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**THE IMPLEMENTATION OF CITIZEN-CENTRED E-GOVERNMENT: A STAKEHOLDER VIEWPOINT**

Murray Scott<sup>1</sup>  
William Golden<sup>2</sup>  
Martin Hughes<sup>3</sup>

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<sup>1</sup> Centre for Innovation & Structural Change, National University of Ireland, Galway, Ireland. [Murray.scott@nuigalway.ie](mailto:Murray.scott@nuigalway.ie)

<sup>2</sup> Centre for Innovation & Structural Change, National University of Ireland, Galway, Ireland. [Willie.golden@nuigalway.ie](mailto:Willie.golden@nuigalway.ie)

<sup>3</sup> Centre for Innovation & Structural Change, National University of Ireland, Galway, Ireland. [Martin.Hughes@nuigalway.ie](mailto:Martin.Hughes@nuigalway.ie)

## Abstract

E-Government provides unprecedented opportunities to improve citizen services and achieve cost efficiencies through process change. As a result, implementation models have been developed to support the successful attainment of citizen-centred e-government. This paper reports from a comprehensive study of e-government implementation in Ireland, conducted over the last two years, the outcome of which is assessed from the view-point of multiple stakeholders. This paper argues that the potential of the Internet to transform service delivery has influenced the focus of implementation models for e-government, precipitating governments to concentrate on achieving web-enabled service delivery and ignoring wider issues of stakeholder management and involvement. A central problem in Information Systems (IS) is the mismatch in expectation of what IS can and cannot deliver; in the context of e-government in Ireland, IS has not delivered the hoped for panacea. This paper argues that the role of stakeholder involvement should be an essential component of implementation strategy in order to develop realistic and achievable expectations of the capability and function of e-government.

**Key Words:** Ireland, e-government, citizen-centred services, information systems, stakeholders

# 1. INTRODUCTION

The impact of the Internet marked a watershed in information technology usage in government and the potential to deliver user-centred, cost-effective services has been well-documented (Seneviratne, 1999, Watson and Mundy, 2001, Al-Kibisi et al., 2001, Scavo and Yuhang, 1999, Ho, 2002). One main goal of citizen-centred e-government is to develop citizen-centred service delivery and to achieve this significant cross-functional service integration and data availability is required (Chen and Gant, 2001, Fernandes et al., 2001, Gant and Gant, 2001). However, many of the models for e-government development have produced only descriptive frameworks for service delivery over the Internet (Layne and Lee, 2001) and have failed to address the wider issues of managing stakeholder expectation and involvement in the implementation process. Recently, Hirschheim and Klein (2003) have argued that cross-functional information systems have not delivered the hoped for panacea in the private sector and highlight, as a central problem, the mismatch in expectation of stakeholders as to the role and capability of the IS function. In e-government, stakeholder theory has been successfully introduced to support requirements gathering and the process of managing stakeholder relations (Tennert and Schroeder, 1999, Scholl, 2001, Pardo and Scholl, 2002, Chan et al., 2003). However, there is a need to carry out further research into engaging stakeholders in discourse regarding the appropriate role and capability of the IS function (Hirschheim and Klein, 2003) in order to ensure that, in the case of e-government, stakeholder expectations are both realistic and achievable.

This paper reports on an in-depth case study, spanning two years, in e-government implementation in Ireland – a country rated as one of the most advanced countries in Europe in the provision of online services (CGEY, 2002). The case study included a complete stakeholder set, covering not only top, middle and local management, but also the citizen. This paper uncovered significant gaps in the expectation of stakeholders as to the role and function of e-government, resulting in a rich picture of divergent interpretations of implementation. In common with Myers (1994) and Klein and Hirschheim (1991) this paper supports the importance of mutual understanding between stakeholders for IS implementation, but argues that, in the context of e-government implementation, communication and consultation between stakeholders becomes essential to ensure that realistic expectations are developed of the capability and function of e-government. To this end, the paper is organised as follows. Section 2 traces the development of citizen-centred e-government and outlines the components and challenge of electronic service delivery. Section 3 defines the research methodology adopted for this research and section 4 summarises the essential features of the case study. In the fifth section, the findings from the stakeholders are presented and the implications for e-government in a wider context are considered in section 6. The final section presents the conclusions.

## **2. THEORETICAL BACKGROUND**

### *2.1 The Modernisation of Government*

A significant conceptual shift has occurred in public administration, from a controlling bureaucratic administration, to one focussed on creating an efficient and responsive organisation (Denhardt and Denhardt, 2000, De Araújo, 2000, Pollitt, 2000). Central to modernisation programmes that have dominated reforms since the 1970's, is the influential model of New Public Management (Minogue et al., 1998, Aucoin, 1990, Barzelay, 2001, Pollitt, 1990). The objective of this model has been on reshaping the boundaries and responsibilities of the state, especially through the citizen-centred restructuring of public services achieved through the adoption of private sector practices (Barzelay, 2001, Minogue, 1998). This approach seeks radical improvements to public service delivery through the development of information technology and has identified the development of a 'single' view of citizens as a major reform target, imported from the private sector (Hood, 1991, De Araújo, 2000).

Two of the central themes guiding the recent development of e-government are the need to provide 'citizen-centred' government, where services and information are integrated at the point of delivery and the need for 'joined-up' government through functional and cross-departmental integration (Chan et al., 2003, Al-Kibisi et al., 2001, Ho, 2002). These themes challenge the limitations of the traditional organisational structure of government and represent a continuation of previous public sector reforms with a substantially increased role for information and communication technology (Li, 2003, Hood, 1991, Heeks, 1999).

### *2.2 Electronic Service Delivery*

The key requirement in providing citizen-centred e-government is in the use of technology to produce and deliver services electronically (Ho, 2002, Layne and Lee, 2001, Bannister and Walsh, 2002). The motivation for this is firstly to deliver public services centred on the needs of citizens and secondly to achieve administrative efficiencies in the functions of government (De Araújo, 2000, Hood, 1991, Minogue et al., 1998). Electronic service delivery (ESD) initially occurred in the private sector and was characterised by a focus on the specific needs of the company (Clarke, 1999, Clarke, 1996). The important development in ESD however, was in refocusing the presentation of the service to suit the manifold and changing needs of the customer, not the organisation (Lenk, 2002, Ho, 2002). This 'client-based' view has been adopted in e-government initiatives, reinforcing the shift in government from the traditional, functional structure of administration to a more responsive model that provides services in a citizen-centred manner (Lenk, 2002, Osborne and Gaebler, 1992, Bellamy and Taylor, 1998, Heeks, 1999).

The concept of Entry Points or Portals provides the vehicle in ESD for delivering integrated, citizen-centred services (Clark, 1999). The generic architecture of an entry point is outlined in figure 1 below. The main component is the integrative technology, the 'entry point'; this middleware element coordinates data flow between the legacy systems of service providers and multiple delivery channels. A variety of delivery mechanisms provide a choice of interface between the user and the entry point, depending on the requirements of the service and preference of the user (Poon, 2002, Lenk, 2002). One of the advantages of this model is that communication is managed between government agencies in the provision of integrated services; this in turn simplifies the implementation of entry points as major organisational change is avoided (Ho, 2002).

(figure 1)

The ability of the entry point to provide integrated services to citizens enables the provision of citizen-centred e-government, as common services can be customised for individual citizens (Al-Kibisi et al., 2001, Chen and Gant, 2001, Gant and Gant, 2001). Service integration will mean that a single citizen interaction, from whichever delivery channel, will automatically notify all government systems required to perform the requested task (Watson and Mundy, 2001). Tambouris (2001) states that the ultimate goal is to provide a 'one stop shop' service to the citizen through which any level of government transaction can be completed.

### *2.3 Implementation*

Layne and Lee (2001) argue that the benefits of e-government can only be realised when organisational changes accompany technological ones. However, Hirschheim and Klein (2003) argue that achieving comprehensive cross-functional integration has become more a pipe dream than reality in the private sector, with political issues as well as technical problems challenging the implementation process. Accordingly the authors call for the realignment of stakeholder expectations of what IS can and cannot deliver (Hirschheim and Klein, 2003). In the public sector, implementation problems possess more complex characteristics particularly with reference to political elements inherent in organisational change (Willcocks, 1994, Willcocks and Mark, 1989). The political context of the public sector highlights not only the multiple agencies that are involved in the implementation of e-government, but also the potential impact each can have to the successful implementation of e-government (Chan et al., 2003, Adelakun and Jennex, 2002). To support the implementation of e-government therefore, the process of identifying and managing a broad range of constituent stakeholders must be considered not only to ensure successful development (Chan et al., 2003, Pardo and Scholl, 2002) but more specifically to ensure that a realistic set of expectations are communicated to all.

In e-government, the adoption of a staged implementation approach has been widespread (Al-Kibisi et al., 2001). Experience from other public sector implementation approaches (Bellamy and Taylor, 1994, Carrick, 2001, Willcocks, 1994) has highlighted this strategy as conducive to organisational learning and

providing greater allowance for social and political issues to be resolved. In 2000, at the Lisbon summit of the European Council, a four stage evolutionary framework was developed in order to aid the development of e-government services, these stages included: the information stage (for the presentation of public service information over the Internet); the interaction stage (for the provision of downloadable forms); the interactive stage (for the online processing of forms); and the transaction stage (for the full provision of fully interactive electronic services). This framework has been adopted or closely resembles many other staged models for e-government implementation for example, Deloitte Consulting, the Australian National Audit office, Cap Gemini Ernst and Young and Layne and Lee (2001).

### **3. RESEARCH METHOD**

The principle of stakeholder analysis was adopted in this research in order to examine the development of citizen-centred e-government in Ireland. This approach ensured that critical stakeholders were identified and their multiple viewpoints accounted for in data analysis (Burgoyne, 1999). The principle of multiple interpretations requires that multiple viewpoints are sought and documented, the analysis of which involves seeking to understand conflicts relating to power, economics or social values (Klein and Myers, 1999).

An in-depth case study is presented consisting of 13 semi-structured interviews, supplemented by two questionnaire surveys. Five in depth interviews were conducted with three central agencies involved in e-government: the first with a senior civil servant from the Department of An Taoiseach (Prime Minister) – the governmental department providing strategic leadership to e-Government initiatives in Ireland; two in depth interviews were conducted with members of Reach - the executive body created specifically to implement e-government strategy; and a further two interviews were conducted with senior members of the Local Government Computer Supply Board (LGCSB), a public sector company providing IS services to local government. The average length of these interviews was two hours. Six local authorities were identified for study and in-depth interviews were carried out onsite in June 2003 with IT managers from each county council, each lasting from between 2 and 4 hours. Interviews were also conducted with health authority officials representing two health boards. Care was taken throughout the interviewing process to produce detailed reports as soon as possible to avoid the loss of data or impressions gained by the researcher (Darke et al., 1998). Records were kept of the content of all interviews. Further clarifications and updates were obtained by email and telephone contact. Two survey-based questionnaire were also conducted in a 'Counter, Shop Front' (Clarke, 1999) in Co. Donegal: the first involved staff members of the facility and the second obtained responses from users of the centre. The researcher gathered 85 responses from a total of 110 staff members, resulting in a response rate of 77% and obtained a further 98 responses to the citizen questionnaire.

## **4. CASE STUDY: E-GOVERNMENT IN IRELAND**

### *4.1 E-Government Strategy*

In March 2002 the Irish government committed itself to placing all appropriate services online by 2005 (Government of Ireland, 2002). In order to achieve this the government developed a comprehensive strategy for the development of electronic services with two key objectives: a focus on citizen-centred service development and the use of the entry point concept as a technological means to provide service integration. In line with these objectives the Irish government has delegated certain tasks to progress the development of electronic services: first the concept of the entry point has been prioritised and an independent agency created for the purpose of managing its development; second, local and national agencies have been mandated to modernise their resource provision in line with citizen-centric principles; third, pilot initiatives have been progressed in selected areas for the purpose of developing various delivery channels to the entry point. In line with Clarke's (1999) model of entry points, the implementation of this strategy can be explored in more detail.

### *4.2 Entry Point*

The Irish government identified the concept of the entry point as the central mechanism for delivering the e-government agenda. This model was identified as the most efficient to provide mediated, citizen-centred services. The model of the entry point was designed to provide a mechanism to coordinate government service providers and to manage the various interactions with resource providers in delivering a service. In turn the entry point provided the ability to combine and restructure those services around the needs of citizens. The entry point also supports multiple delivery channels. The model of the Public Service Broker (PSB), see figure 2 below, outlines the structure of the proposed entry point. (figure 2)

In order to implement the PSB, the Reach agency was established. Reach is an executive body, its name reflecting the concept of government reaching out to its customers. Initially Reach was composed of 11 members, all civil servants drawn from a variety of departments, reporting to the Department of An Taoiseach, the central government department responsible for developing e-government strategy.

### *4.3 Resource Provision*

In response to a clear mandate to modernise resource provision, local and national agencies took the initial step in 2000 of developing individual web sites, providing detailed information to citizens and

businesses respectively. With a focus on customer requirements, these sites broke the long standing tradition of distributing government information along functional lines.

Also in 2000, in response to local authority requests, the Local Government Computer Supply Board (LGCSB) developed electronic forms (e-forms) for use on local authority web sites. These were essentially web versions of the traditional paper based form and enabled users to register with their local authority. However, there was no online system to process the form electronically – these initial e-forms served only to promote the accessibility of public service forms.

Central to the development of resource provision in government agencies was the redevelopment of e-forms into an interim entry point. In developing the PSB, Reach identified the need for a more efficient system of managing forms and a more accessible location for delivering forms. As a result Reach, in partnership with LGCSB, progressed the development of e-forms and enabled the provision of an interim level PSB. This development was called reachservices. The key development to e-forms was the creation of an entry point, of which the key component is a form builder tool. The form builder tool enables the local authority to create their customised form that is then uploaded onto the reachservices site. Each local authority administrator can select which e-forms are to be made available for their authority and can customise or edit those forms online.

#### *4.4 Delivery Channels*

Two delivery channels have been developed to interface the PSB: physical access through a counter, shop front and online access through the pilot reachservices site. The strategy adopted by the Irish government for developing the physical channel has been to test a pilot initiative in a selected area. Reach chose Co. Donegal to pilot the physical channel of the PSB and was supported by central government with an allocation of Euro 1.8 million to the research and development of the project. Reach believed Co. Donegal to be an appropriate test site for a physical channel as the incidence of PC ownership and Internet connectivity are not high in Co. Donegal. Furthermore, senior management in Co. Donegal predicted that there would be significant need for assisted or mediated access to the Public Services Broker, particularly for sections of the community that require regular or frequent access to public services, such as the socially excluded (DCC, 2001).

At the centre of the pilot scheme was the development of Integrated Service Centres (ISC). These centres offer integrated services to local citizens, delivered through physical channels. The ISC provides a range of core local government services e.g. housing and unemployment services and has developed an intermediary service from which services can be activated as well as the provision of detailed information and advice. In the past citizens were required to contact every agency involved in the delivery of a particular service, for example, to avail of housing services citizens were forced to contact the North Western Health Board, Donegal County Council, the Department of Social Community and Family Affairs and the Revenue Commissioners individually. The ISC however, has developed sufficiently

effective collaboration between local agencies that the citizen is only required to make a single interaction with the ISC to expedite the service. The process of developing the ISC was initiated in 1999 and a total of six ISC are planned for County Donegal with 4 currently in operation.

The other delivery access channel to be developed, providing online access to services, was reachservices. This allows registered users to submit forms electronically to the relevant department. Part of this registration is an authentication process that is managed by the Department of Social and Family Affairs. The individual may then access the reachservices site using their Personal Public Service (Social Security) number and password. This provides the authority with proof of the individual's identity and enables features like intelligent form filling – a feature that allows certain fields to be populated automatically based on the information stored on each citizen. When the user submits the form it is automatically routed to the relevant authority in XML format. At present the front-end interface is fully automated while the back end system still relies on human interaction.

## **5. FINDINGS**

### *5.1 E-Government is not all E-Delivery*

One of the central themes guiding the development of e-government is to achieve citizen-centred service delivery, the development of which involves an increased role for information technology (Li, 2003, Heeks, 1999, Hood, 1991). The role for technology however, implicitly assumed through e-government implementation models e.g. Layne and Lee (2001), focuses solely on the development of web-enabled access to services. This case suggests that the role for technology in e-government should support a model for multiple channel delivery e.g. Clarke (1999), utilising the advantages of both web-enabled efficiencies and the need for government to retain physical interaction with citizens.

The potential for accessing services online has been generally supported by citizens. The initial uptake rate for reachservices was 500-600 per month, which was viewed as successful by Reach as the launch of the web site was subdued to prevent an initial surge of activity. Those citizens in the ISC who have access to the Internet, show a strong desire to access services online: over 70% would access services such as car tax and educational services online. Furthermore, the number of homes in Ireland with access to the Internet has increased from below 20% in 2000 to 34% in 2003 (CSO, 2003), enabling these citizens to access government services online.

However, the importance of the physical delivery channel has also been highlighted through the success of the ISC. Management in Donegal noted that socially excluded citizens were in greatest need of improved citizen-centred services, but were least able to access services online and also in need of advice from government agencies for particular services. 88% of citizens using the ISC highlighted the ability to access specific information and advice on personal issues as important reasons for choosing to use the ISC. 76% of users strongly agreed with the importance of physical contact in accessing services and over

80% highlighted the presence of many government and council departments as important features of the ISC. The ability and willingness of users to avail of government services online were also noted. The survey revealed that the highest demand for services were those relating to social welfare services and these citizens were also most likely not to have Internet access. Over 50% of users have rarely or never used the Internet for personal use. This compares with a national average of 66% of households that do not have a computer connected to the Internet (CSO, 2003). Of these users 77% either disagreed or strongly disagreed with being comfortable providing personal information over the Internet to avail of services. In a national context 71.5% of unemployed persons have never used the Internet (CSO, 2003). These figures show that of the high volume services in the ISC the users most likely in need of such services cannot or would not access them online.

These service delivery initiatives provide evidence of the need for multiple delivery channels as the flexibility offered, by providing two modes of service provision, has been important in allowing for differences in both citizen choice and in social profile. However, although there is evidence to support the validity of pursuing a multi-channel design strategy, in this case development did not occur in a co-ordinated fashion. There has been no communication between Reach and Donegal since the inception of the ISC and as a result the potential to explore the progress made by the ISC has not been exploited. As such the potential role of technology to provide further benefit has been hindered through lack of co-ordination between local and central developments.

## *5.2 Weakness of implementation models*

The design strategy for e-government, devised by central government and embodied in the model of the PSB, was inclusive of the need for multiple access to services. However, the implementation strategy adopted by Reach was reflective of traditional implementation models for e-government e.g. Layne and Lee (2001), as the focus was primarily on developing online access to services. In this case the approach pursued by Reach highlights certain weaknesses in traditional implementation models: a bias on technological issues to support web development and a lack of attention to stakeholder concerns. The focus on centralised web development has primarily resulted in insufficient development at a local level. Only two local authorities interviewed stated that their service departments received forms submitted from the reachservices web site and in these cases there was no means to electronically process the form. Although agencies have the ability to present services to citizens electronically using the form builder, the process of implementation has not tackled the challenge of back-end development in resource providers. A report produced by the Information Society Commission, an independent advisory body to the Irish government, also reports similar findings (ISC, 2003). The report highlights the importance of streamlining and re-engineering back-end processes in order to fully e-enable services. In addition to delivering services online, the report also highlights the potential of e-government to improve the quality of existing services delivered through more traditional channels. Due to the lack of back-end

development, this report believes that the development of e-government in Ireland is unlikely to achieve the target of providing all appropriate services online by 2005 (ISC, 2003).

The implementation strategy adopted by Reach encouraged the expectation that IS alone would deliver integrated e-government services. However, in common with Hirschheim and Klein (2003), IS has not delivered the hoped for panacea and there is evidence to suggest that this expectation is misguided. Furthermore, stakeholder expectations were not managed in the implementation process and certain stakeholders were excluded from the development of strategy. Local authorities only met once with Reach and were not included by central government in the development of e-government strategy. As a result local authorities have become resistant to certain initiatives, in particular reachservices, and believe that senior management were interested only in presenting services online and were not supportive of initiatives that sought to e-enable back-end processes. Evidence from this case suggests that identifying and including stakeholders should not only be regarded as an integral strategic element missing from current implementation models, but also that communication and consultation with stakeholders can identify and resolve important developmental issues to support the achievement of e-government.

### *5.3 Achievable expectations for E-Government*

The evidence of the ISC supports the importance of communication and consultation as political resistance was avoided by ensuring that staff members and management shared mutual expectations throughout the development process. In common with Myers (1994) and Klein and Hirschheim (1991), failure to achieve consensus through misconceptions held by stakeholders contributes to systems development failure. In the case of the ISC, the inclusion of stakeholders was a primary feature of the success of this approach and played an important role in negotiations between management and staff for the development of the ISC. Some of these negotiations related to accountability, communication from management and employment roles. From the staff survey, 55% of staff members indicated that they either agreed or strongly agreed with having a more clearly defined role since the introduction of the ISC, 60 % of managers strongly agreed to the level of communication from management regarding policy guidelines for services and a total of 69% of staff agreed or strongly agreed with the provision of a more challenging environment in the ISC. Finally, over 50% of staff members agreed or strongly agreed with an increase in accountability for departments in the provision of services to customers.

The process of organisational restructuring was identified by management as critical to achieving better collaboration between agencies and to create an environment that will support the introduction of new technologies.

*“ We have no history of departments collaborating in the provision of services within Donegal County Council or with any other service provider. It became a priority for us therefore, to support the*

*development of inter-agency cooperation through organisational restructuring in advance of the introduction of the Public services broker.”*

*Director of Services, Donegal County Council, 2003*

Staff members of the ISC have responded positively to the increase in cooperation between departments since the introduction of the ISC and further believe that this has had a positive impact on the provision of service. 83% of staff either agree or strongly agree with the increase in cooperation since the introduction of the ISC. Management also highlighted the potential role of ICT to the development of better service provision. In particular, the internal intranet is rated strongly by staff with over 64% agreeing that it enabled collaboration with other departments. 75% of front-line staff either agreed or strongly agreed with the benefits of access to e-forms, reflecting the fact that this staff group would have more direct access to the customer and more experience of the benefits of online forms.

As a pilot scheme, the ISC thus represents a ‘working model’ of realistic and achievable expectations for e-government development. This approach highlights the importance of stakeholder support as inclusion and consultation has resulted in effective collaboration among service providers. This approach also emphasises the need for the introduction of appropriate technology to support inter-agency co-operation and to provide better co-ordination in service provision. The development of the pilot also suggests firstly that progress has been achieved slowly – the development of the ISC has been ongoing for over four years and secondly, that the functional structure of government cannot be easily changed. The implementation of the entry point requires a middleware element to interface with individual departments, connecting otherwise untouchable islands of process. The weakness in the ISC pilot is that this element has not been fully implemented and the functional structure of government is hindering further development.

## **6. CONCLUSIONS**

Through unravelling the complexities of e-government implementation, this paper argues that achieving citizen-centred services is an arduous process not adequately provided for by conventional implementation models. The focus on online service delivery proposed by Layne and Lee (2001) and others, has been shown in the case of Ireland to lack flexibility in providing for citizen needs and precipitates an approach focused on technical issues. This has important policy implications for government since the adoption of this model has made little progress in fully e-enabling services and has gained only stakeholder resistance. If the approach is therefore inappropriate then support of such implementation models is misguided. Following Hirschheim and Klein (2003) this paper argues that in the context of e-government, IS has not delivered the hoped for panacea and that expectations of the capability of IS to deliver e-government are unrealistic. This paper therefore highlights the importance of stakeholders as a key element of implementation strategy, one that is currently absent from

implementation models, but one that can promote consensus in stakeholder expectations and reveal a more achievable role for IS in e-government. As such this paper would argue that IS remains essential to e-government development but in an enabling not central role.

## Figures

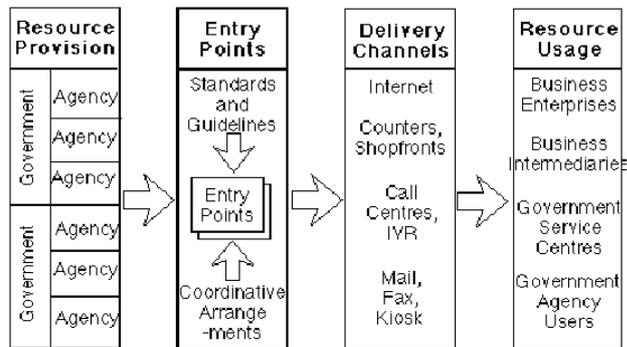


Figure 1 Generic Architecture of an entry point. Source (Clarke, 1999)

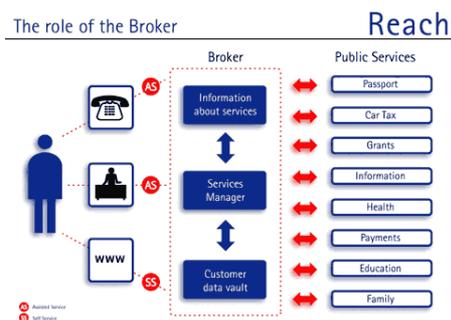


Figure 2 The Public Service Broker. Source Reach internal documentation.

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