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EGOV4U

eGovernment for You Impact Evaluation Framework

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An important obstacle to effective progress towards digital and social inclusion is that, beyond assumed short-term cost savings, relatively little is known about the wider scope and value of the impact achieved through provision of ICT-mediated government and public services. This makes it difficult to justify significant investment in new e-services, either before or after the event. In October 2009, the i2010 High Level Group observed that: “[t]he social impact of ICT is still a basically unexplored area at the European level” and suggested that work was needed “to look at different aspects affecting life of citizens”. A similar view was taken in a review of progress of the i2010 eGovernment Action Plan, which observed that whilst member states shared a perception of the benefits of digital inclusion, they had difficulties in substantiating those perceptions.

eGovernment for You (EGOV4U) is a 3-year ICT PSP pilot project funded within the Competitiveness and Innovation Framework (CIP). Partners within the EGOV4U Consortium are implementing and developing over 30 local projects, each providing flexible, personalised, multi-channel services targeted at citizens who are socially disadvantaged and at risk of social exclusion. These diverse projects provide a valuable testing ground upon which to develop and evaluate the EGOV4U Impact Evaluation Framework, which is intended to be a significant contribution to the challenge of evaluating the longer term and wider impacts of ICT-mediated multi-channel government and public services.

Development of the EGOV4U Impact Evaluation Framework is organised as a distinctive work package, within the larger project. This document is the first substantive deliverable (D7.7.1) from that work package and represents the attainment of the first objective: develop and specify a shared evaluation framework for service impact. Subsequent deliverables from this work package include training materials, and baseline, interim and final reports for each of the EGOV4U project partners.

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EGOV4U Consortium Members (‘Partners’)

City of Dublin, Republic of Ireland
Local Councils Association of Malta, Malta
Milton Keynes Council, UK (Project Coordinator)
City of Reykjavik, Iceland

City of Rijeka, Republic of Croatia
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A. Introduction

1. Today, citizens who are digitally excluded are at increased risk of social, economic and political exclusion, and many people who are currently socially excluded are also digitally excluded. The scale of the digital inclusion challenge is represented by the fact that some 150 million EU citizens (30% of the population) have not used the Internet¹. Amongst this group are many who have the most to gain from digital inclusion as they often have the greatest and most complex needs. This is especially true of people over 65 years of age, people on low incomes, and people with basic or no educational qualifications. Europeans with disabilities also face barriers to participating as citizens and making effective use of government and public services.
2. Tackling social exclusion through the provision of better eGovernment and other ICT-mediated public services has been at the centre of EU policy and action in pursuit of its i2010 objectives². That commitment endures in the 'Digital Agenda for Europe' where digital inclusion is a prominent goal for 2020 and where the benchmark has been set at nothing less than 'empowerment' and 'emancipation'³.

The Need for Impact Evaluation

3. An important obstacle to effective progress on digital inclusion is that relatively little is known about the scope and value of the impact achieved through ICT-mediated government and public services (hereinafter e-services⁴). This makes it difficult to justify significant investment in new e-services, either before or after the event. In 2007, the 'Breaking Barriers to e-Government' study highlighted the way concerns about the costs and benefits of eGovernment projects served to constrain or block the flow of investment at the levels necessary to support innovation⁵. The study contrasted the ease with which very tangible costs could be measured (e.g., hardware, software, network infrastructure, ICT centres, managers, administrators, technical and consultancy staff) with the difficulty of

¹ Ibid.

² i2010 - A European Information Society for growth and employment.

³ A Digital Agenda for Europe - Communication from the European Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. European Commission, 2010, p24 (http://ec.europa.eu/information_society/digital-agenda/)

⁴ In using the term 'e-Service', we include all citizen-facing services, statutory or otherwise, which use ICT in whole or in part to reach citizens and/or to support 'back office' processes. Many services, especially those aiming to reach those most at risk of exclusion, continue to use a combination of ICT-mediated and face-to face interactions when working with citizens.

⁵ Breaking Barriers to eGovernment: Overcoming obstacles to improving European public services. Oxford Internet Institute, eGovernment Unit, DG Information Society and Media European Commission (2007), p6.

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measuring the benefits which “cannot be defined with confidence in a similar way as they are too qualitative, intangible or unpredictably set in the future”⁶

4. In October 2009, a report from the i2010 High Level Group observed that: “[t]he social impact of ICT is still a basically unexplored area at the European level” and suggested that work was needed “to look at different aspects affecting life of citizens, instead of addressing directly the impact on well-being”⁷. A similar view was taken in a review of progress of the i2010 eGovernment Action Plan⁸, which observed that whilst member states shared a perception of the benefits of digital inclusion, they had difficulties in substantiating those perceptions⁹. The review concluded that work was needed to “develop a common impact-based measurement framework at the European level”¹⁰.
5. If relatively little is known about assessing the social impact of ICT or of eGovernment services, even less is known of the impact on the most disadvantaged and excluded in society. However, within the period covered by the i2010 agenda, some lessons have been learned, particularly about supply-side factors that lead to increased effectiveness and impact when seeking to tackle social exclusion. The recommendations from the review of the i2010 eGovernment Action Plan included a greater focus on user-centricity, personalisation, flexible combined services, increased accountability and transparency. Specifically, the review recommended a *multi-channel*¹¹ approach that integrates intermediaries into the delivery of services as an important element of any strategy. Intermediaries, be they family, friends, carers, neighbours, local voluntary or community organisations, NGOs, or one of a variety social enterprises, all bring distinctive knowledge, capabilities and capacities to the challenge of reaching those at risk of exclusion. Not least of these is the ability to

⁶ Ibid., p13.

⁷ Benchmarking Digital Europe 2011-2015 a conceptual framework. i2010 High Level Group, European Commission 2009, p15.
(http://ec.europa.eu/information_society/europe/i2010/docs/benchmarking/benchmarking_digital_europe_2011-2015.pdf).

⁸ i2010 eGovernment Action Plan Progress Study: Final Report. Prepared for the European Commission by: The Danish Technological Institute, Denmark, and TNO Information and Communication Technology, The Netherlands. European Commission, November 2009.

⁹ Ibid p3

¹⁰ Ibid p4

¹¹ In early usage within eGovernment, the term ‘channel’ was associated with a specific means by which a citizen could access a service, often with a specific communications technology such as Internet, SMS, autophone, etc. More recently, the term channel has come to mean the set of organisational interactions which take place within a network of organizations which has come together to provide the service. A ‘multi-channel’ approach is one in which the service delivery network provides a number of alternative channels in order to better address the diverse needs of citizens; hence its association with the ideals of personalization and flexibility. (See: ‘MC-eGov Study on Multi-channel Delivery Strategies and Sustainable Business Models for Public Services addressing Socially Disadvantaged Groups’. European Commission, DG Information Society and Media, ICT for Government and Public Services, 2009.)

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bridge the ‘trust gap’ that can exist between government and its agencies and those who experience disadvantage and exclusion¹².

EGOV4U Project

6. The ‘eGovernment for You’ project (EGOV4U) aims to take forward these lessons in order to help accelerate the pace of e-enabled citizen-centric service delivery to socially disadvantaged citizens¹³. EGOV4U has two main strands of work: ‘deployment’ and ‘impact evaluation’.

- Within the deployment strand, members of the EGOV4U consortium are implementing nearly 30 e-Service projects, which put targeted technology into the hands, homes and communities of the socially disadvantaged and equips them to engage more effectively with government and its agencies (Table 1; see also Annex 1). Central to the EGOV4U deployment strategy is the closer integration into multi-channel service delivery networks of organisations such as NGOs, voluntary and community organisations and others in the Third Sector¹⁴ who can act locally either with or for excluded citizens.
- The goal of the impact evaluation strand is to develop, apply and refine an ‘Impact Evaluation Framework’ that will enable all stakeholders, including citizens and their representatives, to make better decisions when commissioning, designing, implementing, and managing flexible, personalised, multi-channel services targeted at the socially excluded and disadvantaged. The framework will be widely applicable, beyond the EGOV4U projects.

7. The purpose of this document is to present the EGOV4U Impact Evaluation Framework, prior to its first application to the EGOV4U e-Service delivery projects. The framework is the first substantive deliverable of the EGOV4U project and is the product of a work package with the following objectives:

- develop and specify a shared evaluation framework for e-service impact

¹² MORI (2003) Trust in Public Institutions: A report for the (UK) Audit Commission. MORI.

¹³ EGOV4U is funded under CIP-ICT-PSP-2009-3 Objective 3.3 ‘Inclusive eGovernance: flexible, personalised and multi-channel based service delivery targeted at the socially disadvantaged’. (See: http://ec.europa.eu/information_society/apps/projects/factsheet/index.cfm?project_ref=250509)

¹⁴ We use the term ‘Third Sector’ to refer to those organizations that are not part of the public or private sectors, but whose objective function is not primarily the pursuit of profit. They include co-operatives, credit unions and other not-for profit firms, (also known as social enterprises in some instances). The term has grown in prominence in the academic and practitioner discourses concerning just those different forms of socio-economic organization, especially in Europe. For a fuller discussion see: Defourny, J. “ Introduction: from third sector to social enterprise” in C. Borzaga and J.Defourny (eds) “The Emergence of Social Enterprise” London: Routledge.

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- define appropriate measures for impact on all stakeholders in a multi-channel service delivery network
- define appropriate measures of impact in respect of end users, be they individuals, families or social groups (with specific attention to those who are socially excluded)
- define appropriate measures for impact on social and economic sustainability at the level of communities (again, with specific reference to social exclusion).

Table 1. EGOV4U e-Service Projects

EGOV4U Partner	e-Service Project Title*	Intended Beneficiaries	Type of Intervention
<i>Dublin</i>	<i>Access Dublin</i>	Disability, age	Web portal for services and mobility assistance.
	<i>Open Door</i>	Age	Wrapper portal for one-stop-shop access to public services.
	<i>Web Umbrella</i>	Disability, age	Loan of PC and broadband connectivity.
	<i>e-Inclusion Apps</i>	Disability, age, literacy	Smart phone apps to assist mobility/way finding and digital access to services.
	<i>Your-Dublin-Your Voice</i>	Disability, age	Online survey tool for policy & services development.
	<i>Fifth Province</i>	Disability, age	Online forum for design of future City development.
<i>Malta</i>	<i>MAR scheme</i>	Various - via intermediary organisations	PC loans.
	<i>IT training</i>	Various (5 groups)	Training.
	<i>E-Clubs</i>	Various (5)	Web portal.
	<i>MITA</i>	Various (5)	Staff training, portal/services.
	<i>Portal</i>	Various (5)	Upgrade of e-gov portal.
	<i>TV training</i>	Various (5)	TV programmes.
<i>Milton Keynes</i>	<i>E-clubs for Socially Disadvantaged groups</i>	Various (6)	Web portal.
	<i>e-Services Portal for Socially Disadvantaged groups</i>	Various (5)	Portal.
	<i>SMS for Socially Disadvantaged groups</i>	Various (5)	SMS .
	<i>PC loans and broadband for Socially Disadvantaged groups</i>	Various (5)	Loaned PC equipment and access to broadband.

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EGOV4U Partner	e-Service Project Title*	Intended Beneficiaries	Type of Intervention
Reykjavik	<i>Better Reykjavik</i>	Not specified/all	Web portal.
	<i>Accessibility certification</i>	Disability, age, low	Web design.
	<i>IT skills for the elderly</i>	IT literacy Age	Training courses.
	<i>Services for immigrants</i>	Ethnicity	Web site, E-club (Facebook), advisor.
	<i>Gender and child based violence</i>	Women and children	Web portal.
	<i>Information services for young unemployed</i>	Unemployed (youth)	Web portal.
Rijeka	<i>With the internet I am not alone</i>	Disability (physical/mental, deaf/ blind) War veterans	Training (inc materials) PC loans Web portal upgrade E-clubs.
	<i>Together we are stronger</i>	Unemployed (women)	IT course and materials IT equipment supply Web forms.
	<i>Knowledge for a new job</i>	Age	IT courses and materials Upgrade web portal Upgrade helpdesk IT courses and materials.
	<i>The society in which I learn and feel well</i>		IT equipment supply Creation of web site.

* Details of projects remain subject to revision.

8. The remainder of this document details the framework and is organised as follows. Section B locates the approach to impact evaluation adopted by EGOV4U within a range of approaches found in the literature and in practice. Section C describes how impact evaluation activity is structured to support impact evaluation over the life-cycle of an e-Service project as its effects mature in both depth and breadth, whilst also recognising that those effects need to be evaluated differently depending upon whether the impact is on the organisations delivering the e-service, the immediate beneficiaries, or the wider community/society. Section D specifies the *impact factors* that are the subject of the evaluation. These factors are defined at a level that allows each to be interpreted appropriately and meaningfully at a local level for each e-Service project, whilst also allowing comparison between projects in order to support identification of effective practice and obstacles to success in a pan-European context where cultural, political and other aspects of context come into play. Section E provides a more detailed account of the structure of the EGOV4U Impact Evaluation Framework

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that emerges from the considerations outlined in Sections B-D and outlines issues that arise when it is applied in context.

9. Selected examples, based upon individual EGOV4U e-service project descriptions, are provided to illustrate the concepts being introduced.

B. Impact Evaluation

Challenges of Impact Evaluation

10. That the review of the i2010 eGovernment Plan undertaken for the Commission should have found that there were difficulties in evaluating the impact of eGovernment services is not surprising. In common with other 'open' systems, the boundaries of any particular project or programme, the nature of the costs and benefits, and the range of stakeholders, may all be difficult to define and are all related in a dynamic and complex way¹⁵. Obstacles are prominent enough when dealing with tangible or objective evaluative measures, but they are magnified considerably when confronted with intangible or subjective measures¹⁶ such as occur in projects seeking to address disadvantage. Here, intangible objectives such as community sustainability, democratic participation, social inclusion, government legitimacy, citizen satisfaction and trust are common, but poorly understood and difficult to manage and measure. Further, in a democratic context, e-government priorities and objectives such as efficiency and effectiveness are likely to be contested politically.
11. In examining the state of the art in using official statistics to examine both economic and social impact of ICT the OECD's Working Group on Information Society Statistics concluded that, whilst official statistics do provide a basis for analysis of economic impact, there is very limited support for social impact¹⁷. To quote the authors:

*"[s]tatistics on social impacts of ICT tend to be of an intermediate nature, for instance, impact on patterns of work or changes in how people do their shopping, rather than whether this has a positive or negative outcome for individuals, communities or the broader society"*¹⁸.

¹⁵ Weiss, C.H. (1998) Evaluation, 2nd edition. New Jersey: Prentice Hall. See also: Chen, H.-T. (2005) Practical Program Evaluation, Thousand Oaks, Sage; and Bamberger, M., Rugh, J. and Mabry, L. (2006) Real World Evaluation: Working Under Budget, Time, Data and Political Constraints, Thousand Oaks, Sage.

¹⁶ Farbey, B., Land, F. and Targett, D. (1999) 'Evaluating Investments in IT: Findings and a Framework', in Willcocks, L.P and Lester, S. (Eds.): Beyond the IT Productivity Paradox, John Wiley & Sons: Chichester, England, pp.183-215.

¹⁷ Measuring the impacts of ICT using official statistics. Working Party on Indicators for the Information Society, OECD, October 2007, <http://www.oecd.org/dataoecd/43/25/39869939.pdf>. Social impact is often treated as being implicit in economic impact, as measured using official statistics. The relationship between the two is recognised in debates concerning how the measurement of economic welfare might best include quality of life. Social impact often contributes significantly to value-added but is often underestimate. See, Stiglitz, J.J.E. Sen, A. and Fitoussi, J-P. Report by the Commission on the Measurement of Economic Performance and Social Progress, <http://www.stiglitz-sen-fitoussi.fr/en/index.htm>.

¹⁸ Ibid p17.

The authors are pointing to a familiar challenge in technology impact evaluation, that of addressing the macro, meso and micro levels of analysis. Macro evaluation takes place at the global, international and pan-national level; meso evaluation at a national level; micro the intra governmental or organisational level. Each level of analysis merits different approaches and techniques, though macro and meso evaluation are commonly approached in similar ways.

Macro and Meso Evaluation

12. To illustrate macro and meso evaluation, we briefly consider two recent examples of work, both commissioned by the EC since the OECD report. They are the 'eGovernment Measurement Framework' from the eGovernment Economics Project (eGEP)¹⁹, and the 'European Index of Digital Inclusion' (EIDI)²⁰. Both eGEP and EIDI establish indices that allow comparisons across member states. They each develop a high-level conceptual model for measuring or 'indexing' performance. The eGEP model evaluates three high-level drivers of value: efficiency, political value, and effectiveness. The data that underpins the computation of the eGEP measure consists of 92 quantitative 'indicators' assessed at national level. The European Index of Digital Inclusion (EIDI) has developed an index with three high-level factors relating to digital inclusion: access, usage, and impact. EIDI uses 22 indicators relating to education, employment, health, government, economy, and communication, culture and entertainment. The data used to compute the index is quantitative, usually based upon official (national) statistics.
13. eGEP and EIDI are both examples of impact evaluation based upon indirect and associational data that is readily derived from mainly official sources. Evaluation frameworks of this sort are not designed to provide a rich account of the way in which the lives of people and communities are improved by digital inclusion initiatives. For local policy makers and managers there is only limited value in macro- or meso-level evaluations as the data used has only a very indirect relationship to the local context that drives local policy and priorities. Further, macro and meso-level indicators are not good at capturing significant changes in context²⁰. When a limited number of macro or meso indicators are used at an international or national level to evaluate local performance, there is a risk that

¹⁹ Codagnione, C., Boccardelli, P and Leone, M.I. (2006) Measurement Framework Final Version. eGovernment Unit, DG Information Society, European Commission (2006).

²⁰ Benntivegna, S and Guerrieri, P (2010) Analysis of e-Inclusion impact resulting from advanced R&D based on economic modelling in relation to innovation capacity, capital formation, productivity, and empowerment. European Commission, DG Information Society and Media, ICT for Government and Public Services Unit, 2010

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they distort management practice there may be an incentive to ‘manage what is measured’ rather than manage for local optimal strategic outcomes²¹.

Micro Evaluation

14. At the micro-level, impact evaluation of social impact is even less well developed than for macro-level evaluation. The OECD Working Group observed that, at the micro level questions about social impact are “essentially unanswered”. The consequences of local project and policy interventions are fundamentally context specific²². Similarly, the significance of context in influencing the use of particular ICTs is well established in the information systems literature. For example, differing local government systems and competences, and local social and political histories and demographics, all influence the conception, conduct and outcomes of any local eGovernment initiative²³. A useful micro-level evaluation framework needs to be sensitive to these and other factors.
15. At the micro-level, evaluation of any form has, for some time, been one of the most challenging areas for information systems management. The most frequently cited obstacles are: problems identifying and quantifying benefits, unfamiliarity with evaluation techniques, difficulty interpreting results, and lack of time, data, information, or interest²⁴.
16. Recent work to help support the identification of possible future benefits of digital inclusion has been undertaken by the City of London Digital Inclusion Team and Tech4i2 (CoL-DIT)²⁵. CoL-DIT provides a database of ‘benefit categories’ and ‘groups of beneficiaries’ drawn from an analysis of approximately 500 e-Inclusion projects that gives support to those assessing the likely ‘benefits footprint’ of any new public service initiative, especially one making use of modern ICT. Both the

²¹ See: Bannister, F. (2007) The curse of the benchmark: an assessment of the validity and value of e-government comparisons. *International Review of Administrative Sciences*, Vol 73(2):171–188 for a useful discussion of the limitations of seeking to make international comparisons of eGovernment performance.

²² Pawson, R. and Tilley N. (1997) *Realistic Evaluation*, Sage, London. See also Walker, S. Martinez Lucio, M. & Trevorrow, P. (2007) Tracing trade union innovation: a framework for evaluating trade union learning projects in a time of complexity, *Transfer: European Review of Labour and Research Quarterly* (2), 267-290 for an example consideration of the relationship of European project interventions and diverse local contexts, in the field of trade union education.

²³ These initiatives take place in the context of the discourses of governance and in particular digital governance., See Dunleavy, P., Margetts, H., Bastow, S. and Tinkler, J. (2006), *Digital Era Governance: IT Corporations, the State and e-Government*, Oxford University Press, Oxford, and Osborne, S. (2006), “The new public governance?”, *Public Management Review*, Vol. 8 No. 3, pp. 377-87.

²⁴ Ballantine, J. A., Galliers, R. D. and Stray, S. J. (1999) ‘Information Systems/Technology Evaluation Practices’, in Willcocks, L. P. and Lester, S. (Eds.): *Beyond the IT Productivity Paradox*, John Wiley & Sons: Chichester, England, pp.123-149.

²⁵ *Benefits Framework for Social Inclusion Initiatives*, City of London’s Digital Inclusion Team and Tech4i2, 2010, City of London.

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CoL-DIT and WF-PV frameworks produce information for decision makers and managers at the level of strategic outcomes, but external comparability is much more limited.

17. Even where micro-level impact evaluation is practiced there is limited evidence of stakeholder-centric approaches. One 'survey of surveys' within e-government summarises the situation thus:

“there appears to be far more emphasis on technological aspects of delivery than on engaging citizens in identifying real needs and participating in decision-making regarding perceived priorities and methods of service delivery”²⁶.

Evaluative techniques to support identification of the views and interests of all stakeholders, accommodating subjective assessment and complementing objective techniques, have been advanced²⁷. Following a comprehensive survey of practitioners, approaches that were qualitative and interpretive were considered the methods of choice for 'radical' projects for which the objectives are 'fuzzy'¹⁶, a category within which many significant eGovernment and e-Inclusion projects demonstrably fall²⁸.

Public Value

18. At this level of scope traditional cost-benefit analysis, quantitative measures of efficiency and effectiveness and of social impact have all been found inadequate when evaluating specific projects²⁹. Modern impact evaluation in this sphere

²⁶ Damodaran, L., Nicholls, J., Henney, A., Land, F. and Farbey, B. (2005) 'The contribution of sociotechnical systems thinking to the effective adoption of e-government and the enhancement of democracy'. The Electronic Journal of e-Government, 3(1) pp.1-12

²⁷ See: Walsham, G. (1999) 'Interpretive Evaluation Design for Information Systems' and Hirschheim, R. and Smithson, S. (1999) 'Evaluation of Information Systems: a Critical Assessment', both in Willcocks L.P. and Lester, S. (Eds.): Beyond the IT Productivity Paradox, John Wiley & Sons: Chichester, England.

²⁸ This perspective was echoed by municipal and government officials when the authors of this report visited the cities of each of the EGOV4U partner organisations. A number of people commented on the relative absence of any tradition of evaluation and felt that that qualitative evaluation in particular was an area where there was scope to develop capability and capacity.

²⁹ At a macro and meso levels of impact evaluation direct and indirect quantitative analyses, based, for example, on official statistics, can be undertaken. One substantive and recent example is the report from the University of Siegen and others takes a 25-year macro perspective on the impact of ICT in terms of four themes: Rationalization(effectiveness, efficiency, innovation), Networking and Social Capital, Empowerment and participation, Information and Lifelong learning.. The study identifies a number of trends, including: the acceleration of all societal processes, increasing mobility, globalization, network individualization, complexity, the rejuvenation and growing instability of capitalism, growing social inequality, civil emancipation and the rise of populism, the rise of participation in the media, increasing choice opportunities in daily life. (See: 'Study on the Social Impact of ICT' Topic Report 3 (D7.2) University of Siegen and others http://ec.europa.eu/information_society/eeurope/i2010/studies/studies_ongoing/index_en.htm).

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extends beyond traditional measures to include the concept of Public Value³⁰. Public Value is an approach to evaluating the societal-level impact of individual government and public institutions and services. Its component qualitative measures are particularly associated with wider social, economic and political well-being and with community sustainability. Public Value can be interpreted as the value that citizens seek in relation to democratically endorsed strategic outcomes of government and public services. It includes both the value attached to relatively concrete outcomes, such as reduced levels of homelessness in the community or universal access to education or health care, together with more intangible outcomes, such as increased trust in government, its officials, and other providers in the public service delivery network.

19. Of particular note in this context is the 'Public Value' framework developed by The Work Foundation (WF-PV)³¹. The WF-PV framework focuses on distinct enterprises and institutions (public or private) that have an explicit social mission or function, especially those providing government and public services. The high-level elements of the WP-PV framework are themselves open to appropriately free interpretation in the context of any specific organisation.

EGOV4U Impact Evaluation – Mixed Methods

20. The contrasting approaches to evaluation considered above illustrate the fact that, for a given level of evaluative resource, there is always a trade-off to be made: the more readily any framework supports comparison across different states, institutions, services, or projects, the less it is able to capture a rich and detailed appreciation of the specific goals and contexts that distinguish one from another, often in a profound way.
21. In choosing where to position the EGOV4U Impact Evaluation Framework within the spectrum of possible approaches, we have been influenced by the fact that

³⁰ Introduced as a concept in the mid 1990s, Public Value may be defined as the value attached by citizens and their democratically elected representatives to the attainment of "normatively compelling collective purposes" (Moore, M.H. (1995) *Creating Public Value: Strategic Management in Government*. Harvard University Press, Cambridge, MA.). Such purposes include the entitlements of others and not just the self. For example, citizens attach value to the entitlement of both themselves and others to quality health care, threshold standards of education, and access to civil and criminal justice. For elected representatives in government, examples of such goals include social inclusion, community development, well-being and sustainability. Public value can be considered a measure of the extent to which citizens are satisfied that these civic aspirations are met (Kelly, J.M. (2005) *The Dilemma of the Unsatisfied Customer in a Market Model of Public Administration*. *Public Administration Review*, 65 (1), 76–84).

³¹ A concise but thorough introduction to 'Public Value' as considered by The Work Foundation is available in 'World-class Public Services: Engaging Citizens and Staff', The Work Foundation, November 2008 (http://theworkfoundation.com/Assets/Docs/adobe_world_class_updated.pdf). (See also the series of papers at <http://theworkfoundation.com/research/publicvalue/publicvaluereports.aspx>).

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indices such as eGEP and EIDI already provide a basis upon which to make comparisons within and between member states in respect of impact of e-Inclusion initiatives³². This suggested that the scope for adding greatest value through EGOV4U lay in providing a framework that is interpretable and applicable at the micro-level, supporting the development of a richer and more detailed understanding of impact in context. At the same time, the framework should be sufficiently generic to reduce the transaction costs of capturing wholly context specific and heterogeneous phenomena. This is the approach that is taken in the EGOV4U Impact Evaluation Framework.

22. The prior existence of the CoL-DIT tool for specifying the anticipated benefits and beneficiaries when evaluating strategic choices for possible future projects pointed to the potential value of a complementary framework that supported the monitoring and better management of such projects, once launched. We were also aware that policy makers and managers saw value in a framework that better supported the monitoring and management of their projects. This view was echoed in many discussions held when the authors of this document visited a wide range of e-Inclusion projects that were being developed within the EGOV4U programme. In these visits the proposal for a framework that addressed many of the obstacles to evaluation mentioned above: what benefits to identify and quantify, how best to undertake evaluation, how to interpret results, was strongly endorsed. It was felt that the greatest value would come from a model that:

- *Recognises diversity of context and approach.* Because of the very great diversity of local contexts and projects, a single evaluation instrument that included the same measurement items in each instance is not applicable. Rather, what is needed is a framework that is adaptable to the local context.
- *Accommodates changing context.* Not only is there diversity between contexts, but any original context will change, even in the short term, not least because each project impacts its own context from its inception.
- *Supports ongoing management* of a project throughout an e-Service project life-cycle. (We call this approach *Concurrent Evaluation*³³.)
- *Supports learning and innovation* through comparison between projects at the level of impact on social exclusion, community coherence, and sustainability. Some practices may be widely transferable (though these are likely to be few), others will apply in defined and comparable contexts; some

³² There are, of course, many more such indices produced by international agencies and national governments. Many are produced by international management consultancies.

³³ This acknowledges the influence of Concurrent Design and Engineering practice in which a great number of diverse viewpoints are considered from the outset.

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are likely to be very context sensitive, in which case, explanation of this is of wider value.

23. Accordingly, the approach to impact evaluation we adopt is *not* one that makes a *post hoc* Olympian judgement about whether or how well an initiative has met or compares to some 'ideal' benchmark of performance. Instead, the EGOV4U Impact Evaluation Framework provides a high-level measurement framework within a cyclical activity structure from which any multi-channel e-Service project seeking to address disadvantage and social exclusion can derive and subsequently refine its own context-specific impact evaluation approaches and instruments. The high-level measurement framework provides a means to identify a range of impact factors known to promote community cohesion and sustainability. At the same time, it assists stakeholders in identifying how a project generates its impacts, and so guides decision-making and future actions rather than simply assessing past actions.
24. This requires an open approach to the selection of both quantitative and qualitative evaluation/research methods and techniques.³⁴ Different contexts, types, and levels of impact demand different tools and instruments, including, for example, surveys, service usages statistics, interviews, focus groups, panels and juries³⁵.
25. The cyclical model is one in which social needs and entitlements and democratically endorsed policies to meet them are addressed by providers of multi-channel e-service projects which directly impact immediate beneficiaries and indirectly benefit larger target groups and communities and wider society (Figure 1). The direct and indirect impacts of the e-Service projects result in changes to perceived needs and entitlements and revised priorities. An interim feedback cycle is needed to support the providers in optimising the impact of the e-services as the projects unfold.

³⁴ Mingers, J. (2001) Combining IS Research Methods: Towards a Pluralist Methodology. *Information Systems Research*, 12, 240-259. See also: Bamberger, M., Rugh, J. and Mabry, L. (2006) *Real World Evaluation: Working Under Budget, Time, Data and Political Constraints*, Thousand Oaks, Sage.

³⁵ For a range of practical techniques for qualitative evaluation see: Hills, D. and Sullivan, F. *Measuring public value 2: Practical approaches*. The Work Foundation, 2006.
http://theworkfoundation.com/assets/docs/publications/171_measuring_practical3.pdf

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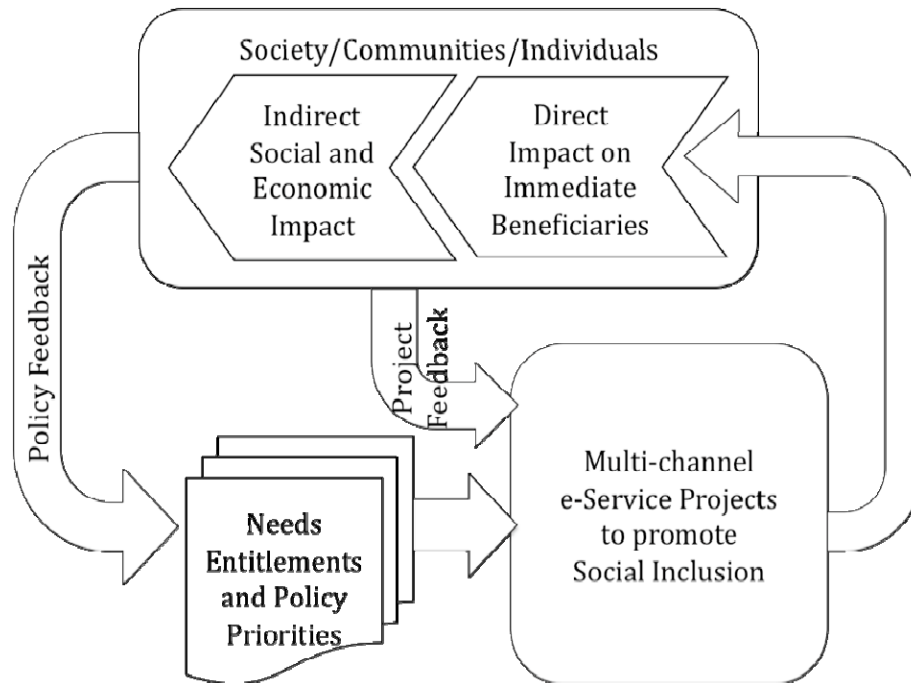


Figure 1. EGOV4U Multi-channel e-Service Impact Cycle.

Evaluation - Involvement and Engagement

26. Who should be involved in evaluation? In part, we have already answered this question by pointing to the recognised value of involving all stakeholders. In the context of multi-channel e-services that list of stakeholders includes:
- direct beneficiaries,
 - intermediaries who will act with or for beneficiaries
 - organisations in the multi-channel service delivery chain (including managers, front-line and 'back-office' staff)
 - those commissioning the service, (politicians and senior officials)
 - members and/or representatives of the wider community/society whose democratic endorsement is needed.
27. Evaluation has most value when it occurs throughout the life-cycle of an e-service project. As the e-service matures the scope of impact evaluation needs to increase. This is not to imply that some stakeholder groups can be excluded at some stages, rather, the question for those designing the evaluation is how to include all stakeholders in an appropriate way at all stages. This can be most challenging in contexts where the provision of an e-service is controversial, either in its means or in its ends. In such situations, it is important to engage and hear all views and voices, even if some are 'oppositional' at the outset. For many e-

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services one of the most important tests of their impact in tackling social exclusion is likely to be changing attitudes of some sections of a community to some other section of the community.

28. The next section of this document looks at the way in which the immediate and relatively tangible impacts for direct beneficiaries evolve and diffuse to benefit their communities and wider society and at the implications for how evaluation activities can be structured to capture these benefits.

C. Evaluation Activity Life-cycle

29. The EGOV4U Impact Evaluation Activity Life-cycle has two related aspects. The first reflects the way in which the effects of e-service projects tackling social exclusion become more deeply embedded in communities and societies over time, as impacts range from the short to the long term. The second aspect reflects the way in which the scope of those impacts spreads and diffuses over time affecting people, organisations and institutions and throughout a community or society³⁶. These two effects, deepening and diffusing (or spreading), are not independent of each other. Superficially, this is because both are time-dependent, but more fundamentally it is because the coupling of the two aspects shape the dynamics of impact: shallow short-term effects are unlikely to diffuse widely, more profound changes such as those that transform organisations or institutions take longer, but are more likely to persist and become embedded.

Impact Evolution and Diffusion

30. The EGOV4U Impact Evaluation Framework seeks to reflect the way in which the impact of e-service projects spreads and deepens as immediate effects on direct beneficiaries diffuse and spread as they effect family, friends and neighbours, people at work, the wider community context. Some effects, often increasingly indirect and intangible, will impact wider society in ways that shape its social, economic and political character. The framework seeks to reflect a degree of path-dependency so that managers can anticipate how early tangible benefits may emerge as later more intangible benefit, but also so that evaluators can trace intangible benefits back to earlier more tangible benefits.
31. To capture the evolution of impacts, the framework calls for evaluation to follow the life-cycle of an e-service project. This approach means that impact evaluation can (and should) take place from the earliest stages of project through to completion.

Impact Evolution

32. The evolution of impact is represented by the following *impact progression*:
- *Inputs*. In the earliest stages of an e-service project, evaluation focuses on the adequacy and fitness of the community resources available in relation to the goals that are set. The resources considered are described in more detail in Section D; amongst others, they include people, organisations (formal and informal), infrastructure, and finance. At this stage too, the conditions for

³⁶ Much as a stone thrown into water creates ripples that spread across the surface.

Impact Evaluation Life-cycle

long-term and sustainable impact of multi-channel approaches to tackling social exclusion are often established³⁷.

- *Projects*. The project is viewed as a mechanism through which the inputs are used to deliver the goals that have been set, through attainment of a series of objectives. At this stage, evaluation focuses on the relevance of the objectives to the goals and on the effective participation of all stakeholders needed to attain them.
 - *Outputs*. In the case of e-service projects, the first and most tangible expression of impact is the launch of the new or enhanced service.
 - *Outcomes*. Beyond immediate outputs, lies the attainment of outcomes; these reflect the changed circumstances of direct beneficiaries, but also of the organisations in the multi-channel delivery network. Outcomes can be intended or unintended. Intended outcomes are those explicitly envisaged when the e-Service project is conceived. Unintended outcomes can be either positive or negative.
 - *Impacts*. We define impacts as wider changes that transcend a simple change of circumstance for direct beneficiaries and begin to transform aspects of the wider social, political and/or economic character of the community or society.
 - *Sustainable Transformation*. The highest level of impact in the framework is characterised as transformative change that represents a new social, political and/or economic equilibrium capable of persisting. Such changes are associated with empowerment and emancipation of communities and societies³⁸.
33. Evaluation over this life-cycle provides the basis for learning and adaptation, thus supporting the management and development of the e-service in pursuit of its policy goals (Annex 2).

³⁷ See: 'MC-eGov Study on Multi-channel Delivery Strategies and Sustainable Business Models for Public Services addressing Socially Disadvantaged Groups'. European Commission, DG Information Society and Media, ICT for Government and Public Services, 2009; and 'Benefits Framework for Social Inclusion Initiatives', City of London's Digital Inclusion Team and Tech4i2, 2010, City of London.

³⁸ For many e-services tackling social exclusion, it is possible to anticipate that the e-service can be allowed to diminish in capacity, releasing resources for newly emergent needs or aspirations. Examples might include e-services to address large-scale unemployment through new skills development or e-services designed to help the integration of migrant workers. For others, the need may persist, e.g. those aimed at supporting people lacking mobility or suffering some physical impairment.

Impact Evaluation Life-cycle

34. In order to support e-service planning and impact evaluation, the EGOV4U framework uses logic modelling to capture the anticipated evolution of the impacts of any e-service project. Derived from 'theory based evaluation' approaches³⁹, a logic model is a structured representation of how inputs are expected to evolve through the stages described above⁴⁰. The aim is to make explicit the sequences of cause/effect/mechanism that project/programme managers anticipate coming in to play in the contexts in which they have designed their activity. (See Rijeka: 'A City in which I Learn and Feel Well'.)

Rijeka: EGOV4U e-service '*A City in which I Learn and Feel Well*'

Approximately 16% of the Rijeka's population is aged 65 or older. Demographic projections predict this will increase. Research into the needs and quality of life of Rijeka's elderly citizens suggests they are poorly integrated into the life of the City - they have fewer social roles, reduced regular contact with others, and seldom go to clubs and other places where they can spend time in an organised manner. Rijeka's Healthy Ageing Strategy has a strategic goal of increasing the social integration of the elderly within the City and improving their mental health.

As part of the EGOV4U project Rijeka's IT Institute and the City of Rijeka will work with the Rijeka Pensioners' Association and The Kantrida Centre as intermediaries to develop a total of fourteen e-clubs for elderly people. The clubs will be equipped with recycled ICT from the City of Rijeka.

The pensioners clubs will turn into small digital centres where interested persons will be able to learn to use ICT and the Internet through education and training provided by peers (eMentors), who have completed a more advanced course in ICT. In addition to making ICT and the Internet available free of charge, the clubs will organise a variety of other activities to prevent social exclusion and accompanying problems tied to mental health.

Sustainability of the e-service is promoted by the fact that the IT Institute and the City of

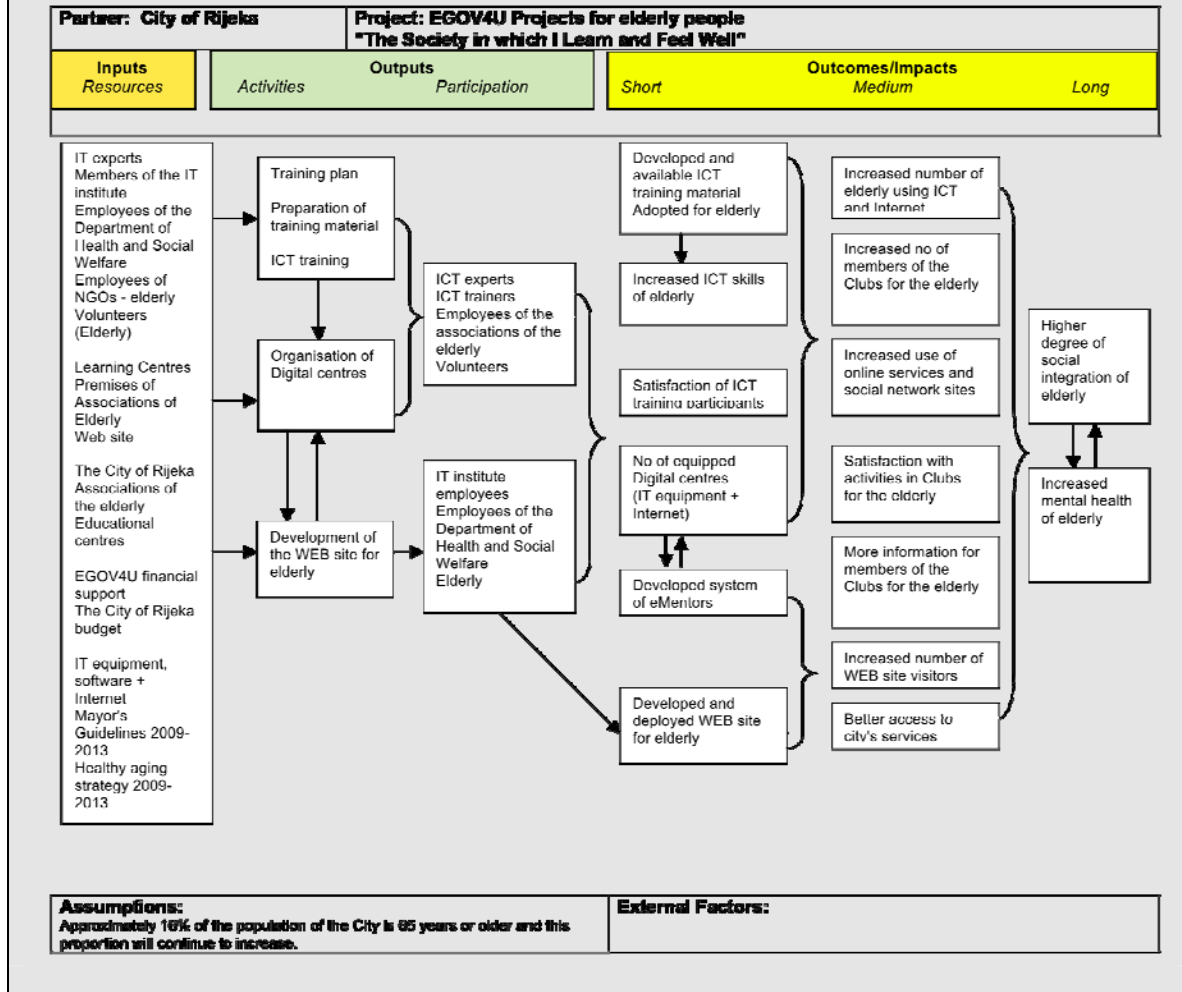
³⁹ Theory based evaluation (TBE) seeks to render explicit how the project designers see the sequences of causes and effects, and mechanisms that underpin them, that are expected to lead to the intended impacts (See Birkmayer, J., D. & Weiss, C. M. (2000) Theory-based evaluation in practice: what do we learn? *Evaluation Review*, 24, 407-431. See also: White, H. (2009) Theory-based impact evaluation: principles and practice. *Journat of Development Effectiveness*, 1, 271-284; Chen, H.-T. (2005) *Practical Program Evaluation*, Thousand Oaks, Sage.

⁴⁰ Logic models are an important part of the methodologies underpinning evaluation studies, particularly of public policy (See Verdung, E. (1997) "Public Policy and Program Evaluation". New Brunswick, NJ: Transaction Publishers).

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Rijeka are working to build the capabilities and capacities of Rijeka Pensioners' Association and the Kantrida Centre and by the training of eMentors who will pass the skills they have learnt on to others who will follow them.

The anticipated evolution of the e-service project's impact is illustrated in the following Logic Model.



35. Logic models support the high-level planning and design of evaluation instruments and methods over the whole life-cycle of a project, from 'Inputs' through to 'Long-term Outcomes/Impacts'. When evaluation is guided by a logic model it allows claims made about the reasons a particular intervention worked (or didn't work) as expected to be assessed and thus supports learning and sharing of lessons.

Impact Evaluation Life-cycle

Impact Diffusion

36. As direct and tangible impacts diffuse to produce subsequent indirect and increasingly intangible effects, so the scope of evaluation needs to expand. The EGOV4U Impact Evaluation Framework envisages this expansion at a variety of levels of scope.
- *Project Focus.* The earliest focus is on the inputs available and the attainment of the specific e-service project objectives. In the main, these objectives usually relate to:
 - i. developing capability by putting the new e-service or channel into place
 - ii. developing capacity and engaging direct beneficiaries (often expressed in terms of target numbers) to achieve intended outcomes
 - iii. attaining benefits to the organisations in the multi-channel network, often under the heading of improvements to effectiveness and efficiency.
 - *Participant Focus.* Once the project has delivered the new or extended e-service the focus of evaluation needs to expand to include more indirect and intangible benefits and to examine how these impact on a wider group of stakeholders beyond those participating directly in the co-production of the service. These stakeholders can be divided into sub- groups:
 - i. the e-service providers themselves; that is those organisations within the multi-channel network
 - ii. the direct beneficiaries (users/clients) and those who gain indirectly from the outputs and outcomes of e-service projects at an early stage, often family and friends, and extending to neighbours, people at work, and other close associates and intermediaries who are not part of the formal multi-channel network.
 - *Public Value Focus.* Beyond participating stakeholders (multi-channel network, beneficiaries and intermediaries), the focus expands to capture the wider social, political and economic impact, as experienced by all citizens and their representatives.
37. Impact evolution and impact diffusion are not independent dimensions, though they are linked by time or e-Service duration/maturity. Accordingly, impact evaluation activity can be seen as a life-cycle process in which examination of impacts of different nature and degree ('Outputs' to 'Sustainable Transformation') coincides with an expanding scope of inquiry (Participants to Public) (Figure 2).

Impact Evaluation Life-cycle

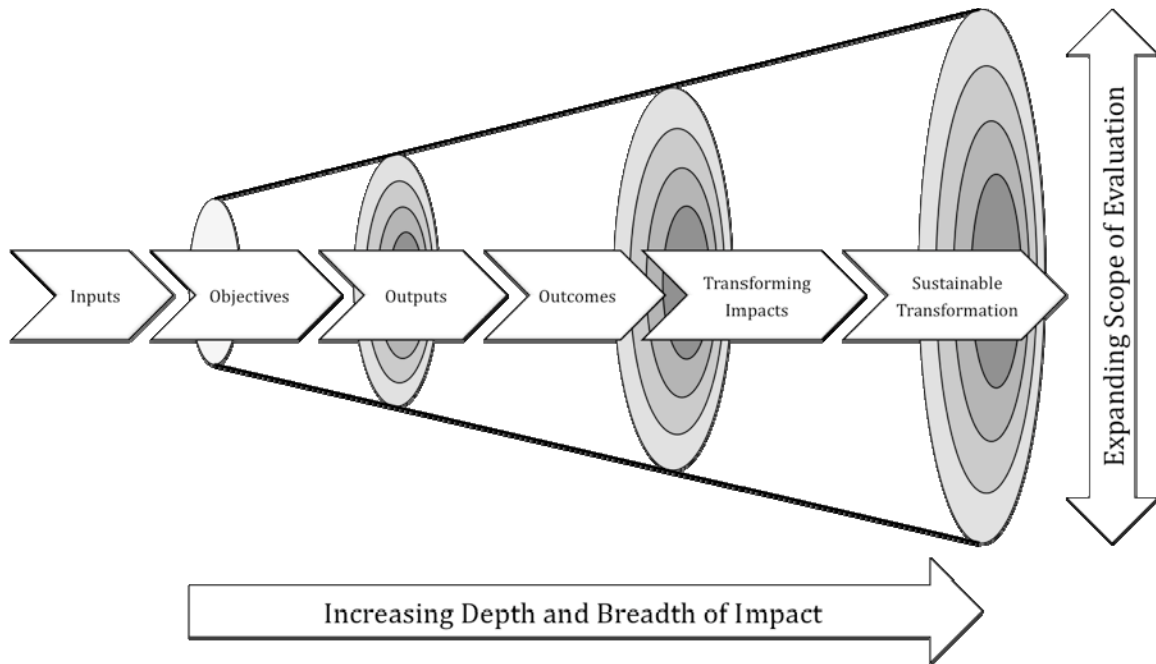


Figure 2. Expanding scope of evaluation as e-service impacts evolve and diffuse.

D. Evaluation Impact Factors

38. Having outlined the way in which the EGOV4U Impact Evaluation Framework structures evaluation activity and scope, this next section gives an account of the factors ('spheres of impact') that are the objects of evaluation. These impact factors are selected on the basis that they meet a number of key requirements.
- They are capable of ready and meaningful interpretation at a variety of levels of scope. In particular, they are meaningful in terms of evaluating impact on individual beneficiaries and their families, friends and neighbours, on groups of beneficiaries, on the multi-channel network, and on communities as a whole. In this way, they link impact on individuals to impact at a societal level.
 - Their 'universality' means they translate across otherwise context-specific settings and so support comparison and learning between local projects, but also some degree of comparison of projects at national (meso) or international (macro) level.
 - They are directly relevant to high-level policy goals aiming to address social exclusion and disadvantage through digital inclusion and e-service projects. Typically, but not exclusively, these goals include increasing social inclusion, social cohesion, a sustainable (local) economy, and democratic political engagement.
 - They relate to known barriers or obstacles to effective longer-term impact of eGovernment and other e-services⁴¹.
39. The impact factors chosen for the EGOV4U Impact Evaluation Framework are widely recognised social and economic resources or 'Community Capitals', the levels of which are positively correlated with community/societal well-being and sustainability⁴². They are:

⁴¹ We take as our reference point the persistent barriers identified in listed in 'Breaking Barriers to eGovernment: Overcoming obstacles to improving European public services. Oxford Internet Institute, eGovernment Unit, DG Information Society and Media European Commission (2007), p5 and p11-16.

⁴² The use of capitals as the basis for impact evaluation has its origins in the literature on growth and environmental economics (Ekins, P., Hillman, M. and Hutchinson, R. (1992) *Wealth Beyond Measure: An Atlas of New Economics* (3rd edn.). Gaia, London; Perlman, R., Ma, Y., McGilvray, J. and Common, M. (2003) *Natural Resources and Environmental Economics*, 3rd edn, Harlow: Pearson/Addison-Wesley). Subsequently, capitals have been used at an international level by the World Bank (World Bank (1995) 'Monitoring Environmental Progress (MEP): A Report on Work in Progress'. World Bank, Washington DC.; Grootaert, G. (1998) 'Social Capital: The Missing Link'. SCI Working Paper No.3, April 1998, World Bank) and in regional and sub-regional evaluation of regeneration in disadvantaged neighbourhoods and community well-being (Green, G., Grimsley, M. and Stafford, B.

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- Human Capital
 - Social Capital
 - Organisational Capital
 - Environmental Capital
 - Infrastructural Capital
 - Financial Resources/Capital
 - Reputational Capital⁴³
40. The stock of these resources/capitals can be enhanced (or diminished) over time. The potential value of the resources/capitals will also vary with time through the impact of e-Inclusion projects, which serve to change the social, political and economic context.
41. The following sub-sections provide a summary account of each resource/capital as used in the EGOV4U framework.

Human Capital

42. Human Capital is widely considered as comprising the knowledge, skills and expertise of people⁴⁴. It also takes into account aspects of the physical and mental well-being of people. This is often of appreciable importance in contexts where people are disadvantaged or socially excluded. Amongst all the capitals, Human Capital is pivotal as it is applied human effort that realises the potential value in other capitals/resources and is necessary for their production and reproduction.
43. When evaluating the development of Human Capital in the context of multi-channel e-service networks, there is a pragmatic distinction to be made between two distinct sets of knowledge and skills (*technology-independent skills* and *technology-specific skills*) and whether they are needed by e-service users or the organisations in the multi-channel network.
- *Technology-independent skills for users*. These are the skills needed for effective co-production of outcomes. They include skills of effective

(2001). 'Capital Accounting for Neighbourhood Sustainability', CRESR, Sheffield Hallam University, UK.; Green, G., Grimsley, M. and Stafford B. (2005) 'The Dynamics of Neighbourhood Sustainability' Joseph Rowntree Foundation: York Publishing Services).

⁴³ A subset of the capitals used here have been used in an early evaluation of multi-channel eGovernment (See Grimsley, M, Meehan, A, Tan, A (2007) Evaluative design of e-Government projects: a community development perspective. Transforming Government: People, Process and Policy. Vol. 1, Issue 2, 174-193).

⁴⁴ The concept of human capital is not without controversy; see, for example. Becker, G.S (1964, 1993, 3rd ed.) "Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education." Chicago, University of Chicago Press, and Bowles, S. and Gintis, H. (1975). "The Problem with Human Capital Theory--A Marxian Critique," American Economic Review, 65(2), pp. 74-82,

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communication, coordination of action/initiative between parties, relationship management, consultation, negotiation, joint decision-making, and self and organisational governance.

- *Technology-specific skills for users.* Beneficiaries and their close intermediaries (family, friends, carers) need to be able to make effective use of appropriate e-service channels, including the available computing and communication technologies (e.g., PCs and associated network technology, email, Internet, SMS, autophones, etc.)
 - *Technology-independent skills for organisations.* Staff working for organisations in the multi-channel network need skills for co-production that complement those of the users: effective communication, coordination of action/initiative between parties, relationship management, consultation, negotiation, joint decision-making. These skills are needed to a particularly high level in front-line staff and those acting as intermediaries. Additionally, skills of political and management leadership are needed within the network⁴⁵.
 - *Technology-specific skills for organisations.* For organisations in the multi-channel network, the key technological skills are those needed to commission, develop, configure maintain the ICT infrastructure (traditionally, information systems management and systems administration). The availability of these skills is particularly important for organisations playing the role of intermediaries in a multi-channel context, but this is often where they are most lacking.
44. For impact evaluation of Human Capital, the emphasis is on evidence of the acquisition of knowledge and skills and the subsequent direct and indirect benefits that follow. Many digital inclusion projects feature explicit skills training and development for beneficiaries, enabling an immediate and direct assessment of project impact. However, the EGOG4U Impact Evaluation Framework also seeks evidence of subsequent less direct impact, be it on better employment, enhanced careers, better support for children in school, enhanced ability to help family members or neighbours, improved citizenship skills, etc.
45. The EGOV4U framework also looks for impact at the level of the effectiveness and sustainability of the multi-channel networks and their constituent organisations as a result of improved knowledge and skills acquired directly or indirectly by employees and/or volunteers. Investment in the acquisition of a broad range of

⁴⁵ Lack of adequate leadership during any stage in the initiation, implementation, promotion and ongoing support of developments has been identified as a barrier. (See 'Breaking Barriers to eGovernment', Op. cit. p12.)

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skills relevant to the operation of a multi-channel network can help to overcome anxieties amongst staff about new and different ways of working⁴⁶.

Malta: EGOV4U e-service '*Targeted ICT Training*' and associated projects.

Availability of the Internet in Malta is high and many homes have PC and Internet connections, however many people are still digitally excluded because they don't feel they have the knowledge or skills needed to make effective use of the technology. People working in fisheries and agriculture, older people, people with disabilities and women not going out to work, are all perceived as specific groups of people who stand to gain much from developing their digital skills.

Fishermen and small farmers stand to gain from government support for their industries and may benefit from online banking as other financial services. The well-being of older people and people with disabilities can benefit from being better able to keep in touch with family, friends and neighbours, or from access to online shopping and similar services. People with disabilities and women may be able to work digitally from home. Many women are particularly keen to help their children be successful in school or to be able to research matters of family health online. They are also interested in learning digital skills in order to return to work.

To address the digital and social exclusion experienced by the above groups and others Malta's Local Councils Association (LCA) and Fondazzjoni Temi Zammit (FTZ) Community Foundation have developed series of inter-related projects. The '*Targeted ICT Training*' project aims to provide basic ICT skills to people in these and other digitally excluded groups. The project will build upon the impact of the basic training of the *ICTforAll* programme to address the specific needs and interests of the target communities and social groups, especially in relation to accessing e-government services via Malta's e-government portal.

To reach a broader audience a series of 39 one-hour television programmes will be produced in the '*TV Training Project*'. The programmes, broadcast weekly, will include informative and educational material on e-services, ICT Training and being a 'mobile citizen'.

To complement the more formal skills training of the '*Targeted ICT Training*' project and the weekly television programmes, the '*e-Clubs*' project will establish a number of e-Clubs in which individuals with common interests will be encouraged to help and support each other, not just in learning to use ICT, but also in how to successfully engage with e-government and other e-services, and with the wider digital community.

⁴⁶ These anxieties are sometimes expressed in ways that lead to management perceptions of intransigence or inflexibility. (See '*Breaking Barriers to eGovernment*', Op. cit. p15.)

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For those people in the target groups who do not yet have PCs or the Internet, the 'PC Loan Scheme' will make available recycled government PCs to local community centres and organisations. Making them available in this way (as opposed to at home) is intended to encourage people to share their knowledge and skills with others through established community organisations, to reach more people with each loan PC, and to encourage wider participation in those same community organisations. (For some groups, such as people with limited mobility, home loans may be possible.)

On the supply side, the 'MITA Project' recognises that many staff in the offices of the archipelago's Local Councils can benefit from greater knowledge and better skills in supporting local citizens in engaging with e-government services. Working with the Malta Communications Agency (MCA) and the Malta Information Technology Agency (MITA), five local councils will serve as pioneers in the provision of e-government services from their local offices. Subsequently, three localities will be transformed to serve as one-stop shop for e-government services within their community.

Social Capital

46. There is a vast literature on Social Capital and its nature, role, significance, and measurement all continue to be matters of debate, not least because it is recognised that it can serve both positive and negative ends⁴⁷. In Putnam's seminal work, communities with high levels of Social Capital are characterised by high levels of political engagement and economic performance⁴⁸. Coleman describes it as making possible the achievement of community ends that would not be attainable in its absence⁴⁹. Following a programme of related studies in the context of socio-economic development, the World Bank concluded that Social Capital, alongside other capitals, made a distinct impact on growth, equity and the alleviation of poverty⁵⁰. There is broad recognition that, when used positively,

⁴⁷ The French sociologist Pierre Bourdieu's account of social capital has influenced later writers like Coleman, particularly through his classic 1986 book; 'Distinction: A Critique of the Judgement of Taste: London Routledge, Keegan & Paul. Although social capital is one form of non-economic capital, Bourdieu has tended to broaden his perspective to include interactions with other forms of capital, whereas Coleman has tended towards a functional approach. This represents a challenge for EGOV4U Impact Evaluation Framework in that we seek to go beyond the transactional relationship between social capital and the goals and actions of individuals to examine and promote the transformational aspects of enhancing social capital in order to combat social exclusion.

⁴⁸ Putnam, R., Leonari, R. and Nanetti, R. (1993) Making Democracy Work: Civic Traditions in Modern Italy. Princeton University Press, Princeton, NJ.; and Putnam, R. (2000) Bowling Alone - The Collapse and Revival of American Community. New York: Simon & Schuster.

⁴⁹ Coleman, J. (1990) Foundations of Social Theory. Harvard University Press, Cambridge, MA.

⁵⁰ Grootaert, C. (1998) Social Capital: The Missing Link?, Social Capital Initiative Working Paper no.3, World Bank, Washington DC. See also: Grootaert, C. & van Bastelaer, T (2002) Understanding and measuring social capital: a synthesis of findings and recommendations from the social capital initiative, Forum Series on the Role of Institutions in Promoting Economic Growth, USAID,

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Social Capital promotes cohesive and sustainable communities, so there is a clear rationale for giving it prominence when evaluating the impact of multi-channel networks delivering government and public services.

47. Recognising the different perspectives that exist on social capital and its measurement the UK Office of National Statistics (ONS) has sought to "harmonise" a number of approaches and measures (Harper and Kelly, 2003). The ONS summarise types of social capital as *Bonding*, *Bridging*, and *Linking*. In evaluating Social Capital we take the view that the value resides in the existence of relationships⁵¹ and particularly their density and diversity. We interpret the ONS's scheme in the domain of multi-channel e-service delivery as follows:
- *Bonding* social capital is characterised by strong bonds among members of a single family, neighbourhood, social group, organization or a collective of such organizations sharing a single focus (such as a multi-channel e-service delivery network).
 - *Bridging* social capital is characterised by weaker, sometimes transitive ties that are span communities, especially to connect individuals or groups to others with complementary capabilities.
 - *Linking* social capital is characterised by connections within a hierarchy where there are differing levels of power. It is different from bonding and bridging in that it is concerned with relations between people or organisations who are not on an equal footing.
48. The concepts of bonding and bridging relate naturally to a distinction between intra-organisational and inter-organisational relations, respectively. The development of bonding social capital can be related to the development of 'identity' and in the sphere of social exclusion, the creation of group identity can prefigure the subsequent assertion of claims to rights and entitlements, especially to social inclusion and equality. For organisations in multi-channel networks themselves, bridging social capital resides in professional, business or perhaps campaigning links with other organizations and people within them. And one interpretation of the role of intermediaries in these networks is that through

Washington, DC. and Sarah Cummings, Richard Heeks and Marleen Huysman (2003) Knowledge and Learning in Online Communities in Development: A Social Capital Perspective. Development Informatics Working Paper No.16, Institute for Development Policy and Management, University of Manchester, UK.

⁵¹ A question arises as to how to treat the quality of relationships and specifically the extent to which each is characterised by high or low levels of confidence and trust. Some evaluations of Social Capital go so far as using trust as a proxy measure of social capital. In the EGOV4U Impact Evaluation Framework, we choose to account for confidence and trust as aspects of Reputational Capital (see later).

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them, weak ties become stronger⁵². Linking captures the power and authority differentials that occur. In this context, perhaps especially in respect of government commissioning contributions from a variety of non-government organisations, and which are often reflected in the governance arrangements that exist at any time.

49. For Bonding Social Capital, the focus of impact evaluation is on changes in the density of relations within families, community and neighbourhood groups, members of the multi-channel network. For Bridging Social Capital, the focus of impact evaluation is on increases in both the number and diversity⁵³ of relations between groups in a community. For Linking Social Capital impact evaluation focuses on the establishment of relationships that facilitate empowerment, for example, when beneficiaries, intermediaries, and citizens at large are included in making decisions about and governance of e-services.

Milton Keynes: EGOV4U e-service '*e-Clubs for socially disadvantaged groups*'.

Many socially disadvantaged people are not active users of the Internet and other digital facilities that can give them access to sources of information, public services or other resources that may help them. This can be an important constraint on their ability to contribute effectively to overcoming their disadvantage. The fundamental reason for providing e-Clubs for specific groups is to provide a means by which socially disadvantaged individuals can share experiences with others in similar circumstances and where joint and group initiatives can be exploited to reduce social disadvantage and to promote self-sufficiency and empowerment. (See the MK e-Clubs Logic Model, below.)

Other EGOV4U projects to be undertaken by Milton Keynes are designed to give members of disadvantaged groups access to personal computers and broadband services, but inexperienced users will need help to find and access relevant information e-services. Milton Keynes's e-Clubs project will complement the provision of technology by providing an environment in which such users can access the information and services easily from one place.

The e-Clubs will provide a safe environment in which people from a range of target groups can meet, communicate and support each other when engaging with national and local government services and with voluntary and community organisations. Where possible and available, incentives will be built into the e-clubs to encourage active membership from the targeted groups.

⁵² See; Granovetter, M. (1983). "The Strength of Weak Ties: A Network Theory Revisited". *Sociological Theory* 1: 201-233.

⁵³ Without 'diversity' Bridging Social Capital simply increases capacity; diversity enhances capability.

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Examples of target groups which will have access to an Milton Keynes e-Club include:

- economically disadvantaged – these are broadly defined as people in receipt of some sort of social benefits – such as unemployment benefit, disability benefit, housing benefit
- faith groups – such as Muslim, Sikh
- minority ethnic groups – such as Somali and Bangladeshi communities
- people with disabilities – such as impaired mobility, sight, hearing
- people with chronic health problems and their carers
- older people (over 65s)
- lone parent families
- migrant workers

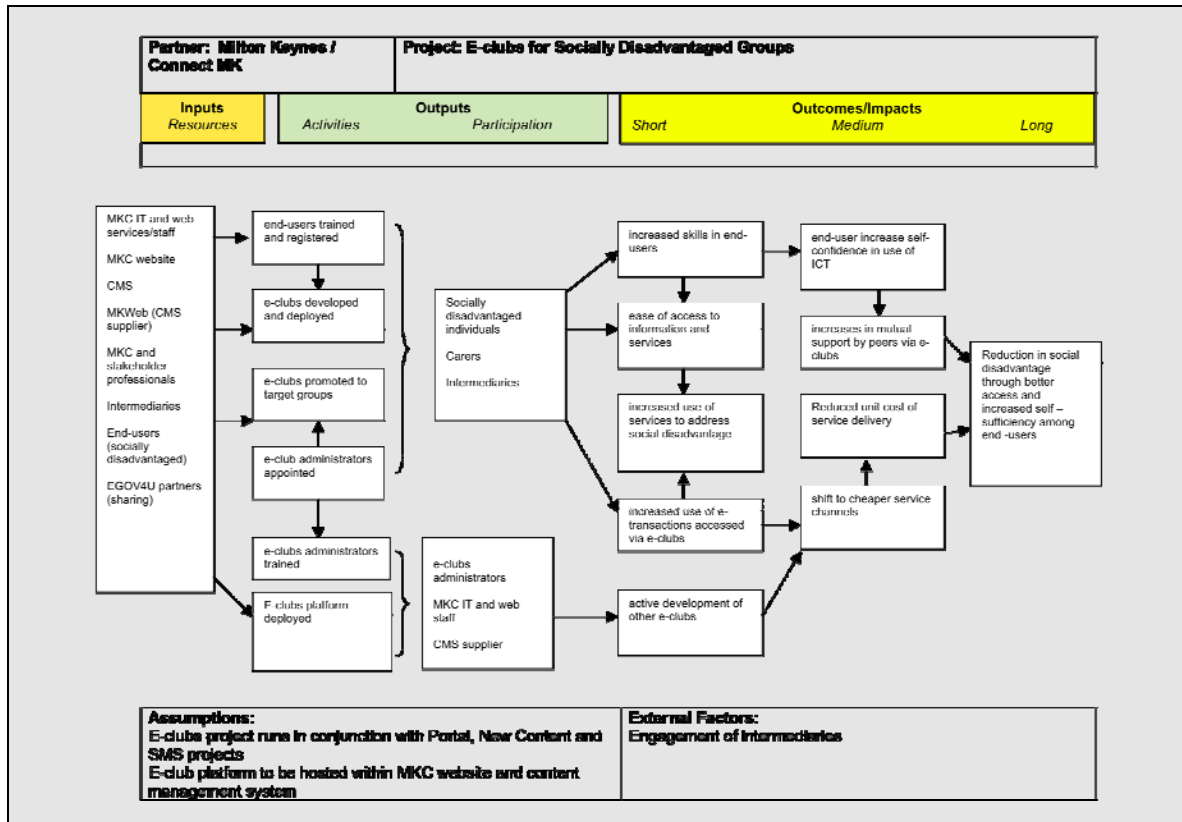
For each target group a ‘stakeholder organisation’ will act as an independent trusted intermediary to manage and administer the e-club on behalf of the target group members. e-Clubs managed in this way can have a significant effect of reducing a sense of isolation among individuals, and providing mutual motivation and support in addressing their disadvantage.

The e-club platform(s) will be integrated within the Milton Keynes Council website to improve the proximity of the Council’s e-services. Initial content will be collated and created for the e-clubs as part of the project, but it is intended that members, with the support of the stakeholder organisation managing the site will develop additional content over time.

Members of the e-Club will be able to discuss and agree ideas for new and improved e-services, which can then be communicated to Milton Keynes Council.

e-Clubs are also being developed by other members of the EGOV4U Consortium. In some cases, they include not only virtual meeting places but also physical meeting places, such as local community centres.

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Organisational Capital

50. Organisational Capital inheres in the processes and structures, especially managerial and governance structures, within and between organisations⁵⁴. In the EGOV4U Impact Evaluation Framework there are three main levels at which Organisational Capital can be evaluated, reflecting the context of multi-channel e-service provision/co-production. The first is intra-network organisation; the second is between a multi-channel network and beneficiaries; the third is between the multi-channel network and citizens at large and their representatives, who are responsible for commissioning the e-services provided by the network.
51. *Intra-network organisation.* The organisations with a multi-channel e-service delivery network often have different forms of organisation, depending mainly upon their legal basis (for example, government, public bodies, commercial

⁵⁴ We choose a broad definition of 'organisation' to allow for it to include not just legally constituted entities, but also entities such as semi-formally constituted community organizations and close intermediaries of direct beneficiaries such as family, friends and neighbours. In the literature, the term 'organisational capital' is often used in the non-specific sense of: 'all of the capitals belonging to some organisation', as opposed to the more specific sense given here. (See: Spender, J.C. (2009). Organizational Capital: Concept, Measure or Heuristic? In A. Bounfour (Ed.), Organizational Capital: Modeling, Measuring and Contextualizing (pp.5-23). London: Routledge.)

Impact Factors

organisations, voluntary organisations, co-operatives, etc.). Conventional modes of government service delivery involving government agencies alone are often characterised as centrally/hierarchically controlled⁵⁵; those involving commercial, and, increasingly, major Third Sector organisations, often involve formal contracts and rigidly specified service level agreements, which are often inflexible.

52. When voluntary and community organisations are involved as intermediaries, these forms of organisation/governance are rarely appropriate because they do not allow for the intra-network flexibility and agility that is essential to successful multi-channel e-service delivery. However, the rigid organisation of tradition is often replaced by very loose and/or informal arrangements for 'coordination', rather than formal management and governance.
53. The MC-eGov project established two important organisational features of successful and sustainable multi-channel networks:
 - that a formal 'partnership' approach was to be preferred because

"[t]he intermediaries and their networks need to work within a coherent governance framework, with clear working arrangements, and where all the actors involved are working towards agreed objectives to help socially excluded people to effectively reintegrate into society as they overcome their exclusions" and it concluded that *"this does not work effectively if directly controlled from the centre nor does it work in the longer term if there are just informal alliances at a local level."*⁵⁶
 - that the multi-channel network needed to be structured and organised in a way that enabled it to take a holistic view of the beneficiaries needs and organise flexibly to address them, rather than operate as a series of silos.
54. Accordingly, the EGOV4U Impact Evaluation Framework suggests a categorical scheme to assess the development of multi-channel network organisation. One dimension of the grid ranges from 'Centralised', through 'Loose-informal', to 'Partnership'. The second dimension captures the degree of flexibility of the network, where flexibility is defined as the organisational ability to respond to the holistic needs of beneficiaries.
55. *Multi-channel network and beneficiaries.* At the interface between the multi-channel network and the beneficiaries (including family, friends and neighbours)

⁵⁵ Centralised hierarchical control is sometimes labelled "bureaucratic", but we value the distinction between these terms. See. DuGay, P. (2000) *In Praise of Bureaucracy: Weber, organisation, ethics* Sage: London.

⁵⁶ MC-eGov, op. cit., p5

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the key feature of organisation considered is ‘user-centricity’. In the EGOV4U Impact Evaluation Framework, this is assessed in two ways. First is ‘personalisation’⁵⁷ which can be assessed by assessing the degree to which the diversity of channels through which the e-service can be accessed reflects the diverse needs of the target population of beneficiaries. Second is the extent to which the beneficiaries and/or their spokespeople are involved in specifying and designing the e-service and its mode(s) of provision and are subsequently involved in monitoring its effectiveness and adaptability.

56. *Multi-channel network and wider community.* At this level, the EGOV4U framework assesses the degree to which there is a culture of broad public consultation about, and accountability for, the provision of multi-channel e-services, and the impact that these practices have on public attitudes.

Reykjavik: EGOV4U e-service ‘*e-participation for a Better Reykjavik*’.

Historically, active public participation in the governance of the City of Reykjavik has been very low. Following the collapse of the banking system in 2008, trust in politicians, parliament and many other public bodies decreased significantly. Re-building trust is one of the most important political tasks of the day. One way to do this is to improve transparency by allowing citizens to participate to a larger extent in public decision-making.

The vision of the ‘*Better Reykjavik*’ project is that it will enable wider forms of e-participation so that, for example, the City can consult citizens, conduct polls and perhaps even carry out binding votes on certain issues. An incentive to participate is a guarantee that the most popular issues discussed on the portal will feature on the agendas of the City and Neighbourhood Councils.

The portal will be open to all citizens. Home access to the internet is relatively high in Reykjavik (93%) compared to other countries, therefore the Internet is seen as a good channel to increase engagement and improve representation of citizens. However, special measures will be taken to help ensure its design and operation don’t indirectly exclude some important groups.

A special focus of the portal is to support the political socialisation of young people by encouraging them to organise and contribute via media and electronic environments that they are most familiar and comfortable with. Also, it is recognised that effective e-participation requires a range of ‘citizenship’ skills, so the City will work with youth centres schools and others to offer young people the opportunity to learn these and put

⁵⁷ Many studies, including MC-eGov, have established that personalisation is important for reaching people who are disadvantaged and excluded.

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them into practice.

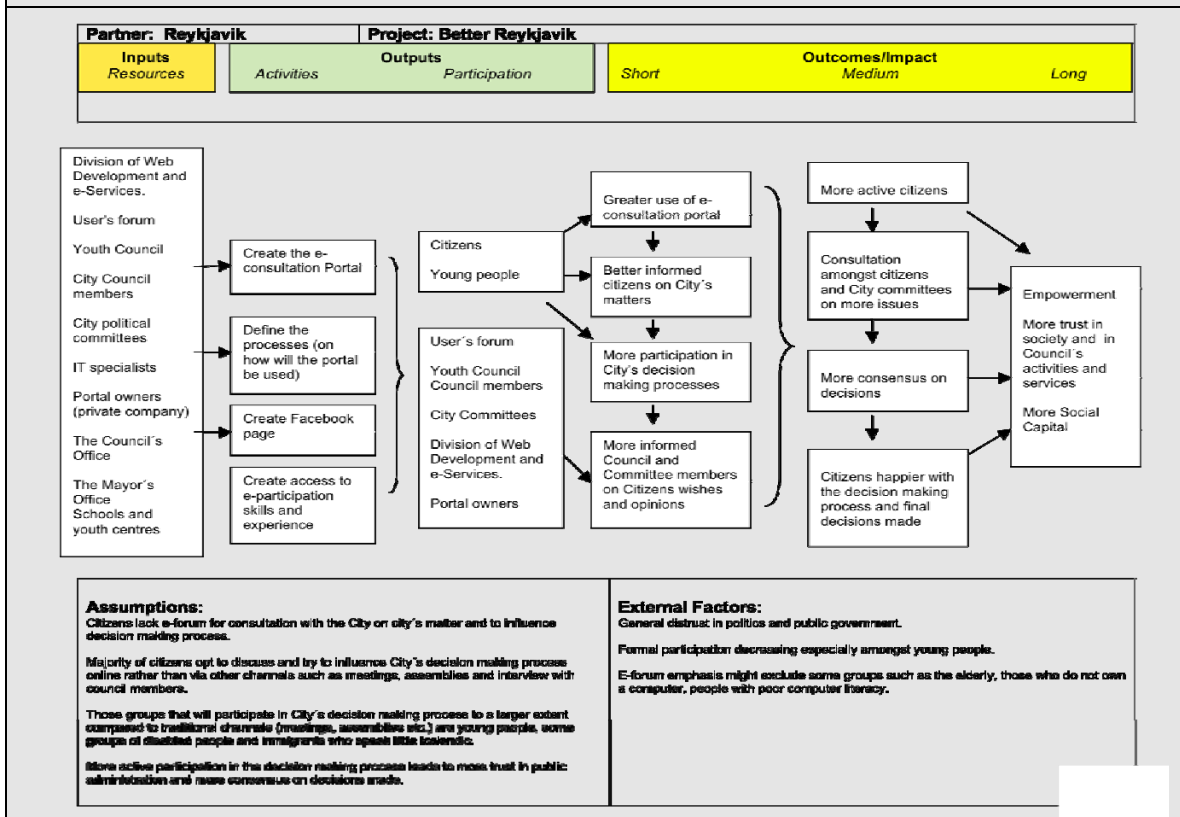
Measures will be taken to ensure older people are not excluded, for example, by raising awareness and participation through neighbourhood social centres where many older people meet and where courses and technical support are available.

The needs of people with visual, auditory and other impediments to participation will catered for in the design of the portal.

Reykjavik has a sizable population of recent immigrants and it is hoped that translation support will be provided to assist their participation.

Whilst participation is open to all individuals, it is anticipated that many different groups will participate. Thus not only will *Better Reykjavik* improve transparency, it is also hoped it will promote all forms of social capital, within and between all of the groups that participate, and between them and democratic government institutions.

(The Logic Model for the project appears below.)



Environmental Capital

57. In the context of multi-channel e-services, Environment Capital is defined as 'any amenity that facilitates social co-production of e-service outcomes and their subsequent social diffusion of their impacts'. Such amenities are the 'interfaces' between beneficiaries, intermediaries and the e-service network. Inappropriate interfaces can seriously undermine relations between public agencies and citizens and businesses, leading reluctance to engage⁵⁸.
58. Much of the value of environmental capital resides in its capacity to foster and realise social capital. We can make a pragmatic distinction between *digital* and *non-digital* environmental resources.
- *Non-digital*. Traditionally, the term has included public spaces such as 'village halls or community centres, parks, shops⁵⁹, the school gate⁶⁰, public transport, places of work, youth and sports clubs, indeed any resource that facilitates social interaction and the production of social capital. In traditional face-to-face models of service delivery, the importance of physical environmental resources has long been recognised. Public offices of one form or another have often been located in the communities they seek serve, especially in relation to disadvantaged communities. Some services have used schools, commercial shops and other resources to reach target groups. These physical environmental resources will continue to be key to delivering services to the disadvantaged and excluded, especially when they provide a physical location for usable and accessible ICT.
 - *Digital*. The Internet and other digital communications technologies have extended significantly the potential and scope of social interaction, facilitating social relations within and between people and organisations that rarely, if ever, meet. Thus, in the realm of multi-channel e-services, it is natural to interpret the Internet, email, social media, conferencing, blogs, SMS/txt, etc., as additional expressions of environmental capital which complement existing community amenities. As well as facilitating the development of social capital, they also support the circulation of information and especially 'reputation' (see Reputational Capital, below). ICT in particular provides a means for promoting e-participation and democratic deliberation and governance.

⁵⁸ 'Breaking Barriers to eGovernment', Op. cit. p16.

⁵⁹ Recently, the coffee shop has become a focal point of social interaction, even more so with free wifi.

⁶⁰ In some communities, the school gate is a point where parents, especially mothers, meet almost daily as they take their young children to and from school. This notion has spawned online equivalents where forum and blog technology allows parents to meet and discuss, and even become prominent political lobbyists.

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59. In evaluating the impact of multi-channel e-services, the EGOV4U Impact Evaluation Framework seeks to identify enhancements to both digital and non-digital Environmental Capital, taking account of its creation, development, and quality, especially in terms of *usability* and *accessibility*⁶¹.

Dublin: EGOV4U e-service '*eInclusion Apps*'

For some groups of people, such as the elderly, citizens with a certain disabilities, or people with limited literacy, modern mobile technology provides an affordable means of providing support and assistance whilst 'on the move'.

The availability of relevant, timely, personalised and location-specific information on a city and its services is particularly important to citizens that face special challenges when travelling. The City of Dublin intends to develop *Inclusion Apps* that will help individuals feel able and confident in making use of their city. Examples of *Inclusion Apps* are a service to help people with visual impairments to navigate the city, a service to help people needing wheelchairs locate and visit accessible venues, and an audio-service for people with low levels of literacy.

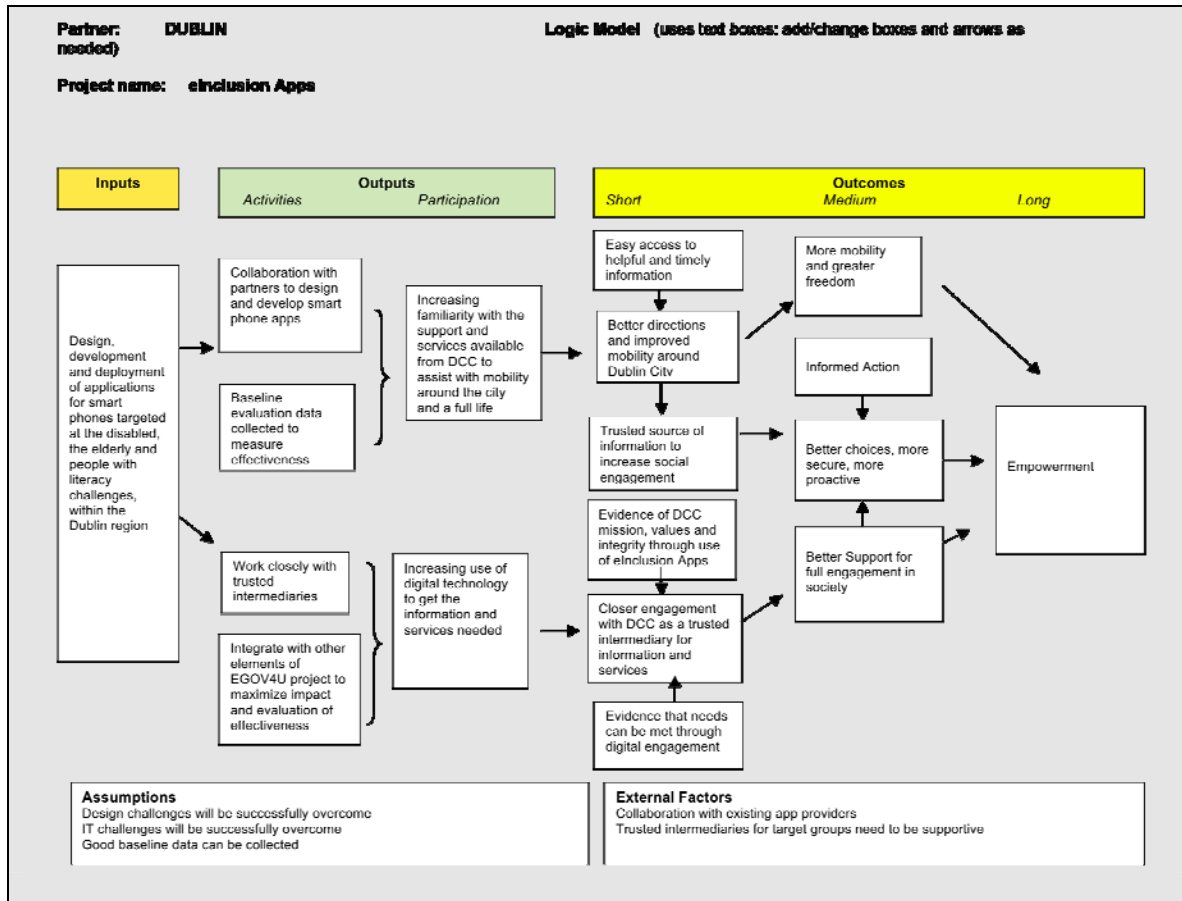
By increasing mobility, the *Apps* will create new opportunities for otherwise excluded citizens to engage with more of their city, for example, allowing them to socialise with friends and others, to seek work in new areas, and to access government and other public buildings and services. There may be indirect benefits to their family and friends from this new mobility. In the longer term, greater engagement in society may lead to Other expressions of empowerment.

There may also be indirect benefits for the tourism-based economy of Dublin, as some of the *Apps* will make the city more accessible to visitors, not just citizens.

The Logic Model is given below.

⁶¹ Defined in Section E, below.

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Infrastructural Capital

60. One of the main reasons many citizens remain digitally and socially excluded is poor availability and poor quality of ICT and related technological resources. For this reason development and extension of the ICT/Internet infrastructure is one of the main outcomes sought by many digital inclusion projects.
61. A crucial aspect of infrastructural capital in multi-channel e-service delivery networks is the extent to which the hard and soft systems deployed serve to facilitate and integrate the processes or workflow operations of all parties involved. Lack of interoperability is a key barrier to the development of effective and efficient e-services⁶². In multi-channel networks involving different organisations the challenges of eliminating incompatibilities in hardware, software or networking infrastructures can be very appreciable, but the development of an integrated but distributed 'back-office' supports capability and capacity and thus effectiveness and efficiency. In the longer term, it will support sustainability of the multi-channel network.

⁶² 'Breaking Barriers to eGovernment', Op. cit. p16.

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62. For the purposes of the EGOV4U Impact Evaluation Framework, Infrastructural Capital comprises principally the computing and communications hardware and systems-level software deployed⁶³. Evaluation accounts especially for its *availability*⁶¹ to beneficiaries and/or intermediaries, but also for its degree of workflow and management integration, underpinned by interoperable systems.

Milton Keynes: EGOV4U e-service '*PC Loan and Broadband Scheme*'

For many e-services, especially e-government and e-business services, availability of a personal computer (PC) and high-performance broadband are essential. For many citizens, especially those most disadvantaged, the cost of these remains an obstacle.

Milton Keynes Council, through Connect MK Ltd (a micro company wholly owned by Milton Keynes Council), have pioneered a scheme to loan high quality re-cycled PCs with a specially negotiated license for Microsoft software. The PCs are available at very low cost to people on means-tested benefits or to people seeking to start their own business, especially as a way out of unemployment.

Additionally the Council and Connect MK Ltd have created a broadband reseller business offering WIMAX wireless-based broadband into those parts of the City with poor broadband infrastructure. The Council now plans to introduce differential pricing for the socially disadvantaged to facilitate their use of broadband services and to encourage the take up and use of online Council and Government services.

As part of the EGOV4U project, the scale of this scheme will be extended from 1000 units on loan in September 2010 to over 3000 units on loan by the end of the project in 2013. The target groups are:

- the socially disadvantaged – those in receipt of means tested benefits
- people over age 65 (up to 200 units and internet access free for 6 months)
- new small start up businesses
- any single person earning less than £12,500 p.a. or a family (two or more adults) earning less than £25,000 p.a.
- those who cannot get good speed broadband at an affordable price
- school children who need extra assistance to get these facilities so as to help improve their educational opportunities and attainment.

Organisations involved as intermediary channels to target groups include:

- The MK Council of Voluntary Organisations – in particular the 'community mobilisers group'.

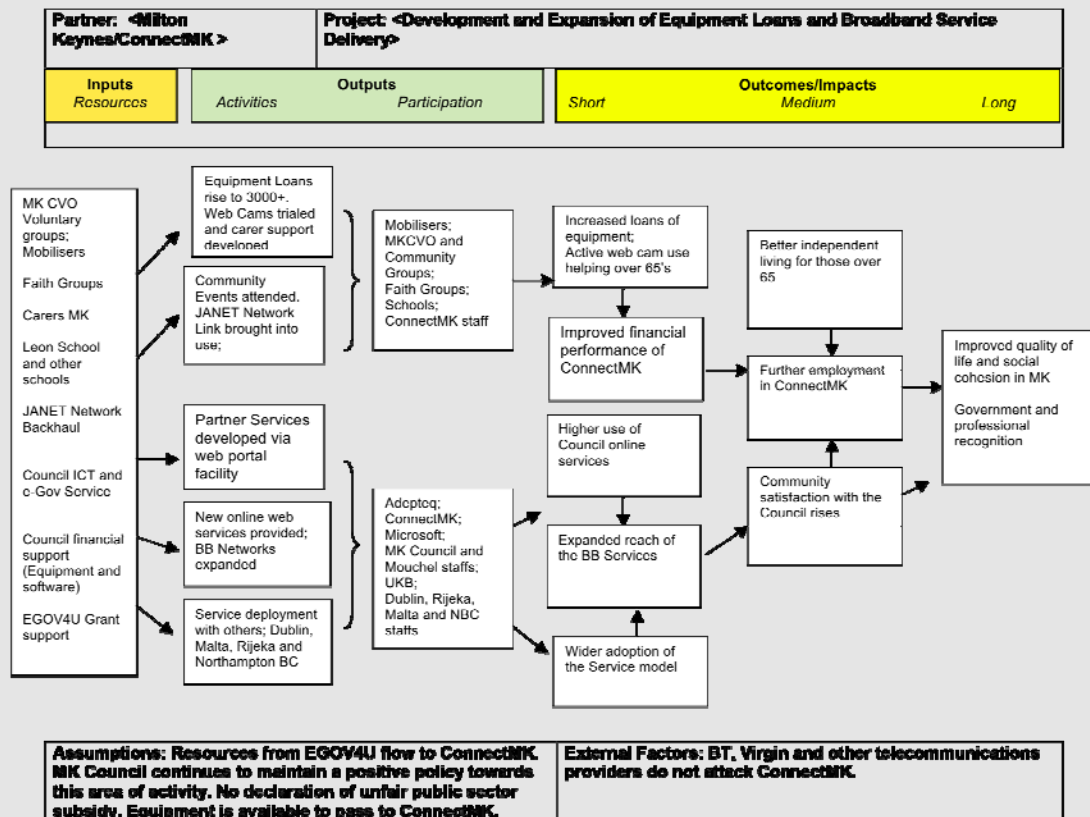
⁶³ It is appropriate to distinguish between the software that constitutes Environmental Capital and that which constitutes Infrastructural Capital.

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- Leon School and Sports College – arranging equipment loans and broadband for its children and families.
- Carers MK – a local charity
- Some faith and community groups – e.g. the Somali and Bangladeshi communities.
- In the future the Council/ConnectMK aims to build new relationships with the Citizen Advice Bureau and with Age UK.

(The Logic Model for the project is given below.)

The PC loan scheme is being adapted by other members of the EGOV4U Consortium, including Malta and Rijeka.



Logic Model for the Milton Keynes 'Equipment Loan and Broadband Scheme'

Financial Resources/Capital

63. A high proportion of excluded and disadvantaged people have low incomes and experience problems with managing limited financial resources. For some this is

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the cause of their exclusion, for others it is a result of their exclusion. Thus, direct or indirect improvements to the financial means of beneficiaries⁶⁴, and/or enhancing their ability to manage finances, are important measures of impact within the EGOV4U Impact Evaluation Framework.

64. For organisations within a multi-channel network, enhanced financial resource is also an important factor, though the nature of the organisation influences which aspects of finance are more or less significant.
65. For government and public bodies, the focus tends to be on efficiency. Improvements in efficiency releases financial and other resources. These can be used in a number of ways, for example, they can be allocated to enhancing or extending existing services, they can fund new and previously unaffordable services, or they can be used to reduce the level of public spending and taxation.
66. For private commercial and other for-profit organisations, the role and value of enhanced financial resources depend upon their particular business model.

Reykjavik: EGOV4U e-service *'Supporting young unemployed people'*.

Since the onset of the economic downturn in Iceland, young people have been particularly disadvantaged in the labour market. Unemployment amongst people between 16 and 24 years of age is approximately 15%, nearly twice the rate for the whole of the working-age population. Providing young people with access to training, early employment opportunities and subsequent careers so that their lifetime financial circumstances mean that they are not a 'lost generation' is a high social, political and economic priority in Reykjavik and Iceland as a whole.

Part of the strategy is to seek ways to engage young people, not only by helping them find work or continue in education and training but to give them other opportunities to be socially active and avoid exclusion. In this project, Reykjavik will support development of a dedicated information service for young people that integrates information on jobs, education and training, with other opportunities to be socially active and involved.

Local research has shown that, whilst virtually every young person in Reykjavik has access to the Internet, they use and interact with it differently to most citizens. A distinctive feature of this project is that it recognises that young people are best placed to decide what information they want and need and how best it should be communicated to their peers and that they may prefer to use modern interactive

⁶⁴ Direct means usually involve the payment of benefits or credits, indirect means include a wide range of effects, for example, improving paid employment, reducing outgoings such as transport costs, etc.

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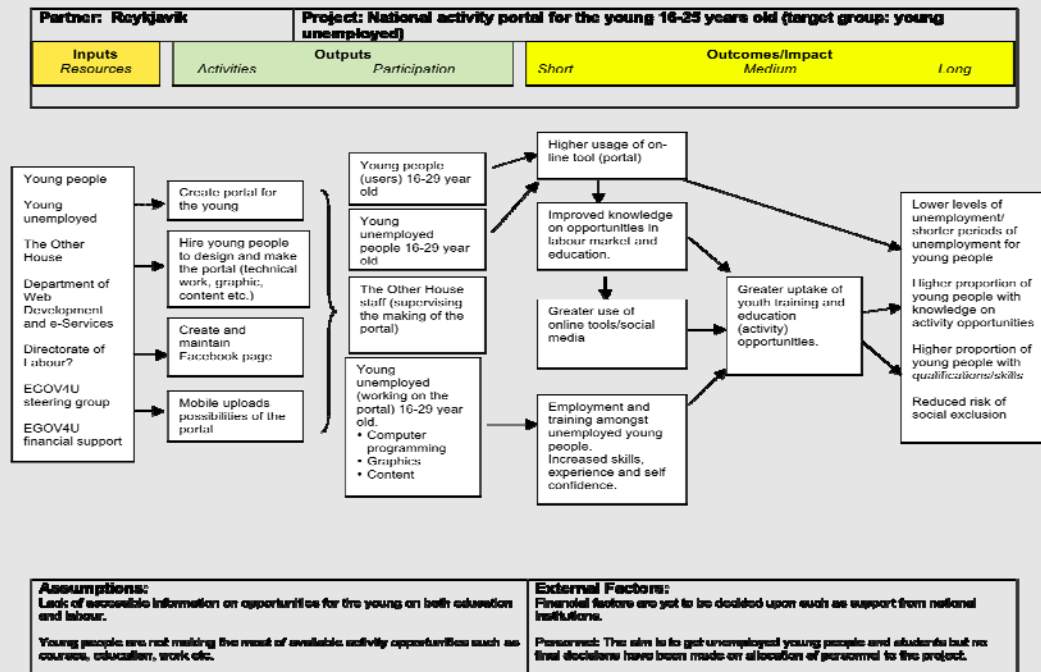
technologies that they are most familiar with, such as mobile phones and social networking sites such as Facebook® and Twitter®. In particular, Facebook® can be used to organise an e-Club.

A significant innovation is that young people will be directly involved in the design and later the governance of the portal. Some young people will be trained and employed to development and maintain it.

To develop the project, the City of Reykjavik will work with 'The Other House', a popular youth centre in the centre of the city, which will act as the key trusted intermediary in helping to engage young people. Other intermediaries include the Labour Unions and the network of Neighbourhood Service Centres, which advise locally on unemployment and training.

In addition to serving young people, it is anticipated that the service will become an important resource for other agencies interacting with and supporting them, including teachers, social workers and others seeking to tackle a broad range of issues relating to the social inclusion and well-being of young people.

The Logic Model for the project appears below.



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67. For voluntary, community and many not-for-profit organisations in the Third Sector, a key issue in relation to finance is often one of sustainability. Many projects that include such organisations are funded as time-delimited capital ventures without due consideration being given to the need to establish enduring revenue streams that will allow their contribution to continue beyond the ‘pilot’ or ‘launch’ phase⁶⁵. Given the pivotal role of these organisations in the success of many multi-channel e-services, and, indeed, their wider value to communities, the EGOV4U Impact Evaluation Framework focuses particularly on the degree to which there is a positive impact on their financial sustainability.

Reputational Capital

68. The value of Reputational Capital inheres chiefly in the extent to which the public reputation of an organisation makes it more or less easy to engage beneficiaries. E-services that readily engage beneficiaries and their close intermediaries in the co-production of outcomes are more effective and more efficient. The EGOV4U Impact Evaluation Framework focuses on two specific but related measures of reputation: the extent to which people, and especially potential beneficiaries, express a sense of trust in the multi-channel network and the extent to which they are willing to recommend it to others.
69. High levels of trust are correlated with community coherence and sustainability and other forms of well-being. In the context of tackling social exclusion, trust is particularly important because low trust inhibits engagement, even to the extent of self-exclusion - some people avoid contact with public and community services that they do not trust unless it is absolutely essential⁶⁶. Without effective engagement modern multi-channel e-services are:
- less effective, because e-services that don’t succeed in engaging users find it more challenging and more expensive to achieve intended policy and social outcomes
 - less efficient, because e-services that don’t enable users to engage (especially through cost-effective modern ICT) fall short of anticipated savings because appreciable numbers of users will continue to rely on more traditional and expensive channels.

⁶⁵ Benefits Framework for Social Inclusion Initiatives’, City of London’s Digital Inclusion Team and Tech4i2, 2010, City of London. (p6). See also Grimsley, M, Meehan, A, Tan, A (2007) Evaluative design of e-Government projects: a community development perspective. Transforming Government: People, Process and Policy. Vol. 1, Issue 2, 174-193.

⁶⁶ MORI, Trust in Public Institutions: A Report for the UK Audit Commission, 2003

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70. The EGOV4U Impact Evaluation Framework incorporates a number of factors relating to reputation. Evaluation looks for evidence that experience of multi-channel e-services has a positive impact on perceptions of transparency, security, privacy, and trust, and subsequently on willingness to recommend. The (relative) absence of each and every one of these represents a barrier to the success of an e-service⁶⁷.
- *Transparency* concerns the extent to which people perceive e-services to be available equitably on the basis of need or merit as opposed to on the basis of privilege, undue preferment, or even corruption.
 - *Security* concerns the degree to which people feel that information they choose to share with government and its agencies will not be accessible to unauthorised parties.
 - *Privacy* concerns the degree to which people feel that information they have chosen to share will not be used for (intrusive) purposes that they have not explicitly agreed to⁶⁸.
 - *Trust* is the basis upon which an individual feels able to engage⁶⁹. Without trust being translated into positive recommendation between potential beneficiaries (or their intermediaries) the trust relationship needs to be built between the multi-channel network and each individual beneficiary.
 - *Positive Recommendation* within a community reduces the cost of 'client recruitment', thus enhancing effectiveness and efficiency. At the same time, a disinclination to recommend either way or, worse, a negative recommendation, both serve to undermine engagement and so inhibit effectiveness and efficiency.

Combining Community Capitals

71. Whilst each of these forms of capital is distinct, it is their combination that determines the potential value that that can be realised from these community/societal resources. For example, a successful e-service will (need to)

⁶⁷ An extensive treatment of these barriers is given in 'Breaking Barriers to eGovernment', Op. cit. p83-149.

⁶⁸ For example, some people are concerned that government departments or agencies might share information and use it for purposes that were not agreed at the outset.

⁶⁹ Trust in e-service providers is shaped by specific aspects of clients' experience, perhaps especially by the extent to which they feel they are well-informed and understand the e-service, the extent to which it gives them a sense of greater control in their lives, and the extent to which they feel they can influence the e-service. (See: Grimsley, M. and Meehan, A. (2007) e-Government systems: evaluation-led design for public value and trust. European Journal of Information Systems, 16, 134-148.

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apply the right knowledge and skills, assembled or composed through high-trust social and business relations, using effective forms of technology, organisation and governance, to exploit appropriate financial resources, environmental amenities and infrastructure.

72. As well as acting as input resources on which project interventions can draw, these capitals also represent a situation which the intervention seeks to transform. So, for example, a particular technological intervention might seek to enhance technological infrastructure (enhancing infrastructural capital) to support new ICT-based communication spaces (enhancing environmental capital) to develop new relationships and connections (enhancing social capital).
73. At any given time, the intersection of these capitals defines a 'space' (drawn from the concept of 'habitus'⁷⁰) that determines community capacities and capabilities and scope for development of the community (Figure 3). When whole communities are socially excluded it is often because the 'habitus' is limited, for example, through the absence of relevant skills, poor infrastructure, absence of social capital, or low trust. Thus, e-service/e-Inclusion projects can maximise their impact by judging where, when and how to generate and align these capitals.

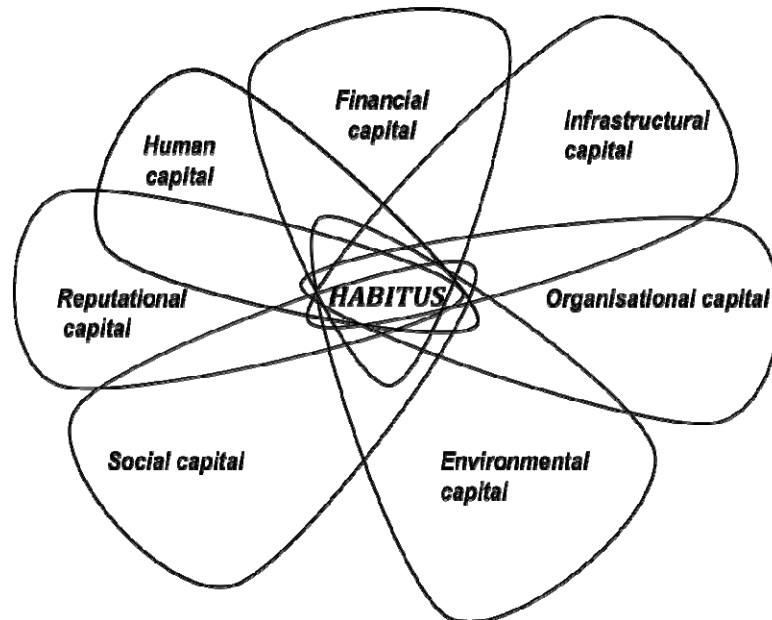


Figure 3. Habitus determined by level and alignment of Community Capitals

⁷⁰ The concept developed from Bourdieu's observations of how colonial societies adapted to the imperatives and exigencies of economic modernity. In doing so, the communities developed a set of social practices, norms and skills in order to negotiate realities of modern societies. (See: Bourdieu, P. (1977). *Outline of a Theory of Practice*. Cambridge University Press.) Within the scope of EGOV4U Impact Evaluation Framework, habitus provides a useful datum in order to evaluate the impact of e-services in combating social exclusion over time.

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E. Applying Impact Evaluation in Context

74. The aim of this section is to give an account of how the EGOV4U Impact Evaluation Framework links the differing levels of evaluative scope: *Project*, *Participants* and *Public*, with the *Resources/Capitals* in order to produce a generic framework that guides design of evaluation instruments and activities for a specific e-service context. The context in which the framework is applied can be visualised (Figure 4).

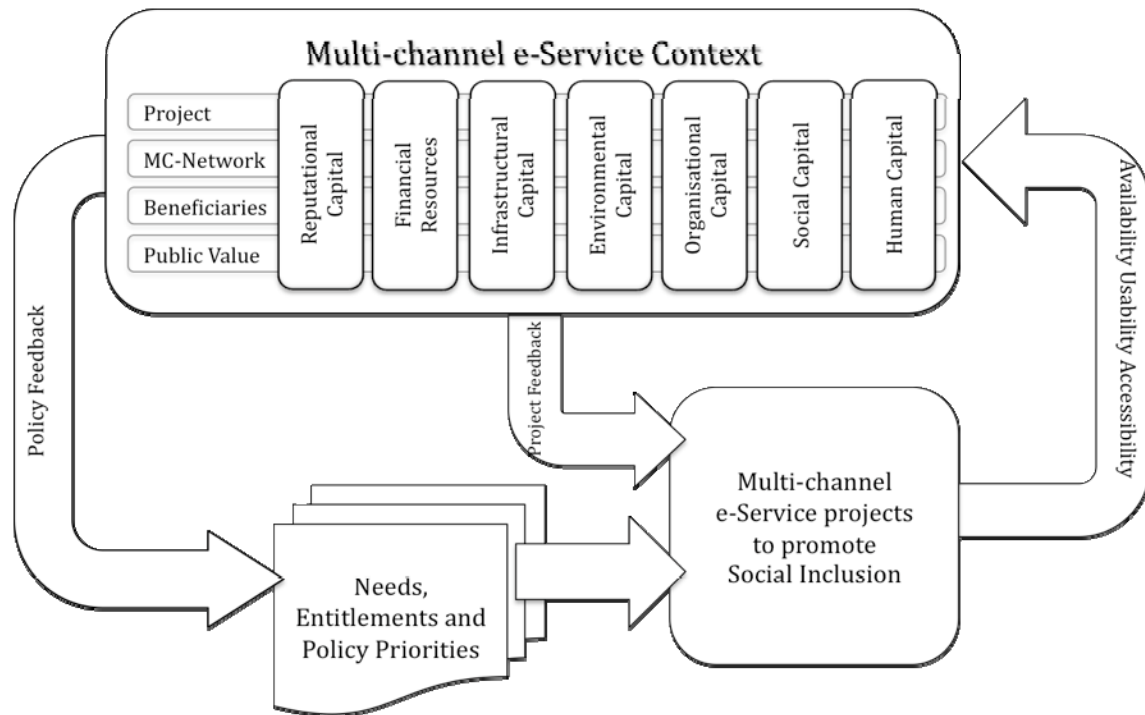


Figure 4. Application of EGOV4U Impact evaluation Framework for Multi-Channel e-Service Projects

75. The framework helps to identify evidence of impact on the levels of human, social, organisational, environmental, infrastructural, financial and reputational resources/capitals at differing levels of scope: *Project*, *Participants* (multi-channel network and beneficiaries) and *Public*. The output of an evaluation is understanding and learning that feeds back to inform the better management and delivery of any multi-channel e-service as an instrument for tackling social exclusion. In terms of outcomes, evaluation is envisaged as an integral part of any multi-channel e-service strategy and so contributes to tackling social exclusion through ensuring management focus on enhancing the community capitals and resources which lead to transformed needs, revised entitlements and policy priorities.

Applying Impact Evaluation in Context

76. It is important to emphasise that it is not necessary, nor is it intended, that all resources/capitals and all levels of scope are considered at once. The priorities for allocating evaluative resources will be determined by context-specific factors such as e-service goals and objectives, resources and expertise available to undertake evaluation, and the maturity of the service (as considered in Section C).
77. A second point deserving of emphasis is that the purpose of the framework is to help evaluators to identify and explore a diverse range of possible impacts, intended or unintended, direct or indirect, tangible or intangible. In providing the framework, it is not the intention to induce burdensome and inappropriate efforts to ascribe any one impact to just one capital or one level of scope when, in all likelihood, most impacts will find expression in more than one form of community capital and at various levels of scope.
78. The following subsections provide further structure and detail of the framework. They are organised by levels of scope of evaluation: *Project*, *Participant*, and *Public*. At each level of scope, a table is provided that indicates, in summary form, generic impacts associated with each community capital/resource, along with some examples of impacts that might commonly arise from e-service projects tackling social exclusion.
79. Additionally, there is an account of some specific issues that tend to appear/predominate at each level of scope and which provide an additional and alternative perspective for those planning impact evaluations. It will be evident that in describing and discussing the issues, many of the matters considered relate directly or indirectly to one or more forms of community capitals/resources. In considering the development of evaluation instruments for specific stages of specific projects, some may prefer to start with a 'capitals/resources' perspective and others may prefer to start with an 'objectives and issues' perspective. In our view, it does not matter which is taken as the starting point, but it is advisable to consider both perspectives during the development process.

Project Scope

80. The project-level focus is concerns impacts associated with specific e-service project objectives, usually as stated in the project specification.

Generic Project-level Impacts

81. Table 2 provides examples of generic project-level impacts on community capitals and some common examples of their expression.

Applying Impact Evaluation in Context

Table 2. EGOV4U Project-level Impact Evaluation Framework

Resource/Capital	Generic Project-level Impacts	Common examples
<i>Human Capital</i>	<p>Acquisition of e-service-related knowledge and skills by intended beneficiaries.</p> <p>e-service related training/skills-development within multi-channel network.</p>	<p>Increased understanding of e-service as a multi-channel process.</p> <p>Enhanced skills acquired by immediate beneficiaries:</p> <ul style="list-style-type: none"> • ICT skills. • Communication skills. • Self-organising skills. • Negotiation skills. • Coordination skills. <p>More effective co-production of e-service outcomes.</p> <p>Raised level of skill amongst employees/intermediaries/volunteers.</p> <p>e-service skills:</p> <ul style="list-style-type: none"> • Communication skills. • Self-organising skills. • Negotiation skills. • Coordination skills. <p>ICT-related skills, especially 'back office' systems integration knowledge and skills.</p>
<i>Social Capital</i>	<p>Creation/reinforcement of bonding relations.</p> <p>Creation of new bridging relations.</p> <p>Creation of linking relations.</p>	<p>Sharing skills within circles of families, friends and neighbours.</p> <p>Enhanced quality of relations in family, community group.</p> <p>Creation or reinforcement of collective identity within target group.</p> <p>New/better use of friends, neighbours, community and other organizations as intermediaries.</p> <p>Involvement of beneficiaries in e-service commissioning, design and governance.</p>
<i>Organisational Capital</i>	<p>Develop multi-channel network capability through creation of appropriate architecture, reach, diversity.</p>	<p>On basis of segmentation of target group(s):</p> <ul style="list-style-type: none"> • include organizations to ensure coverage of roles/functions needed to support all e-service channels/process(es). • recruit/integrate intermediary organisations, to 'bridge the gap' between an existing provider network and those who are excluded.

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Resource/Capital	Generic Project-level Impacts	Common examples
	<p>Develop multi-channel network capacity.</p> <p>Enhanced contribution of all stakeholders to planning, design and governance of e-service.</p> <p>Organizational sustainability through formalisation of multi-channel network relations/governance.</p>	<p>Recruit/allocate/invest resources to resolve bottlenecks in channel/process operation.</p> <p>Beneficiaries and/or their immediate representatives included in the specification and design of e-service(s).</p> <p>Formalised (joint) governance arrangements.</p>
<i>Environmental Capital</i>	<p>Increased usability of online, and offline channels.</p> <p>Increased accessibility of intermediated online, and offline channels.</p>	<p>Simplification of e-service processes/workflows to reduce burden of sustained engagement (e.g. one-stop-shops or replacing down-loadable pdf forms with web-forms).</p> <p>Use of social software to facilitate self-help groups.</p> <p>Personalised communications to help sustain engagement.</p> <p>Introduction of multi-lingual interfaces to e-services.</p> <p>Adaptation of e-service interfaces (online and face-to face/intermediated) to accommodate specific needs, especially those arising from physical/cognitive limitations (e.g. to comply with international standards or better).</p>
<i>Infrastructural Capital</i>	<p>Increased availability of relevant ICT and/or appropriate accommodation for face-to-face interaction.</p> <p>Increased integration of 'back office' ICT systems. (Often requires specific measures to assure privacy/security.)</p>	<p>Installation of ICT/Internet into locations (homes, community centres, public offices/spaces) where beneficiaries and/or their intermediaries can more readily make use of e-services.</p> <p>Provision of mobile ICT for beneficiaries or their intermediaries.</p> <p>Provision of accommodation to facilitate face-to-face meeting/interaction.</p> <p>Enhanced flow of information between organizations in multi-channel network.</p>

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Resource/Capital	Generic Project-level Impacts	Common examples
<i>Financial Capital</i>	<p>Increased access to financial resources for beneficiaries.</p> <p>Plan for sustainable funding of e-service.</p>	<p>Beneficiaries:</p> <ul style="list-style-type: none"> • improved access benefits and other financial entitlements. • enhanced ability of beneficiaries to manage financial resources. • increased incomes through new/better remunerated employment. <p>Explicit forward business plan for multi-channel network (inc. intermediary organizations).</p>
<i>Reputational Capital</i>	<p>Positive opinions of e-service circulating in community.</p> <p>Multi-channel network organizations operating on basis of enhanced trust and confidence.</p>	<p>Beneficiaries report increasing sense of being well-informed, having more personal control, and more influence over outcome of engagement with e-service(s).</p> <p>Enhanced levels of confidence and trust expressed by beneficiaries.</p> <p>Growing willingness amongst beneficiaries to recommend positively e-service(s).</p> <p>Individual organizations report positively on collaboration with others in multi-channel network.</p>

Some Project-level Issues

82. *Effectiveness* and *Efficiency* are frequently cited as prominent objectives in e-government/e-service project, but even these seemingly unproblematic aspects of 'performance' are difficult to assess (see Section B). They are even more difficult to assess when different and diverse organisations organise to form a multi-channel delivery network. Public sector, private sector, Third Sector and voluntary organisations often, if not always, have their own, contrasting goals and different approaches to defining and monitoring effectiveness and efficiency. This means that a pan-network assessment of effectiveness and efficiency is rarely achieved, especially in the short-term when multi-channel delivery networks are first established. In the longer term, the extent to which this becomes possible depends largely upon the degree to which the individual parties and organisations come to operate collectively on a more formal basis⁷¹. (Although the degree to

⁷¹ In the EGOV4U framework, the development of a formal basis to the multi-channel organisation is evaluated at level 2a as this is most frequently an emergent impact not normally specified as a project objective or outcome.

which this may occur may itself depend on the stability and sustainability of the Multi-channel network.)

83. To address the problem of assessing effectiveness and efficiency, especially at an early stage of e-Service development, the EGOV4U framework focuses instead on two key antecedents of effectiveness and efficiency: *capability* and *capacity*. Capability relates to ‘what can be done’ by the network; capacity relates to ‘the rate at which its capabilities can be put to effect’ to achieve outcomes and impacts.
84. *Capability*. Assessment of capability focuses upon identifying how the combined capabilities of all parties in the network enable the network *as a whole* to achieve (or co-produce) the outcomes it seeks. Typically, development of additional multi-channel capability is achieved in one of two ways: adopting or incorporating a new technology and/or extending the knowledge and skills of people (though other resources/capitals may be involved also). Sometimes this involves extending the capability of one or more of the existing parties in the network; on other occasions it may involve ‘recruiting’ new organisations to the network.
85. To assess (and plan for) capability, the framework suggests three constructs: *Multi-Channel Architecture*, *Reach* and *Diversity*.
 - *Multi-Channel Architecture*. The capabilities of the multi-channel network can be analysed in a way that reflects the ‘EGOV4U Generic MC Service Delivery Model’⁷². This should lead to a qualitative understanding of existing capabilities, and serves to highlight where and how capability can be most appropriately developed in the terms described above. Of particular interest and importance in the context of adopting a multi-channel approach to tackling social exclusion are the extent which there is adequate:
 - recruitment and integration of intermediary organisations, such as voluntary and community organisations, who can bridge the gap between an existing provider network and those who are excluded;
 - use of appropriate personalised technology to bridge the gap between the providers and the beneficiaries;
 - integration of ‘back-office’ processes across the whole network of providers, including intermediaries.
 - *Reach*. Reach is defined as the degree to which an e-service network currently engages the whole target group of beneficiaries.

⁷² This model appeared originally in Annex A of the EGOV4U Technical Annex to Grant Agreement 250509.

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- *Diversity*. The circumstances of individuals within any target groups are often diverse. Understanding the diversity of the target group is one of the foundations for improving the personalisation of the e-service and thus for promoting inclusion. Diversity provides an account of the main sources of differentiation within the target group in order to provide a basis for seeking to ensure that the service does not exclude sub-groups either directly or indirectly.
86. In developing an account of capability it is important to iterate (at least once) over the three elements above because assessment of each will serve to inform forward thinking about the others (Figure 5):
- Limitations in the architecture of the network constrain both reach and diversity, for example, due to absence of some specific technology or the need for an intermediary to make the bridge to those currently excluded.
 - Limitations on reach may be due to previously unrecognised diversity in the target beneficiary community and vice versa.
 - The need to address some specific aspect of diversity may highlight the need for a specific development of the architecture.

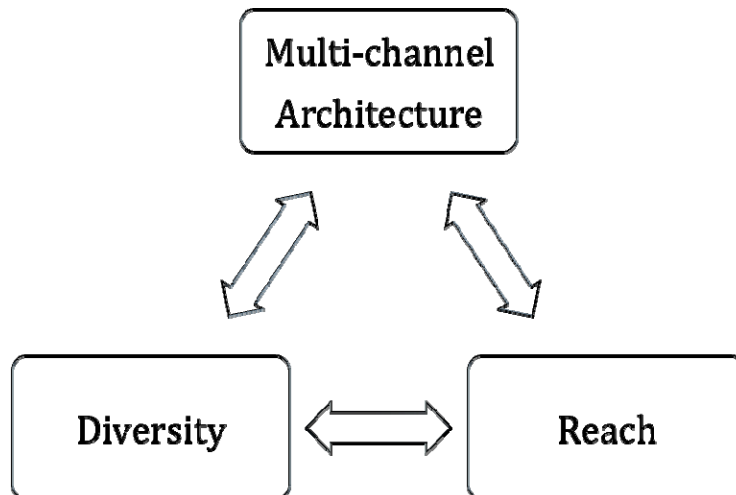


Figure 5. Aspects of Capability for e-Inclusive e-services.

87. *Capacity*. Capacity concerns the rate at which capability can be used to attain the desired e-service outcomes. In the early stages of a project, development of capacity is usually achieved through increasing the scale of operation by assigning additional resource and/or investing in technology, especially to remove 'bottle

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necks' within channels. In the medium to longer term, the evolution of capability can generate additional (internal) resource that can be used to increase capacity through improved efficiency.

88. At this stage, it is perhaps worth noting that the impact resulting from development of capability and capacity is readily evaluated in terms of enhancement of the capitals/resources considered earlier. In the account immediately above human capital, bridging and linking social capital, and organisational, environmental and infrastructure capitals are clearly evident.

Participant Scope.

89. The second focus for impact evaluation examines the broader and increasingly indirect impacts upon the multi-channel delivery network itself and the organisations within it, and upon the direct beneficiaries and their families, friends and neighbours. In both cases, the evaluation looks for increasing impact as a result of engaging in the co-production of service and outcomes.
90. For the multi-channel network, we take the view that development needs to lead to a sustainable operating or business model. Sustainability itself is not a static state; organisations need to continually re-position themselves in a complex and often dynamic environment. The evaluation framework supports the application of managerial attention to:
 - ensuring that the provision of multi-channel e-service(s) enables the direct and indirect beneficiaries to exit or avoid social exclusion in a way that endures and is not temporary;
 - engage in ongoing formal and informal re-negotiation between all parties in the network, including beneficiaries, as to the most appropriate mode of operation;
 - engage in a wider democratic or community dialogue about the continued relevance and legitimacy of the e-service.
91. For the beneficiaries, their family, friends and neighbours, we take the view that the route to sustainable exit from social exclusion involves progression towards empowerment, based upon progressive development of the knowledge and skills of active citizenship.

Generic Impacts on Multi-channel Network

92. Generic examples of impacts on the capitals/resources available to the multi-channel network and the organisations within it are outlined in Table 3.

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Table 3. EGOV4U Participant-level Impact Evaluation Framework (Multi-channel Network)

Resource/Capital	Generic Impacts on Multi-channel Networks	Examples of impacts
<i>Human Capital</i>	Enhanced knowledge and skills promote effectiveness, efficiency and sustainability of multi-channel network and constituent organisations.	<p>Raised level of e-service skills (communication, organising, negotiating and coordinating) reduces the burden/transaction costs of working with beneficiaries so that more beneficiaries can be engaged and time to achieve outcomes acceptable to beneficiaries reduces.</p> <p>The staff report skills being used in other/new contexts.</p>
<i>Social Capital</i>	<p>Multi-channel Network developing a sense of its own identity.</p> <p>Multi-channel network capable of more than any individual organisation.</p> <p>Network sustainability improved through shared flexible operation/adaptability.</p>	<p>Organisations in network working more flexibly and learning from each other.</p> <p>Voluntary and community organizations cooperating more to achieve mutually shared aims.</p> <p>Emergence of new initiatives/projects from interactions within multi-channel network.</p>
<i>Organisational Capital</i>	<p>Formalisation of relationships/partnerships within multi-channel network.</p> <p>Formal multi-channel network organisation leads to more effective coordination, management and governance.</p>	<p>Management and governance able to make more effective use of shared information.</p> <p>Balance of governance effort shifts from short-term focus on performance in relation to the immediate e-service project to focus more on improved modes of operating and strategy for new/future initiatives.</p> <p>Reduced management overhead on communication and negotiation and more emphasis on improving effectiveness and efficiency.</p>

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Resource/Capital	Generic Impacts on Multi-channel Networks	Examples of impacts
<i>Environmental Capital</i>	More effective channel interfaces to beneficiaries (e.g. one-stop-shops, multi-channel network portals) leading to enhanced effectiveness and efficiency.	<p>Increasing levels of engagement with e-service:</p> <ul style="list-style-type: none"> • more 'visits' to portals, social network sites, one-stop-shops etc. • greater diversity of clients making use of e-service • higher percentage of, and shorter completion times for successful transactions. <p>Offline and online environmental resources being adapted for new, initially unanticipated purposes and beneficiaries being encouraged to engage with broader opportunities.</p>
<i>Infrastructural Capital</i>	<p>Increased channel availability, greater integration of multi-channel 'back office' systems leading to improved effectiveness and efficiency.</p> <p>Information security systems enable sharing of (confidential) information.</p>	<p>Enhanced performance of processes and systems producing performance-based returns for organizations that go beyond specific e-services.</p> <p>Systems supporting new ways of working and new lines of activity both within individual organisations and the multi-channel network as a whole.</p> <p>Supports diversification of use of environmental resources.</p>
<i>Financial Capital</i>	<p>Returns from enhanced effectiveness and efficiency.</p> <p>Sustainability enhances financial health of organisations and multi-channel network.</p>	<p>Financial resources become available, e.g. for investment in new technologies, recruitment, further training of employees/volunteers.</p> <p>Better access to investment capital and/or borrowing.</p> <p>Improved sustainability reflected in finance-related forward planning of individual organizations and multi-channel network.</p>

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Resource/Capital	Generic Impacts on Multi-channel Networks	Examples of impacts
<i>Reputational Capital</i>	<p>Increased confidence and trust between organisations of multi-channel network.</p> <p>e-service develops an identity in a way that improves its ability to engage beneficiaries.</p>	<p>Organisations better able to share (confidential) information about beneficiaries and with reduced transaction costs.</p> <p>Improving quality of relations within multi-channel network reduces burden of negotiation and coordination leading to improvements in effectiveness and efficiency.</p> <p>Individual organizations experience reputational benefits from association with e-service.</p>

Some Issues relating to Multi-Channel Network Scope

93. In developing a framework for assessing impact on the multi-channel network and its organisations, the EGOV4U Impact Evaluation Framework draws upon the MC-eGov Study on Multi-channel Delivery Strategies and Sustainable Business Models for Public Services addressing Socially Disadvantaged Groups³⁷. This study identified both a ‘Framework of Fundamental Principles for Delivering Sustainable Exit from Social Exclusion’ and ‘Sustainable Operating Model Elements’ (also ‘Business Models’). The Impact Evaluation Framework looks for evidence within the multi-channel network of its development towards these two benchmarks.
94. In respect of ‘fundamental principles’ of multi-channel e-service delivery, the Impact Evaluation Framework examines:
- the extent to which there is improvement in the identification of (holistic) personal needs;
 - relevant (formal) changes in organisation structures, relationships and policies, and systems designed to support meeting those needs;
 - evolution of multi-channel e-service delivery (especially ability to engage intermediaries and beneficiaries);
 - enhancements in methods of assessing and measuring outcomes.
95. In respect of ‘operating (business) models’, the Impact Evaluation Framework suggests examining the ways in which all of the partners in the e-service delivery network (jointly and severally):
- develop improved means of mapping, understanding, and tracking the changing policy context;
 - continue to develop new e-service propositions (in terms of both increased e-service diversity and flexible scale);

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- improve their ability to manage/deploy resources across the delivery network to deliver outcomes for beneficiaries.

Generic Impact on Direct Beneficiaries

96. Table 4 provides examples of generic impacts on capitals/resources available to direct beneficiaries and their immediate circle of families, friends and neighbours.

Table 4. EGOV4U Participant-level Impact Evaluation Framework (Direct Beneficiaries)

Resource/Capital	Generic Impacts on Beneficiaries	Examples of impacts
<i>Human Capital</i>	Technology-specific skills, technology-independent skills (communication, self-organisation, consultation, negotiation, decision-making, coordination, etc.) Improved physical, and mental health.	Beneficiaries using acquired ICT skills in ways that enhance quality of life, e.g.: <ul style="list-style-type: none"> • improved relationships with family, friends and neighbours • seeking/finding new or better employment • managing personal/domestic finances more effectively • researching and managing personal and family health. Beneficiaries able to act more effectively on their own behalf (self-organisation/self-advocacy).
<i>Social Capital</i>	Increased bonding SC with family, friends, close neighbours. Increased bridging SC through intermediary organisations.	Beneficiaries: <ul style="list-style-type: none"> • use knowledge and skills more broadly in new/different contexts. • contribute knowledge, skills and experience to family, friends and neighbours • experience improving relations with family, friends, neighbours. • increasingly involvement in local/community activities. • accessing additional support through new contacts outside immediate family and friends.
<i>Organisational Capital</i>	Increased quality and quantity of community-level self-organisation. Increased engagement in community governance.	Beneficiaries more engaged in neighbourhood / community activities.

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Resource/Capital	Generic Impacts on Beneficiaries	Examples of impacts
<i>Environmental Capital</i>	Richer and more usable online and offline environment facilitating further development of other capitals, especially human, social and organisational.	Beneficiaries making use of offline and online environment for purposes not directly related to e-service(s) (e.g. e-learning/training, support for health and well-being, informal social interaction, base for community organization).
<i>Infrastructural Capital</i>	Increased availability and accessibility of ICT, e-services and other e-resources.	Supports family friends and neighbours of beneficiaries in engaging with e-service(s) but also making use for wider purposes.
<i>Financial Capital</i>	Financial resources of direct beneficiaries and their immediate family improving.	<p>Increased incomes through access to benefits and other entitlements.</p> <p>Beneficiaries report improved ability to manage (domestic) finances.</p> <p>Increased income from new or better employment.</p>
<i>Reputational Capital</i>	<p>Increased trust in and between family, friends and neighbours.</p> <p>Increased confidence and trust in multi-channel network providers.</p> <p>Increased trust in social and political institutions.</p>	<p>Improved relationships with circle of family friends and neighbours.</p> <p>More positive attitudes towards others living in same neighbourhood.</p> <p>Willingness to recommend e-service providers within own social circle or wider.</p> <p>People feel more informed about their community and feel they have some influence within it.</p> <p>Increase in political participation, including voting in elections, contributing to online discussion/consultation for a, joining social and political institutions/parties, etc.</p>

Some Issues for Evaluating Impact on Beneficiaries

97. Here we approach the issue of evaluating impacts on direct beneficiaries (and their immediate circle of family, friends, carers, and any others who are not part of formal intermediary organisations) from a different perspective. It is possible to evaluate impact in terms of how the e-service project, taken as a whole, empowers beneficiaries, and subsequently those around them. Rather than attempting to 'measure' empowerment directly, the EGOV4U framework advocates its evaluation indirectly via a number of factors that can be thought of as pre-requisites for empowerment. The advantage of each of these is they can be

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evaluated more readily and give better indications of what sorts of actions can be taken within a project to enhance empowerment. The pre-requisites proposed are as follows:

- *Availability.* Availability is a measure of the ease with which beneficiaries can engage with the e-service. Multi-channel e-service projects use a variety of approaches to increase availability; examples include introduction of a range of relevant ICT into the home or community and/or face-to-face channels such as one-stop-shops or technology-equipped staff making personal visits.
- *Usability.* We take a broad view of usability that extends beyond the immediate interaction with the system, product or service. We include the user experience over the entire e-service encounter, from its initiation to its conclusion. It is this extended interaction that influences users' perceptions of value and quality⁷³, and which consequently determines the outcomes of that service and the possible impact on its target users⁷⁴.
- *Accessibility.* Accessibility is the degree to which the e-service is as equally available and usable to all, and especially citizens with special needs arising from, for example, problems with mobility, visual or auditory impairments, physical or mental ill-health, etc.
- *Skills acquisition.* Successful co-production of e-service outcomes requires a range of skills on the part of the beneficiary. This is particularly so when e-service outcomes require sustained engagement over a whole series of step-by-step transactions or exchanges between beneficiary and provider. Technology-specific skills are needed by beneficiaries and their close intermediaries in order to make effective use of available channels. Examples of important generic skills include effective communication,

⁷³ Service-quality is the user's perception of the degree to which the service has met their requirements and expectations. In a multi-channel context the experience and perception of service quality is shaped by total experience across all of the various channels in their service encounter (Minocha, S., Dawson, L., Millard, N. and Roberts, D. (2004) A Model of Customers' Behaviour with (B2C) E Commerce. Proceedings of the British Computer Society – Human Computer Interaction Group's Annual Conference (BCS HCI 2004), Leeds, UK). Users may welcome the freedom to choose between channels, switching from one channel to another based on their experiences and circumstances, but they rarely appreciate being required to switch between channels (van Dijk, G., Minocha, S. and Laing, A. (2007). Consumers, channels and communication: online and offline communication in service consumption. *Interacting with Computers*, 19(1), pp. 7–19.).

⁷⁴ Petre, M., Minocha, S. and Roberts, D. (2006). Usability beyond the website: an empirically-grounded e-commerce evaluation instrument for the total customer experience. *Behaviour and Information Technology*, 25(2), pp. 189–203.

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negotiation, joint decision-making, coordination of actions with the e-service, and self-organisation.

- *Engagement.* Many e-services in the realm of social inclusion require sustained engagement for medium- to longer-term outcomes to be attained, especially if beneficiaries have multiple and complex needs. Dimensions of engagement that can be evaluated include quality of communication, personalisation (negotiation of personal needs), collaborative decision-making, and effective coordination of timely actions⁷⁵.
- *Quality of relationships.* The quality of relationships between users and their intermediaries and e-service personnel, and indirectly with the organisations providing the services, and the political institutions commissioning them, is fundamental to both effectiveness and efficiency. Key measures are a sense of trust and a willingness to recommend the e-service(s) to others.
- *Empowerment.* The sense of 'empowerment' expressed by the user in terms of three key correlates (factors) of empowerment: a sense of being well-informed, a sense of personal control in their lives and a sense of influence (in respect of the e-service and more widely).

(As before, analysis the above readily reveals how empowerment, as conceived above, relates to enhancement of capitals/resources. In this account, references to human, environmental, infrastructural, and reputational capitals are all in evidence.)

⁷⁵ Habermas's theory of social action provides a framework for analyzing quality of engagement. In particular, Habermas' typology of social actions can help to appreciate at what level people are interacting because his 'social action' categories capture widely recognizable and important aspects of human dialog and behaviour, including in ICT-mediated engagement (Klien, H.K., Minh Q. Huynh (2004) The Critical Social Theory of Jürgen Habermas and its Implications for IS Research. In John Mingers and Leslie Willcocks, Social Theory and Philosophy for Information Systems, Chichester, John Wiley & Sons, pp 157-237). The theory can also help assess the quality of the ICT environment deployed to support co-production of e-service outcomes as the deployment of ICT systems which provide inadequate support for social action forms might be seen as reinforcing digital exclusion through 'capability deprivation' (Zheng, Y. and Walsham, G. (2008) Inequality of what? Social exclusion in the e-society as capability deprivation. Information Technology & People, 21:3 p222-243).

Public Value Impact

98. Beyond participating stakeholders, the scope expands to include the wider social, political and economic impact, as experienced by citizens and their representatives.
99. The framework for measuring Public Value developed by The Work Foundation⁷⁶ points to specific attributes that are commonly sought by citizens in respect of specific public services. Drawing upon the Work Foundations framework, the EGOV4U Impact Evaluation Framework advocates assessing citizens' perception of e-service outcomes in terms of the following:
- *integrity* – that is that the providers are working towards the democratically endorsed e-service outcomes
 - *efficiency* and *effectiveness* (as considered earlier)
 - *democracy* (the public is involved in determining policy in relation to e-service provision)
 - *transparency* (access to, and benefit from, e-services is based upon open and observable criteria)
 - *equity* (citizens are treated fairly on the basis of *need*, as opposed to purely on the basis of demographic or other generic criteria)
 - citizens' *trust* in e-service providers and
 - *willingness to recommend* e-services to others.
100. Beyond these attributes of services, it may also be feasible and appropriate to evaluate the following high-level impacts related directly to reducing deprivation and social exclusion:
- increased social cohesion and social inclusion;
 - safety and security - both objective and subjective⁷⁷
 - promoting democratic and civic engagement
 - enhanced quality of life, well-being and happiness.
101. Table 5 provides examples of generic impacts on capitals that may be observed at the level of Public Value.

⁷⁶ See 'World-class Public Services: Engaging Citizens and Staff', The Work Foundation, November 2008 (http://theworkfoundation.com/Assets/Docs/adobe_world_class_updated.pdf). (See also the series of papers at <http://theworkfoundation.com/research/publicvalue/publicvaluereports.aspx>).

⁷⁷ Subjective feelings of safety and security (so-called ontological security) are as important to mental health and well-being. At a community level, they are correlated with cohesion and sustainability.

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Table 5. EGOV4U Public Value-level Impact Evaluation Framework

Resource/Capital	Examples of Public Value-level Impacts
<i>Human Capital</i>	<p>Public perception that social and employment-related skills, acquired directly or indirectly, are contributing to well-being of beneficiaries, including better integration of beneficiaries into social and economic life of the (local) community.</p> <p>Public perception of increased engagement and empowerment of direct beneficiaries in public/political life.</p>
<i>Social Capital</i>	<p>Perception of a clearer collective 'identity' by those in or associated with the community intended beneficiaries.</p> <p>Increasingly positive public attitudes towards the beneficiary community.</p> <p>Increased recognition of the contribution the beneficiary community can make to the wider community.</p> <p>Beneficiary community seen as positively participating/contributing to community economic and social actions.</p> <p>Perception of increasing expressions of empowerment in relation to community governance.</p>
<i>Organisational Capital</i>	<p>Increased involvement of beneficiary community in consultation about, and more formal governance of, community/social policy and its implementation.</p> <p>Occasional and/or regular forums for consultation/feedback on e-services and related matters.</p> <p>Informal community activity becoming more formalized around identity of beneficiary community, e.g. through representation on consultative and/or decision-making bodies of the wider community.</p> <p>Public perception of the developing capability of the multi-channel network, perhaps especially of voluntary and community organizations acting as intermediaries.</p>
<i>Environmental Capital</i>	<p>Public awareness of increased usability and accessibility of e-services.</p> <p>Public perception of the growth in engagement facilitated by more usable and accessible ICT, community and public buildings and places, etc.</p>
<i>Infrastructural Capital</i>	<p>Public awareness of increasing number of e-service channels through which e-services can be accessed.</p> <p>Community-based resources (ICT and physical) perceived as being used by more people and for more diverse purposes.</p>
<i>Financial Capital</i>	<p>Public perception of effectiveness and efficiency of e-service(s).</p>

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Resource/Capital	Examples of Public Value-level Impacts
	Public perception of increasing financial resources available within local community and attributable in some part, direct or indirect, to the e-service.
<i>Reputational Capital</i>	Public recommendation/endorsement of e-service provision. Public awareness of the 'mission' and capabilities of the multi-channel network in relation to the beneficiary community. Public confidence/trust in multi-channel network as providers, and other social and political institutions as commissioners of e-service(s).

Structuring Evaluation in Context

102. The EGOV4U Impact Evaluation Framework is intended to be both generic comprehensive, however, any particular e-service project will be rooted in a specific context. With this will come particular priorities and resource constraints on what can be evaluated at any one time. Thus, while the framework features different levels and sub-levels of scope (Project, Participant, Public) and seven different Community Capitals, some with more than one component, it is envisaged that there will be a selective focus on scope and capitals determined by the current context. The most straightforward way to do this is by choosing to 'centre' some capitals whilst treating others as parameters (which constrain and shape impact evolution, but are more peripheral).
103. To illustrate this in a general sense, we take as an example the question of how one might proceed if one wished to 'centre' evaluation on the impact of new e-service technology. By 'technology' we mean the socio-technical system encompassing the interplay of people (collectively) and the multi-channel e-service process (not just hardware or software.) The focus on people within the socio-technical system suggests the centring of social capital and human capital (e.g. the relationships, knowledge and skills for co-production). The focus on the multi-channel e-service process suggests the centring of infrastructural and environmental capitals, and possibly organisational capital. Financial and reputational capitals might be considered as more peripheral⁷⁸.
104. To evaluate impact at some particular stage in the evolution of the e-service project, we suggest that it is desirable, if not necessary, to take an iterative approach. The first iteration tends to develop an account of the current state of development (the 'as is'); the second iteration refines this, but also tends to highlight where management actions are needed to best assure future outcomes and impacts. If this were to be done over all levels of scope and all capitals (that is,

⁷⁸ The 'centred' capitals in this illustration may be considered as constituting a socio-technical space within a larger habitus (see Figure 4, above).

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leaving aside for the moment and selectivity arising from the comments made in the two paragraphs above), one possible sequence of activity is as follows.

For each e-service project:

1. Start with statement of the problem to be addressed and a description (initial segmentation) of the group of beneficiaries;
2. Project scope:
First iteration:
 - a. document the (current) project aims and objectives;
 - b. develop an account of network capability; (iterating over: the network architecture, reach, diversity) and capacity;
 - c. describe the current multi-channel network, paying particular attention to channels/intermediaries. Description given in terms of:
 - i. roles (e.g. providers of services, applications, content, practitioners, intermediaries);
 - ii. capitals available to the network (human, social [bond/bridge/linking], organisational, environmental, infrastructural, financial, reputational) being clear about which were the key enabling/constraining ones.
 - iii. sustainability of multi-channel-network.
 - d. describe the reach (% of target group readily engaged)
 - e. describe the diversity of the target group (segmentation)

Second iteration:

- f. assess capability and capacity focusing on how the mc-network needs to be developed/extended in order to extend reach by better addressing diversity. Identify new channels/recruit additional intermediaries to provide new capability and capacity.

3. Participant scope (multi-channel network):

First iteration:

- a. For multi-channel network and organisations within it describe changes in:
 - i. effectiveness and efficiency;
 - ii. capitals available
 - iii. sustainability

Second iteration:

- b. assess scope for further managed changes to:
 - i. effectiveness and efficiency
 - ii. capitals

Applying Impact Evaluation in Context

iii. sustainability

4. Participant scope (beneficiaries):
 - First iteration:
 - a. assess the development of the target group of beneficiaries (taking into account key aspects of its diversity/heterogeneity) in terms of where it and each major sub-group is on the ladder of empowerment (availability, usability, accessibility, skills acquisition, engagement, quality of relationships, empowerment)
 - Second iteration:
 - b. identify managed project activities that will further develop empowerment of target group.
5. Public scope:
 - First iteration:
 - a. assess citizens' perceptions of e-service in terms of:
 - i. integrity
 - ii. efficiency and effectiveness
 - iii. democracy
 - iv. transparency
 - v. equity
 - vi. trust and willingness to recommend to others.
 - b. where feasible and appropriate evaluate the following:
 - i. increased social cohesion and social inclusion;
 - ii. safety and security - both objective and subjective
 - iii. promoting democratic and civic engagement
 - iv. enhanced quality of life, wellbeing and happiness.
6. Revise project aims and objectives (and continue to iterate as necessary).

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EGOV4U e-Service Project Summaries.

Milton Keynes	
Increasing availability of Internet technology for people entitled to social benefits.	Connect>MK provides both low cost rental of refurbished PCs and broadband services to poor and disadvantaged people who are entitled to social benefits. The PCs are good quality refurbished stock, mainly from the Milton Keynes Council, and run preferentially licensed software from Microsoft. The broadband service is high-performance wireless system (WIMAX). Technical support is also provided. Connect>MK will service the Milton Keynes Digital Service Centers, providing them with their equipment and broadband service.
E-Clubs for the Socially Disadvantaged	The Milton Keynes e-Clubs will provide a safe environment in which people from a range of target groups can meet, communicate and support each other when engaging with national and local government services and with voluntary and community organisations. For each target group a stakeholder organisation will be appointed as an intermediary to manage and administer the e-club on behalf of the target group. e-clubs managed in this way can have a significant effect of reducing a sense of isolation among individuals, and providing mutual motivation and support in addressing their disadvantage. Possible target groups include: faith groups, ethnic community groups, people with specific disabilities, people with chronic health problems and their carers, older people, lone parent families, migrant workers
SMS Services	SMS has a number of advantages that enhance engagement. SMS provides a low cost method for communication between service provider and the target users. It uses a technology that many users are more familiar with and is more convenient than a conventional PC. It supports integration of with other SMS services from other sources. Typical uses will include: The SMS services may include: alerts for individuals at critical times, promotion of services to socially disadvantaged people, access to simple service transactions, delivering service transaction outputs, confirmation of service transactions.
e-Services Portal	The portal project will improve the quality of services and transactions which are most directly relevant to the needs of the target excluded groups. It builds on the existing citizen portal operated by MK Council through its website. The project will identify and identify e-service transactions specifically provided for the target groups. Wherever appropriate, the end-user interface for the e-transaction will be a simple-to-use e-form designed to the needs of the target groups. The e-transaction will be integrated to the appropriate back-office system for the purposes of validation of data, access to and updating of operational records. This will enable the transaction to be completed with a minimum of manual intervention and delay.
Reykjavik	
Supporting young unemployed people in finding jobs, education and training.	Young unemployed people need a dedicated portal that integrates government and other information on jobs, education, training, and other opportunities. They also need this information to be available using interactive technologies that they are most familiar with, such as mobile phones, Facebook® and Twitter®. A significant innovation for this project is that young people will be directly involved in the design of the portal and employed in its development.
Fighting gender-based	The physical and emotional effects of gender-based violence and

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violence and violence against children.	violence against children are violations of human rights that lead directly social exclusion. Victims of gender-based violence and children subject to violence have immediate/short-term needs backed up by longer-term support. Their acute needs often include refuge and security, financial resources, along with medical and psychological support. These will be better addressed if provided via a single point of reference/contact.
Better e-services for immigrants.	The largest immigrant communities in Reykjavik are less than one generation old. Many who arrived during the major expansion in the economy are choosing to stay and start families, despite the recent significant increase in unemployment. Reykjavik's City website and the City's e-services portal (E-Reykjavik) are not usable to many in the immigrant community. This is partly because of language but also because most people newly arrived from within the EU and elsewhere are very unfamiliar with the way social services such as child-care, education, housing, employment, are structured and administered. Immigrants risk increased social exclusion unless changes are made to the City website and the E-Reykjavik portal in ways that are involve and are relevant to the needs of the immigrant.
Meeting the IT needs of elderly citizens.	Many elderly people have particular as well as commonly shared needs in relation to ICT. A number of related initiatives are being undertaken taken to ensure that these needs are better understood and catered for. As well as improving availability, usability and accessibility of Reykjavik's e-services website, 'hot spots', sustained technical assistance, and personalized training provided by young people attending local schools are being provided at via local community centers.
Improving accessibility of e-services	Many people are digitally excluded because they have a disability or have some special need in order to be able to use ICT. To help this group of citizens, the accessibility of Reykjavik's city website is to be brought up to the standard needed for certification against W3C/WA/WCAG international standards.
Public e-consultation	The 'Better Reykjavik' e-consultation portal will enable citizens to influence the administration and policy making of their city. Citizens can focus on priority issues and be assured that their priority concerns are put on the agenda of the political committees of the City Council on a monthly basis.
Rijeka	
IT training for elderly citizens	The project will build upon a proven model to provide IT education free of charge to elderly citizens. People first attend a basic course, followed by a more advanced course. Volunteers who have successfully completed the advanced course are able to provide informal education as e-Mentors to other members of pensioners' clubs in accordance with their needs and desires. Also, the volunteers will provide assistance to elderly persons when submitting requests for subsidies and benefits from the City's social programme.
Digital Centers at Pensioners' Clubs	The aim of the project is to provide PCs and other IT equipment and along with Internet services to 14 Pensioners' Clubs. In this way, the clubs become digital centers where elderly people will be able to learn about and use ICT free of charge.
Enabling the Rijeka Pensioners' Association	At the request of the Rijeka Pensioners' Association, the Internet Support Service of the City of Rijeka will help create a website of the Pensioners' Association. The website will be developed in co-operation with the members of the Pensioners' Association and will be connected with city

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	portals and the existing profile "Penzići Rijeka" on the social network Facebook.
Basic IT training for unemployed women	40 hours of free IT training will be provided for women of working age who are unemployed and entitled to social benefits from the City. This will give women an opportunity to socialise with other women facing similar circumstances and enable them to develop their competencies, self-confidence, and ability to find work.
Improving availability and usability of e-services for women.	The webpage of the Department of Health and Social Welfare will be made visible to and adjusted for unemployed women. An e-Benefits calculator for social assistance and online on-line adviser will be developed to support women in obtaining social benefits. Personalised accounts and enhanced face-to-face and back-office systems will be introduced.
IT training for veterans and victims of the Homeland War	The project will build upon a proven model to provide IT education free of charge to veterans and victims of the Homeland War. Volunteers who have successfully completed the advanced course are able to provide informal education as e-Mentors to other members the 18 veterans associations in the City.
Digital Centers at Veterans Association Centers	The aim of the project is to provide PCs and other IT equipment and along with Internet services to 18 Veterans Association Centers. In this way, the centers become places where veterans can learn about and use ICT free of charge.
Facilitating free public transport for veterans and victims of the Homeland War	Online web service will be developed to allow veterans and victims of the Homeland War to recover the cost of public transport in the city.
Increasing availability if Internet technology for people with disabilities.	Low cost rental of PCs and other associated equipment will be made available for people disadvantaged by blindness or deafness. Information and online application forms will be made available on RI-Connect, the newly developed portal for e-Inclusion. After identifying needs for Internet connection related to the needs of blind and deaf person, plans to extend the zone of city broadband and the possibility of Internet service providers' sponsorship of free Internet access will be developed.
Improving the accessibility of the City's web portal for disabled people	The website of the Department of Health and Social Welfare within the City WEB portal will be adapted for persons with disabilities, particularly blind and deaf people, to bring it up to the W3C/WA/WCAG international standard. With assistance of target group representatives, a special part of the City's portal will be developed. The content will comprise specific information for persons with disabilities (text, multimedia, streaming, GIS) and will feature deep links to their e-Clubs. Persons with disabilities will be enabled to register for an information system, GRIC, which provides SMS and voice messages relating to the City's social welfare services and ways to respond to them.
e-Clubs for people with disabilities	Interested members of the targeted groups will be trained by editors and journalists to function as a Facebook group to create their own multimedia content on topics of relevance and interest.
Malta	
Increasing availability of ICT through local centers and community organisations	Good quality refurbished PCs running preferentially licensed software from Microsoft will be made available to local councils, community centers, civil organizations and NGO's so that their members and clients can support each other in learning to use ICT, especially for access to government services. In a later phase, individual loans may also be made.
Developing e-Clubs to	Fisheries and agriculture are economic sectors where people working in

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support workers in fisheries and agriculture.	them have limited knowledge and skills for accessing government services, markets, etc. 5 new e-Clubs will be launched around the islands of Malta and Gozo where socially disadvantaged people, especially those in fisheries and agriculture areas, can collaborate to improve their ICT-related knowledge and skills. (The e-Club initiative is related to the PC loan scheme.)
Portal for government services	The existing portal, www.egov.mt , is complicated and not very efficient, mainly 'serving' pdf forms for citizens to complete and return by hand or post. This makes it difficult to use for many disadvantaged people, especially those without ICT and related literacy skills. A new more user friendly and more efficient portal for selected government services will be developed. Additional services will be developed and, importantly, it is planned to make easier the process of obtaining the electronic-ID card required for many e-services.
Local one-stop-shops to support e-services	Many e-government services require citizens to interact subsequently with national government offices, which are not always convenient to get to, and for some citizens, very difficult to get to. In collaboration with the Maltese IT Agency (MITA) 5 Local Council offices will be selected as pioneers in the provision of e-government services. Later, three offices will be equipped and trained to act as one-stop-shops where citizens can have local support for accessing national e-government services.
Intermediate training in ICT for access to government services	In order to build upon the success of the 'ICT for All' training programme in basic ICT, an intermediate level training programme will be offered at local training centers, local council offices and e-Cubs. The emphasis on effective use of e-government services will be increased.
TV Training in ICT	Although a very high proportion of Maltese citizens have ICT and Internet access, including at home, many do not use it for need of basic training. To tackle this skills gap, a weekly television programme lasting 39 weeks will be produced. It will include an informative education programme on E-Services, ICT Training, and being a Mobile citizen. Part of the programme will feature government institutions providing relevant information and discussions.
Dublin	
Access Dublin	Dublin has developed a web portal for citizens with disabilities / accessibility issues (www.accessdublin.ie). This portal will be further developed to address usability and accessibility issues. The target beneficiaries are citizens with disability, including, physical, mental, and developmental challenges. Intermediaries will be family, friends, community and voluntary organizations. Other stakeholders include local businesses, tourist industry organisations, councils in other cities.
Open Door	Dublin will develop a wrapper portal web application (called 'Open Door') to ease access to and understanding of eGovernment services in Ireland. Dublin City Council (DCC) will engage with other online Government service providers to identify services that should be 'pushed' as part of this process. The portal will be displayed and promoted on existing DCC websites: www.dublincity.ie , www.dublin.ie and www.accessdublin.ie . The portal will specifically focus on services for older people and other disadvantaged citizens.
Web Umbrella	Dublin will develop a 'free' WiFi zone in a social housing complex and implement a PC loan scheme – approx 50 used PC's/laptops (perhaps more if resources/time allows) and distribute free or for a nominal charge to citizens in the chosen DCC social housing complex WiFi area.

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	The pilot will target disabled/elderly citizens. Access to the Web Umbrella, and the content featured in these zones, will be especially managed and promoted to increase the uptake of eGovernment and EGOV4U access services among the target groups. Access to Internet access technologies is a barrier to eInclusion. Availability of a PC will also help to increase digital literacy.
eInclusion Apps	The availability of good, timely information on services and the city when on the move is particularly important to citizens that face special challenges when travelling – e.g. visually impaired, or people with wheelchairs. Good information can help increase empowerment, increasing trust and leading to greater engagement in society. In this project, DCC will develop and deploy applications for mobile phones targeted at the disabled, the elderly, and those with literacy problems, within the Dublin region.
Your-Dublin-Your Voice	Your Dublin-Your Voice will be an online sentiment and opinion survey tool designed to shape public policy and service delivery for all citizens served by Dublin City Council. The issue of digital inclusion will be included on the survey. Special efforts will be made - through good design, prominence on Access Dublin and eGOV4U splash screens, and through targeted promotion – to collect the views of the digitally disadvantaged
Fifth Province	Fifth Province will be a DCC web initiative aimed at shaping the future of city development and the future provision of public services, by engaging citizens in dialogue, both online and in person. The online forum will be designed to pay particular attention to the needs of the socially and digitally disadvantaged.

Types of evaluation in the EGOV4U Evaluation Life-cycle.

