Local e-government now: a worldwide view

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Foreword by Dietmar Pfähler, Senior Vice President Public Sector, SAP AG

If we are all to achieve the maximum benefit from e-government, then new and creative approaches will have to be explored. This international study provides valuable insight into how different governments worldwide are engaging with their communities to improve services, using technology as the lever but focusing always on the citizen.

To successfully unlock the potential of e-government requires open and collaborative working, and a willingness to learn and change. Governmental processes are often based on historical procedures and forms and a rigid approach will hinder progress. By examining these processes and developing flexible and innovative solutions, we can utilise technology to transform services in line with community and individual needs.

From my discussions with government ministers in many countries, it is clear that the expertise and experience of the private sector in Enterprise Resource Planning (ERP) solutions can be applied to the public sector, enabling it to serve its communities better and to work more efficiently.

Re-engineering and integrating the back-office business processes, breaking down departmental barriers, and turning the whole government organisation into a customer- or citizen-facing environment are key building blocks for e-government.

For the citizen to benefit, e-enabled government must be relevant, accessible and easy to use, but it must also offer a comprehensive service with which citizens feel confident. Accessing some services may be straightforward, for example, finding out details about a school, but more complex issues, such as applying for benefits, can be daunting and the citizen will need advice. E-government must provide all the information needed to support such requests, whether they come via the web, telephone or face-to-face.

In Austria, for example, this kind of service is offered through the on-line citizen guide, the state portal and is arranged around life events. Although not all the services can be accessed electronically, all the information is available in one place. A similar guide has been developed for business needs, but such comprehensive offerings are unusual.

For e-government to succeed, the public has to be persuaded to use it. A city council may provide a wide range of services, but these have to be communicated so that people can understand what is on offer and how to access it.

Lifestyle portals giving consumers details of leisure or social activities, such as theatres, restaurants, sporting events and shopping, all attract very high ‘hit’ rates compared with local government sites. The public sector cannot compete with this ‘portal press’, but can benefit from its expertise by linking with it and reaching citizens in new ways.

At SAP, we see collaboration — joining-up governments, people and business — as one of the greatest culture challenges facing the public sector when implementing e-government. In some countries, such as Canada, the different tiers of government have an established record of working together, particularly on economic issues, but this has yet to extend to electronic services.

In Mannheim, Germany, the federal and city governments are working together with SAP to implement joint electronic services, and we foresee a growing demand for this kind of joint development. At this early stage of e-government, much of the public sector is focused on solving its own departmental issues and, although keen to learn from others, there are few joint projects between different sections of government.

Collaboration requires that all parties work together in new and innovative ways — particularly where citizens and government engage electronically. At present, a citizen may request a service and then have to wait for a response from the department concerned. Enabling citizens and business to initiate processes and to track the progress of their request on-line provides a better service. The citizen and the public servant can both see how the organisation is responding through the different stages from initial request to service delivery.
With collaborative e-government, the process of service delivery becomes transparent and immediate — putting the citizen or supplier inside, not outside, the organisation, and opening up government. For those citizens with electronic access, there is no media ‘break’ — their browser effectively puts them on the same desktop as the government worker, and that has important implications for the way the public sector works.

However, the digital divide can be addressed only by providing multi-channel access. After all, what matters to the citizen is the result of the interaction, not how that is processed.

For those using call centres, or one-stop shops, customer relationship management (CRM) delivers the same e-service, provided that it is integrated with the back-office systems that support the delivery of services. Without that integration, the customer-facing staff in the front office cannot respond effectively. Lack of up-to-date information, customer data being held in diverse systems and the need to make further enquiries, all lead to a non-integrated organisation and a dissatisfied community.

With collaborative working, governments can partner citizens by initiating actions tailored to their individual requirements, for example, by sending reminders about the expiry of a passport, or providing details of a new benefit or service.

Politicians understand that we have to solve the problem of identifying who is communicating with government, and the context of that communication, whether it is in a public consultation or requesting a service.

Although it is estimated that 20 per cent of government transactions with individuals and businesses will require strong authentication, 80 per cent might be dealt with at a lower level, perhaps by using password mechanisms. However, it is crucial to build and maintain public confidence and trust for important and sensitive activities, such as paying accounts or e-voting.

The development of citizen ‘smart cards’ and digital signatures relies on our being convinced of their usefulness. If their use is restricted to our dealings with government, then take-up by individuals and business may be slow. Collaboration with the private sector should be explored if we are to bring down the barriers to the take-up of electronic services.

Perhaps the area of most immediate advantage is in government-to-government transactions, where significant business improvements can be achieved by moving documents electronically with digital signatures.

E-government is bringing new ways of collaborative working, requiring the organisational will to manage change in culture, people and processes, but opening new opportunities to improve service delivery and to reduce the administrative burden.

Providing joined-up services and information is a key part of successful e-government and, as the case studies show, technology can improve citizen service whether using the web, a call centre or one-stop shop.

SAP, as the world’s largest inter-enterprise software company and a leading e-government provider, is committed to advancing technological solutions through research and development. Collaborative studies, such as this report, play an important role in informing the public sector and its partners about how changing citizen expectations can be met, and services improved and developed.
Introduction

What makes this report unique is that it focuses on local e-government worldwide and the experience of local authorities interacting with citizens, customers, other levels of government and service agencies using electronic means. Various international studies have addressed national e-government policy, strategy and implementation, largely ignoring the local dimension. Yet, we know that the overwhelming majority (up to 80 per cent) of citizen-government transactions take place at the local level.

Purpose of the report

The international study that is the focus of this report is designed to inform:
- National and local policy-makers about:
  - what is being achieved, and
  - what needs to be done to transform local government and its interaction with citizens and customers (including businesses and the voluntary sector) in different country settings.
- Members of contributing professional associations, information and communications technology (ICT) suppliers and other stakeholders about:
  - emerging local e-government best practices
  - key building blocks
  - ways of addressing the cultural, structural, process and technology changes needing to be made.

Previous research

This report follows and builds on the findings of the Local e-government now series — research by IDeA and Socitm Insight that evaluated UK-based progress to early 2001, followed by the recently published update to early 2002.

Key findings of the 2001 Local e-government now report were:
- There is a long way to go...
- We have a small number of pioneering local government authorities.
- We need to share the knowledge gained.
- We need to disseminate the lessons learned.
- We need to spread this advanced thinking and engage in the process across the whole of local government.
- We need to help create the conditions in which vision, leadership, management and infrastructure can be focused on successfully implementing local e-government.

The 2002 report found that:

One year on, the focus has moved, as we anticipated, onto the actual implementation of e-government in every region, in every locality and across every community. Talking about it is no longer enough. Envisioning and planning should now be in place. Government and the public expect us to actually be doing something. These expectations are not about technology, not just about information and communication, they are about delivering improvements in services and in the ways people can access those services.
Project description

The research upon which this report is based has involved active collaboration of professional associations, local government training and development organisations, local authorities, municipal companies and academic institutions in 14 countries. The countries involved are: Australia, Brazil, Canada, Germany, Finland, Italy, the Netherlands, New Zealand, Norway, the Republic of Ireland, Spain, Sweden, the United Kingdom and the United States of America. Case studies from these countries are supplemented by information obtained from other sources about progress in Singapore, Hong Kong and Japan, to complete our coverage of five continents.

An initial selection of case study countries was based on relationships established over the last five years between representatives of the organisations participating in the study. A key criterion for inclusion was whether local e-government is a recognisable area of policy and practice in the respective country. In addition, some countries were eliminated from the search because they failed to offer any meaningful material for case studies.

For each of the 14 countries, participating organisations were asked to nominate a lead person to act as research officer to the project. The research officers sought ‘exemplar’ case studies (generally two or three in number) from their country’s experience of implementing local e-government.

Criteria for selection included a range of size and type of approach taken to local e-government, including customer service, citizen engagement and internal efficiency.

These reflect the three features of e-government set out in the FITLOG’s report Electronic Local Government and specified similarly in Gartner’s definition of e-government:

Transformation of internal and external public sector relationships through Internet-enabled operations, information and communication technology to optimise government service delivery, constituency participation and internal government processes.

Our research officers collected relevant material for each case study using the template from the first Local e-government now report (see below and Appendix 1). The template was used as a guide rather than as a rigid model. As a result, each of the case studies reflects some, but not necessarily all of the elements contained in the framework.

The UK editorial team has analysed the exemplar case studies from each country in order to identify:

- a spectrum of approaches being taken to individual, organisational and cultural change
- types of innovation
- implications for the successful implementation of local e-government.

John Mahoney
Vice President and Research Director
Gartner Research and Advisory Services, Europe, Socitm 2002 Spring Seminar
‘Flavours’ of local e-government

Readers of our report will wish to interpret the results of the case studies, and their implications, for their own local situations. Such interpretation starts most usefully with an understanding of the key distinguishing features of local e-government found in their own country as compared with others.

All our participating countries exhibit, to a greater or lesser degree, a range of approaches to delivering local e-government. The ‘flavours’ set out in the accompanying diagram (Figure 1) have been distilled from the evidence collected and presented in the case studies, and fall broadly into three categories, namely:

1. **e-services**: securing and providing government services by electronic means eg USA, UK, Canada, Germany, Spain, Singapore, Hong Kong

2. **e-governance**: linking-up citizens, stakeholders and elected representatives to participate in the governance of communities by electronic means (including e-democracy) eg Brazil, Netherlands, Finland, and Italy

3. **e-knowledge**: developing the skills and the ICT infrastructure to exploit knowledge for competitive advantage eg Brazil, Singapore, Hong Kong, Republic of Ireland.

These flavours mark out the distinctive approach in each particular country, as opposed to the many characteristics that the different countries share. The distinctive flavours reflect cultures, traditions, and constitutional and governmental arrangements. So, in Brazil, a country in transition from military rule (pre-1992) to a neo-liberal democracy, it should come as no surprise that developing a sense of citizenship and establishing the infrastructure and institutions of representative and participative democracy should assume priority.

The surprising aspect of Brazil's progress, for outsiders at least, is the penetration of e-government thinking and ICT applications locally, in different parts of the country and across the socio-economic spectrum. Our analysis suggests that the adoption of neo-liberal economic policies, alongside the development of democratically-accountable and locally-managed services has fostered the creation of arms-length, publicly-owned companies. Companies such as Prodabel are developing and applying ICT to local government services and democracy, while non-governmental organisations are delivering peer-led approaches to capacity and skills development in the favellas.

In the Republic of Ireland, economic and social regeneration have been the distinctive driving forces in establishing the so-called ‘Information Age Town of Ennis’. Elsewhere in Europe, community engagement (Italy), community planning and development (Netherlands) and stakeholder participation and media communication (Finland and Norway) are evident.

These countries demonstrate a concern to use the opportunities afforded by citizen-focused ICT to establish new approaches to local participation at street, neighbourhood and town/city level, to enrich political deliberation and, by inference, to reinvigorate representative democracy.

These examples contrast with those countries that actively embraced ‘modernisation’ underpinned by neo-liberal economic thinking during the late 1970s through to the 1990s.

In the USA, driving down the costs of government using methods drawn from the private sector, such as business process re-engineering, are commonplace at all levels of government.

Australia and New Zealand have been similarly driven, with radical restructuring of local government throughout New Zealand and in a number of Australian states. This restructuring has released new creative forces at the local level. New leadership and senior management have been able to rethink service delivery, as is evident in our New Zealand case studies, while the examples from Australia demonstrate the value of exploiting external forces to drive change.

Germany, with its strong tradition of managerialism, exhibits determination through its legal framework and MEDIA@Komm programme to develop local e-services in a secure, authenticated environment. A similar approach is unfolding in Spain.
Brazil
Citizenship and democracy

Italy
‘Engagement of communities of interest’

Netherlands
Community planning and development

Norway
E-democracy involving the local media and citizens

Australia
Opportunistically, driving down costs

Canada
One-stop access to multi-level government services

Germany
Secure, controlled access

New Zealand
Local innovation and integration

Spain
Secure e-services

Sweden
Enabling transactions with a high return for citizens, business and government

United States of America
Driving down the costs of government services

Hong Kong
Multi-channel electronic services

Japan
Public-private internet service centres

Singapore
Seamless transactional services

United Kingdom
Standards, national infrastructure and support to local government

Figure 1: Flavours of local e-government
In the UK, a strong, albeit voluntary regime of standards development, national infrastructure and support are available to local government, with subtle variations in the constituent countries. Indeed, among all the countries surveyed in this report, England is unique in developing a national strategy for local e-government while, across the UK as a whole, the range and depth of supporting organisations and services available for implementing local e-government is unparalleled.

In our Scandinavian countries, we find a pragmatic, problem-solving approach to local e-government driven by local needs, including promoting economic development, overcoming problems of remoteness, and addressing specific events such as applying to secondary school.

Leaders in multi-channel e-services are found in countries such as Singapore and Hong Kong that have the advantage of being national, regional and local governments rolled into one, accompanied by high levels of computer literacy amongst their populations. Yet Canada, with its federal constitution, huge geographical scale, and widespread and diverse population, embodies similar goals in its one-stop, multi-level government service initiatives. Here, a federal (national) lead, through its Connecting Canadians initiative, supported by funding and projects such as the Community Access Program and Smart Communities, is complemented by provincial developments such as Service New Brunswick that are featured in this report.

**Emerging VIA**

Analysis of the case studies is based on Kurt Lewin’s familiar and commonly used model of how to go about change management, namely ‘to unfreeze, to move and to refreeze’ the organisation. The model recognises explicitly the need to overcome forces resisting change and to harness forces that support change, with a strong emphasis on attitudes and behaviours at three levels.

1. Changing **individuals** — skills, values, attitudes and eventually behaviour

2. Changing **organisational structures and systems** — reward systems, reporting relationships, work design and organisation

3. Changing the organisational **mindset or interpersonal style** — how people and organisations collaborate, how change and conflict are managed, how decisions are made, and so on.

Using this model, our team examined the evidence in the case studies and identified four complementary journeys running through their experiences of change. We have called each of these journeys a VIA, reflecting the notion of *via tuti* — ‘a beaten path is a safe path’. As the *viatori* along the VIA, leading local authorities around the world are our wayfarers or messengers — exploring, learning and sharing their experiences of beating the pathways that can be taken most safely on the journeys into implementing local e-government.
The four VIA are:

| INVOLVEMENT | Unfreezing the status quo | Leadership that involves a wide cross-section of stakeholders builds an understanding of what is possible and how the possibilities can shape the future, and creates a sense of common purpose. |
| WHAT MATTERS TO CITIZENS ACCESS PRIORITIES | Beginning to move | Understanding the outcomes that matter most to citizens (including businesses). What services are people really keen to access? In what policy debates are people really interested? Which of these should be available online or through other electronic means? |
| COLLABORATING AND REDESIGNING WORKING IN NEW WAYS | Moving and beginning to refreeze | Streamlining processes within and between organisations as a way of improving internal efficiency and driving down the cost base of local services, while achieving improved service outcomes for the citizen. |
| SEARCHING FOR INNOVATION | Overarching approach | Purposeful and organised search for changes in the way things are done and in what is done. |

The relationship of these journeys to previous work on local e-government in the UK is set out in Appendix 2.

We use the four VIA to structure the analysis of our case studies in a way that identifies a range of activities that can be followed in implementing local e-government. The VIA cut across the three features, derived from Gartner's definition of e-government, namely customer service, citizen engagement and internal efficiency.

By way of conclusion, we offer some insights about the depth of change being experienced around the world as a result of local e-government initiatives. The depth of change is considered in terms of simple automation of existing processes, through more complex joining-up of organisations and activities, to deeper transformation of organisations with redesigned processes offering innovative ranges of services and interactions with citizens.

Author: Martin Ferguson (IDeA)
Analysis

Involvement  Vision

Our case studies demonstrate that there is widespread acceptance of the view that ‘Local authorities need... vision to see what is possible and how the possibilities can shape the future.’ (Local e-government now, 2001). Yet, experience of how to go about establishing a vision varies widely. While all countries offer examples of implementing local e-government that are set in the context of a vision-building process, some, such as the Belo Horizonte (Brazil) LabFUST project, recognise that the task is far from easy. Conflicting interests, differing capacity levels and varying degrees of readiness to participate among organisations and communities of interest are just some of the issues encountered.

The response is to intervene at many levels — federal, state and local — and through a variety of organisations — government and non-governmental — to build the capabilities of communities and the competencies of individual citizens so that they are able to participate in an emerging vision for local e-government.

Analysis

Involvement

Acknowledge differences and address them from the outset.

Conflicting expectations generate one frequently-asked question about implementing local e-government, namely: ‘Where should we start?’ Practice around the world comprises many examples of initiatives that pilot new electronic access channels, and front- and back-office solutions. Critics might argue that this approach falls into the trap of ‘technology in search of a solution’. Alternatively, such initiatives can be viewed as part of an organisational learning and development continuum. It does not seem to matter whether the focus is on:

- developing websites and portals for citizen, business and media access (Sydney and Alice Springs, Australia; Hutt City, New Zealand; Greifsen-Kjelsás and Møre og Romsdal, Norway; and Dade County and Mecklenburg, USA)
- streamlining forms and integrating front/back-office processes (Mobile, USA)
- introducing customer relationship management systems (Cape Breton, Canada; and Gwinnett, USA), or
- introducing digital signatures and smart cards (Bremen, Esslingen and Nürnberg, Germany and Catarroja, Spain).

Evidence from our case studies suggests that it is involvement in applying ICT to delivering services that generates learning, feeds the vision of what is wanted locally, and opens up opportunities for further development.
The approach of piloting new developments to build experience and potential solutions, products and services has been given formal recognition in national government programmes in some countries. Examples include MEDIA@Komm (Germany) and Local Government Online Pathfinders (England). These programmes demonstrate that, through an incremental process of building experience and collecting evidence from pilot projects, local authorities, suppliers, staff, elected members, citizens, businesses and the third sector begin to appreciate and learn about the possibilities afforded by new technology for service improvement. Furthermore, these pilot programmes have been accompanied by specific activities to disseminate widely the learning that is generated, so as to begin the process of diffusing the implementation of local e-government into other areas and local authorities.

Involvement

Get on and do something, and actively learn.

It is the mainland Northern European countries that tend to be characterised by a bottom-up, community-led approach to developing their vision of local e-government. Examples include:

- Zoetemeer (Netherlands) – seeking to develop a community ‘platform’
- Amersfoort (Netherlands) – ‘learning by doing’ and engaging the local community
- Grefsen-Kjelsås (Norway) – communicative planning
- Kuusami (Finland) – community and economic development.

These approaches reflect a relatively mature culture of subsidiarity employed in these countries’ systems of government as compared to the more centralised, top-down model that has evolved in countries such as the UK. At its most extreme, in the Netherlands, The Hague is piloting social contracts at the street level – packages of services and agreed service levels to meet local needs.

These developments have implications for local authority planning and budgeting processes and the flexibility of associated ICT systems where the external user becomes the main driver of requirements.

Even in Brazil, where democratic participation is a relatively novel concept, we see evidence of local governments and non-governmental organisations working in and with communities to develop their understanding of, and capacity to use, ICT. Examples include community service centres in Belo Horizonte, ‘Lighthouses of Knowledge’ in Curitiba and internet access centres set up by the CDI (the Committee for the Democratisation of Information Technology) in over 300 of the poorest communities across Brazil.

1 www.denhaag.nl
2 www.pr.gov.br/curitiba/faroli.html
www.cdi.org.br/eng_entrada.htm
Be sensitive to community development needs.

In parallel with electronic service developments, e-democracy is characterised by a range of initiatives that spans a spectrum of citizen engagement from passive to active involvement. These range from e-voting in places as diverse as Brazil and the UK (pilots that took place in the May 2002 local elections), to trials in deliberative engagement around specific policy issues.

In Jesi (Italy), the development of a civic network, information media and training programmes is explicitly focused on building the capabilities and competencies of citizens to participate more fully in deliberations about specific local policy issues. Grefsen-Kjelsås and Møre og Romsdal (Norway) provide fascinating examples of participative e-democracy projects involving citizens and the local media, respectively. These initiatives involve a wide variety of stakeholders — governments, non-governmental organisations, academics, private sector suppliers, print, audio and visual media, and communities of interest.

However, the experiences so far suggest that local e-democracy remains elusive, with limited evidence of when and how citizens, and elected members, want to participate using electronically-enabled means. Having said this, the Møre og Romsdal example does offer hope that participative e-democracy rooted in local government’s ‘unique selling point’ — ‘place’ and ‘affection’ for it at an appropriate scale — can help to overcome dissonance, whether caused by geography or self-interest.

Encourage the development of local e-democracy by involving a wide variety of stakeholders and a range of imaginative solutions.

Holistic change, embracing a vision of joining-up information and, in some cases, offering transformed services and relationships with citizens, is evident in a number of our case studies. Perhaps the most far-reaching initiative involving relevant stakeholders in generating a vision and then seeing that vision translated into agreed objectives comes from Dunedin (New Zealand).

In recent years, local government has been radically simplified along unitary lines in New Zealand. For Dunedin, a new chief executive has been instrumental in creating the conditions for widespread involvement of senior management, staff and members of the public to explore the possibilities afforded by new technology for radical improvement in service performance. The resulting vision for ‘Citizen Direct’ states:

Dunedin City Council makes it possible for its citizens to achieve what they need, when they need it and in the manner that best suits this need. Barriers of time and place are removed to let the customers decide how they will do business with the Council so that their needs are met. Thirdly the customers are enabled to be successful in achieving their goals. In other words, Citizen Direct is about empowering customers and citizens.

1 www.teledemocracy.org
www.hansard.gov.uk
www.wolverhampton.gov.uk/webocracy
Involvement

Exploit organisational and staff capacity, alongside community capacity, to create a vision for local e-government.

In contrast to Dunedin (New Zealand), where change has been achieved on a relatively low budget, Ennis (Republic of Ireland) has seen a significant injection of new investment — some £15 million from Eircom to provide integrated information and communications technology, infrastructure and training. Frequently described as ‘the largest community technology project in the world’, the project’s aim has been to explore what happens when the majority of people in this town of 18,000 inhabitants have access to online facilities. The project illustrates vividly the need to involve and to consult the community at an early stage in local e-government projects. Ennis has overcome initial difficulties with some significant changes to the vision emerging as the community became more involved. Ennis has developed articulate and educated consumers, and is now established as a unique test-bed for emerging technologies.

Across the Irish Sea, a contrasting example in scale and approach, again involving a telecommunications partner, is that of ‘Liverpool Direct’ (UK). Essentially a ‘business turnaround’ project, the vision espoused by the newly-elected leader and recently-appointed chief executive is to transform the experience of the customer in dealing with the council of this city which has a population of over 450,000. The project starts with a vision and implementation of dramatically-improved access to services; what follows is the integration with the back-office systems to support the services. A strategic partnership with British Telecom’s Ignite Business Solutions is implementing a contact centre, streamlining services and driving down costs in this large and previously poorly-performing authority. Together with BT Ignite, Liverpool is seeking now to offer its contact centre services to other local authorities in the UK.

Involvement

Consider the role that strategic partnerships with the private sector can play in making step changes in performance and cost reduction.

The wide range of business models used in our various case studies is particularly striking. In Bremen, coincidentally another major European port city, we see a similar example to Liverpool, namely a city council building partnerships with the private sector to deliver electronic services and now seeking to market its ICT applications and services to other local authorities. Similarly, the Nürnberg municipal association has set up a wholly-owned subsidiary company to undertake its e-government project. In contrast, Service New Brunswick uses the business model, knowledge, and experience of an existing Crown Corporation to develop its redesigned customer services.
Be aware that there is no single model that works universally for every organisation.

In all these examples, leaders in the form of enlightened individuals and organisations spark involvement which, in turn, generates new leaders and advocates of radically-transformed local government. Skills are developed, new relationships with customers are formed and capacity is created to embrace change throughout the respective organisation(s) and their communities.

Frequently, these changes have come about following the appointment of new key figures or agents of change: a chief executive and incoming leader of the council in Dunedin; a new mayor in Curitiba; a new stakeholder in Ennis; new chief officers in a freshly-reorganised local government authority in East Riding; and a new leader and chief executive in Liverpool. There is a strong engagement of senior figures in local authorities who nurture and work with others to 'seed' the vision, followed by sponsored processes to turn the vision into practical and achievable steps. In every instance, a climate is created in which change is actively embraced and encouraged, and where the ideas of staff and customers are sought and followed up. A key success factor has been the engagement of local stakeholders and communities of interest in developing, and then embracing, a vision of what local e-government can do for them.

Understand that change begets change — new people, new stakeholders and/or new organisations are conducive to creating the conditions for transforming services and relationships with customers.

The experiences presented in our case studies are evidence that vision for local e-government is not something handed down or prescribed from on high, rather it is something that emerges from a wide body of experience and stakeholder involvement. The role of leaders is then to promote the shared vision into a sustained programme of implementation.
What matters to citizens

Access priorities

We have all heard the exhortations to ‘focus on the customer’ and to ‘put citizens first’. But what is the experience of doing so when implementing e-government locally? A key theme emerging from the case studies is to understand what outcomes matter most to citizens (including businesses). What services are people really keen to access? In what policy debates are people really interested? And which of these should be available online or through other electronic means?

Dunedin’s ‘Citizen Direct’ project in New Zealand offers a well-developed example of an organisation-wide approach to doing what matters most. Here, all staff are consulted, focus groups comprising citizens and businesses are involved and cross-functional teams are established to implement the e-services priorities identified. There is a clear focus on service outcomes as the starting point for investment in e-government. Elsewhere in New Zealand, the Auckland Region’s approach to developing an alliance of seven district councils around shared services, including a contact centre, is a leading example of working together to join-up and to improve access to services across separate tiers of government and across multiple agencies.

What matters to citizens

Work to achieve the outcomes sought by citizens.

The UK has taken a centrally-led approach to e-government enshrined in a simple, yet potentially challenging, target for universal online access to government services by 2005. Informed by a macro view of what matters to customers, as evidenced in publications such as The View from the Queue, this centrally-led approach is being modified as knowledge is unearthed from actual delivery experience ‘on the ground’ and from a growing understanding of customers’ expectations and needs in different local circumstances. For example, Tameside (UK) uses citizen focus groups to define the services to be made available through its local portal, while Ipswich (UK) is building similar consultative relationships with its local business community.
Instead, over 1,500 people participated in mediated, online discussion on two evenings on the AOL Washington portal.

Similarly, the city authorities in Kalix (Sweden) were considering plans for a major city centre renovation project during 2001. They set up online deliberation channels to allow citizens to engage with local politicians and to express their views on the issue. Of those taking part, 86 per cent chose to use the Internet channel. In total, 1,200 residents out of a total population of 15,000 took part. Not only was this a substantial level of involvement from such a small community but, in subsequent evaluations, 72 per cent of citizens reported that they had found the exercise a useful initiative.

Participation, defined as the use of individual and group emails together with web-based discussion spaces, may have real potential to connect citizens with the political process between elections. Pioneering online consultation by the Virginia Department of Transportation (USA), concerning extension of the Washington Metro to Dulles International Airport, demonstrated the value of this method over traditional public meetings where, typically, a few die-hard campaigners would turn up.

What matters to citizens

Balance the role of process-based targets with an understanding of customer needs.

Elsewhere, different histories create different social, economic and political conditions that have given rise to a greater emphasis on ‘bottom-up’, citizen and community-led approaches to implementing e-government. In Brazil, a fledgling democracy, issues such as the democratisation of government information, transparency of government, engaging citizens and building widespread understanding of citizenship underpin local implementation of e-government.

In Porto Alegre, an innovative participatory budget process operates online to give individuals and communities a direct say in what matters to them and how it should be reflected in the coming year’s municipal budget. This model has been copied in a number of countries, including four major German cities.

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What matters to citizens

Seek opportunities to develop meaningful consultative and deliberative online relationships with citizens.

At the other end of the economic spectrum, in countries such as the Netherlands and Finland, we find a similar concern to develop community-based plans and to build the capacity of individuals and, hence, communities to use e-services as the starting point for implementing e-government. In Amersfoort (Netherlands), the approach is epitomised as ‘learning by doing’, creating an environment in which the community and the municipality gradually shape the implementation of local e-government.

At the other end of the economic spectrum, in countries such as the Netherlands and Finland, we find a similar concern to develop community-based plans and to build the capacity of individuals and, hence, communities to use e-services as the starting point for implementing e-government. In Amersfoort (Netherlands), the approach is epitomised as ‘learning by doing’, creating an environment in which the community and the municipality gradually shape the implementation of local e-government. Similarly, in Cape Breton (Canada), strategy making for local e-government is integrated with the annual cycle of business planning, budgeting and public consultation.
What matters to citizens
Learn with your communities and use every opportunity of interacting with them to explore the scope for local e-government.

Turning to Modena (Italy), we find echoes of Porto Alegre’s participatory budget process but, this time, across a wider spectrum of local government activities. The Modena Civic Network is expanding direct contact between citizens and the local public administration, through media such as electronic newsletters and information services, complemented by online consultations and discussion groups. All this is backed up by a programme of computer literacy training for citizens.

What matters to citizens
Champion and make use of electronic media to engage with citizens and to build their confidence and skills.

The focus in Stockholm (Sweden) has been on a specific application that scores high on what matters most to citizens, namely access to secondary education. An online application system was introduced in the winter of 2001, when no less than 90 per cent of pupils submitted their applications over the Internet, backed up by online information about schools and the educational opportunities they provide.

What matters to citizens
Focus first on what matters most to citizens to build interest, trust and take-up.

Elsewhere, the focus is on multiple services across multiple access channels. We see this approach most clearly in Hong Kong’s ‘ESDlife’ portal with around 110 services grouped into a number of themed areas. Initially, availability is limited to PCs and public kiosks, with plans to extend the range to channels as diverse as interactive public payphones and television. At this stage, these tend to be pragmatic solutions focusing first on delivering the transactional services and subsequently on driving efficiency gains into the back-office through value-chain analysis and process redesign. (In Hong Kong’s case, the 110 services are delivered by no less than 40 government departments.)

So, what we see here is e-service delivery being grafted onto legacy organisations and systems. The downside in the short term is that this is additive in cost and in generating increased demand from customers. The upside, however, is that the increased demand and exposure can be used to drive the streamlining of processes to improve efficiency and to achieve a return on the initial investment in e-services.

What matters to citizens
Link multiple-channel access, which is additive, to streamlined information and content management in the back office and you have the potential to improve quality and efficiency.

Understanding who your customers are, what specific local needs they may have, how they view your services and their delivery, and developing access to suit their characteristics and requirements, is an essential part of successful implementation.
Collaborating and redesigning

Working in new ways

Pursuit of transformed ‘business processes’ has long been a ‘holy grail’ for those engaged in implementing local e-government. Streamlining processes within and between organisations has been viewed as a way of improving internal efficiency and driving down the cost base of local services, while achieving improved service outcomes for the citizen.

Perhaps it should come as no surprise that it is in the USA, the country that espouses the free market and minimum government intervention, that driving down costs and improving internal efficiency set the tone of local e-government. In Mecklenburg, the development of multi-channel access is linked explicitly to more efficient information management across the County’s and City’s services. Integrating customer service delivery and back-office processes around stakeholder requirements are the keys in Gwinnett, while in Dade County the cultural and structural issues are at the centre of implementing seamless online services.

In these examples, we see explicit consideration of the value chain of information production and communication for different stakeholders’ needs, alongside changing the culture, structure and technology for information sharing. Further afield, in Sydney and Alice Springs (Australia), we find that issues of planning the information architecture — allowing for scalability, developing the flexibility to adapt to emerging demands and new technologies and assigning ownership of information content — are important factors in managing information.
Collaborating and redesigning

Improve information management within and across organisations to transform the quality and efficiency of services accessed online.

For many local authorities wishing to transform their services, wholesale change is not a feasible option. Continuity of services, ensuring statutory responsibilities are met, and retaining precious staff competencies and knowledge, may take precedence. In these situations, an approach that builds incrementally appears to be favoured and fits well alongside a mode of change commonly described as ‘organisational development’.

Experience, trust and confidence within the organisation, among the citizens and across the wider communities served by particular local authorities, may be built by tackling specific issues and life situations. The downside of this approach is that it could create new electronic ‘silos’ for specific services, unless implemented within a framework of overarching vision, strategy and standards.

In Santo André (Brazil), we find a focus on a specific application, namely the issuing of building and construction licences and follow-up inspections. The question that arises is whether an overall strategy is emerging to ensure that property information, technology infrastructure and access channels can be utilised to streamline other services. In the case of Dunedin (New Zealand), a service-specific focus on improving performance of property conveyancing does sit within the Council’s overall vision and strategy for local e-government.

In the UK, this approach has been taken to its logical conclusion with national projects to create comprehensive and integrated information systems for land, property and people data, based on common standards. These projects are: the National Land and Property Gazetteer (NLPG), the National Land Information Service (NLIS); and the Local Authorities Secure Electoral Register (LASER).

Collaborating and redesigning

Ensure incremental approaches to introducing e-enabled services sit within an overall vision and strategy to avoid creating new ‘electronic’ silos.

On the east coasts of Canada and England, we find two newly-created rural authorities, Cape Breton and East Riding, that espouse ‘change as the norm’, and where new top management is introducing different organisational arrangements, underpinned by a vision for the role that new technology can play. These examples provide evidence that when ‘the slate is wiped (relatively) clean’ in organisational terms, radical change can take place.
Collaborating and redesigning

Harness the potential of a clean slate as an alternative approach to unlocking the potential for change and releasing resources to implement local e-government.

What is rare is the ‘pure form’ of business process re-engineering (BPR) applied to an existing organisation. This may have something to do with the sheer complexity and range of services offered by local government. Much more common are attempts to use aspects of BPR, namely process mapping and redesign, but in a way that builds on the intellectual capital of the organisation and that involves its staff. Perhaps the nearest to comprehensive BPR exists in Hertfordshire (UK), where a fundamental re-engineering of the organisation took place following a ‘whole organisation review’ in the late 1990s. The challenge now is to integrate the redesigned organisation and its contact centre (Herts Direct), with online services and with those services offered by a second tier of ten local district councils, a third tier of parish councils and other sectors such as the National Health Service and the Police.

Collaborating and redesigning

Remember that an approach predicated on fundamental re-engineering of the back office is a challenging and long-term project.

A more pragmatic, but no less challenging, approach has been taken in situations where poorly-performing, high cost, bureaucratic organisations require radical change in order to modernise. In Hong Kong, which is in many ways a large municipality of over six million citizens, the Special Administrative Region’s government organisation remains one that is modelled on traditional, hierarchical local government (a legacy of British colonial rule). Here, the development of the ESDlife portal is being used to stimulate and drive change into the back office. Similarly, in Liverpool (UK), the development of a contact centre is being used to stimulate a rapid turnaround of the existing organisation.

In Mannheim (Germany), the city authority is building new ‘enterprise-wide’ resource planning and workflow systems to provide the infrastructure from which to launch its e-services. Critics have argued that simply grafting a website or a contact centre onto existing poorly-developed business processes merely exposes bad service to the public. However, the Hong Kong, Liverpool and Mannheim examples, while contrasting in solution, demonstrate that with the right conditions (high levels of Internet usage in Hong Kong) and leadership (new senior management and political leadership in Liverpool; the mayor in Mannheim), then significant progress can be made. All of these projects involve strategic partnerships with the private sector, with ESD Services Ltd (a joint venture between Compaq, Hutchison Whampoa and Asia Global Crossing) in Hong Kong, with British Telecom Ignite in Liverpool, and with SAP in Mannheim.
Collaborating and redesigning
Consider developing front-line services using expertise from strategic, private sector partners to act as catalysts for radical change in service efficiency and response.

Online access raises the question of whether public service information should be treated as a ‘free good’. In the Netherlands, there is a long tradition of freedom of information, where free public and business access is the accepted norm. This position contrasts with recent developments in the UK, where unlocking the value attached to information is seen as a lever for attracting private sector investment in ICT to enable governments to modernise. The National Land Information System, based on the National Land and Property Gazetteer, is being implemented based on a business model that charges a transaction fee for the information provided to the customer.

Collaborating and redesigning
Consider the value of information created and the opportunity to modify the value-chain to generate the investment required in new infrastructure.

Elsewhere, the introduction of streamlined service processes has been linked to the need to maintain the integrity and security of information and to ensure the authentication of the citizen making a request. In both Spain and Germany, we see examples of implementing security and authentication based on digital signatures. In Catarroja (Spain), new access channels linked with digital signatures for authentication purposes provide electoral registration, property and vehicle taxation, with a range of other online services planned.

Germany is attempting to adopt a common approach through its Digital Signature Act (1997) and the three MEDIA@Komm (Germany) pilots underway. In the UK, central government is offering the Government Gateway as a common infrastructure for authenticating users, while a number of local authorities are exploring delivery options based on smart card technology. In all these initiatives, it is becoming clear that a key issue is to understand when and what level of authentication is necessary for a citizen to complete a given transaction. These projects are all at early stages of development. Issues of trust and take-up by citizens remain, alongside the need for common standards and methods for authenticating users of local e-government services.

Collaborating and redesigning
Be clear about the levels of security and authentication required for any particular transaction and implement accordingly.

The issue of data sharing and privacy of information is one that is tackled in different ways in different countries. In Finland, the high trust in which government is held means that data is shared freely (with only limited legal restrictions) between public organisations. The main principles are defined in the Law on Public Information. As a result, data sharing in Finland is not the barrier to seamless service delivery that we find elsewhere. Concerns about personal privacy reflect the advent of multi-level e-government with the implementation of the Personal Information Protection and Electronic Documents Act (2000) in Canada.

In Europe, the European Union Data Protection and Human Rights Directives provide the underpinning framework for countries such as the UK that have a strong tradition of protecting personal privacy. Here, the Performance and Information Unit has published a consultation paper on the subject. At the local level, authorities such as Kingston-upon-Hull and East Riding are beginning to introduce information-sharing protocols with partner agencies. Sunderland is developing a ‘data consents’ system to place, as far as is legally possible, the decision over what data is shared with what agency/agencies in the hands of the customer.
Collaborating and redesigning

Seek practical working arrangements to enable data sharing while protecting personal privacy.

Auckland Region offers a methodology for working systematically and collaboratively to identify candidates for shared services delivery across multiple tiers of government. Their approach offers a way of:

- envisioning what shared services could be introduced, based on an understanding of organisational cultures and structures, and on common business processes and technology platforms
- developing principles for collaborating, sifting and prioritising candidate services
- working-up business cases, risks and rewards
- developing transition plans, governance and programme management for the changes to be implemented.

Similarly the MEDIA@Komm project of Nürnberg municipal association of five German municipalities demonstrates how a shared vehicle, a wholly-owned subsidiary company, can be used to map and redesign processes and to offer integrated services in an online environment.

Collaborating and redesigning

Develop a systematic approach to identifying, selecting, planning and implementing shared services.

The evidence from our case studies indicates that collaboration and partnership working are essential for implementing local e-government, whether internally, across services, or between front-line and back-office support staff, with partners across all sectors or with community groups. Such collaboration is essential to focus resources and to integrate the processes necessary to address the issues faced by citizens and customers of locally-delivered services.
Searching for Innovation

The case studies presented in this report demonstrate what Peter Drucker calls ‘systematic innovation’. In times of rapid change, he suggests that systematic innovation is essential to convert change into opportunity. For Drucker, systematic innovation depends on ‘purposeful and organised search for changes, and... systematic analysis of the opportunities such changes might offer for economic or social innovation’. Arguably, this approach to innovation would find a welcome home in local government where a systems approach to management has been a widespread and successful way of ensuring consistent and universal availability of services. The challenge now is to turn that systematic approach to advantage in the search for ways to improve the quality of service and to personalise delivery.

This section of our analysis uses Drucker’s seven sources for innovative opportunity, with the addition of ‘disruptive technology’, as an eighth source, to highlight the manner in which our case study local authorities have searched for, and discovered, innovation in their approaches to implementing local e-government:

Internal sources of innovation:

- The unexpected
- Incongruities
- Process need
- Changes in industry or market structure.

External sources of innovation:

- Demographic change
- New knowledge
- Changes in perception, mood and meaning
- Disruptive technology.

Our first internal source of innovation, shows that unexpected success or failure may lead a local authority to ask what basic changes are appropriate for it to make to the way in which it defines its role, the technology it uses, and its customer base. Perhaps this is demonstrated best by the manner in which website technology has been embraced by local government. Website development has frequently been a speculative venture, often led by ICT specialists. What website development has achieved, however, is to open up the prospect of radically-changed ways of organising processes, managing information and content, and communicating within and between organisations and their customers.

The received wisdom, that most local authority websites have failed to attract a substantial audience, has led authorities to review how they use the Internet and to shift their focus to Intranet developments, to customer segmentation and servicing, and to information and content management, before exposing their services to the wider world. Perhaps this is illustrated best in our examples from the United States, where small beginnings with website developments have grown into significant portals fronting a variety of agencies and services, with customer relationship management, workflow, content management and business process redesign in various stages of implementation.
Seek out the unexpected and look for new opportunities to make progress with local e-government solutions.

The second source of innovation is found in incongruities or discontinuities in the social, economic, cultural and political environment within which local government operates. Our case studies support the view that incongruities affecting local government services and its community leadership role can act as sources of innovation. The macro-economic circumstances of the post-modern period have been characterised by rising demand and lagging results, in this case an ever-growing demand for more and better public services while economies have struggled to keep pace.

At the local level, this has fuelled a drive to reduce costs and, in recent years, a realisation that simply paring away the organisation is insufficient. We see examples as diverse as New Brunswick and Liverpool, where e-government has been grasped by local government authorities as a real opportunity to transform radically their organisations, their approaches to service delivery and their cost bases. Often these are authorities that, historically, have been poor or mediocre performers on key service quality indicators, accompanied by relatively high costs. The visible transformation seen in these examples is underpinned by the introduction of new ICT systems and the pursuit of synergies in competencies, skills and experience within the organisations and with their partners.

Another incongruity driving change is that between customer expectations and the reality of public service delivery, particularly when compared with that of some parts of the private sector. The mismatch between expectations and what is actually experienced underpins a search for new and improved means to deliver services that will offer the access, quality and responsiveness that customers are seeking. Our case studies explore a wide range of new means to deliver services, including contact centres, public, private and mixed-economy delivery vehicles, and a variety of access channels.

The incongruities that develop in the rhythm or logic of a process, typically in the form of bottlenecks and delays or duplication, are common experience in public services. What we see with the advent of new ICT is the opportunity to reform processes, to shrink value chains and to shift responsibilities, choice and decisions from the back office ever closer to the customer or their intermediary. Examples include new approaches to processing information for property conveyancing searches (Dunedin, New Zealand; and NLIS, UK), procurement (Skövde, Sweden; and 'IDeA Marketplace', UK). These approaches rely heavily on exploiting latent intellectual capital in local government organisations to spot the opportunities and to implement the changes.

Uncover incongruities between reality and perception to ensure that customers' real priorities drive the implementation of local e-government.

Outcomes in the form of customers’ processing needs being met act as the third source of innovation. The demand to offer faster, cheaper and higher quality services is evident in the experience of a number of our case studies. Auckland Region epitomises the systematic search for new ways — new, shared processes — to deliver a range of services, prioritised by stakeholders, on a more cost-effective basis. The methodology set out in their report identifies a series of steps that need to be taken to identify and implement ‘candidate services’.

In Porto Alegre, we see the requirement to generate individual and community participation in preparing and prioritising the annual budget as a key driver in making the process available online. In the UK, the universal, process-based target to deliver 100% of government services online by 2005 is prompting authorities such as Tameside and the LEAP Consortium to discover customers’ potential top priorities and to identify the processes to be redesigned and e-enabled to support interactive, online services.
Searching

Consider customers’ needs to realise the promised shift of resources from back-office, process administration to frontline service delivery.

Structural changes and opportunities arising from the reshaping of private sector products and services provide the fourth source of innovation. The old adage ‘form follows function’ is no longer sustainable. In times of rapid change, structure and function are inextricably linked. We have numerous examples that illustrate how changes in structure have prompted the rethinking of services, processes and relationships with citizens. In Cape Breton (Canada), Dunedin (New Zealand) and East Riding (UK), new local authority organisations resulting from restructuring of local government have embarked on systematic searches for new ways of delivering services using ICT. In other instances, such as Bremen (Germany) and Liverpool (UK), new organisational vehicles facilitated by ICT are being used to transform services and relationships with citizens. Service New Brunswick achieves a similar outcome by mapping its functional requirements for one-stop shops and e-enabled services onto an existing vehicle, namely a Crown Corporation.

Searching

Consider facilitating an environment in which local e-government can flourish through changes in organisational structure.

Moving on to external sources of innovation, our fifth source of innovation concerns the demographic and social changes sweeping most developed countries that have helped to stimulate an interest in life events. Situations such as changing place of residence, having a baby, retirement, needing long-term care, death and bereavement are identified and used to structure access and to join-up services. This is particularly apparent in our Tameside (UK) and Bremen (Germany) case studies and in work proceeding to define and develop life-event-driven portals and information services (see, for example, UKonline and the LEAP initiative). These initiatives raise issues of terminology, taxonomy, information standards and the potential development of intelligent, natural language searching to enable the customer to gain access using terms that are familiar to them.

1 www.ukonline.gov.uk
www.leap.org.uk
Many of our case studies exhibit features of customers behaving as innovators, including:

- Møre og Romsdal (Norway) – local print and television media participate in the development and use of online council information services
- Modena (Italy) – a civic network engages different communities of interest
- Ennis (Republic of Ireland) – citizens and businesses re-determine priorities and investment in local e-government.

As the demand for more customised services and the number of iterations needed to arrive at optimum service solutions increases, then customer innovation begins to make more sense. Customers really become key stakeholders in the design, building and testing of prototypes. The advent of the so-called ‘intelligent customer’, to whom we must give a greater share in the responsibility for innovation, raises a fundamental question for the design of local e-government infrastructure.

Where should the focus of ICT investment and joining-up be? Will attention on ICT systems and joining-up services in the back office need to shift to opening-up services in such a way that they can be joined up at the point of delivery by the customer? What are the essential elements of the toolkits that customers will use? What are the implications for social inclusion?

**Searching**

Consider the role and capacity of citizens and customers to innovate in developing your approach to local e-government.

Changing perception, mood and meaning have underpinned a number of the searches in what is the seventh source of innovation demonstrated in our case studies. This is a strong feature of the Ennis (Republic of Ireland) case study located in a country that, until now, has had a long history of economic decline accompanied by emigration. In the town of Ennis, an external agent, Eircom, sets out deliberately to search for ways to introduce a change in perception, mood and meaning by building information-age capabilities of citizens, businesses and organisations. In Brazil, the onset of the information age is accompanied by a belief among citizens and government that key infrastructure such as the Internet should be freely available as a ‘public good’. Furthermore, the exploitation of new telecommunications opportunities by the private sector is seen as a legitimate source of tax revenue for the government to plough revenue back into providing universal access for citizens.

**Searching**

Consider demographic and social changes in approaching service design.

The issue of customers acquiring new knowledge and becoming innovators in their own right is receiving increased attention in the private sector and acts as our sixth source of innovation. Examples abound of customers being able to specify and select the component mix for private sector products and services, eg online ordering of PCs pioneered by Dell. Now, customers may order tailored components, products and services, rather than being restricted to a standard range of models.

The implications for e-enabling a wide range of personal, social care and health services, as well as community services, are profound. Systems and toolkits will be essential if citizens and communities are to have the opportunity to search information, to make choices and to design services to suit their unique needs, rather than making choices from one or more pre-determined offerings. Many of the more successful peer-led ICT awareness-raising initiatives have been created on this simple premise — give people the tools and they will use them. In Ipswich (Queensland, Australia), ‘SeniorNet’ has pioneered the use of PC and Internet technology by senior citizens. Also, in Ipswich (UK) the introduction of PCs into sheltered housing schemes is proving highly popular.
Searching

Determine the trends in perception, mood and meaning in your situation and consider the role local authorities and intermediaries can play in changing or accelerating them.

The eighth source of innovation is disruptive technology. Examples from our case studies include the Internet, geographical information systems (GIS), smart cards and short message service (SMS). In Santo André (Brazil), GIS technology has been applied to transform radically the process of issuing building permits and inspections. For Belo Horizonte (Brazil), it is the free availability of ‘open source’ software that is making possible the diffusion of public access Internet centres.

In the MEDIA@Komm projects (Germany), smart cards, accompanied by certified digital signatures, are expected to offer citizens secure access to a range of public services — at the same time improving transparency of service operations, improving efficiency, and equipping staff to offer the services required. Tameside (UK) has implemented text messaging (SMS) for the relatively high volume activity of notifying arrival of library book orders. Recent e-voting pilots in the UK (May 2002) have incorporated Internet and SMS as channel options for the first time, with some encouraging results — up to 17.4 per cent of those who voted used the Internet and a further 8.1 per cent used SMS. For younger age groups, SMS has the potential to become a significant disruptive technology affecting how local authorities communicate and manage transactions.

Searching

Identify the disruptive technologies currently emerging that could radically transform services and relationships with citizens.

Finally, the creation of new knowledge can be a harbinger of innovation. Lestijvari (Finland) is developing as a ‘centre of excellence’ for seven municipalities to deliver high bandwidth access to local citizens and businesses. In Møre og Romsdal (Norway), the creation of an online press room reflects a positive desire to use web technologies to generate new knowledge and community participation from radically improved communication. We see the same enthusiasm echoed in the Essex (UK) example, where the tacit knowledge held in the community is invited through an online portal to contribute to the pool of explicit knowledge that will define and enrich the education curriculum.

A number of our case study examples actively embrace web technologies to reform their procurement practices. These use sophisticated knowledge of practitioners from the public and private sectors about procurement practices and ICT networks to build e-procurement solutions. They include Skövde (Sweden), while others such as Mobile (USA) see the field of e-procurement as the next step in their unfolding vision. These local approaches contrast in scale and opportunity with the Marketplace service being developed for UK local government.

Searching

Ensure your organisation keeps up-to-date with emerging knowledge of best practice and potential opportunities.

So, what we see is a rich tapestry of local initiatives in building community capacity to use relevant and appropriate e-services and to seek the views of citizens and local businesses to determine e-government priorities. It remains to be seen whether this investment in the future of local e-government bears fruit in significant take-up of e-services and e-democracy. The key issue is not that there is no experience, nor that there is no practical application upon which to build. Rather, it is recognising the very richness of the tapestry of experience and the knowledge derived, and how to weave this across the breadth of local government and into the depth of its relationships with partner agencies. Furthermore, all of this needs to take place with people and organisations in different local contexts, with different interests, to transform the nature of local government, local services and relationships with citizens and businesses.

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Conclusions
Conclusions

By way of conclusion, we offer some insights about the depth of change being experienced around the world as a result of implementing local e-government. The depth of change is considered in terms of simple automation of existing processes, through more complex joining-up of organisations and activities, to deeper transformation of organisations with redesigned processes offering innovative ranges of services and interactions with citizens.

The opportunities presented by local e-government include citizen-focused services, mixed-economy provision and modernised government. Challenges are to encourage all citizens to use e-service delivery, to encourage the voluntary and the private sectors to collaborate and to make government willing and able to change. Such endeavours are not without their risks. The UK’s National Audit Office has identified these as lack of take-up by citizens, social exclusion and the potential for ICT failure.

Our report paints a picture of local governments around the world rising to the challenge and taking steps to mitigate risks such as these.

We find that local e-government is being approached as a combination of journeys:

- **VIA involving everyone to make it their vision**
- **VIA focusing on what matters most to citizens in determining access priorities**
- **VIA collaborating and redesigning to achieve better outcomes**
- **VIA searching for innovation**

National targets and prescriptions are playing their part, but these would have limited impact without the local innovation, creativity, application and resourcefulness seen in the case studies presented in this report. Around the world, many local authorities are moving out of the automation stage — simply applying ICT to the automation of existing processes — to join-up information and services and, ultimately, to transform the very nature and delivery of local government.

Where national governments are attempting to promote policies for the development of ‘knowledge societies’ as a prerequisite for transforming central and local government services, as is the case in Germany and the UK, the practical consequences are beginning to filter through into local e-government projects. Encouringly, many of these projects tackle Lewin’s three levels of change — individual, structures and systems, and organisational mindset. In countries such as the Netherlands, the initiative is being driven more strongly from local communities, with a focus on changing the capabilities of individuals and communities, as well as transforming the organisational mindset.

Neither the centrally-driven nor the community-led approach offers a panacea. Both struggle with structural and systemic issues, particularly:

- a lack of standards and legal permissions to join-up information and services locally, between agencies and levels of government
- a lack of common infrastructure
- a need for support and co-ordination.

The ‘Pillars’ and ‘Building Blocks’ of local e-government, promoted by the IDeA and featured in the UK national strategy, are one attempt to address these issues in a strategic manner. In many countries, practical steps are being taken to join-up services in ways that are meaningful to citizens. Such countries include:

- Finland — an open approach to sharing information across government (see Haggren’s presentation on change of address notification)
- New Zealand — a single health care record (see Harte’s presentation to the IDeA/Socitm)
- Republic of Ireland — integrated health and social care (see O’Sullivan’s case study of the Southern Area Health Board).
Meanwhile, concerns remain about privacy and data protection in countries such as Canada and the UK (see Bennett’s address on the first year of the Personal Information Protection and Electronic Documents Act in Canada and the UK Performance and Innovation Unit’s Report on Privacy and Data Sharing).

Our case study authorities demonstrate growing evidence that e-government is being viewed strategically by local authorities as a transformation involving a wide range of local government, voluntary, private sector and other stakeholders at each of Lewin’s three levels. Transformation — ‘doing existing things differently and doing new things’ — and innovation are beginning to happen. Some may argue that our case studies are exemplars and that the lessons, including investment in the development and use of ICT for e-government, do not transfer easily to other ‘cash-starved’ local government authorities.

On the other hand, a strong counter-argument can be made that local authorities really have little choice in the matter. Further, small size is not a barrier, as is illustrated by case studies such as Dunedin (New Zealand). If there is a business case to be made, we would argue that it is the business case for ‘doing nothing’. For local government authorities not to embrace the opportunities offered by e-government to transform its services and democratic practices is an open invitation to other organisations to step-in and start to offer alternative service options.

Questions remain about the replication of local projects, whether these form part of a co-ordinated programme (MEDIA@Komm, Germany; Pathfinders, England) or other locally-driven initiatives. This report contributes to the learning from implementation of local e-government worldwide. Together with complementary conferences, seminars, workshops, training and consultancy services, the report also contributes to dissemination of that learning. What is less clear, from the growing worldwide experience of implementing local e-government, is what are the parameters and constraints affecting replication and further development.

Given that local e-government is fundamentally about the transforming and improving local government leadership, relationships, services and processes, then peer-led approaches would seem to have much to offer in changing individual attitudes, in raising awareness of the opportunities for new structures and systems and in changing the organisational mindset. Organisations such as Difu (Germany) and the IDeA (UK), working with and on behalf of local government alongside the professional associations such as those participating in this report, can and in many cases already do offer a range of peer-to-peer support and co-ordination services to local authorities.

Perhaps the greatest challenge enabled by increasingly pervasive ICT is the prospect of a radical change in the landscape of government brought about by the ‘death of distance’, and the emergence of communities of interest without geographical boundaries and of customers acting as powerful driving forces in their own right. Nevertheless, ‘place’ and the ‘affection’ that people have for it remains the powerful and ‘unique selling point’ for local government. Locally is where the majority of citizens interact with government. This is where e-government needs to make its impact felt or it will not be felt at all.
So, is transformation of local government the end of the story? Indeed, is transformation a realistic prospect for the local e-government ‘project’ or is there some other, as yet undefined, prospect?

A revolutionary approach making step changes along the pathways from automation to transformation may be possible for more enlightened leaders in the field of local e-government. However, for the majority, it is likely that life on the local e-government trail will be more chaotic; spotting and pursuing opportunities as they arise while staying in step with the rhythms and beat of local communities and politicians. Much of this is familiar to local government and is evident in the wide range and nature of examples presented in this report. It remains to be seen whether the well-intentioned prescriptions of some central governments are able to lever e-government into the existing institutions of national, state and local government.

Alternatively, we may be witnessing the origins of a radically-changed map of government services and democracy in an e-world, where locality and place play a key part. Indeed, the encouraging finding from our worldwide analysis is that local authorities are ‘unfreezing’; ‘movement’ is happening; and a wealth of successful examples are emerging of local government radically transforming its approach to service delivery and governing its communities.

Author: Martin Ferguson (IDeA)
Australia

The Australian local government sector employs close to 140,000 people in 730 local governing bodies located in every part of Australia. Communities served by local government can vary from fewer than 150 people to more than 160,000; and local government areas range from less than one square kilometre to more than 50,000.

Local government in Australia exerts a major influence on local economies and communities. It is responsible for delivering a wide range of economic and human services and providing engineering services and infrastructure. It plays a major role in environmental management and provides leadership and governance to local communities.

Constitutional responsibility for local government rests with the states and territories (‘the states’), which provide the legal framework in which councils operate and oversee their operations. The Australian Capital Territory has not found it necessary to establish separate local government authorities. The states mandate the electoral system for local government, establish boundaries and regulate the services councils provide. As a result of these arrangements, there are significant differences in state systems for overseeing local government and delivering local government services.

In December 1997, Australia’s Prime Minister, John Howard, announced in the ‘Investing for Growth’ statement, the Commonwealth government’s commitment to putting all appropriate government services online by 2001. The government made a commitment in Investing for Growth to show leadership in the information economy by adopting online technologies to provide better services and improve its own business practices. Specific commitments were made to:

- deliver all appropriate Commonwealth services electronically on the Internet by 2001, complementing — not replacing — existing written, telephone, fax and counter services
- establish a government information centre through the Office for Government Online as a main point of access to information about government services
- establish electronic payment as the normal means for Commonwealth payments by 2000
- establish a government-wide Intranet for secure online communication.

The national policy of ‘government online’ is a Commonwealth government initiative for implementation of e-government in Australia and covers all levels of government (local, state and federal).

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The organisation responsible for ensuring that Australia takes advantage of the opportunities offered by the information economy is the National Office for the Information Economy (NOIE). It was established as an executive agency on 18 October 2000. According to a survey conducted by NOIE in March 2001, 93 per cent of government agencies reported that they would have all appropriate services online by the end of 2001, meeting the government’s commitment. Those agencies that report that they may not meet the deadline are all very well advanced in online service delivery. It is anticipated that they will meet the government’s commitment in 2002.

In terms of level of Internet access, Australia has the third highest per capita usage of the Internet, after Finland and the USA. The increase in percentages of people accessing the Internet is charted below:

<table>
<thead>
<tr>
<th>Month</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 2000</td>
<td>43.94%</td>
</tr>
<tr>
<td>July 2001</td>
<td>49.95%</td>
</tr>
<tr>
<td>August 2001</td>
<td>52.49%</td>
</tr>
<tr>
<td>February 2002</td>
<td>54.38%</td>
</tr>
</tbody>
</table>

Author: Hassan Raisianzadeh
(University of Sydney)
Abstract

In the commercial, financial and cultural hub of a major city, an award-winning website has been developed that reflects the council’s aspirations as set out in a ten-year strategy, ‘the Living City’. The City of Sydney hosted the Sydney 2000 Olympics, and used this as a springboard for further development of its web presence. The global public face has been complemented by extensive information about local commercial opportunities and cultural events. The website now includes information and transactions covering most of the council’s services, supported by the council’s many business units.

www.cityofsydney.nsw.gov.au

Introduction

The City of Sydney was established in 1842, and comprises the central area of Sydney. It includes the Sydney CBD, the commercial, financial and cultural hub of the greater Sydney area, and a number of adjoining residential areas (Greater Sydney is made up of 42 separate local government areas). The City of Sydney was the official host for the Sydney 2000 Olympics. The City has an annual budget of around $95 million, employs more than 720 staff and owns more than 100 properties, including Sydney Town Hall and the Queen Victoria Building.

The city community includes a residential population of only about 24,100 people but the working population is about ten times that number. Also within the city community are other government agencies, arts and cultural organisations and community-based service providers. The city is pursuing its Living City vision, originally developed in 1994, by implementing a range of services, programmes and initiatives to meet local needs as well as reflecting Sydney’s position as Australia’s premier city.

The council for the CBD has responsibility for a global city of about four million people, providing the City of Sydney council with a much larger rate base than many other Australian local government bodies. This gives it the resources, and also the need, to run a fairly sophisticated IT platform. Its website and its government presence has been developing over a number of years and is now acknowledged as one of the best government sites in Australia. In 2000, it won the Australian Financial Review best government website award (one of the leading web prizes in Australia) and, in 2001, its website was a finalist in the Webbies in the government/legal category.

Vision and leadership

There has not been a consistent vision for an e-government presence of the council that had been considered, formulated and adopted. The vision has evolved over a number of years. Overall, management has supported the concept of e-government in general and reacted to the more definite vision of IT staff and others as the website has evolved. However, one central focus of the project has been to include the council’s vision for a Living City — a ten-year theme that aims to make central Sydney a much more desirable place to live.

Add to this the issue of the Olympics. It was considered that the website should be a showcase for Sydney during the Olympics period. Funding was made available for the development of the system and other forms of corporate support followed. This vision was borne out as traffic for the site increased significantly around the time of the Olympics, reaching 20,000 independent page views per day.

As with many other e-government projects in Australia, the traditional leaders did not know a lot about the technology, the potential or other technical issues about the project, so they tended to react to what was put in front of them rather than taking on an active leadership role. However, they certainly provided the resources for the project and trusted their key staff.
In terms of a broader role for e-government that might include such things as e-procurement, there is a broader, state and federal government focus. Whilst the City of Sydney has taken some initiatives, it is considered that these issues require government involvement at a higher level, rather than a fragmented approach across the large numbers of separate local governments in Australia.

Management and infrastructure

The City of Sydney website project has grown incrementally as a number of additional stakeholders, including the large number of business units that make up the council, saw the potential of the project and came on board.

The project is managed using a decentralised business model. There is a central web team of three to five people who provide support to the various business units of the council. The central team provides a centralised style guide or template to preserve the corporate look and feel of the council. The central web team is responsible for major design projects, for example, the full redesign that took place in 2001, as well as other projects like user testing of elements of the site.

Originally, there was some pressure for the information architecture of the central website to model the internal structure of council. One of the management issues has been to explain to the various business units the need to modify the nature of the site to make information more accessible to the public. As with the vision and leadership issues, this was an issue of people not understanding the possibilities of the technology or the nature of the web.

Work on the most recent site started in 1998 and, at that stage, no reliable cost-effective content management systems were available. As a result, the decision was taken to develop one specifically for the site. This task was contracted to an outside firm.

The system went live in early 1999. Originally, changes to the system were made by the external contractors but, over time, the responsibility for making changes to the system has been taken over by council staff. The system is database driven and is able to connect to the variety of back-office databases used by the council for a number of tasks. Much of the material on the site is now updated by the various business units. The council is just beginning a project to replace this system with a new content management system but a decision on this is some time away.

The site is hosted by a commercial hosting service located in another city (Brisbane) and now consists of two web servers and a database server. The council is happy with this arrangement and does not see it changing in the near term. Security has been progressively upgraded. The council has never had any hacking problems on the site.

Conclusion

One of the hallmarks of the site is the density and up-to-date nature of the content. The content is organised around a good-looking, efficient and consistent interface. In discussing the success of their project, one of the key issues has been for people within the council to get to own their content. The various business units now have a web ‘front of mind’ that took a while to develop but is now working very effectively.

As a result of the council’s web presence, all IT system purchases are evaluated according to the ability to participate in the council’s web strategy.

In reflecting on the development of their site, council staff have the following advice for their colleagues in other local government areas:

- plan, plan and plan some more — the information architecture needs to be sorted out before anything happens and this is a process that takes a lot of time
- allow for scalability — you will end up with at least three times more information than you anticipated, in a very short space of time, so make sure you can scale up your site
- be flexible — the technology, user demands and everything else will change quickly — try to keep your options open and let your ideas change in response to what is going on in the e-world.

Author: Peter Phibbs (University of Sydney)
Alice Springs — adapting to local requirements

Abstract
The website developed for the community of Alice Springs is designed to meet the expressed needs of the local community in this country town set in the centre of Australia. They are a culturally diverse community and they host close to half a million visitors each year, drawn to Central Australia by some of the most significant icons of Aboriginal and Australian culture. The website has been developed from one that simply provided a web presence, developed by local business interests, into a real community portal, offering information and services to the local community and its many visitors.

Introduction
Since time immemorial, Alice Springs and much of Central Australia has been the homeland of the Arrernte Aboriginal people. In 1862, explorer John McDouall Stuart led an expedition through the centre to the north coast, navigating and mapping the country. In 1929, the railway line linking Alice Springs with Adelaide was completed. Motor and air transport to the centre grew more frequent and reliable, and Alice Springs overcame its isolation.

Until the early 1930s, the town’s official name was Stuart. Alice Springs was the name given to the Telegraph Station, the site of the original white settlement in Central Australia. However, this dual naming created such confusion for administrators in Adelaide that on 31 August 1933 the township of Stuart was officially named Alice Springs.

Alice Springs lies almost in the geographical centre of the immense Australian landmass some 1,500 kilometres from the nearest major city (almost equidistant between Adelaide and Darwin). In typical Australian humour, it has been said of Alice Springs ‘that every breeze is a sea breeze’. The town sits astride the Stuart Highway, a ribbon of bitumen road dissecting the nation for 3,000 kilometres from south to north, the name of which commemorates the remarkable courage and resilience of John McDouall Stuart.

Culturally, Alice Springs is a diverse community, a multicultural blend, with a resident population of around 27,000 including around 20 per cent of Aboriginal and Torres Strait Islander descent. Over recent years, Alice Springs has achieved a population growth rate of just over one per cent per annum. This rate of growth is expected to slow in the future.

A key feature of the Alice Springs area and the local economy is the large number of visitors (physical, not electronic). About 500,000 national and international visitors visit Central Australia each year — it is the home of some of the most significant icons of Aboriginal and Australian culture (eg Uluru/Kata Tjuta). In Alice Springs, they find a worldly, vibrant and progressive ‘can-do’ perspective unlike any typical country town of similar size.

The council has reasonably modest access to financial and IT resources, and the target audiences for the Alice Springs Town Council website are very different to those visiting major metropolitan sites.

www.alicesprings.nt.gov.au
The Alice Springs website characterises itself very much as a community portal. It contains about 270 pages and the information model that supports it organises information by broad categories, namely:

- about Alice (history, Aboriginal culture, etc)
- community
- council
- business
- tourism.

The home page is attractive, informal and inviting though it could be criticised for requiring a lot of scrolling. It has a Highlights section, a This Week in Alice section and a welcome from the mayor.

Whilst the nature of the site is very different to the large metropolitan sites, its major feature is the way that it has adapted to the needs and requirements of the local community. What is clear is that the site reflects the nature of the area through distinctive elements such as a link on the home page to road conditions and to important news links. The home page also features a major section on events associated with 2002 being the Year of the Outback — including some unique local activities such as the Henley-on-Todd Regatta (a boat regatta run on a dry river bed — www.henleyontodd.com.au) and the 2002 Alice Springs Beanie Festival.

**Vision**

The original vision for the site was for a business and community portal implemented in the original Alice On Line website. The site was sponsored by the council and developed by a local business. The original vision came from the staff involved in community and economic development. However, there were difficulties in keeping this site up-to-date, a familiar problem with websites introduced without a clear vision and management process in place from the start. This and other problems with the site resulted in a tendering for redevelopment in August 1999 with the following scope:

> The contractor is responsible for establishing target audience demand for the Alice Springs Website, providing strategic and marketing initiatives, and redeveloping the website in a manner that transfers ownership, web page design and maintenance to the Alice Springs Town Council.

The council was concerned to ensure that it had more control over the site in the future.

An IT firm won the contract with a proposal to redevelop via a two-stage process, namely:

- review site and ascertain community needs and expectations
- redevelop site and train Alice Springs town council staff in maintenance.

The first stage involved an extensive community consultation process which led to the specification of a number of new elements of the site including a database of events, of community organisations, rates payments online and discussion forums.

**Leadership**

Leadership for the project was provided in a top-down manner with the chief executive officer lending support for the site and sticking with it through its variety of permutations. Senior management has also responded to requests for further staff and training resources as the site was increasingly brought under internal control.

**Management**

The management of the site has been a clear-cut demonstration of the tension between internal and external control of e-government. Initially, the site was run by an external business but the problems associated with this model led to a specific instruction to bring the site back in-house in the latest review.

However, there were some initial delays in bringing the site in-house because of lack of internal staff capacity (staff already had full workloads) and a number of related training issues. It was recognised that, for the site to maintain momentum, additional dedicated web resources would be required.

Whilst the site is now functioning effectively, an ongoing management issue is the continuous staff training that is required as a result of high staff turnover (a feature of the Central Australian economy).
Infrastructure

The site uses Microsoft ASP and is hosted externally. Whilst some dynamic use of databases to generate material occurs, any further use of internal databases would require the adoption of a ‘heavy-duty’ web access product and a different configuration of the network to protect the exposed servers.

Despite the call from the community to provide a facility to pay rates online, this feature has not been implemented. This was an internal council decision, taken because it was not seen to provide significant efficiencies for the council and because ratepayers are already able to use electronic facilities, such as B-Pay or direct credit via online banking, to pay their rates.

There is a discussion feature that uses the internal Microsoft discussion engine but it is currently used very little (fewer than ten postings on any topic). This highlights the fact that the success of discussion groups on e-government sites is a promotional (rather than a technical) problem.

Conclusion

Alice Springs is a good example of a site that addresses community requirements and is tailored to local issues. Through a trial and error process, the council now has a very functional website with the potential for considerable expansion.

In reflecting on the development of their site, the council staff had the following advice for their colleagues in other local government areas:

- bring skills in-house but recognise the training implications of this strategy
- do not underestimate the additional staff resources required to build and maintain an effective web presence
- give people ownership of the particular web pages that deal with their services or their interests after you have addressed the first two points.

Author: Peter Phibbs (University of Sydney)
Brazil

There are 5,507 municipalities in Brazil, ranging from 10,434,252 inhabitants (São Paulo) down to 795 (Borá-SP). The largest municipality, Altamira, is larger than several European countries (160,755 km²), but has only 77,439 inhabitants. There are two tiers of political and administrative power at the sub-national level: state governments (Brazil has 26 states and a federal district) and municipal (local) governments.

Although popularly regarded as universal services, neither the health service nor fundamental education (students from seven to 15-years old) are entirely public in Brazil. Local government is responsible for the administration of municipal education (the public elements of fundamental schools and kindergartens) and public health services. Other responsibilities of Brazilian local government include: public transportation, social services, some leisure activities such as sports for young people, sanitation services, street maintenance and, in some cases, water supply and sewage management.

Brazil is a nation of large contrasts and differences. It ranks amongst the top ten largest world economies, but income distribution variances are amongst the greatest in the world too. These differences are manifest regionally in terms of, for example, relative population density, literacy and income.

Currently, 358 municipalities have websites or portals. More than half the municipal authorities serving populations in excess of 200,000 use the Internet to provide services or information. The complexity and quality of information varies drastically among the sites.

Capital and metropolitan city governments are much more advanced in the use of e-government and putting services online. A significant problem is that small municipalities very rarely have computerised administrative systems.

At the national level, the Green Paper on Information Society in Brazil was published in September 2000. The federal government now offers a wide range of services on the Internet via the ‘RedeGoverno’ (‘GovernmentNet’) portal. More than 800 services and 4,800 types of information are available. Some of the most important Internet services for citizens are:

- income tax declaration
- tax payment certificates
- register of government suppliers
- primary and secondary school enrolment
- follow-up of judicial process
- information on retirement funds and other social security benefits
- distance-learning programmes

Some information on the general level of Internet and personal computer penetration in Brazil:

- Internet usage density (users/100 inhabitants): 2.93
- Personal computer density (PC/100 inhabitants): 4.41
- Percentage of population using the Internet:
  - May 1998: 0.8%
  - July 1999: 1.8%
  - September 2000: 5.0%
  - July 2001: 6.8%

1  www.redegoverno.gov.br

Author: Matthew Wolstenholme (IDeA)
Abstract

The municipal government of Belo Horizonte has been involved in an experimental initiative to evaluate the pre-requisites for providing universal access to information through the Internet. This has involved: establishing co-operation between civil society, local government and academia; setting up ‘laboratories’ for Internet access in municipal high schools and evaluating a range of issues from the physical space available to the qualification of teachers.

Introduction

In Belo Horizonte, the initiatives for using digital technologies to expand public access to government information and to improve relations between state and society started in the 1993 – 96 municipal government term. The first initiative was the Democratisation of Governmental Information Project which sought to incorporate the use of information and communication technologies to improve the interaction between the municipal administration and citizens. This was followed by the Citizen Services Programme which set up service centres in each of the nine administrative regions of the municipality and was supported by those technologies to provide better and more efficient services to citizens.

More recently, two new initiatives have been introduced that incorporate Internet use to increase access to digital technologies: the first is the setting-up of popular, Internet access centres and the second is the creation of information and communications technology laboratories for the educational system, called ‘the LabFUST’.

In Brazil, the creation of Internet access centres in public schools relies on resources from the Fund for the Universalisation of Telecommunications Services (FUST). These come mainly from a one per cent levy on the revenue of telecommunication companies operating in the country and, legally, at least 18 per cent of this levy must be used in public educational establishments.

Previous experience has shown that initiatives involving the wider and routine use of digital technologies by the school community require both changes in educational processes and the training of users. Additionally, in countries like Brazil where social exclusion is high, local strategies to provide universal information access and services need cost-effective solutions.

The LabFUST initiative has been developed to identify and evaluate the requirements and variables that affect the setting-up of labs for Internet access in high schools, guided by the above considerations. It has been jointly supported by the municipal government, Prodabel (the municipal information technology company), the Municipal Education Department (SMED), and the Federal University of Minas Gerais through its computer science department (DCC/UFMG). It also relies on support from Telemar (a telecommunications company) and from hardware, software and office furniture suppliers.

The activities carried out in the LabFUST project will evaluate the functionality and servicing capacity of:

- disseminating information through the Internet and performing collaborative work
- e-learning (including multimedia databases and virtual libraries)
- systems integration for school administration
- technological choices, such as hardware, operating systems and techniques for the installation, operation and management of distributed computer networks
- evaluation of new educational methods from the use of information technology in schools.

Aspects related to the operational expenses and the tools required for the continued operation of the laboratories would also be part of the evaluation.
Project issues

The education policy for incorporating new information and communication technologies in schools and the potential for extending use to the local community have been particular issues in this initiative.

Among aspects to be evaluated are issues surrounding the extension of the experimental project, particularly for dealing with the complexity that arises when a larger number of laboratories are set up: change agents that operate during the experimental project may not apply to all the school-based access centres.

Furthermore, although the success of the actions so far is due to the high involvement and commitment of the staff, it cannot be taken for granted that these will always be automatically available.

Providing the technological infrastructure necessary to set up projects for universal information access involves investing in hardware to increase the physical capacity of the network to support the new demands; for software, it requires designing the necessary applications; for the telecommunications network, an increase in the network connection capacity; and, for personnel, it requires individuals who have the appropriate qualifications to implement and maintain the aims of universal access.

Vision

LabFUST intends to generate evidence to support similar initiatives in the future by: monitoring the processes for the introduction of new technologies; analysing the functionality of the resources used; evaluating the results of their operation; and systematically organising the results.

However, while LabFUST’s objectives are clear to the designers of the project, particularly to Prodabel, DCC/UFMG, and the educational policy co-ordination team, they are not so clear to the teachers and students involved. Also, the values that guide the initiative are not always fully shared by the participants because the project involves organisations from the public and private sectors that sometimes have conflicting interests.

Nevertheless, LabFUST has encouraged changes in the structure of the public organisations that are involved. With its orientation towards change and creating new processes, it has brought about the establishment of working groups that are outside the conventional structure of the participants, ie Prodabel, SMED and DCC/UFMG.

As an experimental project, LabFUST did not entail wide consultation, but the participants were involved in the consideration of its operation, needs, and expectations. The initial LabFUST workshop took place in May 2001 and brought together those individuals with the necessary decision-making skills. Project approval was gained in June, installation began in July and the experimental operational period of 18 months commenced from August 2001.
Management and infrastructure

The backbone of the Municipal Information Network is the only component of the initiative in which there are established standards and clear guidelines. Only this part of the network is systematically monitored for performance. There is, however, a concern with the sharing of costs and infrastructure. Fortunately, a municipal health information network that is being implemented can provide most of the physical infrastructure.

The monitoring of the project is carried out using Project Management Office (PMO) methodology — this relates particularly to the technological aspect. The organisations involved have significant experience in innovation and change projects and in working in multi-disciplinary projects with more than one sector or department. Despite this, there is no strong move towards global monitoring, and the management is fragmented according to the outlook of each of the organisations involved.

There are two limitations to an increase in the demand that will result from the successful setting-up of LabFUST. The first is the physical limitation of the laboratories, i.e. the maximum number of computers that can be installed. The second is the capacity of the current networking infrastructure to service additional schools.

While the financing of the experimental LabFUST is ensured, its continuity depends on the Fund for the Universalisation of Telecommunications Services (FUST) to provide the necessary resources. The Fund plans to provide financing for telecommunication services in the medium term, along with the investments in connection and equipment.

As access to the Internet is considered to be beneficial to the public, the provision of these services is not dependent on payment by the users. Resources for future investments and maintenance will be the subjects of more detailed discussion by the municipal government.

LabFUST was implemented as a project based on popular computers, mostly using free software with open and free coding to meet its guidelines of minimum costs and open standards, which result in reduced maintenance and updating of laboratories.

The network used has security levels that meet the current needs. The operating system ensures an individualised level of security for the collective hosting of data. Electronic authentication is essential, given the anticipated use of laboratory resources for the evaluation of school performance.

In Belo Horizonte, the process for changing the technological platform of Prodabel began in 1993 and brought about the development of competencies to deal with the range of demands that were created. The investment in training ‘front-office’ personnel who deal directly with the users and public is now established, but for the ‘back-office’ personnel, the training is more variable.

Inter-organisational teamwork has been used in the management of the municipality of Belo Horizonte for some time. Seminars, workshops and other collective ways of dealing with problems and seeking solutions are established practices, with open communication among the personnel. However, the technology skills of users vary; personnel in the municipal administration receive their computer training from Prodabel; this extends to on-the-job training for teachers.

Conclusion

The results of the LabFUST experiment can be seen mainly as methodologies and the description of processes. These results will include an estimate of the time period for execution and the training that is required. They will also comprise descriptive reports registering specific experiments and their results in terms of learning, hardware adequacy and response times and the software and networking solutions employed.

Because of their involvement in the community, schools are potentially the key to widening the population’s access to the digital world. However, the use of LabFUST installations for this purpose would require the setting-up of laboratories as popular Internet centres. This double functionality is not, so far, part of a specific evaluation as, to be feasible, it would require other elements that go beyond the scope of this study.

Author: Juliana do Couto Bemfica (Prodabel)


**Abstract**

For more than a decade, Porto Alegre has had a policy of concrete public involvement in decisions about the authority’s budget and priorities. The process is now being underpinned by Internet technologies. This ethos of public participation and social inclusion has permeated the way in which the authority has developed e-government services — including the relationships between the authority and the private sector.

**Introduction**

Porto Alegre is the capital city of Brazil’s southernmost state and has a long history of community involvement in decision-making through its Participatory Budget (PB) process. Since 1989, regional and issue-based public meetings have involved large numbers of the population in determining where the authority should make investments in the locality and also the budget for public services and administration. All residents are permitted to take part in this process and around 30,000 residents do so each year by attending these meetings.

The PB has developed over its 13-year history to utilise modern information and communication technologies and, in 2001, was extended to enable citizens to use the Internet to make suggestions as part of the deliberative process.

**Vision**

The idea to use information technology, in particular the Internet, to enhance participation in the budgeting process was developed by authority officers, administrators, the PB participants, and the Council of Representatives (CoR) — an annually-elected representative body which reflects the investment and service priorities determined through the PB.

All parties were keen to widen participation in the process by using the Internet as an additional means of communication. From the outset, the complex deliberative process demanded an underpinning information management system — which has now been made available on the Internet, providing information on the PB deliberations from 1992 to the present day.

At the same time as making this information available, four ‘Telecentres’ were created in Porto Alegre, to ensure equality of access to this new technology. These Telecentres not only enable the local community to engage the authority officers in the PB process, but also enable them to access local government services that include requests for street lighting, sanitation or water repairs and official documents. Residents are also able to access information on public transport, including services for people with disabilities, to locate public health clinics or other government offices, as well as to obtain information and news from the City Hall.

The Telecentres are run in partnership between government, non-governmental organisations, private sector and community leaders. They provide a convenient, user-friendly foundation for developing active citizenship, overcoming the digital divide and for increasing transparency in the public sector.

In addition to the Telecentres, the authority runs a municipal educational network comprising 51 schools — all with Internet access. Each school has 16 networked computers that are dedicated to promoting learning.
Management

Over the last 13 years, the PB process has meant that the authority has had to develop flexible management processes to meet fluctuating public demands, both in terms of service delivery and authority budgeting. The authority has been able to establish a spirit of continuous modernisation by working collaboratively in teams across departments, re-designing and automating processes to solve problems or issues raised through the PB process. This has been partly funded by the Interamerican Development Bank.

Currently, work is being undertaken in a number of key areas including citizen enquiries, health and building licensing. Over time, these processes are becoming fully computerised and will be managed through a workflow system with Internet, Intranet and Extranet interfaces.

Supporting this modernisation process, the authority’s social communication department sets the communication policy for all authority departments across the various forms of media. PROCEMPA, its information and communication technologies company, has a unit dedicated exclusively to developing the authority’s communication interface which includes the official website of the Porto Alegre government. Internally, the council has over 10,000 e-mail accounts, through which it disseminates up-to-date information to employees about the progress of the e-government projects.

Based on the demands defined by the population, the municipal government and its information technology company work strategically to plan their programme of work. Evaluation processes enable changes whenever objectives are not met. For example, in economic development, activities can range from Trade Point — an e-commerce department of UNCTAD representing industries and businesses — to exhibitions and events promoting agricultural products direct to the consumer. The Porto Alegre Technopoli Project is an example of a technology incubator, involving universities and the private sector to establish the metropolitan region as an advanced technology centre.

Municipal government, through PROCEMPA, has set up an e-commerce service through a virtual mall — Portoweb Shopping — to act as a lever for small entrepreneurs. This technology enabled the World Education Forum, which took place in the city last October, to process all the submissions and enrolment from over 9,000 participants via the Internet.

The volume of data and the varied areas of operation of the municipal government (health, education, housing, sanitation, environmental management, economic development, citizenship, transportation, urban planning, maintenance works and legislation) require a shared database, and a management information system called SIGPOA has been adopted. This system is based on geo-processing technology, allowing spatial visualisation to be shared in a client-server environment, and will be accessible on the Intranet.

Infrastructure

The need for a strong infrastructure that can simultaneously support the e-government project and transform the city into an advanced technology centre has required bold strategies.

Telecommunications, which were recently deregulated nationwide, have made this possible.

The setting-up of a fibre-optic information highway was essential to leverage this process and the municipal administration and PROCEMPA established regulations to help provide this infrastructure. Private telecommunications companies are now required to install additional cable ducts for future public use in each of their works.

The city now owns 100 kilometres of fibre-optics that make up the PROCEMPA Infovia, a multi-services network using ATM technology for the transmission of voice, data and images. The PROCEMPA Infovia information highway services 21 of the 23 municipal departments, connecting 4,000 microcomputers distributed in 163 local networks that compose a metropolitan-area network. From January 2002, it has also been used for the departmental telephone system.

The health sector will also benefit from this information highway revolution: it will be possible to set up a single electronic medical file for each user of the public health service and to transmit medical images between hospitals, laboratories and other centres.

In 2001, two per cent of PROCEMPA’s annual budget of R$ 35.8 million was earmarked for personnel training (with fellowships for specialisation and graduate courses) with access through public selection processes and some financing from international institutions.

The company, which has 98 per cent of its operations computerised, has a team dedicated to evaluating and implementing procedures for data and systems security. Data privacy and protection issues for citizens are foremost, so the company is establishing an internal electronic certification system that will qualify it as an international certifying agent, in line with current requirements. A special task group is developing this, with the direct participation of the users, to meet the public’s needs.
Conclusion

The approach to e-government in Porto Alegre is guided by four principles — popular participation; citizenship building; identification of priorities; and administrative transparency — that, since 1989, have been chosen by local people as their option for municipal government.

In the case of Porto Alegre, the Participatory Budget has provided the public arena in which the city’s investment priorities are established. Over the last 13 years, more than 20 sectorial councils have been set up, with the participation of citizens and a minority government presence, where the policies established by annual thematic assemblies are monitored. The guidelines for the thematic assemblies are, in turn, established by the city conferences (the Third City Conference was held in 2000). All of these consultations are open to all citizens.

In the fourth term of the Popular Administration, which started in 2001, the three main priorities of government are: overcoming social exclusion, providing full democracy, and technological development.

The drive to use technological innovation as a tool for local development must be backed by decisive action from public authorities, particularly in developing countries. Local government has an essential mission in this process, building the infrastructure to allow this advance whilst at the same time ensuring the inclusion of the poorest sectors of the population.

Author: Mayor Tarson Genro (Prefeitura Municipal de Porto Alegre)
Santo André — a new role for local authorities

Abstract
A citizen-centred approach and a strong desire to reduce social exclusion in the local population underpin the e-government programme outlined in this study. These twin themes have extended the objectives of the programme beyond the provision of better information and services and rationalising bureaucracy, into the realms of reviewing and redesigning internal business processes and accepting a new role for the authority with new relationships with its customers. The study highlights a particular group of services where, through the adoption of this approach, the authority has achieved major increases in the efficiency and effectiveness of its services.

The e-government programme
The e-government programme in the city government of Santo André sits within the wider programme of administrative modernisation — with its focus on meeting the real demands of citizens and delivering on the authority’s social responsibilities.

The most advanced of all the elements of the e-government programme is the city’s website. This provides information on and access to a range of services including taxation, public tenders, council proceedings, forms and opportunities to submit complaints. There are also links to the public education network, to the city’s ‘basic health units’, and to a number of ‘virtual libraries’.

Another key e-government project is the implementation of an ‘Integrated Public Health System’ (SISP) — providing a better and speedier service for the most needy section of the population. This project is being integrated into the Federal Health System and the magnetic card of the National Health System — the SUS.

Throughout these projects, the authority has been clear that e-government is not something that can take place within its organisational boundary. The Internet and related technologies may not originally have been developed with the objective of increasing democratic participation and decision-making by society. However, it is clear from the ways it is currently being used that it can and must be treated as an important tool for doing just those things. The challenge of fully exploiting the opportunities afforded by new technologies — the challenge of e-government — is to find ways of stimulating access to information, thereby enabling ‘self-education’ and encouraging participation and involvement.

As a consequence, in Santo André e-government is seen not only as a rational form of public management, delivering reduced administrative costs and increased transparency, but also as involving the local authority in taking on the additional role of trainer and informer of the population it serves. As a result, the focus on social inclusion and computer literacy is a priority, whether providing the low-income population with cheaper access to Internet or making tools available for e-learning. Key also is the encouragement of new social and political networks, permitting new forms of democratic participation with clear potential to influence future communities and decision-making in a concrete way.

www.santoandre.sp.gov.br
Service example — urban development control

Santo André has, therefore, been able to use e-government to increase the efficiency of its operations in real terms. Initially, the approach has been to concentrate on providing easy access to the administration — including prompt responses to enquiries. Santo André achieved this through the ‘Guia Fácil’ (Easy Guide) on its website, which organises over 500 items ranging across 18 service areas. This contains information about to get the best out of council services, including details of response times, location of information desks and details of the documents necessary to access each service.

One particular area where real progress has been experienced is in speeding-up procedures and decision-making in the urban development control department, responsible for licensing and inspecting construction work in Santo André.

In a dedicated project, the authority conducted a diagnosis of existing procedures for responding to citizens’ enquiries. Using the process maps generated, the authority was able to identify bottlenecks and those critical procedures that had an impact on the response times to requests. At the same time, the main users of the department — engineers, architects and construction firms — were asked to identify which services were most important to them and how satisfied they were with them. This survey confirmed the areas for action raised through the diagnosis.

Crucially, however, it also found that a key obstacle for users was the difficulty in interpreting legislation.

The solution to these issues was found by making a Geographical Information System (GIS) available on the Internet, which provided information and data on road planning, zoning and other constraints. Staff in the department can access GIS directly through the network, which helps them make decisions there and then that help to reduce the number of visits citizens need to make to City Hall to resolve enquiries. It has also brought direct benefit to residents through the speeding-up of the process of granting approval for construction projects, which represent 60 per cent of licence requests made by the public. As a result, many licences that took between two and four months to approve are now approved within five days or, in some cases, immediately.

Conclusion

The study shows that e-government does afford the opportunity for quick efficiency gains — by understanding service demands, listening to customers and focusing on priority areas identified through simple business process analysis. However, the belief in Santo André is that external pressures mean that e-government cannot be restricted to service improvement. Local authorities need to engage with the Internet not only as an additional channel for service delivery but also as a means of communication, deliberation and democratic debate.

Local authorities face the possibility of being excluded from this arena if they do not engage with it by acting as community trainers and leaders. This can be understood as a new role for authorities involving a new relationship with its customers. It could also be seen as merely the challenge of delivering on traditional responsibilities of social inclusion and community development, albeit in a new environment. As such, it is unavoidable.

Author: Carlos Augusto Souto de Moura (Prefeitura Municipal de Santo André)
Canada

Canada has three territories and ten provinces. It is considered a federal state since the various powers are divided between the central government and the provincial governments. The powers of the territorial governments are delegated by the federal government. The federal government is responsible for matters that concern Canada as a whole, such as inter-provincial and international trade, national defence, criminal law, the banking and monetary systems and the fisheries.

The provinces and territories are responsible for matters such as education, property and the administrations of justice, hospitals and municipalities. For the territories, federal laws regulate the election of territorial councils, whose powers — including passing territorial laws — are conferred by the federal government. The provinces, in contrast, have the power to pass laws in a number of areas. The 920 or so municipalities in Canada are responsible for delivering a range of services to their communities — including local environmental services including refuse collection and traffic control, licences, recreational facilities. Municipalities raise income in the main from property taxation.

‘Government On-Line’ is the government of Canada’s plan to deliver programmes, services and information over the Internet and a key component in the plan is to improve service delivery to Canadians. The objective of the Government On-Line plan is to make the government of Canada the most connected in the world to its citizens by 2004, with Canadians able to access government information and services online at the time and place of their choosing.

The initiative is a multi-year project that will provide citizens with the ability to interact with government, to receive information, programmes and services, and to do business electronically with the government of Canada. Government On-Line will complement the other ways services are delivered to Canadians — in person, by mail and by phone.

The Government On-Line objectives can be summarised under the following headings:

- more accessible government
- better, more responsive service — convenient and responsive
- trust and confidence in online delivery — secure and protected
- service for all Canadians — choice of channels, choice of language and choice of format.

There has been tremendous growth in the access to the Internet in Canada as can be seen in the table below:

<table>
<thead>
<tr>
<th>Month</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 1999</td>
<td>42.30%</td>
</tr>
<tr>
<td>December 1999</td>
<td>42.80%</td>
</tr>
<tr>
<td>July 2001</td>
<td>45.71%</td>
</tr>
<tr>
<td>February 2002</td>
<td>53.26%</td>
</tr>
</tbody>
</table>

Canadians are among the most connected in the world. Almost 70 per cent of citizens have accessed the Internet and they spend an average of nine hours per week on it (Communication Canada). In addition, 81 per cent of Canadians consider the use of information technology by government to be a move in the right direction (Ekos).

Author: Gary Grant (IDeA)
Abstract
With continued pressures from constituents for better, faster and efficient government programmes and services and increased knowledge of enabling technologies, Canadian municipalities are faced with the challenge of transforming their organisation and operations with limited skilled resources and funding. In this study, one municipality in the province of Nova Scotia has managed to meet these challenges on several fronts by adopting an incremental or phased-in approach to the implementation of e-government. To do this, it has been working to build a sound infrastructure to create an environment in which both the community and the organisation can gradually create their e-government.

http://highlander.cbnet.ns.ca/~cbrm

Introduction
If there is one word to describe the municipal government in the industrial Cape Breton area, the word is ‘change’!

In 1995, a legislated amalgamation of eight municipalities created the Cape-Breton Regional Municipality (CBRM). The new municipality has 120,000 residents, a municipal staff of 800 and over 20 disparate systems to bring together to keep the offices running. One of the largest municipalities in Nova Scotia, CBRM is an economy in transition. With a rich history in traditional resource industries that are no longer viable, CBRM is moving to a knowledge-based economy. Community culture remains strong, and residents still describe themselves as from Sydney, Glace Bay, North Sydney, Louisbourg, Dominion, Sydney Mines, New Waterford, or the ‘county’. But in this ‘community of communities’, the face of municipal government has changed dramatically. CBRM’s long-term goal is to deliver better constituent programmes and services at a lower cost. This could only be done by adopting integrated technology and optimising processes on a municipal-wide basis. No legacy systems could properly service the size and diversity of the new organisation. The migration to an e-government solution could only be achieved by transforming the whole organisation to a new business model.

With very limited resources, CBRM entered into a public-public partnership with the Province of Nova Scotia to configure a model system for municipal government using the SAP suite of software modules. The Department of Housing and Municipal Affairs contributed funding towards the creation of a municipal template, while the Department of Finance extended their licence agreement and training materials to the partnership.

Since its implementation, the software is providing timely and accurate financial information. Staff now have the advantage of activity-based accounting, which allows for proper costing of both routine service delivery and of special projects. This enables proper cost comparisons between public and private service delivery — so important in today’s economy. The template created in the SAP project is available to other municipalities, several have already implemented the ‘back-office’ solution, and the CBRM team is currently working with several more throughout the province. The concept of ‘one taxpayer’, if adopted by all levels of government, leads to strategic partnerships such as with this project, providing significant savings to all.

The first phase of the project was successfully completed in December 1997 at a fraction of the cost of similar installations. Implementation costs for new SAP installations typically run from four to ten times the cost of the software licences. This project was completed with a cost roughly equal to the cost of licensing. For example, savings were achieved in the careful management of consultants, who were used as trainers for an ‘in-house’ team, made up of staff members from key areas of the organisation.

Participating organisation

Service Nova Scotia & Municipal Relations
This project has been recognised by SAP internationally and, in 1998, it was presented as a case competition winner at the Federation of Canadian Municipalities Conference in Regina, Saskatchewan. Most recently, the project was recognised as a finalist for the 1999 Technology in Government’s Award of Excellence.

With the CBRM Project success, the regional municipality is now focusing its efforts on citizen-facing services enabled by world-class technology. The key elements must ensure that citizen and business needs are met in the areas of:

- ease of access
- consistent, accurate information
- consistent level of service no matter what the means of access.

With that in mind, activities are focused on migrating the municipality to an e-government environment. Increased electronic programmes and services are being implemented based on community needs and priorities. Continued partnership with the provincial government of Nova Scotia ensures complete integration and collaboration throughout the broader public sector.

Critical success factors

Faced with the same challenges as other global public sector organisations, CBRM identified organisation, leadership, management and technology as key critical success factors.

Vision

The Cape Breton Regional Municipality understood from the onset that a clearly articulated vision and strategy were essential when a relatively large-scale business transformation initiative was to be undertaken. In taking the lead from the government of Nova Scotia’s vision of e-government, and collaborating with key stakeholders, CBRM clearly articulated its vision in transforming itself. A planned and focused approach to consultation, both internal and external, continues to ensure that stakeholder needs and priorities are considered prior to completing the Municipal Business Planning Cycle. CBRM management is committed to change and institutionalising the required corporate culture, to sustain achieved changes, but also to maintaining momentum toward the broader vision of e-government.

Organisation and people

With the amalgamation of eight municipalities into one regional municipality, the organisational and management structures were re-aligned. With Phase 1 completed, staff in all departments have become more self-sufficient, managers have the information they need in a timely manner and operations are more efficient. CBRM has continued to streamline its operations and realign its organisational and management structures as it continues to migrate to an e-government environment.

The degree of success of this project and continued realisation of benefits are largely attributed to CBRM’s ongoing attention to detail as it relates to its ‘people’. With state-of-the-art tools, business processes and increased autonomy, employees are encouraged to share information cross-departmentally to improve programme and service delivery continuously. Further, employee recommendations regarding new creative, innovative approaches to governing and service delivery are strongly supported by the CBRM management team. To support many of these employee initiatives, continuous professional development and skills retooling are planned and implemented to ensure a self-sufficient and self-reliant team. Multiple training and professional development sources are sought to enable the municipality to operate in a cost-effective and efficient manner, while providing staff members the opportunities for both personal and professional growth.
Leadership and management

CBRM has continued to provide strong leadership in transforming its organisation and management structures to support an e-government environment. The belief that achievement of the vision of e-government can be done only through a collaborative partnership model, enabled by integrated technology, continues to be the foundation to all business transformation activities and efforts. Traditional models of planning and funding are no longer appropriate to support required programmes and services. Thus, CBRM has turned to its trusted partner, the government of Nova Scotia, to optimise partnering opportunities and, where possible, to leverage successful initiatives. The institutionalisation of e-government is based on a broader, public sector strategy of ‘smaller is better’. Identifying quick successes and building upon these ensures continued progress toward the bigger vision.

CBRM has an exceptional track record for delivering the ‘Municipal Template’. The project approach and methodology were based on two principles:

● create repeatable templates and implementation processes
● create an internal centre of expertise.

Significant operational savings were achieved through careful management of all resources, both internal and external, and in the overall project implementation. External consultants were used to coach, mentor and train the internal project team. This ensured appropriate knowledge transfer and rendered the project team self-sufficient and able to determine their technological destiny. Flexible contracting and procurement were also put in place to enable easy access to expertise as needed. Creation of repeatable templates and business processes that continue to be based on global best practices allows similar municipal projects to be implemented in record time, going from what typically would take between eight to ten months to less than three months. Management efforts continue to focus on introducing improvements in all activities, moving toward operational excellence.

Technology infrastructure

The government of Nova Scotia has already invested considerably in an integrated technology infrastructure that supports optimisation of data sharing and systems. Standardisation of business processes, technology and information continues to drive efforts towards modernisation of systems in the broader Nova Scotia public sector. The three key focus areas will form the basis for most technology-related decisions in future years:

● hardware modernisation
● business applications’ modernisation
● ongoing support.

CBRM will continue to invest in improving its current use of technology and business applications to better meet programme and service delivery goals. CBRM team members are actively involved in broader public sector initiatives such as the centralisation and outsourcing of the provincial data centre. Implementation of best practices continues to be an integral part of the day-to-day activities of the CBRM staff members, as well as the CBRM Municipal Roll-Out Project Team members.

Conclusion

The Cape Breton Regional Municipality has adopted the government of Nova Scotia’s vision for e-government that is founded on an “inside-out” approach. Both the government and the municipality acknowledge that they have now only begun to scratch the surface of the benefits derived from an e-government environment. However, both have created the necessary ‘back-office’ infrastructure and support systems needed to enable successful deployment of present and planned initiatives toward the achievement of the broader vision.

Many activities are currently underway to provide additional support for both organisation-specific and/or cross-sector projects. The implementation of a Programme Management Office, led in partnership with SAP, Government and MUSH (municipal, university, school boards and healthcare) representatives, will ensure ongoing alignment with broader public sector goals and objectives. It will also create an environment where leverage, collaboration and optimisation can easily be achieved to deliver cost-effective and efficient programmes and services where operational and service excellence are standards.

Author: Debbie Rudderham (Service Nova Scotia)
New Brunswick — a single window into government services

Abstract

Across the province of New Brunswick, customers are offered a consistent way to access a whole range of government services. Whether the preferred access is by personal visit to an over-the-counter access point, by telephone to the call centre or directly using the Internet, a consistent, joined-up operation is presented to the customer. Links have been made with other agencies to offer service access points in the community bringing direct service provision into the reach of most customers. Developments are bringing more services into the window, with more information and re-designed business processes providing additional facilities.

Introduction

New Brunswick was the first jurisdiction in the world to establish an Information Highway Secretariat. Its aim was to formulate, drive and co-ordinate strategic policies and efforts toward e-government through the extensive application of information technologies to change business practices, to deploy public services, and to update and upgrade its citizenry (both personal and commercial) with respect to the computer age.

New Brunswick also led the world with the establishment of Service New Brunswick (SNB), a crown agency charged with the responsibility of building a ‘single window’ access to government services. SNB is making government services more accessible through one-stop service centres, through the Internet and toll-free over the phone.

The agency has offices in 35 communities around the province, employs 700 people, and is responsible for delivery of over 100 government services. Prior to the establishment of SNB, there were 1,782 separate points of service serving a population of approximately 785,000. The cost of supporting a service delivery structure that offered so many points was impossible to sustain or justify.

From 1991 through 1996, SNB (as a division of the province’s Department of Finance) was an acknowledged leader in the development of single-window Government Service Delivery, focused primarily on the over-the-counter (OTC) channel. This was achieved through a modernised physical network of SNB service centres offering a variety of government services, particularly those engaged in revenue generation.

During this same period, the New Brunswick government’s Geographic Information Corporation (NBGIC) was developing online land and personal property registries and digital mapping to support the land registry. New Brunswick was Canada’s first jurisdiction to achieve 100 per cent province-wide coverage of digital property mapping. Recognising the ‘service’ nature of disseminating information and data files related to land and personal property elements, the two entities (SNB & NBGIC) were brought together in 1996 under one new crown corporation structure, Service New Brunswick Inc.

Participating organisation

Service New Brunswick

www.snb.ca
**Vision**

SNB is responsible for delivering government services — information, transactions, data, etc — with uniformity, consistency and speed. It has a mandate to employ all appropriate technologies and to do so efficiently and effectively.

Customers are fundamental in setting service standards. Research shows that taxpayers want less paperwork and red tape, shorter waiting times, better access to government and fast and courteous service from staff. Customer satisfaction is a key performance indicator to the corporation and drives its strategic direction.

Service New Brunswick has three principal functions:

- being the interface between the public and government, providing one-stop delivery of provincial government services
- providing an information service, as they operate New Brunswick's real property information service, personal property registry service and corporate affairs registry
- developing innovative policy on land-related issues, with responsibility to assess all land, buildings and improvements for property taxation purposes, to operate the province's Property Assessment and Taxation System and to maintain New Brunswick's land information infrastructure.

Convenience to the customer is a key factor in service delivery. SNB offers three channels of delivery:

- service centres
- SNB TeleServices
- SNB Online.

SNB has no mandate to deliver services to the citizen; it must actually win the business from each individual department through the preparation and presentation of a solid business case. Costs and benefits must suit the situation for a given department or client and show that SNB is a more efficient, delivery agent.

Transformation began with concentrated efforts to create ‘brand recognition’ for SNB's over-the-counter channel in the minds of the citizen and the client departments. Local SNB service centres were re-equipped, renovated and sized appropriately for their respective communities. The objective was to create a common ‘look and feel’.

As a result of the branding efforts, SNB earned its reputation as professional service-delivery specialists, both with citizens and the government departments it represents. SNB clearly communicated its business approach to both groups. It has support from them for continued growth in the number and types of services.

SNB worked from the fundamental premise that to increase service (for the citizens) and at the same time reduce costs (to the government), the implementation required both accessibility and efficiency:

- ‘accessibility’ implies single-window access to services regardless of the channel (transparent technology)
- ‘efficiency’ implies seamless, fully-integrated back-office processes, regardless of channel method.

Service New Brunswick is a customer-service oriented corporation. While comment cards, focus groups and local advisory committees are a good means of getting citizens’ feedback on the corporation’s achievements, SNB identified 15 performance indicators or goals that will measure the progress made towards fulfilment of its mandate. One of these performance indicators relates directly to customer service quality, aiming for 85 per cent satisfaction rate. Currently, SNB is achieving a reported 92 per cent satisfaction rate.

To obtain local input on the services communities require, community advisory committees are established in each region where a service centre is located. These committees also provide SNB with local input and feedback on service quality.

**Leadership**

The government of New Brunswick, through successive administrations, has led, supported and encouraged its citizens in changing the way business is done in the province. This leadership has seen the government change its own business practices, enhance its delivery of services, and improve citizens’ access to government through the adoption of technology.

Premier Bernard Lord has said: ‘I have asked Service New Brunswick to take the lead in working with departments and agencies to move this government forward, further and faster, towards e-government.’ The Premier made a commitment to move quickly on the legislative and regulatory changes that will allow e-government and e-business transactions to grow.

Peter Mesheau, formerly the minister responsible for SNB, said in a recent news release: ‘Technology has changed the way we live, work and do business. People expect to do business with government as simply and easily as they do business with the private sector.

Leading governments understand this and give top priority to initiatives that improve the delivery of service. This agreement will enable us to deliver services innovatively, and to provide the tools that support e-government such as training and process improvement.’

Local e-government now: a worldwide view © 2002 Socitm and IDeA
Management

A board of directors guides the business of the corporation. Revenues are acquired through a combination of fees for services (real property, personal property and corporate registries fees), payments (the province and the municipalities pay for the property assessment service), and grants (the province provides funding to the corporation to deliver services on its behalf).

SNB follows a business model that integrates delivery of services to the public through Internet, phone and over the counter. The model also sets out an approach for business partners. SNB adds value to their operations by creating, managing and tracking transaction data and customer information.

The business model provides the framework within which the corporation acts as an outsourcing solution, allowing its business partners to focus on the core competencies that they do well, leaving SNB to deliver their transactional services in an integrated and seamless way.

Infrastructure

SNB service centre network

With a network of service centres located in 35 New Brunswick communities, SNB offers a combination of personalised service delivery and convenient extended hours of operation. Some offices are open evenings and Saturdays. The service centre network is composed of 13 full-scale service centres throughout New Brunswick offering up to 120 services on behalf of government departments, some municipalities, and public utilities. Smaller centres are established in other communities; the number of services they offer varies at each location.

During the past year, 3.5 million transactions were completed at SNB centres while $319 million was collected on behalf of government departments for taxes, licences and permits.

In addition to the specific SNB sites, arrangements have also been made with New Brunswick's 200-plus community access centres (CAC), allowing these sites to function as near-franchised outlets providing non-over-the-counter services on behalf of SNB. CACs are technology familiarisation, training and Internet access sites that have now become widely-used, publicly-accessible, provincial facilities where the citizen is able to access government online. With the assistance of CAC staff, citizens are able to conduct business with government quickly and effectively, even though an actual SNB service centre office may not be situated in their community.

SNB TeleServices

During the period from 1996 to 1998, a glimpse of where the province was headed emerged with the launch of SNB TeleServices. This channel was an integrated companion to their over-the-counter channel and included the implementation of computer telephony integration at SNB's call centre. The citizen was now able to renew their motor vehicle registration either at an SNB service centre or through SNB's call centre. In either case, the registration process was 'fulfilled' via a real-time access to the department's registry system that sits far in the background on a mainframe computing platform. A motor vehicle registration process was added to SNB TeleServices capability in 1998.

SNB TeleServices, the corporation's call centre, now offers 15 services over the phone, including motor vehicle registration renewals, information on Medicare, government programmes and services, parking permits for persons with disabilities, and address changes on drivers' licences, motor vehicle registrations, property tax accounts and Medicare files. These services are available 75-hours a week, Monday to Saturday. In 2000 – 01, SNB TeleServices answered close to 270,000 calls, approximately 10 per cent more than the previous year.

SNB balances human resources between electronic and over-the-counter service delivery using a system that distributes the back-office administrative work of the TeleServices agents to various SNB centres with a lower volume of transactions. This allows TeleServices agents to spend more time answering calls and taking care of callers and, where the workload is not at its peak, to handle the paperwork that follows a telephone transaction.
Service New Brunswick is a leader in government service delivery on the Internet. The web portal provides access to transactional applications that enable direct, user-driven service and fulfilment. Real-time connectivity to the Department of Transportation’s motor vehicle registration system completes the ‘delivery’ aspect in this scenario. The portal also provides access to the province’s online land registry and titles system that was launched in 1996 and to the online personal property registry and corporate affairs information on companies registered in New Brunswick. SNB developed and implemented a customer support system by email and a toll-free phone number for customers who encounter difficulties while visiting the website.

In June 2000, SNB launched its new web portal, following a public consultation process on its look and feel and functionality.

The SNB online channel has evolved to include the implementation of an e-commerce infrastructure. This infrastructure supports Internet-driven functions for financial processing (payments), registration, permits, forms retrieval and completion, and the security required to perform such functions. It also affords the further development of business applications for specific client departments, including value-added service packaging.

Back office
To support the three distinct channels (over the counter, TeleServices, and online), integrated back-office processes have been implemented that interface into the Corporation’s common Enterprise Resource Planning application. This provides functional modules that address Customer Relationship Management (CRM) as well as data warehouse repositories. These data management capabilities support consolidated financial reporting, but also permit the generation of integrated performance management systems and indicators.

A portion of revenues is allocated to making improvements in business processes and in the way services are delivered to make it easier and simpler for citizens to do business with government. During the past year, SNB invested $5.3 million, the bulk of which related to system developments in Real Property, the Customer Service System (CSS), and the Enterprise Resource Planning (ERP) system.

Conclusion — SNB tomorrow
With various channels, delivery media and platforms now in place, SNB’s role as the e-services agent for government will steadily accelerate over the next 24 months. One by one, applications will be ‘lit up’ on a multi-channel, multi-delivery platform basis. More and more applications will be implemented. This implementation pattern follows a business plan that will see the number of processed transactions nearly double over the next three years. It is expected that more than half of these new transactions will be fulfilled through e-services channels.

The challenges in implementing and integrating the three types of delivery channels have not been strictly related to technology. The business processes that support these administrative functions and services must also be reviewed — considered for redesign and possibly changed for optimisation. The overriding objective is to make all forms of delivery channel independent for the consumer and to integrate these various channel solutions ‘at the back end’. In this way government administrators will be able to minimise the management effort required within those organisations.

Ideally, the various business functions of taking payment, reconciliation, registration, licensing and application will all be represented by integrated business processes. Enterprise registry programmes, data warehousing, data mining, and data retrieval will make up the foundation and framework for managing government information. Another necessity for the multi-channel approach has been to add a customer support focus to what had once been strictly an issue of excellence in customer service. This has translated into deeper organisational changes as the requirements for adding new functions, additional support technologies and enhanced employee skill sets came into play.

Author: Martin Ferguson (Service New Brunswick)
Finland

There are 448 Finnish municipalities (local authorities), and a further 300 local authority organisations owned jointly by the municipalities. Finland is home to 5.2 million people. The largest individual municipality serves 555,474 citizens (City of Helsinki), whilst the smallest serves 129. The expenditure of local authorities and joint municipal organisations makes up nearly two-thirds of all public expenditure on consumption and investments. Finnish local government, in total, employs 410,000 people, i.e. one-fifth of the employed workforce.

Local government is based on self-government by the residents of a municipality, which is guaranteed in the Finnish constitution. Residents elect the supreme authority — the local council and local authorities are entitled to a degree of financial and administrative independence. Finnish local authorities have wide responsibilities. These include both local functions, which benefit residents, and functions specified in various laws. The most important services provided by local authorities are concerning education, social welfare and health care, and maintenance of the technical infrastructure. Four out of every five municipal employees deal with social welfare, health care and education.

Finland’s strong local self-government derives from independent taxation rights. Local authorities fund 52 per cent of their operations out of their own tax revenues.

Local authorities can produce the services they offer residents themselves, but they can also procure them from other service providers, both public and private. They can also privatise their operations within the limits laid down in the law; they can, for instance, set up limited-liability companies. A local authority can function jointly with one or more other local authorities. They can enter into co-operation agreements or found a separate organisation — a joint municipal authority — to handle their combined affairs. Finnish law requires some regional co-operation amongst municipalities. For instance, joint municipal bodies called regional councils are responsible for regional physical planning and act as the regional development authorities responsible for regional policy. Local authorities are also required by law to belong to a joint municipal authority administering a hospital district.

In 1998, a national strategy was published for developing the Finnish Information Society entitled ‘Quality of Life, Knowledge and Competitiveness’. The ‘Decision-in-Principle’, also published in 1998, focused on e-government. That document contains the top-level target of the Finnish government, i.e. a significant proportion of forms and requests will be dealt with electronically by 2001.

In the summer of 2001, the Information Society Advisory Board to the Finnish government appointed a high-level committee to clarify the main obstacles to e-government and to prepare an action plan. The members of the committee were from ministries and local government. The action plan was assigned to the Advisory Board in January 2002 and has been, after that, also handled in the Council of State.
The main content of the action plan consists of following the development of 16 proposals:

1. e-government must be an essential and integrated part of all development strategies in the government
2. renewal of the back-office processes as a base for electronic services
3. covering training programme for the managers in state and local government
4. joint initiative with the public government to develop the interfaces of the interactive forms
5. increase of resources in the development of e-services in health care and social work
6. better use of the national basic registers on population, buildings and real estates in the services
7. physical one-stops-shops as a base of the public government portals
8. looking at the price of the information as an obstacle of e-government
9. better circumstances for e-democracy
10. accessibility of public e-services
11. quality criteria of e-services
12. skills in SMEs to benefit from e-services
13. general access problems in certain areas of the country
14. electronic identification issues
15. co-ordination inside public government, especially between local and state governments
16. increase the effectiveness of the public government ‘recommendation system’.

Most of the proposals are under preparation and some of them are already in the concrete phase.

Some indicators for the development of local e-government, as at January 2002, are:

- workstation penetration in the local government: 100 per cent of staff in governmental work
- 99 per cent of the municipalities have websites.
- use of email in the local government: almost 100 per cent of administrative workers
- electronic transaction between banks and municipalities: 100 per cent
- information and communication technology costs: 0.7 – 1.5 per cent of the total municipal budgets
- agendas and protocols of the Council and Board meetings online: 60 per cent of the municipalities
- providing services with the electronic signature/digital certificate: three per cent of the municipalities
- mobile phone penetration: 75 per cent of the population
- access to Internet: 65 per cent (from home, 50 per cent) of the population.

Author: Matthew Wolstenholme (IDeA)
Abstract
‘eTampere’ is a bold strategy that aims to develop in Finland a world-leading city of information society expertise. The strategy aims to deliver an e-enabled local public sector, a greatly improved research and training base, and an increase in economic activity and investment related to the Information Society. Partnership working across the locality, involving all sectors, is essential to making a reality of the strong vision that is already in place. Tampere’s approach to delivering the vision, and some of the achievements secured to date, are described here.

www.tampere.fi

Introduction
Tampere is the third-largest municipality in Finland. Located in the south, the city is home to 200,000 people, of which 11,100 are employed by the local authority.

The Tampere authority undertakes annual studies of local Internet use and in the latest — of December 2001 — 72 per cent of the citizens were found to have access to Internet. This figure rises to 95 per cent for the 25 – 34 age group. Almost 70 per cent of Tampere citizens have their own email address.

This study is about eTampere — a five-year development programme with 130 million euros investment and based on the Tampere City Strategy. eTampere is the biggest locally-oriented information society project in Finland, including the national initiatives. Its primary objective is to make Tampere a global leader in the research, development and application of issues related to the Information Society.

The eTampere programme focuses on three core objectives:
1. public services will be provided online and made available to all residents
2. the knowledge base of research and training will be strengthened
3. new business related to the Information Society will be generated.

These objectives will be delivered via seven activity modules:
- Infocity
- the Information Society Institute
- the eBusiness Research Centre
- the Research and Evaluation Laboratory RELab
- the eAccelerator
- Engine programme
- the eTampere office.

The eTampere programme is strongly linked with the business strategy of the Tampere Urban Region and the development strategy for the province. The programme will be carried through in close co-operation with the Tampere Region centre of expertise programme.

Critical success factors
The eTampere programme is ambitious and its scope is broad. It is also in its early stages of implementation, but good progress has already been made. The descriptions accompanying the critical success factors below explain further the principles that are important to the effective delivery of the programme, summarise its progress so far, and introduce some of the important lessons that have been learned to date.
Vision

The new city strategy (‘Tampere – working towards excellence’) was approved by the city council in October 2001. The vision for Tampere, to be realised by 2012, is articulated in the strategy as follows:

Tampere will be a citizens’ information society and a centre of expertise growing in a sustainable manner. Its operations will be based on courageous initiative-taking, good public services, extensive networking and regional co-operation.

The provision and take-up of e-enabled services is central to the eTampere programme. The following extract demonstrates how both e-service provision, and Tampere citizens’ ability and willingness to use e-services are of equal importance:

The Information Society projects must be assessed from the local resident’s viewpoint. The City of Tampere will determinedly renew its services and decision-making and aim towards as equal a service model as possible. The development of municipal electronic services will aim to generate faster services and a flexible place and time of service. This requires renewal when it comes to both the technical systems and the municipal service culture. Residents, too, must be given training in the utilisation of electronic services.

Progress towards realising the eTampere vision will be made when there is an extensive supply of municipal electronic services, which are used actively with the help of training.

The eTampere programme has been developed with the full involvement of the public and the private and third sectors. It will be implemented through a programme that hinges for its success on collaborative working of many types. The process of managing the development of the strategy has been designed in collaboration with local companies, educational bodies and voluntary organisations.

The city strategy is to be updated in each council term — and local stakeholders are involved in every iteration of its development. As the original eTampere City literature states:

During the preparation of the strategy, local residents, elected officials, and municipal officeholders form common goals for the future. On the basis of these goals arises a vision of what kind of a city it is wished Tampere will become.

Implementing eTampere involves a co-ordination of activity across sectors operating in the city — with the public sector providing a leadership role. When a new iteration of the public sector strategy has been produced: Different municipal sectors make their own strategies along the lines of the city strategy.

As well as increasing the degree to which municipal sectors collaborate, a degree of competition between sectors is also encouraged. The process of updating the Tampere City strategy will lead to an increasingly important role for the private and third sectors.

An important insight from this study is that, in Tampere, both collaboration and competition have an important role to play in improving the quality of local service provision:

The role of the services provided by the private and the third sectors in complementing the public services will be emphasised and increased. Along with the municipal service system, there will be quality-competitive services provided by businesses and the third sector. When organising welfare services, it is important to fit together and to network vocational, voluntary and peer group activities in a new way. Business activity and the creation of new businesses in the service field will be encouraged. A municipal organisation must critically evaluate its own service processes and their costs, and it must also assess the opportunities for networking in its service provision and for outsourcing operations.

Leadership

The eTampere programme is ambitious and implies far-reaching change in the way the authority works and the way that services are delivered. Its sustainability and success hinge on continuous and strong leadership from the most powerful figures in the city. To this end, the city’s mayor is providing high-level leadership by taking responsibility for the sponsorship and management of change.

A reorganisation of management structures is underway in Tampere but is in its early stages; and new technology has begun to play a central role in the way the city is managed. Although meetings are still conducted in the ‘traditional’ way (face-to-face), their organisation has been improved with the introduction of electronically-delivered agendas and papers.

Leadership is not only about visible commitment from those at the top — it is also about supporting bottom-up innovation. The city’s leaders encourage good ideas from staff and are keen to see experimentation thrive. In Tampere, leadership means encouraging good ideas to flourish, from wherever they come. And this includes those external to the authority. For example, service user surveys are conducted each year and new ideas are sought. Following one of these surveys, a popular Office Web Cam has been introduced so citizens can better understand how their civil servants work.
This freedom to experiment is accompanied by yearly targets for improvements and progress. The council provides a strong steer in managing performance through this mechanism.

To improve access, the City of Tampere has over 100 public and free access points. They are positioned in libraries, post offices and university buildings. An interesting example is also ‘Netti-Nysse’, a bus equipped with computers and Internet connections. Netti-Nysse was awarded the ‘e-Government Label’ in the e-government conference organised by the European Commission in November 2001. The city is also providing free WLAN — connections with seven antennae in the city centre. Many student residences in Tampere have free broadband connection.

### Management

The city has demonstrated an ability to sustain programmes of change, without a consistent project management methodology.

Tampere’s approach to implementing innovative and risky projects is to start small, to assess progress and to make honest decisions about future project viability. Positive experiences lead to larger implementations, but not all projects survive.

As described above, the eTampere programme is an example of partnership between the public, private and third sectors — collaboration in pursuit of common goals. Effective management of these sometimes complex relationships requires a good understanding of the legal framework under which they operate. Sound legal advice is a prerequisite for developing good, long-term collaboration across sectors.

An holistic approach to performance management is applied; that is, an holistic approach across access channels. Tampere recognises that not all service users are currently comfortable in using new access channels. Performance management rules are based on the needs of service users. Service requests and waiting lists from Internet channels are not always handled first.

The management of information is a critical discipline for implementing e-government. Effective information sharing underpins the Tampere partners’ ability to provide efficient, ‘joined-up’ services. The city is currently preparing a strategy for the better sharing of information and foresees few legal obstacles to its effectiveness. Finland’s Public Information Law governs the principles under which information may or may not be shared across organisational boundaries and systems (it also governs the use of information posted on or collected via the Internet). In Finland, there are few barriers to information sharing, and only very limited types of public information such as healthcare records are exempt from free public access. The highest levels of information security are essential, to retain public trust and to prevent external access to sensitive information of this type.
Infrastructure

In 2002, recognising that the eTampere programme is about whole-organisational change, the council approved a fundamental change in the way e-government (and eTampere) is funded. Funding for the programme has been centralised — with one access point to funds covering all areas and sectors in the city. This is seen as a welcome simplification and it is hoped that these new arrangements will contribute to the co-ordination of e-government activities across the city. Another change is the introduction of matched funding, which is designed to encourage investment from external sources.

The city’s ICT infrastructure is a key enabler for the eTampere programme and another simplification has been the rationalisation of the technologies in use across the authority. Although the principle underpinning this simplification is clear (to enable seamless services), the initial results have thus far been disappointing. Hence the pace of this simplification will be increased this year (2002).

Standards for storing and communicating information are also essential in the provision of seamless services, and Tampere is participating fully in the development of national standards for information and connectivity.

Conclusion

Although still at an early stage development, eTampere is the leading information society project in Finland. eTampere demonstrates the importance of wide-ranging stakeholder involvement on an ongoing basis, as well as determined leadership from the mayor and other key local figures. Building on already high levels of Internet access, public services are being made available online to all residents. The knowledge base of research and training is being strengthened through investment in the education sector. Seven activity modules are being implemented as part of the eTampere programme, which is closely integrated with regional and provincial business development strategies.

Authors: Heikki Lunnas, Pekka Kopra and Simo Tanner (AFLRA)
**Abstract**

Kuusamo’s economic and community development strategy has been in place since 1987. Implementation of this strategy has led to tangible and measurable changes in type and quantity of economic activity in the area. The objective of Kuusamo’s complementary ‘e-service’ strategy is to e-enable the services provided by public organisations in the city, and to create a customer-centric local authority. Public-private partnership working has played a crucial role in the delivery of the city’s strategic mission. The principles of e-government are shown to be as applicable and effective in remote, rural areas as in larger and often more prosperous localities.

www.kuusamo.fi

**Introduction**

The City of Kuusamo is located in northern Finland, close to the Russian border. It is a remote and sparsely populated city of 18,000 inhabitants (3.1 people/km²), covering a large area — 5,805km². Due to its scenery — fells and forests, lakes, rivers and rapids — Kuusamo is excellent for outdoor pursuits in both summer and winter; it is popular with Finns as a tourism centre.

The city has in the past faced problems typical of other localities with similar characteristics such as rising unemployment and a decreasing population. In 1990, it hosted no higher education facilities and a distance of over 200 kilometres separated it from the closest centres of specialist healthcare.

This study describes how Kuusamo City has embraced the potential of ICT to accelerate the economic development of the locality successfully, and to equip the local population with the facilities and skills to improve their community’s prospects.

In 1987, the local authority developed an economic and community development strategy that put the role of ICT systems, services and skills centre stage. The two broad aims of the strategy were to facilitate communication within the community and between Kuusamo and other communities and to facilitate the development of new sources of income for the city.

The 1987 strategic framework for Kuusamo had five themes:

- development of information technology culture and know-how
- utilisation of information technologies in business
- improvement of the IT infrastructure
- involvement of relevant interest groups
- improvement of Kuusamo City’s image.

Since 1987, practical improvement work has been carried out via dozens of projects involving a large number of partners. The framework provides a decision tool for guiding project selection and acts as a tool for co-ordinating the overall project programme.

The project programme has delivered good results. Highlights include:

- distance learning: about 150 citizens undertake universities courses and 100 study ‘in’ polytechnics, despite there being no physical facilities in Kuusamo
- workforce development: the number of citizens employed in ICT-related work has increased from zero to 250
- improved e-communication: local companies and other organisations in Kuusamo can now take advantage of the city’s own Wide Area Network
- external investment: co-operation with private organisations through public-private partnerships has attracted new employers to the city
- economic profile: the city has become the hub for a regional network of ICT companies.

The 1987 strategy (and projects undertaken since) was focused primarily on improving the economic development of the area, with skills improvement initiatives designed to underpin this objective. Kuusamo’s ‘e-service strategy’ builds on this early work.
The e-service strategy focuses on the Kuusamo community as customers. It is designed to complement the 1987 strategy and targets improvement and e-enabling of the city's public services. It is too early to quantify the benefits of this strategy, but the local authority believes that the strategic groundwork is in place to achieve the required service improvement. The objective is to change the way the municipal organisation works — to effect a shift from the traditional internally-oriented, organisation-centric operations, to externally-oriented, customer-centric provision of public services.

**Critical success factors**

Kuusamo's strength in making tangible improvements to the local economy, and the lives of its citizens, is based on a clear vision of how local e-government can deliver. Crucially, that vision is accepted widely in the community. The authority and its partners have shown courage in embracing new technologies and in experimenting with different kinds of project that support the vision (described in the strategic framework above). Equally, the partners have been ready to abandon projects that have not lived up to original expectations. The continuous programme of projects has enabled an incremental, step-by-step achievement of the city's goals.

**Vision**

Kuusamo has developed a clear vision and clear goals around its local e-government activity. The five themes of the 1987 strategic framework demonstrate the municipality's goals around local economic development. The e-service strategy envisages a modernised, customer-centric public organisation to improve the citizen's experience of dealing with public services in Kuusamo. The role of new access channels (eg e-enabled one-stop-shops) is a cornerstone of the strategy — with greatly improved accessibility to services a core principle.

There is a strong tradition of partnership working in Finnish local government — from regional Cupertino required by law (such as in regional physical planning) to partnerships between municipalities around shared resources (eg hospitals), to public-private partnerships for specific purposes (eg joint ventures to build infrastructure). Kuusamo’s vision for local e-government includes a strong element of collaboration with local partners — both public and private.

A concrete example of progress through partnerships, and the role that partnerships can play in delivering the vision, is the main local Internet service provider (ISP) company. ‘Service Centre’ is owned jointly by the local authority and a number of local companies. The local ISP is seen as having an important role to play in driving-up Internet use in the community (as do the other local companies). From a very low base, regular Internet usage in the locality is now more than 30 per cent.

**Leadership**

There is little doubt that strong leadership has been a critical success factor in securing Kuusamo’s place among the pioneers in Finnish rural areas. Good leadership from the top of the organisation, as the above suggests, involves developing and communicating a clearly-articulated vision of the future.

Strong leadership also involves creating an environment in which change is welcome and innovative projects can flourish. In Kuusamo it is also about creating space for others — so that quick decisions about projects can be made at the operational level. The authority’s leading politicians and top-level officers perform their leadership role by defining the vision and high-level goals. They are then supportive of bottom-up innovation and development.

Kuusamo’s leaders have defined a future that is based on partnership working. The most recent examples of this principle are agreements made with ICL and SAP — both to develop seamless e-enabled services for the benefit of citizens. These agreements involve the secondment of staff to work with these private organisations in ‘developer networks’ (see over) to explore and experiment with innovative ways of improving services. The first outcome of these arrangements was the implementation of video-conferencing facilities in public sites. These facilities have enabled citizens to participate in remote university study.
Management

Kuusamo has, through its implementing e-government activities, accrued a wealth of experience in the management of parallel projects. Project management has been a core discipline in working to deliver on the five themes of the strategic framework, and now in implementing the e-service strategy. The city can boast of many examples of success in large (and small) projects involving multiple stakeholders — with private companies, other municipalities and different sectors working together. One example is the collaborative working that was involved in the design and implementation of the ‘Koillismaa Information Network’.

This collaborative approach to improvement is mirrored in the approach to the management of information resources. In this way, effective sharing of information is seen as a prerequisite for the success of local e-government and the provision of high-quality e-services. Kuusamo’s strategy for sharing information (and the GIS Strategy that this enables) was approved in the mid-90s. Information specialists are regular and valuable participants in project work.

The fact that the entire staff has been trained to use the authority’s preferred project management methodology increases the likelihood of Kuusamo’s success continuing. This training enables staff to be closely involved in the project programme. For each project, secondees are selected from internal staff — to form a ‘development network’ (the project team) for the duration of a project. Substitute personnel are drafted in to “back-fill” until the project is complete.

This approach to managing the overall improvement programme builds motivation amongst staff and leads to a real sense of ownership for successful outcomes. The approach is far from common practice amongst Finnish municipalities — in which external agents are routinely hired to manage new projects.

Infrastructure

Kuusamo’s ICT infrastructure is an essential enabler for better public services. The authority has completed its programme of hardware standardisation, which simplifies the day-to-day management and periodic updating of systems and also removes a degree of complexity involved in collaborative working. Internet protocols are used in all aspects of networking — internally and externally.

The next phase of development is the implementation of standards for structuring and storing data, which is now underway. Using standards in this way will facilitate the data sharing that Kuusamo and its partners see as essential to the provision of e-services.

ICT infrastructure plays a central role in enabling day-to-day operations — hence the importance of rigorous risk management processes. The authority has also undertaken the analysis required to comply with BS7799 — the accredited standard for information security management.

Internal ICT training is central to the effective delivery of local e-government — with staff required to work in new and e-enabled ways. Staff training throughout the organisation is delivered through the ‘e-competence programme’. The pace of change is such that new ways of working are often introduced, so skills updates and continuous learning are essential to the productivity of the authority’s workforce and a programme called ‘e-Knapsack’ is in place for this reason.

Conclusion

The Kuusamo City case demonstrates the pivotal role local e-government can play in accelerating the economic development of a locality. It is a good example of how a rural authority can harness the potential of modern ICTs to overcome geographic and demographic disadvantage.

The authority is now taking steps to redesign itself — from an internally-oriented, functional organisation to one that is customer-centric. The aim is to improve the quality of public service provision. And again, the role of new technologies is key.

Both the e-enabling and the customer-centric elements of the Kuusamo case demonstrate how implementing local e-government can improve the lives of constituents. And their success hinges on four critical success factors: vision, leadership, management and infrastructure.

Authors: Heikki Lunnas, Pekka Kopra and Simo Tanner (AFLRA)
Abstract
Co-operation between local authorities and tiers of local governance has proved essential to the modernisation of the infrastructure of the municipality of Lestijärvi, one of the seven small authorities in the Kaustinen subregion. The creation of a subregion is a voluntary way of overcoming the capacity limitations that individual authorities face when acting alone. This partnership arrangement is shown to be successful in attracting internal investment, and building an ICT infrastructure that provides the backbone for information sharing and service improvement across the area.

Introduction
The subregion of Kaustinen has 20,000 inhabitants and is located in central Finland, close to the western coast. Lestijärvi serves about 1,000 citizens and employs a staff of 80 people. The municipalities of the Kaustinen subregion collaborate on a number of activities, with one municipality typically leading in the co-ordination of each activity. The Lestijärvi municipal authority leads in the subregion’s ICT activity.

Kaustinen is sparsely populated and far removed from major centres and services. To improve access to services and to improve communications across the subregion, the municipalities decided in 1997 to build a 155 Mb broadband network using ATM technology (total cost about 1.7 million euro over five years). Competition amongst telecommunications operators in the area has been low and there was clear evidence of market failure. The project began on a small scale, and has grown to include additional homes, over time, with links to neighbouring municipalities. Now, citizens can access services from major centres further afield (such as distance-based university level education) and local businesses can engage in e-commerce applications over greater distances.

This study is about Lestijärvi’s (and Kaustinen’s) successful approach to e-government collaboration, and describes some of the achievements that have resulted at the local and subregional levels. The successful implementation of local e-government in this context has clearly benefited (and continues to benefit) from the definition of a challenging vision for the subregion, a particular form of local leadership, an approach to the management of projects and resources that suits the local context, and the early installation of an advanced ICT infrastructure.

Vision
Lestijärvi and the Kaustinen subregion attempt to base their e-government work on the needs of the community they serve. Their vision is one of improving services and the quality of local life through collaborative working and by harnessing the potential of new technologies.

Collaborative working at the subregional level is a practical way of overcoming the difficulties that each municipality would face in working alone. The municipalities are individually small, and all face a shortage of particular skills. Where shared goals exist, the municipalities and subregion also work collaboratively with the private and third sectors and the national government. These partners have worked together on many aspects of e-government, including tackling the problems presented by a lack of access to technology in some parts of the community and the development of a shared broadband infrastructure.

Lestijärvi and the Kaustinen subregion have often disseminated the lessons it has learnt from collaborative working to other local authorities and at the regional and national level. Likewise, the council is keen to learn from other experiences and developments at the national level, and about new possibilities in the ICT field. In its approaches to harnessing ICT, and delivering local e-government through a collaborative approach, Lestijärvi is regarded as amongst the leading municipalities in Finland.
The opinions and preferences of the Lestijärvi community are regularly assessed, with the latest study commissioned from the University of Jyväskylä in 2001. The council believes that the whole community shares the e-government vision, goals and priorities of the municipal administration.

However, the process of delivering and building shared goals and values at the subregional level is not always straightforward. The complete commitment of local politicians to their municipality is in no doubt, but the taking of important, practical project decisions in collaboration is not always easy. Despite the existence of a shared vision for the future, Lestijärvi has sometimes found it difficult to gain concrete commitment to e-government projects on the subregional level.

Enabled by ICT, all parts of the authority have been redesigned to overcome the limitations of a rigidly functional, silo-based organisation. An important insight from this case is that this reorganisation may have been easier than if it was undertaken in a large city. Lestijärvi’s leaders understand that, in a small municipality, the borders and barriers that separate internal departments, and external sectors, have always been lower than in larger organisations.

Lestijärvi can point to numerous achievements to demonstrate its e-government progress so far. The municipality has improved access to e-services by installing and providing free access to PCs in libraries, shops, gas stations and other points in the community. The number of free access points is much higher than the national goal in the Finnish e-government strategy (one terminal per 1,000 inhabitants) and citizens can access communal information, www-forums, event calendar, company register and all other Internet services. They can also access regional network and Internet from their homes either via a dial-up modem or wireless broadband connection.

Leadership

Strategic goals for the Kaustinen subregion are developed jointly between the constituent municipalities, and stakeholders from other sectors are regularly involved. Decision-making processes at the subregional level have been designed to facilitate flexibility and speed. To this end, project teams are given a large degree of freedom in choosing how to reach pre-defined and shared goals.

Leaders at the municipal and subregional level have been keen to foster and promote innovation and experimentation. Promoting experimentation is not without risks, and not all new projects have been successful. However, the rewards of this willingness to change have brought early benefits to the locality. The use of email across the municipalities has been growing rapidly since the late 1980s and video-conferencing equipment connecting all of the seven municipal administrations has been in use for some time.

The next benefit to stem from the Kaustinen approach is expected to be the implementation of ‘Voice over IP’ solutions across the subregion. Like all proposals for new projects, the first stage will be to discuss the proposals in the management group of the subregion. If the proposals are agreed, a project team will take responsibility for delivery.

Kaustinen is a remote and sparsely populated area, and communication to the subregion communities about the costs and benefits of implementing some projects has not been perfect. Communication between municipal administrations has been good, as has internal communication within individual authorities. At the community level, the municipalities recognise that more needs to be — and can be — done.

Management

The municipality of Lestijärvi does not employ consistent project or risk management methodologies in its e-government activities. The municipality is a small organisation with limited resources which has nonetheless been involved in over 100 e-government projects. As a result, a small number of people have developed a great wealth of experience in delivering projects. The approach used can be described as ‘learning by doing’ and Lestijärvi has found that it is an approach that fits their needs well. This flexible approach is accompanied by a willingness (and courage) to abandon projects that do not live up to expectations. The approach to procurement for e-government projects is similarly not standardised because new types of equipment are normally required for innovative projects.

Most projects are undertaken jointly — with partners from the subregion and other sectors. Trust between partners is seen as essential, and that trust can be lost only once. In this small municipality (as is likely in most) negotiation and contract development skills reside in the hands of a few people. The role of contracts in this situation is to communicate shared goals and the means by which it is hoped they will be achieved. Their role is not to allocate blame or rights in cases of failure. To this end, Lestijärvi does not rely on any legal expertise in the development of contracts for local e-government projects.

The main goal of the projects is to develop new and more cost-effective ways of delivering services to citizens of the municipality. To date, the greatest challenge has been to develop the ICT infrastructure that enables this progress.

Internal advances have been tackled first — with applications like video-conferencing and electronic scheduling enabling the administration to work more effectively. Delivering e-enabled services direct to the citizen is the next challenge. Advances have been made, with Telemedicine and distance education services in existence, but not yet fully embedded in daily routines.
Infrastructure

Local e-government costs money but its implementation can lead to enhanced service provision for citizens and more efficient ways of working. Lestijärvi, as a small authority, has taken the decision to work with partners at the subregional level to develop the broadband infrastructure that enables e-service provision. The subregion has attracted external funding for this infrastructure. For Lestijärvi itself, detailed e-government plans are integrated with other plans for the municipality, and this planning process has led to many e-government projects being funded from internal sources too.

Lestijärvi’s own ICT infrastructure is standardised, with 90 per cent of workstations similar in kind. All workstations and access points in the community are connected to the subregional broadband network. This network is the backbone of Lestijärvi’s and the subregion’s infrastructure. It connects staff and citizens within Lestijärvi and staff and citizens across the subregion. It is crucial to the sharing of information that can enable seamless service provision.

A second crucial aspect of e-government infrastructure is skills. Lestijärvi’s entire staff has been trained in the use of new technologies. Basic skills are obligatory, and personal development in new areas is encouraged. Lestijärvi’s commitment to the development of its staff is such that time allocated to training can be as much as 50 per cent of working hours. Courses can be undertaken because of a particular personal interest or because of the requirements of working on a new project.

Conclusion

This case is primarily about Lestijärvi’s approach to delivering local e-government through partnership working at the subregional level. It has adopted the collaborative approach because of two factors common to most, if not all, small authorities: a paucity of skills in particular areas, and the prohibitive economic cost of undertaking ICT investment alone. The Kaustinen case demonstrates that the benefits of implementing e-government are as much within the grasp of rural, sparsely-populated communities as they are of larger, urban population centres.

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Germany

In the federal system of the Federal Republic of Germany, the state administration is shared across three levels — the federation, 16 ‘Länder’, and more than 14,000 towns and municipalities.

The federal government has established a five-year, 5.9 billion euro action programme, ‘Innovation and Jobs in the Information Society of the 21st Century’, that is designed to modernise government, promote the use of ICT in all areas of society to combat unemployment, and make Germany one of the IT sector leaders in Europe. ‘BundOnline 2005’ is one of the key initiatives in the programme and is set to modernise the state through implementing e-government. All administrative services that lend themselves to electronic service delivery are targeted to be online by 2005.

Länder are federal state governments that have far-reaching autonomy, their own e-government programmes and are responsible for the provision of the majority of core government services. In collaboration with the Länder, the federal government has been actively seeking to accelerate the introduction of electronic services at the federal, Länder, and local levels. This is being achieved through creating a regulatory and legal environment for e-commerce and e-government and promoting associated initiatives.

‘Germany 21 — Entering the Information Age’ is a cross-sector initiative (federal, state and private sector) to promote and accelerate the use of IT in Germany and includes an ‘Internet for All’ project.

The ‘Modern State — Modern Administration’ programme has been established to modernise federal government administration. It consists of around 40 projects ranging from teleworking, a freedom of information act and an electronic workflow initiative to new ways of organising the administration. These projects are designed to strengthen government by making it electronically-enabled and also lean and flexible in structure.

Towns and municipalities are grouped into districts. These districts (and the larger towns not belonging to a district) have to fulfil particular functions. They act as regional authorities and are also lower state administrative authorities. Local government tasks are divided between the districts on the one hand and the towns and municipalities on the other, according to the principle that the supra-local services that cannot be provided by the municipalities are largely provided by the districts.

Thus, for example, if local e-government investment were to exceed the financial means of an individual municipality, then the district takes on this task for all municipalities belonging to the district. The structure of the districts is similar to that of the municipalities, with district councils elected by their population. The district council — just like the town council in the towns — is the main organ of the district’s autonomy. The supra-local districts are only responsible if a task exceeds the capacity of a municipality to provide a service. The responsibility of the towns and municipalities has priority.

Online services are already offered in many forms by towns and cities. Recently, a number of municipalities have been trying to combine their administrative services and the e-commerce facilities into a single system. From an early stage, the discussion in Germany centred on the question of how such transactions could be made legally secure and how they could be seamlessly integrated across different media. In 1997, Germany was the first country to enshrine digital signatures in law. In 2001, the law was brought into line with the EU Directive and provides a basis for the use of chip-card based electronic signatures.

1 www.staat-modern.de
MEDIA@Komm is the largest public service multimedia initiative of the federal government. It aims to link state, towns, cities, local communities and citizens through the creation of online town halls and market places. Implementation of the MEDIA@Komm model projects goes back to a municipal competition won by three local authorities in 1999: the Hanseatic City of Bremen, Esslingen and the Nürnberg Municipal Association, all developing solutions for legally-binding online services and transactions. A fourth town — Rathenow in Brandenburg — was awarded a special prize for the implementation of electronic access to records. Implementation of the two-year projects started at the beginning of 2000. Around 120 partners are working on them with over 60 million euros invested, including 25 million euros in subsidies from the federal ministry of the Economy and Technology (BMWi).

Surveys show that the number of PCs in German households grew from 38 per cent in 1998 to 45 per cent in 2000. The number of people using the Internet is also growing: almost 30 per cent of the total population above the age of 14 claim to use the Internet regularly.

ICT-based information processing is now established in the administrations of the national government, the federal states and local communities. Almost 90 per cent of administrative staff in town and city authorities now have a PC and almost half have Internet access and can be contacted by email.
Bremen — digital signatures for secure access to online services in a large city

Abstract

Bremen online service is developing secure access to services grouped according to life events. The project involves a wide variety of stakeholders in this major German seaport. Co-ordination and delivery are undertaken by a limited company established exclusively for the project. Pilot applications for the use of digital signatures, development of standards and creation of an ICT architecture for online services feature in this project.

Goals and projects structure

The Bremen MEDIA@Komm project “Legally-binding multimedia services with digital signatures in the Free and Hanseatic City of Bremen” is implemented by Bremen online service GmbH & Co KG (“Bos”) and comprises three core areas with further sub-projects.

- Access to secure and legally-binding online services: Here, in addition to access from home, further opportunities will be created, e.g. via supervised user stations in public places and kiosks. The widest possible distribution of signature cards and scanners is necessary to increase acceptance and gain initial practical experience of applications, so these facilities also come under the heading of access.

- Platform and OSCI™: This includes the creation and operation of a platform on which the communication between the administration, citizens and businesses is structured by the use of forms. To this end, a uniform communication standard OSCI™ (Online Services Computer Interface) must be developed and then harmonised with other local communities at the national level. And finally, different payment procedures should also be integrated.

- Applications/life events: The applications transported via the platform are grouped by so-called life events. The guidance of the citizen in virtual visits to the public authority or requests for information is based on their current interest or ‘life situation’ that is leading them to contact the public authority. For the purposes of the Bremen pilot project, these events have been defined as building a house, buying a car, communication between lawyers/notaries and courts, communication between tax consultants and the revenue office, residence and change of address, award of public contracts, student applications and leisure/online ticket sale. In the course of the Bremen project, several life events and sub-projects with more than 70 transactions and well over 20 external service providers are being implemented.

Vision

The project is customer oriented with a central goal, resolved by the city’s senate in 1998, to integrate electronic services for citizens and business into a single source. With the introduction of a new management model, the City of Bremen had begun projects to create one-stop government solutions. It is hoped that the introduction of secure electronic transactions will improve the service orientation of the administration, ensure greater transparency, increase the efficiency of the administration and lead to a general improvement in working conditions for the staff.

The application for the MEDIA@Komm project came at a time when there were already numerous contacts between science institutions, local businesses (especially IT service providers), associations and the administration with the aim of establishing a city information system, Bremen.de. The steering group that developed the MEDIA@Komm concept included the Senator for Finance of the City of Bremen and representatives of the University of Bremen, the telecommunication service provider in Bremen (BreKom), the chamber of trade, the Bremen innovation agency and the business promotion association. The Bremen administration and private service providers from the IT sector were also involved.

www.bremen.de
The involvement of so many different participants resulted from the so-called life situation concept which was systematically followed from the outset in Bremen. The aim is to provide the customer with electronic services that correspond to their concerns and interests (life situation) and to cover more than just administrative services. The services of private service providers are integrated into various life events. For example, in the life situation of changing address, the citizen can register their change of address online with the relevant administrative body and at the same time find out what removals companies offer. Changes of address can also be registered online with the post office, Deutsche Telekom, the local energy supplier and the local newspaper.

Various combined applications for different groups of users (e.g., citizens with only sporadic contact with the administration and intermediaries who maintain frequent and regular contact with the administration) are being implemented. Combinations are selected after intensive discussions with the administration and an analysis of the economic viability and service quality.

**Leadership momentum**

A special purpose vehicle in the form of a limited partnership company, Bos, has been established to implement the project. The company is owned by the City of Bremen, and its shareholders are the City of Bremen (majority holding) and private companies including Deutsche Telekom, Sparkasse Bremen, Integrata GmbH, Multimedia Centrum Bremerhaven GmbH, Bremer Strassenbahn AG and BreKom GmbH.

The business object of Bos is to offer secure, legally-binding and trustworthy transactions via open networks on the basis of the digital signature and the cash card used by German banks. The supervisory board of Bos consists of a total of five persons, three appointed by the City of Bremen and two by the private partners. The company is represented by two managers.

Bos co-ordinates participants from the administration and the external partners. At the same time, it develops technical solutions. Its role as the co-ordinator is simplified by the fact that one of the two managers of Bos is employed by the Bremen administration on a half-time basis, has a long-standing knowledge of the administrative structures and important participants, and was one of the initiators of the project.

The city has created a New Media Unit for policy and strategic issues related to technology-assisted information processing. This unit falls within the department of personnel and administrative management under the Senator for Finance. This organisational change resulted from a view that central co-ordination of the goals and activities for implementation is essential to avoid mistakes and ensure cost-savings. The unit has defined electronic communication rules for the entire administration in Bremen and issued central instructions for handling emails, a generally valid file structure and the use of standards.

The New Media Unit issues regular reports with information about the latest progress of the development and individual projects, prospects for the future and the strategic direction. These reports are available via the Internet. A newsletter every six to eight weeks reports on the goals and progress of administrative reform. Reports from the individual departments can be called up via the Intranet and Internet, and information meetings are held for the staff.

The congress ‘E-government ante portas’, which was first held in 2000, is to be held annually as a regular information and transformation event. It offers the participants in the project in Bremen, and an interested specialist public, a forum for discussion and exchange about the solutions implemented.

**Management skill set**

It is well-known that new projects have a greater chance of being implemented if they are supported by the political leadership and if the council and/or the administrative management take personal responsibility. This insight is confirmed by the experience gained in Bremen where the entire modernisation of the administration and the MEDIA@Komm project are being implemented under the leadership of the Senator for Finance. He leaves no doubt that it is a personal concern for him to encourage the process of administrative reform by supporting the MEDIA@Komm project.

If there is a weakness in the project's management, it is that risk management has not been addressed. However, as all sub-projects are planned on a long-term basis and implemented in a co-ordinated manner, no fundamental changes have so far been necessary. Participants are aware that the subject of e-government and the associated tasks are a long-term project in which it is still necessary, in some areas, to gain new experience.
There is not yet any specific consideration of the effects of the e-government project on personnel structure and development. The participants are aware that a change to electronic processing of services places special and changed demands on the staff. But it has not yet been finally decided how the in-house training programme within the administration will react to these changing demands.

There is a total of almost 50 private and public partners with whom different sub-projects are being implemented, e.g. change of address, award of public contracts, electronic debt collection and online information from registers. Bos co-ordinates all parties involved and, as the project organiser, also has contractual arrangements with individual IT service providers.

Co-operation with external partners in an area which includes new areas of technology is, of course, time-consuming and not always successful. In the case of the platform to process the online services, it became apparent that one contractual partner was unable to provide the solutions that were promised and bos thus decided at short notice to develop a solution itself. Co-operation with municipal departments is also sometimes difficult because old departmental procedures need to be adapted for use via the Internet. This adaptation can be very time-consuming for the municipal computer centre, for example for the residential registration system.

In addition to the MEDIA@Komm project, there are other municipal projects which could be listed under the heading of e-government, but which are not looked after by Bos. They include, for example, the Bremen municipal information system which citizens and visitors to the city can use to obtain information. Co-ordination of the thesaurus used is more time-consuming than it would be if both systems were from the same source.

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Abstract
Esslingen is a small town project. Participation of citizens and businesses in online services through a high level of acceptance of digital signature cards is its major aim. A new ICT infrastructure for a virtual town hall capable of deployment in other small towns is under development. The project is being run by an association of partners that includes the municipality.

Goals and project structure
There are two special features of the MEDIA@Komm project in Esslingen: the underlying principle and the starting situation. The ‘local community of citizens’ is the principle behind the activities, and the aim is to strengthen citizen participation and involvement. This includes the goal of developing away from being merely an approval body towards becoming a service provider for citizens and businesses. A further major goal of the Esslingen project is to set the threshold for online use by the citizen as low as possible and to create a high degree of acceptance in the population, for example for the use of signature cards.

With 80,000 inhabitants, Esslingen is the smallest of the municipalities in the MEDIA@Komm programme and aims to develop solutions specifically for medium-sized towns. This objective is an integral part of the project because the municipality of Ostfildern in the same region is also a participating partner. By contrast with Bremen and Nürnberg, the ICT infrastructure for the virtual town hall information system is only now being designed. This provides an opportunity to develop a homogeneous and integrated solution without the need to make allowances for any existing ICT infrastructures. At the same time, information facilities must be developed to a far greater extent than in the other MEDIA@Komm municipalities to enable the ‘triangle’ of information, communication and transactions in the Internet to be created.

Six sub-projects make up MEDIAKomm Esslingen.

- Communal services. After thorough analysis and definition of priorities for online services that are equally useful and attractive for citizens and the administration, information services are to be established for citizens, business and the town council. In addition to information services, communication and secure and legally-binding online services also form part of the offering.

- Education. This sub-project includes, for example, the creation of an education forum and an education database on the Internet, a school and education network and a youth network.

- E-commerce and e-business. This heading covers various individual projects such as the creation of a regional online shopping mall and a ‘small ads market’ on the Internet. Tele-Cupertino in virtual companies should appeal especially to citizens involved in the business life of the community.

- Culture. Databases should provide an overview of the clubs and cultural life and it should be possible to buy tickets online. A further goal is to provide online services for congresses in the region.

- Social affairs. Information is also the initial concern in the third sector, for example with directories of social services or a social database. In addition, the project aims to provide access for disadvantaged groups and to encourage the development of competence.

- Cross-section. The base technologies and a basic infrastructure must be provided for these projects and sectors. This includes the technical platform, the security concept and the preconditions for the use of digital signatures (PKI).

The responsibility for each sub-project lies with a different institution or company; the sponsoring body MediaKomm eV in Esslingen is responsible for communication.

www.esslingen.de
The Esslingen vision

The aim of the project is to create a comprehensive image of the real town in the virtual world. All activities to develop applications using an electronic signature are now based on this comprehensive model.

The individual objectives of the project in Esslingen are:

- to create an efficient, transparent and service-oriented administration which will benefit both citizens and business companies
- to strengthen the community of citizens by using ICT and by creating innovative participation possibilities
- promotion of business association and improved local community positioning in the competition between localities by the use of ICT technology
- development of applications backed by electronic signature and modelling of legally-secure and binding communication
- mapping of vertical value creation chains in the local/regional environment on the basis of electronic signature and innovative forms of co-operation between the state and the private business sector
- creation of acceptance for new technology with measures to oppose digital segregation
- creation of synergy
- to achieve transferability of the results to other local communities.

In the original overall project description, these objectives were only roughly formulated but were especially supported by the Lord Mayor and the municipal council. It was only after the completion of an extensive phase of analysis and evaluation that the activities were defined more precisely and adjusted to meet the requirements identified. However, the objectives are not yet sufficiently defined to be used for an evaluation of the projects. The Lord Mayor himself provided important impetus by adopting the strengthening of the community of citizens and activation of citizen involvement in society as his own personal agenda.

MediaKomm Esslingen is a joint project. Several independent partners from private business and research and also the towns of Esslingen and Ostfildern themselves are implementing the planned project activities together. The interests of the partners are brought together in a Cupertino contract, and the projects are under joint management.

Even today, the project activities have not yet been energetically communicated to the population or to private businesses. The Cupertino to date was with target groups who were directly involved in the development and testing of the individual applications. Broad marketing was deliberately avoided because the parties responsible for the project believe that acceptance for (signature) applications can only be achieved if they work faultlessly and offer their users real extra value. The completion of the product ‘AllSign’ by the summer of 2002 will fulfill this condition and the first 1,000 signature cards will be issued to the population.

For about a year now, the MediaKomm Esslingen project has been a topic of increased discussion locally. This began with the MEDIA@Komm Kongress in June 2001 which had an impact throughout Germany. More professional public relations work also led to a greater presence in the media. The congress marked the transition of the project from the concept and analysis phase to the practical implementation of the research work. The first applications have already been implemented. Many more will be completed in 2002 — some of them using digital signatures — and an operator structure for a local community portal on the Internet will be developed.

The MediaKomm Esslingen project was not fully anchored in the municipal administration in its first year (2000), although it is organisationally assigned directly to the Lord Mayor. Since 2001, the municipal administration has shown greater awareness of its own necessary involvement and the challenges that need to be faced. This is probably because specific applications are now in their implementation phase. The people with administrative responsibility sense the need to be involved, especially in the ongoing and sustainable development of the e-government modernisation projects that have begun. The overall council of employees is actively involved.

A review of administrative structures as a result of the introduction of e-government is being discussed and placed in the context of the active efforts for administrative modernisation, but only within strict limits. In the short term, fundamental changes as a result of a consistent e-government strategy are not to be expected.
Leadership momentum

It must be reiterated that the MEDIA@Komm project in Esslingen is mainly being implemented by the association MediaKomm eV in conjunction with its partners, which include the municipality of Esslingen. The town will only take over responsibility for the continuation of the e-government process after the end of the three-year project subsidy period, at the beginning of 2003.

Decisions about strategic adjustments to the project and similar questions can be made comparatively quickly and flexibly at present because of the external organisation. There are two major restrictions:

- As all MEDIA@Komm projects are subsidised by the national government, all changes must be approved by the Federal Ministry of the Economy (BMWi) and the project sponsor. This procedure is necessary but it causes a number of bureaucratic obstacles and delays. The resources of the project sponsor responsible for the organisation of processing of subsidies are not always sufficient and, in some cases, the recipients of the subsidies had too little experience of the application procedure and official approval processes in connection with this type of national subsidy project.
- As the MediaKomm Esslingen association is organisationally assigned to the Lord Mayor and the municipal council needs to approve all major decisions, especially in relation to finance, it is important to involve the political bodies. This always requires a certain amount of time for preparation. However, experience in the past showed that urgent decisions could nevertheless be reached quickly.

The strategic planning of the projects takes place in two phases: in the subsidy period, the responsibility lies with MediaKomm eV and the modernisation programme is closely co-ordinated with the municipal administration. To this end, there is a joint steering group to co-ordinate the plans. There are defined plans and milestones for the strategic implementation of all MEDIA@Komm projects, which in some cases had to be changed because of necessary adjustments to the content and the technical and organisational aspects of the projects. A strategy plan for the period after the end of the project in 2003 is currently being discussed.

Most of the MEDIA@Komm initiatives are innovation or research and development projects and are part of a highly-dynamic development sector. As a rule, the only applications that are developed to full product status are projects suitable for mass application in the ‘market’ and also transferable. The pace of innovation in areas such as smart cards and mobile telephones is enormous, so that in some cases the technical concepts implemented are not the same as those originally planned. Because of the insufficient interoperability of the signature cards up to now, infrastructure solutions were developed as a response to this problem on the user side.

A large number of basic components and standards such as database systems and application servers were researched, evaluated, selected and tested under the heading of ‘basic technology’. Concept documents were drawn up for the use of the standards (eg XML, SOAP, Java applets). A prototype platform was set up and taken into service. With regard to security, a rough outline concept was drawn up and application-specific single components developed and used. In the area of electronic signatures and PKI, the cards and trust centres available on the market were evaluated and the relevant signature components were adjusted to the requirements of the project.

Management skill set

Here, again, a distinction must be made between the project organised by the association MediaKomm eV and the sustainable continued development of the process of introducing e-government in the municipal administration in Esslingen.

For MediaKomm Esslingen, a project organisation was created in which the management was entrusted to a private project partner drawn from private business. At the same time, a project controlling post was created. The project manager co-ordinates the various sub-projects and partners from the town, businesses, institutions and the science community. The contractual arrangements consist of a contract between the project partners and the subsidising bodies, direct contracts between smaller partners or other service providers and MediaKomm eV, co-ordinated by joint project planning with specific milestones.

The exchange of information works well within the limitations; some partners are far apart (eg the institutions in Bonn/ St Augustin and Karlsruhe) so the exchange of information is organised via virtual workspaces and regular meetings held every two to four weeks. There are weekly meetings with representatives of the municipal administration and the personnel representative body in the framework of the steering group.

Unfortunately, it is sometimes assumed that information should be reactive to demand; for example, not all implementation and planning data are well-structured. It is hoped that the use of a professional document management system will bring improvements in this area.

After 2003, a large proportion of the further tasks in the development process will be handed over to the strategic management of the municipal administration. Some of the accumulated knowledge will also be ‘handed over’: two important staff members of the association MediaKomm eV who originally came from the municipal administration will return there, one of them to the newly-founded ‘innovation laboratory’, a co-ordinating department assigned to the manager of the central office.
In this way, a large part of the knowledge of the MediaKomm Esslingen project will remain within the administration. The association will probably continue to exist and undertake new tasks. There is a risk that the clear integrative function in relation to potential co-operation with many partners could suffer from the ‘hand-back’ to the administration. It is also an open question whether the management structures and areas of competence will be adequate to deal with the modernisation project when the e-government tasks are integrated into the hierarchical structure of an administrative organisation.

The operation of the future “virtual town hall and market place of Esslingen” — the municipal portal — is currently being advertised with the support of a consulting company. The aim is to create an operator structure with public and private participants to publish public and commercial content. The economic risk is to be borne mainly by the participating companies which are also to gain economic benefit from the portal. The competence for the technology, organisation and content is to be provided by the public and private partners. There is not yet any experience available in the drafting of comparable contracts and replication will, anyway, need to take some account of individual circumstances in other municipalities.

Risk management is only of limited importance at present because the projects are subsidised R&D projects, as outlined above. There is an accepted risk that some sub-projects may not survive after subsidies cease at the end of 2002, unless they are viable in the market without support. There is not yet any risk management plan for the period from 2003.

Infrastructure

The funding of the e-government projects after the end of subsidies is still uncertain. Calculations have already been prepared to show the minimum amount that the municipality would need to bear as from 2003, and new jobs in the administration have been planned. But under the pressure of financial consolidation that Esslingen — like most municipalities in Germany — is currently facing, the planned funds are not sufficient to ensure a systematic continuation of modernisation through e-government. Certain expectations are therefore contingent on the virtual market place and virtual town hall offering economically viable prospects. Joint use of the infrastructure by the administration and private business and the vertical value creation processes will, it is hoped, make operation profitable.

Technologically, the project in Esslingen is forward-looking. Many innovative solutions have been developed on the basis of international standards and a number of marketable products are already being tested or implemented. For example, a solution for certain online services with electronic signatures is already available as a prototype. AllSign can be used in future not only to sign emails with a digital signature but also to sign PDF documents and forms that are now more or less a standard format for the display of documents. Before adding their signature, the users see the normal form on the display and it can be printed for filing. AllSign supports the two signature cards that are currently most widespread in Germany. The transfer of data into the digital workflow of the administration is implemented by XML.

Security is a top priority in Esslingen as in all MEDIA@Komm projects. As mentioned above, a security concept is currently being implemented and high standards of data protection, identification and authentication will be ensured by encryption and the electronic signature (chip-card based, at least for the verified signature, in line with the EU Directive).

Since the project began, the staff of the municipal administration have regularly been involved in the discussion about the development of the virtual town hall. Various basic training courses for specific new applications have been held. But there have not yet been any extensive strategic training courses on subjects such as changes in the staff’s role in dealing with customers in a service-oriented community of citizens. This is partly because no work has yet been done on a fundamental reorganisation of the front-office and back-office systems and the associated new roles within the municipal administration.

On the whole, the crucial test for the e-government modernisation project in Esslingen is still to come — in the process of transferring the present innovation and development projects into everyday operations. Awareness of the strategic importance of this subject needs to be strengthened in the council and the administration and clear goals and guidance for the future must be systematically developed in consensus with social groups and the business community.
Abstract
This project involves the five municipalities of the Nürnberg municipal association. The co-operation of Nürnberg, Fürth, Erlangen, Schwabach, Bayreuth has been set up only for participation in the municipal competition MEDIA@Komm. The challenge is to develop a range of software modules to support online services in all five municipalities. These online services include public-private partnership projects to address information and service needs of citizens, other public service organisations and the private sector. The product is being delivered by a company wholly owned by the participating municipalities, including staff seconded from the municipalities for the duration of the project.

Goals and project structure
The goal of the project ‘MEDIA@Komm in the Nürnberg region’, is to offer legally-binding multimedia services with digital signatures in a municipal association. A regional communication platform is to be created, which will support secure communications and offer citizens various communal and private services. The Nürnberg municipal association consists of five municipalities of different size in the region, namely Nürnberg, Erlangen, Bayreuth, Fürth and Schwabach. The special challenge here is to develop online services and products which are equally fitting for all municipalities.

On the basis of past experience and the difficulties in transferring pilot projects to the individual municipalities, it was decided to develop a series of software modules (e.g. for signature, payment etc) that can then be used for the implementation of the respective individual online services.

The target groups of the Nürnberg project are various:
- local communities, as providers of public services for citizens and private business companies
- local communities, as users of the digital signature in internal business processes
- citizens, as users of public services
- citizens, as users of the services of private companies (e-commerce)
- private companies and chambers of trade, as users of public services
- private companies and chambers of trade, as providers of their own services and users of digital signatures.

In Nürnberg, there are three pillars within the project, but they are addressed differently.

- Cross-section projects include the platform, security concept, digital signatures, payment function, document management, user interface, regional online platform (operation) and proposals for standards for administrative procedures (geographical information systems). They provide important services for all communal and public-private partnership projects.

- Communal projects are the essential municipal services made available to customers via the Internet: education services, parking permits for residents, electronic support for the council, electronic house construction file, geographical information, residential register (entries, changes and deletions), information from the residential register, information from the trade supervision register, business registration, changes and closure, vanity vehicle numbers, online libraries, invitations for tender, award of public contracts and public participation in communal construction planning processes.

- Public-private partnership projects include applications for the regional virtual market place, medical Intranet, support for business start-ups, online judicial practice, public transport tickets, company identity cards and the establishment of a local card operating company for the multi-functional chip card/bank card. Work is also being carried out to facilitate access to the Internet not only via a PC but also via digital TV and mobile appliances (cellular phones, hand-held devices, etc).
Vision

However the goals were defined in the original MEDIA@Komm project description, the municipalities in the municipal association have continued to develop their own goals and interests in the implementation of e-government projects. On the basis of the experience already gained with the project, the two large cities in the association, Nürnberg and Erlangen, have decided to define the goals for an e-government strategy. Erlangen engaged external consultants to draw up a strategy in which short-term, medium-term and long-term goals are formulated. This strategy was adopted formally by the municipal council in February 2002. The goals formulated are: to improve the service for citizens, to create a city that is children and family-oriented, to stimulate democracy through greater participation, to create an image as an e-city, and to strengthen staff satisfaction. An e-government centre is planned to co-ordinate the necessary activities for implementation.

The experience gained with MEDIA@Komm has stimulated Nürnberg to define its goals too. An e-government vision and strategies for implementation are to be drawn up during 2002. The first step will be to make an inventory of the activities that already exist and the persons involved. An e-government office has been set up to guide and co-ordinate all e-government activities within the municipal administration.

A list of transaction processes that are handled electronically was compiled internally before the MEDIA@Komm project began. No special surveys of businesses or citizens were carried out for this purpose. The NIK (Nürnberg Initiative for Telecommunication), an institution in the region which maintains very good contacts with the regional business community, contributed its experience and expertise and was intensively involved in the preparatory phase of the project. In addition, cost/benefit calculations for the administration, citizens and businesses have been carried out for all planned online services. Regular contacts with local and regional businesses exist as a result of various sub-projects dealing exclusively with the use of electronic signatures for business processes in and between business companies.

As a result of the large number of individual projects included in the MEDIA@Komm project, municipalities are beginning to recognise that the provision of online services will involve not only changes in traditional procedures but also in the entire organisation and structure of the administration. The technical foundations for network operations are currently being laid. But consideration of the possible effects on the personnel structure has been postponed on the basis that experience must first be gained in pilot projects before any conclusions can be drawn.

Leadership momentum

The development and technical implementation of specific online applications for citizens and businesses in all five municipalities is being undertaken in collaboration with a single project sponsor, Curiavant Internet GmbH. A wholly-owned subsidiary of the participating municipalities, Curiavant is responsible for the overall project management, including the technical implementation of all sub-projects. The committee of shareholders, in which all five municipalities are represented by heads of department, is responsible for project control and questions of finance. Local community core teams formulate the various content and technical requirements of the municipalities and pass them on to the Curiavant project managers. The overall project management lies with the two managers of Curiavant Internet GmbH. All changes to the project must be approved by the Federal Ministry of the Economy which provides the subsidies.

Strategic and financial decisions concerning the MEDIA@Komm project are made by the committee of shareholders. On questions of content, the committee takes advice from the project office. By appointing a project office with responsibility for financial control, quality management, communication and marketing and creating municipal core teams to link Curiavant more closely to the municipalities, it is hoped that communication will be assured.

A measure to improve internal and external communication is the creation of a MEDIA@Komm domain for the region that will contain internal information in a protected area and information for external project partners and anyone else who is interested. For the staff and project partners, this will help to ensure that every person involved in the project can obtain information about the goals, activities and the current progress of the project.

The creation of e-government offices and centres in the individual municipalities is a first step towards creating a general plan of activities for the implementation of the e-government goals. Information on the necessary infrastructure, planning and deployment of personnel, financial resources required, definitions of projects and milestones etc is already collected in many sub-projects, but a co-ordinated strategy will only be possible when it has been combined in an e-government office. These offices or centres have a ‘high’ organisational status. In Erlangen, the centre is a co-ordinating department assigned to the lord mayor, in Nürnberg the office is assigned to the head of department for personnel and administration.
Management skill set

The MEDIA@Komm project is concerned with research, testing and development of the use of electronic signatures, multimedia and the Internet in local communities, so a failure of individual projects is fundamentally possible. The restructuring of individual projects in the municipal association for technical reasons or due to generally unsatisfactory conditions (diffusion, legal framework, acceptance by the citizens) has shown that this project does not just involve designing applications and developing a technical platform to run them. Experience must be gained in devising implementation strategies and measures to increase acceptance, and steps must be taken to ensure that this experience can be transferred to other local communities.

In the initial phase of the project, there were deficiencies in project management. Up to the end of 2001, for example, the communication between the municipalities and the project organisers was not organised successfully enough to enable them to develop coherent goals for the activities and time schedules in sub-projects. This conflict was overcome by a change of management and by the creation of a committee to ensure and organise the exchange of information.

The co-operation with private partners is time-consuming and it has not always led to marketable results. The subject of the digital signature is relatively new and is influenced by many factors, including the decision-making processes within companies. Some companies are still in the process of finding out about the use and possibilities of digital signatures and do not (yet) want to commit themselves. Cupertino with business companies has so far been characterised by a large number of contacts and discussions with regional and local businesses, but these have not always been carried through to specific projects.

Infrastructure

The entire MEDIA@Komm project is subsidised by the national government up to 2003. The Nürnberg municipal association is currently considering how the operation of the newly-developed online services can be continued after the subsidies end and who will be responsible for the organisational and technical supervision. The deliberations are tending towards a solution in which the largest municipality in the association, Nürnberg, would operate the technical platform and handle the online services that are offered. The existing expertise and equipment will continue to be used in any case and, if possible, it will be extended further.

A number of municipal employees currently work for Curiavant; they were delegated there for the duration of the project and have a right to return to the administration. Participation in the MEDIA@Komm project is also regarded as a qualification in the area of e-government and it thus offers good prospects of subsequent, continued employment in the individual municipalities.

Personnel continuity is important for the municipalities in the continuation of their sub-projects. The municipalities appreciate established teams and familiarity with specific local problems and situations. Currently under review is the question of whether Curiavant will be able to support itself financially in 2003 when the subsidies have ended. No final decision has yet been taken. In addition to funding by the municipalities for the operation of the online platform, Curiavant will also try to market the solutions that have been developed and to exploit its expertise. The corresponding business scenarios should be developed by the middle of 2002.

The development of a platform to handle online services between the administration, citizens and businesses can be regarded as a key technology in the Nürnberg municipal association. The platform has been developed with a partner (the company 100World) as a modular system. It forms the basis for all online applications in the virtual town halls of the five participating municipalities. It is the foundation on which numerous administrative processes can be handled electronically, irrespective of the heterogeneous systems that already exist in the administrations.

In the final stage of development, the individual modules are to have the following functions: use of digital signatures (processing of incoming and outgoing signatures), integration of payment transactions and booking of payments, administration of user data and authorisations, form administration, integration of the back-end systems by linking work flows and document management systems.

The development of the platform FrameWorld™, the knowledge of local community requirements and the implementation of solutions in the municipal associations are regarded as good qualifications to survive as a service provider in the market place after subsidies end. There are other innovative developments, especially in the area of alternative methods of access. For example, projects are in progress which explore alternatives to the PC as the access medium to the virtual town hall (eg access via TV, mobile phones, signatures with PDAs and access to government via voice communication).

Authors: Busso Grabow and Christine Siegfried (Difu)
Mannheim — modernising services in a big city

Abstract

The development of electronic government is offering improved services to citizens but is also seen as an important economic lever for the City of Mannheim.

The re-engineering of core business processes has provided the basis for developing electronic services for citizens and business.

www.mannheim.de

Introduction

Mannheim is one of the 20 largest cities in Germany, and the second largest in the state of Baden-Wurttemberg. It has a population of 320,000 and, although it has a tradition of heavy industry, the last 20 years have seen a move to the service sector. Mannheim is the centre of the Rhine-Neckar Triangle economic region, which has a population of around 2.3 million.

Vision

In recent years, the City of Mannheim’s administration has modernised its IT systems, using both in-house and external IT experts, as part of the drive to restructure its administration. Since online services have become available, we have investigated ways of using them to benefit our citizens and the local economy and to develop new services.

When we started looking intensively at these areas we were ahead of many administrations. The drive was an internal one, since the city has been attempting for several decades to make the most of the opportunities offered by information and communications technology. But the requirements that we have to meet are also external, since we have made a commitment to the people of this city that we will be an administration that constantly strives to modernise itself.

We are doubly motivated. First, externally, by the public’s expectations of us and secondly, internally, by the recognition that we must push ahead with ICT and of the benefits it can bring to our organisation.

As part of our ongoing modernisation of the administration, we have implemented SAP’s Enterprise Resource Planning (ERP) Solution R/3 integrated with the Financials module to deliver the preconditions necessary for us to meet the challenges of the future and to develop online electronic services.

To meet those challenges, we required experienced partners who could deliver high levels of reliability, both in software that could be easily upgraded to meet future requirements, through to employee training. We saw it as vital to have a stable and strong partnership in order to implement new IT procedures quickly.

Our electronic citizens’ service, which has already gone live, could not have been created without the close, trust-based collaboration with SAP, and this is the real reason behind the speed of our Internet launch.

It is our responsibility as a city administration to ensure that everyone in the city has access to these electronic services. We do this by providing the Internet-based service at out local offices throughout the city and are examining the possibility of street kiosks. However, we do also offer more traditional methods of interaction for those who prefer them.
Management

The ability to adapt to these new services is a challenge in itself for those who use the procedures, but it is clear that a more comprehensive use of technology streamlines administrations and raises efficiency. For e-government to be successful, organisations must consider the issues as early and intensively as possible, giving them the highest priority, and ensuring organisational ‘buy-in’. If employees do not commit themselves to the project, there is no chance of success.

By implementing an ERP solution now as the foundation for all further developments, we have created the preconditions that will enable us to focus on new areas such as business-to-business and e-procurement.

The development of this project will provide the foundation for extending Mannheim's procurement process electronically and we expect to see costs reduce by 20 – 30 per cent as a result of the ability to purchase goods and services at more advantageous prices.

Our electronic citizen's service has encompassed procedures that were previously processed either entirely manually or partly by computer. These services are now processed in workflow without media fragmentation and cover, for example, the creation of parking permits, which involves several thousand transactions each year. This is a classic example of how an electronic service can ensure rapid and secure processing and improved performance.

Examples of our e-services include:

- road excavation permits
- planning enforcement proceedings
- parking permits
- business registration.

One challenge that we faced was to process, and respond to, electronic requests in the workflow without changing media and to notify citizens of the completion of those requests using the same media.

All citizens have the right to expect their government to use public resources effectively. For us, this translates into the ability to implement electronic procedures to provide the full spectrum of services on time, quickly and correctly, but also in a way that enables people to use the procedures to exercise a measure of control over us.

By establishing citizen relationship management tools that give people the ability to check the status and progress of requests online for themselves, we are delivering added value, with an extra benefit for the population that we were not previously able to provide.

Leadership and infrastructure

Tourism is an important economic driver for this region, and Mannheim has one of the most significant conference centres in Germany. Online services offer more advantages to conference organisers and increase the city's attractiveness.

Mannheim, in common with many cities, has experienced unemployment as a result of the move away from heavy industry and increasing globalisation of the economy, and the city government is proactive in attracting new business to the area. Many of these new jobs are in the service sector and it is vital to provide the information and communications technology infrastructure to attract these jobs to the city and region.

We offer a ‘one-stop shop’ to potential companies by concentrating all the information that they are likely to require into one service point. We have had significant success in attracting new companies in the fields of software, medical and bio-technology, as well as supporting existing companies that wish to expand.

Part of supporting business means ensuring that a virtual marketplace for local companies exists. Operating such a marketplace is not part of the city administration's responsibilities, but stimulating its creation is. Our response has been to initiate a pilot project that can then be taken on by others. In this way, local business will receive the services and opportunities that it needs to participate fully in online business-to-business activity.

Companies can use the service free for a trial period to gain experience and evaluate whether they want to join a commercial marketplace. We are running this as a pilot project in order to trigger both infrastructure and economic developments and, so far, we have been very successful with over 1,000 companies already participating in our marketplace.

We cannot influence people's purchasing behaviour direct, but if there is no local marketplace then those wanting to shop online will do so elsewhere and Mannheim business will lose out. We are interested in ensuring that there is a competitive local marketplace — there might even be several — but we are concerned that purchasing power should stay in the region to secure local jobs. Presentation is part of marketing our city: it plays an absolutely decisive role in the competition between industrial regions and we are using technology to support this.

We are convinced that in five years' time we will be providing electronic services that we can't even imagine today, much as we are offering services now that would not have been considered possible five years ago. We continue to monitor developments closely, as we want to be able to use all the opportunities offered by e-government to benefit our citizens and the image of our city.
Italy

Italy is divided into 20 regions that are subdivided into a total of 94 provinces. An executive responsible to a popularly-elected council governs each region. The regional governments have considerable authority. The chief executive of each of the provinces, the prefect, is appointed by, and answerable to, the central government and in fact has little power.

An elected council and a provincial executive committee administer each province. Every part of Italy forms a portion of a commune, the basic unit of local government, which may range in size from a small village to a large city such as Naples; there are approximately 8,000 communes. A council elected for a four-year term by universal suffrage governs each commune and each council elects a mayor.

No specific ESD targets have been set by the central government. However, smart cards, electronic document management, digital signatures and online services have been set as priorities in the e-government action plan of June 2000. That document outlines the vision for e-government for Italy as follows.

- Citizens can receive every public service to which they are entitled by applying to any front-office administration authorised to perform the service, regardless of territorial jurisdiction or residence.
- Citizens do not have to know how the state is organised for the performance of service or which is the department to apply to: they can request a service based on their own needs.
- Citizens must be able to notify the administration once only: at the time they occur, of any changes corresponding to life events or, when they are relevant, to life events of third parties. This notification will automatically produce the necessary sequence of action. The administration shall maintain a file on every citizen that allows it to notify the change to all the departments and agencies affected and to activate the consequent services.
- It is recognised that the regions have an essential role to play in creating the main infrastructures and services necessary for the implementation of Italy’s integrated information system. Local government is seen as being the likely avenue for the creation of front-office facilities through which integrated services to citizens will be provided. The regions have been encouraged to form regional networks that will link their local governments together.

The vision is for these regional networks to be linked with a central government public administration network to create a federally-structured nationwide network. Internet penetration in Italy has increased rapidly over the past three years, partly because free access was introduced in early 1999. This growth can be seen in the table below:

<table>
<thead>
<tr>
<th>Proportion of population with access to the Internet:</th>
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<tbody>
<tr>
<td>November 2000</td>
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<tr>
<td>July 2001</td>
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<tr>
<td>August 2001</td>
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Author: Gary Grant (IDeA)
Abstract
The Piazza Grande one-stop shop offers citizens and visitors to Modena a joined-up channel for information and services from a whole range of information suppliers. Whether they are looking for information, advice and services for young people, women or people with disabilities, whether they want to deal with environmental issues, tourist information or bookings for the theatre, there is a single unified access point via Piazza Grande. This over-the-counter channel is supported by call centre and Internet access, specialist business support, and links to many other agencies that contribute to the life of the city.

www.comune.modena.it

Introduction
The City of Modena can be found in the region of Emilia Romagna. The region is bounded on the south by the Apennines, the other half being a large plain that reaches to the Adriatic Sea. The coastline is flat and sandy, with lagoons and marshy areas. Visitors to Modena find a city that combines artistic beauty, history, entertainment and a passion for fine cuisine.

The Modena Civic Network ‘MoNet’ represents one of the most joined-up examples of local e-government in Italy. MoNet is a civic network managed by the city administration and working over the Internet. It supports a Territorial Information System (TIS), a general public relations office, Piazza Grande, and a one-stop shop for businesses (Sportello Unico per le Imprese). MoNet enables electronic consultation on a broad range of information including city regulations and the budget for the city administration and provides access to online discussion groups.

The Public Relations Office works as a single front-office for direct contact with citizens. Piazza Grande also includes the electronic newsletter ‘Piazza Grande News’ and Televideo (teletext) information pages. This is an integrated service which brings together the city administration with a whole range of other sources of information including:

- ‘informagiovani’ desk (youth information service)
- a tourist information and reception service
- Info Point Europa (IPE)
- unified theatre box office
- ‘infoambiente’ desk (environmental information service)
- ‘infohandicap’
- ‘informadonna’ desk (information service for women)

Vision
The MoNet civic network aims to provide a high-quality relationship between the local public administration and the citizens, supporting the image of an evolved city providing advanced services. In line with this vision, the goals of MoNet are:

- development of digital services, as in the Territorial Information System (TIS)
- promotion of widespread use of ICT
- computer literacy and training of citizens
- testing of new means of participation in the local decision-making processes
- strategic use of ICT to create a system of international co-operation.

The promotion of a culture of widespread use of ICT has involved all economic and social partners including: the university, schools, professional associations, cultural associations, libraries and third-sector representatives.

Contacts with technicians and professionals are being developed, as well as with local professional associations, to identify the most important directions for the evolution of e-services.
Among the services supported by the MoNet civic network, the Territorial Information System (TIS) has involved the greatest commitment to change. It requires the integration of existing and future management databases into a single system to create and aggregate the data held by, or available to, the city administration. The Information Systems Department has set up a unit to manage the sharing of information among different city administration departments. Data and information managed within the TIS comes from different operational processes but is incorporated in a way that does not involve any increased workload.

Collaboration is also in place with other local partners:

- other public agencies, for which the online services available on the civic network act as a catalyst: hosting pages or highlighting links to other sites (province, university, Chamber of Commerce, Environmental Services Agency, Democenter), directly handling these online services (province, some surrounding towns, regional site for the young)
- not-for-profit associations and schools: the city offers these organisations the opportunity to publish, free of charge, their own web pages; the participants (30 schools, 102 associations, 10 public utility projects as of February 2001) independently manage their own content and can update remotely through use of a password
- Authority for Information Technology in the Public Administration (AIPA): the managers of the civic network participate directly in the commission on civic networks.

Leadership

Another relevant service supported by the MoNet civic network is the Sportello Unico per le Imprese (one-stop shop for businesses) which provides a single process for new business start-ups. The one-stop shop offers a single form of final authorisation, indicating that all procedures required to set up or modify a manufacturing facility have been successfully completed and ensuring that there will be no surprises later. Single authorisation means that everything checked through the computerised service access form must have been answered correctly.

By founding MoNet in December 1995, the city executive committee has assumed a true ICT development policy at the local level (the Città Telematica project), which involves several ICT-based advanced services. These include:

- testing of the first secure transaction system in Italy, applied to the management of the weekly day off for some commercial enterprises
- creation of a proprietary operating prototype for the acceptance of remote documents through use of a digital signature
- publication of the TIS data based on cadastral maps.

The City of Modena has arranged a certification authority infrastructure to issue certificates with digital signatures that meet the technical requirements laid out in Italian law, that can be used to sign fully-valid transactions. The technological infrastructure for digital signatures will be used to create a secure, certified channel for the transmission of data flowing from and to the central public administration (e-government plan) or local administrations for those cities that wish to participate.

The City of Modena is also running a test of the electronic identity card. The card will provide identification and act as a key to access a wide range of services over the network. If the experiment gives favourable results, there will be no obstacles, from the technical point of view, to full migration of those services that currently require paper forms.

The challenge now moves on to the organisation of the services, real simplification and closer co-operation between local and central agencies.

During the past two years, MoNet has undergone a rapid evolution, changing from an information and presentation site to a promoter and provider of services for the general population and for business.

The laws in force regarding quality, usability and accessibility of sites are currently being incorporated. The standards and recommendations on administrative streamlining and the considerable legislation for the legal validity of electronic documents, together with the availability of the technology, have all come together to enable a step-change in service quality. This represents a significant advance toward the introduction of interactive services making it possible to initiate and finalise administrative procedures completely over the network.

This has a significant impact on the organisation of work within the public administration. The city’s entire organisational structure is now involved in the operation and management of the civic network. Initial resistance has been replaced with strong interest on the part of those who see the information they originated now published on the Internet.
Management

With particular regard to the TIS, a broad category of services can be envisaged of great interest for the business market and for professional associations. In recent years, an increasing interest in geo-referencing contents has been registered, particularly if available in digital form. This offers the opportunity for companies and private citizens working in the field of distribution and expert satellite control systems to access and download them from the network.

The different information subsystems that have been designed and created in the city information system have always met the guiding criterion that their information should be related to the mapping information. The informational subsystems created cover nearly all topics handled by the city, including:

- population registry
- business registry
- registry of public concerns
- registry of artisan activities
- city assets
- general urban development plan
- register of streets and roadside objects
- gas, water, electricity users
- technological networks.

During the 1990s, an agreement was made with the land registry to update both the registry maps and the land and building taxes. At that time, the city formed its own map base adopting the integrated registry maps with the needed information, in particular the location of the population, the drawing of the road network, limits of the census sections and neighbourhoods.

To meet the requests related to territorial marketing issues, the City of Modena made an additional attempt to develop agreement between the administration and the external players. In August 2001, the city signed an agreement with the company providing the basic TIS technological solution, Core Soluzioni Informatiche of Bologna. It is a business-to-business partnership agreement where both partners pledge to invest in promoting and developing the system. The administration provides its expertise and professional consultation on the content and channels to be dealt with, while the company provides the marketing network. The administration expects revenues that reflect the widespread commitment and results obtained.

As far as the impact on staff is concerned, training is provided on how to produce web pages and on how to promote and use new services. The training distinguishes between two levels of use: simple users and information producers. In 2000, the City of Modena provided 114 days of training in the use of the information technology equipment and products for its own employees and those of other agencies. It is currently evaluating the purchase and development of online training using computer and Internet-based multimedia technologies.

The availability of training packages of this type can prove interesting for a pool of customers including other public administrations, service companies and traditional companies. The private citizen could also take advantage of this opportunity to gain initial computer literacy.
Infrastructure

There are various strands to the developing technology infrastructure in use in the city:

- technological infrastructure for digital signatures will be used to create a secure, certified channel for the transmission of data flowing from and to the central public administrations
- testing (the first in Italy) of a secure transaction system
- creation of a proprietary operating prototype for the acceptance of remote documents through use of a digital signature
- testing of the electronic identity card which will not only serve as an instrument for identification but also as a true and proper key to access a wide range of services over the network.

During 2002, several meetings have been planned to inform the private sector of the standards set out by the City of Modena for the provision of online services.

Conclusion

The Modena Civic Network (MoNet) is an example of e-democracy. MoNet allows internal communication within the different administrative sectors, as well as external communication with agencies, economic and social partners and the general public.

The enormous number of users during the first years was, mostly, made up of young people. Later, however, thanks to the progressive development of databases and online services, the use of MoNet by professionals, technical studios and a wider profile of citizens has grown.

The policy of incentives for Internet access has been particularly developed. These do not include any sort of financial support — the focus is on creating information technology literacy and offering points for public access. The promoters of the civic networks are attempting to create the conditions that will enable general access, not only access to those who already have computing competence or can afford to purchase the necessary equipment.

Activity has been arranged to involve, promote and support potential users of the new e-services, starting with schools and teachers in the schools, involving them in a process that would eliminate the risk of creating a ‘digital divide’.

Author: Silvia Fracchia (Formez)
Abstract

The municipality of Prato has implemented software which allows the online submission of ‘ICI’ tax declarations. Once filled in, the electronic form can be printed in the format of the ministry standard form or filed in a database in accordance with the relevant ministerial order. The software is available free of charge from the municipality website. Moreover, the municipality has made available to the users several dedicated services on a protected server and has provided telephone lines and a network infrastructure that satisfies the increased online traffic.

www.comune.po.it

Introduction

The municipality of Prato lies on the plain north of Florence at the beginning of the Bisenzio Valley. Since the Middle Ages, Prato has had the weaving and cloth industry to thank for its prosperity. The development of a modern textile industry since the 19th century has made Prato into a kind of ‘Manchester of Tuscany’. In the city’s mills and factories, wool and woollens are still processed into finished products. Some 600 years ago, a local merchant invented both the bank draft, as a means of making payments without cash, and double-entry book-keeping. Today, Prato, with its 170,000 inhabitants, is one of the wealthiest cities in Italy.

Prato is developing its own strategy for local e-government aiming to meet two main objectives:

- improve existing services (by improving the access to services, reducing the delivery time and raising the quality of answers)
- improve the internal and external efficiency of the local administration.

To achieve these objectives, the municipality of Prato is carrying out several projects, both on its own and in partnership with the region, province and other municipalities. Among these projects is one aimed at creating a civic network open to all public and private stakeholders of the province, and the ‘ICI Online — Local Fiscal Service On-line’ project.

Through this project, citizens and tax consultants can compose tax declarations on their PC, helped by interactive software. They can send, verify and pay tax across the web. Dealing with the difficult and delicate field of tax, the municipality of Prato is trying to establish a dialogue with citizens to understand their real needs and change the concept of ‘strict control’ in tax matters to one of ‘co-operation’.

Vision

The project has been based on a thorough analysis of the problems affecting the quality of the service, in particular:

- slow updating of the ICI database system
- lack of co-operation between the stakeholders
- difficult and complicated procedures.

The local authority has focused on clear objectives, which were established in a formal contract binding the municipality and its partners. These objectives are to simplify and speed up the procedure, while ensuring its transparency and effectiveness in meeting the users’ needs.

The project staff paid particular attention to making the project objectives and the expected benefits clear to the stakeholders, who agreed completely to the initiative and supported it from the start. The local administrator, who has political responsibility for the project, brought together all the organisations involved in the local tax procedure (including the local Centres for Fiscal Assistance (CAF) and the professional organisations of tax consultants) to explain the basic idea. Later, the partners made an official presentation of the project to the other departments of the municipality and to the citizens in a meeting open to the public.
The project is the first step towards a radical and permanent change in the management of local taxation, and is expected to include the establishment of a one-stop shop for the users. This will address internal co-ordination problems and save time for both the citizen and the staff. It will ensure that the citizen is no longer required to deal separately with the different departments of the local authority.

A strong customer-oriented strategy has provided the basis for changing the old bureaucratic methods. Not only have the users been involved in all the phases of the project, but their needs have always been the focus of attention and they are constantly surveyed for suggestions for improvement. The most significant change caused by the project is the establishment of a co-operative relationship between the local administration and the professionals involved in the tax procedure.

The commitment to change is widely shared inside the administration thanks to the full support of the local political authority, the co-operation of the IT department of the municipality and the private company which has provided the necessary technology.

A work group was created to develop the project guidelines. Representatives of the users’ organisations involved in the project formed this group and they have continued giving their contribution to the project. The municipality has constantly taken their opinion into consideration.

A review of the project is currently under way, concerning widening and improving the methods of electronic payment.

The municipality of Prato is committed to several initiatives aimed at creating an integrated IT infrastructure connecting public and private stakeholders. It will provide a database system for the sharing of information, allowing the information to be made available to the public, and will offer constant communication with the citizen.

The strategic goal of the e-government initiatives of the municipality is to make the management of services more relevant to the citizen by progressively reducing bureaucracy, and to foster citizen participation in managing and making the most of the area.

The management of the online tax project has been carried out by a team that included tax professionals who are not part of the local administration. The team worked within a non-hierarchical structure that avoided bureaucratic methods of decision-making. All decisions are taken through informal dealing among the partners and are always shared. Strong leadership ensures the effectiveness of the actions. The local manager who first suggested the project, the director of the revenue department of the municipality, has taken care of the management and has personally provided the leadership, stimulating and co-ordinating the project team.

The project itself has been run as a pilot, with a view to eventually extending its results to the whole taxation system across the municipality. This strategy has worked, thanks to the strong commitment to innovation in the municipality. To take full advantage of the outcome, the project has followed the Ministry of Finance standards for taxpayer declarations. This increases the opportunities for reuse of the project results. The software used for this project could, in the future, be considered as a common standard.

The municipality has a contract with a private company to provide the necessary software. The project has also been included in the agreement that the municipality signed with ‘Servizi Interbancari’ to allow electronic payment in municipal projects.

Good relationships inside the project team and among the other departments of the municipality have been built on clear communication of the objectives and expected benefits of the project. The rapidity and the efficiency of the project implementation have encouraged the municipality to continue its support and ensured staff motivation.

One of the main pillars is the implementation of a specific strategy for the organisation and sharing of information. All the information relevant to the ICI tax declarations are saved in the municipality’s database, which is accessible by the users. They can view, modify and update the data direct, where it concerns them or their clients. The project platform allows users to create their own electronic archive for their tax declarations and to submit it to the municipality. The continuous updating of the information reduces the risk of mistakes in the procedure.
Conclusion

The main lesson learned from the implementation of this project is that the good performance of an initiative depends on the real co-operation of all the participants, which is in turn related to clear understanding of the benefits received.

In this respect, the process of implementation of the ICI Online project provides a model example. First of all, the survey of the users’ needs and problems has been crucial both during the planning and throughout the implementation of the project. The process of constantly adjusting the service through the participation of qualified users has also been of great importance. This approach has ensured the delivery of improvements in the quality of the service and clear advantages for all the parties in time and cost savings and reduction of errors in the procedure. The project has also increased the internal efficiency of the administration.

Finally, thanks to this project, the relationship between the local administration and the citizen has improved, starting a virtuous circle of collaborative interaction. The case shows how ICT can be a powerful influence in bringing the local authority closer to the citizen and to eliminating bureaucratic obstacles. This is possible when the use of ICT is supported by a strategic vision: when it leaves behind the traditional concept of administrative procedure and adopts an approach based on continuous, peer-to-peer dialogue. It is possible when the use of ICT aims to reach a common problem-solving attitude, taking into account the needs of all the stakeholders.
Abstract

In the town of Jesi, development of a civic network has provided local people with extensive opportunities to participate in debate about their services and local affairs. It has also provided a comprehensive database of information about Italian laws that is referenced by people across Italy. Both of these facilities are providing the public with greater access and information about their government (centralised and locally-based) and its services, and offering the opportunity for citizens to become involved in public debate.

www.comune.jesi.an.it

Introduction

The thriving and elegant town of Jesi, in the region of the Marche, boasts a sophisticated old centre and lively cultural life. It is set between the Appennine mountains and a succession of gently-rolling hills and flat plains crossed by rivers, facing the Adriatic Sea. The regional capital is Ancona.

The activity of the municipality of Jesi in the field of e-government started in 1996 with the ‘Aesinet civic network’ project. The civic network was implemented within the framework of a project to develop the information system of the municipal authority with the joint aims of communication and innovation. Aesinet was designed to be a public service through which the municipal authority would provide citizens with information on its activities and access to its internal systems. In addition, it was meant to put the citizen in a central position in civil society, by promoting debate on government and, where appropriate, on experimental forms of electronic democracy. Aesinet started to provide these facilities in 1997.

One of the services provided by the network is an online database of Italian laws that was made available in March 1998. Jesi is the only local administration in Italy providing this free of charge service which has thousands of web accesses from all over the country.

The study focuses on the Aesinet initiative, both as an example of an efficient customer service and as a possible way to foster democracy by bringing citizens nearer to the institutions of government.

Vision

The goal of this initiative is clearly stated:

To improve the internal efficiency of the administration while communicating to the citizen the quality of the local government, bearing in mind that the local authority plays an important role in fostering the Information Society in its territory.

To achieve this goal, the local authority focused its action on four main objectives:

● promoting cultural change both inside the municipal administration and among the citizens

● fostering technological innovation

● spreading the use of new communication and interaction technologies

● creating a new democratic space for discussion and interaction.

As the main goal was to bring the City of Jesi into the Information Society, a very strong effort was made to gain the agreement on this goal from the whole community. From 1995 to 1997, the Internet was still almost unknown to the general public so that the municipality of Jesi had to face the challenge of increasing citizens’ awareness of the opportunities coming from this communication tool.

For this purpose, the local authority set up seven public Internet points. These free of charge Internet access points have been and still are a particularly effective tool to bring the citizens closer to the civic network and to keep them appreciating its services. The access points are placed inside public administration offices and allow citizens to browse the Internet with the assistance and help, when necessary, of a specifically-trained staff.

The involvement of the citizen, together with consultation and promotion aimed at specific target groups — such as schools, civil associations and enterprises — has made an important contribution to the sharing of values and therefore to the success of the initiative.
Leadership

The municipality of Jesi is well aware of issues of leadership. In particular, while carrying out the Aesinet initiative, it became clear that, to work effectively and efficiently in a network, local government needed to abandon the old bureaucratic procedures that used to be a feature of public administration. The local authority of Jesi considered that it had to develop an open, de-centralised and flexible approach based on transparency. This new approach, supported by the latest developments of legislation that have focused on devolution of powers from central to local government, has allowed the municipality to speed up the decision-making process.

Partnership has also been taken into consideration by the municipal authority when the initiative was set up. The project of a civic network needed technological partners and for this reason, since the very beginning of the project, the municipality sought the collaboration of CINECA (Inter-University Calculation Centre of Northern and Eastern Italy), the Centre for IT Services of the University of Ancona, and OMEGA Generation, a private company from Bologna.

Management

The municipality has a positive attitude towards long-term developments. Jesi participates in international European projects such as Net for the Nets, co-financed by the Fifth Framework Programme for Research and Technological Development. Recently, the municipality of Jesi has been invited to join a partnership with the National Authority for IT in Public Administration.

The Jesi experience proves to be particularly significant for the quality of its services. The network provides the citizens with discussion lists and forums, email services and direct access to administrative procedures. One of the services provided by the Aesinet civic network is the online Italian official journal. Thanks to this service, the municipality’s website is the most visited of Italian municipality websites: 441,683 between November and December 2001.

Infrastructure

A great effort has also been made to involve all parts of the municipal organisation in the initiative, to gain their commitment to change. At first, the staff acted as if the initiative did not concern them; the management of the project was soon aware that no effective result was to be reached without a thorough re-designing of internal organisational processes. For this purpose, a project of reorganisation involving technological infrastructures, management and internal communication started in October 1997 and is still ongoing.

Particular attention has also been paid to the development of staff and skills, above all by training and continuous learning activities. A dedicated team has been selected and trained to carry out the civic network project, while all staff employed by the municipality have attended IT training courses. Jesi is now considering the creation of a centre for continuous training, dissemination and technical support in the use of IT. The centre would be a partnership with other public administrations and private companies and would be available to citizens, the educational system and not-for-profit organisations.

Conclusion

The case of the Aesinet civic network has been analysed as an example of a particularly successful initiative, not only because it provides information and public services through IT but also because it encourages interaction between citizens and government. The high number of visits to the website and the participation of the citizens to the open debate through the Internet, testify to this success.

In conclusion, it can be said that the clarity of goals, the commitment to change and the sharing of values seem to be the key success factors of this initiative. To face the challenge of a global information society, the local authority has chosen to keep a close and direct contact with its territory and its citizens. It can therefore be said that, by considering the Internet as a real and effective means of interaction with the public, along with the traditional ways, the local authority contributes to the achievement of the objectives of democracy.

Author: Silvia Fracchia (Formez)
There are 496 municipalities in the Netherlands, 269 with a population of less than 20,000 and 168 with a population of 20,000 to 50,000. Amsterdam is the most highly-populated municipality with 730,000 inhabitants; the smallest is Schiermonnikoog with 1,000 inhabitants.

In the decentralised unitary state of the Netherlands, there are three tiers of government: central government, provinces and municipalities. While central government sets out national policy, the provinces and municipalities have autonomy to take initiatives in any field where there are no restrictions by laws issued by a higher tier authority. Municipalities also implement national legislation in the framework of joint rule with the central government.

A wide range of public services is delivered by municipalities including social services, environmental care, spatial planning, education, cultural affairs, public health and many other services such as integration of refugees.

At national level, the main drivers for developing e-government have been set out in the strategic document ‘Contract with the Future’, which was tabled in Parliament in May 2000. The key policy document, ‘The Electronic Government Action Plan’, was sent to Parliament in 1999, followed by action plan progress reports in the years 2000 and 2001.

Under this e-government programme, the main targets are:
- at least 25 per cent of public services should be delivered electronically in 2002 at both national and local level
- all municipalities should be online by the end of 2002.

The first target has been met; the latest figures show that more than 25 per cent of public services can be delivered by means of the Internet. At the beginning of 2002, almost 80 per cent of the municipalities were online. It is expected that by the end of 2002 the remaining 20 per cent will be online too. The year 2002 is a crucial year for the further development of e-government in the Netherlands. Following the elections for the municipal councils in March 2002 a new administrative four-year programme will be drawn up in every municipality.

The central government has been carrying out key work on the further development of its back-office infrastructure. Achievements include the implementation of a government-wide Intranet, initial development work on an electronic identity card and a public key infrastructure. The ongoing programme ‘Streamlining Key Data’ aims to improve data flows between organisations and ensure that citizens and business are required to submit the same information only once to government. A system of authentic registrations has been developed, eg for an individual or a business.

The government portal website, which was launched in September 1999 and upgraded in January 2001, enables all government information to be accessed from a single access point. Information can be requested for specific postal districts or cities.

The ‘Public Counter 2000’ programme launched in 1996 provides a nationwide network of desks providing information, products and services to citizens and business without requiring them to be referred on. Counters dealing with business, building and construction, care and welfare were launched in 2000. Pilot projects such as this aim to integrate services at federal, municipal and local level.

The figures below demonstrate the rapid growth of Internet penetration in the Netherlands, particularly during 2000.

<table>
<thead>
<tr>
<th>Month</th>
<th>Percentage</th>
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<tr>
<td>April 1998</td>
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<tr>
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<tr>
<td>February 2000</td>
<td>28%</td>
</tr>
<tr>
<td>November 2000</td>
<td>46%</td>
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Authors: Johan van der Waal (VIAG), Jeroen Stoop (VNG) and Gary Grant (IDeA)
Zoetermeer — experimentation in a growing city

Abstract

In a city that has experienced recent massive growth, the city council of Zoetermeer has conducted a number of e-government experiments aimed at meeting customer expectations and strengthening local democracy and participation. These experiments, combined with the experience of developing a long-term community strategy, have given the authority an understanding of the future possibilities that e-government may be able to deliver, and a solid base from which to build on.

Introduction

The City of Zoetermeer is one of the so-called ‘growth cities’ in the Netherlands. In the last three decades, it has been transformed from a village with 10,000 inhabitants into a modern city with 110,000 inhabitants. This growth is the result of a national government policy of creating new living areas within the densely populated heart of the Netherlands. Zoetermeer is strategically situated between the four main cities of the Netherlands. The city has also succeeded in attracting economic development, especially in the field of business-to-business services and information and communication technology (ICT).

The city council

Along with the fast growth of the city, the local authority has also strongly grown within a relatively short period. It therefore has some special characteristics that are not comparable with an average Dutch city of this size. The organisation has a flat management structure with relatively few hierarchical levels and the style of governance can be characterised by decentralisation, integral management and self-steering and co-ordinating teams. Departments dispose of lump-sum budgets and allocate budget for e-government initiatives individually. However, despite the decentralised character, the organisation has a corporate-wide and rather homogeneous ICT infrastructure compared to the often diversified and decentralised infrastructure in other large cities. Since the beginning of the growth of the organisation, the technical infrastructure has been supplied and managed by one service department. Information policy is set out at concern level, based on input from the departments.

In 1999, the city council of Zoetermeer initiated the development of a vision and masterplan for the year 2025. First, a vision on living and working in Zoetermeer was developed. This vision contains a set of coherent goals aimed at improving the quality of the community in the broadest sense. The goals are:

- a city with 130,000 inhabitants
- a growth in employment from 45,000 to 70,000
- ensuring 30-minute connections to the four main cities
- the strengthening of the social structure
- the strengthening of the city culture.

The vision and goals are the result of an extended process of thinking, discussions and rethinking in which many members of the community such as citizens, local businesses and staff participated. This process was also facilitated by the municipal website on which all available information was published and through which citizens and other interested parties could contribute to the discussions. Based on these goals, the ‘Masterplan 2025 for town and country planning’ was developed. The aim of this masterplan is to ensure future decision-making is more pro-active and strategic. In addition, the masterplan is a communication tool to discuss long-term developments within the city and its various communities.
The focus of the Masterplan 2025 is on the physical infrastructure for living, working and transportation within the city. The consequences of ICT are still undervalued in the document, as the experience in Zoetermeer has been that most citizens and other stakeholders find it difficult to identify and to discuss the potential of ICT for the city and its government. This theme will be worked out in the following years. At present, neither citizens nor members of the city council provide a strong impulse to invest in e-government. This can perhaps be partly explained by the fact that opinion polls and citizens panels show a reasonably high level of satisfaction in the authority and its services. On the other hand, it has been acknowledged through the process of developing the Masterplan 2025 that ICT can contribute to interactive decision-making.

**E-government initiatives**

While the impulses of citizens and other stakeholders may be modest, the City of Zoetermeer is pushing ahead with several pilot e-government initiatives. The major and political leaders within the council are fully aware of the potentials of ICT for the city and its government. As an example, Zoetermeer hosted one of the first municipal websites in the Netherlands to be developed, in co-operation with a local bank.

In Zoetermeer, ICT is regarded as an incentive to rethink processes and products of local government. The new means of communication not only facilitate another way of working but also can strengthen existing ones. Customers are used to more information, available 24-hours a day. As a consequence, ICT will not only influence the relationship between government and citizens, but also the way government itself is functioning.

The development of e-government in Zoetermeer can be typified by an ‘outside-in strategy’. Last year, a modern front-office for ‘one-stop shopping’ with cross-departmental services was created in the city hall. The city website will be redesigned in the same way. Through this approach, both citizens and government employees are triggered to rethink government services and the processes needed for these services. At present, however, awareness still has to be raised, both in and outside the organisation. While the website provides lots of information for a large number of interest groups and all municipal departments contribute to it, the interactive features are still limited. The next step will be an interactive website that not only supports the authority but also the community as a whole. To create this website, the City of Zoetermeer explores the possibility of working with local ICT businesses.

**Project: community platform for local media and ICT initiatives**

A few years ago, a special fund was created for new and innovative initiatives in the field of ICT and local media. This fund is governed by a ‘platform’ in which the authority, local businesses and local citizen organisations are represented. Community groups can bid for funding for projects or initiatives that contribute to better use of media and ICT within the community. Successful projects to date have been an ICT learning programme for the elderly and a multimedia project in the district libraries.

In several parts of the organisation, ICT is used to improve government services. However, ICT can also facilitate increased interaction between citizens and public servants. A good example of this is the special youth page on the city website. Started a year ago as a modest information portal for the youth, it has yielded many hits and comments. Based on the comments of the visitors, the site was reshaped and expanded. Now, various municipal departments contribute to the site. Here, customer and supplier co-operated to rethink government services.

Public responses like these can motivate public servants to think and work across traditional boundaries within and outside the organisation. Another example of this is the email newsletter which was initiated by the department of culture and which attracted many replies. The responses have provided the authority with further insight into the cultural interests of the community. This has made it possible to begin to provide customised information to citizens.
**Project: e-democracy**

The mayor of Zoetermeer was one of the first in the Netherlands to start a debate on the Internet. The number of citizens who responded was modest but the debate provided useful experience for the authority. It was found that local topics such as the development of a local Chinese theme park attracted most attention. Overall, however, the legitimacy of the outcomes of online discussions are questionable as it is difficult to identify participants properly.

Accordingly, the municipality has evaluated these experiences and has formulated a policy for further developing e-democracy. For the moment, ICT will be used to enhance the system of representative democracy, rather than to change or replace it. Websites, email newsletters and online discussions will be used to help improve the work of the city council and to facilitate local political parties. The aim is to stimulate communication and information exchange between citizens, interest groups and council members. ICT will also be used to make the political process and government processes more transparent.

**Conclusion**

The Masterplan 2025 offers the City of Zoetermeer an excellent opportunity to further develop e-government in a number of ways. First, it offers insight into the long-term developments within the city and its communities which can be used for determining the future needs of the citizens. Second, the process of developing the Masterplan has been a learning process in strategic and long-term thinking for all stakeholders. The lessons learned in this process can equally be used in the development of an e-government strategy.

As described above, the authority has conducted several experiments with e-government. The next step is the development of broad scale e-government applications. However, the experiments have shown that this development requires substantial organisational change. The flat management structure and integral management approach that has been successful during the period of strong organisational growth may need to be adjusted. Information sharing within the organisation and the delivery of seamless services is still too frequently dependent on the initiatives of groups of employees. A more horizontal approach will require more corporate-wide guidelines – and corporate funding of key e-government projects.

Authors: Jeroen Stoop (VNG) and Hans Westrate (VIAG)
Abstract
In the face of the uncertainties over customer demand and technological possibility which e-government gives rise to, it is possible for local authorities to become overwhelmed by the agenda — and often this can lead to cultural inertia. In this study, one municipality in the Netherlands has attempted to overcome these uncertainties by adopting an incremental ‘learning by doing’ approach to the implementation of e-government. To do this, it is working to build an infrastructure to create this learning environment in which both the community and the organisation can gradually shape local e-government.

Introduction
With 128,000 inhabitants, Amersfoort is the seventeenth largest city in the Netherlands. Economically, it is an important city with a high level of employment and the third-highest disposable income per capita (among cities with more than 100,000 inhabitants). It is situated in the centre of the transport network. The long-term goals of the municipality are to create a city that offers a wide range of facilities for comfortable living and working and also to deliver excellent government services.

The municipality of Amersfoort fully acknowledges the need to modernise government services and has expressed commitment to the whole organisational change that is needed for this modernisation. However, the municipality has found that the majority of stakeholders in the e-government agenda — citizens, politicians, staff and others — find it difficult to articulate the future needs and wishes of the community. It is felt that the full implications of the ICT revolution for civil society and local government are far from clear. The municipality has therefore set out an approach to shape itself into a learning organisation that will work with the community to articulate and develop a local vision for e-government.

The municipality of Amersfoort already has a clear strategy for customer consultation. Citizens can express views regarding government services in various ways. An independent citizens’ panel monitors the quality of products and services. Citizens are regularly asked to give their opinion on various local issues and, for the last two years, it has been possible to submit complaints about public areas and environmental issues by email to the particular departments or private sector service provider involved. This process has been deemed successful by both citizens and the departments and organisations concerned. From 2002, citizens will be consulted regularly regarding their wishes and capabilities for using ICT.

The municipality of Amersfoort has considerable experience in collaboration with public and private partners to deliver seamless services from the citizens’ point of view. Amersfoort has developed a policy to privatise or outsource operational activities wherever possible. Goals and ambitions are translated into contracts with third parties, and service levels are measured and evaluated. Until recently, this policy was focused on the general services that the municipality provides and not specifically on the further development of local e-government. However, this has now changed and plans are developing for co-operation with other organisations to encourage the use of ICT in community development and the delivery of cross-government services, particularly in the field of public health.

In 2000, the community council initiated a broad consultation process for the development of a vision for the city in 2015. This exercise has yielded a ‘vision’ which contains a wide range of priorities and perspectives of community members. The council found it difficult to translate the various (and often inconsistent) wishes and perspectives of citizens into a set of clear aims and goals. Therefore, instead of putting a great deal of effort into the development of a ‘grand design’, the municipality has opted for a learning strategy and a ‘step-by-step’ development of e-government in Amersfoort. This outcome has highlighted the continuing importance of the citizen consultation policy. The improvement of services and further development of e-government are now also a recurring topic on the political and management agenda.
Critical success factors

Identified as critical to the success of this approach to develop a shared vision for e-government are organisation, leadership, management, technical infrastructure and people. The municipality of Amersfoort is taking forward concrete measures to address these factors.

Organisation

The traditional organisational and management structure is still in place. The organisation does not want to start a large-scale restructuring process while the contours of e-government are not clear. Rather than turning the whole organisation upside down, a growth scenario is preferred. However there is strong commitment to cross-service planning in the development of services to citizens. All departments within the organisation have agreed on a ‘step-by-step’ plan to develop e-government services. The current phase is to create an infrastructure on which e-government services can be further developed. A cross-departmental or ‘horizontal’ group has been formed which consists of employees from all departments. Employees are encouraged to develop improvements and new approaches for government services. Special funding is available for ‘horizontal’ and innovative initiatives.

Leadership

In general, councillors, governors and management have some difficulty in making decisions on ICT matters. The language used in ICT proposals is often difficult to understand for non-technical people and the fast, product life-cycles cause uncertainty. Management acknowledges the fact that traditional planning and funding methods are no longer appropriate. In Amersfoort’s experience, decisions about e-government require active marketing among the stakeholders within and outside the organisation.

A new approach has been developed which has been proven to receive better support from stakeholders and has reduced the length of the decision-making process. Instead of extensive plans or bid books, ICT proposals are written in non-technical terminology and much more effort is put into understanding the visions and perspectives of stakeholders involved in the decision-making process. The policy is to build strategies on small but visible early successes which, in turn, support further actions.

Management

The organisation has a good record in project management. A project management policy has been developed to create the necessary expertise within the organisation. The corporate training programme, backed up by the Intranet, provides methodologies and examples of best practice across all departments. Equal attention is paid to the importance of contract management. Several years ago, Amersfoort introduced a system of contractual relationships within the organisation. The delivery of municipal products and services is organised by means of contractual arrangements between the political managers and the various departments and agencies.

A newly-created database of contracts supports the development of contract and risk management with parties within and outside the organisation. This database has improved contract management and is a source for continuous learning.
Technical infrastructure

Amersfoort has already invested considerably in a corporate ICT infrastructure that seeks to provide maximum opportunity for sharing data and systems. The aim is to improve the way the municipal organisation and council fulfil their duties using ICT. The creation of a corporate infrastructure has required corporate thinking and standardisation. This has meant a reversal of the highly-decentralised approach which dominated ICT usage in the 1990s. Amersfoort has succeeded in establishing a corporate infrastructure through corporate funding and a strong service approach in corporate ICT governance. However, further investments are still necessary and an assessment of the current technical and organisational ICT capabilities and future functional demands is being conducted. ICT management is further actively participating in national projects that support the creation of a consistent ICT infrastructure for the delivery of local e-government. Examples of good and best practices from other municipalities are studied and incorporated when possible.

People

The human factor is perhaps one of the most important critical success factors for the successful development of e-government. The organisation can deliver the technical infrastructure but the employees have to deliver the content. Amersfoort has taken forward a number of initiatives to stimulate the necessary change process. For example, the ‘Amersfoort Academy’ offers a corporate training programme for new employees aimed at developing personal skills, team working and corporate or ‘horizontal’ thinking. Furthermore, Amersfoort has introduced a policy of continuous education for all employees. A wide range of courses and seminars is offered which enables employees to improve their skills and competencies.

Conclusion

The City of Amersfoort has adopted an e-government strategy which can be typified as a step-by-step learning process — as well as an inside-out approach. Both the community and the municipal organisation have yet to explore fully what e-government can offer them, but the organisation has succeeded in creating a set of conditions for the development of e-government.

Many steps have still to be taken but the first results are promising. In December 2001, an ICT innovation fair was organised at which employees were invited to show to their colleagues examples of how they used ICT to improve their work and to deliver better services to the community. The response was overwhelming. Many employees were eager to show their ideas and a large number of employees visited the fair. As a result, employees from all departments and organisational levels exchanged ideas and applications. Management is now focusing on the question of how these outcomes can be sustained and rolled out on a larger scale.

Author: Jeroen Stoop (VNG)
Netherlands: e-government developments within 35 local government authorities

**Abstract**

The purpose of this survey is to provide an overall picture of e-government developments in 35 local authorities with populations of more than 70,000 (see Figure 1). The four largest authorities, Amsterdam, Rotterdam, Utrecht and Den Haag, are not included.

Co-ordinators from the information and automation divisions within 24 local authorities were visited and interviewed. The ICT and, when available, e-government plans of all 35 local authorities were examined.

### Government Inhabitants

- Gouda 71576
- Spijkenisse 71831
- Roosendaal 74069
- Vlaardingen 74332
- Amstelveen 77737
- Schiedam 78169
- Hengelo (o) 78908
- Helmond* 79340
- Hilversum 82308
- Deventer 82621
- Leeuwarden 88762
- Alkmaar 92902
- Delft 95268
- Heerlen 95367
- Ede 101542
- Zwolle 104431
- Emmen 105497
- Zoetermeer 10899
- Haarlemmermeer 109377
- Leiden 117389
- Dordrecht 119462
- Maastricht 121479
- Amersfoort 123367
- ’s-Hertogenbosch 128009
- Zaanstad 135126
- Almere 136157
- Arnhem 137222
- Haarlem 147617
- Enschede* 147832
- Nijmegen 151864
- Apeldoorn 152860
- Breda 159042
- Groningen 171193
- Tilburg 190559
- Eindhoven* 199877

* state-subsidised project for stimulating e-government

### Summary of findings

#### Vision

Local authorities with a clear e-government vision and with support from their council and management are ahead in the process of implementing local e-government.

#### Leadership

Forty-eight per cent of the local authorities examined are not getting support for local e-government from the top of the organisation.

#### Management

- Local authorities have problems in accepting and adapting to the organisational changes required for e-government.
- Most local authorities do not have skilled people available to break through traditional processes.
- Local authorities do not have enough qualified procurement professionals and qualified technical personnel within their organisation.
- The autonomous character of Dutch local authorities and their hierarchical management often causes obstacles for integration and co-operation between the several departments.
- Although local authorities agree on stimulating co-operation between them, they are unable to compromise on important issues.
- Information sharing within and between departments, and accessibility and management of content is problematic.

Figure 1: Dutch local authorities with more than 70,000 inhabitants
Infrastructure

● Integration of databases is hampered by incompatible data standards in legacy systems.

● The most important ICT needs are standardisation of systems, middleware, workflow and content management systems, interfaces and customer relationship management (CRM) systems.

● The cost of ICT with the prospect of only long-term benefits is making it difficult for council and top management to see the necessity of funding local e-government projects.

Local e-government progress

● Most local authorities are in the transitional stage between information and interaction.

● Offering interactive services is most mentioned as number one priority in implementing local e-government.

● Government products and services that do not require identification, that have no interaction with back-office systems and that directly improve services to customers are the most likely candidates for online, interactive services.

● Public service, surveyor and tax departments are the departments most actively implementing local e-government.

Introduction

This survey report is presented in two parts. The first part reviews the most important issues that interfere with establishing local e-government. The second part shows the current e-government service situation and reviews the most mentioned e-projects within the examined local authorities.

The barriers to realising local e-government, as expressed by our interviewees, are summarised in Figure 2. Lack of ICT knowledge — awareness of the opportunities offered by ICT — and unsuitability of current systems and databases are the most important barriers mentioned. Uncertainty about legislation and speculation concerning centralising certain government departments constrain change and add complexity to the process of implementing local e-government.

Vision

Obtaining support from councillors and management starts with the development of a clearly-formulated vision. All our authorities have long-range ICT plans in place. Not every local authority has yet formulated a clear local e-government vision and project plan. Some 20 per cent of the examined authorities indicated they do not have a project plan ready. All of these authorities stated that they are in the process of developing a project plan, aiming to have their plan ready by mid-2002.

Fast-moving technologies and uncertainties about legislation, identification on the Internet (public key infrastructure) and other revisions of law are making it hard to see how the local e-government process will proceed. As a result, local e-government visions are formulated for the short term, for a time period of three to four years.

Local authorities with a clear e-government vision and with support from their council and management are ahead in the process of implementing local e-government.

Leadership

Committed and informed executives and councillors are a prerequisite to make the step to a successful e-government. Thirteen of our interviewees stated that they were getting support from the top of the organisation. This means 48 per cent do not get the support needed to establish local e-government.

Figure 2: Barriers to local e-government

Lack of employees for realising e-government
 Complexity management ICT in an open setting
 Insufficient co-operation with government agencies
 Insufficient protection
 Splitting experiences with ICT
 Lack of ICT know-how with policy-makers
 Unsuitability of current systems
 Unsuitability of databases
 Lack of possibilities to changes
Management

To serve the needs of citizens and customers better, a switch from a supply to a demand-driven organisation is needed. This requires changes in the traditional organisational structure and needs a different kind of management approach. A demand-driven organisation means a different way of working which requires a redesign of business processes. Until now, most authorities have chosen not to start a large redesign programme. They prefer to wait until there is more clarity about what the local e-government scenario is going to be.

In general, local authorities do not have enough skilled and qualified procurement professionals and qualified technical personnel to establish local e-government. Many local authorities indicate that finding suitably-qualified employees within the organisation is difficult. Enthusiastic local e-government ‘champions’ are needed to establish e-government and generate commitment within the entire organisation.

Although ICT is a key instrument in the local e-government process, most ICT employees are already struggling to keep up with ongoing operational work. This statement emphasises that local e-government is not just something you do alongside existing workloads. A successful implementation of local e-government requires people with the right kind of skills and competencies and needs leadership that can stimulate teamwork and a corporate way of working.

The difficulties most commonly faced by ICT departments are presented in Figure 3.

Dutch local authorities are organised into several autonomous departments. Co-operation, integration and sharing information between these departments is a prerequisite for local e-government. In most cases, departments are reluctant to give away some of their autonomy. This makes it difficult to exchange and to share information. Lack of integration and co-operation means some departments are moving forwards faster in implementing local e-government than others.

Collaboration between different local authorities can create surplus value for implementing local e-government. The so-called ‘100,000 plus group’ (consisting of local authorities with more than 100,000 inhabitants) are currently sharing information. Lack of integration and co-operation means some departments are moving forwards faster in implementing local e-government than others.

Digitalising governmental products and services means work processes need to be reorganised. Technical changes and, even more important, changes in human work processes have to be made. Over the years, managing information has not been a core area of competence within local authorities. Today, the use of ICT is making political and government processes more transparent. This transparency exposes processes within local authorities that are neither effective nor efficient. Restructuring of information processes, information sharing within and between departments, improved accessibility and management of content are issues that need to be put on top of local authorities’ political agendas.

Infrastructure

Crucial to local e-government is a sound, connected ICT infrastructure. A proactive approach to customers requires integration of databases. At this point, it appears that systems do not integrate and are obstructing the process of implementing local e-government. Authorities often use various kinds of systems from different IT suppliers. Systems from the two largest IT suppliers do not always integrate, which makes exchanging data between them very difficult.

Local e-government requires integration of back- and front-office systems. Local authorities often work with functional information systems that do not link with the integrated processes of the front office. Middleware is needed to integrate the processes. Standardisation of systems, data and processes to create a corporate ICT infrastructure with maximum opportunity for communication and sharing data is required. The state-subsidised ‘Superpilot’ project aims to offer standards and many local authorities are adopting a ‘wait and see’ approach.

The most mentioned current ICT needs are:

- standards (systems and processes)
- middleware for integration of front- and back-office systems
- generic common information architecture
- workflow and content management systems
- interfaces
- CRM systems.

Funding local e-government is often mentioned as a problem. For successful implementation of e-government, large investments have to be made. Funding is not often available within authorities where the council and top management have not grasped the importance of e-government.

Figure 3: Difficulties faced by ICT departments
An accurate description of total expenditure on ICT within local authorities is difficult because ICT expenditures are often split across several parts of the organisation. The average ICT expenditure across the 35 authorities by the year 2001 is estimated to be 1,113,103 euro per authority. ICT budgets for 2002 are estimated to be 1,360,000 euro.

Some 52 per cent of the examined authorities have raised a special e-government budget, although they remark that it is hard to define what can be described as part of the e-government process. Because of this, some authorities choose to locate e-government costs within departments instead of raising a special e-fund.

The following classification is an indication of available e-government funds for the year 2002 within the 52 per cent of local authorities that do have special funding (including the funds of the state-subsidised Superpilot authorities).

<table>
<thead>
<tr>
<th>Euro</th>
<th>Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,500,000 – 2,500,000</td>
<td>27%</td>
</tr>
<tr>
<td>500,000 – 1,500,000</td>
<td>44%</td>
</tr>
<tr>
<td>300,000 – 500,000</td>
<td>29%</td>
</tr>
</tbody>
</table>

Local e-government progress

During the survey, interviewees were asked to make an indication of when they expect to get to the different stages of Gartner’s e-government development model. Almost unanimously, they expect to reach the stage of **integration** by the year 2004. Only one interviewee expects the final line will be reached by the year 2007. Most local authorities locate themselves in the transitional stage from presence to interaction. A few of them are just starting on transaction.

Current functionality of the websites within the 25 visited authorities are reviewed in Figure 5. Only one government is offering citizens the possibility to look into personnel information.

![Figure 4: Gartner’s e-government development stages](image)

![Figure 5: Functionality of local authority websites](image)

All 35 authorities have a website. These websites give citizens information about governmental products and services. A few are offering the citizen an opportunity to interact. In the first period of developing local government websites, many local authorities chose to host their site externally. Now, we see authorities are taking over, doing the hosting themselves. The complexity of implementing local e-government has made it necessary to manage the site and the content inside the organisation.

Many authorities are willing to co-operate with local ICT businesses. Partnerships will increase knowledge and expertise in using ICT as a key instrument for implementing e-government.

Until now, most local e-government activities have been opportunistic. E-government is just starting to become the issue of the day. Projects that directly show service improvements for citizens are getting priority attention. Positive reactions of customers will help to make e-government more widely visible and integrated into the organisation. Most local authorities think the year 2002 is going to be the turning point when all authorities become aware of how important local e-government is going to be.
Offering interactive services is an aspect of e-government that directly improves citizens’ services and is most perceptible to employees. It therefore has priority within most authorities (Figure 6). Although most are giving interactive services a number one position, they all remark that all other activities are more or less prior conditions to offering interactive services.

Criteria most often used by authorities to select candidate products and services for online, interactive development are:

- products and services that do not require identification
- products and services that have no interaction with back-office systems
- products and services that directly improve services to customers.

Three different departments are most active in offering interactive services, namely public service, surveyors and tax departments. Projects underway or anticipated to start soon include:

**Public service department**
- copy of registration in government administration, notification of birth and death
- notice of removal
- uniform complaints system
- ability for electronic payments
- enquiry and adjust licence (eg parking, cutting-down trees)
- agendas to make appointments (eg planning weddings, refuse passports)
- online discussions and chat sessions
- online broadcasting of council meetings, weddings, etc

**Surveyor department**
- draw-out development plans
- registration of building projects
- enquiry in calculating rent grants

**Tax department**
- calculating indexes (eg real estate tax)
- registration government taxes (eg dog licence)
- requests for remission

Conclusions

Local authorities agree on what they see as opportunities and threats in realising local e-government.

**Opportunities:**
- creating support and commitment by council, management and employees
- standardisation of systems and processes
- co-operation between local authorities and IT companies.

**Threats:**
- social change within the organisation
- no commitment from top of organisation
- lack of qualified and right-skilled people

Issues faced by the larger Dutch local authorities for the implementation of local e-government are more or less the same. Differences relate to the unique circumstances and characteristics of local authorities, but are in a large measure related to the specific municipal cultures and ways in which the individual local authorities are organised. Not every local authority yet has full awareness of the need for changing their government services. They all know that modernisation of local government services will bring along large-scale changes within the organisation itself. Cultural and technical transformation of traditional local government processes are required, using ICT as a key instrument. Creating commitment and support to enable the changes are often barriers to implementing local e-government. Many councillors and managers do not understand the importance of ICT. Lack of technical skills makes it hard for these leaders to understand the language of ICT and its fast-moving developments.
New Zealand

New Zealand is located in the South Pacific and has a population of 3.9 million. It is served by 86 local authorities, the number having reduced from 675 following the amalgamations and reforms of councils in 1989. The 86 councils comprise 12 regional councils, 15 city councils, and 59 district councils of which five are unitary councils that include regional functions.

Regional councils are responsible for environmental monitoring of fresh water, coastal waters, air and land, bio-security control of plant and animal pests, river management, flood control, regional land transport planning, harbour navigation and safety and regional civil defence preparedness. Territorial councils (district and city councils) are responsible for community well-being and development, environmental health and safety, infrastructure including roading and transport, sewage, water/storm water, recreation and culture and resource management including land use planning and development control.

Central government in New Zealand looks after functions such as education, health services, law enforcement, state highways and social welfare. Local government receives only 30% of its revenue base from central government and therefore raises the other 70% from property taxes and other revenue sources. This has created a certain level of autonomy. The New Zealand government has established an e-government unit with a vision of ‘being a world leader in e-government’. Its mission by 2004 is that ‘the Internet will be the dominant means of enabling ready access to Government information, services and processes’. The e-government vision is to provide a one-stop shop for all government and local government services through a seamless front-office portal.

The objectives of e-government for New Zealand are:
- **Better service** — more convenient, lower costs, more reliable
- **Cost-effectiveness and efficiency** — lower transaction costs and delivery
- **Leadership** — support the knowledge society through public sector innovation
- **Improved reputation for New Zealand** as an information age society
- **Greater participation** by people in government.

The government has initiated a number of key developments (currently 21 projects) to meet these objectives, including development of a government portal; web, interoperability, authentication and metadata standards; and the deployment of e-procurement and public key infrastructure within the secure electronic environment roll-out.

On the wider development of an ‘e-state’, the e-government unit has focused on embracing e-commerce, improving bandwidth to rural communities, addressing the digital divide, and developing closer relationships with non-government organisations and the voluntary sector.

Local government is working closely with central government to ensure alignment between these initiatives and to maximise the leverage of time and resources. Further information can be found on [www.e-government.govt.nz](http://www.e-government.govt.nz). Also see the local government portal [www.localgovt.co.nz](http://www.localgovt.co.nz).

Some statistics on the level of Internet access in New Zealand in 2002:
- Internet access in New Zealand households: 37%
- Total use of Internet, home, work, school: 72%
- Regular users of Internet: 54%
- Local authorities with a website: 95%
- High-speed Internet access availability: 62%
- High-speed Internet access uptake: <4%.

Authors: Gary Grant (IDeA) and Mike Manson (ALGIM)
Abstract

Dunedin City Council has effected organisational and cultural change to create a customer focused organisation. The council has focused on providing integrated service delivery and has achieved this through unlocking the knowledge capital of the council, using internal resources and developing a comprehensive integrated project plan.

Introduction

Dunedin is situated on the East Coast of the South Island of New Zealand. With a population of approximately 120,000, the city is known for its Scottish heritage, a huge influx of wealth from a gold rush in the late 1800s, and more recently as the country's premier centre of learning which is home to a tertiary student population of 25,000. Dunedin City Council decided to transform itself into an e-council with a focus on meeting customers' needs.

E-government initiatives

In 1998, the Chief Executive of Dunedin City Council handpicked a team of individuals who met each week for 8 hours over a period of 18 months. Their role was to bounce ideas and scope a project with a vision for ten years into the future including strategies, business plans, costing and budgets which would become the e-council vision.

This project was named ‘Citizen Direct’, and it encompassed a customer-driven philosophy that looked to create an integrated approach to meeting customers’ needs. This new approach would be achieved through changing the culture of the council, reviewing inefficient processes and adopting technology.

The vision for Citizen Direct is defined as, ‘Dunedin City Council makes it possible for its citizens to achieve what they need, when they need it and in the manner that best suits this need. Barriers of time and place are removed to let the customer decide how they will do business with the Council so that their needs are met.

Thirdly, the customer is enabled to be successful in achieving their goals. In other words, Citizen Direct is about empowering customers and citizens’.

The following factors were identified by the council as drivers for the Citizen Direct project:

- customer needs and expectations are changing
- the Council wanted to be proactive about positioning the organisation for the future

www.cityofdunedin.com
Project and change management

The overall project had three main strands to achieving the transformation:

- customer access and participation
- streamlining and digitisation of council processes
- changes to the organisation and the way people work.

Within each of these areas, there were significant projects that required full-time project management. To fulfil this requirement, senior managers were taken ‘offline’ to oversee the projects, including the IT Manager, HR Manager, Library Manager and Asset Manager. This ensured the programme as a whole did not flounder due to lack of leadership or management skills.

Many of the projects were interdependent and, as the programme progressed, the requirement of a single property database came into particular focus. It was determined that only 52% of the current data was accurate, so work began on raising the integrity property database and linking it to GIS layers. This work laid a solid foundation for a single database for all information relating to property within the council region.

Council structure change

A new council unit called the Knowledge Centre was created by bringing together different parts of the organisation. This initiative was aimed at changing the culture of the council and taking advantage of the potential synergies that existed within the organisation.

The Knowledge Centre combined such activities as records, GIS, land information management, web co-ordination, internal communications, Intranet management, telephone administration, business analysis; and the entire Customer Service Agency including the Call Centre all into the one unit.

The creation of this new unit made possible the key strategic project of introducing a records and document management solution which has brought the vision of moving to a paperless environment a step closer.

Benefits

The journey is continuing but the customer has received enormous benefits to date. Many of these can be seen on the council website. Through the Citizen Direct page, it is possible to set up a person profile. Through this profile, citizens have access to council-held information about them, their property and their ongoing relationship with the council. This information is available 24-hours a day, seven-days a week and is the most up-to-date information that the council holds.

Security for this service involves a unique usercode and password. It does not give access to all the information the council holds as not all information is suitable for delivery via a webpage. However, it does include: rate payments, dog licence, liquor licence, dangerous goods licence, health licence, building consent, resource consent, customer services query, environmental health, ‘fix-o-gram’, seepage.

Other public information is also available on the site such as a link to the New Zealand government electoral site and the council rates book, which provides the legal description of any Dunedin property, who owns it, the land value and value of improvements, plus other details.

Not only has the council personalised and increased public access to information, it has also improved customer access to council services on its ‘Working With Council’ page. On this page, citizens can:

- find out how to make a submission on one of the many public consultations undertaken by the council, such as the draft annual plan
- notify the council if they have a change of address (which needs to be done if they have a relationship with the council, eg as a ratepayer, a library member, a dog owner or a business, etc)
- send a fix-o-gram to get fast attention to problems in their area
- find out what to do in a civil emergency
- find out about the council’s internal authority, its policies and bylaws, meeting minutes and agendas.

Within the public notices section, the opportunity of subscribing to the council’s information services is offered. This is a service whereby updates on specialist areas are sent directly to the citizen by email.

Project lessons

During the course of the project, the following lessons were learnt:

- it is important to work on the business as well as in the business
- the power of people working in teams is considerable and these synergies should be leveraged
- staff have a genuine desire to meet customer needs
- useful and practical ideas do not only come from managers, staff also have a valuable contribution to make and it is important to tap into this knowledge capital
- small and low-cost adjustments to internal processes can often create huge value for the customer
- a single property database with high integrity is crucial to integrated service delivery
- the importance of integrated project planning should not be underestimated.
Conclusion

Dunedin City Council decided in 1998 that it wanted to be an ‘e-council’ and, in 1998, set forth on expanding this vision into a comprehensive integrated project plan called Citizen Direct. Customer service was identified as a key driver. Other external factors were also identified including the changing environment local government operated in, as well as the opportunities new technologies offered.

The new focus on customer service involved creating a conscious culture shift in the organisation. This culture change was achieved in part by encouraging staff involvement in the Citizen Direct programme. Their suggestions and ideas were sought and then the creation of various project teams to implement these helped with organisation-wide buy-in to the new customer-focused ethos.

A change in the council’s organisational structure was also implemented with the aim of improving customer service and further encouraging a change in culture. Key informational sections as well as customer-facing sections were combined into a ‘Knowledge Centre’ with a view to taking advantage of the potential synergies between these sections.

Change management and project management issues were tackled by taking several senior managers ‘offline’. This ensured suitable resources were available to lead and manage the programme as a whole. Several lessons were learnt by the council in the initial stages of the Citizen Direct programme. These included the importance of: releasing the knowledge capital within the organisation by encouraging staff participation; having a property database with high integrity as a central project within the programme; and integrated project planning.

Citizen Direct has created real benefits for the citizens of Dunedin. There is increased ease of access to the council including 24-hour, seven-day a week availability of general and personalised information as well as many services. Furthermore, proactive dissemination of specialist information has become a reality. Citizen Direct is an ongoing programme and is set to deliver further benefits to Dunedin citizens in the future.

Authors: Mike Harte (Dunedin City Council) and Mike Manson (ALGIM)
Abstract
The eight councils of the Auckland region have reacted to common drivers to scope and move towards working in partnership. ‘Shared Services’ within the Auckland region between the eight local authorities is showing the potential for joined-up working in the local e-government arena. The councils have taken a pragmatic and structured approach to the process increasing the probability of success.

Introduction
The Auckland region is made up of four cities (Auckland, North Shore, Waitakere and Manukau) and three districts (Franklin, Rodney and Papakura). With a population of 1.1 million, the region is the most densely and highly-populated in New Zealand. These seven authorities as well as the Auckland Regional Council have been investigating the possible benefits that can be gained from entering a formal partnership for certain services. This programme has been called ‘Shared Services — Councils of the Auckland Region’.
Several drivers have been identified as creating an environment conducive to joined-up working. These include:

- fiscal constraints — the requirement to achieve more with fewer resources
- community demands — higher expectations of citizens and customers
- urban growth and demographic shift into the Auckland region will accelerate growth and place additional pressure on infrastructure
- reducing duplication of costs and investments
- opportunities for cost savings — greater co-operation can release economies of scale and joint capacity building
- significant changes in technology raise opportunities for a collective approach and ‘shared entry’ price arrangements
- increasing collaboration between local authorities in the Auckland region
- commitments to limited or zero rates increases
- greater co-operation with central government.

Shared services
In light of the above drivers, Shared Services has emerged as a key methodology and is based on integrating back-office functions to:

- provide economies of scale whilst maintaining decentralised decision making amongst business units
- leverage standardisation, consistency and integrity of processes to enhance service to customers and citizens
- encourage the development of a ‘service’ culture
- harness technology to improve efficiency.

The primary focus of the Shared Services vision is to focus on those services that have the potential to develop into a formal shared service and that have a service delivery or management orientation rather than those which have a policy development dimension.
A high-level assessment of current processes, technology, structure and culture across all councils in the Auckland region was undertaken to assist in determining the appropriateness for shared services. Some key findings were that:

- the local authorities of the Auckland region already engage in a significant degree of regional and sub-regional co-operation and collaboration
- core business processes are similar between the councils. Corporate support processes (such as human resources or legal services) have a higher degree of variability

www.aucklandregion.com
there is a culture of risk aversion that is common amongst the councils

- different organisational structures exist. Some councils use functional structures, while others use process or matrix type structures or a mix of both. All structures separate policy functions from service delivery functions
- the local authorities are autonomous organisations that differ in size and complexity as well as in their capacity to engage in regional projects
- there is significant variation that exists in the technology used by the councils, including software and hardware, differing stages of maturity and levels of integration. No common platforms exist between the councils except messaging.

**Vision**

The primary objective for Shared Services is to contribute to the efficiency and effectiveness of local authorities in the Auckland region through:
- cost reductions based on economies of scale and better leverage
- improved service through timeliness, quality and cost management of common services
- better-quality information inputs to decision making
- sharing benefits and scarce resources as well as better management of risks across a broader base of citizens and customers
- gaining access to shared technology at shared entry prices.

Benefits to various stakeholders include:
- elected members — unique identity maintained; citizen feedback; online agenda, minutes, documents
- customers — access to a range of transactional services; multiple access channels; personalised information
- citizens — online consultation; personalised information
- property developers — access online (eg GIS); site-specific information; dedicated case managers
- staff — online personnel information; customer information to support services
- line managers — support; access to information to support decisions
- CEOs and senior managers — unique identity maintained; citizen feedback; online agenda; minutes; documents; regional perspective.

**Potential candidates for shared services**

There are a number of potential candidates for regional shared services. However, an initial list of 12 candidates was selected using a set of filters. It is important to establish a robust process of selection to ensure that only the most eligible candidates receive priority and that the best outcomes are obtained from the perspective of cost and service quality. This requires a four-step process.

1. Provide a clear definition of any potential candidate.
2. Use a strategic filter to evaluate the candidate.
3. Undertake cost-benefit analysis of the candidate.
4. Provide an operational specification of the candidate, including a business model and technology assessment.

The most common business processes and services for the councils in the region have been defined, mapped and put through evaluation filters to develop an initial short list of 12 eligible candidates: geographic information systems; procurement; billing/revenue collection; community information/call centres; payroll; sharing and benchmarking customer research; human resources; consent processing; administration of property management for council-owned property; ‘SCATS’ traffic flow management; field/environmental services; core financials.
Implementation strategy

The following strategies have been developed to ensure an effective and practical implementation programme is used.

1. Adopt and communicate a clear vision for implementing shared services.
2. CEOs and senior teams demonstrate their commitment to this vision by adopting the charter of principles.
3. Develop an effective governance structure for overseeing the shared services implementation programme.
4. Establish a shared service secretariat to identify eligible candidates and develop business cases for each shared service.
5. Set up project teams for each shared service implementation project by co-opting experts from participating councils.
6. Deploy a change management programme.
7. Take advantage of technology investment life-cycles and investment opportunities.
9. Ensure there are adequate resources to support the programme and that benefits are shared equally.
10. Design appropriate business models for each shared service as it moves through the stages on the co-operation continuum.

Governance structure

The governance structure for the project involves three main levels: a CEOs’ forum, a project leader and a reps group. The interaction of these can be seen in the diagram below.

Conclusion

The eight councils of the Auckland region have made substantial progress in developing a robust and workable methodology for formal co-operation and the establishment of Shared Services in the Auckland region. Common drivers for joined-up working have resulted in the search for Shared Service solutions. These solutions are still in the early days of implementation, however the Auckland region’s councils have approached the project in a systematic and thorough manner, ensuring that only the processes that can be successfully joined-up are included in the Shared Services programme. The Auckland region council experience has shown that partnership working can potentially yield real benefits for both councils and citizens alike, and that sound methodology is integral to the process.

Authors: Gary Grant (IDeA) and Mike Manson (ALGIM)
Abstract

Hutt City Council plans to be an ‘e-council’ by 2004. A comprehensive e-government strategy has been developed to assist the council in achieving its end goal of a transformed organisation. This plan is fully integrated with the council’s long-term strategic plan. An early step on this journey has seen Hutt City develop a community portal as a gateway to the city that is furthering the council’s leadership role within the community as well as advancing its e-government initiatives.

www.huttcity.govt.nz

Introduction

Hutt City, consisting of 98,000 people, is located at the head of the Wellington Harbour adjacent to the capital city of New Zealand. In 2001, the council’s Customer Services Group, which comprises two-thirds of the organisation’s staff (including Information Management), won the New Zealand Performance Business Excellence Study Awards based on the Baldridge Criteria.

E-government initiatives

Hutt City as part of its e-business strategy has developed an e-business roadmap to achieve the end goal of a transformed organisation into an e-council by 2004. This roadmap is contained in Hutt City’s information management strategy. This strategy is aligned with the council’s ten-year strategic plan and provides a three-year rolling programme.

The council has developed four interlinked delivery strategies for implementation of the information management strategic plan as follows:

- e-business strategy
- application strategy
- documentation and record strategy
- infrastructure strategy.

These four strategies feed directly into both the general council annual plan as well as the annual business plans.

The interaction of all these plans and strategies, as well as external factors such as information and communications technology trends, can be seen in the diagram below. From this diagram, it can be seen that e-government is not simply a superficial add-on for Hutt City, but rather an integral part of the overall council planning structure and vision.

IMSP within Hutt City Council
The e-business strategy defined the principles for delivering services and information online to customers, suppliers, business partners and other parties. These included:

- selecting appropriate activities to web-enable
- empowering customers to manage their interactions online
- delivering content that is relevant, retrievable and available within the right medium.
- delivering convenient, reliable and cost effective e-services
- supporting e-government strategies at a local level.

All strategies and plans have been and are continuing to be regularly audited by an external, independent company (International Accounting Firm) for their alignment of the business processes.

Critical success factors

The e-business strategy addresses the risk of implementing leading-edge technology and has developed a principle of not taking on untried technology but leveraging off other local government initiatives, and being innovative in the use of existing technologies. This principle ensures the council does not become involved in ‘bleeding edge’ developments, but rather employs only technology that has full industry support. This positions the council at the ‘cusp of industry supported technologies’, as seen in the diagram below.

Hutt City has further developed a principle of continual retraining, and takes every opportunity to train staff especially during roll-outs of new technology. This forms an important part of a change-management process ensuring that staff at all levels are fully educated as to why new processes and technology are required as well as understanding the benefits they can bring to them and citizens.

While the information management strategy is also based on a culture of appropriate information sharing, the council recognises that giving every staff member Internet access is a pre-requisite if they are to sell the benefits of e-business. It has therefore adopted a policy of ‘reasonable personal use’.

![Positioning Hutt City Council IT](image-url)
The community portal

As part of its transformation into an e-council, one of Hutt City's early steps was the development of a community portal which was launched in 2001. While most councils' websites provide information on council activities and services, Hutt City has developed a city-wide portal which is furthering the council's leadership role within the community as well as advancing its e-government initiatives.

The portal is the result of consultation through focus groups and community workshops. A proactive stance was required to obtain participation in the consultation process. Meetings with businesses, community groups and council staff were held to ensure user requirements for the portal were properly understood prior to the portal development. Another important aspect was the alignment of the portal with central government's e-government strategy.

Collaboration with both private and public sector organisations was also seen as imperative in producing a cost-effective solution. For example, business partners, such as a Business Directory Service Company, worked with Hutt City to provide access to more than 3,500 businesses in the city. Keyword searches are used in the portal to locate the type of business required and a standard image or consistent look and feel is maintained by all these webpages.

The portal also has gateways to churches and religions, educational institutions, community groups, sporting and recreational bodies. As a large number and variety of organisations are involved in the portal, a key feature is the consistency of branding throughout to provide a seamless interface between businesses, tourism, education, recreation, and council information.

The site makes innovative use of an 'activities map' to view easily events and facilities pictorially within the city, offering a comprehensive view of what's on in the city. Text information sits behind icons to enable quick retrieval. It also provides online street maps with associated bus routes, and regional maps with links to neighbouring local authorities sites.

Links to a weather workshop site provides extensive information to citizens, while the web-cam is directed at places of interest and also provides an excellent view of the current weather.

To raise interest in the portal and also to encourage buy-in, a photo competition was run within the community. This competition obtained good exposure and all winners' entries were placed in a collage on the home page and throughout the site with appropriate acknowledgements.

Conclusion

Hutt City has created a comprehensive framework of e-government plans and strategies with the aim of becoming an e-council by 2004. An important aspect of this strategy is that they are fully integrated with all other aspects of the council's plans and strategies and are not simply an add-on.

Some important principles have been developed from the strategy. For example, Hutt City will only use technology that has full industry support. Continual retraining of staff plays an important part in maintaining staff skill levels as well as being a part of the change management process aiding in cultural change.

As an initial step on its journey to its 2004 target, Hutt City has created a solid platform for further progress on e-government by developing a community portal which provides a major interface with citizens, ratepayers, visitors and business. The portal provides seamless access to businesses, tourism, education, recreation, and council information.

Additionally, the portal is furthering the council's leadership role within the community as well as advancing its e-government initiatives in general.

Author: Mike Manson (ALGIM)
There are 434 municipalities and 19 county municipalities in Norway, ranging from 500,000 inhabitants (Oslo) down to 244 (Utsira). The smallest municipality in the area is Utsira (6 km²) and the biggest is Kautokeino (9,704 km²). There are two local levels administratively and politically. The first, county municipalities, were until recently responsible for hospitals, child care and other secondary-level health services, public transport and upper secondary schools. However, from 1 January 2002, the government took over the responsibility for hospitals and secondary-level health services.

The more numerous municipalities are responsible for primary schools, lower secondary schools, primary health services (including general practitioners), kindergartens, services to the elderly, social services and some leisure activities such as sports for young people. The municipalities are also responsible for water supply, garbage collection, sewage and road maintenance.

‘E-Norway’ is the Norwegian government’s ICT action plan, published in June 2001. The objective of the plan is to influence and accelerate the development of a ‘green knowledge economy’ and an ‘information society for all’.

The plan recognises that, if Norway is to achieve an information society for all, three basic prerequisites must be taken care of: access, competence and confidence. The Norwegian government therefore wants to:

- contribute so that everyone is able to gain access to the new technology
- increase the competence and understanding of the population so that each individual is capable of using IT as a tool in accordance with their own desires and needs
- implement actions to increase confidence: IT should be secure and available to all, irrespective of the level of expertise.

The Norwegian Ministry of Employment and Administration is launching a major national effort to establish Internet-based public services. Included in this effort is a national project establishing an electronic marketplace for e-procurement and another implementing laws and regulations for electronic signatures.

Statistics on the general level of Internet access in Norway show considerable take-up by the general population along with an increasing trend:

- Internet access in Norwegian household: 42 per cent in March 2000, 50 per cent in October 2000 and 56 per cent in February 2001
- total use of Internet, home, work, school: 67 per cent
- high-speed Internet in February 2001: 60 per cent via ISDN, one per cent via cable TV
- local authorities with website: 63 per cent
- people regularly accessing government sites: 29 per cent.
Abstract
The development of Møre og Romsdal county municipality's award-winning website highlights the potential of the Internet as a medium for delivering official information to the authority's customers in remote areas. In this case, particular attention was paid to working with the local media to develop the site, thereby reducing costs and improving the ability to relay council information to citizens through more traditional channels.

Introduction
The county of Møre og Romsdal on Norway's western coast has 250,000 inhabitants. The county municipality's primary function is to lead the economic development of Møre og Romsdal, but it is also responsible for delivering certain health and education services. Thirty-eight district and borough municipalities, responsible for the bulk of public service provision, sit below the regional administration.

Vision
In 1998, with Internet penetration in the area running at 30 per cent, the authority decided to try to strengthen dialogue with its citizens by using the Internet as a new channel of communication. Initially, the website developed by the authority featured largely static pages conveying basic information on council policies and decisions.

Despite the limited content, the media in Møre og Romsdal were quick to express their appreciation of the new website as a valuable source of council information. It quickly became clear that, collectively, the 50 or so local newspapers, radio stations and TV channels were a key user community of the site. Accordingly, the authority decided to work with them to redevelop the site to make it fully news-orientated.

The redesign not only had the advantage of making it easier for council information to be relayed to citizens through the more established channels of print, radio and television, but it also actually helped to reduce costs for media organisations. For instance, the website has been used to report live from council meetings held in Geiranger, a remote fjord village. Before the creation of the site, attendance at these meetings had been limited to those media organisations with enough resources to send reporters to the village for the whole three-day period of meetings. Following the introduction of the website, news stories and interviews could be uploaded to the site via ISDN telephone line immediately following council decisions. The site also contains an interactive council meeting schedule.

These initiatives have proved to be highly successful and the site has continued to be developed with the media in mind. As a result, one quarter of the current 18,000 daily hits on the site comes from local and regional media.
However, the redevelopment of the site was not solely to serve the interests of the local media. It aimed also at providing information to the growing number of citizens who would wish to obtain it directly via the Internet. A large amount of information is available, aimed at a multiplicity of user groups. Features of the site include a searchable database of 25,000 documents relating to council decisions, along with access from the Internet to over 40 databases held in different departments of the council. Content production is devolved to designated web editors within departments, who receive step-by-step (and regularly updated) training on how to develop web pages. All councillors and 85 per cent of officers can be reached directly through the site. Its use has doubled over an 18-month period to the end of 2001. In June 2001, Møre og Romsdal was chosen as the Norwegian ‘Web-Municipality of the Year’ and was praised by the jury as having an ‘easy-to-use site, impressive throughout, which quickly enables users to obtain the information they require’.

Conclusion

In Norway, the county municipal level of administration is not responsible for delivering a large range of services but exists to promote regional economic well-being and to serve as regional representation to central government. As such, the emphasis on the development of the website was on information provision rather than service delivery — in particular providing access to the council’s decision-making processes. The website provided an excellent means to offer this information, both direct to citizens in a country with good levels of access and also, indirectly, harnessing the power of the local media by tailoring the website to serve them. By understanding the importance of the media as conduits for council information across more ubiquitous channels, and by working in partnership with them, the authority has been able to get the most value from the investment in the new media channel.
Abstract

This case study illustrates that high Internet penetration and literacy in a locality combined with an affluent, active and involved population, does not necessarily ensure swift take up of e-democracy. The examples here of a local authority consulting with citizens on two issues within a locality — childhood and sustainable development — show that the Internet will play only a partial role in the consultation process with citizens. Financial incentives to get involved, however, can prove more successful.

www.bydel-grefsen-kjelsas.oslo.kommune.no

Introduction

In 1988, local government in the City of Oslo was organised into 25 local districts, each governed by a district council with 13 councillors appointed by the city parliament. The main role of district councils is to provide social and health services such as care for the elderly, kindergartens, youth clubs, mental health care facilities and health centres. The districts are also responsible for integrating refugees and immigrants into the community.

About 18,000 people live in the district of Grefsen-Kjelsås, which lies in the northern part of the city. It is a district of contrasts, bordered on one side by lakes, forests and rivers and on the other by two large highways. By tradition, the citizens of the district are active, organised and involved and are keen to keep their community clean and safe. These concerns manifest themselves in a number of key environmental challenges that face the district: reducing noise and air pollution, preserving the surrounding natural environment and reducing consumption of resources.

Vision

The district therefore has a strong focus on its ‘Local Agenda 21’ and is working hard to promote sustainable development in its community, particularly in terms of consumption and travel habits. The authority is a successful user of technology in enabling service delivery, providing home-help staff with handheld terminals to facilitate their work and, recently, developing a wireless network linking all 25 workplaces in the district.

In May 1999, the authority commenced the development of its website. This initiative was aimed at supporting the strategic objectives of the council, that:

- the hallmark of their services should be “good information, when you need it”
- local democracy should be stimulated and developed.

With the socio-economic conditions in the district favourable for high Internet use, the authority felt that the Internet would be an appropriate additional channel for information and communication with citizens. Initially, the site focused on providing information on local services, council processes/decisions, and community groups/events. It went live in 2000.
Two consultations

The authority has recently engaged in two consultative exercises with its citizens to shape strategies on childhood and sustainable development (Local Agenda 21). In both exercises, use was made of the council's website to support the consultation.

The council viewed it as necessary that services relating to childhood in the district should be planned in a strategic manner. It therefore initiated a year-long consultative planning process, working with citizens at grass-roots level to develop a vision for childhood — ‘Blikk 2010’ (Vision 2010). During the consultation process email was used as an easy and important method of communication between citizens and the council. The various drafts of the report were available on the web and citizens had a chance to comment and suggest alterations via the web. The approved plan is now available on the web for continuous comment.

However, council staff noticed that during this consultation process young people themselves were reluctant to use email as a channel of communication. They did not seem to have the patience to sit at a computer and send an email, preferring instead to communicate face-to-face with friends or youth workers in the administration or by mobile phone text message (SMS) when meeting up was impossible.

Similar results were found during the consultation process on Local Agenda 21. It is common with LA21 projects for local authorities to work directly with residents. Grefsen-Kjelsås participates in a project on environmentally-friendly urban transportation. The district’s LA21 plan is a result of a broad consultation, again a ‘bottom-up’ process, involving citizens over the past few years. Rather than calling large, formal community meetings to discuss the issue, the council has taken the decision to talk to people where they actually meet — at their own existing community gatherings.

Throughout the process, information on the project has been available on the district’s website. Citizens have had the opportunity to comment and influence the project and they can email the secretary of the LA21 group directly from the website. The proposal is now available for further comment before the council takes the final decision. Few have made use of this opportunity — instead, people still seem to prefer traditional channels such as letters and telephone.

However, one project involving technology where the authority has been successful in engaging the population has been running courses for the elderly on email and the Internet. In partnership with two local schools, the district has set up a series of four evening courses, run by the schools’ IT teachers, where students aged 14 to 18 have acted as ‘pupil teachers’ to the elderly people. The pupils get paid for this job and the courses have been popular amongst both the young and old. Approximately 200 people have attended these courses over the last two years.

Conclusion

The experiences in Grefsen-Kjelsås show that take up of ‘e-democratic’ methods (understood here simply in terms of new channels of consultation) can be slower than expected — just as take-up of e-government services can be. The Internet has distinct strengths as a channel of consultation and deliberation. It can provide easy, anytime access to a wealth of free information. It can connect disparate groups of like-minded people. It can provide a measure of anonymity and, therefore, protect freedom of expression in a way that council meetings often cannot. Authorities like the district of Grefsen-Kjelsås have, therefore, rightly experimented with it during consultation processes. Often, though, these experiments expose the limitations of e-democratic methods. Primarily, the lack of personal contact means that the Internet as it is manifest today can only be an effective vehicle of communication in planned conjunction with other channels such as the local media, meetings and open days.

In addition, organisations, including local authorities, have long been used to using incentives to encourage participation — by providing prizes for responding to questionnaires and so on. This study hints at the fact that the novelty alone of e-democracy is not going to result in a wave of democratic renewal in local communities and that incentives, financial or otherwise, will still have a part to play in the modern democratic processes.

Author: Tove Christiansen (Grefsen-Kjelsås kommune)
Local government in Ireland consists of 124 local and regional authorities divided into three levels: county/city level, sub-county level, and regional level.

The three levels of local government are described as follows.

- At county/city level: 34 local authorities are the mainline providers of local government services — 29 county councils and five cities.
- At sub-county level: 80 town authorities carry out a representational role for the town with a varying range of local government functions.
- At regional level: eight regional authorities co-ordinate some of the county/city and sub-county activities; they play a monitoring role in relation to the use of EU structural funds.
- Two regional authorities, known as regional assemblies, were established in July 1999 under new structures for regionalisation. They promote co-ordination of the provision of public services in their areas, manage new regional operational programmes under the Community Support Framework (CSF), and monitor the general impact of all EU programmes of assistance under the CSF.

Local authorities are multi-purpose bodies which are responsible for an extensive range of services. These are typically broken down into eight broad groupings: housing; planning; roads; water supply and sewerage; development incentives and controls; environmental protection including rivers, lakes, air and noise; recreation facilities and amenities; agriculture, education, health and welfare.

In addition to these functions outlined above, a fundamental role of democratically-elected local government is representation of local communities, voicing local concerns and responding to local needs.

Ireland has a clear vision of what e-government will entail, and this is outlined in the key policy document ‘Implementing the Information Society in Ireland: An Action Plan’ (January 1999). The more recent document, ‘New Connections’ (April 2002), the second government action plan on the Information Society assesses Ireland’s progress, reviews its priorities, and outlines a new strategic framework. The objective is to provide online access to fully-integrated, customer-focused public services. Customers of government will be given the option to do their business, including interactions with the public service, online (through the Internet, through PCs, phone, TV, call centres, etc), whether as citizens or businesses.

This will mean:

- less red tape for customers
- quicker access to services, when it is wanted, 24-hours a day, seven-days a week

- taking services closer to the customer, by enabling them to access public services wherever web access is available — including from the home
- better quality services, provided more efficiently with the use of state of the art technology
- services with the customer at the centre.

The objective is to provide an electronic gateway for service access for ‘life events’ — such as registering a birth, getting a job, buying a house — and for ‘business episodes’ such as starting a business, registering a company, filing returns, taking on extra staff.

There has been a significant rise in the number of people who have access to the Internet, either at home, school or work. Almost one in every three households has a home computer. As the figures below indicate, there was a 12 per cent rise during 2000 in Internet access.

<table>
<thead>
<tr>
<th>Date</th>
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<tbody>
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<td>June 1998</td>
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</tr>
<tr>
<td>March 2000</td>
<td>16%</td>
</tr>
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Author: Gary Grant (IDeA)
Abstract
In October 1996, Telecom Éireann (now Eircom) announced details of a competition; a flagship project designed to accelerate Ireland’s progress towards the Information Age. The goals of the project were two-fold: to saturate a town with 21st century communications technology to see how people come to terms with and use the technology; and to encourage the town to trial new technologies and applications.

Forty-six towns entered the nationwide competition. On 24 September 1997, Eircom announced that Ennis had become Ireland’s Information Age Town. The town of Ennis was guaranteed an investment by Eircom of £15 million to provide integrated information and communications technology, infrastructure and training.

Introduction
Ennis, County Clare, is an urban town in the mid-west of Ireland, with a population of approximately 18,000. Ennis community includes the town and its environs, the people who live, learn and work in Ennis, people with family connections and people who are interested in the history, heritage and culture of the town. For some, Ennis is a virtual community with links maintained electronically. For most, it is tangible, with all the opportunities and problems that similar prosperous towns present. It is an historic town and a major tourist centre. It is also Ireland’s ‘Information Age Town’.

Since September 1997, Ennis has benefited from a £15 million investment by Eircom to develop an ICT infrastructure across a comprehensive range of programmes: residents, business, community, education, public sector and industry. Ennis, as Eircom’s Information Age Town, was to answer five questions.

- What happens when every home has a telephone — not just an ordinary telephone, but one with sophisticated voicemail, caller-line identification and other advanced services?
- What happens when every business, large and small, has access to an ISDN connection and high-speed access to the Internet?
- What happens when every student in the education system, from the age of five, has regular, intensive access to a computer with learning, knowledge-gathering and communications tools?
- What happens when public services — from libraries to healthcare — are fully equipped to exploit the potential of the Information Age?
- What happens when the majority of households have a personal computer linked to the Internet?

The Eircom Ennis Information Age Town project is unique. Although the project now has a team of over 20 staff, much of the work has been voluntary and all are committed to, and proud of, the project.

Vision
A major criterion for the selection of Ennis as Eircom’s Information Age Town was the degree of enthusiasm and commitment the town could demonstrate. Ideas and initiatives were invited from the community, outlining innovative and alternative uses of technology in Ennis. Submissions were received from as far as Phoenix (Ennis’s sister city in the US) and included industrialists, retailers, public sector, local sports clubs and residents of all ages. Three public meetings were held in the town. The local media added their support with regular features on technology. The local newspaper and local radio organised awareness campaigns. An information age quiz was held and attracted a huge response. Mobile computer units were set up in the town centre to inform members of the public about Internet use. Bolstered by the support of the local community, the Ennis task force was confident in its submission to the Eircom competition.
The submission concentrated on five major initiatives:

- the establishment of Ennis as a centre of excellence in three disciplines: lifelong learning, healthcare, and teleworking
- the development and positioning of Ennis as a centre for telecommunications industries, particularly online and multimedia services
- the positioning of Ennis as a test bed for emerging technologies and services
- the establishment of Ennis as the centre for raising awareness nationally on the Information Society
- the development of an information-rich and service-intensive set of Internet applications for community use, the ‘Ennis intranet’ system, to which the general public in Ennis would have free access.

Leadership

The president of the Ennis Chamber of Commerce spearheaded the campaign to win the project and the investment for Ennis, and adopted a strategic partnership approach. Ennis Urban District Council (UDC) demonstrated its commitment at an early stage by granting £15,000 to the project. Support and commitment were also received from Clare County Council and Shannon Development.

All partners brought considerable resources to the project. Consultants were appointed to help prepare the submission, working with a full-time development officer from the Chamber of Commerce. The partnership started with a common goal of becoming Ireland’s Information Age Town.

A task force of 15 people was formed, headed by the president of the Chamber of Commerce and including men and women active in business, community, education and public-service sectors within Ennis. They recognised the establishment of a support environment as crucial to the success of the project.

Supports were identified, centred on five key areas — co-ordination, promotion, training, technical support and monitoring — facilitated through:

- an experienced team, appointed to develop and administer the Ennis system/website
- a project co-ordinator, appointed to encourage potential inward investors and to facilitate organisations seeking to conduct technology trials and research
- a promotions manager, appointed to raise awareness of Ennis as an Information Age Town and co-ordinate campaigns nationally to increase Information Society awareness
- a training centre in the library and three other locations within the town
- a mobile unit deployed to raise public awareness and answer queries
- establishment of close links with third-level colleges with students looking for work experience opportunities and academics interested in monitoring the social, psychological, technical and commercial aspects of various initiatives
- development of a user-friendly interface for the Ennis website
- establishment of links with other Information Age projects, nationally and internationally and the sharing of best practice.

Along with the celebrations in September 1997, came the inevitable question of ‘what do we do now?’ The talk in the town changed from the All-Ireland hurling final to computers, connections and emails. The challenge of integrating technology into people’s daily lives without excluding whole sectors of the community became apparent immediately.
Management

After the initial excitement of winning the Information Age title in September 1997, expectations that Ennis would develop instantly into a 'wired' town abounded, although a strategic plan had yet to be developed between Ennis and Eircom. A perceived lack of progress and consultation caused tension in the community and resulted in media criticism. The Ennis community felt that they were not being informed about project plans and, increasingly, the task force members, working in a voluntary capacity, felt that lack of progress reflected on them. There was also concern expressed about the cost of Internet access, a new expense for the majority of Ennis households.

To improve the consultation process and develop specific programmes for target groups, seven advisory committees became active in September 1998, representing:

● health and social care
● sports and social groups
● commercial activity — trade, retail, tourism, professional services
● the public sector
● education
● new industry
● information technology.

Negotiations between Eircom and the task force resulted in the formation of two companies — Ennis Task Force Ltd and Ennis Information Age Town Ltd. Nominees of the four sponsors of the Ennis submission remained on the task force. Up to ten co-opted members could also be invited to join, to broaden the representative nature of the group. The management structure and project development continues to be guided by the task force, whose members are nominated by their constituent organisations. The task force nominates directors to the board of Ennis Information Age Town Ltd.

The Eircom Ennis Information Age Town project covers five key programmes:

- residents — developing household PC ownership and Internet usage and an ICT philosophy; enabling people of all ages to learn new skills which can enhance their education, their employment prospects and their way of communicating
- business — developing active participation by Ennis businesses; using consultation and the provision of tailored supports to facilitate progression from ICT awareness to ICT use and integration
- community — developing in the Ennis community and voluntary sector the use of an advanced ICT infrastructure, tailored training and supports, community network centres and community champions to ensure that social inclusion is an achievable goal, not a metaphor
- education — developing Ennis as a centre of educational ICT innovation where teachers, students and parents are committed to exploiting the benefits of an unrivalled technology infrastructure
- public sector — transforming the traditional, conservative image of local service providers into one that is proactive in delivering dynamic services, through ICT, to their service users.

Since 1998, the project has been involved in six technology trials. Ennis has developed articulate and educated consumers and is now established as a unique test bed for emerging technologies. The industry programme is central to the promotion of Ennis as a unique location for new and developing ICT-based industry, creating high-skilled sustainable employment.

Extensive media publicity for the project has allowed it to develop communications links and networks with digital projects worldwide. The Eircom Ennis Information Age Town project is committed to providing a consistently high standard of training, knowledge, support and innovation to all sectors of the community, enabling it to become the 'largest community technology project in the world'.

Infrastructure

The ICT programme for Ennis residents aimed to provide all households with telephone and voicemail and a personal computer with Internet connection. Simultaneously, plans for the installation of computers to 12 Ennis schools were under way. To enable these projects, the town's ICT infrastructure was significantly enhanced.

Over three months in 1997, a digital broadband ring was installed around Ennis. It connects all the major areas of the town, carries 24 fibre-optic cables, each with the capacity to handle the equivalent of 250,000 telephone calls simultaneously. The digital broadband ring facilitates 'split second' transmission of a range of data, including materials such as architects drawings, high-definition photographs, medical X-rays, audio, video and graphics.

In November 1997, 600 people who had never had a telephone in their homes applied for free telephone connection, bringing the household telephone penetration to 93 per cent, the highest for any town in Ireland. A month later, in December 1997, all home phones in Ennis were enabled with voicemail. Seventy-seven per cent of Ennis households currently use this service.
At full capacity during the summer of 1998.

newly-equipped school PC labs, operated
volume, nine training centres, including
ages 16 to 84 years. To cope with the
attended the training classes, ranging from
Internet and email. Over 2,400 residents
training covering Microsoft Office, the
unsuccessful in the usage test were
successful. Participants who were
do the usage test to demonstrate they had
approximate, 2,200 residents opted to
do the usage test to demonstrate they had
basic understanding of how to operate a
residents’ PC programme; 83 per cent of Ennis
households applied for a computer. Households contributed £260 to be
reinvested in community IT
projects. Free connection to the Internet
and one year’s rental was included. A
waiver was offered to 110 households.
During the summer of 1998, up to 50
computers were installed daily in Ennis.
The computers were delivered with suites of
software, including Microsoft Office
Pro ’97, anti-virus software, moderns and
Internet guard software.

Ennis school students are considered to
be the most privileged in Ireland as a
result of the Information Age Town
project. The four secondary, six primary
and two special schools have an average
student-to-computer ratio of 9:1. State-
of-the-art PC laboratories were
constructed to house the computers, data
projectors, scanners and printers.

Schools had the option of installing PCs in
individual classrooms, computer labs or a
combination of both. All schools received
free Internet connection and free line
rental for two years. Internet access was
provided via high-speed ISDN lines. Also,
5,200 individual email addresses were
allocated to all primary and secondary
students, as well as to their 300 teachers.

All teachers in Ennis received subsidised
PCs. A training and development
programme was organised for teachers
through the University of Limerick. Training
was provided in three main areas:

● computer use and applications, including Internet and email
● incorporation of applications into the
curriculum and the use of computers as a
teaching tool
● maintenance of the local area network (LAN), for two teachers in each school

By December 1998, some 18,000 people
had access to 5,000 computers with
Internet access in schools and homes in the
town.

Conclusion

Ennis has developed a unique ICT
infrastructure and can now capitalise on
the investment. The project has:

● developed a vision for an information
age community
● worked with all sectors of the
community in its creation and
sustainability
● provided an environment that
encourages the development of services
● promoted use and built capacity across
public, community and business
sectors
● established an online presence that
provides a sense of ownership and
encourages the local community to use
the Internet dynamically
● encouraged networking and provided
individuals and organisations with the
means to develop content and
contribute to the network
● built in reporting, monitoring and
evaluation measures in all programmes.

Compared with the original Ennis
submission, the organisational structure
has evolved and changed dramatically.
While the original submission envisaged
only minimal investment in personnel, the
experience of the Ennis Information Age
project has been that ICT interest and use
increases in response to human contact,
exploration and demonstration of the real
benefits and enjoyment of using ICT.

Ennis has now also established a
company, Ennis Information Age Services,
which provides usability services. This is a
result of some of the lessons learned over
the last four years that point to significant
difficulties that users have in using
technology, and the increasing recognition
by corporations and government agencies
that they need to test applications with
real users. The company is currently using
this experience in work with two local
authorities and with the revenue
commissioners on their websites to
deliver user-centred services.

The Eircom Ennis Information Age Town
team is supported by volunteers in the task
force, people who serve on advisory
committees and people active in the
community who act as advocates for the
project. The project is now in a position to
promote and accelerate electronic
communication, community and commerce.
The project team, supported by the task
force and board, is committed to providing
a consistently high standard of training,
knowledge, support and innovation to all
sectors of the Ennis community.

Author: Mary Wintershausen (Independent
Consultant)
Spain

Spain is a unitary state with three levels of decentralised government: regions or 'autonomous communities', provinces and municipalities. Since the restoration of parliamentary democracy in 1978, there has been a substantial decentralisation, based on the creation of the new regional tier of government.

A total of 17 autonomous communities (ACs) have been established, covering the whole country. The provinces and municipalities are longer established and formed the basis of a two-tier structure of local administration prior to 1978.

There are a total of 50 provinces, of which seven cover an area identical to that of one of the new ACs. These seven have been renamed 'Autonomous Communes' and combine the functions of both the provinces and the ACs in a single body. There are currently 8,078 municipalities of which 60 per cent have fewer than 1,000 inhabitants and only four per cent have a population of more than 20,000.

Spain is making steady progress in its implementation of its e-government programme. It has not yet established any high-level e-government targets, although, in 1999, a key initiative was launched, 'INFO XX' and 'La Sociedad de la Informacion para todos' (the Information Society for all) were published. The programme covers projects in three areas: Spain on the Internet, electronic services for citizens and businesses, e-government.

An action plan for the 2001–2003 period has been developed, which is closely aligned to the e-Europe plans'. The plan is mainly focused on the ministerial departments and state agencies but also anticipates support and collaboration from local government and the private sector. Issues to be covered in this period include: Internet in education, public access Internet points, digital literacy and e-commerce.

Other initiatives that are being centrally driven are development of security services to provide authentication through establishing a 'public key infrastructure' and an initiative to introduce a social security smart card for every citizen.

An example of local and central government working together is the ‘Infoville’ pilot project in Valencia. This portal provides public and private sector services such as housing and tax collection agencies, as well as utilities, schools, GP surgeries and shops. The pilot has been so successful that 35 other Spanish cities are launching similar projects.

The Spanish have a trend of increasing penetration of the Internet, as can be seen by the table below.

<table>
<thead>
<tr>
<th>Month</th>
<th>Proportion of population with access to the Internet</th>
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<tr>
<td>March 2001</td>
<td>17.2%</td>
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<tr>
<td>May 2001</td>
<td>17.7%</td>
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<tr>
<td>July 2001</td>
<td>18.4%</td>
</tr>
<tr>
<td>May 2002</td>
<td>19.7%</td>
</tr>
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</table>

1 www.setsi.mcyt.es/info_XXIII2.htm
2 www.infoville.net/

Author: Gary Grant (IDEA)
Abstract
Citizens are offered access to the data that local government holds about them. They are able to see, query and act on the data held in the back-office databases from any place where they have Internet access. The ‘Catarroja Virtual Town Hall’ provides interactive communication between the citizen and local government and offers a number of essential services, including trusted digital signatures, that will help the citizens of Catarroja move into the Information Age.

www.infoville.es/Main?ISUM_Portal=5

Introduction
In 1997, the City of Catarroja in the province of Valencia in Spain’s Levante region decided to create and promote change and modernisation in their model of city management. A continuous improvement plan was approved for local management. One of the strategic action lines was to change the approach taken by the local civil service and government to dealing with its citizens, offering, at the same time, quality public services. From this was born the CAVI project (Catarroja Virtual Town Hall).

CAVI consists of a wide range of quality services that allows Catarroja’s citizens to carry out transactions with the town hall using the new technologies — basically Internet and WAP devices — for requesting, checking or acting on the information the town hall has about each person. CAVI offers a 24-hour online service, 365 days of the year. From their homes or workplaces citizens are able to consult or work on the databases that staff in the town hall use for their daily work. Every change is available to citizens at the time it is made.

Catarroja offers its citizens, by means of CAVI, all the information it has about its citizens from the various different services and administration areas. With this system, the citizen can view the work of the local administration with complete transparency.

Vision
The main objectives of CAVI were:

- to offer citizens access to their local administration at all times, in their homes, their work places, or anywhere with Internet access or WAP device
- to create a transactional communication channel between citizens and the local civil service using the new technology platforms available
- to ensure the legal validity of the transactions made through CAVI using the European Guideline 1999/93/CE that establishes a common framework for electronic signatures
- to promote and lead the development of the Information Society in Catarroja, providing and supporting education in the new technologies to create added value for citizens and the city.

The development of the Catarroja community net has brought together experienced users and associations with new and different requirements and customers. The final result of these investigations is a service adjusted to the characteristics and requests of the final users.
Services of Catarroja Virtual Town Hall (CAVI)

CAVI includes a service for citizens to submit applications in the input and output general register with full legal validity (Royal Decree Law 14/1999 about electronic signatures, European Guideline 1999/93/CE establishing a unique framework for electronic signatures). A service is also available to deliver to citizens an electronic signature, applied through the use of digital certificates X.509.v3. These applications are automatically registered in the local administration system of the town hall via the following process:

- application form is completed and submitted
- the town hall server takes the introduced data and gives the citizen a signed confirmation form with the town hall digital certificate
- the citizen accepts and signs this confirmation form
- the town hall takes the procedure in, registers it in its input and output general register and gives the citizen the digital signature s/he applied for.

The digital signature is a non-legible document that contains the original document signed between the citizen and the town hall. This document guarantees to third parties the legal validity of the signatures. When the citizen has the digital signature, s/he can access the system to continue the procedure:

- a printed message is delivered to the public officer in charge of the input register and the procedure continues through the normal channels
- a personalised email is sent to the citizen informing her/him of the result.

CAVI offers citizens the ability to access and check their personal details in the database of the local administration, providing clear, comprehensive and easy-to-access information in the following areas: personal details; municipal register; electoral register; taxable items; receipts; sales; accounting; invoices.

The types of information and services that are available include:

- individual or family query
- legal residence
- salary and personal details in the payroll of the town hall (if a public officer)
- up-to-date data on the municipal register
- historical report of changes in the municipal register
- digital registration or cohabitation certificates with full legal validity
- validation of electronic certificates, both for registration and cohabitation
- up-to-date data on the electoral register
- new and/or removed taxable items
- all kinds of service information: vehicles, rubbish, vehicles 24-hours entrance, IBI Urbana IBI Rústica (tax payment of real properties) and IAE (trade income tax)
- taxable items list with a brief information
- application for changing bank details
- outstanding and/or not outstanding receipts
- receipts list with a brief information
- historical report on receipts with collected movements
- tax payment through Internet
- to receive preliminary tax forms for paying it in the bank
- accounting transactions
- outstanding or/and not outstanding orders to pay
- invoice-processing progress for suppliers to the town hall.

The Hypocentre of Information and Administrative Processing (HITA) has evolved following the same guidelines, with the following objectives:

- provision of information about the administrative processes in the town hall
- printing of documents to be filled in by hand
- electronic processing of the administrative proceedings in the town hall through the Internet, with all necessary security to give them full legal validity.

The HITA options that are now being developed are:

- a directory enabling enquiries about the different departments in the town hall, including management, email, opening hours, employees and structure
- an administrative procedure, offering detailed information about the phases in the processing of files
- legal rules, enabling enquiries about the legal rules concerning the different administrative procedures.
Conclusion

Some present and future guidelines for the evolution of the City of Catarroja as a virtual society are as follows.

● The plan for development of Catarroja’s town hall has, as one of its strategic objectives for the short and medium term, ‘to take the administration to the citizens’. For this purpose, it is going to expand the CAVI project with services that citizens request through the civic consultation platforms created in this plan: citizen forum, associations (of individuals, students, professionals and businessmen) etc.

● In the longer term, after the legal framework and the technology have been set up, it is intended to integrate CAVI into projects in e-democracy. Great expectations are held for these emerging projects.

● To offer global access to the services of CAVI working in the education and funding of resources for disadvantaged groups and those without access to the Information Society.

● The communities of Catarroja must continue testing, measuring and evaluating the services offered by CAVI to adjust them to the needs and expectations of citizens. This is an essential element of the established guidelines in the EFQM (European Foundation of Quality Management) quality model adopted by Catarroja for its management development.

● To adjust and adapt the services of CAVI to the new emerging technologies (digital signature, UMTS, etc) maintaining leadership in changing the community and society of Catarroja as it moves into the Information Age.

Author: Fermín Cerezo Peco, (Ajuntament de Catarroja)
Sweden

Sweden has a population of just under nine million people. It has a three-tier administration comprising central government, 21 regional authorities and 289 local municipalities. Both regional and local authorities are directly elected and have tax-raising and decision-making powers enshrined by law.

The bulk of the 21 regional authorities in Sweden are county councils. These are elected regional governments, but regional executive is lead by a representative of central government — the county governor. The county authorities are responsible for the provision of all health and dental care, along with economic development issues such as regional growth and development, tourism and culture. They share responsibility for transport with local authorities.

Local municipalities are responsible for a wide range of services including primary and secondary education, support for the elderly, water, sewerage and energy issues, granting building licences and permits.

At the national level, the key driver towards e-government is the national strategy for an information society and the action plan for public services in the service of democracy — both of which place strong emphasis on the good use of ICT within the Swedish public sector. The implementation of e-government is led by the Swedish Agency for Public Administration, Statskontoret, which is an agency of the Ministry of Justice.

The e-government programme in Sweden covers a number of streams of activity:

- **24 x 7 agencies**
  Statskontoret has drawn up criteria for ‘24 x 7’ government agencies. The purpose of these criteria is to encourage the agencies to develop electronic services in a manner that suits the needs of citizens, companies and other consumers. The aim is for the criteria to be used in the agencies’ own quality efforts, as well as the government’s quality assessment and control of the agencies.

- **Service declarations**
  The purpose is for government agencies to report openly on their commitments regarding services and also to create a dialogue with their consumers on how these services can be developed.

- **Sweden Direct**
  This is both an online portal and a brand under which e-government activity in the country is co-ordinated.

- **Services to businesses**
  The development of a government portal for business owners to official information is backed by an annual survey of government business customers concerning the accessibility and quality of government information.

- **Secure electronic networks**
  Joint security solutions are being developed to guarantee high security in electronic communication between agencies, companies and citizens, including the secure administration of digital signatures.

While this programme of activity has been initiated by central government, there is recognition that work needs to be done to increase collaboration between government and local authorities. Activity is being focused on a number of ‘life events’, particularly those services where the boundaries of responsibility are unclear to the citizen. The emphasis is on creating integrated service solutions that both government and municipal services have in common.

An example of this kind of joined-up project is presented in the Skövde case study.

Sweden is a highly web-literate country, and estimates show steady growth in the number and proportion of the population who have accessed the Internet:

<table>
<thead>
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<th>Month</th>
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<td>July 2001</td>
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</tr>
<tr>
<td>November 2001</td>
<td>63.55%</td>
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<tr>
<td>February 2002</td>
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</table>

Author: Fred Baron (IDeA)
Abstract

In Sweden, young people who want to attend the voluntary upper secondary school have to apply for this form of education. Special applications are made in the ninth grade, in early spring, for the first year of upper secondary school starting in the middle of August. Due to an initiative by the admission board of upper secondary schools in Stockholm, a web-based e-service solution for the entire application process was introduced in the capital in the winter of 2001. Ninety per cent of all pupils handled their applications over the Internet in the first year of operation.

Introduction

In Sweden, the compulsory educational system requires that all children attend school for nine years, at the ‘nine-year compulsory school’, the ‘grundskolan’. After these nine years of compulsory education, a young person may opt to go on into the upper secondary school system. In the current post-industrialised society, most pupils in the ninth grade do choose to move on in the educational system as the chances of getting a job after only nine years of compulsory education are rather slim.

To move on to the upper secondary school, the pupils have to apply for their choice of further education and to compete by their achieved grades against each other, hopefully then to be admitted to their preferred further studies.

Admissions to upper secondary school in Sweden are handled either by the larger Swedish municipalities themselves or by specially-formed boards for a number of municipalities together. In the Swedish capital, Stockholm, the entire administration, from each individual application to all admissions, is handled by a special local authority, the Upper Secondary School Admission Board the ‘Stockholms Stads Intagningskansli’.

About 8,000 pupils in Stockholm apply annually for their further education in upper secondary school. There are 15 or so general educational programmes at each school to choose from and, added to these, are a vast number of local programmes and specialisms. To assist the pupils in their task to choose the ‘best’ programme at the ‘best’ school, given the individual pupil’s preferences, abilities and grades, there are a number of local guide counsellors (GC) within the compulsory school system. The GC helps the pupils with information about career opportunities and tries to match the pupil’s interest, abilities and possibilities with an appropriate choice of further studies.

Profiling upper secondary education

There are 23 municipal council upper secondary schools (‘gymnasieskola’) and 26 independent upper secondary schools in the City of Stockholm. Courses available include national programmes, specially-designed programmes and individual programmes.

Around 11 per cent of the city’s students attend independent schools. As part of a process of improving the quality and competitiveness of council upper secondary schools, the individual schools are being asked to develop clear educational profiles.

The education administration is working to promote more flexible organisation of education, based on student preferences. Students should be able to have a say in their timetable and choose the pace at which they want to study. A few schools are trying web-based tuition, with compulsory attendance alternating with computer-based work, either at home or in the school’s computer room.
The traditional way

Until the winter of 2001, all applications to upper secondary schools were made on special paper forms. The forms were then collected by the GCs and sent to the admission board to be registered into a special IT system, ‘PC-Admission’, provided by a private sector supplier, TietoEnator. The forms were entered into the system by staff employed at the board. This was a tiring and time-consuming task and identified many rejects since many of the applications turned out to have errors.

There were many reasons for rejection, including illegible entries or that a requested education programme was not available at the school chosen. A considerable amount of time was spent in further communication with pupils just to work out their basic requirements to register all of the applications.

Once all applications were correctly registered in the PC-Admission system, they were processed and preliminary admission results obtained. Notification of the results of this first-pass admission process was sent by regular mail to the pupils, who then either accepted or declined the result. If they were not happy with the result, they then notified the board and eventually a second admission process was undertaken. Final admissions were sent in the middle of July, by which time the admission process had taken about six months.

The e-service way

In the summer of 2000, the upper secondary school admission board in Stockholm approached their private sector IT-solution provider, TietoEnator, to discuss alternative and more cost-efficient methods of handling the application process to upper secondary schools in the capital. Given the evolution of the Internet, and the fact that more than two out of three families in Sweden today have daily access to a personal computer and to the Internet, some sort of Internet-based solution seemed an obvious avenue to pursue.

A special development project with participants from the board and from TietoEnator was put to work. The goal was to work out an e-service-based, more direct and cost-efficient approach to the application process. A process that also should reduce manual administration, increase quality and allow for more time in the process itself.

A web-based application, directly connected to the PC-Admission system database, was drafted. The functions within the system directly targeted the applicants but also the GCs and the entire admission administration. The system was also designed to increase dramatically the quality of the application process, since it became impossible for anyone to apply for any educational programmes that were not provided by the individual school they chose.

Launch of the e-service-system

In December 2000, work was completed and the new application was launched. All pupils in the ninth grade of the compulsory schools in Stockholm were sent a letter containing information about the new procedures. The letter introduced them to the Internet way of applying, provided a personal ID and gave a password to log on to the special website. Information for the pupils was also provided directly to them by the GCs. With the new web-based approach, pupils themselves, together with their parents, could apply, check out the results, accept or decline and eventually get the final result of the admission process. The wheels were set in motion in February 2001.

The results were, to say the least, beyond all expectations. As it turned out, some 90 per cent of all pupils in the ninth grade in Stockholm handled their applications the new web-based way. Only some 10 per cent of the applications had to be fed into the application system by staff at the admissions board. Gone were the rejects. The pupils could alter their preferred choices up to a given date when the system was closed for applications.

The GCs’ work was made more efficient by inclusion of special functions in the web-application by which they could follow-up pupils who had not made their applications. The first admission results were then presented on the web, and the pupils had only to log on to get the result. In mid July 2001, the final admission result was presented and the admission cycle for 2001 came to its end.
Conclusion

The e-service-solution in Stockholm for young people applying to upper secondary school fulfilled its goals:

- it made the admission process easy and always accessible for the pupils as well as the GCs
- it gave the applicants a better overview of what educational opportunities were to be found at which school
- it greatly reduced the administration, and allowed for more time to be spent on other matters
- it significantly reduced time spent on personal visits by applicants to the board
- it greatly improved the quality of the applications.
Abstract
Implementing an approach that is planned for the whole of the Swedish public sector, Skövde has realised efficiencies and economies following the implementation of e-procurement and supporting e-business processes. The commitment to the use of standards and to working in partnership has resulted in a more effective operation that offers benefits to the municipality and to its suppliers. The results have been seen in internal efficiency and in reduced prices.

www.skovde.se

Introduction
Over the last few years, the public sector in Sweden has invested in the use of information technology and e-commerce. The background to this was the budget proposal in 1994 highlighting the importance of working towards operational development within the public sector, using information technology as a support. A project designated ‘Electronic Commerce’, was started in the public sector within the informal co-operation body ‘Toppledarforum’ in 1995.

The purpose of this was to bring about cost savings in the public sector, using long-term standardisation and automation to rationalise the public procurement process. E-commerce gives rise to the possibility of reducing lead-times within the public and private sectors, but also presents the potential for gains in simplifying and rationalising the public procurement process. Enhanced processes produce gains by reducing tied-up capital, increasing competition and lowering prices.

A preliminary study was made in 1994, which showed that the public sector in Sweden procured products and services valued at around SEK 275 billion (29 billion euro). This generates a huge number of invoices. Local authorities alone deal with around 13 million external invoices every year. The various work stages in the invoicing process, for example, in registration, coding, payment approval, payment instruction, registration, bookkeeping and payment, demand an average of one hour per invoice. The cost of this work is just over SEK 300 million (32 million euro). By changing the work process and by using IT support, it has been estimated that this cost could be cut in half. A more efficient public procurement process would also reduce the prices of goods and services procured by the public sector. Even if prices were to come down by only a few per cent, this would offer a huge saving against the background of the amount of products and services procured by the public sector.

The purpose of this study is to follow up how e-business has been implemented at Skövde and what efficiencies have been gained. Skövde municipality is in the region of Västergötland, in west Sweden, an area rich in tourist attractions including the Göta Canal, which crosses Sweden’s two large inland lakes, Vänern and Vättern. Skövde has 3,600 employees and around 50,000 inhabitants.

Vision
The vision in Skövde has been to save money and to reduce time in the processes of procurement. The work behind introducing e-commerce has been an ongoing process. The goal is that pre-planning, procurement, ordering and the invoicing processes will be done electronically. The processes will follow the standards that have been produced and adopted under the ‘Single Face To Industry’ (SFTI) concept. SFTI means that the public sector will act in a unified way as regards the private sector. The same standards shall be used regardless of the party concerned.
The purpose of SFTI is to establish a single set of specifications for the interchange of e-commerce transactions with all public operators, whether at governmental, regional or local community level. To achieve this, a platform of co-operation has been organised where representatives from all three levels meet with representatives from the suppliers to develop a shared view of the public procurement processes and agree common specifications. The purpose of this co-operation is to identify user requirements, agree on standards and have the resulting specifications recognised among the various industries and groups of users.

Leadership

Experience shows that savings can be made on the administrative side by merely creating system support for automatic matching of invoices against orders. When combined with a review of the logistic flows and organisation of work, more significant savings are indicated from the implementation projects. The nature of changes of this type requires committed and persistent leadership.

E-commerce has been implemented with full support from the management team as follows:

- March 1997 — decision taken in municipal executive board to introduce e-commerce
- August 1997 — project start, pilot project
- May 1998 — conclusion and evaluation of pilot project
- August 1998 — start of e-commerce on a full scale, across the organisation and bringing-in new suppliers

Management

Four SFTI scenarios are in operation, building on combinations of messages from the following: publication of price list including amendments; order/call-off; order acknowledgement; order change; dispatch advice, with various level of detail; invoice.

Additionally, a web-based alternative for order/call-off, linking to the ‘EDI’ invoice, was recently adopted and is now being implemented.

A project task force team was set up and organised in a project structure with an overall steering group, a reference group and consistent project management across all sub-projects. The sub-projects covered:

- business processes
- skills and competencies
- technical demands and needs
- suppliers
- business communication
- implementation of the IT solution
- education and training to use the IT solution.

Infrastructure

Distribution of e-commerce within Skövde local authority today covers 18 suppliers. Across the units within Skövde local authority, the following numbers of processes are dealt with:

- 200 staff involved in ordering
- 80 – 100 orders per day
- 20,000 electronic invoices each year.

The infrastructure available currently allows for electronic maintenance of, and reference to, the catalogue and price lists, placing of the order, receipt of order confirmation and of delivery instructions. Depending upon the supplier involved, there may also be direct electronic invoicing. For other suppliers, the invoicing is still on paper but, on receipt, the invoice is scanned to allow the records of the transactions to be completed electronically. Direct electronic links into the accounting system are also in place, as are electronic records of contracts.

Conclusion

To reach the visions and goals, the prerequisites for e-commerce implementation have been:

- effective management decisions
- clear objectives
- knowledge of the possibilities
- resources to develop the solution
- standards — especially Single Face To Industry.

To implement an e-commerce solution, it is not only a technical matter, it is matter of understanding and doing.

What we can learn from this is how important it is to have an organised project where clear goals have been set; the involvement of leadership and management; the commitment (and the resources) to sustain the project over several years and, finally, the time to report and to follow-up goals.

To date, savings for Skövde local authority during 2001 and annually are seen to be well worth the time, management and resources that have been invested. The savings are:

- 25 mins/invoice x 16,000 invoices per year = 6,600 hours (approximately three staff)
- three staff = 800,000 SEK
- five per cent lower prices = 1.5 million SEK

Other effects that have been realised are:

- reduced processing time
- more effective administration
- fewer returned goods
- increased purchaser satisfaction
- lower prices
- shorter payment times
- more time released for core operations.

Author: Hans Dahlén (Skövde Kommun)
United Kingdom

Local government in the United Kingdom is structured in two ways. In Scotland, Wales, Northern Ireland and parts of England, a single-tier, ‘all-purpose’ council is responsible for all local authority functions. The remainder of England, mostly rural areas, is governed locally through a two-tier system comprising district and county councils. In total, there are 464 councils in England and Wales. Sitting below these authorities are some 10,000 parish and town councils across the UK with some limited service-delivery responsibilities.

Local authorities in the UK are responsible for the provision of a very wide variety of services. In two-tier areas, county councils and district councils work together and split the responsibility for the provision of services between them. The county council usually provides core services, such as education and social services. The district is responsible for more local services, such as tourism, environmental health and housing. Councils in single-tier areas are responsible for providing all the local authority services in their area.

In July 1998, the government set out its plans to transform local government in its white paper Modern Local Government — in Touch with the People. Underpinning the government’s plans for central and local government in the 21st century is the vision to establish a new dynamic partnership that will provide integrated, efficient and effective services that are accessible, citizen-focused, seamless and transparent.

To carry forward this vision, the government announced in the Modernising Government white paper that, in conjunction with the Local Government Association (LGA) and the Improvement and Development Agency (IDeA), it would establish a central local information age government concordat, which will encourage information and communications technology (ICT), innovation and co-operation between central and local service providers. Within this strategy a target date of 2008 (later changed to 2005) was set for when all government services to the citizen and business should be available electronically.

This target has been a catalyst for change for local government within the UK. Most authorities are taking the opportunity not only to enable services electronically but also to re-engineer totally their organisations away from departmental silos, and place the citizen at the focus of everything they do — thus giving integrated service delivery.

However, to ensure that local e-government is taken forward in a co-ordinated and cost-effective manner, and to ensure that all authorities, large and small, realise the potential of e-government, the central government department with responsibility for local government, the Office of the Deputy Prime Minister (ODPM), has initiated the development of a national strategy for local e-government. This strategy enshrines a strong, albeit voluntary, regime of standards development, national infrastructure and support (including financial support) for local government.

Building on work undertaken by the IDeA, the draft national strategy has proposed a model based on ‘pillars and building blocks’ (Figure 1) which describes the national framework within which local implementation will take place and which provides local and central government with a shared language with which to understand and co-ordinate e-government.

Figure 1: The building blocks — a framework for implementing local e-government
The four pillars consist of:

- standards — to ensure connectivity and interoperability between local authorities and across tiers of government
- national infrastructure — which will provide elements of technical infrastructure too costly for local authorities to build individually including national data sets and national solutions for authentication of customers
- partnerships — encouragement and support for authorities to work across their organisational boundaries to achieve economies of scale and joined-up, customer-focused services
- support and co-ordination — to enable all authorities to embrace e-government, regardless of size or budget.

Within these four pillars, local authorities can build the e-government solution that best fits their locality’s needs with the building blocks framework.

Authorities are building their ‘e-organisations’ using the building blocks outlined in the evolving model either individually, with private sector partners, or in collaboration with other authorities across the country. The draft national strategy has proposed nationally-funded projects in areas of the building blocks where the market or local innovation is struggling to provide appropriate solutions.

The devolved administrations of Wales, Scotland and Northern Ireland also have e-government plans in support of ‘Modernising Government’.

The National Assembly for Wales

The National Assembly for Wales has outlined its vision for Wales in the document ‘Cymru Ar-lein Strategic Framework’. The vision is for Wales to exploit ICT to deliver sustainable improvements in social, economic and health prosperity to achieve a better quality of life for all its citizens.

Scottish Executive

Digital Scotland is a Scottish Executive initiative that aims to ensure that Scotland obtains and retains maximum economic and social advantage from information and communication technologies. Digital Scotland’s remit covers e-commerce, infrastructure and digital inclusion, and is benchmarking Scotland’s progress as a digital nation.

Northern Ireland Executive

The Northern Ireland Executive underlined its commitment to electronic service delivery in the ‘Programme for Government’ agreed in March 2001. This aim has been further articulated in the ‘Corporate Strategic Framework’ with its vision for a ‘modernised efficient government, alive to the latest development in e-business and meeting the needs of citizens and businesses in Northern Ireland’.

Implementation of the framework strategy will be based on four principles fundamental to electronic service delivery — choice, convenience, simplicity and inclusiveness. These principles have been enshrined in the ‘Leapfrog’ initiative, which has been developed to accelerate progress towards a knowledge-based economy in Northern Ireland.

Internet access

Fifty-six per cent of adults in Great Britain have accessed the Internet at sometime according to figures from the February 2002 National Statistics Omnibus Survey. Over the fourth quarter of 2001, an estimated 9.8 million households in the UK could access the Internet from home — representing 39 per cent of all households. This is more than four times higher than three years earlier. Over 2001, the growth in household Internet access has begun to level off from the steady increases seen in the previous two years.

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1 www.cymruarlein.wales.gov.uk /ictimportant/ichthome.htm
2 www.scotland.gov.uk/digitalscotland
3 www.nics.gov.uk
4 www.leapfrog.gov.uk

Author: Gary Grant (IDeA)
Abstract

Keeping in touch with its rural communities is one of the most crucial challenges that faces the East Riding of Yorkshire Council which, by area, is the largest unitary council in England. Since its creation in 1996, East Riding has established 11 customer services centres and a 16-agent call centre to provide a comprehensive range of services to all its community which has led to the council being held up as model of best practice. In particular, it has sought to encourage young people to set the community agenda for the future and has produced a specially-designed website to engage and retain the interest of this hard-to-reach group.

Introduction

The East Riding of Yorkshire Council was created in 1996 from the merging of the previous shire districts and (most of) Humberside County Council and covers more than 933 square miles of mainly rural area.

At its inception in 1996, the council took on a new management team and a new organisation structure. In 1999, this structure was checked for effectiveness against the objectives of ‘Best Value’ and it is currently being reviewed against the objectives of its community plan and the changes needed to look forward to 2006. The reason for each review is made quite clear. This culture of continuous change is promoted to, and accepted by, the council’s employees. Key to this is the strong and regular two-way internal communication process (all corporate management team discussions are posted on the Intranet by the following day), which encourages discussion and allows good ideas to be fed into the process and up the chain as far as is necessary for a decision to be made.

Vision

E-government is not seen as a new initiative for the East Riding. Rather, it is seen as a continuum of the service delivery developments that have been ongoing since 1996 to reflect the key issues in its community plan. The ethos of the council is to bring services closer to the people by investing in, and managing, information as a strategic resource. The council’s vision of how to achieve this is tied in with its vision of the future e-enabled council. The truly customer-centred council, in its view, is one where services are integrated and delivery is available 24-hours a day, seven-days a week — one where the council reaches out and becomes closer to the whole community it serves, using appropriate technology to make this possible for rural and widespread communities.

To achieve this holistic approach to public services, the council established 11 customer services centres and a 16-agent call centre to provide a comprehensive range of services to everyone in the community. Trained staff are equipped with ICT systems and telephone facilities linked to integrated databases to provide information about all of the council’s services, enabling them to deal efficiently with requests, comments and complaints. Since its inception, the customer service network has had more than one million enquiries and has received satisfaction ratings of 96 per cent.
E-government is, therefore, an integral part of all the council’s plans. The community plan and the council’s position as community leader are underpinned by the use of technology. The delivery of integrated responses to the citizen, backed up with high-quality services, requires an understanding of what really matters to people across the East Riding. So, contact with the people — and especially trying to engage the hard-to-reach groups — is an integral part of the vision.

One group that has been specifically targeted is young people. The challenges of reaching young people are the same as with any hard-to-reach group — how to gain their attention first and then how to retain it by making the contact interesting and stimulating and worth staying in touch with. The solutions, however, are different for different groups.

The challenge of how to engage with young people was highlighted during the collection of user satisfaction opinions for the council’s Best Value performance indicators (BVPIs). Echoing the challenges facing the UK (as well as other countries) in engaging citizens in the overall democratic process, responses to this survey from young people were very difficult to obtain.

The answer is being sought through the council’s ‘SaySomething’ project, which is jointly funded by the national Invest to Save Budget (ISB) as well as national and local partners (the latter include the Humberside Police, the Region and Countryside Agency, a local youth council, Connexions and the Hull and East Riding Health Action Zone).

The objective is to try out, and evaluate effectively, the use of the web as a means of gathering data from young people who have traditionally been left out of consultation processes. With the commitment of the local partners, the project has been able to sustain the fast-changing and stimulating content required to keep young people’s interest in, and interaction with, the site. ‘Instant’ spot polls are used to entice people to the home page and then to register for more detailed consultation. Whilst the registration process is not full authentication, it does ensure that individuals are within the right consultation target group and that they answer the variety of questionnaires on the website only once.

Keyword searching is recognised as an important dimension of this exercise: ‘consultation’ and ‘questionnaire’ are not the sort of language that young people will use when surfing the Internet. Another importance consideration has been the use of marketing to help maintain a high profile for the project: this has been achieved by local radio campaigns, articles in the council’s monthly, printed newsletter and by promotional ‘give-aways’ for schools.

**Leadership**

The leadership style was established in the first week of the council’s new existence when the Chief Executive met with all the employees in a series of meetings to make it clear that things had changed. This was not just a merging of the previous shire districts and (most of) Humberside County Council. It was a totally new entity, with a totally new management team (only one of the directors had come from the predecessor councils) and a totally new approach. It wanted to engender a new ethos, a new way of working and a new image to the public, which resulted in a new logo and totally new branding.

This start was backed up with the introduction of weekly briefings across all services — and at all levels — and with all the other processes for Investors in People accreditation across the entire council. There is a fully-developed personnel and performance development process which links with Best Value, with service-led business plans and with the future needs of the council, as identified by the consultation and research processes. People are part of the changes and of the developments and are supported and developed by their managers and peers to cope with them.
Management

The management teams in East Riding contain a diverse set of expertise and experience. Managers with experience in the private and voluntary sectors have been recruited and their different experiences welcomed. This has helped to make managed risk-taking an accepted part of life: providing a website where young people are encouraged to give opinions and to write free text requires courage, as well as some management and control. A research team keeps a watch on things and also provides the analysis of the questionnaire responses. Part of the engagement process is to ensure that the results are available within a couple of days of the closing of a particular month’s questionnaires. The results are not just the analysis of the responses but include the winners of a prize draw into which all registered responses are entered. Prizes are used as an incentive, they are also part of the ongoing marketing of the website so their presentation is carefully managed to maximise opportunities.

Infrastructure

East Riding has similar problems to every other rural area of the UK — with issues around affordable, high-bandwidth Internet accessibility. The infrastructure is not there to offer the public constant direct connection. The council does not feel it is in a position to bring sufficient pressure to bear to encourage the private sector to offer these facilities. It still looks to central government to deal effectively with this big issue on behalf of all rural councils. However, it is using the opportunities offered by the Grids for Learning projects and People’s Network and it is installing WAN links to its own office locations — this still leaves significant parts of the community without these links.

One real long-term benefit of the SaySomething project is that it has enabled technology to be introduced into the council’s children’s homes. The young people there have been involved in checking out the site, and the interest generated by providing online access to the Internet offers them significant extra benefits in the longer term. This initiative also links to the council’s local public service agreement to improve the educational achievement target for looked-after children.

Conclusion

While there are issues to be addressed about the sustainability of the website after the external ISB funding stops, the project has had a number of beneficial outcomes already. One such outcome is that the council and its partners have generated sufficient interest over the life of the project to build up an extensive emailing list of young people across the area. Also, useful information has been revealed from the questionnaires that have been run during the project.

Key lessons that have been learnt include the need to:

- maintain real focus on what will gain attention and what will retain it when you are trying to reach ‘hard-to-reach’ groups
- involve representatives of the target group when you are trying to gain and retain their attention
- think about the words people would use if they were trying to find you using a web search engine and make those the keywords on your site
- develop sustainability in new e-government channels by extensive marketing to generate capacity until it gains its own momentum
- use technology to reach out and join-up communities across well-spread, rural areas
- learn, even from projects that do not result in sustainable outcomes; then close them down gracefully
- maintain good, two-way internal communications to ensure change is welcomed and supported
- review the suitability of the organisation regularly as you make continuous changes in services and skills
- support and develop people who are essential to the change process.

Authors: Mary Wintershausen (Independent Consultant) and Gary Grant (IDeA)
Hampshire — the business case for back-office integration

Abstract
Hampshire County Council is a large local authority in the south of England serving a population of 1.25 million people. It has more than 40,000 employees with over 12,000 IT users, and delivers a wide range of public services including education — it has more than 500 schools — social services and highways.

The council developed a robust business case to support investment in an integrated Enterprise Resource Planning solution as the foundation for its e-government strategy and vision of citizen service.

Introduction
In 1998, when Hampshire County Council started preparing for the Year 2000 challenge, it became clear that the diverse systems throughout the council would require substantial expenditure just to keep them running.

We saw this as a unique opportunity to review our complete IT strategy, to see if we could make the quantum leap to an integrated solution as the first step towards e-government.

Potential opportunities were first explored in a series of seminars and workshops with consultants who were then appointed to help us examine options in more detail and build a business case for our IT strategy.

We identified three main drivers for the council:

● to improve the service for users and the public
● to achieve business efficiency
● to meet ‘Best Value’ criteria.

As a large county council, we have a very devolved structure and this resulted in a large amount of duplicate data entry and paper flow. By giving people the centrally-supported software they needed on their desktop and removing different and unrelated clerical systems, substantial savings could be made.

Along with many employers in the south-east of England we have difficulty in recruiting and retaining clerical staff. By automating processes and working more efficiently, we could reduce staffing requirements, giving a quick pay-back. Just as importantly, we could also make jobs more interesting and improve skills and training.

Most importantly, the financial benefits achieved by more efficient working and economies of scale would mean more money for front-line services, rather than back-office systems.

By creating the council’s own ‘Invest to Save’ initiative, we were able to identify the resources needed over three years, to capitalise the costs and re-coup the savings later, without having to take money from budgets allocated for service delivery.

Our completed business case, demonstrating options and outcomes, was enthusiastically supported by elected councillors and was based on:

● a five-year payback
● demonstrable efficiencies and economies of scale
● staff cost savings
● improved services
● providing a framework for future e-government initiatives.

The benefits were identified as:

● improved management information by linking financial and other data to enable better planning of resources and service delivery
● best business practice promotion through modern technology
● removal of duplicate data entry and reduced paper flow through common processes
● substantial cost savings by removal of unrelated clerical systems releasing more money for front-line services
● more efficient processes to support service delivery to the citizen.

www.hants.gov.uk
In 1999, the council selected PwC Consulting to implement SAP-integrated solutions for our core financial, procurement and HR requirements.

When preparing our business case, we had recognised the importance of communication and ownership. The elected politicians supported the strategy and procurement process being led by the council's business needs not IT. We needed to get the right messages to staff to ensure that the business changes were seen as a good thing. All staff needed to understand why it was important to invest to help them to do their jobs more effectively and give a better service to the public.

By setting-up cross-departmental working groups, including staff from schools, we enabled skills and enthusiasm to be transferred and cascaded throughout the authority. Staff were able to see the potential of the SAP solutions and the benefits from new ways of working.

Vision

Our vision is to integrate the back- and front-office processes to provide better services and more efficient ways of working. We want to respond to citizens by using multiple channels such as call centres or one-stop shops and enable citizen self-service over the web, supported by Customer Relationship Management (CRM) and document management systems. These systems will also enable us to work directly with contractors and suppliers, using the Internet to facilitate maintenance and repairs for street lighting, buildings or equipment.

An important component of the strategy is the development of the Hampshire Public Services Network delivering broadband capability for voice and data to all operational points for council and community services throughout Hampshire. County, district and unitary councils, health authorities, general practitioner health centres and the voluntary sector are coming together to develop a 'service catalogue'. These differing organisations will offer entry points into a joined-up service for easier citizen access to essential information.

Joining together and pooling resources means we will be able to offer a better service to the community. By developing a network of information centres that are customer-facing and have access to these systems, we can ensure that all citizens benefit from the technology, not just those who have their own Internet access.

The integration of our back-office processes means that we are now able to develop links with the customer-facing front office. By developing common forms for student loans and tuition fees, we are able to offer a service whereby students can track online the progress of their application through what was previously a complex system.

We are also piloting a system with NHS Direct to link up health and social services information, providing a 24-hour co-ordinated response service for vulnerable people.

All councillors now have access, via the council intranet and the Internet, to committee papers and reports, but we recognise the need for them to be outward-looking, to interact with their constituents. With our elected politicians, we are exploring the potential for a members' portal to enable them to deal with community matters in their area; for example, seeking public opinion on a local issue such as school admissions or the use of public buildings.

Conclusion

By building a solid business case that identified the payback and had high-level support from the politicians, we have been able to invest in SAP's integrated solution to provide the framework for our vision of e-government.

We are achieving positive benefits for staff and citizens, with more efficient ways of working and improved council services, as well as developing new communities of interest by joining up with other organisations.

Author: Jon Pittam (Hampshire County Council)
Abstract
In the mid-1990s, Tameside Metropolitan Borough Council made clear its intention to make customer service a priority for the council. This intent has been borne out in the form of the ‘Customer First’ programme which is an ongoing project placing the customer at the centre of the organisation. Many initiatives have taken place bringing real benefits to the borough’s residents and have illustrated that e-government is an ongoing pursuit.

www.tameside.gov.uk

Introduction
Situated seven miles due east of Manchester, in the north-west region of England, Tameside is a compact borough with an industrial heritage and good communication links with the rest of the country. Tameside is roughly eight miles across — with just under a quarter of a million people settled in its 40-square miles. As a leader in e-government in the UK, Tameside has invested considerable time and resources into its Customer First programme, which aims to provide the borough’s residents with fast, efficient access to information and services.

E-government initiatives
Improving access to services is firmly set within the context of Tameside’s current organisational development programme. The vision for Tameside was originally developed from the statement of values, published in 1994, which helped to reinforce the council’s community leadership role and its commitment to enabling access to services for all members of the community.

In 1995, a review of council departments revealed that council officers were not putting the customer first. A series of MORI polls of Tameside residents was conducted to discover exactly what Tamesiders wanted from their council and how they wanted it to be delivered.

Four key themes emerged:
- easy access to information
- the ability to give information to the council quickly and simply
- the ability to request services (such as an appointment with a planning officer) without inconvenience
- the ability to make payments swiftly and securely.

In 1997, the council endorsed the strategy for improving access to services, and work began on implementing the vision. Representatives from across the council were brought together as a project team to ensure on-schedule delivery of the renamed Customer First project.

A key aspect of the Customer First project was the restructuring of the council from the traditional departmental structure into focused service units. This structure gives a much stronger focus on the customer, as managers are judged on the performance of their units with respect to customer-focused objectives and targets.
Work has continued on the Customer First programme and the range of achievements and improvements in developing accessible services include:

- a network of one-stop shops which is linked to the Benefits Agency, police, community legal services and credit unions.
- a fully-transactional website 24-hours a day, seven-days a week. This site allows residents to make payments for council tax, housing rent, business rates, mortgages, car park fines or general debts.
- all front-line staff and call-centre staff have access to the council Intranet, and 65 per cent of all staff have similar access.
- the council’s Internet allows customers to make complaints, access elected members by means of ‘Know your councillor’ screens, access details of councillors surgeries and to submit questions to district assemblies.
- electronic kiosks in customer service centres.
- an advisory service for Internet use by businesses — ‘e-Tameside’.
- a major ‘life events’ page is under development to enable customers to report a life event (eg, marriage, birth) at one point only and which is updated with all the relevant agencies.
- provision of nearly 400 free Internet access points in libraries and community centres.

Critical success factors

Tameside’s achievements can be clearly linked to several critical success factors:

- consultation and vision
- leadership — executive and member commitment
- ongoing organisational development
- partnerships
- performance management and business analysis skills.

Consultation and vision

Tameside’s vision can be directly linked to the early consultation carried out with its citizens in the MORI polls of 1995. The council was careful to set its vision in line with what its residents actually desired. This important step of consulting its customer has been formalised with the formation of the Citizen 2000 panel which was set up in 1998. This panel regularly canvasses the borough’s residents gaining feedback on developments as well as seeking guidance for future plans. Tameside’s vision has been clearly documented and is contained in the organisational development programme, Tameside 20/20 Vision. Having a clear vision that is solidly based on resident consultation has enabled Tameside to move forward with e-government in a positive fashion.

Leadership — executive and member commitment

In 1999, Tameside adopted a shadow cabinet style of governance and a specific cabinet portfolio for community services was created. The cabinet deputy for community services meets regularly with the head of service to receive an update on the progress of the Customer First project. In turn, the head of service meets each week with the project manager and members of the project team to monitor the success of improvements made so far, to identify problems and to set targets for the implementation of corrective action and further improvement.

Ongoing organisational development

A comprehensive organisational development programme has existed in Tameside for ten years. This programme is based on adopted management values of partnership, customers and continual improvement. Extensive staff training and development have been delivered in a variety of ways. ‘Just in Time’ training was delivered to customer service staff to support the opening of the one-stop shop, and training was provided to enable the operation of a new electronic queuing system and customer first technology.

To date, over 1,000 Tameside staff have completed the ‘Continual Improvement’ training programme, and IT training in the region of 1,200 delegate days is provided annually each year by the in-house training team. This training is predominantly for front-line staff to equip them with basic IT skills.

The needs of elected members in Tameside have been addressed through a ‘leadership’ programme which built on the Local Government Chronicle ‘highly commended’ series of events offered in 1999/2000, and provided the culmination of improvements in elected member training.
Partnerships

Tameside’s experience in leading effective partnerships for the benefit of the borough has attracted considerable investment and has accessed a wide range of funding.

- The IT and Customer Services partnership with CS Rand improves the delivery of front-line customer services using web-enabled technology. This partnership has just won the Digital Britain Award for the best use of IT in the public sector.

- The Community Legal Services partnership aims to improve access to legal services across the borough. It consists of over 80 organisations and, according to the Legal Services Commission, one of the best consultations in the country took place using the Citizen 2000 panel.

- The Lifelong Learning partnership is delivering excellent work for the learning disabled — from early years education through to further education.

- The innovative Social Services and Health Joint Mental Health service has been recognised with the NHS Beacon Award.

Performance management and business process re-engineering

Tameside’s application of business analysis skills to deliver continuous service improvement has been pivotal to the Customer First programme. Business process re-engineering (BPR) or the exercise of breaking-down existing business processes and examining how they can be improved, has been central to better serving the needs of citizens and customers. More than 1,000 staff have been trained in the tools and techniques of statistical process control and systems. Application of BPR and quality management tools is expected in every work group and at all levels of the organisation. All employees who work in a service are expected to come together, to improve constantly on what they do.

A programme of back office re-engineering is currently in progress and involves a dedicated e-project team and front-line service managers. This follows an earlier internal audit that identified 724 front-line council services considered deliverable through electronic means. Tameside is confident that it is well positioned to achieve the national target of 100 per cent electronic delivery of services capable of this by 2005. In fact, Tameside is seeking to achieve this target by 2003.

Conclusion

Tameside has shown what can be achieved when a local authority sets a clear vision to create a customer-focused organisation. Very real benefits have been created for Tameside citizens who are consistently involved in shaping the council’s vision for the future. Factors which have been identified as critical to Tameside’s success in the e-government arena have shown that clear vision and solid leadership are important. Also e-government is not a one-off affair, but the ongoing pursuit of organisational improvement.

Author: Gary Grant (IDeA)
Abstract

Encouraging its community to become actively involved with the council and the services it provides is one of the central themes spelt out in Essex County Council’s ‘Essex Approach 2000 – 01’ which describes local democracy as ‘a dialogue involving Essex people’. The council recognises that most of its services should not be ‘delivered’ to people but ‘fashioned with them’. For example, with the education service, it sees that governors, parents and children shape the service just as much as managers and teachers. As part of its commitment to promoting community involvement, the council has created a curriculum website where users are encouraged to be fully involved in the site’s content and development — providing access to a community-wide learning environment.

www.essexcc.gov.uk
www.e-gfl.org

Introduction

Essex is a large and diverse county comprising urban as well as rural areas, with a population of nearly 1,300,000. The county council is responding positively to the challenges of the Information Age and appreciates the potential of new information and communications technologies in helping to achieve several key aims. These include: enhancing the life of its communities; strengthening local democracy; and delivering new and better services. Crucially, the council aims to make the best use of technology to communicate with its citizens (ensuring effective local government in a local democracy), and to promote Essex as a learning society.

Vision

The Essex Grid for Learning is a curriculum website intended for all who teach and learn in Essex. Launched in November 2000, the ‘e-gfl’ (as it is widely known) is now used in almost 600 schools and colleges.

The e-gfl was created to meet a demand in Essex for high-quality, online content for all the county’s learners and teachers. Additionally, it was felt that parents, carers, school governors and, most importantly, young people should have a vibrant, interactive website to which they could contribute — a real community resource for learning.

A key feature of the e-gfl is that it is a free resource, available to every school, college and home in Essex. Pupils and parents, teachers and governors, can access the site 24-hours a day, providing a vital boost to home learning and pupil commitment.

Pupils and learners have their own interfaces, which are specially designed to cover early years, primary and secondary through to further and adult education. Many activities for younger pupils feature animation and learning games, reinforcing learning through fun and participation. There are also separate areas for teachers, governors and for parents and carers.

The main contributors to the e-gfl are the people of Essex. Online templates encourage easy submission of news, favourite web links (which can be star rated), and ideas for activities and resources. Teachers can also upload worksheets, lesson plans, reading lists, and teaching ideas for others to share, and have access to an extensive curriculum resources area. Parents and governors can ask questions about curriculum issues, and online communities exist for groups of teachers and adult trainers. Students and adult learners have their own pages and, throughout the site, there is a balance of local and national news, resources and web links.
Leadership and management

In Essex Approach 2000 – 01, the council leadership pledged its commitment to making the best use of new technologies to communicate with citizens and to promote learning. This commitment was demonstrated right from the start of the e-gfl project and through to the launch of the site which was attended by the Chief Executive who made the keynote speech. Also, every one of the council’s service area directors was encouraged by the leadership to be actively involved at the project’s launch, which ensured their early introduction to the site and their future participation.

The e-gfl is managed by the Curriculum ICT team employed by Essex Learning Services, and is funded through the National Grid for Learning initiative. Version one of the e-gfl was developed for trial in 100 schools, which were encouraged to promote the site to their pupils, teachers, parents and governors. Consultation and feedback took place online, using a feature built-in to the site for this purpose. The responses were collated and evaluated and used to inform the design of version two of the e-gfl, which was launched in June 2001. The updated version contains a new early years area, a revised parents and carers section, changes to the Gallery and a new noticeboard structure. Development of the site is ongoing, and recent contributors have identified a need for an online weather station, using data collated and submitted by local schools, for daily publication on the e-gfl. This idea is being taken forward in Autumn 2002.

All contributions to the e-gfl are initially stored in an editing area so that the volunteer specialists can review content to provide a quality assurance before live publication. This process is particularly important in ensuring high standards across subject and early years, primary and secondary boundaries. However, everything is done to ensure that the review is made quickly, and contributors receive a response within two days of submitting their work.

Infrastrucure

From the start, the council wanted to ensure that the e-gfl would be a resource for people without home Internet access and has, therefore, been keen to build on public access points. Every school in the county has a minimum of six computers linked to the Internet; all libraries have free Internet access with between two and six computers; and museums in Essex also have computer kiosks. Additionally, the council is working closely with its youth service to ensure that most youth centres have Internet access and there is ongoing work connecting breakfast clubs and after school/homework clubs.

The council is particularly keen to bring in new users to the website and regularly runs road shows across Essex which are held at computer centres. At these events, the site is presented to new users who are then given the chance to try it out themselves. Turnout at these events has been high, with around 70 people per session, which may account for the fact that there is heavy usage of the site in rural as well as urban areas.

Conclusion

Participation is the key to the success of the Essex Grid for Learning. While many educational websites exist, few are designed for a specific community. Even fewer actively encourage the community to write material, submit ideas and showcase creative output. This uniqueness has resulted in the e-gfl winning three awards in 2001 and, 18 months on from its launch, the site is as popular as ever and the number of contributors and users — both adult and pupil — continues to grow. The e-gfl is now established as a resource for Essex, by Essex.

Authors: Steve Woodhurst (Essex County Council) and Rosa Drohomirecka (IDEA)
The United States has a population of 285 million. The federal republic has 51 administrative divisions consisting of 50 states and one district (Columbia). The federal, state and local governments consist of no fewer than 84,955 governmental units including counties, municipalities, townships, school districts and special districts.

Central government in the US, although largely responsible for treasury, regulating interstate and international trade, foreign policy, national defence and post offices, has assumed ever-broadening responsibility in such matters as health, education, welfare, transportation and housing and urban development. But where the federal government exercises such responsibility in the states, programmes are usually adopted on the basis of co-operation between the two levels of government, rather than as an imposition from above.

State governments’ responsibilities include regulation of intrastate business, public health and safety, regulations relating to property, industry, business and public utilities; the state criminal code; and working conditions within the state. State government is also responsible for establishing local governments which consist of:

- city governments — providing everything from police and fire protection to sanitary codes, health regulations, education, public transportation and housing
- county governments — which levy taxes; borrow and appropriate money; fix the salaries of county employees; supervise elections; build and maintain highways and bridges; and administer national, state and county welfare programmes
- town and village governments — which deal with local needs such as paving and street lighting, water supply; police and fire protection; local health regulations; garbage, sewage and other waste disposal; collecting local taxes; and (in co-operation with the state and county), directly administer the local school system.

The government is transforming its functions to focus on the needs of citizens and business alliances and the ability to do business when it is convenient over the phone or via electronic technologies. Adoption of e-commerce is well under way in federal agencies. The US government is striving to achieve the following principles:

- deliver customer-centric services rather than stove-piped agency-centric processes
- demand interoperability across government and with industry partners
- provide common access to government services and information via government-wide portals that are organised around the needs of communities of customers
- build strong privacy protection, confidentiality and trust
- adopt commercial products, practices and standards
- foster strong interagency, inter-organisational and cross-sector leadership to promote the sharing of information and leading practices
- re-engineer paper-based processes to produce results that will dramatically improve service and responsiveness while reducing costs.

Government mandates include:

- Government Paperwork Elimination Act of 1998 (GPEA): agencies must offer electronic services/transactions as an alternative to paper by October 2003
- Electronic Signatures in Global and National Commerce Act of 1999 (E-SIGN): electronic signatures may not be denied legal effect; and all commercial, interstate contracts, transactions and writings may be executed electronically.
A collaborative effort between federal, state, and local governments involving both ‘government to government’ and ‘government to citizen channels’ of electronic government is the ‘Government Without Boundaries’ e-government project. This project looks at government programmes from the citizen’s perspective and closes the performance gap by providing seamless and integrated services to its constituents. ‘Communities of interest’ in major citizen service channels are empowered to create core standards of interoperability that will be used to create a ‘virtual pool’ of information and services that can be integrated horizontally and vertically across governments.

Some statistics on the level of Internet access in the US

- Internet access in US households (NUA 2002): 58.4 per cent
- total use of Internet, home, work, school (IDC 2002): 62.4 per cent
- regular users of Internet from home (IDC 2002): 49.4 per cent
- local authorities with a website (ICMA 2000): >80 per cent
- high-speed Internet access availability: N/A
- high-speed Internet access uptake: N/A

1 www.gwob.gov
Abstract
In a large county authority in the United States, the administration is building on the successes of online services in discrete areas of the organisation by developing a county-wide e-government framework. This will enable the authority to deliver customer-focused services, primarily across the Internet, 24-hours a day, seven-days a week.

In this study, the authority has identified four critical success factors in developing its e-government framework: leadership, governance, competency and technology. The study explores the concrete measures, based on these success factors, deemed necessary to drive the transformation of government.

Introduction
The county government of Miami-Dade serves a population of more than two million, spread over an area of approximately 2,000 square miles. Besides Miami-Dade County with 30,000 employees providing county-wide services to the public, there are also 30 city municipalities, responsible for delivering city-based services like zoning and policing.

In August 1999, the county established a new position of Chief Information Officer (CIO) to bring about a cohesive approach to organisational information technology. Among the CIO’s first tasks was the development of a vision and strategy for information technology. One of the six main goals identified in the strategy was to ‘use e-government to expand county hours and service’. Key to the CIO’s approach was the formation of cross-organisational working groups associated with the six goals that were tasked with assessing how strategic technologies could be applied to improve organisational processes. In May 2000, the working group on e-government recommended the initiation of a pilot project for the establishment of an e-government environment in the county.

With considerable collaboration among county leaders, the county launched a new web portal1 in April 2001, unveiling a new customer-focused design and approach to online service. Through the portal, customers can access a range of transactional services — including paying a building re-inspection fee, adopting a pet, renewing a library book or obtaining an occupational licence. Public response regarding these transaction services has been positive. Approximately 20 per cent of building re-inspection payments are now made online and the county is collecting over $4,000 a day in parking citation payments via the web.

The county also uses the web portal to provide up-to-date news and information to the public. Press releases, announcements and meeting notifications are kept current on the portal. Additionally, where Miami-Dade County is in an area prone to extreme weather, the portal is used as a tool for communicating important information to citizens regarding emergencies such as hurricane preparation or about critical incidents such as the September 11 terrorist attacks. Live fire rescue dispatch calls from our 911 Computer-Aided Dispatch System are available also on the web, updated every 60 seconds. Information on the website is also targeted toward specific groups of online customers, and users can subscribe to an email information service, based on chosen categories of interest.

Despite these successes, however, it is clear that many services that have been placed online are the ones which are reasonably easy technologically and organisationally to achieve. Planning is underway to identify the next ‘wave’ of e-government applications, targeting those services that are of greatest benefit to the public.

1 www.miamidade.gov
Critical success factors

In trying to achieve this, the county has recognised the need to examine critically its organisational structure. From this evaluation, inefficiencies in current processes have emerged. The leadership has recognised that to deliver accessible and customer-focused services, the organisation must change in many ways. This does not necessarily mean that e-government requires significant changes to the existing organisational structure but rather it necessitates new and unique relationships across the organisation, some of which are unfamiliar to the traditional culture of government.

The county is emphasising four critical success factors to underpin this new culture: leadership, governance, competency and technology. Miami-Dade has already developed strength in these key areas, as is evidenced by the progress it has made in delivering online services. However, the organisation views the transition of government as a holistic, ongoing process. For that reason, the county has taken these factors further and broken them down into concrete tasks within an e-government framework that employees must embrace to ensure that the success factors do not turn into barriers to change.

E-government framework

■ Leadership

Strong leadership is the single most important factor in success. While a champion will lead the transformation brought about by e-government, all organisational leaders must embrace and nurture this process. County leadership must therefore engage themselves in the following tasks.

● Focus on the customer. Success will be measured by how well the customer perceives their needs are being met.
● Solve business problems before applying technology. Business process re-engineering will make the difference between successful projects and failures. For this to occur, those responsible for the operation of the business must be fully engaged in e-government initiatives.
● Lead by example. Leadership that is truly passionate about organisational transformation will live the model they preach.
● Encourage continuous learning and innovative thought. Learning is not synonymous with training. Exploring information through research and professional development will inspire innovative thinking required for organisational transformation.
● Communicate the vision to all stakeholders. Communication at all levels of the organisation on a consistent basis is required. The organisation must maintain a clear view of where it is heading and how their individual contributions will help transform the delivery of services.
● Cultivate an e-culture by sharing information. Internet technology makes it more possible than ever to make information available to the organisation. People who have access to information feel a sense of empowerment and can be more productive.

● Maintain a continuous awareness of strengths, weaknesses, opportunities and threats. As part of the strategic planning process, leadership must be constantly aware of stakeholder perception of organisational success and failure. External and internal factors can shape the future of the organisation.

● Seek out agents of change and empower them to act. There exist in every organisation individuals that have the influence and trust to exact change. Often, these individuals are more powerful change forces than the highest forms of leadership. Miami-Dade County leadership will seek out these individuals and empower them to lead in organisational transformation.

■ Governance

Governance refers to the organisational models that are adopted in support of e-government and includes structure, roles, responsibilities, accountabilities, funding and financial management.

● Implement a governance model to serve as a decision-making body. In Miami-Dade, the CIO has implemented such a model for the county’s overall information technology initiatives and this is used to address decisions and policies related to e-government as well.
● Implement a performance measurement process that extends from the measurement of individual performance to the organisation’s ability to meet goals and objectives.
● Define an organisational model for e-government. Miami-Dade County will establish an organisational model designed to support the e-government initiative. At the core of this model is a new e-government department.
Establish accountability as part of the definition of roles and responsibilities. Strategic action plans will identify agencies that will take a lead role in implementing strategic initiatives.

Implement new models for procurement. Government practices in the procurement of goods and services pose a significant barrier to the dynamic nature of an e-government environment. The county will seek new approaches towards procurement while still ensuring that the county maintains a fair and competitive process.

Secure legislative and legal expertise. The Internet has introduced a whole new discipline within the legal profession. The county must have access to knowledgeable legal counsel when dealing with the circumstances surrounding this ‘brave new world’. Similarly, as previously noted, federal, state and local legislation must be evaluated given the impact of this new environment.

Competencies

Competencies refer to the organisation’s ability to adapt to change and the ability to respond to this change with the appropriate level of resources. Strong competencies will be evidenced in the ability to:

Adapt to change. Most employees will acknowledge that government is not fully meeting organisational goals and that changes must take place if we are to improve that situation. Change must be incremental but must also be rapid — a tough combination. Effective leadership will be key in increasing the organisation’s ability to adapt to new challenges.

Manage multiple relationships in support of e-government initiatives. The ability to manage successfully an e-government initiative involves a blend of multiple relationships including business experts, customers, technologists and vendors. It is the project manager’s task to synchronise these relationships to ‘make it happen’.

Execute implementations in ‘Internet time’. Traditionally, large-scale IT projects have been undertaken as single-threaded, long-term initiatives designed to deliver a complete solution. Today’s technology solutions are typically delivered within three to six months and are often incremental implementations. ‘Internet time’ has changed the way projects are planned, developed and implemented.

Provide support to the unique demands imposed by the Internet environment. Government has grown accustomed to providing service primarily during working hours: five-days a week, eight-hours a day. E-government opens the organisation’s doors for service on a 24/7 basis. This requires the organisation to rethink its operational and technical environment to adapt to new demands.

Secure the necessary resources, forming and dissolving project teams as new initiatives are undertaken. A new model for tackling initiatives is required. As discussed in the strategy section of this plan, this model will call for organisational relationships that are new to government.

Technologies

At the core of the Information Age is information technology. Without technology to deliver the promise of e-government, there can be no product. Moreover, providing inaccurate information is worse than providing no information at all. Therefore, successful e-governments will employ a technology infrastructure that is designed to be reliable, accurate and scalable.

Traditional IT departments like that in Miami-Dade County are accustomed to managing infrastructure on a large scale, are aware of the requirements for reliable and accurate information and have been operating systems on a 24/7 basis for years. The challenge comes, however, in embracing new perspectives of external awareness, flexibility and rapid delivery. These are some of the key points to be tackled in the area of competencies, as discussed above.

Miami-Dade County has addressed the following issues by establishing a technology policy to support the e-government environment.

Develop standards across the organisation. Technology standards will allow the county to achieve cost savings in the procurement of hardware and software. More importantly, standards will allow the county to deliver online services more rapidly and with greater value to the public.

Assess options for sourcing versus in-house hosting of web services. Each project that is undertaken in the e-government arena will be evaluated according to resources, skills required and availability of software to determine the most appropriate method of delivery, whether the system be developed using in-house resources, or outsourced to a business partner under county project management.
Develop the skills and talents of in-house technology resources. It is very difficult in today’s technology environment to maintain a full complement of IT personnel that are adequately trained in the various areas of hardware and software. The county will therefore develop a plan to focus on what is considered to be technology core competencies and ensure that an adequate level of training and skill development is provided to staff. Critical to the success of e-government is the county’s ability to manage technology projects. The county will establish a training programme for project managers and will establish mentoring relationships between trained project managers and county staff.

Build an application and network architecture that is scalable, reliable, secure and flexible to meet the growing needs of e-government.

Develop a comprehensive disaster recovery and crisis management plan. The ability to develop a disaster recovery and crisis management plan was proven during the Year 2000 era. Like most large organisations, the county took an organisational approach to this situation and developed plans for disaster recovery/business continuity and crisis management. The county will apply the experience gained during Y2K in the development of such a plan for the online environment.

Develop a comprehensive plan to web-enable information that now resides in disparate computer systems throughout the county. The county’s technology assets are dispersed throughout county agencies and involve the use of various software and hardware components. Placing appropriate public records on the web is a key goal for Miami-Dade County and, to make this happen, the county must develop a plan to overcome the complexities that arise from the current environment.

This e-government framework is designed to underpin the new ways of information and service delivery across the entire organisation. However, the decision has been taken to establish a central e-government department to work across the organisation and steer the county in a transformation of service delivery and operation through the use of technology. Through collaboration and innovation, this office will work with county staff at all levels to achieve the vision. The main areas of activity for this department will be to:

- provide staff support to the ongoing efforts of the e-government working group in forming policy recommendations
- provide professional project management to county-wide e-government initiatives and provide assistance in the development and analysis of service levels and performance measurement
- develop a classroom/lab environment in which developers build a standard end-to-end business application including workflow, e-commerce, digital signatures, database access, legacy system interfaces, archive, audit, data sharing and other elements, which will be published so that departments can achieve rapid development of consistent, reliable, and auditable applications
- provide research and analysis for strategic and emerging technologies to determine the tools and technologies that will be adopted as organisational standards
- continue to develop and decentralise the content management arrangements of the miamidade.gov portal
- provide web-based applications.

The e-government department will be staffed with a core group of individuals, while other individuals throughout the organisation will be assigned to the office on a project/initiative basis.

Conclusion

The model of transformation evidenced in this case study is clearly dependant on a number of factors. Miami-Dade is clearly a large administration with relatively abundant resources — and it exists to serve a population that is highly Internet literate. For that reason, it has been able to concentrate on developing its Internet portal as a channel for service delivery. That said, it continues to provide services via the telephone. Its aim is to provide services consistently well across all access channels.

In common with other large organisations, discrete areas of Miami-Dade County have been early adopters of the Internet as a channel for delivering their services, and a large number of online transactions are possible — and are being used. However, the true benefits of e-government — seamless, convenient access to customer-focused services — will only be experienced through whole-scale organisational transformation. Miami-Dade has embarked on this journey and, by building on existing successes, it has been able to develop a shared framework for implementation of what it calls an ‘e-government environment’. This has necessitated senior leadership from the Chief Information Officer and others, and a strong management framework and technical direction. The new e-government department being established will pool project and programme management and technical skills to support effective and holistic organisational change.

Author: Judi Zito (Miami-Dade County)
Abstract

After identifying and clarifying its e-government vision, Gwinnett County has elected to move forward with a county-wide customer relationship management (CRM) solution. The county sees this decision not simply as the adoption of new software, but a reflection of an overarching vision to create a customer-centric organisation focused on exceeding its customers’ expectations. To achieve this vision, Gwinnett has identified several critical success factors and adopted a phased approach to the project.

www.co.gwinnett.ga.us

Introduction

Gwinnett County is located in north-east Georgia, in the metropolitan Atlanta area. The county has a population of 614,500 and is one of the fastest-growing counties in the nation. In light of the increased demands of this growth on limited county resources, Gwinnett County is in the process of becoming more efficient at meeting the needs of its customers, while also increasing the levels of customer service delivered.

Gwinnett County is one of only 15 counties in the nation awarded a ‘AAA’ bond rating that has been received for the last four years. This rating is seen as a reflection of the county’s commitment to provide the best service to its constituents, a commitment which has been carried through into the e-government arena.

E-government initiatives

In June 2001, a CRM Task Force was formed to look at the current state of customer service at Gwinnett, and to make recommendations to the county administrator’s office on initiatives that would enhance these services. Additionally, the Gartner Group was contracted in June 2001 to perform an information technology strategic assessment and to develop a business services strategy. On 15 January 2002, Gartner presented their final report to the board of commissioners.

Gartner’s e-government action plan recommended integrating planning efforts for the web portal, geographic information system, enterprise resource planning, CRM and imaging/document management initiatives in which Gwinnett is currently involved, with the recommendation that this integration should be provided by one vendor.

Specific recommendations from the report included:

- create intuitive and effective methods for customers and employees to access county services via the Internet and other alternative channels
- provide access to pertinent information across related, but disparate, functions
- develop county-wide name and address policies and standards
- provide shared data and service to support efficient and effective customer service.
Vision

As a result of the work done by Gartner and the CRM Task Force, and in light of their separate reports, the county’s vision of making communications with its constituents as courteous and convenient as possible and of exceeding citizens’ service expectations was defined further by the following goals:

- provide anytime, anywhere access to Gwinnett County government
- answer questions on the first contact, whenever possible
- provide detailed and accurate customer-contact tracking and reporting capabilities
- present a unified, consistent image to the citizens
- gather knowledge currently dispersed throughout the Gwinnett County offices into a consolidated, searchable database to aid employees in handling common questions and to enhance citizen self-service capabilities
- proactively look at practical steps to improve customer service, such as reviewing directories, building signage etc to reduce confusion when trying to locate offices that provide specific services.

As stated in the information technology strategic plan:

Gwinnett County will provide practical and easy-to-use services employing multiple channels of access to its constituency, businesses, other governments and employees through innovative and effective use of information technology.

Critical success factors

The Gwinnett County CRM Task Force has identified the following factors as critical to the success of the CRM project:

- a clear, well-defined vision and agreed-upon goals is the first step in a successful plan
- buy-in from all levels of the organisation is critical: leadership and continuing support from elected officials, department heads and customer service support staff throughout the county are key to meeting the customer service goals
- stakeholder input at each stage of the process — including not only customers but also county staff and management — is critical to ensure that needs are understood and addressed
- recognition that the installation of CRM is not merely adoption of a new software product but is part of an overarching business strategy can have a significant impact on both business processes and people
- the need to address the particular requirements of different departments, while keeping in mind the overall need to share information and resources to reduce duplication of effort and to streamline processes
- the realisation that a phased approach will increase the likelihood of success
- front-line employees must be empowered to resolve most customer issues on the first contact, wherever possible, and be provided with the tools and training necessary to accomplish this.

Leadership direction

The County Administrator and her office, which has a clear desire to have a centralised database for tracking citizen concerns, provide executive level support for the project. The Administrator’s office reviews recommendations made by the CRM Task Force, and makes high-level decisions related to overall project direction.

The Deputy Director of Support Services is the project champion and leader of the CRM Task Force. He, along with the Task Force, has been tasked with studying the current condition of customer service at Gwinnett and identifying ways of making services more customer-centric.

Cross-functional support, a spirit of co-operation and a commitment to common goals are being realised in the multi-departmental, CRM Task Force. The task force is composed of members appointed by 12 different Gwinnett agencies and departments: community services; department of corrections; financial services; fire and emergency services; human resources; planning and development; police; public utilities; sheriff’s department; support services; tax commissioner’s office; and transportation. These members represent the interests of the various department directors and elected officials.
Phase I
During Phase I, the task force worked to evaluate the viability of a CRM solution and to define goals and recommendations on how the project should proceed if it was seen as a viable project. Several sources of guidance were used: an internal CRM white paper that summarised previous research and recommendations to proceed; a CRM questionnaire was distributed to the participating departments to clarify current and planned services and systems; a survey of other county and municipal jurisdictions was conducted to discover what others were doing in the CRM area; several task force members attended two demonstrations of available products. During this process, care was taken to determine interest and concerns about an enterprise-wide customer request tracking system within participating departments. At the end of Phase I, the Task Force recommended to the County Administrator’s Office that installation of a CRM system would be a viable means of moving towards Gwinnett’s e-government vision, and that the county should simultaneously move towards integrating customer-focused information about services provided by the county on the website; building signage; telephone listings and directory; cable television channel and other avenues.

Further, the following steps were identified for Phase II of the project:

- Evaluate systems currently in use in departments at Gwinnett County and determine applicability for an enterprise-wide implementation.
- Document most common questions/concerns reported by citizens and how these issues are resolved, and make this information accessible to employees and citizens to enhance employee efficiency and provide citizen self-service.
- Select a software product to handle Gwinnett County’s business requirements for a service request tracking system through a Request For Proposal (RFP) process.
- Implement a pilot programme, followed by a phased implementation to reduce risk and enhance probability of success.
- Ensure that the privacy, confidentiality and legal rights of citizens are protected.

On communications/training:
- Review directories, building signage, web pages and other avenues, and recommend ways to make these more citizen-friendly.
- Provide citizens with choices on how to get needed services (come in to the office, email, phone, fax, Internet, IVR).
- Communicate the objective of CRM to all employees and provide them with the tools, information, and authority to resolve issues for customers through one contact with Gwinnett County whenever possible.
- Evaluate and document training needs, realizing that training needs will be ongoing, as the new system is implemented and as new employees are hired. Train employees on new CRM tools, procedures and policies.

Phase II
Phase II of the project was due to begin late April 2002, pending approval by the County Administrator’s office to proceed as recommended. Funding has been approved in the budget for a citizen enquiry system, and an RFP (Request For Proposal) will be developed after the business requirements have been identified during Phase II.

The business requirements will be established through departmental focus group meetings. The objectives for these meetings include the identification of departmental goals, concerns and business needs for the proposed county-wide customer request tracking system, providing an overview of business processes and the identification of the most commonly-handled issues received by customer support staff. Two types of meetings will be conducted. The first will include front-line personnel who deal directly with the public. The second will include management representatives.

Citizen input will be actively sought during Phase II of the project through the use of surveys and citizen focus groups. The task force hopes to identify services that the county is doing well in their citizens’ eyes and areas of concern that need to be addressed. Citizen recommendations for improving and prioritising services will also be sought.
Conclusion

In its continuing commitment to provide quality services to its constituency, and after careful consideration of the CRM opportunity, Gwinnett is proceeding with the initiative. It was concluded that the process of preparing for and installing CRM would put Gwinnett on the correct path to fulfilling its e-government vision.

The county sees installation of CRM not simply as a software application but as the heart of an overall business strategy. The aim of this business strategy is to create a customer-centric organisation and to exceed its customers’ expectations. The installation of the CRM system is thus not the end of the process but merely the beginning of an ongoing focus on improved customer service, a focus extending to basic factors such as reviewing directories and building signage.

For this ongoing process to be successful, strong leadership from the executive and management, organisation-wide buy-in to the project and regular consultation with stakeholders (both internal and external) are required.

These factors, coupled with a phased approach to the project, increase the likelihood of success.

Author: Jim Waicul (Gwinnett County)
Abstract
Mecklenburg County government is recognised as a leader in providing excellent services to its citizens and has won many national awards. Most recently, the Government Performance Project (GPP) evaluated the management capacity of 40 of the nation’s largest counties during 2001. The project’s underlying premise is that high-capacity government management is vital for achieving better government performance. The GPP focuses on government management capacity in five core systems: financial management, human resources management, information technology management, capital management, and managing for results.

Mecklenburg County government received an overall score of B, including B for information technology management. Only eight of the 40 participating counties received higher scores.

Introduction
Mecklenburg County and the City of Charlotte in North Carolina have developed a joint county-city website with streamlined and collective information and services provided to citizens through this single portal. The website provides access to the services that are managed through an effective partnership approach to service delivery, focused on customer and citizen needs.

Vision
During the past several years, Internet usage has exploded and it has emerged as the most dominant technology trend in the information technology industry. The private sector has made dramatic strides in applying Internet technology to serve its customers and to interact with its suppliers and business partners. Governments, including Mecklenburg County, have also begun using the Internet to provide information and services to its customers and constituents. E-government promises to revolutionise the way government services are delivered. Information services and technology (IST) articulates this e-government vision for Mecklenburg County:

E-Government is the delivery of information and services to citizens, business, and employees using technology to facilitate self-service, customer convenience, extended hours accessibility, citizen participation, and internal efficiency.

Mecklenburg County e-government strategies are to:
- provide access to public information and services 24-hours a day, seven-days a week
- improve customer service by making information and services accessible from home, business, libraries and other public facilities
- reduce the cost of delivering services by using technology instead of hiring additional staff and expanding office space
- facilitate citizen communications and interaction.
Leadership

In 2001, Mecklenburg County went through a major reorganisation which resulted in a greater emphasis on e-government. The executive assistant to the county manager is now Mecklenburg County’s e-government leader, who is accountable for co-ordinating all e-government business for the county. Through his leadership, the Internet management committee (IMC) was formed. The IMC consist of senior-level staff from both the City of Charlotte and Mecklenburg County. The city and county managers appoint the co-chairs.

The primary purpose of the IMC is to develop the policies, guidelines and standards that are necessary to create a framework for city and county e-government activities. This framework will then act as the guide for agencies and business units to advance the e-government vision, strategy and architecture.

The IMC has the authority to:

- develop and recommend inter-governmental policies designed to govern decisions and actions related to the achievement of a shared Internet vision, as well as the strategies and goals developed to achieve that vision
- develop inter-governmental practices that achieve the purpose of approved inter-governmental Internet policies, strategies and/or goals.

This new organisation has had some major successes. These include the development of its Charter and Governance, jointly funding and selecting content management software and developing a prototype and organisational structure for the redesign of the joint city-county website.

Partnership

The City of Charlotte (located in Mecklenburg County) and Mecklenburg County have a joint city-county website. The Charlotte-Mecklenburg website offers convenient, secure, personalised, easy-to-use information and services that meet customer demand, improve customer service, reduce costs and further involve citizens in democracy. Its mission is to improve customer service and satisfaction. The joint site is the virtual business centre for co-ordinated access to government information and services.

The website constructed by these two local government entities was one of the first joint city-county efforts to be successfully accomplished on the Internet. However, the original design was based upon the hierarchy of the organisations, not a familiar concept to most citizens. The first priority for the IMC was to conduct a complete redesign of the inter-governmental web presence. The online services and information that citizens request, now and in the future, were the focal points for that redesign effort.

The City of Charlotte and Mecklenburg County are in the final stages of redesigning the city-county website. Content management software will be used to facilitate the conversion of 50,000 pages of web content and to simplify the development of new content. Objectives of this software are to:

- manage repositories of unstructured content
- implement change management for web content
- implement versioning control
- create and manage workflow
- manage security
- design templates.

The new design is scheduled for implementation by July 2002. This is currently the only joint city-county website in the country established by two separate government organisations.

Communication

The Charlotte-Mecklenburg government website is capable of providing a tremendous service to citizens.

- It saves citizens time and effort, avoiding waiting in long lines at department offices, leaving work early or using their lunch breaks to run errands, or staying “on hold” while customer service representatives are assisting other citizens.
- It saves taxpayers money by eliminating the need to print, mail, or fax documents or hire additional government workers to handle increasing workloads.
- It improves government’s ability to serve its customers by providing up to the minute information to individual citizens and the media.
- It provides a two-way communications tool for government that can be used to disseminate current information and receive citizen feedback and opinion.

Despite these significant benefits, in 1999, surveys showed that only about 50 per cent of Charlotte-Mecklenburg citizens were aware the Charlotte-Mecklenburg government had a web and only 22 per cent of Charlotte citizens actually used the website. In 2000, website usage increased to 32 per cent. By 2001, 40 per cent of Charlotte area citizens had logged onto the site. These survey results point to a need to improve awareness and usage of the website to realise its full benefits.
In the past, the city and county governments have conducted some marketing efforts for the city-county website, but these efforts relied heavily on free marketing activities. Judging from the results of past surveys, it would seem that these free and low-cost marketing activities by themselves are insufficient to maintain public awareness. The aim is to:

- increase overall awareness and usage of the website among customers by 25 per cent annually
- develop and implement an ongoing method for determining demands and expectations of the Internet customers
- provide opportunities for citizens to participate in discussions, give opinions, and receive replies from government officials and staff.

Infrastructure

Mecklenburg County has an extensive portfolio of applications that provides a wide variety of information and services to the public, including the following.

- Interactive voice response systems are used by several departments to provide information and services. These include the payment of vehicle and real-estate taxes by credit card over the telephone, interacting with the permits and inspections system to schedule inspections and obtain inspection results.
- Wireless communications — building inspectors use laptop computers to access and update the permits and inspections system in the field, using CDPD wireless technology, enabling inspections results to be available immediately to construction contractors. The sheriff and Charlotte Mecklenburg police use laptop computers to access criminal justice information from their vehicles. The sheriff also uses his laptops to aid in the serving of legal papers.
- Wireless Internet — a vendor, in collaboration with IST, developed an application that provides wireless Internet access to the permits and inspections system via a cellular telephone that has a small video screen. Contractors and developers can request, schedule, cancel and check results of inspections in real time. An email message can be sent to the contractor alerting him to the completion of an inspection and the results.
- "Just1Call" provides department of social services with a one-stop source of information pertaining to human service providers, both non-profit and profit, in the community. The Just1Call staff handle telephone enquiries from the public and perform preliminary assessments. The automated system supports the service and also searches a database of agencies and providers to find the most appropriate for the stated need. While the caller is on the line, the worker establishes a three-way telephone conversation with the recommended agency, immediately linking the caller with the prospective provider.
- "4citizenhelp.com" was created to save Mecklenburg County money and make it easier for citizens to get information that they needed to access on a regular basis. Prior to 4citizenhelp.com, Mecklenburg County had to research, write and create printed books for each of the county's six districts at every election. The website contains up-to-the-minute news about county events and all the information that was previously printed in the district books.
- Mecklenburg County GIS — this organisation's innovation and high-quality GIS products and services to the customers have been recognised by numerous vendors and professional organisations for their commitment to excellence.

Mecklenburg County's Internet applications are successful, with usage and the demand for new applications growing steadily. New applications will bring a shift to transaction processing and e-commerce style applications. IST has recognised the potential impact that the rapidly-changing Internet environment and customer demands for service will have on its infrastructure, as well as the skills and resources that will be needed for support. In November 2000, an Internet technical assessment was commissioned to provide:

- an assessment of the impact of a growing portfolio of Internet and web-enabled applications on the county's physical IT infrastructure (hardware, network, security, systems management tools, etc)
- an assessment of the adequacy of current IST staffing levels and skills to support future Internet initiatives
- findings and recommendations for correcting weaknesses identified in the assessment, based on industry best practices
- web content management practices.

IST provided extensive information about the county's present Internet environment, usage, plans and future vision. There were many specific recommendations, some of which have been adopted as criteria for success for e-government.
Conclusion

The county’s current Internet environment and usage have resulted from the deployment of a centralised infrastructure that is supported by IST, and the implementation of applications by various county agencies. This has worked well to date for those agencies that have participated and the county has some very innovative and good applications. However, the growth of applications and use will require a more co-ordinated and cohesive e-government strategy for the future. Furthermore, advanced Internet applications frequently involve transformed and integrated work processes which span multiple agencies. Therefore, they should be treated as enterprise systems.

Mecklenburg County has been successful in implementing its e-government vision because IST had the vision to built and support a robust technical infrastructure to support the current and future applications and services. IST worked in partnership with county agencies to provide innovative, useable applications and services with limited funding and staff.

One of the major challenges is funding and staffing. The growth of Internet applications and services has put a tremendous strain on IT infrastructure and staffing. Management and elected officials consider e-government strategy, and understand the need to increase funding and resources. However, the level of resources available does not adequately support the actual growth of Internet services and applications. One of the challenges with the Internet is that it is an additive technology: Internet applications typically do not replace legacy applications or work processes but provide another means to provide information and services. The older means of service delivery must retain staffing and support, at least for the foreseeable future.

Lessons learned so far:

1. Security must be a fundamental issue:
   ● establish an information security team
   ● take a proactive approach to security before mission-critical applications go onto the Internet
   ● expand and strengthen security policies
   ● address privacy
   ● conduct regular security audits.

2. Plan for high availability:
   ● understand the real requirement and negotiate appropriate service level agreements
   ● separate hours of operation from reliability and availability
   ● co-ordinate availability with departmental owners
   ● develop a validation/process filter for the customer and IST (information services and technology).

3. Establish a network operations centre (NOC):
   ● NOC will be the ‘war room’ that proactively monitors the network
   ● NOC should support the entire network
   ● NOC should have a defined physical location and staffing
   ● it will ultimately need to be staffed for additional shifts.

4. Overall leadership, management and vision must be maintained:
   ● executive sponsorship and continuing support are critical
   ● effective e-government services will streamline work processes to capitalise on the technology, rather than applying technology to the same old processes
   ● governments must implement strategies to address the digital divide
   ● management structure and overview are essential but must be implemented in a manner that encourages agency and individual innovation
   ● IT must plan and implement a reliable, secure and scalable IT infrastructure to support the enterprise
   ● policies, procedures and standards are essential.

Author: Jerry Pinkard (Mecklenberg County)
Abstract

From early trials with the web and public access kiosks, the City of Mobile concentrated its efforts on development of a citizen-focused website. It has linked the back-office information from more than 70 separate departments to create a website that is organised to provide information and services in a way that makes sense to the citizen.

These efforts were rewarded in October 2001 when the City of Mobile’s website was named a finalist by Government Technology in the ‘Best of the Web’ competition. Last year, Mobile was awarded third place in the ‘Digital Cities Survey’ conducted by the Center for Digital Government. This was the nation’s first study on how city governments have progressed in adopting and utilising digital technologies. All this has been accomplished without a separate e-government staff or dedicated budget.

www.cityofmobile.org

Introduction

Mobile is the third-largest city in the state of Alabama, with a population of 200,000 in the city limits and 440,000 in the metropolitan area. The city has grown from a small settlement on the banks of the Mobile River in 1702 to a bustling seaport with a metropolitan area of 128 square miles. Its diversified economic development programme attracts industry and commerce from all over the world. Mobile is the only city in Alabama with sea, air and rail access.

The state of Alabama lags behind the nation in e-government initiatives and in the percentage of its citizens that use the Internet. However, with a progressive administration and an innovative staff, Mobile has moved steadily forward in the e-government journey.

The City of Mobile began its e-government quest in 1994, partnering with a local technical school to provide a web presence for the city. This relationship continued for three years. Each succeeding class had its own ideas for design, and the website began to lack a consistent appearance. The decision was made in 1996 to redesign the website and give it a standard, consistent appearance. The first goal was simply to provide information to citizens. Later phases provided downloadable forms, interactive applications and financial transactions.

The challenge has been to find ways to communicate the details and services of city government to the citizens of Mobile. Focusing on business, tourism, government and the citizen, a media strategy was developed to conceptualise and implement a first-class city government website and interactive kiosk application to provide the ultimate guide for its users. The kiosk development was later abandoned in favour of a more focused approach to website development.

Vision

The vision of the City of Mobile for e-government states:

E-Mobile will be a city that is fundamentally innovative, responsive and technologically empowered in its approach to business processes, a city where:

- information technology helps our organisation become faster, flatter and friendlier and our employees are able to get work done easier and more inexpensively, where use of the web is a core competency
- all elected officials, management, employees citizens and business partners can conduct business online, anytime, anywhere for not only core city services but also to address personal business as well
- information technology systems and applications are largely web-based, robust yet simple and user-friendly, where self-service, dependence on commercial, off-the-shelf tools and extensive data collection are the norms
- citizens and external customers access city services and information conveniently on the web
- the core values of development will be end-user requirements and involvement, innovation, collaboration and managed risk taking.
The goal is to create a user-friendly, efficient interface between government, technology and the citizen and to provide better and more economical service in a technologically-challenged area. In the year 2001, there were 12.6 million visitors to the website and 14,632 downloaded forms (207,848 pages). This is only approximately $3,000 in saved paper and printing costs, but it reflects over $360,000 in time saved for citizens in not having to drive downtown.

Leadership

The e-government programme is succeeding due to strong executive support. The Mayor recognised that an effective information technology infrastructure was crucial to consistent, strong growth. The mayor supported the initiative to integrate electronic and traditional service delivery methods and resolved to provide an atmosphere to allow for an ongoing process within the City of Mobile.

The MIS users’ group, consisting of a cross-section of departments, meets monthly to discuss technology progress and challenges. Representatives are challenged to think about how technology can provide better service to citizens and staff in faster and more cost-effective ways. The use of technology in innovative ways is the standard. In 2001, this group was tasked to identify 12 transactions that could be developed for the website. The actual number implemented was over 30.

Every city department is encouraged to appoint a departmental contact to participate in e-government initiatives. These are the people who identify needs, challenges and possibilities for specific work areas. Their objective is to recognise methods to improve service and access to government. Enthusiasm, rather than technological expertise, is the basis for participation. However, they must have a broad knowledge of their departments. Using that knowledge, their creativity is the key to coming-up with sound methods to solve problems and create service opportunities using modern technological pathways.

A dedicated content manager oversees the departmental web submissions for content and overall value for the website. The creative talents of this individual are essential to maintaining a consistent standard for all material submitted.

Creative challenges

The primary challenge was to provide an easy-to-use and appealing graphical interface that would allow any level user access to a large variety of information online. A tremendous amount of government information was provided and resolved into elements designed to be seen through the ‘user’s eyes’. It was important for the user to be able to find the information s/he was looking for in the most efficient and user-friendly way. Each department was asked to identify the most commonly-asked questions and answers from the citizens, which were then categorised, integrated and sorted by common topics of user interest in a frequently-asked questions (FAQs) section. The key was to provide information related in common, every-day language the citizens use and not through the formal structure of city government, which few understand.

Each department was also asked to have a plan for satisfying the future information needs of the department and citizens, department structure, contacts, physical and mailing address along with phone and fax numbers, giving basic information at a glance. The following sections were included in the website to maximise usability:

- **Search the site-in** — a page is dedicated to searching the website, using a keyword to look through the entire website and return results based on that keyword.
- **City officials** — a short-cut offering more information about the mayor, elected and appointed officials and city council meetings, including information and pictures to help the citizen become familiar with the people and functions of their government.
- **City departments** — provides several different ways to find locations and contact information, frequently-asked questions, and downloads from over 74 departments responsible for handling city business and relations.
Frequently-asked questions — provides a list of questions and answers by topic to help the citizen find the information they need without having to search for it.

City contact pages — provides listings of frequently-requested phone and fax numbers, address and basic information for all departments.

Calendar of events — provides a searchable calendar of events, based on arts and culture, business events, city special events, community and sporting events, offering subscriptions and monthly email updates. Allows the citizen or departments to submit their own event for inclusion.

History of Mobile — over 300 years of America is represented in the city and structure. In this section, it is possible to learn about this history by interacting with a timeline dating back to the beginning of the 1700s.

Internal challenges

Although the users’ group provides the channel for departments to submit ideas and information for the website, many departments still do not participate. The best approach is simply to capitalise on the ones that have the desire. Others will follow, albeit at a slower pace.

The City of Mobile has hundreds of forms and documents that are used and maintained by departments. These documents include forms for conducting city business such as citizen applications for business licenses, zoning district changes, building permits, liquor licences, and parking tickets. Putting forms online and making them available to citizens and employees was a primary concern.

A document review team from various departments, established in 1999, collected over 450 paper forms and documents and converted them into standardised digital formats, eliminating over 150 forms or documents that were found to be redundant, obsolete, or that could be combined into other forms. Over half the forms did not have an original electronic version. In 2001, an Intranet document repository, or library, was created, where document ‘owners’ could change or add a document to their department’s folder and where users could easily find documents to print.

The evolution of the document conversion process resulted in major changes to the way the city was managing document information. It was not easy — some departments resisted the coming changes. But, the resulting new business process has organised, streamlined, and centralised the city’s paperwork. Most importantly, departments have worked together to lower printing costs (by reformatting documents) and made access to forms fast and easy.

The city’s goal for the final stage of the forms conversion process is to have all forms, for citizens and employees, in a digital format that will allow users to fill out the forms on the web. The document review team and the MIS department are working on conversion procedures for this last phase. The process will once again involve all departments, many dedicated employees, and city administrators who share a commitment to make e-Mobile work.

Highlights

Some examples of innovations include:

- TimeSaver downloads — any online form download or interactive application that can save users time and money
- Integrated city department database — an online application combining all city departments (75), their basic information, associated TimeSavers, and frequently-asked questions
- Action centre — as an extension of the city-wide Request for Action (REACT) system, allows citizens to report a problem to a 24/7 customer response unit
- Advanced city mapping system — allows citizens and businesses to search an interactive map of the entire city down to the street level by owner name, address, subdivision, parcel number, or by zoning information
- Online government resources — provides links to government resources for arts and culture, business and jobs, education, general government operations, health and human services, money and taxes, travel and weather and helps guide users in interactions with all levels of government
- Citizen participation — citizens can directly interact with their government through online surveys or via email to any elected or appointed officials. All city council meetings are provided in audio format for citizens who cannot make the trip downtown every Tuesday
- Online surveys — when the site was first launched, everyone was asked what were best and worst parts of the site to guide development. Survey questions are changed routinely and results are available on the front page of the site
- Interface portals — citizens may not know whether the service or information they are looking for falls under city, county or state etc, so ‘area links’ provides a gateway to these resources in order to ease the finding of relevant material.
Conclusion

One of the biggest challenges was dealing with the volumes of data contained in the site and presenting it in a manner that was easily accessible for all users. The majority of content was organised and patterned after the city's internal organisational structure. Unless you work for the city, this is not seen to be the best way to organise the information. Often, citizens do not know what department they need to visit to find the particular information they are looking for.

The City of Mobile does not have any staff or budget dedicated to e-government. Success, thus far, has been largely due to dedicated employees willing to take on the added workload. However, city employees are the experts on city business and an experienced, professional web developer enhances their expertise. The additional benefit of an outside consultant is that s/he is not a city employee and offers a layman's perspective of e-government.

Legislative hurdles have added complexity to developing many online transactions. Local and state laws written before the Internet was conceived often require a 'real' signature or even require a magistrate to be present. Therefore, certain transactions cannot be put online until this legislation is changed.

Although the web is another communication channel for the citizens of Mobile, it does not completely replace person-to-person contact. There are still many instances where a phone call or visit is required.

Finally, the 'build it and they will come' mentality will not necessarily work. Putting all of the forms, applications, data and information online in an easy to use fashion is one thing, but creating the awareness and getting the word out that these resources are available online has been a challenge. Numerous press conferences have announced the website: an annual expo gets the media involved: newspaper and television coverage gets the web address out and generates significant traffic spikes: civic and community organisations know that tools and resources are available online: homebuilder and contractor groups know of the online permitting application and advanced mapping application: a set of six, five-minute infomercials will walk citizens through the website and expose them to the many features of the site. Our hope is that many people that are unaware of the site will tune in and that others who already use the site may find features that they were not aware of.

The goal has been to develop this new communication channel for the citizens and businesses of Mobile and bring tools and resources online that will help make city government more accessible and efficient. Re-examined and streamlined internal processes operate more efficiently and serve the citizens better. Mobile wants its citizens going online, not standing in line. And while they are online, they want the experience to be user-friendly, informative and most of all, useful.

Author: Sue Farni (City of Mobile)
Other countries — Singapore, Hong Kong and Japan

In South East Asia, the infrastructure of back-office automation and growing public use of the Internet and related technologies are evident but, with the exception of Singapore and Hong Kong, there is a lack of co-ordination and integration of information provision. As elsewhere in the world, the focus on information provision remains ‘silo’ based — organised around current government departments rather than reorganised to suit the needs of citizens and consumers. Undoubtedly, Singapore and Hong Kong Special Administrative Region have overriding advantages in being unitary national and local governments (on the traditional UK local government model). Indeed, Hong Kong has the largest public housing authority department in the world with over three million persons occupying its properties.

Singapore and Hong Kong have positioned their e-government programmes within wider ‘knowledge and digital economy’ strategies. Singapore’s strategy ‘IT2000: Realising the Intelligent Island’ provided the foundations for it becoming one of the first national/local governments to offer electronic access to public service information. Looking ahead, Singapore is formulating an ICT21 Masterplan that will facilitate the development of ICT over the next ten years in what is anticipated to become an ‘e-world’. The ICT21 vision is to transform Singapore into a dynamic and vibrant global ICT capital with a thriving and prosperous net economy by the year 2010. In addition to the development of its government portal, Singapore has focused heavily on the demand-side, raising awareness amongst its citizens, incentivising take-up (e.g. with schemes to introduce a friend) and liberalising telecommunications.

Singapore now has a vast array of government services available online in its e-citizen centre. Similarly, the government of Hong Kong aims to provide public services to citizens and businesses with 24/7 bilingual access using a wide range of electronic access channels. Private sector participation is being encouraged in setting up a common information infrastructure that may be used by the public and private sectors for the conduct of electronic commerce. Initially, this infrastructure is being made available to the whole community for various kinds of electronic transactions. The features of this infrastructure are described by Hong Kong in the following way:

It will enable the public to obtain services through various channels, including but not limited to personal computer, interactive public payphone or television. The facilities will be interoperable, secure and reliable. Using the facilities to be provided and following the interface standards, one can use diverse access means to obtain services provided by different agencies. The public will find a more efficient and effective alternative to the conventional form of public service delivery. The new means will be as secure and reliable as the conventional paper-based form.

The interface standards used in the infrastructure will be open market-based standards. This is an important feature to ensure that we are not locked into a particular solution that will not be sustainable and that we build in the necessary flexibility for the adoption of advanced technology. The user interface of this infrastructure will be bilingual. Being a bilingual society, we need both Chinese and English interfaces for the successful implementation of ESD. Public services will be made available on this infrastructure as an alternative to conventional means.

Hong Kong has set an ambitious target for 90 per cent of those services amenable for ESD (electronic service delivery) to be e-enabled by the end of 2003. More than 110 types of public services from about 40 government departments and public agencies are now accessible online on the ‘ESDlife’ portal. Services include the filing of tax returns, renewal of driving licences and payment of government bills. Further enhancements are planned, including bookings for sports and leisure facilities as well as marriage registration. The success of Hong Kong’s portal is evident from an article carried recently in The Washington Post which stated that the ESDlife portal had completed over one million transactions in its first ten months of existence.
Whilst Hong Kong has embarked on the preparatory work for e-services, in mainland China progress is slower. Internet access exceeds 50 per cent of the population in Hong Kong but is still under five per cent in mainland China, although the growth rate is over 200 per cent per year — twice the world’s average. Current trends suggest that China will overtake the USA to become the biggest Internet user in the world by the year 2005.

At the state level, there is activity to automate access to government information by citizens and businesses; however, this initiative is not yet evident in the national government’s programmes. In April 2001, the Chinese People’s Congress approved the tenth Five-Year Plan (2001 – 2005), in which achievement of national economic and social informatisation is considered to be the highest priority and a key vehicle to progress social productivity. A key element of this plan is to establish a policy framework for e-commerce development and authentication, as well as policies for building an information-based society in China.

As in the UK, a strong lead on information society policy has been taken by the Japanese prime minister. The ‘e-Japan Strategy’, a strategic framework for Japan’s Information Society launched in January 2001, outlines the government’s commitment that Japan will strive to become the world’s most advanced IT nation within five years by:

- building ultra high-speed Internet networks
- establishing rules on electronic commerce
- realising electronic government
- nurturing high-quality human resources for the new era.

Local governments are empowered to develop and operate e-services beyond their boundaries, so fostering opportunities for co-operation between cities, towns and villages. Partnerships with the private sector are also encouraged to develop the ICT systems required to transform services rather than continuing their historical focus on improving internal efficiency and administration.

Local e-government entered a new phase in 2000 when authorities started giving serious consideration to a variety of online civil services including:

- electronic applications for administrative certificates and other papers
- electronic declarations of taxable income
- business-to-municipality online transactions.

As the online declaration of income is to be launched in 2003, a service that takes care of management of household budgets together with tax declaration procedures is under consideration. When online payment and receipt of fees involving online applications become common, it is anticipated that a variety of financial institutions such as regional banks, shinkin banks (credit associations) and agricultural co-operative banks that deal with local government will introduce online systems for settling payments to and from municipalities. Such online financial systems will not only serve the interests of e-government at local levels but also function as a new infrastructure for regional industries. Likewise, it is expected that making government services available electronically will spur business models that combine services of the public and private sectors.

The Public Management Ministry plans to set up Internet service centres (ISCs) to operate local e-government information systems as a way of promoting participation by the private sector. The ISCs will not only provide e-government services for municipalities, but also function as an ICT-base for local companies and citizens. For their part, local governments, as large and stable clients of ISCs, will secure the financial soundness of ISCs.

The new ISC provider model is fueling new thinking about combining services of both public and private sectors. Attention is moving from using language describing stages of internal procedures such as ‘documentation’ and ‘settlement’ to words describing specific types of services such as environment, welfare and medicine, all tailored to an individual citizen’s needs. Such services require customer relationship management, service aggregation and management of personal data on health and welfare. The sticking point concerns the control of personal data in a trusted, fair and neutral system.

The Asia-Pacific countries examined here share a common starting point in their concern to develop competitive knowledge economies. Singapore and Hong Kong have developed the most comprehensive examples anywhere of e-services delivery. It is in Japan that we see some original and potentially transformational thinking about the future shape of public-private e-services.
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Canada

Community Access Program

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Republic of Ireland

Email: osullivan@shb.ie
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Singapore

eCitizen Centre
www.ecitizen.gov.sg

Spain

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United States of America

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Appendix 1: *Local e-government now template*

<table>
<thead>
<tr>
<th>Key issue</th>
<th>How can we be sure that our VISION of the future embraces everyone that must be involved and covers all aspects of local e-government?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear goals</td>
<td>Have you developed clear goals that set out where your community wants to be?</td>
</tr>
<tr>
<td>Shared values</td>
<td>Have you gained agreement to your goals and priorities from the whole community?</td>
</tr>
<tr>
<td>Commitment to change</td>
<td>Are you re-aligning all parts of your organisation away from traditional silos of service?</td>
</tr>
<tr>
<td>Consultation</td>
<td>Have you consulted with all your customers and citizens about their needs and expectations?</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Have you engaged with partners in your local community to ensure joined-up working?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key issue</th>
<th>How can we create the LEADERSHIP momentum for moving forward to deliver our vision?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast decisions</td>
<td>Can you make fast and effective decisions when they are needed, without unnecessary bureaucracy?</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>Are your strategies and plans for all infrastructure and service changes aligned with each other and with your vision?</td>
</tr>
<tr>
<td>Open to experimentation</td>
<td>Do you support innovation and experimentation, accepting managed risks and the possibility of failure?</td>
</tr>
<tr>
<td>Communication</td>
<td>Do you have clear methods of communication providing consistent messages, and capitalising on good ideas?</td>
</tr>
<tr>
<td>ICT governance</td>
<td>Is there a strong arrangement for managing ICT, with clear standards and guidelines, consistent delivery and maximum opportunity for sharing data and systems?</td>
</tr>
</tbody>
</table>
Key issue: How can we engage the core MANAGEMENT skill set that is needed to deliver transformed local e-government?

Projects: Are you able to sustain programmes of change and major projects that involve multiple agencies and long-term developments?

Risks: Have you a process to assess and manage risks and minimise the effects of essential changes of direction?

Contracts: Do you have experience of dealing with contractual arrangements involving public and private sector partners?

Services: Can you sustain the outcomes of change dealing with large-scale roll-outs and the impact on staff?

Information: Have you developed an information strategy for shared use of information both internally and with external partners?

Key issue: Is our INFRASTRUCTURE robust and flexible enough to sustain long-term delivery and support the vision for local e-government?

Funding: How will the delivery and support of local e-government be funded?

Technology: What are the key technologies you should be implementing and how should you be using them?

Security: How should you deal with issues of internal security, data protection, identification and authentication?

Skills: What skills should you develop across your organisation to ensure everyone can use the technology and information to deliver what the customer wants?

Learning: How should you develop an environment of continuous learning and improvement across your organisation?
### Appendix 2: The four VIA

The four VIA build upon previous UK work on local e-government as follows:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Involvement Vision</td>
<td>Vision Leadership</td>
<td>Leadership and commitment</td>
<td>Preparing to deliver</td>
</tr>
<tr>
<td>What matters to citizens Access priorities</td>
<td>Infrastructure Management</td>
<td>Developing access channels</td>
<td>Know your customer</td>
</tr>
<tr>
<td>Collaborating and redesigning Working in new ways</td>
<td>Infrastructure Management</td>
<td>Delivering front-office integration Commissioning and procuring effective delivery vehicles</td>
<td>Working together</td>
</tr>
<tr>
<td>Searching for Innovation</td>
<td>Vision</td>
<td>Achieving a change in culture</td>
<td>An appetite for change</td>
</tr>
</tbody>
</table>

Local e-government now: a worldwide view © 2002 Socitm and IDeA
Participating organisations

This report would not have been possible without the collaboration of a number of organisations from around the world. The contribution of time and effort from these local authorities, professional and representative organisations and businesses in the field is greatly appreciated and acknowledged here.

Australia

Faculty of Architecture, University of Sydney

The Faculty of Architecture is a teaching and research-intensive faculty focusing on a wide range of disciplines dealing with architecture and the built environment.

Professional degrees are organised in four major clusters:

- Architecture
- Architectural Science
- Design Computing
- Urban Planning

Urban and regional planning research has been established in the Faculty since the late 1940s, covering a wide range of subject areas, including international studies with a focus on SE Asia and the Pacific; metropolitan planning; housing studies; regional policy and many other fields of policy and development.

A recently-established urban design programme provides additional opportunities to conduct research into the design dimensions of urban form.

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Brazil

Prodabel, Belo Horizonte

Prodabel is the information technology (IT) company for the City of Belo Horizonte, Brazil. The company co-ordinates local government public IT initiatives with the objectives of ensuring the citizen’s right to public information, more efficient services, and greater participation in public management.

Landmark achievements include a centre of excellence on geographic information systems, the Municipal Information Network (Rede Municipal de Informática, RMI) which connects 236 different local government facilities and a centre for development and studies, which has the objective of absorbing, producing, and disseminating knowledge on IT.

Prodabel — Empresa de Informática e Informação do Município de Belo Horizonte

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Service New Brunswick

Service New Brunswick (SNB) is a Crown Corporation owned by the Government of New Brunswick. Its mission is to improve the accessibility of government services and to be stewards for authoritative public information by bringing together, under one roof, the information and transactional services upon which provincial citizens (New Brunswickers) conduct their personal and business lives.

The Government of New Brunswick is committed to embracing the new knowledge-based economy to make New Brunswick a global leader in the digital economy of the 21st Century. Service New Brunswick is pivotal in the government’s approach to become a leader in the digital world.

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Service Nova Scotia & Municipal Relations

Service Nova Scotia & Municipal Relations (SNSMR) is a service delivery department of Nova Scotia with offices in 54 communities in the province. SNSMR (whose website strapline is ‘Because life doesn’t have office hours’) is a modelled service organisation and a catalyst in fostering seamless access to all levels of government and migration from paper to electronic services. E-government goals include increasing cross jurisdiction online services, increasing the availability of informational and transactional services and supporting government/commerce that require geographic information components.

The economy of Nova Scotia now stands at the forefront of the new economic age and the Government of Nova Scotia embraces technology as a key enabler of service delivery via SNSMR, community networks and legislative webcasts.

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Email: drudderham@region.cape-breton.ns.ca

Finland

Suomen Kuntaliitto (Association of Finnish Local and Regional Authorities)

Suomen Kuntaliitto is an interest group which promotes the interests of local and regional authorities (including joint municipal boards and hospital districts) and supports and develops their activities. It plays an active role in municipal legislation, guides and advises its members, engages in research, writes reports and produces publications and information on current issues. Developing standards and raising awareness amongst political and civil servant managers in the municipalities is an important part of its work on e-government. Services include training, consultancy and auditing services to local government on IT.

The policy of the association is based on the local e-government strategy approved in 2001 and it is co-ordinated by the local Information Society Forum, which consists of 11 mayors and other similar leaders of Finnish local government.

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The Association of Finnish Local and Regional Authorities
Germany

Deutsches Institut für Urbanistik — Difu (German Institute of Urban Affairs)

Difu was founded in 1973 by the Deutscher Städtetag (German Association of Towns and Cities) with the aim of identifying long-term prospects for urban development and providing expert advice to municipal authorities to help them solve their problems. An institution currently serving approximately 130 towns, five municipal organisations and one planning community, Difu consciously orientates its research activities towards the needs of towns and cities, offering them a broad spectrum of services. Studies, expert reports, further training seminars, information and documentation services, and regular publications promote the user-orientated dissemination of scientific findings.

With regard to local e-government and the MEDIA@Komm programme, Difu has been commissioned by the Federal Ministry of the Economy (BMWi) to co-ordinate research and to facilitate transfer of learning, products and services from the three model regions to applications throughout the country. This work also includes reputable institutes in the fields of law, IT security and standardisation. The transfer of knowledge is implemented by means of questionnaires, publications and specialist events. Further information on MEDIA@Komm can be obtained under www.mediakomm.net (much of the material is also in English).

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Italy

Formez, Centro di Forazione Studi

Formez Training and Study Centre is an operating agency whose joint stakeholders are the Public Administration Department of the Prime Minister’s Office, regional governments and a number of local government associations representing municipalities, provinces and communities.

Formez exists to decentralise and simplify public administration functions and procedures utilising technological innovation to strengthen regional and local government whilst promoting cultural and professional growth. It co-ordinates public training and has developed regional and local networks, adoption of new technologies, distance online training and assistance, best practice and information exchange, local projects and national one-stop shops.

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Email: sfacchia@rap100.net
**Japan**

**Japan Local Government Centre, London**

The purpose of the Japan Local Government Centre, London is to:

1. Promote and strengthen ties between the local government sector in the UK, northern and central Europe and that in Japan
2. Conduct quality research into the public sector in Europe
3. Facilitate additional research conducted by visiting Japanese public officers.

To achieve these goals, the JLGC staff members research a wide variety of topics, visit local authorities in the relevant countries, facilitate links between local authorities and publish a quarterly journal, "Myriad Leaves".

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Director (Seconded from the Ministry of Home Affairs, Japan)
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**Netherlands**

**De Vereniging van Coördinatoren Informatievoorziening en Automatisering in Nederlands Gemeenten — VIAG (Society of Information Technology Managers in local government)**

Founded in 1991 as the professional association for ICT managers working in and for local government in the Netherlands, VIAG has 480 members representing the country’s 490 cities. The society's main goal is to support their members as local government ICT managers, and their services include workshops, conferences, magazines, website and discussion platforms, study tours and a regional structure for easy communication.

VIAG also represents Dutch local government ICT managers through memberships on several national platforms.

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**De Vereniging van Nederlandse Gemeenten — VNG (The Association of Netherlands Municipalities)**

VNG was founded in 1912 and has 500 employees. All 496 municipalities of the Netherlands are a member of the VNG, which protects their interests, provides products and services adapted to their needs and provides a joint platform for communication.

The annual turnover of VNG is approximately 40 million euro and the number of telephone consultations per year is approximately 130,000.

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PinkRoccade

PinkRoccade supplies IT services to clients in information-intensive sectors, such as industry, banks and insurance companies, social security, health care and government. PinkRoccade aims to achieve leading positions — both qualitatively and quantitatively — in these sectors in the Netherlands but is also active in other countries, mainly in the field of IT infrastructure.

Services (supplied both by the individual companies and jointly) include design, management and protection of IT infrastructure and development, maintenance and updating of IT applications together with expertise in outsourcing, acquisition and selection and Application Service Provision (ASP) via the Internet.

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New Zealand

Association of Local Government Information Management (ALGIM)

The Association of Local Government Information Management (ALGIM) was founded as the Information Technology Management Group (ITMG) in 1975. For many years, ITMG was part of the New Zealand Local Government Association. In late 1995, ITMG became independent of the NZLGA and as a result the Association of Local Government Information Management was set up from 1 July 1996, and steps were taken to form an incorporated society.

ALGIM's mission is to provide leadership to local government in information management and information processes. ALGIM membership spans every local authority in New Zealand with 11 councils represented on the Executive in addition to a Government Audit Office nominee.

ALGIM entered into a joint venture partnership with SOLGM (The Society of Local Government Managers) some four years ago to create a portal and resource library to all councils in New Zealand. An organisation was set up known as New Zealand Local Government On-line and is run as a commercial enterprise. This can be found at www.localgovt.co.nz. Local Government On-line is assisting councils through offering website templates, e-procurement, resource libraries, news briefs, personnel database and other council information.

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Norway

Kommunenes Sentralforbund — KS
(The Norwegian Association of Local and Regional Authorities)

KS is a national membership association for municipalities, counties and public enterprises under municipal or county ownership. KS is an employers’ and central bargaining organisation, an advisory and consultative body, and acts as a collective voice and advocate vis-à-vis central government on behalf of its members. All 435 municipalities and all the counties, except Oslo, are members.

KS is responsible for a programme of research and development which analyses the quality and efficiency of local government services with a special focus on framework and organisation. The new programme is a follow up to a previous four-year programme which focused on different models of local public services — including positive frameworks, consultations between the local and central governments, involvement of the users in the development of local government services and quality of local government services and management.

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Ennis Information Age Town

The Ennis Information Age Town project is committed to ensuring that a high standard of training, knowledge, support and innovation is consistently provided to all sectors of the community. The project was intended to be a live experiment to see what would happen when an entire town became ‘wired’. Every town in Ireland with a population of over 5,000 and less than 30,000 was invited to enter the Information Age Town Competition. The overall prize was a £15 million investment in Information Age Technology for the town. Ennis emerged as Ireland’s Information Age Town on 24 September 1997.

Project aims are:
- document the Eircom Ennis Information Age Town project
- foster links and networks with digital cities/ICT projects worldwide
- participate in European IST projects
- facilitate and support academic and action research on Ennis — Ireland’s Information Age Town
- create awareness of the Information Society — and Irish policy initiatives
- provide a web publishing resource — making research reports publicly available.

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Kommunal IT-Samverkan — KommITS

Formed in 1996, KommITS is a society aiming to utilise the interest in IT matters primarily at small- and medium-sized municipalities and a provide a forum for shared experiences among local government IT managers. KommITS is open to all local authorities regardless of their technical status, and is independent of suppliers. The society collaborates closely with the IT-sector of Svenska Kommunförbundet (the Swedish association for local authorities) and sister societies in the United States, United Kingdom, the Netherlands and New Zealand.

The purpose of KommITS is to:
- bring IT matters into focus at local government authorities
- draw attention to the importance of information technologies for the efficiency of local government administration
- raise the status of the IT section of local government authorities.
- circulate information among members and stimulate the exchange of ideas both on a regional and a national level
- maintain a dialogue with the suppliers of IT services
- represent members in their dealings with authorities and other organisations.

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Spain

Ayuntamiento de Catarroja
(Catarroja City Hall — Local Government of Catarroja City, Spain)

The Catarroja City Hall is the local government of the city of Catarroja which is located 10km south of the city of Valencia, next to the Mediterranean sea. Its population is a little over 22,000 inhabitants and its economy is dominated by the service sector. The City Hall has a staff of 200 people.

In 1997, Catarroja decided it was necessary to create and promote change and modernisation both in the model of local management and in the model of Catarroja city. As part of this initiative, the CAVI project (Catarroja Virtual Town Hall) was born. This project is designed to use new information and communication technologies to establish a two-way relationship between citizens and local government, providing access to local government services in their homes, work places or wherever citizens access the Internet.

Catarroja City Hall wishes to promote and lead the development of an information society in Catarroja through education and ICTs which creates added value to citizens and the city.

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Improvement and Development Agency — IDeA

The IDeA was set up three years ago to support self-sustaining improvement from within local government. The Agency provides practical solutions to improve councils’ performance, by offering tailored support packages to individual authorities and by developing innovative solutions to problems affecting the whole of local government.

The IDeA is helping local authorities transform the way they lead their communities and deliver services through ground-breaking initiatives such as the National Land Information Service, Marketplace and the Electoral Registration project.

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Society of IT Management — Socitm

Founded in 1986, Socitm is the professional organisation representing over 1,000 local government and public service managers with responsibility for ICT policy. Our vision is to see public services transformed through the application of ICT. We want all local authorities and public sector organisations to make effective use of ICT to deliver quality services and to enable citizens to engage actively in the democratic process. We seek fulfilment of this vision through helping to set the agenda for local e-government and through sharing experiences, collaborating with other organisations and providing a wide range of support services to our members, including Events, Learning, Consulting and Insight (formerly MAPIT).

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Institute of Local Government Studies — Inlogov

The Institute of Local Government Studies is a department of the School of Public Policy at the University of Birmingham. We aim to enrich the professional and management practice of UK local governance as the leading Institute for research in local governance, public policy and management, a centre of excellence in education and development, and an acclaimed resource for local authorities and other local agencies.

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United States

Government Management Information Sciences — GMIS

The purpose of GMIS is to provide a forum for the exchange of ideas, information, and techniques and to foster enhancement in hardware, software and communication developments as they relate to government activities.

GMIS aims to

- provide a forum for the exchange of ideas, information, techniques and solutions
- encourage a unified effort among state, county, and local government agencies and educational institutions in the area of information/data management
- promote a common voice for standards and standard systems
- present a consolidated, co-operative platform to suppliers
- involve, affiliate, and/or develop relationships with related professional organisations
- aid GMIS State Chapters
- promote commonality of information technology within and among the states and/or regions.

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SAP, as the world’s largest inter-enterprise software company and a leading e-government provider, is committed to advancing technological solutions through research and development. Collaborative studies, such as this report, play an important role in informing the public sector and its partners about how changing citizen expectations can be met, and services improved and developed.

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