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# **E-Government Implementation Challenges in the UK: A Case Study of Trading Standards Department**

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## **Abstract**

*The governments in many countries have invested significantly in building an electronic infrastructure to support e-government initiatives. However, there is mixed evidence about the success of e-government initiatives whether such initiatives result in improved service and enhanced satisfaction for the citizens. In this paper, we report the findings of a case study of e-government implementation undertaken recently at a local government authority in the UK. Despite the push by the UK government to offer public services electronically and the success of such efforts at National Health Services Direct (NHSD) in the UK, local authorities in the UK have not been able to replicate the success of e-government initiatives at NHSD. Consequently, local authorities in the UK have largely failed to meet the expectations of the UK government and the needs of the communities they serve by not being able to offer efficient electronic services. We use the framework proposed by Heeks to understand the underlying reasons for the failure of local authorities to implement e-government successfully. Using a case study of a local authority in the UK, this paper contributes to our understanding about successful implementation and adoption of e-government initiatives at the local government level.*

Keywords: E-government, Implementation, Electronic services

## **Introduction**

The term 'e-Government' may be considered to refer to the use of information and communication technologies to improve delivery of government services, facilitate interactions with business and industry, or empower citizens through access to information. Efforts to offer electronic services to citizens have intensified across many countries. The United Kingdom (UK) is no exception. The statistics reveal that an increasing number of citizens in UK are using the Internet to access central and local government websites to get information or download different types of forms. Sixty three percent of adults in the UK access Internet and nearly 57% of adults access local or central government websites (Office of National Statistics, 2006). Encouraged by these statistics, the UK government has initiated a major push toward offering its services through Internet to provide efficient services (Mimicopoulos, 2004). Additionally, the UK Cabinet Office has opened the largest unit, eGovernment Unit (eGU) which is responsible for various guidelines for central and local government authorities to help them deliver products and services electronically (see [www.cabinetoffice.gov.uk](http://www.cabinetoffice.gov.uk))

However, evidence suggests that the UK government's efforts toward e-government have met with limited success, particularly for the local authorities. While the e-government initiative is largely reported successful at National Health Services Direct (NHSD), such initiatives at the local authorities' level have not achieved a similar success (see [www.nhsdirect.nhs.co.uk](http://www.nhsdirect.nhs.co.uk)). For example, only 22% of the 500 local authorities have been able to meet the expectations set by UK government related to e-government. With limited studies focusing on e-government implementation at the local level, it is not clear why such initiatives have not been as successful despite the NHSD example.

Against this backdrop, this paper discusses the findings from a case study conducted at a local government authority in the UK, namely, the Trading Standard Department (TSD) within a North West City Council (NWCC). The objective of this paper is to identify and understand some of the underlying reasons for the failure at the local level in the UK to implement e-government successfully. We have organized the paper as following. In the next section, we review the current literature on e-government followed by a discussion of the research methodology and the guiding framework for the case study. Subsequently, we discuss e-government initiatives in the UK and provide a description of the research setting. We then present the findings from the case study. We conclude the paper with a discussion of the findings.

## **Literature Review**

The studies related to e-government can be broadly categorized into three areas. These include evolution and development (Wimmer, 2002; Layne & Lee, 2001; Srivastava & Teo, 2005; Heeks 2006); adoption and implementation (Moynihan, 2004; Heeks, 2002; Poon & Huang, 2002), and impact on citizens and businesses (Moynihan, 2004; Banerjee & Chau, 2004). Most

of the studies focus on either synthesizing models or factors across implementations (Heeks and Bailur 2006). Specific to e-government implementation at local level in the UK, Weerakkody and Choudrie (2005) suggest that many local boroughs are lagging behind the national expectations for e-government. In another study, Choudrie et al. (2005) report many factors that inhibit e-government implementation at the local level. However, current studies do not identify the underlying reasons why certain e-government implementations succeed while others fail at local level.

## **Research Methodology**

We employed interpretive case study approach for identifying and analyzing the issues that form the focus of this paper. While conducting this case study, we followed the guidelines suggested by Walsham (1995) for interpretive case studies. These guidelines helped us eliminate interview bias and minimize concern about generalizing the findings of the study. Our data collection involved semi-structured interviews with operational and managerial staff at TSD. The selection of the staff members for interviews was based on their experience, profile, and role in implementation of e-government at TSD. The choice of interviewees helped us gain richer insights into positive and negative aspects of e-government implementation at TSD. An additional set of interviews were conducted with the technical staff members responsible for providing support and guidance for e-government development for TSD. Each interview lasted for about 30 minutes. To supplement the data collected through interviews, we also evaluated the electronic services offered through the TSD website. To triangulate the results, we also conducted a survey of 89 citizens to understand their awareness and usage level of TSD website. This survey was conducted at an event organised by North West Police for educating citizens about trading standards enforcement. The average for the citizens who responded to the survey was between 30 to 40 years.

To analyze the data, we used Heeks framework (1999; 2001) for success and failure of e-government projects. This framework outlines seven dimensions that reflect the 'gaps' between the project design and on-the-ground reality in context of e-government. These dimensions include information, technology, processes, objectives and values, management systems and structures, staff and skills, and other resources. While the prime focus of Heeks (1999; 2001) framework is on identifying gaps in the design and development of e-government projects, we modified the framework to analyze the success of e-government implementation from initiation, development, implementation, to adoption by the citizens. Based on the data collected from interviews, we categorized the issues in e-government implementation at TSD under one or more dimensions identified in Heeks (1999) framework.

## **Background: E-government initiatives in the UK**

E-government related efforts in the UK are being viewed increasingly as a way to modernize public services, rather than just as a tool for automating existing processes for government services such as tax payments or license applications (Minicopoulous 2004). Recognizing the need for local councils to provide efficient and better public services, the UK's

Central Government initiated the idea of 'Modernizing Government' (White Paper, 1999) to achieve multiple objectives such as delivery of customer services more efficiently. To meet these objectives, the UK government set up e-Government (eGU) to formulate information technology (IT) strategy and policy, promote best practices across departments and deliver citizen-centred online services. The UK Government also outlined a set of ten guidelines as a framework for the development and management of local government websites (eGov Monitor, 2005b). These guidelines provide assistance to senior managers and web management teams in local government. These guidelines also provide structure for website management and resourcing, evaluating success of e-government implementation, and promoting the websites. The broader objective of e-government in the UK is not to just offer services electronically as in e-service delivery but to also expand to e-governance and e-democracy. Electronic delivery refers to service delivery through Internet or other ICT methods and also includes delivery by telephone if the staff receiving the call can access electronic information and/or update records online.

Early efforts towards e-government in the UK are exemplified by the implementation at National Health Services (NHS), which developed an Internet gateway to link patients to sources of quality health information. A new 24 hour telephone advice service called NHSD was also established that facilitates access to health services for segments of the population which may not have been able to access such services in the past. Given that over 6.5 million people accessed NHS Directs' online services in 2003/2004 alone points to the success of e-government implementation at NHS (Public Technology, 2005). Encouraged by the success of e-government efforts at NHS, all local governments in the UK were expected to implement e-Government by 2005. One of the 500 councils in the UK, North West City Council (NWCC) is part of a local authority that serves the community in North West. In this case study, we studied an e-government initiative at one of its department, Trading Standards Department (TSD), to understand the challenges involved in implementing e-government in local authorities in UK.

## **Research setting**

The North West City Council (NWCC) is part of a local authority that serves the community within the North West area of the UK. The NWCC is divided into 5 different portfolios, central services, children's services, regeneration, resources and supported Living. It employs over 20,000 staff and offers services ranging from housing, education, pest control, and environment health issues. Recently, NWCC won a Beacon Council Status for 'Social Inclusion' through their Information and Communication Technology (ICT) initiatives including a 24/7 call centre. The Beacon Status is the highest award given to local authorities in recognition of quality public services and best practices for service delivery.

The Trading Standards Department (TSD) is one of the departments within the council that falls under the ambit of the regeneration portfolio and employs a staff of 24 people. TSD is responsible for providing information and services related to weights and measures equipments, safety of products ranging from children's toys to electrical equipment; and age restriction of products such as alcohol and fireworks. TSD conducts routine inspections at trade premises to ensure that there is compliance with all relevant legislation such as Trade Descriptions Act and Supply of Goods and Services Act. In addition, TSD also provides an education program to informing young people about their rights as a consumer.

The TSD provided the appropriate setting for understanding the challenges in implementing e-government at the local level in the UK. It is part of the council which has won the Beacon award for high quality of its public services but could not successfully transition its quality public services to online context.

## **E-government implementation at NWCC and TSD**

The NWCC's main objective for e-government implementation is to provide a website with updated information about the council and its services for the citizens. Currently, all the major services are available electronically through the NWCC's website. The council information and services are also available by phone, in-person, through street kiosks or through postal mail. Most of the departments within NWCC, including TSD, have a website with the basic information. Overall, the NWCC website contains many different pages and links to the various departments within the council. Each of the NWCC's departments has content pages on the council website and is responsible for keeping them current. As part of its efforts to offer electronic services to its customers, TSD is required to update its website to provide the most current and updated information. Additionally, TSD allows traders and citizens to download relevant forms. The TSD website is connected to its internal database, which is part of its overall management information systems. This system operates on a Solaris platform and all the information resides on a central server. The database is split into several components to record and store information ranging from current TSD legislation to product safety. The database provides up-to-date information that staff uses to change and maintain the contents of the website. However, many staff members complain about the accuracy of information stored in the database, which makes it difficult for them to properly maintain the website.

## **Findings and analysis**

Using the framework provided by Heeks (1999; 2001), we analyzed the findings of e-government implementation at NWCC and TSD.

**Information:** The primary objective in the implementation of e-government at the local authority level in the UK is to provide updated and accurate information. An analysis of TSD website revealed that information such as contact address or email address for contacting the department is readily available. The TSD website also provides address of main council's

website that contains information on various policies. However, we discovered that TSD failed to provide updated information. The TSD website's contents were found to be outdated providing information as old as 2002. The only modifications made to the web content are the address and telephone numbers. The only current content of the site is a list of bullet point text which details some of the work the department undertakes. While TSD's website provides consumers with information, it is not displayed in a clear manner and is confusing for citizens to find the exact piece of information they require. No search facility is provided on the website. There are no links provided to other agencies such as Merseyside Police or to other trading standards authorities or government departments. There were no forms available on the website for citizens to provide their opinion or contact the department to report a violation by a trader. In summary, it appears that TSD fails to provide updated information to its clients and does not update the website frequently.

**Technology:** The majority of the technological problems that TSD faces are related to inadequacy of technical skills of its staff members. The TSD did organize training for one its staff members to facilitate website update. The NWCC decided to use in-house IT staff to develop and maintain the structure of the council's web pages. Each department, however, is accountable for its own website. Each staff member within the council has his/her own PC and depending on the level of seniority has access to the database that provides consumers with current legalization and other relevant information to encourage fair, safe and honest trading. The staff at TSD faced lots of problems because of outdated technology in use at TSD and also the fact that database was not properly populated. Most of the staff at TSD feels that information stored in the database is not current and many complain that data can not be analyzed to meet the needs of the consumer. Moreover, limited technical resources to maintain the website created barriers for TSD to support its effort to implement e-government effectively. As a result, TSD finds itself struggling to maintain its website. Moreover out-of-date material, poor control over design and navigation and bottlenecks caused by the time taken for webmasters to update content and graphics are common problems.

**Processes:** It appears that TSD lacked proper planning and formal procedures to guide its efforts while implementing e-government. While central government in the UK released a set of ten guidelines for all local authorities to follow, the processes at TSD partially followed those guidelines. The TSD followed some guidelines on accessibility and usability of the content provided on its website. One of the websites under TSD was found to be highly interactive, have the most current information and easy to navigate around. The TSD also followed the guidelines on using other channels for offering services such as interactive digital TV. However, it did not follow other guidelines issues by the UK government. For instance, one of the guidelines relating to website management and re-sourcing requires local authorities to evaluate the success of their e-government implementation through customer survey or user testing. However, there is no formal procedure at TSD that

supports this guideline. Another instance of lack of processes is that related to guidelines on building trust. The central government in UK expected local authorities to develop trust among its consumers about the services they offer through agreements such as connection guarantees or publicizing policies on data protection and freedom of information. However, there was no evidence of efforts on part of TSD to build trust by formalizing agreements or developing policy documents related to data protection. On the positive side, TSD did, however, anticipate the need to provide training to its staff members involved in updating the website and organized such training for one of its staff member. Overall, it appears that adhoc processes guided the efforts of TSD during e-government implementation.

**Objectives and Values:** The main objective of central government of the UK in pushing the implementation of e-government to the local level is to ensure that efficient services are offered. A budget of £675 (see [www.cabinetoffice.gov.uk](http://www.cabinetoffice.gov.uk)) million was allocated to help local authorities achieve this target. The NWCC shares the strong commitment of the central government to provide excellent electronic communication mechanisms to citizens. Encouraged by the success of e-government initiative at NHSD, the central government set a very ambitious target for the local authorities. While some local authorities did recognize the value of e-government initiatives, they could not meet the ambitious goals the central government set for them. This is pertinent for TSD. It appears that there was a significant gap in the objectives set by the central government and the reality at TSD. In view of significant and frequent changes in the management structure at TSD over past couple of years, there was lack of clear communication about the purpose and the objectives of e-government implementation at TSD. The staff members at TSD did not seem to share the same values as did the management staff. This largely resulted in TSD not meeting the timeline set by the central government for e-government initiative.

**Staff and Skills:** The TSD employs staff which has been around for many years. This has made the staff well conversant with the processes at TSD. However, staffing and skills emerged as one area of concern during the e-government implementation at TSD. Despite the pressure from the central government to meet the e-government implementation timeline, no staff was specifically assigned to oversee this task within TSD. Besides lack of motivation among the TSD staff to take the responsibility for e-government implementation, some staff needed the necessary technical skills to use the tools that enabled them to upload the correct information on to the website. As a result, they were not able to update their website. When citizens or traders called to get information, staff members had to access the database with incomplete and inaccurate information. This resulted in delays in answering inquiries from the consumers. Perhaps this explains why most staff did not see an immediate benefit from the e-government implementation at TSD.



**Management Systems and Structures:** The management structure at TSD has changed significantly over last six years, with many changes occurring council wide. Currently, it lacks a clear reporting structure. This has resulted in no staff member being assigned the responsibility of maintaining the website of TSD. It appears that the adhoc management approach resulted in an environment where little was done to support the e-government initiative or improve the department's services. The evidence of similar issues in the management structure is provided by Irani et al. (2005). They indicate a lack of cohesion amongst departments while analyzing the success of e-government implementation in some of the UK government departments at the local level. In summary, lack of technical experience and understanding of the potential of Internet technology on the part of senior managers may restrict the benefit any technological innovation can bring to an organization, especially in case of e-government implementation.

**Other Resources and Constraints:** The overall driving force for the e-government initiative at the local authorities' level in the UK has been the perceived success of e-government implementation at NHSD. However, local authorities in the UK such as TSD operate with different constraints. For instance, the investment made in the implementation of e-government at NHSD was £63.7 billion in 2003-2004 alone (Public Technology, 2004) while local authorities have much lower budgets. Unlike many other government agencies at the local level, the NHS Direct did not have to redevelop a legacy system. The NHS Direct was also the first scheme of its kind so it did not have the constraints that are usually present at the local level.

### **Issues and challenges: E-government implementation at NWCC and TSD**

Based on the findings and analysis presented earlier, some key issues and challenges in the e-government implementation at NWCC and TSD emerge. First, the availability of relevant information and lack of resources to update the information on regular basis has proved to be a major issue at TSD. The staff at TSD was overwhelmed with the task to maintain consistency and uniformity for some of the basic contents such as location map or the emergency services information in TSD's website. Second major issue that figures prominently in e-government implementation at TSD is the lack of processes and a positive mindset toward e-government within TSD staff. Even though TSD did have a database with all relevant information and an inbuilt report generator for analyzing data, staff members at TSD did not trust the accuracy of the information stored in the database. The lack of resources for maintaining the web pages and updating the information on TSD website points to inadequate planning and support within TSD for the e-government initiative. Additionally, TSD staff hoped that having an operational website with updated information will reduce the number of telephone calls received by them and thus minimize the workload. However, the staff at TSD now received regular calls as well as those related to problems concerning the website. In absence of proper planning for resources to deal with a large volume of calls, the staff at TSD could not pay attention to e-government initiatives.

This case study also highlights the lack of knowledge and skills about e-government among the managers at the local level in the UK. While managers seemed to be comfortable with manual processes, they did not anticipate issues and problems they were likely to face while transitioning to e-government. It appears that dominant mindset among the managers was to have TSD website operational rather than focusing on planning for the supporting processes usually required to make e-government efforts successful. The decision to maintain the website using internal staff which lacked the required technical skills, coupled with the lack of trust among the staff members about the value of e-government initiative contributed to the complicated situation at TSD.

Some of the issues faced by TSD had their origin in the ambitious targets set by the central government of the UK. The targets given to TSD and other local authorities by the central government for e-government implementation were primarily based on the success of such efforts at NHSD. Not many local authorities were able to meet the December 2005 deadline set by central government. Even those authorities that did meet the deadline could only meet the ten guidelines set by the central government. It seems that local authorities in the UK found themselves overwhelmed by the ambitious deadline given to them and seemingly did not share the same level of enthusiasm toward e-government implementation as did the central government. Another challenge before local authorities like TSD was to provide a comprehensive plan to support the ten guidelines issued by the central government. The lack of any prior experience in offering electronic services coupled with the lack of resources proved too challenging for the local authorities to execute the implementation of e-government successfully. Additionally, the local issues such as coordination among different departments or preparedness of individual departments to embrace e-government also played a role in effectiveness of e-government implementation.

Our study of e-government implementation at TSD points to the some of the issues related to adoption of e-government by citizens in the area that TSD serves. The adoption of e-government by citizens is important because if citizens do not effectively use electronic services offered by the government, it is likely to result in their sub-optimal utilization. A survey conducted by us to solicit citizens' responses to use of electronic services offered by TSD reveals that only 20% of people prefer to contact TSD by e-mail. In a similar survey conducted by Streib & Navarro (2002), an overwhelming number of citizens favor personal visits or telephone calls as opposed to the use of email. This is because an immediate response can be expected in a telephonic call. It appears that four years later, the attitude of citizens has not changed. Another challenge that local authorities like TSD face is the lack of awareness among citizens regarding the benefits of e- government. Despite the tremendous amount of investment in e-government initiatives, recent evidence suggest that only 15% of the citizens use e-

government services in the UK (Egov Monitor, 2005) Moreover, earlier research also points to the lack of publicity about most of the government and local authority websites (Thompson, 2005).

Considering that the TSD has not been able to successfully meet the central government's guidelines on promoting their electronic services, TSD faces significant challenge in getting people to use its electronic services.

## **Discussion**

In this study, our objective was to highlight some of the issues and challenges that local authorities like TSD within NWCC face during e-government implementation. Our study reveals that some of the key issues at the local government level include lack of resources, both financial and technical, lack of formal processes to guide e-government planning and implementation efforts, and lack of common understanding between central government and the local authorities. Because of lack of prior experience in offering such services or availability of right technology, availability of resources and guidance on e-government implementation is extremely critical. While some of the problems related to design and development of the e-government tend to be more structured, the problems related to the implementation and adoption of e-government at the local level tend to be unstructured and are not easy to anticipate. The success of e-government as measured by the success of the design and development is not sufficient.

Overall success of the e-government efforts at the local level requires a close examination of issues that are much more complicated than at the central government level. Given that websites may be the first point of contact for the citizens using electronic services at the local level, the reliability of contents of the web page plays an important factor in achieving a 'strong commitment' to e-government initiatives. (MORI, 2005). At the same time, it is important to recognize this 'strong commitment' is influenced by factors such as technical skills, funds and other such resources available within a particular local authority. These issues often exhibit a high level of complexity, affecting the implementation of e-government, particularly at the local level. In the UK, perhaps the first successful e-government initiatives in the health care area (eGov Monitor, 2005b) is the major reason for the overambitious milestones established by the government. This is not to say that central government has not made efforts to support local authorities. For example, the central government launched a new service, Government Connect (see [www.govconnect.gov.uk](http://www.govconnect.gov.uk)) aimed at helping local authorities to improve their efficiency and connect more effectively with their citizens. However, the tendency to rely on ICT and overlook important factors such as pre-existing problems (both management and technical) affects delivery of better electronic services. Recent surveys (eGovernment News, 2005) of both the general public and government frontline staff illustrate that misunderstanding, mismanagement and miscommunication might confound the drive towards better public services.

Moreover, issues related to adoption of e-government can impact the success of e-government efforts at the local level. The first step toward adoption of e-services is the greater emphasis on the marketing of local authorities' websites. Significant attention to advertising can increase awareness as proven in the past with other public services (Liam, 2005). For instance, citizens regularly use NHS Direct instead of visiting their local GP as awareness has increased through significant advertising.

## Conclusions

The findings from our case study indicate that e-government implementation at the local level requires an understanding and consideration of multiple issues. Some of these issues relate to the implementation process while others relate to adoption of electronic services. While some issues such as those related to staffing and skills can be addressed through better resource planning and identification of relevant skills, others such as lack of awareness or adoption of electronic services can be addressed by organizing awareness programs for citizens. Our paper identifies various factors that local authorities will find useful as a starting point whilst implementing e-Government. Consequently, it provides significant guidance for e-government implementation at local level elsewhere.

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