

CHAPTER ONE

GREAT BRITAIN: A STRATEGY FOR THE WIRED WORLD

"From the beginning this Government has set out its commitment to serve the best interests of the British people. As I see it, ensuring that the information revolution benefits the many, not the few, is central to fulfilling this contract....We must look at reforming government from the point of view of the ordinary person. Technology is there to make peoples lives easier and governments more accessible and less intimidating."

**Hon. David Clark, Minister for Public Service,
November, 1996**

Introduction

The United Kingdom has become as high tech as North America. This impression comes when it is analysed from the perspective of the numbers of people on-line (nearly 50% of the population as of February, 2000). But the United Kingdom initiatives and movement towards an information technology infrastructure are different from Canada and the United States, as this chapter will show. One of the differences is that the British Government has developed an overall strategy on the delivery of services. As will be seen below in the Chapters on Canada and the United States, these countries have taken more of a piecemeal approach to IT implementation. What the British government is doing in the way of using technology for the delivery of all manner of services and programs is striking. It is useful to study as a comparison to what is occurring in Canada.

There are many similarities in the problems the British Government has in delivering services to its citizens, which are very familiar to Canadians. While the United Kingdom is often seen as a small Island (and in comparison to Canada's massive land mass there is justification in this) in fact, like Canada, they have many remote areas that need to be served. There is also a language question as parts of the UK, Wales and parts of the Highlands in Scotland, speak Gaelic and services have to be offered in this

language. One distinct difference between Canada and the UK is that there is a higher profile political leadership in the United Kingdom, in that the Prime Minister, the Right Hon. Tony Blair, is consistently promoting new information technologies and the values of government being on the Internet. As will be shown below, he has his own interactive web site as Prime Minister. It encourages citizen participation in the site and feedback on ongoing policy debates.

Following is an overview of the steps being taken to move the UK government towards electronic government. The focus here is on the approaches taken for the delivery of electronic services to the public.

The Minister responsible for the Public Service has responsibility for all manner of IT initiatives. There is a division in the Cabinet Office, the Central Information Technology Unit (CITU), which has responsibility for the development and implementation of policy initiatives, such as the 1996 Green Paper GOVERNMENT DIRECT and 1999's MODERNISING GOVERNMENT initiative. CITU is also responsible for assisting departments in their implementation of the various IT innovations and initiatives.

The 1996 Green paper was called "Government.Direct: a prospectus for the Electronic Delivery of Government Services" and called for responses from the public and interested groups. The analysis of "government direct" is followed by a look at the Modernising Government initiative and a recent consultation paper entitled E-Citizen E-Government and E-Business. The final section looks at how the Department of Trade and Industry (DTI) is using knowledge management to forward some of the goals laid out in Modernising Government.

Government Direct: The 1996 Government Green Paper

When this Green Paper was released in November 1996, there were already a multitude of computer and IT applications in government, as was to be expected in an increasingly high tech world of the '90s. Implementations ranged from CD-ROMs, usage of computers to enhance efficiency, saving millions of pounds in the process, bar coding systems for benefit order books (which alone saved over £50 million in its first year of operations), computerisation of the land registry, web sites, elec-

tronic bracelet for parolees and many other individual applications. The UK Green Paper represented a move towards broad implementation of IT across government and delivery of services to the public, in an attempt to harmonise their own services as well as assist people in making access to government information and government services easier. The proposals planned to take advantage of the world class telecommunications infrastructure which has been built in the UK.

The government has also sought, through a number of different projects, to increase the public's awareness of the importance of IT. Under their Information Society banner (also an European Union initiative) they initiated a program for SMEs (small and medium sized enterprises). These present a range of programs for the business community and were designed to raise awareness, to demonstrate the practical benefits of adopting new technologies, and to spread best practice.

The government had three main purposes to better harness the delivery of government services:

- ☐ Provide better and more efficient services to businesses and citizens;
- ☐ Improve the efficiency and openness of government administration; and
- ☐ Secure substantial cost savings for the taxpayer.

The original Green Paper reinforced the government's intention to ensure that these services that are delivered electronically are of world standard in efficiency and quality. But, at the same time, there would be a pressing need to continue to deliver services in the old formats to those who either do not have access to the technology or do not want to use electronic services that will be on offer. There is also a necessity to continue to deliver programs in the standard formats, while using IT internally to execute the functions more efficiently, as there would continue to be situations where technological applications would not be feasible. While in time the information technology infrastructure will take hold the Government Direct initiative recognised there would continue to be limitations. These limitations continue to this day.

The Green Paper was introduced while the Conservative Party was still in power. At the time they created a Ministerial Group, chaired by the Lord Privy Seal, to ensure a strategic vision was achieved by taking into

account all of the activities across the whole of government. This group was charged with identifying and taking forward significant cross-departmental initiatives in information technology to ensure that developments in the field were exploited to the full in the national interest. While this was a worthy and idealistic statement the question still remains to this day as to whether this would be at all feasible. While many governments have tried to achieve this laudable aim, of developing a strategic view that takes into account a broad range of applications and interest of all of government, few have achieved it. In the area of interactivity with the public, to broaden the democratic parameters of electronic government, most governments continue to wrestle with how precisely they can be interactive with the citizen in a manner satisfactory to both the public and government agencies. This is a phenomenon that is apparent in all the countries studied here.

The New Labour government's Minister for the Public Service, David Clark, in 1997 indicated they would carry on with the initiatives articulated in the Green Paper. On 18 June 1997, David Clark announced that the government would bring forward a White Paper to set out a coherent program for the reform of government. That paper, he said, *"will underscore our new government program, informing all that we do. I want to bring government services closer to the people and ensure the needs of the customer are met. It presents an amazing opportunity to restructure government's dealings with citizens and small businesses around their needs."*

Expanding on this theme of meeting the needs of the many and the interests of society as a whole, he went on to say, *"...(Using new technology, government will be accessible through electronic 'post offices', where people will be able to claim benefits, get tax information or renew driving licenses at the touch of a button. This will be possible from our homes using interactive Internet links, down a telephone line or from multimedia kiosks in supermarkets and shopping centres. Services will be available electronically 24 hours a day with an instant response."*

He also said his government was trying to move towards the *"one stop shop"* concept of services, in attempts to reduce the number of departments people have to contact for different or similar services. *"Clever use of information technology,"* said Mr. Clark, *"will reduce the traditional boundaries between Government departments. People will no longer have to work out which Government department to contact. Technology will provide a simple and efficient link to any Government Agency or function. In the longer term this will mean a radical restructuring of the government machine around the needs of the customers. This is central to our*

program for delivering open, responsive and simpler government.”

He stressed the importance of IT not only to make government more efficient and for easing the delivery of services , to make it easier for people to deal with government, but to stimulate the economy. He observed that *“the current value of the combined information technology, electronics and communications industries in the UK is estimated to exceed £30 billion a year and is growing fast. Britain’s success in the information revolution is vital to our future prosperity and we must plan ahead to get the best for everyone”*.

Beyond stimulating the economy, the Minister also sees IT as a means of economising on government spending in the operations of government itself, saying that *“Our ambitious plans for improving Government through Information Technology will play a leading role in the Comprehensive Spending Review which is currently taking place across Government. IT can save resources, freeing up time and money which can be redeployed.”* In speaking of future plans for IT initiatives he reiterated his view of reaching all the citizenry and not making electronic applications selective or simply for the few. *“Although,”* he concluded in his 18 June 1997 remarks to a conference hosted by the UK Government Computing magazine, *“electronic services will obviously be optional rather than compulsory, I want to ensure that new technology benefits the many and not the few. The Information Society offers unparalleled opportunities for this country and this government. We can make a great difference to our society and its members.”*

Government Direct: Issues and Applications

As this document was a discussion paper on its proposed strategy for electronic services, it presented both a variety of technological applications, some of the kinds of services to be delivered, and, most importantly, it laid out the issues that need to be addressed. As this was a consultation paper, and the government was seeking input from many groups, it laid out the basic principles that the strategy might encompass and poses questions as to whether this is the right approach.

The basic principles articulated here are:

Choice: While it is preferred citizens choose electronic application there should remain the right to opt out of this and continue with paper based

services or traditional face-to-face or telephone queries.

Accessibility: Easy access is the key and working out how, where and when the citizen will have access to the services. This could include “one-stop shopping”

Options: Taking into account people in remote areas is a vital issue.

Efficiency: This provides for streamlining operations across government to ensure efficiency and the simplification and automation of routine information.

Rationalisation: This calls for the sharing of resources for functions and processes which are common to more than one department in an effort to reduce costs and simplify systems. It would also mean an effort to cut down on not only duplicative services but the collecting of the same information from the individual by different departments.

Open Information: This would be an attempt to make all types of information available electronically. This would cover a wide range of information but takes into account the protection of personal information as required under the UK.

Data Protection Act: (Note: The Green Paper was released in November, 1996, prior to the election of the Labour Government of Prime Minister Tony Blair in May, 1997. Since coming into office the government produced a White Paper on **Freedom of Information**, sought wide consultation and input and has since introduced a freedom of information bill, which is currently before Parliament. Passage of this Bill should have a substantial impact on the government’s overall Information Policy).

Fraud Prevention: This will mean the implementation of systems to ensure persons making enquiries or paying for services are who they say they are and all transactions are secure.

The questions posed here by the paper were:

- ☐ Are these the right principles on which to found the strategy?
- ☐ What are the implications of delivering government services electronically, direct to the public?
- ☐ Where might public access terminals be most conveniently located?

- ☐ How important are twenty four hour access and near instantaneous response?
- ☐ What are the implications of service rationalisation?
- ☐ What kinds of information would it be convenient to be able to tell the government only once?
- ☐ What are the implications of sharing data between government departments?
- ☐ What benefits would follow from the wider use of e-mail for communication between government and the public?
- ☐ Are any difficulties caused by the present Crown Copyright arrangements and if so how might they be reduced or removed?

(Note: Many in the Information Industry have given a resounding “Yes” to the above question and see the copyright question as a major bar to accessing the vast wealth of government data for commercial and other purposes. This question was raised in a 1997 Report from the House of Lords.) The responses to the Green Paper expressed a strong need for reform of Crown Copyright and the government said it agreed extensive review and reform was needed.

The Green Paper recognised that there are many hurdles to overcome in implementing such a strategy and suggested the best approach would be to do this on a pilot basis. The paper also recognised the important question of who is going to pay for these pilots and the eventual delivery of the services, mainly the building of the infrastructure and the administration of the services.

“Implementing the strategy will involve a very large capital investment, and is likely to take five to ten years. Large information technology projects, both in the UK and abroad, have met with mixed results, for example cost and time-scale overruns, and failure to deliver all the planned benefits. The best value for money will be achieved by balancing the risks involved between public and private sector.”

The Green Paper goes on to say that the government “*is determined to protect the taxpayer from technical and program risks, by placing responsibility for them where they are best able to be managed and controlled, which is in the private sector.*”² However, as a comment, with the new government this attitude might change or we will see the original plan of the Conservative Government to have the private sector raise the necessary capital investment to deliver the services, proving the government is satisfied with the standards set by a private sector company. The Paper also stated that full electronic services would have to be done on a stage

by stage process, beginning with simple information functions and gradually moving into secure transactions. Security will play a major role in any proposed development in the years to come. The theme often arises throughout the text of Green Paper.

Tools of Delivery and Sampling of Potential Services

The Green Paper recognises that there are a multitude of technologies that can be utilised to deliver services, including Smart Cards. Some of the options discussed are as outlined below:

More Familiar Technologies

Domestic Television: Set top boxes already exist to allow Internet access through television over a telephone line. Such services could be enhanced with the continuing laying of cable in the UK. Televisions, which are increasingly being digitized, could be used to deliver and access a variety of on-line services. The British are used to information services through the Television having had Teletext, a vast information resource, since the 1970's.

The Personal Computer: This, with a modem and a telephone line, could be used to access any of number of services. Citizens, notes the Green Paper, could access all manner of government services from both the home and the office.

Link to Computer Systems: This essentially would be links from business to government departments and, conversely, the ability to be able to pull down information and services through the linking of computers.

Banks and Building Societies: As these institutions already have public access terminals in their front offices then the government could utilise these for the delivery of services.

Public Access Terminals: Also generically known as kiosk, this technology is already in use in many countries, including the UK, in both the public and private sector. One of the main values of this form of technology is the ability to use a touch screen. A small camera could also be installed and the individual could then access a government person on-line or a screen for services. Privacy of conversations and transactions could be secured through the use of a phone handset at each public access

terminal.³

Smart Card Technology

As to smart card technology there is the recognition that appropriate security measures are needed. Thus, options like fingerprint scanning, eye retina scanning, a palm print or electronic signatures were considered. The latter is a combination of the person's signature scanned into the card itself, a Personal Identification Number (PIN) and some personal, identifying information. This is an option that might well catch on as most British people (90%) use some form of a smart card in their daily activities. There is also an electronic signature program now in place through the government.

On the subject of smart cards, as a reliable option for the delivery of services, the Green Paper says:

“8.10 Smart cards in particular open up other possibilities - the cards can be used for more than one purpose. Just as credit cards are accepted today by some airlines as boarding cards for flights, making life easier for frequent travellers, so it would be possible for an ‘Electronic Signature’ card to be used for more than one purpose. It would be possible for the electronic signature used for a bank to be the same as the one for dealings with government. Alternatively, it would be possible for the same card to hold two or more electronic signatures: one recognised by the government, and another recognised by a bank, and so on. It would also be possible for a card to contain other kinds of data (emergency medical data such as blood groups or allergies, for example). If such data were stored, it would be done in a way that prevented it being accessible to machines reading an electronic signature and vice versa.”

“8.11 What is clear, however, is that electronic signatures of some form are already part of everyday life, and can be expected to be more so in the future. They will be cheaper and more convenient for many transactions. The government intends to carry out evaluations of available systems and conduct trials to find out the type of electronic signature which works best, and which is most convenient for people to use.”⁴

The questions arising from these discussions in the Green Paper are:

- ☐ What are the implications of using electronic signatures in transactions with the government?

- ☐ What are the implications of electronic signature cards having additional functions (e.g. to carry electronic signatures recognised by private sector organisations, to carry medical or other personal data)?

Government Direct: Electronic Service Delivery Benefits

The types of services the Green Paper perceives will be of benefit to the citizen need not be fully articulated here but only mentioned, as they are familiar to government seeking to bring similar services to their citizens. They see benefits for job seekers; vehicle license renewal; skills training; income tax return filling; claiming a benefit; checking personal information; accessing government information to assist both individuals and business; accessing regulatory information; health and safety information and others. All seek to make transactions by both the citizen and business easier and more efficient. While the government wants to cut costs and increase efficiency, they see it cannot be done at the expense or to the detriment of the citizens to whom the services are being delivered. This is why this is a consultation process and the questions asked for the types of benefits that could be delivered are:

- ☐ How might electronic service delivery be arranged to bring the greatest benefits to the citizen?
- ☐ How might electronic service delivery be arranged to bring the greatest benefits to business?
- ☐ How might electronic service delivery be arranged to bring the greatest benefits to the taxpayer?
- ☐ What are the implications of pricing electronic services differently from conventional services?

The Green Paper was followed by **Modernising Government** the actual implementation strategy not only *for the integration of IT in government and for the delivery of services but for the actual modernisation of government itself*. The White Paper is an overall agenda for reform of the public service in the United Kingdom. The Modernising Government White Paper reflects the next important step in the preparations for the delivery of government services and development of methods for govern-

ments to interact with the citizen and vice versa. The latter is still a goal in progress.

Modernising Government: Template for Change

“Modernising Government is an important statement for the government. It is a programme of reform for the future. And it is a series of new measures which the government will implement now. But Modernising Government is also about something else. It is a clear statement by the government of what government is for. Not government for those who work in government, but government for people ✓ people as consumers, people as citizens.

That doesn’t mean to say that those whose job it is to deliver public services are not important. Far from it; they are central. For too long, they have been denigrated. This government values public servants, and public services ✓ and we will continue to do so. But in doing so, we will make sure that government services are better ✓ that they reflect real lives and deliver what people really want. Better provision of better services available from government at all levels is central to the approach of Modernising Government ✓ in schools, in hospitals, in doctors’ surgeries, in police stations, in benefit offices, in job centres, in local councils. To improve the way we provide services, we need all parts of government to work together better. We need joined-up government. We need integrated government. And we need to make sure that government services are brought forward using the best and most modern techniques, to match the best of the private sector ✓ including one-stop shops, single contacts which link in to a range of government departments and especially electronic information-age services.

These are key new initiatives. It is important that we act upon them now and we will. But Modernising Government is a long-term programme. Modernising Government is a key step forward in that programme, and a road-map for its future. It sets out a challenge for all of us in government: a challenge to modernise government, to create better government to make life better for people.”⁵

The March 1999 UK White paper, Modernising Government, lays out many of the possible initiatives that the government is planning to take to better serve the citizen. The White Paper recognises that many of the changes in society are coming about because of rapidly developing information and communication technologies. The Cabinet Office’s Central Information Technology Unit (CITU), responsible for developing and

implementing the technological changes, understands that the citizen in today's environments wants interactivity. Knowledge management is seriously considered in many British government departments partly because of the modernising government initiative. One case study looked at below is the Department of Trade and Industry. But first it is important to briefly look at the thrust of the White Paper.

The HYPERLINK "<http://www.citu.gov.uk/moderngov.htm>" White Paper on Modernising Government incorporates three major areas for action:

- ☐ Citizen focus and consultation;
- ☐ New methods of working; and
- ☐ Collaborative ventures, involving the best of public and private sectors.

The Prime Minister set this challenge in 1997. At that time he said that he wanted, by the year 2002, 25% of all services to be delivered through electronic means. He then revised this in 1999 to say that he expected the government to be delivering 100% of their business services electronically by the year 2008. In March, 2000 the goal was again moved up to the year 2005. To this end, the White Paper on Modernising Government stated that the public will deal with government through home computers, call centres, public terminals and digital TV's, as well as personal contact (including one-stop shops). This is not to imply that all services will be delivered solely through information and communication technologies. Services will continue to be delivered to the non-connected citizenry in traditional formats.⁶ The important thing here is that people will be able to access government services through the medium of their choice.

The Central Computer and Telecommunications Agency, CCTA, is a UK Executive Agency that advises and consults with all government agencies. To them the call from the Prime Minister means that public sector organisations will need new methods of working centred around Internet technology and telephony. The impact of this change will require extensive re-engineering of departments, and will involve frontline staff, policy makers, and business managers, and the way they deliver their services.

A large investment will be necessary, and this will demand collaborative ventures between organisations across the wider public sector, and between public and private sectors. The management of risk, audit and accountability will be key concerns. (see: HYPERLINK <http://www.ccta.gov.uk/corporate/modern.htm>

The White Paper on Modernising Government is not solely about technology. Its main thrust is that there is a need to modernise all of government to better serve the citizen. As the Prime Minister has said: *“Modernising Government is a significant step forward in what is a long-term programme of reform. It puts in place a number of important initiatives, and sets out an agenda for the future. But in line with the Government’s overall modernisation programme, in line with our policy of investment for reform, it is modernisation for a purpose: modernising government to get better government – for a better Britain.”*

Modernising Government: Electronic Services Delivery

The Modernising Government White Paper is changing all levels of government, starting at the top with the Prime Minister Tony Blair. The Prime Minister has been the major advocate of not just giving people access to the Internet but bringing people into the democratic process using information technologies, especially the Internet. The Prime Minister’s web site is interactive and when putting up White Papers and Policy Papers for discussions allows for on-line responses. The following update was posted on the Prime Minister’s web site in April, 2000.

Modernising Government: Electronic Service Delivery Briefing

The revolution in Information and Communication Technology has the potential to radically alter the delivery of government services. There is a huge opportunity for government (both central and local) to improve quality, reduce costs and dramatically change the way services are delivered.

There are many initiatives throughout central and local government to deliver electronic services.

In central government they are driven by the Modernising Government White Paper (published in March 1999), which states that the government will continue to promote initiatives to modernise services in accordance with the needs of citizens and businesses. It sets time-bound targets to make sure that departments and agencies deliver an ever increasing number of services electronically.

The White Paper proposes that by 2002, the government intends, as a min-

imum, that citizens will be able electronically to:

- ☐ Book driving and theory tests;
- ☐ Look for work and be matched to jobs;
- ☐ Submit self-assessment tax returns;
- ☐ Get information and advice about benefits;
- ☐ Get on-line health information and advice;
- ☐ Use the National Grid for learning; or
- ☐ Apply for training loans and student support.

Some of this is in the process of being realised right now. For example, the National Health Service (NHS Direct) is available on the Internet. Shortly to arrive is me.gov.uk, which will eventually be a single gateway to all public services that can be accessed electronically; initially on the Web with a personal computer, but later on interactive digital TV. It will start off with a facility allowing the citizen to inform all of central government of his or her change of address. Following that, citizens will be able to go to me.gov.uk to fill in their income tax returns to the Inland Revenue on-line. Other services will be added in time that might involve some sort of transaction between government and citizen (like benefits applications and payments).

Electronic service delivery will not just be through personal computers with Internet access. The Internet is a virtual space and personal computers are only one vehicle for navigating through it. Historically they have been the only vehicle. That is about to change. Within the next 5 years many will gain access to the Internet through interactive digital television, mobile phones and even games consoles. At the community level, some local centres already have public access interactive kiosk using Internet connections, which do or will provide some local government services electronically.

Government still has much work to do, however, to create a more coherent, co-ordinate, long term strategy that will:

- ☐ Prioritise electronic channels and services (including enhanced existing services and the creation of entirely new services)
- ☐ Indicate how government should best be organised, structurally and financially, to deliver more citizen focused services and, meet citizens preferences while still ensuring access for all.

None of this is easy to do. There are some central dilemmas that are hard to overcome. For example, those in most need of many government services that could possibly be delivered electronically in the future, including even benefits, are least likely to have the money to buy electronic channels; although mobile phones could be an exception here with a level of ownership already far higher than personal computers. They are also least likely to have joined a bank into which benefits could be electronically transferred. Indeed, they are less likely to be accessing an on-line discussion forum such as this. This could all change as interactive TV and Internet-enabled mobile phones start to enter households in great numbers but it should not be ignored.

There are also other barriers, besides the financial, to greater electronic interaction and, eventually transaction, with government. For example, one very prominent barrier is *a widespread lack of trust both in the security of the Internet and in the confidentiality and responsibility of the government in holding personal data given to it.*⁸

Modernising Government: Policy Forum Discussion

At the end of the on-line briefing on the web site the following questions were then asked.

- ☐ Many people have a lack of trust in the security of the Internet. What could be done to change this?
- ☐ In what circumstances might advertising on government websites be inappropriate?
- ☐ How would you feel if on-line access to government services were run by private companies? In what ways would this be positive/negative?
- ☐ Public interactive kiosk at a local level can allow electronic access to local government services for a large number of people. Would you use them? What might you use them for? Where would they best be placed (pub, Post Office, shopping mall, library, supermarket, specific locations etc)?
- ☐ What interactions with central or local government do you think could usefully be done electronically? How might they be enhanced on-line?
- ☐ Can you think of any brand new services that the government might deliver electronically?

Visitors to the site are the invited to join a live discussion forum on these issues. The Prime Minister's web site can be found at: [HYPERLINK](#)

Modernising Government within the UK Department of Trade and Industry: *Applying Knowledge Management Principles*

"Modernising Government" is an important initiative of the UK Government because it is an overarching strategy that sets out to reform the public service. The improvement of services, including those in electronic formats, is an important goal. According to the Modernising Government White Paper this new initiative is a program of reform for the future that will see better provisioning of services from all levels of government. While the key focus is on information and services delivery through one-stop shops, single contacts which link in to a range of government departments and use of electronic information-age services, the government has recognised that application of knowledge management principles will play a significant role in advancing the objectives. The following is a case study of one department using knowledge management (KM) to both improve their own internal operations and deliver more effective services to the public.⁹

One government department that has taken a lead role in this initiative is the Department of Trade and Industry (DTI) through its Knowledge Management Unit,¹⁰ established in March 1999. This department, with their KM initiative to improve services within their department and with their clients in the private sector, qualify as information champions.

As identified by Pat Langford, Assistant Director of the Knowledge Management Unit, DTI has a mission to assist companies to survive and compete in the globalized economy. A working paper, DTI2000, published in March 1999, recognised that to be able to cope early in the new century with changes being brought by information and communication technologies and the shift in attitudes in the population, it was going to be important to change how departments operated. Implementing a knowledge management strategy became a central part of this change.

DTI's KM Unit harnesses knowledge from the department's own vast information resources and is seeking ways to extract knowledge from private companies which could be useful in servicing the public.

Achieving these goals means resolving many internal hurdles, not least of which is the fact that employees of this huge government agency are spread out in many buildings across London. Information is dispersed throughout these complexes and is not routinely shared.

On top of the separation of physical locations is the current silo approach to information management taken by the units within the DTI. In this organisational framework, data, information and knowledge move vertically but not horizontally. DTI wants to break down these barriers to create a sharing culture.

The KM Unit in DTI perceives that the Modernising Government Initiative is stimulating other wider changes within government. There is recognition that the type of people to promote into senior management positions will have to change. In the past, senior management has consisted largely of analysts who have had the ability to rationalise and put issues into a policy perspective. Creative and innovative people have tended not to be in these ranks. Now, says Ms. Langford, "what is needed most in these new environments are creative and innovative people who know and understand the new society that is emerging." She adds that KM implementation "celebrates innovation as much as it recognises the role of the analyst."

One of the first tasks of the DTI (KM) Unit was to end the hoarding of information by developing a strategy on how to create a sharing culture. They wanted to educate individuals on how to become a more valuable member of the team. The DTI (KM) Unit sought to teach people the skills to extract what they know, i.e. to draw upon their tacit knowledge. They recognised that people often aren't aware that they possess unique and valuable knowledge.

One early project the KM Unit is considering is the development of a comprehensive off-line and on-line yellow pages directory that effectively assists people making enquiries. At the moment it is very difficult not only to find the co-ordinates of any government employee, but also to find the right person in the department. The Yellow Pages Directory would lay out the duties of a particular position, a brief description, the person involved and contact numbers. Thus, a member of the public could do either a name or a function oriented search.

Another project is to set up a system on the Department's Intranet whereby all members of the different departments in DTI would be able to share papers written by staff. Currently, employees need special code numbers

to access different databases which are scattered and in different formats. Organising and codifying a common database of existing information with a good search engine would provide wider access to the department's knowledge assets, and would avoid expensive duplication of effort by allowing other employers to see what had already been done.

The KM Unit also wants the department to co-ordinate all its information gathering and information queries from the public. At the moment all information queries into DTI are done in isolation. By developing a "one-stop shop" approach, the KM Unit hopes the public will more easily get to the right site or, in the case of a person engaged in an off-line query, be directed to the right individual. If a member of the public or another government department calls an information line, the person answering will be trained in how to answer or direct the query. The employee would have direct on-line access and the ability to get the required referral immediately, with direct onward routing of calls.

With the Modernising Government Mandate coming from the Prime Minister's Office, there is leeway for departments to get needed funding and personnel. Langford says DTI will be growing as they bring in the needed resources to implement their plans. The approach they want to take is to create different projects for the types of knowledge gathering to be undertaken. This would also hold true for any departmental reorganisation to better utilise or exploit knowledge within DTI.

Langford also notes the value of high level leadership (in this case, the Prime Minister's Office in ensuring successful KM implementation). There is resistance to change that comes from senior levels of an organisation and, as Langford says, "It is difficult for senior executives to start thinking radically when in their minds things are ticking along quite nicely."

An interview with Pat Langford, some five months after initiatives began within DTI reveals substantive progress on a number of fronts.¹¹ Among specific projects underway five months later were:

Learning at DTI – an in-house "university" open to all DTI staff, combining instructors with on-line resources to acquaint staff with the principles of KM and use of the Internet;

ELGAR (Electronic Government and Administration Re-engineering) – a major upgrade of the information technology infrastructure (upgrading of computer equipment and move to a Windows NT environ-

ment from an outdated Windows 3.1 environment along with re-engineering of processes, including electronic documents records management);

Information Architecture – a re-design of how information within the department is managed to ensure that knowledge is properly captured and structured;

Human Resource Policies Review – a recognition of the need to re-vamp HR policies to formally recognise and reward behaviours that contribute to knowledge sharing;

"Yellow Pages" Directories – DTI is creating a directory where all staff will be identified by name, job title, job functions and areas of expertise, as well as telephone, and e-mail co-ordinates. Unique to this directory will be a personal web page for every employee to list their experience and skills (with photos of themselves, if desired) on a voluntary basis. The Department will encourage employees to participate in this web page program and the Knowledge Management Unit would have their web pages on-line by end of as an exemplar.

Round Table Event - DTI organised an event where 150 employees from all levels of the Department came together to exchange ideas about how to collaborate more effectively. DTI's Permanent Secretary participated in the event. This brainstorming session captured many work processes and how they could be improved. Subsequent focus groups are being used to refine ideas documented during the workshop. Another larger workshop of some 400 employees was being planned. DTI hopes to ensure a sizeable percentage of "knowledge management cynics" participate in this second event.

Knowledge Management Awareness Program – an Internet-equipped resource centre has been set up where KM workers can explain to other employees how to access and use Internet-based KM tools in their work.

COBRA – COBRA is a Lotus Notes-based media response system whereby the Department's senior management and press office will be able to respond more quickly to breaking news stories and events. It depends upon KM tools to quickly access relevant data and instantly make it available to senior officials and media relations staff.

Flexible Project Teams – DTI is trying to break down "silo" mentality by establishing flexible project teams that "borrow" employees from other units.

Plant Data Exchange – DTI is beginning to build up data on companies the department deals with, including a log of which unit the company dealt with, who they corresponded with, what information or knowledge was exchanged. This process is designed to help the department understand its client base better and how to improve services to clients. A key question being asked of employees is to think about output – what trade and industry clients want from the department and how their needs can be better met.

A general theme running through all of these Initiatives is how to tie them in to the Modernising Government initiative. Langford acknowledges that this initiative has overtaken some of the department's own programs and is forcing the department to think more outside of the box and consider bigger issues such as the capability of the department to truly effect the necessary level of change within their own current resources. Questions being asked of all departments include "Are we doing enough, do we need specialised change managers and do we have all the skills to do it?"

An early general conclusion reached from this process is also the realisation that "great minds don't think alike" and the resulting need to build teams with very diverse people. Langford states that the department needs to promote people with "creativity and people skills, not just intellectual skills.

On a pan-government level, the Modernising Government White Paper also recognises that many of the changes in society are coming about because of information and communication technologies. The Cabinet Office's Central Information Technology Unit (CITU), responsible for developing and implementing the technological changes, has recognised that the citizen in today's environments wants interactivity.

This, and the need to disseminate knowledge quickly if it is to have value in policy making has led the UK Department for International Development (DFID) to back an Internet-based system which links development research and researchers directly to policymakers and development practitioners around the world through a new web site. Hosted by the Institute of Development Studies, the initiative is known as ID21 – or **Information for Development in the 21st Century**. Its key feature is a searchable on-line collection of short, one-page (500-word) digests of the latest social and economic research studies across 30 key topic fields. ID21 is now on-line and can be found at: <http://www.ID21.org>.

The Information for Development in the 21st Century is a prime example of knowledge sharing, without actually calling it by this name. This KM initiative came out of Cranfield University to capture the constant stream of development research findings of UK-based academics, consultants and Non-Governmental Organizations (NGOs). This, in turn, is contributing to an informed, interactive citizenry that can then participate in the democratic process at a higher plane than currently exists.

A THIRD INITIATIVE: eCitizen, eBusiness, and eGovernment

One of the initiatives to come out of the Modernising Government White paper is The Information Age Government Champions. This group is charged with defining a corporate IT strategy for the UK Government/Civil Service. The group comprises 36 senior government officials at board level within departments who have been designated to champion the information age government agenda within their departments and agencies. HYPERLINK "<http://www.citu.gov.uk/modern-gov/whitepaper/4310.htm>" The Modernising Government White Paper issued in March 1999 stated that the corporate IT strategy will focus on the needs of citizens and business and will encourage wider choice in access to public services. The strategy will maximise the benefits to both central and local government of a co-ordinate approach to information technology and procurement. In taking the strategy forward, the UK Government will work in partnership across the public sector and with the private sector.

On 14 February 2000 the Central IT Unit (CITU) released a consultation paper entitled e-citizen, e-business, e-government: A Strategic Framework for Public Service in the Information Age.¹² The paper recognises that the IT revolution has brought large changes to manufacturing and services industries around the world and society in general. The vision of CITU is to bring similar changes within the public service, a theme set out in Modernising Government. The paper recognises the need to deal with the citizen and to be able to be interactive with the citizen. There is a clear understanding that in the wired world the citizen is in control in terms of what they want. This includes high quality services which are accessible and convenient.

The consultation paper looked at the following:

- ☐ How services can be built around customer needs, not

- government's organisation;
- ☐ Increasing choice in service delivery;
- ☐ How government can ensure that everyone is included;
- ☐ How government can make better use of information; and
- ☐ How government can go about making the changes.

The paper continues on the thematic messages set out in Government Direct and Modernising Government that services should be electronically delivered where possible while also recognising that a segment of the population will not want services in electronic format. Also, personal contact will also be paramount. In this respect, the paper predicate the use of electronic media to facilitate customisation this to deliver tailored services to an individual. The paper points out that there are increasingly new ways of accessing the Internet. The continuing development of new technologies to access the Internet means that government must ensure that their plans take into account the continuing changes. This is a difficult challenge considering the large amounts of money invested in technologies. There are many examples of governments spending millions and millions of their budgets for IT products only to see them become obsolete within a short period of time. One of the challenges of government is to deal with the built in obsolescence mechanisms inherent in new information technologies.

The paper also recognised that “ new ways of doing business will change the relationship between individuals and government. Access to information will be guaranteed under the Freedom of Information Bill and government organisations will be more responsive to citizens’ views.” It also recognised the necessity for strong data protection law.¹³