

The Evaluation of e-Government projects for Small Local Government Organisations

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Abstract: The concept of e-government is complex and covers fields, which differ a lot from each other. This heterogeneity can be a problem in the definition of a model for the evaluation of the impact e-government projects can have. In this paper, starting from a broad definition of e-government, we will discuss the possibility of defining a model for the evaluation of e-government systems based on the concept of public value. To this end we will suggest an approach to the concept of public value that is citizen-centred and role-based, so that we can distinguish different aspects of public value on the basis of the different roles citizens can have in their interaction with Public Administration. The approach we suggest will be illustrated as regards the evaluation of projects aiming at the activation of Local Service Centre, as requested by the Italian Action Plan for the inclusion of small municipalities in the spread of e-government.

Keywords: e-government, public value, small local government organisations, intercommunal cooperation

1. Introduction

In the last few years considerable resources have been invested in supporting innovation in Public Administration. Nevertheless, in spite of the efforts made by many institutions (see for instance eGEP (2006)), there still does not exist a consensus about how to evaluate the results of the investments in e-government projects. On the one hand this is due to the fact that not all the results of the e-government innovation processes, which have been put into action, are visible yet. On the other hand, the complexity itself of the concept of e-government makes it difficult to define an evaluation system that can be applied to all the areas covered by that concept (e-Democracy, e-Administration, e-Services). In this paper, we adopt a broad definition of e-government, such as the one suggested by the Organisation for Economic Cooperation and Development (OECD (2003)). According to this definition e-government can be considered as the process of innovation of Public Administration in order to achieve innovative forms of government and governance through the use of ICTs. In this sense, the evaluation of an E-government system must be referred to its capacity of improving on the whole the performance of the organisation adopting it. The concept of public value provides an interesting point of view for the evaluation of the performances of Public Administration (Kelly, Mulgan, Muers (2002)).

The aim of this paper is to describe an approach to the evaluation of e-government systems, based on a citizen-centered and role-based view of public value. Such an approach, described in section 2, will be applied in the description of a model that can be used for the evaluation of projects for the inclusion of small municipalities in the spread of e-government, as requested by the Italian Government's Action Plan for the implementation of e-government at the regional and local level (CNIPA (2005)). The Italian Action Plan requires Small Local Government Organisations (municipalities with less than 5000 inhabitants that represent the 72% of the Italian municipalities) to define cooperation agreements for the activation of Local Service Centres (LSC), based on the model of intercommunal cooperation.¹ In section 3 we will discuss the model of intercommunal cooperation. One of the most critical elements for an intercommunal cooperation is the management of the process that leads to its activation. In order to reduce the risk of failures due to inaccurate design of the cooperation, we will present a standardised model for the definition of intercommunal cooperation's, which results from an analysis of the case of Local Government in Italy (IreR (2002); Castelnovo, Simonetta (2006b)). Finally, in section 4, we will discuss a public value-based approach to the evaluation of the definition process of an intercommunal cooperation for the management of innovation involving SLGOs. More specifically, we will consider how the evaluation of the cooperation can depend on the public value as perceived by citizens playing roles directly involved in the definition and the management of the cooperation.

¹ The term 'cooperation' will be used as a noun here as it more accurately reflects the meaning in Italian than the more normal English word 'cooperative'.

2. e-Government and public value

In a broad sense, public value refers to the value created by government through services, law regulations and other actions. Public value provides a broader measure than is conventionally used within the new public management literature, covering outcomes, the means used to deliver them as well as trust and legitimacy. It addresses issues such as equity, ethos and accountability (Kelly, Mulgan, Muers (2002)). The close relationship between the concept of public value and e-government has been pointed out by Kearns (2004). In a critical discussion about the excessive emphasis given to online services as the central element of e-government systems, Kearns applies the work of Kelly, Mulgan and Muers directly to the evaluation of e-government. Public Administration aims at producing value for citizens; from this perspective, the use of ICTs to improve government is a means to improve the production of public value. Thus, an e-government system resulting from a process of technological and organisational innovation can be indirectly evaluated by considering the possible increase of public value deriving from the adoption of that system. Since e-government aims at a citizen centred vision of government, also the evaluation of an e-government system as regards the public value produced should be based on a centred-centred approach (Bannister (2002), Alford (2002)). Discussing the value of ICTs for Public Administration, Bannister underlines that the definition of value reflects the fact that citizens interact with Public Administration, and therefore with public value, playing different roles. A possible classification of the roles involved in the production and use of public value is the following:

- Citizen as such: any person having the right of citizenship;
- Citizen as taxpayer: person who, through taxation, finances Public Administration;
- citizen as user/consumer: person who “buys” a service from Public Administration, thus obtaining private value (for himself);
- Citizen as beneficiary: person who receives a service from Public Administration without having to buy it;
- Citizen as entrepreneur: person who benefits from the services of Public Administration as economical subject;
- Citizen as participant: person participating in democratic decision making or policy formulation;
- Citizen as policy maker: person playing the role of policy maker within Public Administration;
- Citizen as operator: person working for Public Administration;
- Citizen as delegate agent: person working on behalf of Public Administration without being an operator of Public Administration;
- Citizen as supplier: person who, as economic subject, supplies goods and services to Public Administration.

These roles correspond to some modalities of interaction between citizens and Public Administration. Some of these modalities concern relations between Public Administration and subjects that are external to it: they correspond to roles in which citizens receive a value from Public Administration as users of services or participants in democratic processes (user/consumer, beneficiary, entrepreneur, participant). Other modalities of interaction, by contrast, concern internal relations: they correspond to relations between Public Administration and citizens playing a direct or indirect role in the processes of production of value (policy maker, operator with managerial responsibilities, operator without managerial responsibilities). In these roles citizens receive a private value from Public Administration (in terms of political or economical reward). Nevertheless, as these roles are responsible, on different levels, for the functioning of the organisation, they might also receive a public value, for instance in terms of good functioning of Public Administration. To these two kinds of roles we can add a third one, which includes roles external to Public Administration and yet involved on different levels in the production of public value, as it is the case of Networked Government. Examples of such “mixed” roles are the role of delegate agent and of supplier, in particular of service supplier. Taking these observations as a basis, we can suggest the following classification of the roles, which must be considered in a citizen-centred vision of public value:

Table 1: A role-based model of the interactions between citizens and public administration

External roles	citizen as such (generic role)
	citizen as taxpayer
	citizen as user/consumer
	citizen as beneficiary
	citizen as entrepreneur
	citizen as participant

Internal roles	citizen as policy maker
	citizen as operator with managerial responsibilities
	citizen as operator without managerial responsibilities
Mixed roles	citizen as delegate agent
	citizen as supplier

3. Intercommunal cooperation

Adopting the definition of OECD (2003), e-government amounts to a process of reorganisation of Public Administration in order to improve its efficiency and effectiveness through the use of ICTs. SLGOs often lack the resources that are necessary for the management of innovation. The sharing of resources and competencies is one of the possibilities for SLGOs to manage the processes of technological and organisational innovation that are required for the implementation of e-government systems. For this reason the Action Plan for the diffusion of e-government in Italy provides special funding for SLGOs that define cooperation agreements for the activation of Local Service Centres (LSCs), based on the model of intercommunal cooperation for service provision. (CNIPA (2005)) As usually happens with intercommunal cooperation's, the activation of a LSC by an aggregation of SLGOs is a complex operation, which must be carefully planned, otherwise it will risk that it will not be successful. Considered as the result of a cooperative process, the activation of a LSC presupposes (Castelnovo, Simonetta (2006b)):

- The definition of the goals of the cooperation;
- The definition of the functions assigned to the LSC;
- The definition of the levels of responsibility;
- The definition of the relationships between the LSC and the SLGOs that adhere to it;
- The definition of the conditions for the attribution and the management of the resources necessary for the functioning of the LSC.

From a process-oriented point of view, all of these operations can be considered as constituent of two kinds of processes, typical of the definition of an intercommunal cooperation:

- Processes of structuring: processes which define the institutional and organisational form of the cooperation, defining its control structures and levels of responsibility;
- Processes of selection of the fields of activity: processes which define the activities that are the objects of the cooperation and, consequently, the relations between the intercommunal cooperation and its environment.

Figure 1 summarises the definition processes of an intercommunal cooperation:

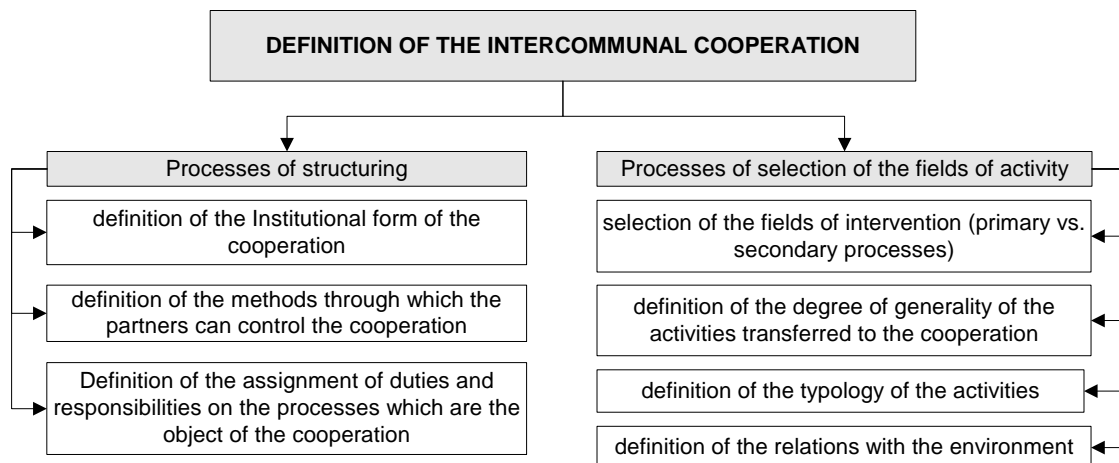


Figure 1: Processes for the definition of an intercommunal cooperation for service provision

The definition of an intercommunal cooperation among SLGOs aims at achieving better results than those that its members could achieve individually. From the point of view of public value, this means that a cooperative network is expected to produce more value for citizens than each member could produce individually. In a role-based approach we can look at this value from different perspectives, at least as many as the roles defined in table 1. In playing multiple roles, the citizen is, in effect, a multiple stakeholder. The processes that, according to figure 1, define an intercommunal cooperation determine the conditions for an efficient and effective management of the cooperation. Such processes have no direct effects on the value

perceived by the citizens, as they have external roles. For the external stakeholders those processes are significant just because a good definition of the cooperation could guarantee better operational conditions for service delivery and, possibly, a widening of the range of the available services. Actually, from the point of view of the external stakeholders, the object of the evaluation should be the results of the definition processes, and not the processes themselves. Nevertheless, even if the cooperation achieves the goal of producing value perceived as such by the external stakeholders, its stability and continuity in time might be questioned because there is not a similar perception of value by persons having regulative (policy maker) or managerial roles (management) in the cooperative network. The possibility of conflicting evaluations by internal and external stakeholder makes it necessary to point out the elements that can determine the perception of the value also for the internal stakeholders. If the stability of the cooperation is considered as an element that can generate value, then the evaluation of the cooperation from the point of view of the value perceived by the external stakeholders must be related to its evaluation from the point of view of the value perceived by the internal stakeholders.

For the external stakeholders the evaluation of an intercommunal cooperation depends exclusively on the results it can achieve, whereas for the internal stakeholders it is important also the way it is structured and managed. From this point of view, for the internal stakeholders the value generated by an intercommunal cooperation depends also on the quality of its definition processes. Table 2 relates the processes of definition of an intercommunal cooperation to the internal stakeholders involved in them. The involvement of the stakeholders is defined as regards two elements:

- The direct participation in the processes of definition of the cooperation (for instance, the choice of the institutional form of the cooperation is exclusively up to the policy makers),
- The consequences of some choices made during the definition processes fall upon a certain stakeholder (for instance, defining a particular typology of activity for the cooperation has some consequences on the activity of the operators).

Table 2: Roles involved in the definition of the intercommunal cooperation

PROCESSES		ROLES
Process of structuring	Definition of the institutional form	Policy maker
	Definition of the modalities of control by the members of the network	Policy maker Operator with managerial responsibilities
	Definition of the assignment of duties and responsibilities on the processes which are the object of the cooperation	Policy maker Operator with managerial responsibilities
Process of selection of the fields of activity	Definition of the fields of intervention	Policy maker Operator with managerial responsibilities
	Definition of the degree of generality	Policy maker Operator with managerial responsibilities
	Definition of the typology of the activities	Policy maker Operator with managerial responsibilities Operator without managerial responsibilities
	Definition of the relations with the environment	Policy maker

4. Value for internal stakeholders

Kelly, Mulgan, Muers (2002) identifies three sources of public value for citizens: services, outcomes and trust. Services, outcomes and trust can be considered as elements generating value also as regards the internal stakeholders involved in the definition and in the management of an intercommunal cooperation. Based on these concepts, in this section we will describe some of the elements that can generate a public value for the members of the cooperation. Such elements can be used to evaluate the cooperation from the point of view of the value perceived by its members. The relation between public value and internal stakeholders can be considered from two different points of view:

- The evaluation of an existing intercommunal cooperation defined through processes such as those described in section 3,
- The definition of a new intercommunal cooperation through processes such as those described in section 3.

The two points of view are clearly correlated: specifying from the definition stage which are the elements for the evaluation of the activity of the network is a means of reducing the risk of future conflicts among its partners. Generating public value for citizens through services depends on the level of quality with which

they are delivered by Public Administration. Kelly, Mulgan, Muers (2002) defines the quality of services in terms of:

- Service availability;
- Satisfaction levels with services;
- Importance of services offered;
- Fairness of service provision;
- Cost.

The services delivered to citizens by the cooperation on behalf of its members can be many (all the services defined during the definition stage through the processes of selection of the fields of activity). On the contrary, there is only one service delivered directly by the cooperation to its members: the production and supply, on their behalf, of services to citizens. The attributes of availability, satisfaction, importance, fairness and cost can be then directly referred to the perception of value by the internal stakeholders interacting with the cooperation. Table 3 illustrates these attributes and points out some elements for their evaluation.

Table 3: Evaluation elements and correlated general indicators

Attributes	Evaluation elements
Service availability	Timeliness of the answer to inquiries about the functioning of the intercommunal cooperation Flexibility and timeliness in changing the performance levels Capability to anticipate problems and solutions Capability to offer original trends Transparency levels, intended as possibility to control the acts externally
Satisfaction levels with services	Overall satisfaction level about the functioning of the intercommunal cooperation.
Importance of services offered	Relation between services, which can be delivered only through an intercommunal cooperation, and services, which can be anyway delivered by the single administrations.
Fairness of service provision	Congruence between the needs formally recognised and the services delivered in the administrated territory. Congruence between the costs covered for the services delivered by the administrations and the level of the service delivery.
Cost	Congruence between costs for the management of the intercommunal cooperation and the benefits derived. Adequate levels of economicity, such as ability to maintain an economic balance on the long term.

In the definition stage of the intercommunal cooperation, the attributes of availability, satisfaction and fairness can be defined in relation to the processes of selection of the fields of activity and of definition of the modalities through which the single members can control the activity of the cooperative network. In particular, the attributes of availability and satisfaction can be defined through the adoption of suitable service level agreements, whereas the attribute of fairness can be guaranteed through the direct or indirect control that the single members exert on the cooperation. The attribute related to the costs can be evaluated, instead, as regards the determination of the amounts the single partners must pay for the functioning of the cooperation. In general terms, the outcome evaluation of the activity of an institution concerns the evaluation of the impacts of its action with reference to the citizen needs and expectations. From this perspective, in a role-based approach also the outcomes can be specified with reference to the different roles a citizen can have. The evaluation of the government as regards achieving the desired outcomes seems to require only the adoption of a vision focused on the external stakeholders, as it concerns first of all the impact of policies on the environment. Nevertheless, in a broader meaning of the concept of environment, the environment for an intercommunal cooperation includes also the concept of constitutive environment, intended as the local and global system of Public Administration. From this point of view, the evaluation of the outcomes achieved by an intercommunal cooperation can also be carried out with reference to the impacts that its activity can have on its constitutive environment. This evaluation presupposes the adoption of an internal stakeholder-based point of view. In these terms, the intercommunal cooperation evaluation as regards the outcomes that can directly generate value for the internal stakeholders can be carried out as regards conditions characterising the quality of a local system of Public Administration. In particular, a cooperative network of SLGOs could be evaluated with reference to the capability of the cooperation to increase:

- The degree of policy integration in homogeneous territorial areas;
- The capability to invest in goods which cannot be acquired individually by the individual administrations;

- The organisational and operational simplification of the single institutions forming the network;
- The contractual strength with reference to suppliers and other administrations;
- The capability to maintain cooperative relations with other administrations, suppliers, associations;
- The capability to play a regulation role in Networked Government systems, in which organisations not belonging to the public sector can be involved in the process of generation of public value (Castelnovo, Simonetta (2006a)).

Trust is the third source of value defined in Kelly, Mulgan, Muers (2002) and represents a critical element for the evaluation of the activity of the government; as a matter of fact even if services and outcome targets are met, a failure of trust will effectively destroy public value. From this point of view, between trust and public value there is not only a positive connection (a higher trust level in the government increases the perception of public value produced). The impact of trust can also be of a negative kind: the absence of trust tends to overshadow positive aspects related to the quality of services and to outcome achieving. This potential negative impact of trust on the perception of value is even more evident if value is considered from the perspective of the internal stakeholders. Within an intercommunal cooperation, the absence of trust among the members of the network can lead to interrupting the cooperation, also in the case the outcomes related to the quality of services supplied to citizens are evaluated in a positive way. Trust among partners can be intended both as a qualifying condition for the possibility itself to activate an intercommunal cooperation, and as an element which, strengthened by positive experience, can guarantee stability to the network by increasing the sense of membership of its partners

There is an extensive literature on the subject of trust among partners within a cooperative network. In this paper we do not intend to assume a specific definition of trust; instead, we will assume that the level of trust of the partners towards the cooperation can be indirectly measured by considering their degree of integration within the network. As a matter of fact, the higher is the level of trust towards the cooperation, the more willing the partners will be to integrate in the network. Similarly, reaching levels of close integration can determine an increasing of trust of the partners towards the network through more and more active forms of collaboration. In a network of partners which desire anyway to maintain their autonomy, integration can be achieved by defining levels of interoperability, mostly organisational interoperability, or cooperability (Gompert, Nerlich (2002), Castelnovo, Simonetta (2006b)). Clark, Jones (1999) describes four attributes which summarise aspects characterising interorganisational collaborations:

- Preparedness: this attribute describes the preparedness of the organisation to interoperate. It is made up of doctrine, experience and training.
- Understanding: the understanding attribute measures the amount of communication and sharing of knowledge and information within the organisation and how the information is used.
- Command Style: this is the attribute that describes the management and command style of the organisation – how decisions are made and how roles and responsibilities are allocated/delegated.
- Ethos: the ethos attribute concerns the culture and value systems of the organisation and its goals and aspiration.

The attributes defined by Clark and Jones describe different levels of cooperability, characterised by a growing degree of integration among the partners.

Table 4: Summary of organisational interoperability reference model (Clark, Jones (1999))

Levels Of Co-operability	Attributes			
	Preparedness	Understanding	Command style	Ethos
Unified	Complete, normal day-to-day working	Shared	Homogeneous	Uniform
Combined	Detailed doctrine and experience in using it	Shared communications and shared knowledge	One chain of command and interaction with home organisations	Shared ethos but with influence from home organisations
Collaborative	General doctrine in place and some experience	Shared communications and shared knowledge about specific topics	Separate reporting lines of responsibility overlaid with a single command chain	Shared purpose; goals, value system significantly influenced by home organisations
Ad hoc	General guidelines	Electronic communications and shared information	Separate reporting lines of responsibility	Shared purpose
Independent	No preparedness	Communication via phone, etc.	No interaction	Limited shared purpose

During the definition stage of an intercommunal cooperation, the levels of integration of the network can be defined through the structuring processes. This can be made with two different aims. On the one hand, the integration level among the members of the network can be defined simply by verifying the current conditions of Preparedness, Understanding, Command style and Ethos characterising the potential partners, in order not to force unsustainable integration conditions. On the other hand, apart from the conditions characterising the single partners before the definition of the cooperation, the structuring processes can define a certain level of integration as an objective to be achieved. In this case the definition of the integration level will be combined with the individuation of the organisational processes which, once carried out, can lead to the desired integration level. In the evaluation of an intercommunal cooperation, verifying the conditions of Preparedness, Understanding, Command style and Ethos can be useful to identify the integration level characterising the network in that moment. Since the integration among the partners is strictly connected to the level of trust towards the network by the subjects involved in its evaluation (policy makers and managers as internal stakeholders), verifying the subsistence of integration conditions, or verifying their strengthening, is an indication about the value determined by the activity of the network.

5. Conclusions

In this paper we have outlined the general aspects of an approach to the evaluation of intercommunal cooperation's based on a citizen-centred and role-based vision of the concept of public value. The adoption of this perspective allows to refine the description of public value and to integrate in the evaluation process also points of view which are generally not considered as important. In section 2 we have identified some roles that can be considered in the definition of a role-based approach to the concept of public value and that correspond to some modalities of interaction between citizens and Public Administration. Some of these modalities concern citizens playing a direct or indirect role in the processes of production of value (policy maker, operator with managerial responsibilities, operator without managerial responsibilities). Even maintaining a citizen-centred approach, by considering these roles it has been possible to define as relevant in a public value perspective also points of view citizens can adopt since they play roles internal to Public Administration. In section 3 the internal roles have been related to some activities that are relevant for the definition and the management of different forms of intercommunal cooperation for service provision (based on the analysis of the context of Local Government in Italy).

Finally, in section 4 we discussed some evaluation elements related to the three areas of quality of services, outcomes evaluation and trust increasing, which are generally considered to be the three sources of Public Value. In this section quality of services, outcomes and trust have been considered from the point of view of the internal roles involved in the definition and the management of an intercommunal cooperation. This forms the basis of a model for the evaluation of the cooperation based on the value perceived by its members. The approach described in this paper is a general one and can be used to evaluate any form of intercommunal cooperation for service provision. The Italian Action Plan for the inclusion of small municipalities in the spread of e-government assumes the model of intercommunal cooperation as the model SLGOs can resort to in order to manage the processes of technological and organisational innovation required by E-government. From this point of view, the evaluation approach described in this paper can also be applied to the evaluation of E-government projects that involve SLGOs.

References

- Alford, J. (2002), "Defining the client in the Public Sector: a social-exchange perspective", *Public Administration Review*, 62, 3.
- Bannister, F. (2002), "Citizen Centricity: A Model of IS Value in Public Administration", *Electronic Journal of Information Systems Evaluation*, 5, 2.
- Castelnovo, W., Simonetta, M. (2005) "Organising E-government for Small Local Government Organisations", *Proceedings of the 5th European Conference on E-government*, Antwerpen.
- Castelnovo, W., Simonetta, M. (2006a) "Le reti della Pubblica Amministrazione Locale nel Networked Government", *Organizzazione, regolazione e competitività - VII Workshop dei docenti e dei ricercatori di Organizzazione aziendale*, Fisciano.
- Castelnovo, W., Simonetta, M. (2006b) "Networks of SLGOs: from systems interoperability to organisational cooperability", *Proceedings of the 6th European Conference on E-government*, Marburg.
- CCRE (2005) Inter-communal cooperation, Seminar, [Online], Available: www.ccre.org [6 June 2006].
- Christensen, G. E., Gressgård, L. J., (2002) "Trust as a Governance Mechanism in Internet-based Interorganisational Cooperative Relationships", *eReality: Constructing the eEconomy, Proceedings of the 15th Bled Electronic Commerce Conference*, Bled.
- Clark, T., Jones, R. (1999) *Organisational Interoperability Maturity Model for C2*, *Pocceedings of the Command and Control Research and Technology Symposium*, Newport.

- CNIPA (2005) Linee guida per la costituzione e l'avvio dei CST, National Centre for IT in Government (CNIPA), [Online], Available: <http://www.cnipa.gov.it/site/files/CST%20Linee%20Guida1.pdf> [20 July 2006].
- eGEP (2006) The eGovernment Economics Project, European Commission Modinis programme, [Online], Available: www.rso.it/egep [6 June 2006].
- Gompert, D. C., Nerlich, U. (2002) *Shoulder to Shoulder - The Road to U.S. European Military Cooperability. A German American Analysis*, [online], RAND Corporation, <http://www.rand.org/>.
- IST RTD, *Report of the E-government Interoperability Workshop*, Brussels.
- IReR (2002) *Sistemi associati negli enti locali lombardi*, Istituto Regionale di Ricerca della Lombardia (codice ricerca IReR 2001C033), Milano.
- Kelly, G., Mulgan, G., Muers, S. (2002), "Creating Public Value: An Analytical Framework for Public Service Reform", Discussion paper prepared by the Cabinet Office Strategy Unit, United Kingdom.
- Kearns, I. (2004), "Public Value and E-government", Institute for Public Policy Research (ippr).
- OECD (2003), "The E-government imperative: main findings", Organisation for Economic Cooperation and Development, [Online], Available: www.oecd.org/dataoecd/60/60/2502539.pdf [6 June 2006].