business and finance—and into interacting with public services. M-government (the latest buzzword, now that e-government has lost some of its lustre) allows citizens and the state to deal with each other through pared-down web pages, barcodes sent as pictures and simple text messages.

In some countries digital television offers another way of reaching the computer have-nots. So far, digital-television applications have involved things like voting in game shows or calling up information about a programme. But in principle there is no reason why the same mechanism could not be used by citizens to interact with their governments. •

Identity parade

It's best for governments not to know too much

THE internet, argues Kim Cameron, who works as "Identity Architect" at Microsoft, "was built without a way to know who and what you are connecting to". That is bad enough in the private sector, where the only thing at stake is money. For dealing with government, it is potentially catastrophic. Technology can—just about—tell how an internet user got online. It can check the authenticity of passwords and logins, and validate smart cards or biometric checks. But such data, even if encrypted, can be stolen, borrowed, guessed or intercepted.

Internet users have become used to providing personal information to any convincing-looking box that appears on a screen. They have little idea of either the technology that helps to provide electronic security in practice or the theoretical principles that determine whether it will work. According to Mr Cameron, "there is no consistent and comprehensible framework allowing them to evaluate the authenticity of the sites they visit, and they don't have a reliable way of knowing when they are disclosing private information to illegitimate parties. At the same time they lack a framework for controlling or even remembering the many different aspects of their digital existence."

So financial institutions and their customers are routinely defrauded by cyber-gangsters, and there is little legal basis for dealing with cybercrime. Identities are valuable, allowing crooks to empty bank accounts or buy things online. Cybercriminals have been targeting individual internet users with "spyware" (which records keystrokes) and "phishing" (bogus e-mails that trick users into providing personal information online). But the huge databases held by governments would be a much bigger prize. If you know someone's name, address, date of birth, mother's maiden name and bank-account details, you are well placed to steal from them. Medical histories could prove equally valuable.

E-government looks like a potential crock of gold for fraudsters, with huge databases compiled by law, most of them only lightly and incompetently protected, and ambitious plans for even more. The

biggest e-government contract anywhere is Britain's £12.4 billion scheme for centralised medical records, which will be held on a database accessible by perhaps 1m NHS staff. Other grandiose plans in Britain include a national identity-card scheme; ContactPoint, a national register of all children in England, which will be accessible by 300,000 people; and a pensioners' bus-pass scheme containing the ages and addresses of 17m people.

Why worry?

Officials and politicians insist that these schemes are safe. Encryption will be strong, they say, and access controlled. Any attempt to get into a patient's medical records will leave an electronic fingerprint, which will help to protect confidentiality. Maybe. But the history of big databases so far is not encouraging. Critics worry that it will take only one person with the right access to any of the planned databases who is careless or corrupt, and the whole country's records become vulnerable.

Ross Anderson, professor of Security Engineering at Cambridge and one of the government's most vehement critics, argues that local systems are far more secure than national ones. Patient data held at a GP practice may be vulnerable to a security lapse on the premises, but the damage will be limited. "You can have security, or functionality, or scale—you can even have any two of these. But you can't have all three, and the government will eventually be forced to admit this. In the meantime, billions of pounds are being wasted on gigantic systems projects that usually don't work, and that place citizens' privacy and safety at risk when they do." Richard Clayton, a fellow-campaigner, says that personal information should be treated like plutonium pellets: "Kept in secure containers, handled as seldom as possible and escorted whenever it has to travel. Should it get out into the environment, it will be a danger for years to come. Putting it into one huge pile is really asking for trouble."

Public paranoia about government da-



tabases may well be justified, but it sits oddly with the complacency, verging on carelessness, that people display when convenience is on offer. Ask the average traveller from a developed country whether he would like to be fingerprinted by an authoritarian regime and have the results stored indefinitely in its computer, and he will probably say no. But when such procedures save time, scruples go out of the window.

Travellers standing in the lengthy visa and immigration queues at Dubai airport face a phalanx of bored and sullen officials who communicate by hand gestures and grunts, with nary a "please" or "thank you". But passengers with an "e-card" fare much better. They go straight to the "e-gate" where they swipe their card, press a finger on the glass panel and smile at the camera. The partition opens and they walk into the outside world, an hour richer. It is the sort of treatment that at most airports is reserved for first-class travellers and VIPs. But the e-card costs only a few dollars, takes a few minutes to apply for and is available to anyone. All the traveller needs is his passport and a willingness to trust the country's feudal rulers.

The voluntary principle

The hard lesson for governments is that citizens will adopt technology when it is both optional and beneficial to them, but resist it strenuously when it is compulsory, no matter how sensible it may seem. To take another example, if users of public transport in London were told that in future all their trips would be logged by the authorities, they would revolt. But offered lower fares if they use an Oyster card, issued by a branch of government called Transport for London, they have few ob-

jections. Nor do they seem to mind much that the same body photographs their car every time they visit central London on a working day to enforce the capital's congestion charge.

Oddly, people seem to mind even less about how much information the private sector holds about them. Supermarket loyalty cards record all their purchases, however revealing, and search engines note everything they have been looking for on the internet. People who would strongly resist giving any personal information to the government are quite happy for Google to know that they have been searching for "hot Asian babes". The result, says Microsoft's Mr Cameron, is pernicious. "Hundreds of millions of people have been trained to accept anything any site wants to throw at them as being the 'normal way' to conduct business online."

Cybercrime discredits the use of the internet not only by business but by government too. Mr Cameron suggests rethinking the whole issue, starting from the principle that users may be identified only with their explicit consent. That sounds commonsensical, but many big government databases do things differently. Britain's planned central records for the NHS, for example, will assume consent as it combines all the medical records held in local practice databases.

The second principle, says Mr Cameron, should be to keep down the risk of a breach by using as little information as possible to achieve the task in hand. This approach, which he calls "information minimalism", rules out keeping information "just in case". For example, if a government agency needs to check if someone falls into a certain age group, it is far better to acquire and store this information tem-

porarily as a "yes" or "no" than to record the actual date of birth permanently, which would be much more personal and therefore more damaging if leaked.

Third, identity systems must be able to check who is asking for the information, not just hand it over. How easy it is for the outside world to access such information should depend on whose identity it is. Public bodies, Mr Cameron suggests, should make themselves accessible to all comers. Private individuals, by contrast, should be protected so that they have to identify themselves only temporarily and by choice.

Some existing technologies are not capable of making such distinctions. Examples include Bluetooth technology (in which gadgets such as mobile phones constantly broadcast their availability) and RFID (radio frequency identity) chips. These tiny, remotely readable devices have already been incorporated in many countries' passports, despite plentiful evidence that they can be remotely read, deciphered and even cloned with easily obtained equipment and software.

The final principle is a thorough understanding of the human factor. As Mr Cameron notes, "we have done a pretty good job of securing the channel between server and browser through the use of cryptography—a channel that might extend for thousands of miles. But we have failed adequately to protect the two- or three-foot channel between the browser's display and the brain of the human who uses it. This immeasurably shorter channel is the one under attack." When it comes to government data, a loosely guarded password can cause untold damage. Officialdom and the public alike have yet to that take on board. •

E for express

Countries like India may leapfrog the rich world

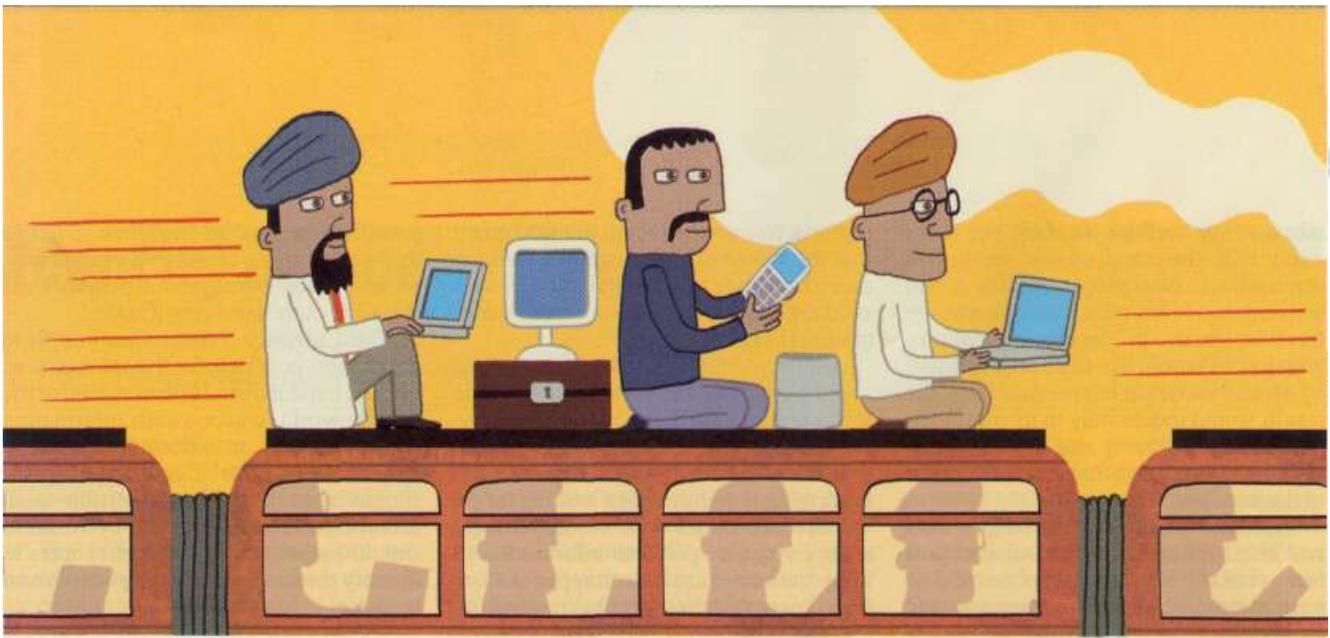
AS IT becomes clear that getting entrenched rich-country bureaucracies to move towards e-government will be slow and difficult, hopes are turning to poorer countries. Not that their bureaucracies are intrinsically more promising. Even under British colonial rule, Mahatma Gandhi was a severe critic of Indian officialdom. His words of advice are displayed in public offices all over India:

Who is a customer? The customer is the most important visitor on our premises. He is not dependent on us. We are dependent on him. He is not an interruption of our work. He is the purpose of it. He is not an outsider in our business, he is part of it. We are not doing him a favour by serving him. He is doing us a favour by giving us an opportunity to do so.

Those words have been honoured

much more in the breach than the observance. Standards of public administration in India are appalling. Billions of dollars are spent on subsidies and doles. When Rajiv Gandhi was prime minister in the 1980s, he once speculated that 85% of them did not reach their intended target. Nothing much has changed since those days.

The current holder of the top job, Manmohan Singh, says the handouts bring I



• "neither equity nor efficiency". The public school system leaves a third of its pupils illiterate. The public health system does not provide even the most basic cover. Roads in rural areas are barely passable. Cities are choked with unmanaged traffic. The land-records system is in chaos. If you own some vacant land, it is a good idea to paint your name on the fence in large letters to reduce the chance that a huckster will sell it to a third party. Time, money and human potential is wasted on a grand scale.

But—slowly—that is changing. The hotbed of e-government in India is the southern state of Andhra Pradesh, which pioneered e-seva, a network of public internet offices where citizens can pay bills online. That may not sound much to be thankful for, but for anyone with memories of the previous system it is a giant step forward. Paying an electricity bill could easily involve a day's wait at a government office where a cross official would demand a bribe for doing his job.

The same was true for phone bills, water bills, taxes and all other interactions with government. Often the customer would first have to go to a bank to get a banker's draft and then take it to queue at the payment office. Even a small firm would need an employee whose sole task was to pay bills and deal with other aspects of officialdom.

Online bliss

Now all this can be done online. Those who have computers and credit cards can go to esevaonline.com, those without can visit an e-seva centre. Although getting a birth certificate or a passport remains pretty difficult (of which more later), at least paying for such things has become easier. Critics say that e-seva has simply put a user-friendly front on a collection of government agencies that remain deeply

inefficient. Yet compared with what went before, even this modest improvement has transformed the lives of millions.

In Andhra Pradesh, e-seva now processes 110,000 transactions a day, worth 110m rupees (\$2.8m). Those numbers are growing by 25% a year. Some 60% of all payments for public services in the state are electronic. "We are moving from in line to online; people want to communicate not commute," says Suresh Chanda, the state official responsible for e-government.

And that is only the start. The state government wants to extend the network of e-seva centres from the current 119 to 4,600 across the state, one for every six villages. The plan is to use existing post offices: these days, chuckles Mr Chanda, they have little to do.

None of this involves the state in running anything: e-seva, like most successful providers of public services in India, is outsourced. A private contractor recruits the staff, provides the computers and premises and keeps the customers happy. In return, he receives a small commission on each payment. E-seva also provides other services: you can transfer and collect money through Western Union, for example, or buy railway and cinema tickets.

The contract for e-seva has just changed hands after six years. The winner of the tender will be offered incentives to run it even better. If a customer has to wait for 15 minutes, the commission will halve; if the wait is 30 minutes, there is no commission. The next stage will be to widen the scope of the system. A pilot project in early 2008 will allow people to apply for driving licences online instead of queuing.

But the most important move is to make the mobile phone, rather than the computer, the platform for payment. This is possible because in some respects banks in India are already streets ahead of their

counterparts in richer countries.

Passengers arriving at the airport in Hyderabad, the capital of Andhra Pradesh, are greeted by an advertisement for a bank account that allows payments to be authorised by a biometric identifier: a thumbprint. Such systems are convenient for the busy middle classes and those who habitually forget their PINS, but they also have wider application in a country where up to half the population may not be literate (though most are probably numerate). From early 2008, two go-ahead banks will offer e-seva services by "m-banking". Customers will be able to pay bills by sending an SMS and a security code.

The m-word

But that is not the only use for mobile phones as computers. A pilot project in Andhra Pradesh that started in mid-2007 aims to improve the mechanism for paying pensions and unemployment benefits to around half a million people in villages in the Karimnagar and Warangal regions of the state. These are arid areas where the main (and usually sole) source of employment is subsistence agriculture. Public services are patchy and roads awful; schools are free but bad; there is basic health care but no nearby hospital.

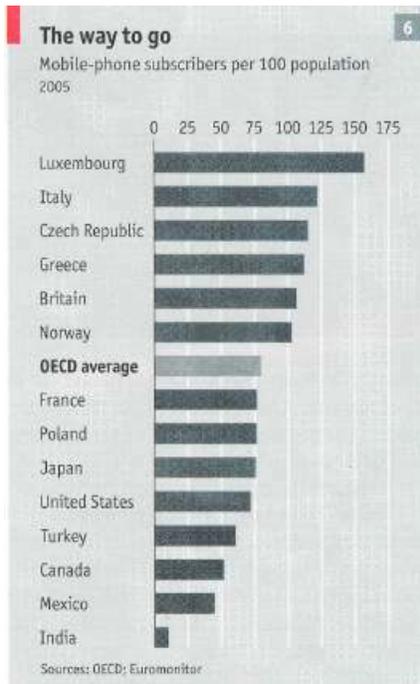
The payments involved are small and 70% of the target population are illiterate. The existing system is both expensive to administer and time-consuming to use. It involves presenting a ration card and an account book at a bank, which may involve several hours' travel to get there and several more hours' queuing. Alternatively, the payments can be disbursed by the local village council. But a large proportion of the money may not reach the intended beneficiaries.

Crucially, however, the mobile-phone signal has excellent coverage. The new I

scheme, the brainchild of the National Institute for Small Government (NISG), does not require the recipients to travel. Instead, they have smart cards incorporating their fingerprint and photograph. A payment agent, equipped with a terminal, comes round to check the cards and disburse the money. The cheaper version works offline, with data loaded into the terminal. The more expensive kind includes a mobile phone that checks identities against a central database. The payment agent is a trusted local figure who has to be at least semi-literate, and is rewarded with 0.5% of the value of each transaction.

The scheme is now metamorphosing into an online bank. In some areas the recipients are able to store some of their money online, withdrawing only as much cash as they need there and then. It is a tiny start-so far some 40,000 cards have been issued-but the potential is clear.

E-government is slowly spreading across India, transforming the public's experience of government as it does so. Take railway tickets. Until the deregulation of air travel in the mid-1990s the train was the only sensible way of getting around India, but ticketing became a cesspit of corruption. Ticket clerks routinely hoarded long-distance tickets to create an artificial scarcity and then sold them at a profit. But since 2002, when the railway authorities put the ticketing system online, corruption has virtually disappeared. You go to the website and click on the train you want. The computer tells you what seats are



available or how long the waiting list is. You can pay by credit card or reserve a ticket and pick it up at a station.

All this has started a process of internal competition that ratchets up the efficiency of every public agency. Other state governments, such as Gujarat, are fast catching up with Andhra Pradesh, which is having to run ever faster to stay ahead. The federal government is getting keener too. It

plans to open 100,000 "common service centres"—in effect, stripped-down versions of e-seva-across India by the end of 2008. It has made online tax returns mandatory for companies and introduced legally binding digital signatures (something that many Western countries are still struggling with).

The prime minister has also ordered a complete overhaul of the nightmarish process of applying for a passport. This typically requires the applicant to assemble 11 documents (including birth certificate, proof of address and police conduct certificate) and spend at least a day queuing in a crowded and squalid passport office. The document itself can take as long as six months to appear. The only way to speed things up is by handing over a bribe, with a going rate of about 1,000 rupees (\$25).

Mr Singh has instructed his bureaucrats to cut out the queuing, limit waiting time to 45 minutes and get the passport ready within three working days. The NISG, which is drawing up the scheme for the government, has spelt out just how difficult this will be. The new system, to be run by a private provider under a \$300m, six-year contract, will require a complete re-organisation of the present process. All the work involved in issuing a new passport has been broken down into simple, logical steps, and the new passport offices have been designed down to the smallest detail, such as levels of lighting and ventilation and a "tea-coffee nook". The scheme is due to start next year. •

The road to e-democracy

E-government is only the beginning

GOVERNMENTS have more or less caught up with what in geek-speak is called "web 1.0", with the online world largely mimicking the offline world. E-mails replace letters; websites make publishing speedier and more effective; data are stored on the user's computer. A collection of programs, paid-for or pirated, are the essential tools for getting going.

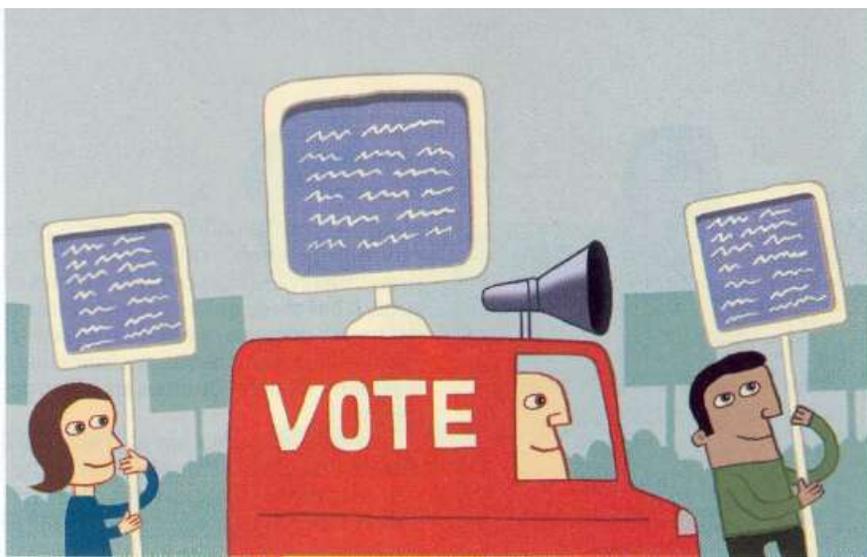
But all this has been overtaken by "web 2.0", shorthand for the interactivity brought by wilds (pages that anyone can edit) and blogs (on which anyone can comment). Data are accessed through the internet; programs are opened in browser windows rather than loaded from the hard

disc; instant messages, often attached to social-networking sites such as Facebook, replace e-mail. Web 2.0 also means free video-sharing on sites such as YouTube and free phone calls between computers. These developments allow information to be shared far more effectively, at almost no cost. That gives great hope to the proponents of e-democracy.

Citizens are not only the state's customers; they are also its owners. The term often used in the jargon of government technology is ritoyen, reflecting the French idea of the politically engaged citizen. Technology can amplify and aggregate voices that used to be faint and muffled. Voters used to

write letters to newspaper editors and hope they would be published. Now they can blog. Contacting an elected representative has become a simple matter of sending an e-mail.

The story so far is that technology intensifies the democratic process, but does not fundamentally change it. For example, the internet is now a vital way of raising money for political campaigns in America, but it has not supplanted the public meeting. Howard Dean's campaign for the Democratic party nomination in 2004 was a huge success in the blogosphere, but failed to translate into votes in real life. The internet has provided citizens with vastly I



more information about their elected representatives: their voting behaviour, their sources of finance, their outside interests, the content of every public speech they ever made. But the effects tend to cancel each other out. When each side has heavier ammunition, the battle rages on.

Some e-democracy efforts look like little more than gimmicks. Giving out politicians' personal e-mail addresses does not make them any more likely to read the result. Gordon.brown@no10.gsi.x.gov.uk, or president@whitehouse.gov make the recipients seem more accessible, but the message will probably be answered by a computer. Politicians and civil servants who have tried blogging have found it remarkably difficult to be both interesting and sensible. The spontaneous (and sometimes half-baked) tone of the blogosphere sits ill with the need to sound measured and definitive. Most politicians' blogs tend to degenerate into anodyne travelogues. One senior British official, Jeremy Gould, has an excellent blog on e-government. "We think he's been very brave," says a colleague, carefully.

Where e-democracy may make a difference is in places where the middle class has become largely disengaged from politics. In India, for example, educated people are much less likely to vote than the rest. Opinion polls suggest that they are disgusted with bad government, but this rarely translates into votes against the incumbent parties.

Yet a few glimmers of hope are appearing. India is developing a caustic and increasingly effective blogosphere. Melody Laila, for example, electronically lambasts the inadequate public services in her native Mumbai, as well as the kid-glove treatment of corrupt politicians in Delhi. "Blogs give us the freedom to say things that wouldn't be published in the mainstream media, and the safety of anonymity," she says. In a country like India, they may also prove more effective than their

counterparts in older democracies. It is hard to imagine a blogger who would wish to promote the cause of corruption and bad government.

Technology offers an opening, too, to outfits such as Lok Satta, a clean-government campaign run by a formidable, Economist-wielding doctor called J.P. Narayan. It has recently celebrated its first electoral victory, in municipal elections in Mumbai. Its candidate, an energetic entrepreneur and community activist called Adolf D'Souza, campaigns for decentralisation, transparent online budgeting and public accountability. What made the difference, he explains, was that during house-to-house campaigning he collected voters' mobile phone numbers. That allowed him to send text messages, bypassing the local media which are cosily tied to the established parties.

As you might expect, the place that makes the most advanced use of technology in promoting public participation is America, where officials now invite online comments from outsiders when they draw up legislation on subjects like environ-

mental protection. A Department of Agriculture draft on organic-food standards, for example, prompted more than 250,000 comments. Yet the expertise mostly comes from a narrow range of specialists.

According to Cary Coglianese, an American e-government expert, imagining that giving automobile owners the ability to download technical manuals and order car parts online would turn a great number of them into do-it-yourself mechanics". Greater involvement by experts may make for more sensible rules, but it will not turn the system of public administration on its head.

Aux armes, citoyens

The sad truth is that most citizens find government and politics rather boring and think they have better things to do with their time. For outsiders, the online world is obscure and complicated. Similarly, the inherent complexity of government risks blocking the gains that technology can bring. Rupert George, who runs a site called eGov Monitor that enthusiasts find fascinating, explains: "All too often, public-sector investment in technology has been wasted by administrations unable to tackle the cultural change necessary to realise its potential."

In short, badly managed organisations with computers will stay badly managed. That has been the lesson from private business, and it equally applies to the public sector, where e-government has barely begun to scratch the surface of what is possible. That is reason for disappointment, but also for hope. ■

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