ISAC6+ Delivering Smarter Administration through innovation - a Benefits Realisation approach to ensuring success.

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1 Abstract

The paper describes how the Project Management discipline of benefits realisation has been applied to an EU funded E-government initiative. It explores the benefits of using this approach, the challenges to be addressed, and suggest a framework for applying the approach to other local and national e-government initiatives. One of the key project objectives is to demonstrate through the pilot that implementation of the iSAC6+ system will provide value for money by delivering the desired benefits both to government office users and citizens.

The approach described here focuses on costs and benefits generated by use of the system. There are staff costs for training, support and operation, technical costs for integrating iSAC6+ in to existing systems and websites, and more significantly organisational costs for designing and implementing new procedures and working practices. Citizens too will incur costs to access and use the service. In iSAC6+ we have created a model of costs and benefits which can be applied in the short term to the pilot, and in the longer term to a much larger number of public organisations. The aim of the Benefits Realisation model is to demonstrate that iSAC6+ is capable of delivering value for money, and thus to justify the investment needed for expanding its use.

Information Technology project success or failure is traditionally judged against objectives set during initial project planning. Enterprises, both public and private sector, have found this approach inadequate because long term costs and benefits do not occur until after the project has completed. Benefits Realisation emerged in the 1990s and developed two roles: a discipline for anticipating and quantifying the expected value of a project in terms of the costs and benefits which will accrue after the project itself is complete; and an over-arching project management philosophy. The paper uses the case study experience to comment upon these two different perspectives. The model developed within the project is based upon the recognised public sector costing formula, the Standard Cost model (SCM) but goes much further by integrating it into a Benefits Realisation tool which creates an audit trail from organisational strategic aims through to detailed cost measures for both quantitative and qualitative incidences.

1.1.1 Keywords

e-government, benefits-realisation, SSM, citizen information services, it projects

2 Introduction

This paper describes how Benefits Realisation concepts and disciplines have been applied within a current, innovative e-government project to support achievement of strategic government objectives and deliver value for money. It is essentially a Case Study, not a research paper. While it does not contain a formal literature review, it does refer to relevant literary sources for purpose of illustration and explanation of key issues.

iSAC6+ is an EU funded initiative aimed at utilising semantic web technology to enhance the provision of advice to Citizens by government offices and public authorities at municipal and national government levels. The value added by iSAC6+ would be in improving the efficiency and effectiveness of Citizen Advisory Services, and in so doing help local government offices carry out

their responsibilities for supporting the needs of citizens at risk of social exclusion or marginalisation. The project's key objectives are:

- To improve the efficiency and capacity of response of local Citizens Advice Services.
- To reduce time, money, stress, administrative burdens and other resources invested by both citizens and companies, especially SMEs, in trying to find information and filling their administrative needs with their local administration.
- To work towards a Single European Information Society for all, by installing a common on-line Citizens' Information and service access in a range of different scenarios and different SAC models across the European Union.

The project team comprised two academic institutions (University de Girona assisted by Sheffield Hallam University), a small number of specialist public and private sector organisations, and six partner public administration organisations who are piloting use of the service. Most partner organisations were municipal governments but there was also one Police Force and a health related NGO.

The paper is broadly structured in three parts:

- Section 1 defines, describes and discusses the concepts, methodologies and practices found under the broad umbrella heading of Benefits Realisation. The discussion, based upon a review of key literature, explore the application Benefits Realisation to IT projects, looking particularly at how they are expected to support successful IT project outcomes. The review includes a discussion issues relating to the use of Benefits Realisation disciplines in public sector IT projects.
- Section 2 describes the case study methodology and how it has been influenced by concepts, practices and tools usually associated with commercial sector projects and organisational initiatives.
- Section describes how concepts, methodologies and techniques were applied to the iSAC6 case study.

The conclusion assesses our experience, makes observations, and makes observations on the applicability of the iSAC6+ approach to other public sector e-government initiatives.

3 Benefits Realisation

3.1 Concept, methodology or technique

In this paper Benefits Realisation is referred to as a set of tools and disciplines rather than a specific methodological approach or procedure but it should be noted that within the world of project management theory and practice the meanings of "Benefits Realisation" are many and varied, ranging from general concepts to procedural toolkits. For example, Breese in a recent paper on the subject ably describes how "Benefits Realisation" has emerged over the last 20 years from being one way of focusing on Return on Investment in IT (ROI) to a position where Benefit Realisation Management (BRM) was seen as the over-arching programme management philosophy (Breese, 2011)

Ashurst, Doherty and Peppard describe research findings which indicate extensive enthusiasm by IS consultants and Business Analysts to claim adoption of Business Realisation as a methodology, while in practice applying it only in a limited or highly customised way. (Ashurst, et al., 2008).

3.2 Benefit and Public Value in e-Government

In general, IT projects are characterized as complex in planning, executing and evaluating, multifaceted due to the variety and typology of intervening parties, often supposing an important volume of investment in terms of effort and financial resources, having the ultimate aim to bring benefits or create value for the implementing organizations.

Despite its relatively young history as a discipline, the field of e-Government is a rich context for Information and Communication Technologies. Different definitions of the concept provided by relevant sources state that e-government is an effective means to create public value for citizens. Public organizations transform their existing services, introduce innovative ones, transform their internal processes, amplify and diversify their channels of service provision, overall improving their efficiency (Karunasena and Deng, 2011). These changes are often a direct result of a previous and premeditated decision on integrating technology in the public service. Information technology (IT), thus, is the underpinning driver of e-government.

In practice, E-government is not just about technology, but it requires change in the processes, attitude, and mind set of the government which is a big challenge (Nasim and Sushil, 2010). However and similarly to the business environment, public administration is pressured towards performance. By nature, its ultimate goal is creating value for the society. This issue is often questioned especially when a considerable input is deployed as it is the case of IT projects. Value definition and benefit realization become a must for the service provider, and satisfaction, trust and value perception are key issues for the user-side of the equation.

IT projects in e-Government are a challenge for both researchers and practitioners. Interest towards the topic has recently accentuated especially in the research community. Specialized sources considered a reference in the field (EGOV, ICEGOV, DGO conferences) and scientific publications (GIQ, TGPPP, IJEGR journals) are a proof in this direction. Although relatively recent in nature, there is a considerable body of knowledge generated around IT impact, performance, benefit realization/management and value generation in e-Government often analysed and described in the framework of organizational change and management, system and institutional approach, the resource-based view. Since different management disciplines are applicable (change management, organizational management, benefit management, technology management, innovation management, project management) and there is a lack of consistent e-government modelling frameworks it is difficult to design and apply a "one size fits all" approach and method for benefit and value evaluation. That might be a possible explanation of the fact that empirical evidences in the field are often qualitative and case study research abounds. (Karunsena, et al., 2011)

The general view is that practitioners in the field of e-government managing IT projects for value generation have a difficult task. Ashurst, Doherty and Peppard reflect on the broadly held opinion that IT projects all too frequently fail either to deliver the expected benefits, or to demonstrate the value of their contribution to their owner organisations and go on to discuss the pressure to create clear value links between IT initiatives and the eventual outcomes of those initiatives. (Ashurst, et al., 2008)

Project management disciplines, including Benefits Realisation, are widely accepted as having been more successfully applied in the business environment than has been the case in the public sector (see for example (Stephen, et al., 2010) (Juell-Skielse & Perjons, n.d.). Furthermore, value and benefit are related to measurement and evaluation tasks. Service evaluation aspects have not been until recently on the top priority lists of public administration services since their monopolistic nature and political influence made it different from traditional services. However since the continuous call for business concepts application to the government sector as well as high interest for pay off aspects of technology this trend seems to be changing.

An additional item contributes to the topic's complexity. According to Viklund (2008) there is a lack of common definitions regarding benefits and value in existing literature and the meaning of the terms is assumed to be implicitly understood. This author uses Bannister's (2001) definition to show the difference: *value* is what we perceive, while *benefit* is what we receive. In other words, *benefits* can be thought of as an *operationalization of the value construct*.

Thorp (1998) stated "If you can't measure it, you can't manage it" meaning that measurement is the key organizations should deploy efforts in quantifying the *value for effort* binom even being a task recognized as difficult in nature. According to the same author several criteria should be taken into account when designing effective measurement systems. These are: make sure measures exist, measure the right things, measure things the right way and make sure measurement systems guide decisions and actions. Existing models offer a starting point. Still researchers and practitioners face a series of practical challenges when willing to apply them for concrete purposes in different contexts.

4 The Case Study Methodology

4.1 Aims

As described earlier the core objectives for iSAC6+ are to deliver an innovative e-government support tool. The characteristics and context are illustrated in Figure 1.

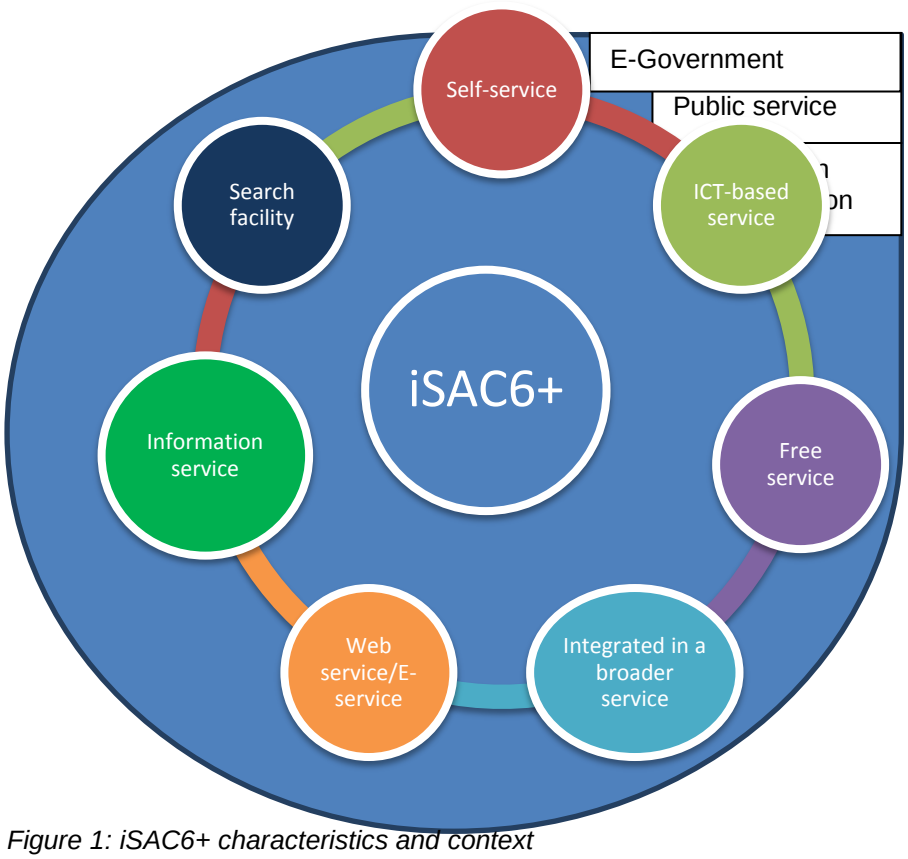

Figure 1: iSAC6+ characteristics and context

The aim of this service is to reduce the administrative burden upon both citizens and government. Consequently there is a project objective to establish a mechanism for assessing the cost impact, in effect, a Benefits Realisation programme. To this end, one of the project Work Packages has the responsibility for establishing measurement and monitoring regimes for costs, benefits and quality of the service. The output from the workpackage was a model or instrument which will:

- identify expected costs and desired benefits
- place a measurable value on those costs and benefits
- monitor and assess the actual costs and benefits accruing during the life of the project
- provide project and organisation management with information about progress towards meeting strategic objectives.

The task was to establish a Benefits Realisation mechanism capable of demonstrating that the iSAC6+ service was delivering real, quantifiable value to users and clients, that is, government offices and citizens using them. Traditionally the approach in public sector projects would have been to include some form of business justification in the original project proposal, possibly with quantified estimates in the form of an Investment Appraisal. Benefits Realisation, the process of monitoring actual costs and benefits with the aim of ensuring the project actually delivered value, would not have been included as a project activity. In this case it was, but only as an aim with no supporting methods or data collection models.

Responsibility for delivering the Business Realisation model lay primarily with a small team from the University of Girona (UdG) and Sheffield Hallam University (SHU). The role of this team was to work with representatives from each of the partner organisations. As a result the core team was able to utilise a range of high quality business management knowledge and skills.

4.2 Principles and Methodology

The UdG/SHU team did not arrive with a clear understanding of the approach needed to achieve the desired results. While they started with a clear set of objectives, they had a blank sheet of paper as far as methodology and approach were concerned. In this situation it was important to establish a set of guiding principles together with a core methodological approach appropriate to the task, understood by all participants, and capable of re-use beyond the project including transference to other e-government initiatives. The core principle were:

- to use proven, recognised and complementary tools and approaches rather than attempt devising iSAC6 specific methods. The tools described below come from, or are derived from good administrative and business practice. It was in putting together the methodology that the team recognised the parallels with benefits realisation practice. That this was a benefits realisation programme was acknowledged rather than planned. This is very much in line with the findings of the previously mentioned research (Ashurst, et al., 2008) which observed a clear distinction between the comprehensive Business Realisation toolkit descried in management theory and the ad hoc adaptation seen in real world practice;
- to build a model based upon an holistic view of the service, looking at the impact on all stakeholders and, as far as was practical, including all costs and benefits;
- to work within each partner's existing information and data collection procedures. This was partly to avoid creating new work, but also in acknowledgement of the fact that the value of using iSAC6+ should be evident in the wider organisational performance, not from measures specific to the project

The philosophy underpinning the choice of methodologies was systems theory, and in particular Soft Systems Methodology (SSM) which provided the approach and tools for developing a shared understanding of the project purpose and strategic aims. A good description of the various aspects of Systems Theory can be found in "Systems Thing, Systems Practice" by Peter Checkland in which he describes Soft System Theory as "a systems based methodology for tackling real world problems in which known-to-be-desirable ends cannot be taken as a given) (Checkland, 1993). The key elements of SSM are that it takes an holistic view of a real world situation, and this view takes into account the subjective perspectives of actors within the situation or system. Using an approach based upon SSM was particular valuable in the early stages of the work when there was both a lack of clarity and ambiguity about the purpose and objectives of the iSAC6+ service. With these principles in mind, the team decided upon developing an instrument with three core roles:

Value Measurement - a basic formula for deriving costs and benefits using the Standard Cost Model.

Strategic Performance Indicators – targets, performance information and core data a Base Data spreadsheet model.

Project Performance Monitors – a mechanism based upon the Balanced Scorecard using the same base data to monitor project progress towards delivering desired benefits.

4.2.1 The Standard Cost Model

The Standard Cost Model (SCM) was launched in March 2007 by the EU Commission as part of its Better Regulation Strategy. The purpose of the Standard Cost Model was, and continues to be, to provide a common cost assessment tool which would support the Action Programme objective which:

"aimed at measuring administrative costs, identifying and reducing administrative burdens, without undermining the underlying objective of the legislations" (Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Region, 2007)

The Standard Cost Model provides a standard formula which can be applied against any proposed policy change or legislation to assess the administrative cost or burden. The core formula as described in the Impact Assessment Guidelines (EU Commission, 2009) is:

Cost = P x Q

where **P** (for Price) = Tariff x Time and

Q (for Quantity) = Number of businesses x Frequency)

For the purposes of the iSAC6+ the formula has been stated as:

Cost = Price x time x quantity

Table 1:Standard Cost Model

The primary objective of the standard cost model is to quantify costs in whatever form they take. In iSAC6 the proposal is to use the model in a more comprehensive way to assess the value of positive

impacts as well as negative ones. In practice this means that the model will measure benefits as well as costs. The content and operation of the model is described below, but to summarise, it will enable project partners to identify where benefits accrue from using iSAC6, and to quantify those benefits alongside costs.

The SCM was used throughout, appropriately adapted and developed to include a range of factors and measures which include qualitative and beneficial impacts as well as monetary costs. In this way it was hoped the resulting instrument would be capable of producing a balance sheet for the project, similar in concept to a Benefits Realisation appraisal See figure 3 below.

5 Applying the Methodology

5.1 Approach

The diversity of the partner organisations meant that there was a multiplicity of business aims and objectives generating requirements for an equally diverse range of measurement and monitoring indicators. It was imperative to engage with partners in a way which would enable each to safeguard the aims and expectations of their respective organisations, while at the same time working together to develop a shared model and to identify common data needs. The choice of SSM as a consultancy discipline was made because it had a successful track record of being used in large, complex public sector environments (Wilson, 2001) (Checkland & Scholes, 1991).

The process consisted of three phases as illustrated in figure 2 below.

Phase 1 - establishing strategic objectives and drivers for each partner organisation

Phase 2 - identifying and defining data requirements

Phase 3 - mapping data on to an SCM based model

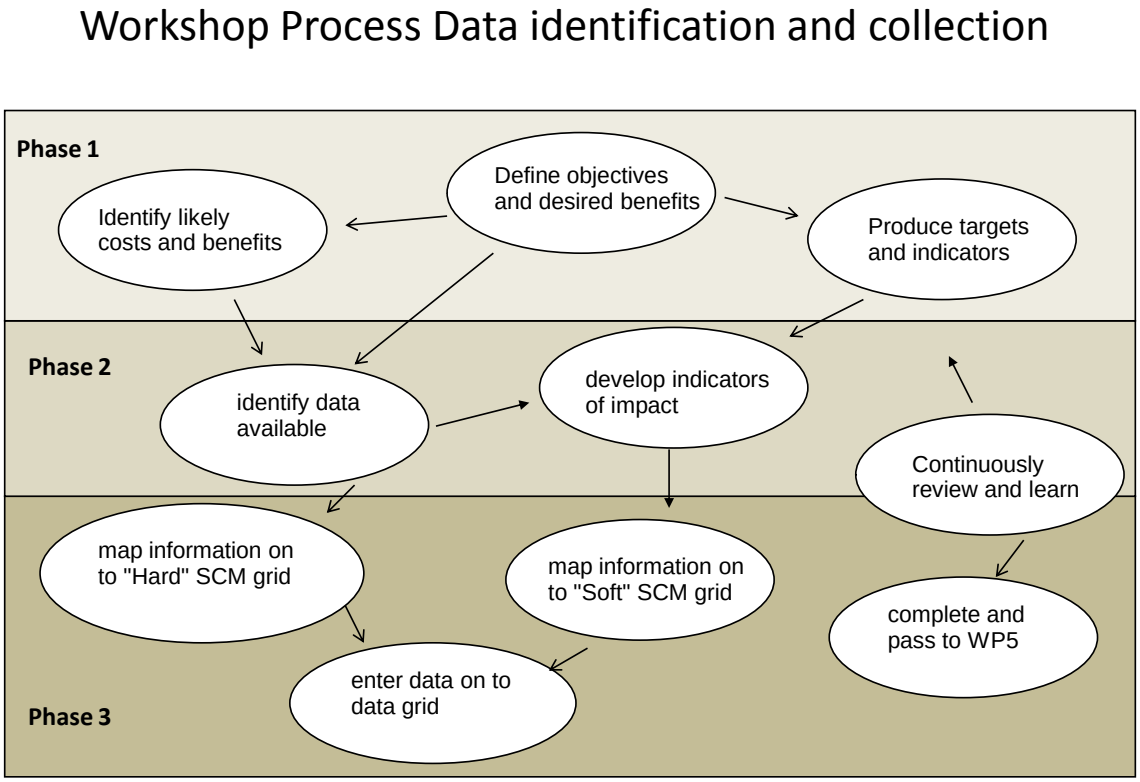

Figure 2: iSAC6+ Data identification process

It was of paramount importance that the core team engage fully with the partner practitioners, not only to ensure the accuracy and value of the end result, but also to enable us to fully utilise the skills and

knowledge referred to earlier. The approach, in good management consultancy fashion, was workshop based, supplemented by face to face meetings. The practice was to present participants with a logical series on questions, the answers to which would deconstruct high level, strategic aims and expectations down to their base data components. The value of this approach was that it enabled partners to express their individual position, while leading them to a position where they could identify common data needs.

Examples of the questions featuring in the workshops are:

Questions	**Response**
why did your organisation decide to participate in iSAC6?	Strategic Aim
what did they hope to achieve as a result: for citizens, organisations, administrations?	Strategic Objectives
what were the cost and benefit consequences of achieving these objectives?	Impact
how would they judge the success or failure of their organisation's participation?	Critical Success Factors
what information would be required to measure and monitor success or failure?	Indicators

Table 2:Phase 1 Questions

Questions	**Response**
what data was required to generate the information?	Data
what was the source of the required information?	Data source

Table 3:Phase 2 Question

Responses were structured into a model which effectively provided an audit trail from strategic aims through to the incidences where costs or benefits were accrued. The process for turning the information collected into quantified costs and benefits was as follows:

- identifying and describing processes with potential iSAC6+ interventions.
- recording SCM related data on costs and benefits for citizens and public services within these processes;
- describing "soft", qualitative costs and benefits Where possible partners suggested where indicative measures could be used to generate a quantitative value.

The result was the Baseline data model. The table below itemises and describes the individual components in their logical sequence.

Title	**Description**	**Data**
Strategic Aim	Policy level expectations of benefits to be gained from iSAC6+	Text description e.g. Reduce staff costs
Strategic Objectives	Measurable outcomes supporting the strategic objective	Text description
Critical Success Factors	Achievement target for each Specific Objective	Quantitative (number, percentage, time etc)
Indicators	Indicators of performance against CSFs	Quantitative Indicator
Data	Primary data to construct indicators	Quantitative

Data source	Origin and nature of data e.g. survey, total population, actual, sample, estimate	Text

Table 4:Phase 3 Baseline Data model

To make the model workable measures were structured and clustered in two ways. At the highest level the data is split into two sections to reflect the basic nature of the measures, quantitative and qualitative. Directly measurable costs comprised clearly defined capable of being represented in terms of quantifiable cost. Indirectly measurable costs, derived from qualitative objectives and indicators are difficult to cost in precise quantitative terms. They are nonetheless significant project outcomes which can be given a cost value through a process of analysis, research and estimation, in line with the European Commission Impact Assessment Guidelines (European Commission, 2009).

Data is then further sub-divided into three clusters each, namely Costs to Citizens, to Businesses and to Administrations.

The basic SCM formula is applied throughout the model, though it may be found to be difficult to apply it fully to some qualitative measures. Costs are straightforward, and benefits are shown as negative costs. This is will enable the project to show a bottom line figure which reflects the true burden and benefit for the citizen of using iSAC6. The model, once populated, will be a working tool which will now be used for gathering data as Partners implement iSAC6 into their organisational processes.

The intention was to monitor progress towards achieving benefits using a Balanced Scorecard. The Balanced Scorecard is an organisational analysis framework widely used to present an holistic view of performance and progress towards achieving core strategic objectives. In the event this was not possible because its design and use was dependent upon an understanding of strategic measures and data which did not yet exist.

Data collection grid (SCM & MSC models)

Cluster / Activity Area (4)	Strategic Outcomes (5)	Specific objectives (6)	Critical success factors (%) (7)	Indicators (8)	Information source (9)	Activity Standard Costs (10)	Price	Time	Quant	Final cost	Improvement rating %
Citizens (users) (1)											
Business (users) (1)											
Admin (provider) (2)											
Social impact (3)											

1. Impact on Citizens / business = Cost of burden to citizens / business
2. Internal impact = impact on the organization - Sustainability and efficiency
3. Social impact …. ……..Identification is a goal in iSAC6+ . Measurement s to be done qualitatively
4. Area of activity: citizen, Administration and Employees (that can be also include in Administration)
5. Strategic Outcomes = expected benefits - describes the benefits we expect for a set of actions
6. Specific objectives = result - describes any specific result we expect to reach by implementing iSAC in the specific sites
7. Critical success factors – criteria we want to achieve to meet strategic objectives (Expected improvement - %)
8. Indicators – describe one or more measurable indicators for each result
9. Source - where we gather information from
10. Activity Standard Costs – indicate the cost parameters for each outcome (cost per hour of employee, cost citizen's trip, …)

Figure 3: Baseline Data Model Spreadsheet

5.2 Issues and Challenges

5.2.1 The Standard Cost Model

The SCM was developed to assess the potential cost impact of proposed new legislation and changes in policy requirements upon organisations and businesses, and to a lesser extent to citizens. From this point it has been further developed as a tool to assist in measuring the cost burden on citizens. It is essentially a quantitative tool. It does not easily accommodate qualitative impacts on less tangible aspects such as quality of life, satisfaction, or social cohesion.

There were also difficulties applying the SCM to positive factors such as service improvement or enhanced economic opportunity. The most recent addition to the Impact Assessment Guidelines provides guidance on assessing and measuring Social Impact, for example the impact on health or social cohesion. Essentially the guidance suggests ways in which impact can be "monetarised", but does not promote any single methodology.

Finally, the Standard Cost Model is primarily focused upon the impact of legislation and policy changes on business organisations. The impact upon individual citizens is included but the guidance is minimal, though increasing. The challenge for iSAC6+ was that the data collection model needed to indicate and measure costs on citizens in situations where costs may not have been clearly defined or even identified. Furthermore, the hoped for impact of iSAC6+ is that individual citizens and service providers are recipients of positive benefits rather than costs.

6 Observations and Conclusions

6.1 Evaluation

In our view, one of the achievements of the present project is that it has ***created awareness on the importance of monitoring and measuring***. Partners showed different degrees of involvement in the measurement process and different degrees of maturity and previous experience in general service monitoring. Although having managed previous IT projects none of the partners has a universal and/or unique project management method. Assessment and measurement issues often remain uncovered and do not have the same weight (in importance, dedication, time, etc.) as previous stages such as planning and execution.

Experts often call for the adaptation of general benefit measurement tools to specific circumstances. This process has obvious positive outcomes, but is not lacking difficulties especially when wanting to draw general conclusions.

Since IT is about transformation, time becomes a key player. Multi partner projects often lack of homogeneity in the different steps of the project they are facing. This is an additional feature that adds to the complexity of the measurement topic.

6.2 Successes and difficulties

The decision to adopt a broad philosophical basis on which to develop methods and approaches proved valuable. Most partners were unfamiliar with Soft Systems thinking but this proved not to be a problem. It was clearly the right choice for the situation in that it recognised the variety of contexts and perspectives present in the project, and in so doing provided an approach which enabled the team to develop shared solutions. This was important because finding a balance between individual and project objectives was difficult. There was a wide variance in the typology of partner, cultural context, initial service situation, objective of joining the project, to mention just a few.

The choice of SSM generated two other areas of success as well as providing a useful set of consultancy tools. The first area was the focus on strategic aims which helped us avoid becoming immersed in the detail of the data model. The second was the participative, action research nature of the method which encouraged partner engagement and contribution of knowledge.

The IT solution under analysis was not fully developed when the project started. Partners had difficulties in understanding the ultimate outcome of the project. However, the stress placed upon identifying and measuring benefits helped overcome uncertainty and confusion over what was expected from involvement in the project.

6.3 Concluding remarks

The failure to integrate the work on benefits measurement into the overall project management through a Balanced Scorecard raises fundamental questions about the choice and application of project management methods to publicly funded IT projects, bearing in mind the oft quoted high rate of failure to deliver expected benefits.

Our approach to applying BRM was not in line with the classic methodology, reflecting the findings in the literature review. It has not been able to apply BRM as a Project Management discipline because of the nature of the project. This might indicates that BRM needs to be built in to the project structure from the beginning if it is to be used in this way. On the other hand it raises the question of whether Benefits Realisation is a management methodology or a less grandiose but equally useful measurement regime.

Finally, it is our belief that the approach used in iSAC6 is suitable for, and transferable to other e-government initiatives especially when they exist in varied business processes where their primary purpose and desired benefits become obscured by the fog of complex implementation

Bibliography

Ashurst, C., Doherty, N. F. & Peppard, J., 2008. Improving the impact of IT development projects: the benefits realization capability model. *European Journal of Information Systems,* Volume 17, p. 352–370.

Breese, R., 2011. Benefits realisation management: Panacea or false dawn?. *International Journal of Project Management,* Volume doi:10.1016/.

Checkland, P., 1993. *Systems Thinking, Systems Practice.* s.l.:Wiley.

Checkland, P. & Scholes, J., 1991. *Soft Systems Methodology in Practice.* s.l.:Wiley.

Chircu, A. M. & Lee, D. H. D., 2005. E-government: key success factors for value discovery and realisation. *Electronic Government,* 2(1).

Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Region, 2007. *Action Programme for Reducing Administrative Burdens in the European Union,* s.l.: s.n.

EU Commission, 2009. *Impact Assessment Guidelines,* s.l.: s.n.

European Commission, 2009. *Guidance for assessing Social Impacts within the Commission Impact,* s.l.: European Commission.

Guclu, A. N. & Bilgen, S., n.d. Process Based Public Value and Effectiveness of Government Information Systems.

Juell-Skielse, G. & Perjons, E., n.d. New Challenges for e-Govemment: Value Realisation among independent actors.

Karunsena, K., Singh, M. & Deng, H., 2011. Measuring the public value ofe-government: a case study from Sri Lanka. *Transforming Government:People, Processses and Policy,* 5(1), pp. 81-99.

Kezar, A., 2001. *Understanding and Facilitating organisational Change in the 21st Century,* Washington: Wiley.

Mattheis, T., Loos, L., Schmidt, D. & Wimmer, M., 2009. Requirements Based evaluation of e-goverment. *International Journal of Electronic Government Research,* 5(3), pp. 47-61.

Stephen, J. et al., 2010. *Fatal Error:fixing the flaws in government IT,* London: Institute for Government.

Ward, J. & Daniel, E., 2006. *Benefits Management: Deliveering Values from IT Investments.* s.l.:Wiley.

Wilson, B., 2001. *Soft System Methodology: Conceptual Model Building and its Contribution.* s.l.:Wiley.