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# MC-eGov Study on Multi-channel Delivery Strategies and Sustainable Business Models for Public Services addressing Socially Disadvantaged Groups

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**Deliverable D1.1: Analytical Framework  
Final**

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## 1.0 THE PURPOSE OF THE ANALYTIC FRAMEWORK

The MC-eGov study will use an analytic framework designed to provide a conceptual structure within which sustainable business models can be identified, categorised and shared. This will help us focus the study not on an open-ended descriptive overview, but in a targeted action that aims to promote Multi Channel eGovernment 'in the right way'.

The framework will provide a methodology that helps us to unpack projects and applications that we will study, into the '**sustainable business models**' that we will identify. It will also provide an agreed set of concepts and relations, describing the study domain, that are made explicit between participants.

The framework will be used in two contexts:

- First, where we identify multi-channel services that have direct relevance to socially excluded groups, we will study them to unpack relevant business models (**covering not just financial, but other sustainability criteria**).
- Second, prior research such as that undertaken by Jeremy Millard, has shown a very uneven distribution across member states of both multi-channel projects and of services that are directed to a broad community of **socially excluded groups**. This has been confirmed by our early research where we have reviewed projects. For that reason we are also building a set of **scenarios** (these are sometimes also known as **personae**) and we will use these scenarios to map the complex social exclusion cases onto existing services and channels across member states. The scenarios are detailed in the deliverable 'D1.3: Report on Good Practices'.

In this document we review analytical frameworks in general, and then identify which aspects of a classic analytical framework will support our task, and identify also what might be done to make the framework suitable for our project needs. A draft framework is then offered for consideration, along with some operational approaches showing how it can be put into practice.

A classic view of an analytical framework is that it provides the necessary and sufficient set of **concepts and relations to support description**, structuring and analysis within a domain of interest, and that it is appropriate for the task in hand.

An analytical framework therefore contains the domain concepts and relations 'relevant' to the task. In practice, it may be articulated as a short description of the domain, phrased in terms of the concepts and relations (more a text description rather than a formal model) that supports general understanding of the team and provides focus for the work.

The analytic framework is sometimes referred to as the 'conceptual framework' and is used in research to identify courses of action or to present an ideal approach to analysis. "The framework is built from a set of concepts linked to a planned or existing system of methods, behaviours, functions, relationships, and objects. A conceptual framework might, in computing terms, be thought of as a relational model"<sup>1</sup>.

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<sup>1</sup> [http://en.wikipedia.org/wiki/Conceptual\\_framework](http://en.wikipedia.org/wiki/Conceptual_framework)

Some analytical frameworks contain concepts, plus embedded study goals, issues to be studied, and indicators to be observed. Such frameworks are more like 'guided' templates for case studies.

An example offered for illustration and comparison<sup>2</sup> is that designed to support analysis of environmental impact of the NAFTA (North American Free Trade) Agreement. This example is highly focused and operationally detailed. It starts with six hypotheses to be examined, and then describes sectors of interest within the domain along with issues to be examined in those sectors, plus specific indicators for measurement. The structure is relevant for an 'environmental impact' study, by showing indicators of impact, sectors in which impact may be generated or experienced, issues that arise from impact generation and experience, and general hypotheses about what is happening on a global scale.

In contrast to support for an 'open ended' analysis, this kind of approach is almost completely closed-off, and is more of a data-collection guide or reporting structure. It is proposed that we need some freedom for 'discovery' combined with a fairly solid prescription of what is to be observed and recorded in interviews and cases (the former serving creative ideas, the latter serving our need for 'evidence' in standard format).

For this reason we first provide an analytic framework that explores relevant concepts (factors) and potentially interesting relations (loose mapping), then we offer examples of how this might be operationalised, but do not strictly limit operational usage.

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<sup>2</sup> [http://www.cec.org/files/PDF/ECONOMY/Frmwrk-e\\_EN.pdf](http://www.cec.org/files/PDF/ECONOMY/Frmwrk-e_EN.pdf)

## 2.0 CONCEPTS AND RELATIONS RELEVANT TO THE MC-EGOV ANALYTIC FRAMEWORK

Firstly, it is useful to attempt to capture the core vision of the study:

*We seek to understand, and provide evidence of, the extent to which multichannel approaches to public service delivery contribute towards meeting the needs of all citizens, more effectively than ever before, in ways that are economically sustainable.*

In the following text, ***bold italics*** mark concepts or relations for the operational framework in the context of research and analysis, and for the documenting of interviews and cases.

From our initial assessment of the literature and from discussions at the project kick-off meeting, MC-eGov targets ***inclusive eGovernment*** in a ***multi-channel*** context wherein each consumer (citizens, business etc.) may benefit from exploitation of ICT in ***sustainable*** service delivery regardless of whether they themselves use ICT. This defines the three primary concepts to be fully operationalised in our investigation, and in our creation of think papers, case studies, etc.

This focus emphasises Government as supplier and as the key object of investigation, yet retains perspective on citizens and business (e.g. SME) as the targets of different services, and having different needs. This implies:

- ***Differences in customers*** as users of ***selected channels***;
- ***Differences in services*** that may or may not make them ***appropriate for different channels*** because of the ***channel interaction characteristics***, or the presence of ***intermediate Customers*** in the *service value chain*.

These considerations expose the possibility of ***differences in target sectors*** determining ***inclusiveness of eGovernment*** (*features of citizens and business*) [*good practice*].

Discussions at the kick-off meeting revealed an interest in the ***delivery (organisation) of services*** and the ***actors*** involved – especially ***third sector*** as ***service agencies*** in a ***distributed governance*** scenario, and ***intermediate actors*** and/or ***intermediate customers*** where the final step is not online usage of electronic services by citizens (i.e. channels with partial electronic delivery).

Another key point of interest was that of ***value (both material and immaterial benefit)*** and the problem of showing ***return on investment*** (payback from eGovernment exploiting MC opportunities).

In order to unpack an appropriate level of detail for initial our analytic framework, we briefly unpack and elaborate sub-concepts / dimensions within, and relations between the above. This unpacking is limited to that necessary for group orientation, since complete unpacking is the task of the project.

## 3.0 KEY ELEMENTS OF THE ANALYTICAL FRAMEWORK

The following elements are elaborated to ensure common understanding of meaning in support of interviews and case descriptions. It is assumed that cases and interviews will investigate and report on all elements fully as the primary mechanism for development of understanding.

### **eGovernment Services**

These include any and all instances of government services towards citizens and business having significant usage of electronic service components (online) as part of the delivery chain.

Government therefore includes online services used directly by citizens and business, as well as services whereby an intermediary (for example a social intermediary or a tax advisor) is the final link in the electronic part of the service chain, and final delivery is completed offline (for example a face-to-face meeting, product being sent via email or conventional post). We could develop a series of models to describe and understand the various transactional models in more detail.

### **Service Characteristics**

There will be characteristics of services that make them more or less amenable to delivery via multi-channels. Such characteristics may derive from the services themselves or, in a given case, from user or environmental considerations. Whatever the case, the determinants of channel selection are of interest to the study and to case recipients.

### **Inclusive eGovernment**

The development of Government services towards electronic (the 'reinventing' government scenarios) and online (the 'transformational' government scenarios) wherever practical was initially met with discussion of 'exclusion' at a time when services were very much pilots or pathfinder developments.

Digital 'exclusion' is a term still applied by those concerned that some customers will be excluded from accessing services with the same ease as 'abled' customers, and who argue that inclusiveness must depend on who is involved in the design of the service from an early stage – those who's value chain is the reference – and we can link back to work in the cceGov project about how do we can 'know' what people would prefer.

Citizens not using electronic channels, or not using them easily, include those who through preference avoid electronic interaction (the will not use electronic channel users), or who through sensory or physical limitations have problems (they cannot readily use electronic channel users). The former group need to be considered as candidates for non-electronic delivery to the point of consumption, but can be served via a service chain which benefits from eServices right up to that point – for example mediated service delivery.

The latter group can be dealt with in the same way, but can also be facilitated in direct access by careful service design (for example according to Web Accessibility Standards), by provision of sensitive and multi-modal interfaces (allowing users to select their interface of choice), and by provision of user customisation (for example the delivery of data in formats suited to non-standard browsers, screen readers, text to speech).

These measures employed by groups such as 'disabled users' are designed under initiatives dealing with 'access' techniques so as to show methods for 'access for all', and service designers should show adherence to standards coming out of those 'special' initiatives.

### **Service Value Chain and Actors**

For a delivered service there is a clear delivery chain (an operational description of who does what) and a value chain (why the actors do it and what is gained in value). The chain will include government actors, and may also include external partnerships with business and/or the third sector (civil society or voluntary sector). Incomplete electronic service chains are of interest as examples of where electronic access in the final stage (end user) is either not yet working, not suitable, or facing technical and organisational problems.

Potential ways to measure value would include take-up; there are many win-win examples in terms of taxation services of course, but we can also look at the relationship between multi-channel provision and take-up, assuming increased take-up provides value to the deliverer.

Or it may be that the desirable outcome is to shift demand patterns: so we can deal with people worried about minor illness more effectively through UK NHS Direct types of services, and then direct resources to other areas. That should alter or re-focus the value chain without creating new exclusions.

### **Multi-channel Services**

Multi-channel services exploit opportunities to provide easier access to services via multiple channels, including both electronic channels (for example Web, email, SMS, phone) and physical channels (including face-to-face and post).

In common with service oriented architectures (SOAs), which are revolutionising how large scale services are designed and deployed, Multi Channel Service Architectures (MCSAs) will soon be incorporated by organisations requiring synergy and integration of service channels, especially where each customer may be present in multiple channels.

The question here will include exploring the design process and rationale that lies behind the implementation of such systems. Presumably someone decides which channels are provided for which services, assuming there are limitations in terms of practicalities and resources (or competing priorities).

This supports customer satisfaction (choose the right/preferred channel at each instance), as well as customer access (choose channels that customers can deal with). In addition, it supports customer relationship management by facilitating integration about customer behaviour in an appropriate way (case handling, customer history, avoiding of 'multiple personalities' etc.).

We need to be careful to distinguish between satisfaction with the way information is provided about services and the way transactions are dealt with, from the underlying service. We need to look wider to understand the effects on society as a whole.

### **Employed Service Channels**

What is appropriate, what works and why? When mapping channels to services, service users, service agencies (government and external), and actors we could develop a series of transactional models to capture the range of possible types.

### **MC-eService Customers**

(This category may overlap with sectors view – but included since a case or interview may focus actual customers rather than sectors).

Who are the customers – the users of selected channels? What channels match what customers and why? What factors (both supply and demand-side) dictate patterns of use? What is the feedback mechanism that allows iteration towards a better service? So if one channel is underused (do you set target levels initially?), should it be closed and what criteria are there to use in making such judgements (e.g. purely financial or more in line with the public value approach)?

### **Customer Sectors**

Two distinct sectors could be explored – citizens and business, since socially disadvantaged groups can be (for example sheltered employment) active in the labour market and economy. Each has distinct characteristics and will have specific inclusion and MC issues. There may be sub-sectors within each which require special consideration (e.g. poor people, non-IT users, micro-business, etc.). All such sectors which are of interest to eGovernment service providers should be situated in our analysis and cases where possible.

Characteristics of sectors may or may not be determinants of inclusiveness. Where the characteristics of sectors do determine or affect inclusiveness (e.g. health and social services), this should be fully explored and, where possible, illustrated using case studies. Efforts of government to overcome any such effects should be identified. Overcoming exclusions created by the same deliverer is reactive (i.e. eInclusion) not inclusive government. We are interested in:

- Where a new service is provided but which is also more inclusive than what was available before, it serves all users better;
- Where a transformed or extended service is more inclusive than what was available before, it serves all users better;
- Where there is clear evidence of user demand or customer preference informing the innovation;
- Where inclusive eGovernment can contribute towards addressing wider societal, challenges rather than simply provide a better experience for a specific service. So we must consider aggregate or whole-system effects.

**Intermediate Service Customers/Users**

In an extended value chain, especially where external partners are present (commerce and Third Sector), there may be actors in the chain who are customers for part of the service (e.g. 'helping to help' their customers).

**Benefits of Multi Channel Delivery**

What is gained in terms of 'inclusive eGovernment' by using MC as opposed to a single channel? Benefits can be material or immaterial, for example saved time and money, versus improved citizen confidence or reassurance, but benefits must be clearly related to the concepts of MC Inclusive eGovernment.

**Service Sustainability**

The customers for our outputs are the CEC and authorities interested in sustainable MC eGovernment for the benefit of all citizens.

Interests in sustainability issues will therefore be diverse, and will no doubt include financial aspects of sustainability, technology aspects of sustainability, social aspects, etc. We therefore need to recognise that all aspects evident in a case or interview are potentially interesting. We cannot invoke new studies and are operating on 'available' information, so should ensure all available information of potential value is captured and made use of.

## 4.0 OPERATIONAL PERSPECTIVES AND APPROACHES

Some perspectives and approaches that might potentially be useful to the analysis and reporting work are included below. Each can contribute to different tasks in different ways and will be employed as appropriate by different researchers as required (for example interview structures, case study structures, topic maps for analysis and reporting).

### 4.1 *Effects on Primary Factors - Targeted research Questions*

Tasks in the project will explore key questions related to the three dimensions (primary factors) in the study title:

*We seek to understand, and provide evidence of, the extent to which multichannel approaches to public service delivery contribute towards meeting the needs of all citizens, more effectively than ever before, in ways that are economically sustainable.*

One way to do this is by mapping the various concepts and dimensions (identified previously) onto the primary factors, for example:

	Multichannel	Economically sustainable	Inclusive
Customers (demand side)			
Services (supply side)			
Value chains			
Return on Investment			
Other benefits, intangible, social etc.			

The above structure would require at least 15 (5 x 3) key research questions, with sub-questions.

The selection of 5 dimensions on the Y axis is illustrative, and it is clear from the preceding considerations that the potential list is quite large. The selection of relevant terms for this axis will depend on the task in hand (case study, interview, scenario, or Think Paper topic).

To exemplify usage, a case study might look at each dimension and unpack the issues. It would serve as a starting point in illustrating "good practice" (or otherwise), by ensuring that analysis and description satisfactorily cover all three characteristics, or rather the characteristics which we impute through our research (meeting acceptable levels, as defined by users would possibly qualify as evidence of "good practice").

As further illustration, under the "multi-channel" dimension we need to consider how many channels, and whether the set includes a physical channel? The answer is not necessarily that it

should (depends on specific service) but there should be well argued evidence for why the set is appropriate. Here we might consider the typology employed in the cc:egov study, where services were considered in the context of non-emotional and emotional, simple and complex). So for example, where the only remaining physical channel is post, does it matter that you can't carry out that transaction face-to-face?

Under the "economically sustainable" dimension we will explore how that is measured and judged, as well as the different delivery mechanisms available (Public, Public-private or Third Sector).

Under the "inclusive" dimension we identify the issue of targeting groups, as opposed to providing an inclusive service – this allows us to explore the boundaries of what is reasonable and sustainable.

#### **4.2 Interaction of Primary factors**

Further to the above model of effects, we will investigate the interaction of primary factors one with another. Multichannel as a concept may appear to offer greater inclusivity, but it has not yet been fully researched and illustrated as a theme in this way, and so bringing together relevant literature and argumentation may be of value. Similarly, the concept of sustainability may or may not have a meaningful interaction with that of multichannel, beyond the normal considerations and models of eGov service sustainability. These issues have to be clarified as distinct issues not embedded in specific cases (e.g. think papers).

This perspective addresses the more difficult questions, such as:

- “can a service be multi-channel, inclusive, but economically unsustainable”, or
- “can a service be single channel, but inclusive and sustainable” . . .
- . . . .and so on.

#### **4.3 Actors and Actions**

The following grid maps actors and actions

	1	2	3	4	5
Level	Parliament	Ministry	Public administration	Street level/ 3 <sup>rd</sup> sector	End-user
Actor	Politician			Intermediary	Citizen
Action	Produce regulation	Operationalize regulation define benefits	Administer benefits outlined in regulation	Deliver benefits	Consume benefits
Example of action: vocational education	Law on vocational education	Specification of criteria for who is entitled to vocational education	Handling of applications for vocational education	Providing training	Recipient of vocational training

Moore and Flynn (2004) refer to the 'interaction experience' in their presentation of multi-channel interaction. They argue that the interaction experience is made up of a complex blend of technology tools and practices. Levels 3 and 4 in the table demonstrate this view. In particular level 4 is the focus of the MC:eGov work. The level represents the point where types of ICT driven interaction constitute the multi-channel service delivery between government and citizens.

#### **4.4 Channels**

A variety of channel will be present in cases examined. These will include but not be confined to:

- Office and front desk – human to human interaction.
- Paper mail
- Phone: Voice; Touch tone; SMS (text)
- Internet: Information; Interaction; Integration

In the work of the project, we need to elaborate how these channels are utilized to deliver services and in which direction the flow of communication goes. We also need to elaborate this list to ensure completeness.

#### **4.5 Policy relevance**

We need to maintain a strong focus on the CIP – what material does the EC require to allow it to achieve the objectives noted earlier in this paper, for example to raise the profile of and to better support relevant projects (relevance as defined by external actors targeted in this study).

The EC needs:

- A clear definition of what we mean by MC-eGov, illustrated by examples;
- Guidance on identifying and valuing the benefits of a change of paradigm;
- An indication of what sorts of projects the CIP could support - or set of thematic areas that could be considered in a future work programme;
- A coherent case for adopting the principles of MC-eGov – social and economic

## 5.0 SOURCES

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