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BENEFITS REALISATION MANAGEMENT

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FOREWORD

ICT investments present a number of unique challenges to governments. They tend to be large-scale investments involving rapidly changing technologies and business processes. ICT investments often require co-operation between ICT units and business process owners within governments. Finally, ICT investments are increasingly required to support cross-cutting and shared services delivered by multiple agencies within government. Consequently, ICT investments tend to have low rate of return on investment and a high rate of failure.

As part of an overall trend towards improving performance, OECD countries have increasingly turned to business cases to justify ICT investments and to the development of benefits realisation methodologies to ensure that planned benefits ensue.

This report looks at two issues. The first is how countries are meeting the challenge of appraising, monitoring and evaluating ICT enabled investments by adapting existing cost and benefit analysis methodologies and incorporating them into the process of ICT project development and management. The second issue is making sure that projected benefits are realized from ICT investments and business process changes.

The analytical framework for the report is based on the OECD publications *The e-Government Imperative* (2003) and *e-Government for Better Government* (2005). The report was carried out under the auspices of the OECD Network of Senior E-Government Officials, as part of the work Programme of the Public Governance and Territorial Development Directorate (GOV). The work was first begun with an expert group meeting hosted by the UK Government in London on 17 September 2004, which resulted in the chapter, "The Business Case for E-Government in the report *e-Government for Better Government*, and followed-up by a second expert group meeting in Paris on 6 February 2006. A first draft of this report was discussed by the OECD Network of Senior E-Government Officials on 26-27 October 2006. The work on the cost and benefit analysis of e-government has been made possible through voluntary contributions from the Czech Republic, Ireland, Japan, Korea, Mexico, and Switzerland.

Under the leadership of Edwin Lau and Christian Vergez, the report was written by Ernst Nilsson and Jude Hanan. Professor Paul Foley served as a consultant to the project.

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SUMMARY

This report addresses several important issues: (1) why large ICT projects have such a low success rate in delivering on original ICT project goals (*e.g.* on time, on scope, within budget) and expected value (*e.g.* the contribution to organisational goals) and how to increase the success rates and value of projects; (2) the use of cost and benefit methodologies in OECD countries as a response to the pressure for greater value delivery; and (3) country examples of approaches to benefits realisation management by better incorporating cost and benefit methodologies into project management.

Along the way, the report argues that while benefits realisation management methods and plans are designed to improve the success rates of ICT projects, the jury is still out because the data on the impact of benefits realisation methodologies is not yet available.

Those countries that are currently undertaking benefits management initiatives[1] believe that these efforts will increase ICT project value and success by increasing accountability, improving project management and focus, and providing clearer, more standard measures and metrics. Results data is only beginning to trickle in, however, and countries are wary of sharing it because of the potential incentives that it may have on projects adopting these methodologies.

Why benefits realisation management?

Benefits realisation is, for the moment, still a relatively new response to a newly-identified issue, even if the toolkit of cost and benefit methodologies used have been around for a long time. As late as the year 2000, in an effort to appear modern, most OECD countries were still rushing to commit to putting all services online without regard to the cost or benefit of such initiatives. For many of these countries, 2005 was the year when this promise would be met. One of the results of the large amounts invested in support of these goals, however, was a number of high-profile ICT project failures. In other cases, countries put their services successfully online, only to find very few users and therefore little to no value generated. In many cases, these projects were supported by *ex ante* business cases though once the investment was approved there was not always follow-up as to whether or not the project lived up to expectations.

Information Communication Technology (ICT) is the third largest expenditure category in the public sector after salaries and rent, amounting to 7% of total government consumption expenditures in the EU15 and EU25[2]. Increasingly governments are asking if expenditures on ICT and e-government initiatives are providing an *adequate rate of return on investment*. Answering this question is difficult as data on costs and benefits of ICT-enabled investments are difficult to come by and there are no standard methodologies agreed upon that would facilitate comparisons across projects and countries.

[1] Of the 18 countries responding to the OECD benefits realisation survey in 2006, the following reported having formal guidelines for benefits realisation: Australia, Canada, Denmark, Mexico, New Zealand, Sweden, United Kingdom and the United States.

[2] eGovernment Unit, European Commission (2006) *eGovernment Economics Project (eGEP) Expenditure Study*.

A partial answer can be arrived at by determining how large a share of ICT-enabled initiatives deliver projects on time, on scope and within budget, and by measuring how well they achieve projected benefits. Data from both the public and the private sector seem to indicate that 30-40% of ICT enabled initiatives are delivered on time, on scope and within budget. Data from Australia on achieved benefit/cost ratios central government indicates that rates of return on ICT investments often are low or negative.

Much has been written on how the realised benefit to cost ratio or rate of return on investment (ROI) of large ICT-enabled projects can be increased. The most radical recommendation is to make projects smaller and provide results in a shorter time period by breaking initiatives into smaller projects.[3] This reduces the complexity of the project, but more importantly, allows organisations to learn what technology can do, what project objectives should be and what changes are needed in the organisation in order to generate higher returns. A second recommendation is to select ICT-enabled projects that have a high financial return on investment to government as well as providing large benefits to users. This usually requires projects that are user-focused along with business process re-engineering and carries a greater potential risk of failure. This increased risk therefore needs to be managed through improved management techniques. A third recommendation is to develop management processes that will ensure the production and harvesting of benefits from ICT enabled investments. These new management techniques are sometimes referred to as *benefits realisation management methods* and include:

- Improving systems for collecting data on costs and benefits.
- Developing projects with a high rate of return (e.g. through business re-engineering, shared data and services).
- Improving management methods for selecting, monitoring and evaluating projects
- Replacing sequential ICT project management with an incremental, iterative approach where large, multi-year projects are broken down into smaller projects that are carried out iteratively.
- Making the business owner (*i.e.* programme manager), not the ICT department, accountable for realising an adequate rate of return on investment.
- Continued investment in personnel, organisational and process changes building on the new capability provided by the ICT investment.

Taken together, these efforts are part of a benefits realisation management approach which seeks to actively incorporate cost and benefit analyses into the project management process. Benefits realisation management is the process of realising planned outcomes by selecting projects that link to strategic business objectives and have a high benefit/cost ration, monitoring costs, outputs and outcomes, and evaluating actual results. This review of OECD country experiences with benefits realisation methods documents some promising approaches to improving returns on investment in ICT enabled initiatives.

Lesson learned from benefits realisation initiatives

A detailed study of responses to an OECD questionnaire made in April 2006 indicates that United Kingdom, Australia, Canada, and the United States seem to have made the most progress in developing comprehensive benefits realisation management methods to ensure that benefits are considered *ex ante* as part of investment decisions, applied *during* project implementation (in terms of realising an outcome or benefits realisation plan), and then used to assess delivered benefits *after* the end of the project. However, all respondent countries are grappling with the issues of developing management methods for ensuring that ICT investments will deliver an appropriate level of benefits to government, to users and to other stakeholders.

[2] *The Hidden Risk to E-Government*, OECD Policy Brief, 2002.

Many methodologies are used for benefits management by central authorities for analysis of large ICT projects. Most studies use more than one method – usually at different review stages – and governments in several countries provide guidelines or toolkits to support the use of a range of methods that might be appropriate for projects. The standardisation of these methods through guidance and toolkits – whether mandatory or voluntary – is not only helping project managers who are still struggling with how to develop business cases, but are also providing them with the frameworks and tools to collect data that will be comparable across projects and across sectors. This, in turn, allows policymakers to make better informed, evidence-based decisions about whether to proceed with, modify or terminate projects.

Survey responses sent to the OECD from 18 of 30 countries[4] showed that while at least half of OECD countries are engaged in cost and benefit analysis activities for ICT projects, only a few can be said to be combining these analyses in a benefits realisation management framework. Responses to the OECD surveys indicate that:

- Eighty percent of the respondents reported that they require *ex ante* cost/benefit analysis before deciding on a major ICT investment.

- Many respondents are moving towards providing guidelines and toolkits to encourage more standardised use of indicators and benefits realisation methodologies.[5]

- Project cost/benefit studies mainly use a few relevant indicators of costs and benefits that do not give a complete picture of major costs and benefits: studies tend to primarily consider costs and financial benefits to government in appraising projects and less often non-financial benefits to government or costs and benefits to users.

- Benefits realisation efforts can be both mandatory or voluntary: 8 respondents provide formal guidelines for benefits realisation, but only 5 require a benefits realisation plan.

- The greatest reported challenge to implementing a benefits realisation approach is the cultural change necessary

For the moment, benefits realisation is still at an early stage and is focusing on changing the mindset of ICT project managers to move from a focus on achieving deliverables to achieving overall outcomes. Crucial to these changes is the ownership of ICT projects by business process owners in order to completely integrate ICT projects with overall business objectives. There is evidence in the countries that have begun benefits realisation initiatives that a mind shift is occurring, but it is slow and not without resistance. Managing against outcomes is more difficult and riskier than a traditional output-oriented approach. Making business and ICT project owners work together to deliver common outcomes means that different cultures, mindsets and technical frameworks have to be accommodated and traditional boundaries defined by technical specialty have to be eliminated. Countries considering implementing a benefits realisation initiative should also take into account whether an existing culture of cost and benefit analysis exists and if not, how one can be developed. Benefits realisation initiatives cannot succeed without an understanding of outcome and performance management approaches and accountability structures that build in incentives for contributing to overall outcomes rather than just programme deliverables.

[4] See also Table 4 and Appendix D.

[5] 13/18 provide formal guidelines for cost/benefit analysis; 10/18 provide formal procedures for monitoring large projects; 8/18 provide formal guidelines for benefits realisation.

Finally, a cultural shift towards greater transparency is needed in terms of publicising the results of benefits realisation initiatives. While initiatives are geared towards responding to a number of existing problems (*e.g*. ICT project failure and low rates of return), there is not yet evidence to prove the impact of this approach. The standardisation of measures should ultimately enable better government-wide and longitudinal data by providing a common set of analytical tools and indicators. Countries will have to first make this data available in order to figure out what works. Such a comparison of information across OECD countries would benefit e-government projects, and the resulting outcomes, at all levels of government.

Next steps

The OECD can contribute to an improved understanding of whether or not benefits realisation management initiatives actually work by doing analysis in three areas: 1) achieving a broader consensus on what is an e-government cost; 2) analysing how benefits realisation methodologies can be applied to shared services; and 3) collecting and comparing information from benefits realisation analyses on different rates of return for different types of e-government projects (*i.e.* automating processes, re-engineering processes, and sharing processes).

INTRODUCTION. CONTEXT FOR BENEFITS REALISATION MANAGEMENT

The year 2006 represents a watershed for e-government activity in many OECD member countries. Several countries have achieved long-standing goals to provide a high proportion of government services online by 2005. New – often more sophisticated – goals are now being established responding to demands that public services should be made "better, more cost effective and more accessible" (CEC, 2005, page 9).

Policy makers are increasingly focusing on how ICT can be used to achieve efficiency savings or increase effectiveness (Cabinet Office, 2005; Office of Management and Budget, 2006; Treasury Board of Canada, 2003). In several countries the term *e-government* has become a little passé and is being replaced by *ICT-enabled government* or *joined-up government*. The growing emphasis on efficiency in many countries requires a more sophisticated approach in establishing goals, monitoring performance and realising benefits. The development of appropriate management techniques to select projects, control costs and deliver results has become more important.

Many countries have made considerable investments in ICT equipment and infrastructure, and in digital services. At the same time, policy makers face a growing realisation that big ICT projects very often fail and seldom produce promised benefits; this has lead to increased used of *ex ante* and *ex post* examinations of the costs and benefits of e-government.

ICT-enabled projects need to be managed by a programme manager or business owner. The greater complexity of e-government projects is a consequence of the changing nature of the use of ICT in government. In the 1960s and 1970s ICT projects were mainly used to update technology and automate processes: clearly functions and processes owned by ICT departments. However, as ICT technologies enable governments to change what they do and how they do it (*i.e.* changing procedures, processes, and programmes and further involving users in retrieving information and using e-services), the ownership of the project or investment clearly belongs with the business manager rather than the ICT department manager. It is the business manager who is responsible for making sure that transformation will contribute to the organisation's strategic goals, and that users and the organisation will benefit from the investment.

The shifting emphasis from delivering ICT projects to producing large user benefits through increased user-focus and process re-engineering, necessitates more formal procedures to manage change and the production of benefits. *Benefits realisation management* is a collective name for formal management processes developed to ensure a higher success rate and rate of return for ICT-enabled investments.

Benefits realisation management is the process of realising planned outcomes by selecting projects that link to strategic business objectives and have a high benefit/cost ratio, monitoring costs, outputs and outcomes, and evaluating actual results.

An OECD study of e-government evaluation studies undertaken in 2004 (Foley and Ghani, 2004) found that most countries focused on measuring impacts and benefits. Comparing this study with the survey conducted for this project shows what has happened in the intervening two years. In many countries, studies that were previously undertaken on an *ad hoc* basis have been refined to ensure that similar methodologies are applied for each evaluation. Most notably, there has been a growing emphasis on ensuring that benefits established at the start of projects are achieved or exceeded when projects are completed, replacing simple efforts to monitor impacts.

Benefits realisation studies can be undertaken for a variety of reasons. At the *strategic* level, many policy makers aim to better understand the costs and benefits of ICT and its ability to improve policy making and help them better allocate resources. At the *operational* level, there is a desire to improve the uptake, usability, effectiveness, efficiency and benefits provided by projects. This study found four key objectives for most benefits realisation studies:

- ***Improve selection of ICT investments*** through the use of cost/benefit analysis.
- ***Improve project management*** and delivery of results through the use of benefits realisation plans and benefits realisation studies as feedback tools. This will help government manage risks and determine if intervention is necessary to ensure or enhance benefits.
- ***Facilitate accountability*** by providing information about the performance of government.
- ***Enhance policy-making*** design and development. Enabling the design and delivery of more effective policies and programmes.

Box 1. Benefits of Taking a Benefits Realisation Approach

- Sharpens focus on outcomes (results) – how they are articulated, the strategy for achieving them, and accountability. Avoids trap of measuring activities as a surrogate for outcomes.
- Focuses on how to achieve benefits.
- Identifies benefits to different stakeholders in order to better allocate costs, i.e. the: "reap versus sow" dilemma – how to ensure that those who benefit from an investment also help to pay for that investment.
- Supports policy agenda, i.e. identifying common business processes in the US through an enterprise architecture; reducing administrative burden in the Netherlands.
- Supports an enterprise approach to transformation.
- Captures important benefits that may otherwise be overlooked.
- Tests assumptions: -- the obligation to evaluate benefits pushes projects to test underlying assumptions in business cases.
- Serves as a management tool, i.e. incorporating lessons learned back into the project to achieve benefits.
- Focuses on how to achieve benefits.

Benefits realisation studies often assess the benefits at three different stages of an ICT or e-government project: project selection, monitoring and evaluation. The first stage consists of the creation of a business case to justify the project. The business case will usually set out clear goals, objectives, risks and resource requirements for a project and estimate the value of the project. The business case can be complemented with a benefits realisation plan that lays out how benefits will actually be realised, i.e. what steps will be taken to change processes and programmes, train personnel, and encourage users to take advantage of new capabilities. A second stage monitors costs and the benefits realisation plan during project implementation. A third stage occurs after the completion of the project and evaluates whether planned benefits and costs have been realised.

CHAPTER 1. IMPROVING THE LOW SUCCESS RATE OF ICT-ENABLED INVESTMENTS

Two major indicators can be used to determine if a technology-enabled project is a success. The first indicator concerns success in *delivering the technological (ICT) component of the development project on time, within budget, and within scope*. The second indicator refers to success in delivering *the promised project benefits* and is measured in terms of a project's contribution to the business objectives of the organisation, achieving planned benefits to the organisation and to users, and delivering an adequate benefit/cost ratio.

The classic studies of ICT project failure rates (the first measure) have been carried out in the private sector by the Standish group (Standish, 1995). This group surveyed failure rates and reasons for failure every two years since 1994. Projects that came in on time, on budget and within scope were judged to be successful. Projects that were cancelled before completion or never implemented were judged to have failed. Projects that were completed and operational but over budget and over the time estimate, and offer fewer features and functions than originally specified were judged as challenged. In 1994, the Standish group sent out a questionnaire to 365 respondents representing 8 380 ICT applications. A similar sampling scheme was carried out in successive studies. The table below compares the results for 1994 through 2004.

Table 1. ICT Project Metrics for Private Sector in the USA

Metric (%)	1994	1996	1998	2000	2002	2004
Successful project	16	27	26	28	34	29
Failed project	31	40	28	23	15	18
Challenged projects	53	33	46	49	51	53
Average cost overrun	189	142	69	45	43	56
Average time overrun	164	131	79	63	82	84
Required features and functions delivered	61	N/A	N/A	67	52	N/A

Source: Standish Group as quoted in *www.infoq.com/articles/interview-johnson-standish-chaos*.

In 2004, using the above definitions, 29% of technology-enabled projects were successful, 18% failed, and 53% were challenged. There has been some improvement since 1994 in terms of a higher percentage of successful projects and a lower percentage of failed projects. But the share of challenged projects remains essentially the same. The table also indicates that average cost overruns and average time overruns have increased somewhat since 2000.

Table 2 shows similar project metrics for selected large projects completed 1996-2000 by the city of Richmond Virginia USA. While there are few projects in the sample, the results are similar to the Standish group results for the year 2000. Another example comes from Ireland[6]. In an evaluation of the status of 70 priority projects financed in 2002 by central government, three years later only 29 (41%) had been finished on schedule.

[6] eGovernment News 17 October 2005, IE: New analysis highlights delays and failures of Irish e-government projects, http://ec.europa.eu/idabc/en/document/4995/338

Table 2. Project Metrics from the City of Richmond Virginia (USA)

	No. of projects	Percent
Successful	3	23
Failed	2	15
Challenged	8	62
Total	13	100

Source : www.richmondgov.com/departments/dit/docs/PolCo200203.pdf

The second indicator of project success concerns the generation of business or user value. One metric is return on investment after the project has been implemented for six months to one year. Another metric is the benefit/cost ratio for the same time period.

For example, the Australian government (Australian Government NOIE, 2003) analysed the benefit/cost ratios of a sample of 38 e-government programmes. The analysis identified agency benefits, consumer financial benefits, social benefits, and contributions to broader government objectives. Of the 38 programmes, 24 were expected to provide financial benefits of USD 100 million from an investment of USD 108 million, while the other 16 programmes were mainly expected to provide social benefits. The benefit-to-cost ratio to the 24 programmes (*i.e.* cost reductions and cost avoidance) was 0.93 while it was 0.61 for all 38 programmes. The social benefits to citizens and businesses, however, were not quantified. In other words: the financial return to government did not cover the cost of investment.

The Australian study found "little evidence of consistent frameworks being used to measure benefit/cost ratio, from a social benefit perspective", demonstrating difficulties in measuring social benefits and a lack of consistency among frameworks of analysis used by the different programme studies. This made it difficult to compare different benefit/cost results. It is also unclear what costs were included in calculations; costs associated with a change in organisation and business processes are often not included in benefit/cost calculations.

Box 2. The New Zealand Study of ICT Project Performance

The New Zealand government asked three questions: 1) What is the record of successes and problems in New Zealand's public sector ITICT projects, 2) how does this compare with private sector in New Zealand, and 3) and how does this compare with public and private sectors in other countries. The study defined success in two ways: as "a project being on time, within budget, to scope" (criteria 1), and "did the project achieve organisational goals, in an acceptable time frame and at an acceptable cost" (Simpl Group, 2000) (criteria 2). The latter definition is subjective and hard to interpret as well as compare with the private sector and with other countries and will not be discussed here. The New Zealand study divided projects into ITICT projects that mainly involved using existing software and those that required developing new software.

The study's results are similar to those of the Standish group. Results also show that projects requiring development of software are more risky. One should, however, be careful in interpreting the results because of the small sample sizes, possible differences in the definition of challenged and failed projects, and that dissimilarity in projects are dissimilar as to size and complexity in the New Zealand public sector and the USA private sector as reflected in the Standish results

Comparison of New Zealand and Standish Group Results

	NZ: all projects	NZ: subset of development projects	Standish results for year 2000
Success rate	38%	30%	28%
Problem project rate	59%	66%	49%
Failure/cancellation rate	3%	4%	23%
Sample size	34	23	NA

Source: Information technology projects: performance of the New Zealand public sector in perspective (2000)

Why is the failure rate of ICT projects so high?

There are many reasons why ICT projects fail[7]. One reason is simply that the ICT industry lacks solid estimating procedures for large ICT projects. A second reason is that project scope tends to change over time, making original specifications obsolete and bringing uncertainty about what the project is supposed to achieve. A third reason is that large ICT projects may be too complex to be handled by traditional management techniques. A fourth reason is technological risk.

Using tried and tested technology reduces the technology risk while using new, untested technology adds risk. Changing a business process or integrating different business processes promises greater benefits and reduced costs, but also increases risks in managing change and ensuring the proper functioning of new processes. This requires a competent manager knowledgeable about the process, and skilled in change management and technology. A fifth reason is lack of high-level acceptance and backing of a project champion or business owner. Without high-level support, large ICT-enabled projects are very vulnerable to failure.

Box 3. Reasons for Project Failure

There are many reasons for project failure. The British Office of Government Commerce (OGC) has identified the most important risks, and recommends that if there are any uncertainties in any of these areas, an acquisition-based project should not be allowed to proceed:

- Lack of clear link between the project and the organisation's key strategic priorities, including agreed measures of success.
- Lack of clear senior management and ministerial ownership and leadership.
- Lack of effective engagement with stakeholders.
- Lack of skills and proven approach to project management and risk management.
- Too little attention to breaking development and implementation into manageable steps.
- Evaluation of proposals driven by initial price rather than long-term value for money.
- Lack of effective team integration between clients, the supplier team and the supply chain.
- Lack of understanding of and contact with the supply industry at senior levels in the organisation.

Source: Office of Government Commerce (2005) *Common Causes of Project Failure*, www.ogc.gov.uk

[7] McComb, D. and J. Smith (1991) "System Project Failure: The Heuristics of Risk", in *Journal of Information Systems Management*, Vol 8, Number 1, and OECD Policy Brief (2001) *The Hidden Threat to E-Government*.

The ICT department and the business owner have different roles and responsibilities in large ICT-enabled projects. In these projects the ICT department's role is that of a technical consultant. Because the ICT department is not the process owner, it often does not understand how the process delivers value to the organisation; it is also not responsible for generating anticipated benefits, or for changing people, processes, culture and organisation.

Difficulties arise where there is not one, but many, business owners; for example situations involving shared data and services to achieve more joined-up government and greater benefits of scale. These business process owners or stakeholders (or owners) will want to influence business processes and technology and thereby project design requirements. Such projects need a champion in a position high enough to encourage the necessary compromises on requirements, design and systems operation. An example of this might be developing a Criminal Justice Information System.

A special situation arises when the new process is poorly understood. In this case, it is difficult to specify requirements in advance to the ICT department. Instead, the business process change/ICT project should be managed as a pilot project or a dynamic learning environment where knowledge about process, technology, requirements and solutions evolve iteratively and incrementally.

Why do technology-enabled projects have low realised benefits?

The realised rate of return or benefit/cost ratio may be low for several reasons. One reason is that the planned rate of return was low. For example, automation is a relatively low-risk investment with low payoff. Business process improvements can yield higher returns while business transformation holds forth the promise of large returns on investment through the integration of different processes but also more risk in terms of managing change (OECD, 2005). The lesson from best practices is that organisations should consider increasing benefit/cost ratios while implementing strong benefits realisation and risk management strategies. One exception is investments in infrastructure that themselves will have low benefit/cost ratios but will provide a platform for business transformation investments. In summary, the greater the scope for change, the higher the potential benefits, but also the greater risk for failure due to complexity.

Box 4. Benefits Are To A Large Degree Dependent On How Much Change Is Involved

1. **Task Automation**: Technology-driven vision focusing on personal productivity at the task level. A modest 10-20% return is expected from the increased speed of the task. An example is automating a court's case docket so that the clerk can look up information faster. Although successful completion is a formidable challenge, benefits rarely justify major technology investments.

2. **Business Process Change**: Tactical business vision drives use of technology. Returns of up to 300% are expected as technology is used for integrating project management and financial systems, providing constant and current executive information, and providing direct customer access from remote locations. For example, information technology is used to provide direct public access to court records, eliminating the need for a clerk to be involved in retrieving information.

3. **Business Transformation**: Strategic business vision drives restructuring of business processes using technology. This, the true "re-engineering" phase, offers almost unlimited returns on information technology investment, as businesses move to eliminate unnecessary tasks and use: just-in-time scheduling, joint marketing partnerships, intra-industry partnerships, and seamless integration with suppliers and customers. For example courts, might require all court case documents to be filed electronically, and use rule-based software to perform scheduling and work routing. This will allow the court system to greatly expand its caseload capacity with little or no increase in staffing.

Source: Legal Services Corporation (1966).

A second reason for low actual benefits is that lack of necessary process change has prevented realisation of projected high benefits. For investments involving business process improvements or business transformation managing change is important. Technology is only an enabler; the major benefits come from change.

A third reason for a low realised benefit/cost ratio is that actual project costs are higher than expected. This can be a consequence of underestimating project costs or of not managing the project well enough. It is well known that it is difficult to estimate the costs of developing new applications, processes and procedures and implementing change. This is why it is so important to ensure that potential benefits will be significant.

How can success rates be increased?

ICT investments are not significantly different from other major investments. Significant management factors for improving project/investment success are:

1. Clearly link and contribute to the organisation's business goals.

2. Develop an investment proposal with major benefits, a high benefit/cost ratio and adequate rate of return through business process re-engineering or business transformation.

3. Establish a good business case, clearly demonstrating total costs, benefits and risks.

4. Implement a formal benefits realisation plan to ensure that benefits will be delivered.

5. Have a senior project sponsor[8] (*i.e.* the project owner) providing resources for the project and responsible for ensuring that the project is successful at the business or institutional level.

6. Manage the process using a formal project management process including a review component.

7. Ensure that project manager has necessary skills in project, risk, and change management.

8. Establish a partnership between the project and ICT manager/supplier.

9. Break development and implementation into manageable steps.

10. Ensure focus on stakeholder and user needs.

11. Carry out a post-implementation evaluation to identify realised benefits and costs, and determine how benefits can continue to be improved from the initial investment.

These factors are very similar to the normal management process in an hierarchical organisation and are similar to the 10 factors proposed for project success[9] by the Standish group based on its analysis of thousands of ICT investments from the perspective of the ICT manager (see Table 2). The ten factors are listed in order of importance. The factors are weighted as to their relative role in contributing to investment success.

[8] See Crawford, L. and C. Brett (2001) *Exploring the Role of the Project Sponsor*, http://www.projects.uts.edu.au/resources/pdfs/PMINZ2001CrawfordBrett.pdf

[9] Standish Group (2001) *Extreme Chaos*, http://www.standishgroup.com/sample_research/PDFpages/extreme_chaos.pdf

There are two major approaches to ICT project management. The first is the so called "waterfall" approach that progresses through the sequential stages of analysis, requirements, design, coding, implementation and testing. This works well for small projects or projects using known technology and with a well defined scope. The second approach, incremental iterative approach, proceeds in short 4 weeks to 3 month iterations through requirements, coding, testing: each with a deliverable product. This approach is preferable for large projects with requirements that will change as experience is accumulated with the system and where technology is new. This means treating the development as an incremental learning process for both the business owner and the ICT staff[10].

Table 3. Standish Ten ICT Project Success Factors

Number	Factor	Weight
1	Executive support	18
2	User involvement	16
3	Experienced project manager	14
4	Clear business objectives	12
5	Minimised scope	10
6	Standard software infrastructure	8
7	Firm basic requirements	6
8	Formal project methodology	6
9	Reliable estimates	5
10	Other factors	5

In summary, the discussion points to five significant findings:

- **Ensure clear roles and responsibilities:** The business manager should be in charge and responsible for ensuring that the project delivers value to the organisation's business goals. The ICT manager is responsible for developing the ICT project and for working with the business manager in defining requirements and learning from incremental development.

- **Take a methodological approach to measuring costs and benefits:** Management techniques such as cost/benefit analysis, project management, incremental iterative development (IID) and benefits realisation planning can significantly improve the probability of success.

- **Ensure that managers have a broad set of complementary skills:** The business manager needs to be skilled in project and change management and benefits realisation; the ICT manager needs to be skilled in project management and the IID approach to software development.

- **Focus on benefits:** Proposed projects (with an ICT-development component) should demonstrate a high benefit-to-cost ratio, including both one-time payoffs and a platform for subsequent annual improvement payoffs.

- **Chose the appropriate approach** to ICT project management.

The next chapters of this report will look closely at what OECD countries are doing to realise benefits from ICT and present methodological approaches that can help managers to select agency investment portfolios, control implementation and evaluate outcomes.

[10] IEEE Computer Society (2003) *Iterative and Incremental Development: A Brief His*tory. See: http://www2.umassd.edu/SWPI/xp/articles/r6047.pdf.

CHAPTER 2. WHAT BENEFITS ANALYSIS METHODS ARE USED IN OECD COUNTRIES

The OECD Survey on Benefits Realisation

In the spring of 2006, the OECD sent a questionnaire (see appendix B) to member countries to collect data on the use of benefits realisation methodologies for e-government projects.

The questionnaire addressed four areas:

1. *Context and Administration* examines the **context** for benefits realisation studies and the management and administration of these assessments.

2. *Methodology and Evaluation* investigates the actual **methodologies** used in benefits realisation studies.

3. *Use of Results* considers how **results** are used.

4. *Examples of Major Benefits Realised at Project Level* seeks information about **major benefits** that have been identified through studies undertaken in each country.

In all, 17 countries[11] responded to the survey. In addition, the United Kingdom report "UK Approach to Benefits Realisation" has been used by the OECD to provide answers to the survey for the UK.

Are benefits realisation analysis methods used?

The results from the survey are shown in Table 4. The numbers should be interpreted carefully for several reasons: in countries with federal governance structures, uses of benefits realisation management methods can vary among levels of government; benefits realisation studies may be applied before a project (*ex ante)*, during a project, or after a project (*ex post)*; finally, only a few countries have begun implementing benefits realisation management initiatives and even these countries are mostly still piloting and improving these tools in preparation for broader implementation.

Table 4[12] indicates that all countries undertake some kind of analysis of costs and benefits for large projects. The purpose of these studies is to generate better information for project selection and management. The table also indicates that 80% of responding countries require *ex ante* cost/benefit analysis before deciding on a major ICT investment and that most of these countries provide formal guidelines for doing a cost/benefit analysis. Six countries provide formal guidelines for monitoring large ICT investments, but only 5 require a benefits realisation plan. *This indicates that countries can probably improve the success rates of ICT-enabled investments through increased use of benefits realisation management methods and techniques.*

[11] Australia, Austria, Belgium, Canada, Denmark, Ireland, Japan, Korea, Mexico, the Netherlands, New Zealand, Norway, Sweden, Switzerland, Turkey, UK and the United States.

[12] For detailed data, see Appendix D.

Of the 18 countries, six have some kind of staged review process encompassing *ex ante*, monitoring and *ex post* analysis of benefits or a combination for major projects. In England and Australia, this is part of the so-called Gateway Process (presented in the next section) aimed at ensuring that ICT investments will generate agreed-upon benefits. However, few countries have explicit guidelines for monitoring investments and the benefits the generate (6 of 18). Two-thirds of respondents stated that they are still developing methods to better manage large ICT projects.

Table 4. Cost Benefit Guidelines and Procedures used by Responding Countries

Question	Yes	No	Don't know
Is cost/benefit analysis ex ante required?	14	4	0
Is monitoring information required?	10	6	2
Is cost/benefit analysis ex post required?	6	9	3
Are there formal guidelines for cost/benefit analysis?	13	3	2
Are there formal guidelines for monitoring?	7	7	4
Are there formal guidelines for benefits realisation?	8	7	3
Is a benefits realisation plan mandatory?	5	12	1
Is there a Gateway process for large projects?	6	8	4
Are there toolkits for C/B analysis?	10	4	4
Are there toolkits for Benefits realisation?	9	8	1

Source: OECD survey (2006).

In most countries, a business case with cost/benefit analysis is mandatory for major ICT or e-government projects. Thresholds are often established to trigger the mandatory imposition of benefits realisation management to monitor project performance. For example, the New Zealand central government has established precise definitions for "major ICT projects" – projects with a total life cycle cost of over EUR 7.5 million, projects with capital investment of more than EUR 3.5 million in any one year, or projects that will have a significant impact on more than one department or agency.

Efficiency goals are clearly becoming a driver for the adoption of benefits realisations studies, and efficiency criteria have become a key focus for many methodologies. For example, one ministry in Mexico aims to reduce infrastructure costs by 20% and another has set a target of 25% for the internal rate of return on projects. In Switzerland, the Federal Council has established a goal of reducing administrative costs by EUR 19.5 million in 2007 and EUR 26 million per year thereafter. The UK has agreed on a target of efficiency improvements across the public sector of 2.5% per year (Gershon, 2004) between 2005 and 2008.

A detailed study of the questionnaire data indicates that United Kingdom, Australia, Canada, and the United States seem to have made the most progress in developing comprehensive benefits realisation management methods to ensure that benefits are considered *ex ante* as part of investment decisions, applied during project implementation (in terms of realising an outcome or benefits realisation plan), and then used to assess delivered benefits after the end of the project. However, all respondent countries are grappling with the issues of developing management techniques for ensuring that ICT investments will deliver an appropriate level of benefits to government, to users and to other stakeholders.

Does central government encourage standardisation of benefits realisation analytical methodologies by issuing guidance and toolkits, and promoting best practices? The questionnaire data show that most countries have formal guidelines and tool kits for cost/benefit analysis. Only half of respondents have guidelines for monitoring and few have a Gateway or staged review process.

Key methodologies for benefits management

Many methodologies are used for benefits management by central authorities for analysis of large ICT projects. Most studies use more than one method (usually at different review stages) and governments in several countries provide guidelines or toolkits to support the use of a range of methods that might be appropriate for projects (CIO Council, 2003; Enhanced Management Framework, Treasury Board, Canada, 1996; Department of Finance and Administration, 2006; HM Treasury, 2003; NSW Government Chief Information Office, 2003; New Zealand Treasury, 2005; OGC, 2003 and 2005; Office of Management and Budget, 2005 and 2006; SSCNZ, 2003 and 2006).

The most commonly adopted methods of analysis (see Table 5[13]) are key performance indicators, cost/benefit and transaction cost analysis. It is important to emphasise that benefits realisation studies and methodologies are still being developed and refined in most countries. It should also be noted that the Netherlands uses a cost model for measuring administrative simplification impacts rather than any of the evaluation methods in table 5.

Table 5. Evaluation Methods Used by Responding Countries (a total of 18 countries)

Method	Description	Countries
Key performance indicators	Quantifiable performance measures	13
Cost/benefit analysis	Measures tangible and intangible benefits and assesses these against costs	13
Transaction costs	Uses segmentation methods to calculate use and benefits to different user groups	11
Cost effectiveness analysis	Marginal costs for achieving specific goals	6
Net present value	The difference between the present value of cash inflows and outflows at a given discount rate	6
Break-even analysis	The amount of time until benefits equal costs	5
Value assessment	A complex method that captures and measures factors unaccounted for in traditional ROI calculations	5
Return on Investment	The ratio of money gained or lost on an investment relative to the amount of money invested.	5
Internal rate of return	The discount rate that makes net present value of all cash flows equal to zero	4
Portfolio analysis	A complex method that quantifies aggregate risks relative to expected returns for a portfolio of initiatives	4

Two examples of simple benefit calculations

Mini business cases or pre-evaluation analysis of investment proposals can provide valuable information on the expected rates of return or cost/benefit ratios and provide impetus for improving the proposed investment through significantly reduced costs or increased benefits. These quick estimates should be followed up with a more thorough cost/benefit study that considers all major financial and non-financial benefits to government and users.

The following two examples show that relatively simple estimates can provide quick guidance as to the potential value of an investment. In both cases, the benefits are likely to be underestimated, as benefits to agencies are not included in the mining example, and benefits to users are not included in the case

[13] For detailed data see Appendix D

management example. The latter example also demonstrates that economies of scale increase the benefit/cost ratio markedly.

The coal mining industry in the United States is small but important. It is a significant industry in 28 states, and coal is used to produce half of the country's electricity. Submitting forms to federal and state government agencies represents a burden of almost USD 20 000 annually per enterprise. The Miners.gov portal project produced a working prototype for coal miners; it was created through joint effort of the Department of Interior (DOI), Department of Energy, Environmental Protection Administration (EPA), Department of Labor, the Internal Revenue Administration, and State of Pennsylvania EPA. The portal is designed to allow companies to submit data once – after which it is shared among the different agencies. In addition, the portal calculates and accepts payments. Over time, agencies have continued to harmonise and standardise data and reporting periods; they have also questioned the need for certain information, leading to a further reduction in data requested and thereby in the administrative burden. Based on the prototype portal results, the portal is estimated to reduce enterprise administrative paperwork burden by 50%. This calculation shows the big savings to the coal mining industry (USD 107 million), but does not include benefits to the public sector (which is financing the portal) nor operating costs. However, these additional costs are small compared with the estimated benefits.

Table 6. The Coal Mining Industry Administrative Regulatory Burden in the USA (excluding gas and oil)

Total federal burden (hours)	5.4 million
# of responses	6.7 million
# of federal agencies with forms for miners	21
# of forms	79
% of burden represented by top 10 forms	85
# of mining firms excluding oil and gas	11 042
Annual monetary burden (hourly burden x USD 40 per hour)	USD 215.6 million
Coal mining industry revenue	USD 28.1 billion
Federal monetary burden/revenue	0.8%
Average federal monetary burden per firm	USD 19 523
Costs and benefits	
Portal investment cost	USD 200 000
Portal operating cost	N/A
Cost to agencies to receive electronic data and harmonize and standardise data	N/A
Annual benefits: Reduction in administrative burden for coal miners	USD 107 million
Annual benefits: Government agencies	N/A

Source: The Business Compliance One-Stop Business Case, Small Business Administration, USA.

The second example presents an estimate of the potential savings from improving case management processes. The Swedish Administrative Development Agency[14] analysed the potential payoff from re-engineering four different case management systems, making them fully transactional. Reduction in operating costs and estimated investment costs were estimated to calculate savings to agencies. In addition, benefits to citizens were discussed but not quantified. These benefits included:

- Time savings.
- Faster process time.
- Improved access.
- Improved information on services and regulations.
- Improved ability to follow the transaction through the process.
- Improved means to impact the management of the case.

[14] Swedish Administrative Development Agency (2006) Effektivisera genom att automatisera arendehanteringen

Calculations show that there are large potential savings to be achieved through process re-engineering and the use of e-government tools.

Table 7. Potential Savings Using Case Management Systems in Sweden

Case management process	Annual cases	Annual savings (million SEK)	Investment cost (million SEK)	Savings/ investment cost	Payback period (years)
Application for a license to sell non-prescription medicine	40 000	17.0	1.5	11.30	< 1.0
Application for job certification in health care industry	7 000	1.3	2.0	0.65	1.5
Application for rent subsidy	370 000	56.0	3.0	18.70	<1.0
Application for a driver's license in Stockholm region	60 000	1.8	3.3	0.55	2.0

Source: Swedish Administrative Development Agency (2006).

The OECD Survey on Business Case Indicators

In the spring of 2006, the OECD sent a questionnaire to member countries to determine what indicators countries are using in their business cases to analyse ICT investments[15]. The primary purpose was to use this information to provide more detailed examples in support of the OECD checklist of business case indicators[16] as a resource to practitioners looking to adapt measures for their own business cases. A secondary purpose was to collect examples of the actual use of indicators to evaluate specific projects.

The questionnaire considers costs and benefits to government and users respectively. However, some countries use additional metrics to appraise projects such as:

- Strategic alignment with organisation's goals
- Compliance with enterprise architecture
- Risk of failure or not achieving intended benefits

Belgium, for example, uses the following classes of indicators to evaluate projects:

1. Strategic contributions to e-government strategic policy
2. Efficiency (based on ROI or IRR depending on the project type)
3. Coverage of reusability of the provided ICT solution
4. Impact on public governance
5. Impact on information society development

[15] This questionnaire is a response to the proposal at the OECD E-Government Expert Seminar on the Cost and Benefit Analysis of E-Government (Paris, 6-7 February 2006) on broadening and deepening the checklist of e-government costs and benefits.

[16] See Annex C – this checklist was first published in "e-Government for Better Government", OECD (2005), pp. 118-124.

Korea uses several different metrics at three different stages for assessing and monitoring e-government projects: namely pre-evaluation of project feasibility, project appraisal, and project monitoring (see table 8). The indicators are part of the 'Evaluation of Government Policy Implementation' conducted by the Office of Government Policy Coordination (OPC), where projects have their respective target performance plans established, based on which the results are evaluated at year end. Additional indicators cover appropriateness of project plan, appropriateness of performance plan, appropriateness of project contents, rate of performance achievement, practical application of evaluation results, level of readiness for informatisation, level of application, and effect of informatisation (*i.e.* effects of process improvement, citizen satisfaction *etc.*).

Table 8. Korea's Evaluation Structure for E-Government Projects

Factor	Indicators
1. Policy feasibility	Conformity to national policy direction and mid-long term informatisation plan
	Relationship with other projects
	Similarity or redundancy with existing projects
	Cooperation with other agencies
	Risk factors (i.e. regulatory/legal, political or social factors, privacy protection etc.) and countermeasures
2. Economic feasibility	Cost-Benefit Ratio
3. Technical feasibility	Appropriateness of technology to be applied
	Technical risks (complexity of technology, using new technology etc.)
4. Appropriateness of Target Performance (Policy Plan)	Clarity of purpose and reason for pursuing project
	Redundancy or relationship with other projects
	Appropriateness of project implementation method
	Appropriateness of target performance (policy plan)
5. Efficiency of Implementation	Observance of plan
	Appropriateness of risk and change management
6. Achievement of Target Performance	Achievement of target performance
7. Practical application of evaluation results	Practical application of evaluation results
8. Realised results	Evaluation of actual performance results against target performance (policy plans established at beginning of year)

The OECD questionnaire included a list of 131 indicators of benefits and costs to government and users. Table 9 shows the number of benefit and cost indicators by government and user. There are more indicators for government benefits and costs, possibly because of the strong emphasis on financial analysis of e-government projects from the government's perspective. The opposite is true for users, where indicators for benefits to users outnumber indicators for costs to users.

Table 9. Number of Indicators by Type

Benefit or cost	Number of indicators
Benefits to government	37
Benefits to users	29
Costs to government	54
Costs to users	11
Total number of indicators	131

Source: OECD survey (2006).

Table 10 shows how many of the 131 indicators in the checklist are often used in business cases by the 12 countries responding to this request for data. There is great variation among countries where New Zealand and the USA use more indicators than most other countries. There is some indication that countries with a longer history of developing e-government applications frequently use a greater number of indicators in their business cases.

Table 10. Number of Indicators Used Frequently by Type

Country	Number of indicators	Benefits to government	Benefits to users	Costs to government	Costs to users
Austria	22	11	8	2	1
Belgium	40	19	21	0	0
Denmark	39	13	9	16	1
Ireland	104	25	26	45	8
Japan	17	13	3	1	0
Korea	97	29	26	38	4
Mexico	80	28	21	29	2
New Zealand	125	32	28	55	10
Switzerland	93	17	20	47	9
Turkey	56	23	19	14	0
USA	121	30	28	53	10

Source: OECD survey (2006).

Although checklists can be a valuable aid for determining cost and benefit indicators, they often need to be complemented by specific indicators for each proposed e-government project involving process and organisational change. The following matrix shows possible types of benefits for government and for users that can be used as reminders of benefits that should not be overlooked.

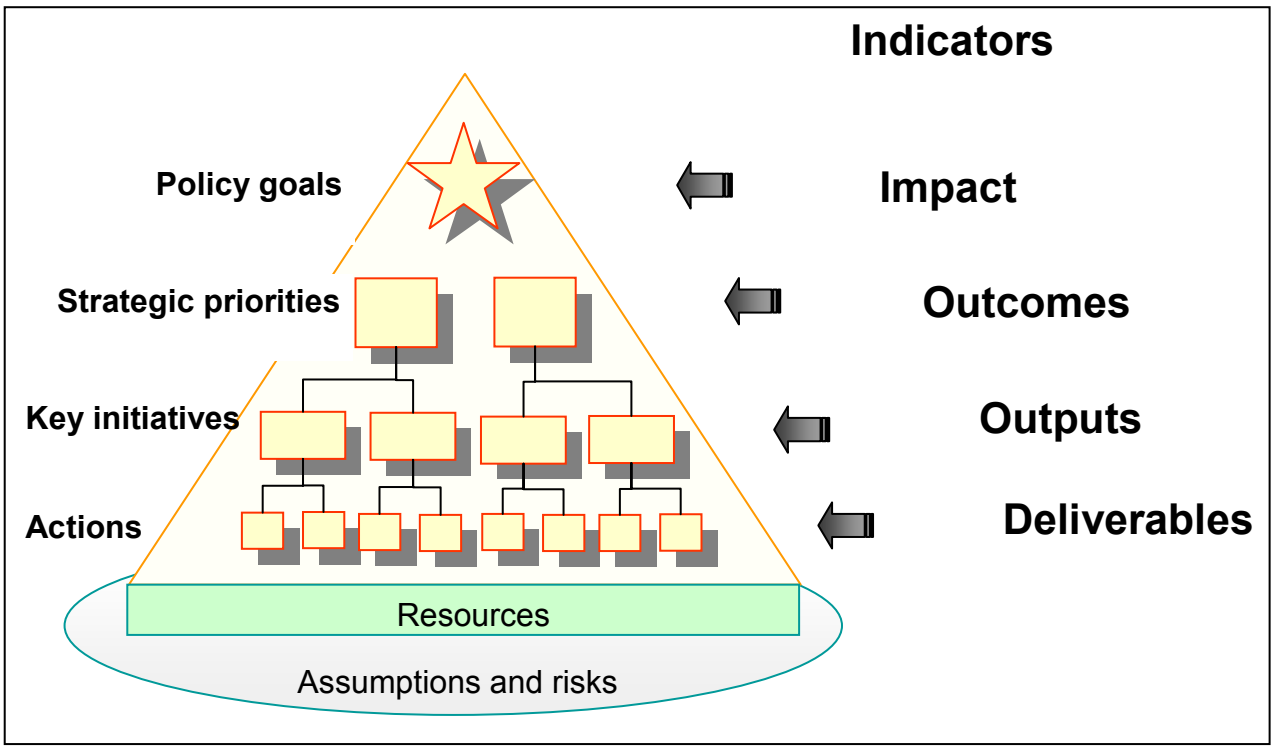
Table 11. Major Kinds of Benefits

Type of Benefit	Government	Citizens and Businesses
Direct Financial Benefits	• Reduce cost • Cost avoidance • Generate revenue	• Reduce burden • Save time and money
Direct Non-Financial Benefits	• More information • Better workplace • Increase effectiveness	• Improve service levels • Increase user satisfaction • Increase knowledge
Indirect Benefits	• Good governance • Trust Economic growth	• Public safety • Improved environment

There are several approaches to determining indicators for evaluating specific investments. One such approach is the LogFrame model used in the developmental aid area as illustrated in Figure 1 (World Bank 2004 and 2002). The logical framework (LogFrame) approach presents the programme logic as a flow from resources, to activities, to outputs, to what happens after the service or product has been delivered to users.

The first question is *what is being changed*: resources, activities, organisation, processes, or outputs. The second question is *what consequences will it have* for the other elements, what changes are expected. The third question is *how will these changes be measured* (*i.e.* what indicators will be used). For example, if resources are changed, what is the expected consequent change in activities, outputs and outcomes? A fourth possible question is if a measurable change can be expected to occur within a pre-determined time period, given the magnitude of the change. After actions and effects have been identified the next step is to identify the indicators to be used to measure the effects on outputs, outcomes and impacts.

Figure 1. LogFrame Model - Monitoring and Evaluation Framework



Source: World Bank (2004).

CHAPTER 3. EXAMPLES OF BENEFITS REALISATION INITIATIVES IN OECD COUNTRIES

Several governments (such as Australia, Canada, New Zealand, the United Kingdom and the United States) have developed and implemented guidelines, toolkits and processes for benefits realisation management.[17] This chapter presents case studies from France, Canada, Norway, the United Kingdom, and the United States[18] in order to provide concrete examples of not only how governments are developing measures to assess benefits, determine potential project value, and manage outcomes, but also how these tools can be used in a more systematic way across government as part of an integrated approach to selection, control and post-implementation evaluation of projects.

The five examples demonstrate different parts of a comprehensive set of tools to manage large ICT-enabled projects. The exposition moves from: a focus on key performance indicators (Norway); to a tool for project appraisal (France); to an outcome management plan (Canada); to a comprehensive set of tools, guidelines, gateway process and expert resources available to help agencies manage projects (United Kingdom). The United States example contains most of the UK features, and also includes management of enterprise architecture and a scorecard mechanism at the political level.

Norway – Developing Benefit Indicators

Hoykom is a grant programme promoting broadband use and applications in the public sector. It is financed by the Department of Trade and Industry and the Department of Education and Research. The Research Council of Norway has provided oversight of the programme and its over 400 projects through external reviews and audits. The Council has taken several steps to improve the programme's effectiveness and results by:

- Requiring a benefits realisation plan laying out what benefits to be achieved and how and when they will be achieved, and to demonstrate high-level organisational support.
- Requiring a cost/benefit analysis.
- Mandating reporting of progress in terms of indicators used in the benefits realisation plan.
- Updating the benefits realisation plan at the end of the project.
- Reporting actual benefits one year after project implementation.

[17] See CCIOB, 2003; CIO Council, 2003; Department of Finance and Administration, 2006; HM Treasury, 2003; IAG, 2003; NOIE, 2003; NSW Government Chief Information Office, 2003; New Zealand Treasury, 2005; OGC, 2003 and 2005; Office of Management and Budget, 2005 and 2006; SSCNZ, 2003 and 2006; TBC, 2003).

[18] The five benefits realisation management approaches presented in this chapter are based on presentations made at the OECD Expert Seminar on Cost and Benefit Analysis of E-Government held in February 2006.

There are three crucial elements: a realistic project and benefits realisation plan, high-level organisational support, and a measurement system that facilitates identification of benefits to be achieved and what was actually realised. The Research Council has developed an initial set of indicators to measure benefits of expanded broadband infrastructure and use (see table 12).

Table 12. Hoykom Benefits and Indicators (Norway)

Benefit	Benefit Indicator
General project benefits: • Labour saved. • Reduced operating expenses.	• Employee hours per year saved. • Savings in total operating expenses.
Service specific benefits: • Shorter processing time. • Reduced cost of service or performing tasks.	• Employee hours per year saved. • Savings in total operating expenses.
User benefits: • Shorter processing time. • Reduced cost for user of service. • A concrete new service filling a need. • Other project-specific benefits.	• Reduced time in days per case • User direct monetary savings and reduction in work days lost. • Reduced cost to users.
Qualitative benefits (examples): • Better management. • Better use of expertise and resources. • Better integration with other parts of the value chain (lower transaction costs). • Better working conditions. • More robust secure technical infrastructure. • More attractive environment for business start-ups in region.	

Advantages of the Hoykom approach

The Hoykom case demonstrates the advantages of standardising the measures to be used for similar types of investments (*i.e.* sectoral or technological investments), allowing for comparison across similar projects and identification of best practices.

France – Value Assessment Tool

The French Electronic Administration Development Agency (ADAE) has developed an analytical method for analysing the value of e-government projects called MAREVA (méthode d'analyse et de remontée de la valeur)[19]. MAREVA is used in selecting projects to be funded, monitoring projects during implementation, and evaluating projects after implementation. By February 2006, the methodology had been applied to 30 projects.

The benefit of the MAREVA method lies in providing a standard, consistent, repeatable method for appraising and selecting projects to be funded that can also be applied at the termination of the project to determine the actual value of the project. Many countries use return on investment (ROI) or cost/benefit analysis to evaluate projects. Because these two types of analysis can be carried out in many different ways, it is often impossible to compare projects. MAREVA standardises the costs and benefits to be considered and the metrics generated. The system also factors equity between employees, users and organisations into evaluations, as well as project risk and the origin of the project mandate (*i.e.* by law or other circumstances).

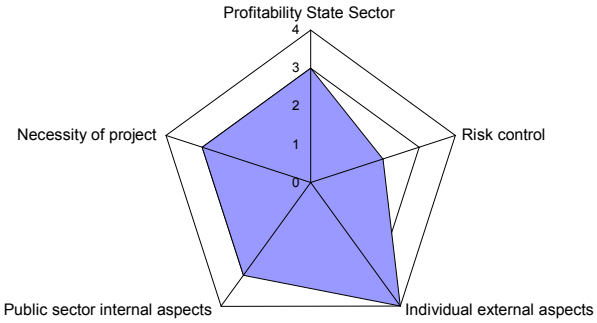
[19] ADAE, 2006.

The MAREVA method consists of:

- Standard calculations of return on investment (ROI) using three indicators: 1) breakeven point, 2) internal rate of return, and 3) recurring gain from the project.
- Assessment of value using four additional indicators: 1) strategic alignment with organisational goals, 2) economic justification using benefits and costs, 3) risk assessment, and 4) follow-up on expected results.
- Presentation format using a radar diagram (see figure 2) to portray values for profitability, risk control, external considerations, internal considerations, and the necessity of the project.

The MAREVA valuation methodology explicitly considers external benefits to users as well as internal benefits to public sector employees and administration. The methodology also measures risk and the necessity of the project (*i.e.* is the project obligatory).

Figure 2. The MAREVA Summary Radar Diagram (France)



Source: ADAE (2006).

Box 5. The MAREVA Tool (France)

The MAREVA method asks the following questions:

1. What is the return on investment for the state?
   - quantifiable costs and gains for ministries and decentralised representatives
   - investment costs avoided due to the project
2. What is the level of risk of the project?
   - risks concerning the process of the project
   - technical risks (development of the service), legal risks
3. What are the benefits for the individual, an association or a business user?
   - gaining time
   - saving money
   - simplifying accessibility
   - promoting the information society
4. What are the benefits of the project for public sector employees and public services?
   - improving employee standing
   - increasing efficiency of public services
   - quantifying profitability for the whole public domain (territorial communities, health and social spheres)
5. Is the project obligatory?
   - necessary to the implementation of Administration Electronic (ADELE) – the strategic plan for implementing e-government 2004-2007.
   - regulatory obligation or political commitment
   - rationalisation of public action

Source: ADAE (2006).

Advantages of the MAREVA approach

MAREVA is useful because it defines an adequate (*i.e.* not too complex) approach to evaluating projects and presents the results in a clear visual fashion which can be easily understood by high-level policymakers. By using five major metrics, MAREVA places return on investment (ROI) in a broader context which allows projects to be compared and an investment portfolio developed.

The MAREVA approach has been evaluated by another government. The French government offered the MAREVA methodology to the Province of Quebec Canada, which carried out an evaluation of this methodology to determine its relevance, validity, robustness, cost of application and need for adaptation to Quebec's needs.

Ten provincial projects were selected for evaluation using MAREVA. Each project was evaluated by a team of four specialists (in ICT valuation, ICT, Business unit, and finance). The 20 participants were asked to fill in a questionnaire. The results were as follows:

1. 95% of participants found MAREVA useful or very useful for analysis of ICT investment projects.
2. 100% found MAREVA useful for comparing projects.
3. 90% found that the MAREVA Radar diagram provided a good representation of evaluated ICT projects.
4. 70% found that the Radar diagram could be a good tool to communicate project value to senior management.
5. Cost for each project evaluation was 12 100- 20 700 Canadian dollars depending on complexity, quality of documentation, scope of project and the support provided to the team.

6. MAREVA yields relevant, valid and consistent results.
7. MAREVA will need to be somewhat revised to fully comply with Quebec requirements, *e.g.* expand the benefits to be considered, modify questions used by the tool, make it possible to use the tool over the Web, and replace the direct and indirect cost as used by France by costs in dollars and in full time equivalent employees.

Canada – Outcome Management

In 1996, the Canadian Treasury Board Secretariat developed the Enhanced Management Framework (EMF) to assist with the management of ICT projects. EMF is an integrated management model for managing ICT projects and the overall ICT portfolio. It is based on four principles:

- Alignment of ICT investments with business strategies.
- Establishment of clear accountabilities for managing ICT investments.
- Development of project management disciplines.
- Identification and management of risks on a continuous basis.

The Enhanced Management Framework is being expanded to include Outcome Management (OM)[20] for ICT projects. Outcome Management is defined as "the set of activities for planning, managing, and realising the desired outcomes from initiatives". Outcome Management builds on management fundamentals such as plans, accountability, monitoring and evaluation; it concentrates on specifying benefits and how they will be achieved, addressing the limitations of cost/benefit analysis by using a log frame type of modelling for more precise identification and qualification of initiatives' hard and soft benefits and consequences.

In Canada, the OM process is usually applied for the benefit of the commissioning department, with supplementary benefits accruing to central government. OM has not as yet been applied as a standard methodology throughout government in Canada. Utilisation is voluntary and usually undertaken at the discretion of the department or agency. To date, Outcome Management has been applied or is being applied to 20 projects. The Outcome Management process is a five-stage process which loosely represents levels of maturity; the five stages can be carried out in parallel, iteratively or in almost any order.

A typical initial OM study consists of a dozen interviews, at least two day-long workshops with up to 20 stakeholders, and production of a final report. Some of the early adopters are now undertaking later stages of the approach and incorporating the results of Outcome Management reports into their project and portfolio governance.

The next steps for the Canadian government are to integrate this methodology into policies and tools for investment in ICT and the management of ICT projects and to cultivate a supportive culture. This is part of a bigger results-based wave happening in the Canadian government. Departments and agencies have been asked to supplement their annual financial reports with information on strategic objectives and results. In order to do so, they must architect the department or agency, define outcomes and build performance frameworks. Thus, departments and agencies are defining their ongoing programs results in consistent and measurable ways. The OM practice will leverage this work by asking project owners to link their business outcomes to improvements in program measures.

[20] Government of Canada (2006) *Outcome Management Guide and Tools*, http://www.olis.oecd.org/COMNET/PUM/egovproweb.nsf/viewHtml/index/$FILE/GOLI_OM_GUIDE_AND_TOOLS.PDF

Box 6. Outcome Management Stages (Canada)

Stage 0: Launch Outcome Management – this stage confirms that the organisation is ready to undertake the Outcome Management exercise.

Stage 1: Develop Outcome Realisation Model – this activity identifies the desired outcomes and establishes the logic of how the outcomes will be realised.

Stage 2: Develop Outcome Realisation Plan – this stage develops a framework for ensuring that outcomes expected from a project are monitored and reported. It also ensures that the required change is managed successfully.

Stage 3: Monitor Delivery of Outcomes – this stage establishes the methods and activities required to monitor the progress of the project and re-affirm the logic of how outcomes will be realised.

Stage 4: Realise and Optimise Outcomes – this final stage establishes the governance structure, identifying the roles, responsibilities and accountabilities towards realising outcomes. It focuses on achieving or harvesting outcomes, and looking for ways to meet or exceed anticipated targets.

Source: Government of Canada (2006).

The Canadian government has identified the following key lessons learned from using the Outcome Management approach:

- Align outcomes with departmental and government priorities.
- Engage all stakeholders in the process.
- Use Outcome Management to gain flexibility in defining intangible or "soft" benefits.
- Conduct Outcome Management early in the project lifecycle.
- Integrate Outcome Management with existing methods, frameworks and tools.
- Successful Outcome Management requires champions, education and communication.
- Cost/benefit analysis is useful to document an initiative's costs and areas for cost avoidance, as well as conducting options analysis.

Advantages of the Outcome Management approach

The OM approach focuses on realising benefits[21] – not just project deliverables. In doing so, it ensures the strategic alignments of outcomes with the line of business. OM continues after the implementation of ICT project and process changes to ensure that expected benefits are realised. It is a flexible approach that is adjustable as a project develops. It also provides a common framework that can be adapted at the project, portfolio, program and initiative levels. It therefore has broad applicability beyond ICT projects and can potentially be adapted to horizontal initiatives as well.

The OM approach identifies clear stages in the project life cycle, as well as appropriate performance metrics which can be used by policymakers to make evidence-based decisions about whether to proceed with, modify or terminate projects. In this way, it is a management rather than an audit tool. While the OM

[21] New Zealand has also developed an Outcome management approach called Pathfinder. See bibliography for more information.

approach details and assigns accountabilities, it also allows managers to adjust and/or change priorities along the way in response to changing circumstances and political priorities.

The United Kingdom – An Integrated Process Approach

The United Kingdom's approach to evaluation of benefits realisation is characterised by mandatory processes and methodologies, accompanied by support and guidance, with clear targets and governance structures that apply to all major programmes and projects but also with assistance. The Office of Government Commerce (OGC) is an independent office in the Treasury with the mission to assist government agencies become more efficient and effective through providing guidance on programme and project management as well as procurement. Its home page www.ogc.gov.uk provides a wealth of information, guidelines, toolkits and best practices.

The UK's approach to benefits realisation includes many building blocks:

- **HM Green Book** – mandatory guidelines on project appraisal and evaluation.
- **The Gateway Process** – a mandatory stage-gate review process for major projects.
- **Departmental Centres of Excellence** – mandatory centralised expertise in project and programme management supporting departments and agencies.
- **Regulatory impact assessment** – mandatory assessment for any project with a regulatory element.
- **Successful delivery toolkits** – tools, techniques and guidance for successful project delivery.
- **Managing successful programmes** – standard guidance describing framework and strategies for programme management.
- **The Magenta Book** – guidelines on post-implementation evaluation of policies.
- **Departmental management boards** – review progress supported by Centres of Excellence.

At the heart of the UK approach to benefits realisation and of special interest to other countries is the Gateway Process™ (OGC 2005). This process was developed after a review in 2003 showed great disparity in the quality of e-government business cases. Business cases were found to be particularly strong on the assessment of costs and benefits to the lead department; however, the identification and quantification of external benefits, *i.e.* to users or other departments, was less strong, resulting in business cases that often understated benefits and provided an incomplete base for tracking future third-party benefits through to realisation.

Business case guidance and new tools were developed in response to these findings. The Gateway process became the procedure for ensuring that these new tools were used. The Gateway is now a mandatory review process for civil procurement projects led by the Office of Government Commerce. Small teams of peer reviewers from across government examine projects at critical stages in their life cycles to provide assurance to the programme director – the senior responsible owner – that they can progress successfully to the next stage. The Gateway process is underpinned by the HM Treasury Green Book (2003), a detailed handbook that provides best practice guidance on appraisal and evaluation of policies, programmes and projects to government departments. Gateway reviews are undertaken at six stages in the development of a project; compliance with Green Book guidance is incorporated into the first, second and fifth reviews.

The Gateway stages are:

Gateway 0: Strategic Assessment – focuses on the justification for the programme. Tests whether stakeholders' expectations of the programme are realistic in terms of costs, outcomes, resource needs, timetable and general achievability.

Gateway 1: Business Justification –establishes that the project is feasible and that there is a robust high-level business case. Requires a strategic outline business case[22], an outline performance management framework with success criteria and KPIs[23], and an outline Benefits Management Strategy[24].

Gateway 2: Procurement Strategy – assesses the project's viability and whether the project is ready to invite proposals or tenders from the market. Business case benefits management strategies must be fully developed and a project evaluation framework in place before inviting tenders.[25]

Gateway 3: Investment Decision –provides assurances on the processes used to select a supplier. Conducted just prior to contract award.

Gateway 4: Readiness for Service – takes place after all testing (including business integration and business assurance testing) has been completed, and before rollout.

Gateway 5: Benefits Evaluation – generally the final Gateway, occurring after a post-implementation review (PIR[26]). Takes place six to 12 months after the in-service date of the project, by which time benefits should have started accruing. Projects with ongoing service contracts required to conduct periodic post-implementation and Gateway reviews.

The results of Gateway reviews are not made public. They are carried out at the request of the project director and include a confidential report on the status of the project delivered to the board. The decision to keep reports confidential is an important ingredient to the success of the whole process, ensuring full and open participation from the project team during the review.

Advantages of the Gateway Process

A recent review of the Gateway Process by those undertaking reviews and using their results found:

- Gateways are useful part of the project appraisal process and an opportunity to stand back and take an objective look at a programme.
- Review results provide well-articulated areas for improvement and highlight programme strengths.
- The process is viewed as flexible and supportive rather than prescriptive and rigid.
- The process does not significantly delay projects or programmes, and any delays that do occur are seen as positive steps towards making business cases stronger.
- Projects take place in broader legal and institutional contexts that determine their ability to deliver on efficiency goals.

[22] http://www.ogc.gov.uk/sdtoolkit/reference/documentation/p13_buscase.html.

[23] http://www.ogc.gov.uk/sdtoolkit/reference/documentation/p12_success.html.

[24] http://www.ogc.gov.uk/sdtoolkit/reference/documentation/p27_benmgmtstrat.html.

[25] http://www.ogc.gov.uk/sdtoolkit/reference/ogc_library/achievingexcellence/ae8.pdf

[26] http://www.ogc.gov.uk/sdtoolkit/deliveryteam/briefings/businesschange/pir.html

- If the political context changes from the point of the original case study, managers have to be prepared to terminate their projects.
- The Gateway approach allows projects to maintain their strategic fit and to adjust if necessary.

The 2003 review of business cases found that the Gateway process was particularly strong on reviewing programme governance, personnel, management and risk assessment. However, the process placed less emphasis on detailed financial scrutiny of business cases and evaluation of customer propositions, both of which require specialist skills that were particularly scarce at that time.

Departmental Centres of Excellence have since helped to fill this gap by spreading the specialised expertise within departments across multiple projects within the programme portfolio. They also provide internal scrutiny to raise the quality of appraisals. Centre of Excellence staff provide centralised advice to the management board on all projects within a department's portfolio, challenging those projects that are not delivering against objectives or that are not aligned to the departmental business strategy. They are also responsible for embedding best practices within the department and its agencies – including, specifically, best practices in project appraisal and benefits management.

The USA – Enterprise Architecture and Shared Services

The United States federal government will spend over USD 60 billion on ICT technology and systems in 2006. This huge expenditure has led many to ask if ICT investment is providing more than USD 60 billion in value to government agencies and, ultimately, tax payers. The answer is increasingly that nobody knows.

The US federal government began creating a legislative agenda in 1995 with the goal of reducing paperwork, moving from paper-based to electronic transactions, and improving the ICT investment and management processes (see Box 7). This approach to realising benefits from ICT-enabled change has a strong emphasis on technology management through the position of Federal Chief Information Officer (CIO), the use of a federal enterprise architecture, and the development of shared services.

Box 7. E-Government Legislative Framework (USA)

Since the early 1990's, the Congress has passed several laws to promote a more efficient and effective government through the use of technology. These include:

The Paperwork Reduction Act (1995) – minimisees the paperwork burden for individuals, small businesses and others while maximising the utility of information created, collected, maintained, used, shared and disseminated by or for the federal government.

The Clinger-Cohen Act (1996) – requires agencies to link ICT investments to agency accomplishments and establish a process to "select, control, and evaluate" their ICT investments.

Government Paperwork Elimination Act (1998) – requires electronic alternatives to traditional paper-based information collection and dissemination processes.

Electronic Government Act (2002) – creates an Office of E-Government and ICT in the Office of Management and Budget with a federal CIO an,d codifies commitment to customer-focused service development.

President's Management Agenda of Expanding Electronic Government – focuses on leveraging ICT investments (shared services) and user-centred government. There are currently 25 presidential cross-agency e-government initiatives and five lines-of-business initiatives.

Federal and Departmental CIOs

The Federal CIO in the Office of Management and Budget (OMB) and the CIO positions in the cabinet-level departments and large independent agencies have pivotal roles in the management of ICT investments. The Federal CIO oversees implementation of ICT throughout the federal government including advising on the performance of ICT investments, overseeing the development of enterprise architectures within and across agencies, directing the activities of the Chief Information Officer (CIO) Council, and overseeing the usage of the E-Government Fund to support interagency partnerships and innovation. The Federal CIO also has responsibilities in the areas of: capital planning and investment control; information security; privacy; accessibility to ICT for persons with disabilities; and access to, dissemination of, and preservation of government information. CIOs in each department and several independent agencies have a similar mandate within their organisations.

CIOs in some departments are members of senior management and play an important role in ensuring that ICT is used creatively and responsibly to improve the achievement of departmental goals. As such, they provide a bridge between technology and their organisation's business processes in addition to ensuring return on investments in ICT.

This kind of approach may be valuable in other countries as well, as it creates a position that is accountable for a resource area, much like the chief human resources officer is accountable for improving the management of human capital and the chief financial officer is accountable for financial management.

The departmental CIO position has received increased emphasis as a result of many large failures of expensive ICT investments in recent years. CIO positions are increasingly being created in agencies. However, the CIO function leads to the question of who is ultimately responsible for transitioning government and providing funds for changes in products, processes, procedures and organisation. This must lie with business owners, not with the CIO.

Federal Enterprise Architecture

The Federal Enterprise Architecture (FEA) provides OMB and federal agencies with a common framework and language to describe and analyse ICT investments, identify potential shared services and areas of redundancy, and facilitate measurement of the impact of ICT investments.

The FEA is being constructed through a collection of inter-related "reference models" designed to facilitate cross-agency analysis and identification of duplicative investments, gaps, and opportunities for collaboration within and across federal agencies.

The FEA consists of five reference models:

- **Performance reference model** provides a framework to measure the success of ICT investments and their impact on strategic outcomes.
- **Business reference model** provides a functional view of ICT investments based on the government's lines of business.
- **Service component reference model** classifies service components supporting ICT investments and assets.
- **Technical reference model** categorises standards and technologies that support of the delivery of service components.
- **Data reference model** provides a framework for enabling information sharing and re-use.

The development of the FEA is an on-going process. One of the early problems was finding the right level of detail in describing the different reference models; another was analysing detailed data and gaining co-operation from budget examiners in the budget process. However, the FEA has already become a powerful tool in identifying duplicative ICT systems and investments, opportunities for shared services and data, and service components that can be re-used by other agencies.

Development of Shared Services

In the fall of 2001, OMB created 25 cross-agency service initiatives; in 2004 an additional five lines-of-businesses shared service initiatives were created (see Table 13).[27] The basic idea is to identify common solutions and methodologies to decrease duplication, increase operational efficiencies, and improve service delivery.

Experience has shown that it takes between two and three years to develop a shared service, and another year to migrate services to the shared service. The Office of Management and Budget has estimated that these initiatives will have funding of USD 169 million for 2006. However, the financial benefits these initiatives remain unclear. Consolidation of services should reduce the number of duplicative systems being maintained for training, recruitment, travel, human resource management, payroll, etc.

Advantages of the CIO approach to ICT Management

The CIO approach in the federal government has been developed over 10 years. Assessments have shown that the CIO can provide professional management of all ICT resources across an organisation and ensure that the ICT capital planning process is improved. Depending on CIOs' access to senior management in the organisation, they can effectively serve as a bridge between technology and the realisation of organisations' strategic goals[28]. If CIOs are given authority over the organisation's ICT budget, they can enforce the enterprise architecture, and ensure that ICT capital investments have a potentially high return on investment. What they cannot do is ensure that benefits are realised by changing business processes, people, and products.

[27] See http://www.whitehouse.gov/OMB/egov/c-presidential.html for descriptions of initiatives, Federal Transition Framework http://www.whitehouse.gov/OMB/egov/documents/FTF_Usage_Guide_Pilot_Final_June_2006.pdf

[28] Homes, A. (2006) *The Clinger-Cohen Act*, www.cio,com/archive/051506/federal_ICT_sidebar1.html and www.cio.com/archive/051506/federal_ICT.html.

Table 13. The Federal Government's 30 Shared Service Initiatives (USA)

Government to Citizen	Gov.Benefits.gov
	Recreation one-stop
	IRS free file (tax declarations)
	E-Loans
	USA Services
Government to Business	E-Rulemaking
	Expanding electronic tax products
	Federal asset sales
	International trade process streamlining
	Business Gateway
	Consolidated health informatics
Government to Government	Geospatial one-stop
	Disaster management
	SAFECOM
	E-Vital
	Grants.gov
Internal efficiency and effectiveness	E-Training
	Recruitment one-stop
	Enterprise human resources integration
	E-Clearance
	E-Payroll
	E-Travel
	Integrated acquisition environment
	E-Records management
	E-Authentication
	Case management
	Federal health architecture
	Financial management
	Grants management
	Human resources management

The five examples shown above demonstrate the importance of finding common methods and indicators as a resource for project managers and agencies, but also as a way to develop a common language across government and ultimately, to develop comparable estimates. This is the first step. A benefits realisation approach also requires that the results of monitoring and evaluation be fed back into the management process. In the most integrated examples from Canada, the U.K. and the United States, benefits realisation initiatives are also helping ICT projects align their activities with their overall objectives. In its October 2006 report, the U.S. President's Management Council, made up of agency officials that serve in a position comparable to that of a chief operating officer, reported that 73 percent of federal programs now are focusing on and achieving clear goals, up from 45 percent in 2003 (Mandel, 2006).

It is believed that using better management tools will improve the success rate of ICT-enabled projects. However, there are limitations to the extent to which better management can deliver benefits and high benefit/cost ratios. The more difficult problem is how to transform public services and improve benefits through citizen-centred service transformation, shared service development and increasing professionalism within the government ICT community.

Box 8. Lessons Learned Benefits Realisation Management of E-Government Projects

An expert group discussion at the OECD in February 2006 identified the following lessons for benefits realisation management:

- Provide incentive to contain costs: *e.g.* the agency has to finance cost overruns.
- Link continued funding to benefits realisation for projects.
- Take an active approach to benefits management and realisation: benefits actually realised are often different from those forecast in original business case.
- Formalise the commitment and expectation to realise benefits by *i.e.* booking benefits in budget baselines (*e.g.* Canada) or in departmental efficiency plans (*e.g.* UK).
- Shorten payback period as much as possible in order to show results and respond to political imperatives.
- Be careful about how benefits are valued: not all time gains are valued the same way in different organisations.
- Watch out for dispersed benefits that cannot be harnessed (*i.e.* three minutes saved per transaction can add up to a significant amount, but is difficult to re-allocate).

Source : OECD (2006)

CONCLUSION

This report has provided a discussion of the fiscal and management context in which benefits realisation management initiatives are evolving, a description of some of the cost and benefit analysis methods employed in order to improve project outcomes and which countries are using them, and a discussion of how these methods are being used at a government-wide level as part of benefits realisation initiatives in a few OECD countries.

Some may argue that "benefits realisation management" is simply old wine in a new bottle and indeed the methods used as part of benefits realisation management are no different than those cost benefit analysis methods that have long been used for ICT project business cases as well as for non-ICT projects (see Table 5). Indeed many of the 18 countries included in this report would not characterise their e-government cost and benefit analysis activities as benefits realisation initiatives.

Of the five country cases presented in this report, Norway and France have provided frameworks and common methodologies for the cost and benefit analysis of ICT projects. The United States has a much more ambitious, mandatory and public approach, but it is mainly limited to financial benefits and to ICT units that have limited leverage to push business owners to co-operate to maximise benefits. Only a small number of countries, however – notably the UK and Canada – can be characterised as having introduced benefits realisation initiatives in which central governments are trying to use traditional methodologies in a new way to improve ICT project success and overall value achieved. Central to this approach are the following characteristics:

- Focus on outcomes and therefore business objectives;
- Active use of measurement and evaluation as a management tool;
- Identification of strategic milestones in the project lifecycle;
- Standardisation of measures and methodologies;
- Technical assistance in the form of guidance and toolkits;
- The inclusion of both qualitative and quantitative measures of benefits;
- Flexible measures that evolve with changing circumstances and political priorities.

This approach has some important consequences, including greater co-operation between ICT and programme staff, ownership of ICT projects by the business owner, and a value-maximising rather than a "gotcha' " approach to project monitoring and evaluation. A benefits realisation approach may not be the appropriate one for all countries and has yet to demonstrate its value by demonstrating a quantitative increase in project success and/or value where benefits realisation management has been applied. Still, this is one response to the growing size, inter-dependency and complexity of ICT projects – a trend faced by all OECD countries. Australia has recently declared that it will develop a Gateway system modelled on the UK approach, and others are also studying further how to implement benefits realisation initiatives.

What this report has not done is demonstrate the quantitative impact of benefits realisation methodologies on ICT project success and on benefits realised. There are several reasons for this which bear additional consideration:

- **Lack of Data:** Due to the recentness of most benefits realisation initiatives, very little data on cost savings and other outcome indicators is yet available. Even when project data is available, the wide variation of cost and benefit methodologies and indicators used render the data non-comparable at the national level.

- **Incentives for measuring and evaluation:** Where data is available, project managers and national governments are still reluctant to make it public. For the moment, the focus is on improving methodologies and encouraging their use in the hopes of improving project management rather than naming and shaming. The major exception is the United States which publishes a score card on agencies' success in meeting the President's Management Priorities (including e-government). But even the United States does not release detailed outcome data.

- **Hidden costs:** The report demonstrates that cost used in benefits realisation reviews may not represent the full costs of e-government projects as they tend to focus on ICT costs directly related to a project, leaving out the associated process re-engineering and change management costs that are essential for achieving high yields on e-government projects.

- **Hidden benefits:** The report also shows that many of the benefits considered are not easily quantified. Benefits realisation methodologies either seek to include soft, non-financial benefits qualitatively (*e.g.* in the Canadian Outcome Management model) or else try to create proxy indicators of these benefits for decision-making purposes (*e.g.* in the French MAREVA model). The focus on improving project management to achieve sometimes shifting outcomes may sometimes actually work against achieving national comparable data.

- **Reaping versus sowing:** Finally, the project-focus of most benefits realisation initiatives only partly deals with the "reap versus sow" dilemma where benefits are not easily associated with the original ICT investment. By more closely associating the ICT project with the line of business that it is meant to support, benefits realisation initiatives focus on global outcomes rather than deliverables, creating an incentive for business owners to focus on channel management strategies that will allow them to maximise the benefit of ICT projects. Benefits achieved across government, however – either from shared services, processes, or information – remain difficult to capture.

Still, a benefits realisation approach actually seems to be the best hope of overcoming all of these barriers. The 2003 Australian study, cited in chapter 1 of this report, which analysed the benefit/cost rations of 38 e-government programmes concluded that national comparisons were still difficult given the lack of consistent frameworks to measure social benefits, among others. Robust benefits realisation initiatives will begin to provide these frameworks as well as the tools to collect the data. Greater standardisation of methodologies will allow the comparison of priorities across projects and the aggregation of data. It will also make it easier to address the reap versus sow dilemma by providing a common set of tools to identify benefits. As these methodologies become widely-accepted – and widely-used – there will be less fear for project owners of being singled out and greater pressure to publish results.

The OECD can contribute to an improved understanding of whether or not benefits realisation management initiatives actually work by doing analysis in three areas: 1) achieving a consensus on what is an e-government cost; 2) analysing how benefits realisation methodologies can be applied to shared services; and 3) collecting and comparing information from benefits realisation analyses on different rates

of return for different types of e-government projects (*i.e.* automating processes, re-engineering processes, and sharing processes).

First of all, work on defining and collecting e-government cost data will help increase available data and improve data quality by achieving greater consistency in measures. Without adequate cost data, countries do not know how much they have spent on ICT-enabled initiatives; thereby making it impossible to estimate returns on investment, efficiency and effectiveness. Additionally, shared services and consequent shared funding require good data on costs. Information on costs is also necessary for management control of projects.

Secondly, applying benefits realisation management frameworks to shared services, as the Canadian Outcome Management initiative is considering doing, makes the best use of the standard measures and methodologies being developed by most benefits realisation initiatives. This is an extremely timely topic as governments are currently under pressure to roll out shared services such as desktop support and the temptation may be to do so before adequate cost and benefit analyses have been conducted.

Thirdly, benchmarking rates of return for different types of investments should provide a valuable input to project appraisals in OECD countries. For example, data might indicate that the estimated rate of return for a proposed investment is low in comparison with what is achieved in other countries and that higher returns might be possible by including other factors in the project such as re-engineering or integration of front and back offices to increase benefits significantly.

Finally, efforts such as the OECD Indicators Initiative will also help to create more demand for clear and comparable data at the international level. By creating a framework for the collection of indicators at the national level, countries can begin shaping their benefits realisation initiatives with these data needs in mind. Greater discussion among OECD countries is needed to align operational data flowing from project-level analyses to national data needs which will, in turn, benefit international comparisons and benchmarking.

From analysis to implementation: while an integrated approach to benefits realisation management is the most likely, in the long run, to allow governments to track benefits across projects, even the most integrated approach to benefits realisation to date still have their limitations. The fact that most of the countries mentioned are Anglo-Saxon countries is not a coincidence. Benefits realisation methodologies cannot just be dropped into the laps of project managers and be expected to take root. Rather it has to build on an existing culture of cost and benefit analysis and a willingness to at least consider outcome and performance management approaches. Even in the Canadian and UK experiences, building stakeholder support and changing culture have been identified as fundamental to the success of this approach.

The UK government states: "Ultimately it is recognised that there is only so far that guidelines and processes can go in driving out benefits. The methodologies are helpful within the context of a particular project or programme but can be too granular in their application, not taking sufficient account of a bigger picture". [29]

The U.K. report cited above goes on to say that the "bigger picture" is characterised by the need to recognise:

- Virtually every public service depends on large-scale process and technology.
- Many government systems are old and custom-built using costly, obsolete, paper-based and staff-intensive technologies.

[29] E-government unit, Cabinet Office (2006) *UK Approach to Benefits Realisation*.

- The systems are often built around legislation or an organisational mandate rather than the customer. Services are not joined up, but rather emerge as islands with their own data and infrastructure.
- It is important to transform public services and improve the benefits they provide through citizen-centred service transformation, shared service development and increased professionalism within the government ICT community.

Benefits realisation management of ICT projects has developed out of a large number of ICT project failures that are both financially and politically costly, as well as from increasingly tight fiscal environments that require them to produce benefits. These pressures are here to stay. The examples presented in this report show that most countries are only just now starting to grapple with these issues and that, even in those countries that have done the most in developing benefits realisation management methodologies, much more still needs to be done.

APPENDIX A: INVENTORY OF INDICATORS USED IN E-GOVERNMENT BUSINESS CASES

The indicators presented in this Appendix are based on country responses to an OECD questionnaire that was sent out in April 2006 (see Appendix C). The purpose of this exercise was to gather examples of indicators and measurement instruments in actual use in business cases in OECD countries, based on the Checklist of E-Government Costs and Benefits, published in *e-Government for Better Government* (OECD, 2005). Eight countries responded to this questionnaire.

Country examples of E-Government Business Case Indicators

1. AUSTRIA Project: Electronic filing system (ELAK)

1.1. Indicator(s)
Indicator a) Rent for storage space for archived files saved
Indicator b) Costs of transportation/distribution of files saved
Indicator c) Paper and printing costs

1.2. Checklist Theme
Direct cash benefits

1.3. Data Source and collection mechanism
a) The measure is calculated from the internal records on the area rented for the archiving of files.
b) Based on the average number of movements per file, the average time for one movement and average hourly wages, the costs for handling physical files are calculated.
c) Internal records on paper and printing usage

1.4. Indicator(s) Measurements
Cost savings in € per year:
a) 2.400 (calculated rent of 10€ per m² and year)
b) 4.838.400
c) 1.440.000

1.5. Project
Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more):
A. back office automation
B. data collection & distribution networks
Indicators assess the electronic filing system which replaces all paper files in the Austrian federal government.

1.6. Responsible Government Body / Beneficiary
1.6.1. Name responsible government body: Which government body(ies) is responsible for delivering the benefit measured by this indicator?
The indicator was measured within the Austrian Federal Chancellery by itself.
1.6.2. Name beneficiary government body: Which government body(ies) receives the benefit measured by this indicator?
Federal Chancellery
1.6.3. Is the cost or benefit government-wide?
Cited benefits only apply to the Federal Chancellery but since the electronic filing system is used in all ministries, depending on the size, similar effects can be expected.

1.7. Timeframe and Milestones
1.7.1. What was the timeframe for the collection of data on the indicator?
n/a
1.7.2. Were there any milestones identified for checking progress of the project before the end of the timeframe?
n/a

1.8. Use of information
The indicator was used to support the business case of the records keeping system.

1.9. Description (+ reference citation and source of analysis)
Provide a short description of results and difficulties identified and cite the source of analysis.
n/a

2. AUSTRIA Project: Central Register of Residence

1.1. Indicator(s)

a) Additional revenue from delivery of new services
b) Time savings for public servant
c) Time savings for citizens

1.2. Checklist Theme

a) Direct cash benefits
b) Efficiency savings (monetisable)
c) Better services for citizens

1.3. Data Source and collection mechanism

a) Number of logged private-sector inquiries to the Central Register of Residence (CRR) multiplied by fee charged.
b)+c) Processing time difference between old, paper based process and new online process, calculated by aggregation of average time per process steps [b): multiplied by average hourly wage].

1.4. Indicator(s) Measurements

a) Revenue from transactions by private businesses: € 2.5 mln. per year.
b) Depending on response time/usage of the system: seconds instead of hours
c) 15 min instead of up to three days

1.5. Project

Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more):

C. back office automation
D. data collection & distribution networks

The CRR holds the personal data (name, birth date, address) of all residents in Austria. In the context of e-government it is used to unambiguously establish/confirm the identity of a person.

1.6. Responsible Government Body / Beneficiary

1.6.1. Name responsible government body: Which government body(ies) is responsible for delivering the benefit measured by this indicator?

Federal Ministry of the Interior

1.6.2. Name beneficiary government body: Which government body(ies) receives the benefit measured by this indicator?

Public sector authorities on all administrative levels, mainly local administrations and cities

1.6.3. Is the cost or benefit government-wide?

Yes

1.7. Timeframe and Milestones

1.7.1. What was the timeframe for the collection of data on the indicator?

n/a

1.7.2. Were there any milestones identified for checking progress of the project before the end of the timeframe?

n/a

1.8. Use of information

The indicator was used to support the business case of the CRR and point out its value to local communities (who legally possess the residence data).

1.9. Description (+ reference citation and source of analysis)

Provide a short description of results and difficulties identified and cite the source of analysis.

n/a

3. BELGIUM	BUILDING COMMON E-GOV APPLICATIONS
1.1. Indicator(s) Provide the relevant measure	A quantitative or qualitative measure used to show the degree of presence of an observable fact (*i.e.* level of Internet penetration) and/or gauge progress towards an agreed-upon objective (*i.e*. meeting a minimum threshold rate of satisfaction). Level of reuse of the provided ICT solution (example eID)
1.2. Checklist Theme Under which theme(s) does the measure fall?	See Annex to this questionnaire – E-Government Cost and Benefit Checklist Efficiency
1.3. Data Source and collection mechanism List the sources and availability of data	The data source and method of data collection (i.e. survey, budget process, administrative data) to assess project progress and/or outcome(s). How often is indicator data available? The estimation is based on the potential use of the e-government component by administration + numbers of potential applications using this egov component. Then when the project is ended, follow up is conducted to evaluate the current level of use of this component by administrations + other sectors.
1.4. Indicator(s) Measurements Provide the results of the evaluation against this measure	Direct and measurable results expected from the project to attain the purpose of the project and its outputs. All administrations, the all sectors using applications with eID (example banks)
1.5. Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **E.** back office automation **F.** data collection & distribution networks **G.** information & e-services **H.** e-participation	A project is a temporary endeavour undertaken to create a unique product or service ideally characterized by specific objectives, planned activities, a scheduled completion date, and an established budget with a specified source of funding. EID is categorised in our portfolio as a e-management project (egov component) involving A°B°C and e-participation in the long run…
1.6. Responsible Government Body / Beneficiary 1.6.1. Name responsible government body: Which government body(ies) is responsible for <u>delivering</u> the benefit measured by this indicator? 1.6.2. Name beneficiary government body: Which government body(ies) <u>receives</u> the benefit measured by this indicator? 1.6.3. Is the cost or benefit government-wide?	Refers to both central (consisting of Parliament, Departments and Ministries) and local government (City Councils and Municipalities). Fedict is responsible to develop a shared ICT Infrastructure to support e-government projects “end users” All administrations To soon to be measured with a standardised methodology…and estimations are very rare and with poor quality of data
1.7. Timeframe and Milestones 1.7.1. What was the timeframe for the collection of data on the indicator? 1.7.2. Were there any milestones identified for checking progress of the project before the end of the timeframe?	Project intended results – what has been accomplished at various stages of the project. Average 3 days, but depending of the quality of the preparation and market reseach within the business case.
1.8. Use of information Describe how the indicator was used.	To evaluate relevance of the business case to help top management to make a decision of GO / NO GO to launch the project.
1.9. Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	Reference citations and source of analysis should briefly cover relevant information such as facts, statistics, background information, etc. and should be sufficiently specific for the OECD to find follow-up information on the indicator if needed, including urls, bibliographical citations or a contact name and contact information. See guidance in annex

4. DENMARK	DANISH AGENCY FOR GOVERNMENTAL MANAGEMENT
1.1 Indicator(s) Provide the relevant measure	1. At least 95 pct. of all companies use eGovernment services by the end of 2006. 2. Time saving of public servants 3. Reduced fraud 4. Reduced publication and distribution costs 5. Tendering
1.2 Checklist Theme Under which theme(s) does the measure fall?	1. Benefits to government, cost to government, benefits to users and cost to users. 2. Benefits to government 3. Benefits to government 4. Benefits to government, benefits to users 5. Cost to government
1.3 Data Source and collection mechanism List the sources and availability of data	1. Data is gathered by Statistics Denmark. 2. Separate analysis done e.g. on NemKonto 3. Separate analysis done e.g. on eIncome 4. Separate analysis done e.g. on eDays 5. Separate analysis done e.g. on FESD
1.4 Indicator(s) Measurements Provide the results of the evaluation against this measure	1. 87 pct. at the end of 2005. 2. Huge savings through fewer people handling checks etc. 3. Saving of around euro 50 mill. each year 4. Huge savings through lower publication and distribution cost on documents, publications etc. 5. Reduced cost to running tenders. Prices on Electronic Document System licenses (FESD) fell to half.
1.5 Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): back office automation data collection & distribution networks information & e-services e-participation	1. Information & e-services (C) and e-participation (D). 2. Back office automation (A) and Data collection & distribution networks (B) 3. Back office automation (A) and Data collection & distribution networks (B) 4. Data collection & distribution networks (B) and Information & e-services (C) 5. ?
1.6 Responsible Government Body / Beneficiary 1.6.1 Name responsible government body: Which government body(ies) is responsible for delivering the benefit measured by this indicator? 1.6.2 Name beneficiary government body: Which government body(ies) receives the benefit measured by this indicator? 1.6.3 Is the cost or benefit government-wide?	1. 1) All authorities dealing with companies, 2) All authorities dealing with companies, 3) The benefit is for all authorities dealing with companies. 2. 1) Danish Agency for Governmental Management, 2) Most public sector authorities, 3) Almost. 3. 1) National Directorate of Labour 2) Lower payment has to be done by the Unemployment Insurance Funds, which in the end mean lower cost for the Ministry of Finance, 3) No. 4. 1) All authorities, 2) All authorities, 3) Yes. 5. 1) The Digital Taskforce -> The Danish Agency for Governmental Management, 2) All authorities buying Electronic Document Systems through the frame contract established, 3) Prices dropped on all suppliers licensed in this area making the benefits government wide.
1.7Timeframe and Milestones 1.7.1 What was the timeframe for the collection of data on the indicator? 1.7.2 Were there any milestones identified for checking progress of the project before the end of the timeframe?	1. Data was collected at the end of 2005. 2) Data is collected each year. 2. The analysis was originally done in 2003/2004. 2) Yes. 3. The business case was done in 2004. 2) The project is still under way. 4. The business case was done in 2002 and 2004. 2) Yes. 5. The business case was done in 2003. The use of the framework contract is checked each year through Statistics Denmark. 2) Yes.
1.8 Use of information Describe how the indicator was used.	1. The board of eGovernment was informed. 2. The indicator showed huge savings by implementing NemKonto. This information was used to get approval of the project. 3. The indicator showed huge savings by implementing eIncome. This information was used to get approval of the project. 4. The indicator showed huge savings by implementing eIncome. This information was used to get approval of the project. The harvesting of savings was followed up through different initiatives. 5. The indicator showed huge savings by implementing FESD. This information was used to get approval of the project and for getting authorities to use the frame contract.
1.9 Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	1. See "Strategi for digital forvaltning 2004-06" which can be downloaded from www.e.gov.dk. 2. The Danish Agency for Governmental Management. 3. Ministry of Finance 4. The Digital Taskforce (see www.e.gov.dk/eday) 5. The Digital Taskforce (see www.e.gov.dk/fesd) and the Danish Agency for Governmental Management.

5. IRELAND	DCMNR Seafarer's Information System Project
1.1 Indicator(s) Provide the relevant measure	2 main indicators were used: Perceived Usefulness Perceived Ease of Use
1.2Checklist Theme Under which theme(s) does the measure fall?	For the 2 main indicators used, these are the themes from the Annex: Time-based non-monetary benefits Value-based non-monetary benefits
1.3 Data Source and collection mechanism List the sources and availability of data	A user survey was carried out where the users had to rate the new application against each of the 2 indicators above.
1.4 Indicator(s) Measurements Provide the results of the evaluation against this measure	The users rated the new system's Perceived Usefulness on a 5-point scale, and on average the users rated the system as "Strongly Agree" (Point 1 on the 5 point scale) with its Perceived Usefulness Similarly, on the same 5 point scale, the users rated the system as "Strongly Agree" (Point 1 on the 5 point scale) with its Perceived Ease of Use
1.5 Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **M.** back office automation **N.** data collection & distribution networks **O.** information & e-services **P.** e-participation	The Seafarers Information System Project is a small project carried out in the Department of Communications, Marine & Natural Resources in Dublin to create a centralised database of all Irish Seafarers. The project sought to improve the data management of the Department and store all data electronically. It involves **A**, **B** and **C**.
1.6 Responsible Government Body / Beneficiary Name responsible government body: Which government body(ies) is responsible for <u>delivering</u> the benefit measured by this indicator? Name beneficiary government body: Which government body(ies) <u>receives</u> the benefit measured by this indicator? Is the cost or benefit government-wide?	The Department of Communications, Marine & Natural Resources (central Government Agency). The Department of Communications, Marine & Natural Resources (central Government Agency). No.
1.7 Timeframe and Milestones What was the timeframe for the collection of data on the indicator? Were there any milestones identified for checking progress of the project before the end of the timeframe?	Over a 2 day review. Yes, regular Project Steering Committee review meetings.
1.8 Use of information Describe how the indicator was used.	These indicators were used to feed into further projects and verified the effectiveness of the approach to the project by the project team.
1.9 Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	On the business side, the system has increased productivity by 50%, while at the same time increasing the accuracy and accessibility of the Seafarers system. Seafarers has lead to the modernisation of the Division. The new system also improves the data management of the Division. All data which was previously stored in hard copy can now also be stored electronically. This greatly improves the efficiency of the office, by easily being able to collate data for EU Reports and Questionnaires from the European Maritime Safety Agency (EMSA) and possible Parlimentary Questions. The system also achieved improvements in processing efficiency, input screens, data integrity as well as accuracy and access to information.

6. IRELAND	DCMNR Integrated Petroleum Affairs System Project
1.1. Indicator(s) Provide the relevant measure	This project is not yet complete but the following 4 main indicators for the post-implementation review have been defined as follows: 1. Improved Service Delivery 2. Improved Information 3. Improved Efficiency 4. Perceived Usefulness
1.2. Checklist Theme Under which theme(s) does the measure fall?	Of the 4 indicators to be used, these are the themes from the Annex: 1. Time-based non-monetary benefits 2. Value-based non-monetary benefits 3. Efficiency savings (monetisable benefits) 4. Value-based non-monetary benefits
1.3. Data Source and collection mechanism List the sources and availability of data	A post-implementation review will be carried out which will both survey users and carry out some metric measurements of 4 categories above.
1.4. Indicator(s) Measurements Provide the results of the evaluation against this measure	The IPAS project is almost complete but the post-implementation review will be carried out only at project completion, which is approximately 3 months from now.
1.5. Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **A** back office automation **B**data collection & distribution networks **C** information & e-services **D** e-participation	The Integrated Petroleum Affairs System Project is a project designed to improve the process of petroleum and gas licensing by introducing a new improved information management system. The project is seeking to improve the information management of the Division and offer better data to the Divisions customers. It involves each of **A**, **B, C** and **D**.
1.6. Responsible Government Body / Beneficiary 1.6.1. Name responsible government body: Which government body(ies) is responsible for <u>delivering</u> the benefit measured by this indicator? 1.6.2. Name beneficiary government body: Which government body(ies) <u>receives</u> the benefit measured by this indicator? 1.6.3. Is the cost or benefit government-wide?	The Department of Communications, Marine & Natural Resources (central Government Agency). The Department of Communications, Marine & Natural Resources (central Government Agency). No.
1.7. Timeframe and Milestones 1.7.1. What was the timeframe for the collection of data on the indicator? 1.7.2. Were there any milestones identified for checking progress of the project before the end of the timeframe?	It will be a 1 week review process. Yes, regular Project Steering Committee review meetings.
1.8. Use of information Describe how the indicator was used.	These indicators will be used to feed into further projects and verify the effectiveness of the project approach.
1.9. Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	The IPAS project is almost complete but the post-implementation review will be carried out only at project completion, which is approximately 3 months from now.

7. IRELAND	DAF Providing Internet Access to Farmers
1.1 Indicator(s) Provide the relevant measure	Number of registrations for eServices
1.2 Checklist Theme Under which theme(s) does the measure fall?	Checklist 2 – benefits to users Checklist 3 – Costs to government Checklist 4 – costs to users
1.3 Data Source and collection mechanism List the sources and availability of data	Single Payment Scheme system – application summary detail, payments and spatial data.
1.4 Indicator(s) Measurements Provide the results of the evaluation against this measure	Number of SPS clients who have registered for eServices
1.5 Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **A** back office automation **B** data collection & distribution networks **C** information & e-services **D** e-participation	c. information & e-services Providing internet access to the farmer to view his Single Payment Scheme application, maps and associated documents
1.6 Responsible Government Body / Beneficiary 1.6.1 Name responsible government body: Which government body(ies) is responsible for <u>delivering</u> the benefit measured by this indicator? 1.6.2 Name beneficiary government body: Which government body(ies) <u>receives</u> the benefit measured by this indicator? 1.6.3 Is the cost or benefit government-wide?	1.6.1.Department of Agriculture Ireland 1.6.2.Department of Agriculture Ireland 1.6.3 Yes – benefit is government wide but cost is particular to the department.
1.7 Timeframe and Milestones 1.7.1 What was the timeframe for the collection of data on the indicator? 1.7.2 Were there any milestones identified for checking progress of the project before the end of the timeframe?	1.7.1 Since 2002 to date 1.7.2 Many milestones were identified throughout the project but most would be relevant to the actual business implementation and not as a primary goal of providing eServices.
1.8 Use of information Describe how the indicator was used.	Indicator was used to bring about process change and change management was a significant element of the overall project.
1.9 Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	N/A – All sources internal to the organisation

8. IRELAND	DFA New Irish Passport System
1.1. Indicator(s) Provide the relevant measure	Improved risk management, Greater confidence and certainty of transaction
1.2. Checklist Theme Under which theme(s) does the measure fall?	Risk benefits, Improved reliability
1.3. Data Source and collection mechanism List the sources and availability of data	Benchmarking against comparative systems worldwide
1.4. Indicator(s) Measurements Provide the results of the evaluation against this measure	Impact on system throughput measured
1.5. Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **A.** back office automation **B.** data collection & distribution networks **C.** information & e-services **D.** e-participation	New Irish Passport System – Development of a more secure Irish passport on a new system scalable to match increased passport demand. Back office automation.
1.6. Responsible Government Body / Beneficiary **1.6.1.** Name responsible government body: Which government body(ies) is responsible for <u>delivering</u> the benefit measured by this indicator? **1.6.2.** Name beneficiary government body: Which government body(ies) <u>receives</u> the benefit measured by this indicator? **1.6.3.** Is the cost or benefit government-wide?	 Department of Foreign Affairs. Department of Foreign Affairs. No.
1.7. Timeframe and Milestones **1.7.1.** What was the timeframe for the collection of data on the indicator? **1.7.2.** Were there any milestones identified for checking progress of the project before the end of the timeframe?	During pilot & within 6 months of completion of the project. Issue was under review through a pilot phase.
1.8. Use of information Describe how the indicator was used.	The information on the project results was used: i.e. to support the business cases of the agency, and to initiate changes in other areas within the agency. he indicator has particular relevance to central government?
1.9. Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	Further information available from the Passport Officer, Passport Office, Molesworth St.Dublin2

9. IRELAND	**Revenue Online Service**
1.1. Indicator(s) Provide the relevant measure	▪ File 50% of business returns and 75% of payments electronically by December 2005 ▪ Make the Revenue On-Line Service (ROS) our customers preferred method of doing business ▪ Move 30% of staff from customers service work to compliance work by December 2007
1.2. Checklist Theme Under which theme(s) does the measure fall?	The measures fall under the 4 categories: ▪ Benefits to Government ▪ Benefits to User ▪ Costs to Government ▪ Costs to User
1.3. Data Source and collection mechanism List the sources and availability of data	Project progress is indicated by the number of returns and payments processed through the ROS Service.
1.4. Indicator(s) Measurements Provide the results of the evaluation against this measure	In 2005, 65% of business returns were filed electronically and payments totalling €12.1 billion were received through ROS. Substantial savings have accrued on postage, printing and processing/amending costs of returns and Revenue conservatively calculates these as a result of ROS for the calendar year 2005 at €10.6 million.
1.5. Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **A.** back office automation **B.** data collection & distribution networks **C.** information & e-services **D.** e-participation	Revenue Online Service information & e-services.
1.6. Responsible Government Body / Beneficiary **1.6.1.** Name responsible government body: Which government body(ies) is responsible for <u>delivering</u> the benefit measured by this indicator? **1.6.2.** Name beneficiary government body: Which government body(ies) <u>receives</u> the benefit measured by this indicator? **1.6.3.** Is the cost or benefit government-wide?	Revenue and Department of Finance Revenue and Department of Finance Yes. Revenue has value for payments in the bank earlier. Savings on postage and processing costs as a result of the take up of the services is estimated at €6.5 million in 2004 and over €10.5 million in 2005.
1.7. Timeframe and Milestones **1.7.1.** What was the timeframe for the collection of data on the indicator? **1.7.2.** Were there any milestones identified for checking progress of the project before the end of the timeframe?	Project commenced in September 2000 and targets set out in our Statement of Strategy were to be achieved by December 2005. As part of business planning process, key performance indicators are put in place and checked regularly (at least quarterly).
1.8. Use of information Describe how the indicator was used.	The introduction of ROS has enabled Revenue to release many staff resources from routine processing of returns to other duties. It is intended that up to an additional 30% of staff will be moved to compliance work by the end of 2007. Revenue has been pursuing an electronic solution for data capture and risk analysis for its audit and compliance programme. The introduction of ROS acted as a catalyst for the capture of detailed information stored in accounts and balance sheets for all customers.
1.9. Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	In 2005, 65% of business returns were filed electronically and payments totalling €12.1 billion were received through ROS. The ROS Customer Information Service gives customers access to their Revenue account. This service received 4.2 million requests for information in 2005. The huge take up of ROS had lead to problems the previous year as the infrastructure in place was not designed to handle such large volumes of transactions.

10. IRELAND	**Revenue Online Service**
1.1 Indicator(s) Provide the relevant measure	Improvement in process, flow of information, quality of information and timeliness
1.2 Checklist Theme Under which theme(s) does the measure fall?	See Annex to this questionnaire – E-Government Cost and Benefit Checklist
1.3 Data Source and collection mechanism List the sources and availability of data	Collected annually at estimates time – it is an internal process.
1.4 Indicator(s) Measurements Provide the results of the evaluation against this measure	More efficiency, accuracy, timeliness and an improved process
1.5 Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **A** back office automation **B** data collection & distribution networks **C** information & e-services **D** e-participation	eEstimates A and B.
1.6 Responsible Government Body / Beneficiary **1.6.1** Name responsible government body: Which government body(ies) is responsible for delivering the benefit measured by this indicator? **1.6.2** Name beneficiary government body: Which government body(ies) receives the benefit measured by this indicator? **1.6.3** Is the cost or benefit government- wide?	 Department of Finance / Treasury Department Department of Finance / Treasury Department and other Government departments in the process. Yes but more to the Treasury Department.
1.7 Timeframe and Milestones 1.7.1 What was the timeframe for the collection of data on the indicator? Were there any milestones identified for checking progress of the project before the end of the timeframe?	 A yearly process in Government
1.8 Use of information Describe how the indicator was used.	To assign and monitor expenditures to Departments and agencies.
1.9 Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis	Simplifying the estimates process, making the recording of information more efficient and using capacity freed for qualitative work.

11. KOREA	**Informatization of City/Provincial Administration**
1.1Indicator(s) Provide the relevant measure	Number of tasks at the city/provincial administrative level that have been converted and linked to the system ※ Number of tasks previously reported by hand that have become automatically available through linking the systems used by the central government agencies, city/provincial authorities, and local municipal authorities.
.1.2 Checklist Theme Under which theme(s) does the measure fall?	
1.3 Data Source and collection mechanism List the sources and availability of data	Performance results of programs developed for link to system
1.4 Indicator(s) Measurements Provide the results of the evaluation against this measure	100% achievement of targeted performance for Q1 2006 [i.e.] * Performance Target for 2006 (Number of tasks linked to the system) - 75 in Q1, 89 in Q2, 94 in Q3, 137 in Q4 (Total: 395) * Performance Results in Q1 : 75 tasks identified for link to system - Construction and housing (13 tasks/100%) - National Assembly (24 tasks/100%) - Health and welfare (38 tasks/82%)
1.5Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **Q.** back office automation **R.** data collection & distribution networks **S.** information & e-services **T.** e-participation	B. back office automation C. data collection & distribution networks Project for developing and distributing a standardized administrative information system to all the 16 cities/provinces and 234 local municipal autonomies in order to promote local e-government through strengthening the linkage among central agencies, cities/provinces, and local municipal authorities
1.6 Responsible Government Body / Beneficiary Name responsible government body: Which government body(ies) is responsible for delivering the benefit measured by this indicator? Name beneficiary government body: Which government body(ies) receives the benefit measured by this indicator? Is the cost or benefit government-wide?	1.6.1 Ministry of Government Administration and Home Affairs 1.6.2 All 250 local governments, and all 48 central agencies that receive reports from local governments
1.7 Timeframe and Milestones What was the timeframe for the collection of data on the indicator? Were there any milestones identified for checking progress of the project before the end of the timeframe?	1.7.1 Data is collected every end of quarter 1.7.2 Intermediate progress check is performed every quarter
1. 8 Use of information Describe how the indicator was used.	To support the business case for the Roadmap Task "Realizing Local E-Government"
1.9 Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	Source of data: all local government portals Contact information: Lee Haewon (Deputy Director for Administration Informatization Team, e-Government Headquarters, MOGAHA) europa@mogaha.go.kr

12. KOREA	**Online Citizen Participation System**
1.1. Indicator(s) Provide the relevant measure	Number of government agencies that have been integrated into the online citizen participation system
1.2. Checklist Theme Under which theme(s) does the measure fall?	
1.3. Data Source and collection mechanism List the sources and availability of data	Official document confirming the integration of the agency system or progress report on the extended application of the online participation system
1.4. Indicator(s) Measurements Provide the results of the evaluation against this measure	Comparison of target performance achievement every six months (in 2006) * Number of government agencies to be integrated into system: - 30 by June 2006 - 55 by December 2006
1.5. Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **A.** back office automation **B.** data collection & distribution networks **C.** information & e-services **D.** e-participation	D. e-participation Project that aims to build a pan-government web-based single window for effective processing of citizen complaints and proposals and promote active citizen participation in policy making
1.6. Responsible Government Body / Beneficiary 1.6.1. Name responsible government body: Which government body(ies) is responsible for delivering the benefit measured by this indicator? 1.6.2. Name beneficiary government body: Which government body(ies) receives the benefit measured by this indicator? 1.6.3. Is the cost or benefit government-wide?	1.6.1 Ministry of Government Administration and Home Affairs, The Ombudsman of Korea 1.6.2 All Central government agencies, local government agencies, and public agencies 1.6.3 Government-wide benefits
1.7. Timeframe and Milestones 1.7.1. What was the timeframe for the collection of data on the indicator? 1.7.2. Were there any milestones identified for checking progress of the project before the end of the timeframe?	1.7.1 Data collected every six months 1.7.2 Intermediate progress check performed every six months
1.8. Use of information Describe how the indicator was used.	To support the business case for the Roadmap Task "Promotion of Online Citizen Participation" and to initiate improvement in administrative process
1.9. Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	Source of data : www.epeople.go.kr Contact information: Huh Jung-Hee (Deputy Director of Service Informatization Team, e-Government Headquarters, MOGAHA) jhhuh@mogaha.go.kr

13. KOREA	**G4C**
1.1. Indicator(s) Provide the relevant measure	Increase in number of online civil applications by 30% compared to the previous year on a year-on-year basis
1.2. Checklist Theme Under which theme(s) does the measure fall?	
1.3. Data Source and collection mechanism List the sources and availability of data	Extracted by statistical programs operated in the G4C system
1.4. Indicator(s) Measurements Provide the results of the evaluation against this measure	100% achievement of targeted performance for Q1 2006 * Performance Target for Q1 2006 - 3,089,010 applications received by Q1 * Performance Results in Q1 : Over 300% increase compared to same period in the previous year - Number of applications in Q1 2005 : 792,872
1.5. Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **A.** back office automation **B.** data collection & distribution networks **C.** information & e-services **D.** e-participation	C. information & e-services This project aims to enhance convenience in administrative services by minimizing the number of visits to government offices by citizens in order to take care of their civil administrative affairs. The single window for online administrative applications enables citizens to retrieve information on various administrative services provided online, make applications online, view results of applications, and print out certification documents issued by the government from home.
1.6. Responsible Government Body / Beneficiary 1.6.1. Name responsible government body: Which government body(ies) is responsible for delivering the benefit measured by this indicator? 1.6.2. Name beneficiary government body: Which government body(ies) receives the benefit measured by this indicator? 1.6.3. Is the cost or benefit government-wide?	1.6.1 Ministry of Government Administration and Home Affairs 1.6.2 Local governments(city/provinces, town/county/districts) and central government agencies 1.6.3 Government-wide
1.7. Timeframe and Milestones 1.7.1. What was the timeframe for the collection of data on the indicator? 1.7.2. Were there any milestones identified for checking progress of the project before the end of the timeframe?	1.7.1 Data collected every end of quarter
1.8. Use of information Describe how the indicator was used.	Applied to select further roadmap tasks for providing sophisticated online application services
1.9. Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	Source of data: www.egov.go.kr Contact information: Lee Seung-Hee (Deputy Director for System Innovation Team, Government Innovation Headquarters, MOGAHA) kcslsh07@mogaha.go.kr

13. KOREA	Administrative Information Sharing
1.1. Indicator(s) Provide the relevant measure	Number of administrative information available for shared use(Increase in number of types of documents that are verifiable through the shared system so that applicants(citizens) no longer need to submit additional documents since public servants can view the necessary documents on the shared system)
1.2. Checklist Theme Under which theme(s) does the measure fall?	
1.3. Data Source and collection mechanism List the sources and availability of data	- Final Report on the Shared System Development Project - Results of the pilot operation of the shared system - 『Present Status and Plans for Administrative Information Sharing』 MOGAHA & Administrative Information Sharing Promotion Committee, December 2005
1.4. Indicator(s) Measurements Provide the results of the evaluation against this measure	- As of January 2006: 24 types of documents (resident registration information etc.) available for shared use - By August 2006: 34 types of documents (drivers license etc.) available for shared use - By December 2006: 40 types of documents (removal from registration etc.) available for shared use
1.5. Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **A.** back office automation **B.** data collection & distribution networks **C.** information & e-services **D.** e-participation	B. data collection & distribution networks C. information & e-services This project aims to build a framework system to enlarge the scope of information and agencies subject to information sharing, to establish countermeasures to prevent overuse or misuse of information, and to extend the application of the system to financial and other private institutions. The system also provides necessary statistical information to all system users.
1.6. Responsible Government Body / Beneficiary 1.6.1. Name responsible government body: Which government body(ies) is responsible for delivering the benefit measured by this indicator? 1.6.2. Name beneficiary government body: Which government body(ies) receives the benefit measured by this indicator? 1.6.3. Is the cost or benefit government-wide?	1.6.1 Ministry of Government Administration and Home Affairs, Administrative Information Sharing Promotion Committee (chairperson: Prime Minister) 1.6.2 The benefits of the service will be extended in phases: Central and local governments →public agencies (government invested institutions, public corporations) → banks and other financial institutions 1.6.3 Government-wide
1.7. Timeframe and Milestones 1.7.1. What was the timeframe for the collection of data on the indicator? 1.7.2. Were there any milestones identified for checking progress of the project before the end of the timeframe?	1.7.1 End of every pertinent target month
1.8. Use of information Describe how the indicator was used.	Applied for innovation of civil affairs services and business processes for institutions using the system
1.9. Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	Source of data: 『Present Status and Plans for Administrative Information Sharing』 MOGAHA & Administrative Information Sharing Promotion Committee, December 2005 Contact information: Chung Na-Young (Deputy Director for System Establishment Support Team, Government Information Sharing Committee, MOGAHA) happysmile@mogaha.go.kr

14. KOREA	**Information Village**
1.1. Indicator(s) Provide the relevant measure	- PC distribution rate and performance results of ICT training for village residents after establishment of Information Village - Sales performance (increase in income of residents) through e-commerce of local specialty goods Number of ICT training for village residents
1.2. Checklist Theme Under which theme(s) does the measure fall?	
1.3. Data Source and collection mechanism List the sources and availability of data	- Performance results on operation of Information Villages (i.e. PC distribution rate and ICT training performance results information provided by the local communities and information villagers) Information Village online shopping mall (www.invil.com) operation system
1.4. Indicator(s) Measurements Provide the results of the evaluation against this measure	(1) PC distribution rate - 1st stage : 25 villages / 22,468 households distributed with PCs / 72 % (PC distribution rate) - 2nd stage : 78 villages / 2,722 households distributed with PCs / 66.3% (PC distribution rate) - 3rd stage : 88 villages / 6,844 households distributed with PCs / 69.2% (PC distribution rate) - 4th stage : 89 villages / 5,475 households distributed with PCs / 58.5% (PC distribution rate) (2) ICT training of village residents - 1st stage : 18,332 residents trained - 2nd stage : 40,606 residents trained - 3rd stage : 27,210 residents trained - 4th stage : 11,271 residents trained (3) Online commerce sales - 2002 : 73,743,000 KRW 2003 : 620,382,000 KRW - 2004 : 1,021,590,000 KRW 2005 : 1,716,135,000 KRW
1.5. Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): A. back office automation B. data collection & distribution networks C. information & e-services D. e-participation	C. information & e-services Project aimed to reduce digital divide and promote economic development in the rural areas via improvement of information usage environment through establishment of high-speed Internet networks and distribution of PCs to rural and fishery communities which are alienated from ICT technology. Also aims to extend the customer basis for e-government services by forming a culture for using online information over the Internet and by forming local communities in cyberspace.
1.6. Responsible Government Body / Beneficiary 1.6.1. Name responsible government body: Which government body(ies) is responsible for delivering the benefit measured by this indicator? 1.6.2. Name beneficiary government body: Which government body(ies) receives the benefit measured by this indicator? 1.6.3. Is the cost or benefit government-wide?	1.6.1 Ministry of Government Administration and Home Affairs 1.6.2 All 280 local governments(city/provinces, town/county/districts) – as of December 2005, a total of 280 Information Villages have been established 1.6.3 Government-wide
1.7. Timeframe and Milestones 1.7.1. What was the timeframe for the collection of data on the indicator? 1.7.2. Were there any milestones identified for checking progress of the project before the end of the timeframe?	1.7.1 Every year (once) 1.7.2 Intermediate evaluation of performance on project operation since 2005
1.8. Use of information Describe how the indicator was used.	Used for benefit analysis in terms of narrowing digital divide and promoting use of online information in everyday life in agricultural and fishery communities. Used for evaluating local community competitiveness such as in terms of increased income from informatization
1.9. Description Provide a short description of results and difficulties identified and cite the source of analysis.	Data source: www.invil.org Contact information: Lee Dae-Young (Deputy Director for Service Information Team, E-Government Headquarters, MOGAHA) dylee@mogaha.go.kr

15. MEXICO SEVERAL PROJECTS	
1.1 Indicator(s) Provide the relevant measure Several indicators that were reported were related to the achievement of non-ICT goals. For instance, IMSS and CONACYT mention the percentage of patients assisted or the percentage of scholarships as indicators. The assumption here might be that if those program indicators are successful, then e-Government is doing its job. SRE and eMexico measure the number of users of ICT initiatives, such as the Indicator of the official electronic documents emitted for consular affairs (visas, passports and Matrículas), the number of Digital Communitary Center (CCD's) installed, number of visitors to the CCD's and number of visitors to the e-Mexico web portal. SEGOB measures the signal distribution and monitoring (coverage) of its media initiatives. The Oficina Jurídica de la Presidencia uses two indicators related with time use: decrease in time spent in data search, and time that public servants save doing their duties. SEMARNAT developed a Five Star Indicator for the Strategic Program of Information Technologies and Communications (PETIC). It measures the technology gaps. NAFIN uses NPV (Net Present Value), IRR (Internal Rate of Return) and Payback indicators.	A quantitative or qualitative measure used to show the degree of presence of an observable fact (*i.e.* level of Internet penetration) and/or gauge progress towards an agreed-upon objective (*i.e.* meeting a minimum threshold rate of satisfaction).
1.2 Checklist Theme Under which theme(s) does the measure fall? • Time saving of public servants • Benefits to government • Direct cash benefits • Enhanced customer service • Enhanced policy alignment and outcomes • Allows more, greater and new data to be collected • Reduces user time • Improved interactive communication, particularly between government and remote communities. • Faster and easier access to information	See Annex to this questionnaire – E-Government Cost and Benefit Checklist
1.3 Data Source and collection mechanism List the sources and availability of data It varies: Central database of the Consular Administration Integral System (SIAC) for the case of the SRE Budget process and Administrative data for IMSS. SEMARNAT, ICT Project Management office reports and the ICT Quality Management System Consejería Jurídica de la Presidencia - Informatics Subdirection SEGOB uses user surveys and administrative data. NAFIN collects data from the budget and the cost estimation of each project.	The data source and method of data collection (i.e. survey, budget process, administrative data) to assess project progress and/or outcome(s). How often is indicator data available?
1.4 Indicator(s) Measurements Provide the results of the evaluation against this measure SRE measures the Percentage of electronic documents issued electronically against the number of documents not issued electronically. SEMARNAT needs to achieve four stars from the five possible of the indicator to sustain and deliver a stable ICT deployment and reach all its benefits. When the indicator was first calculated the first measurement was 1.7 today they are just over 3 and the goal is still to end the term reaching four stars Consejería Jurídica of the Presidency achieved a decrease in search time. SEGOB has received scores of 8 and 9 out of 10 in quality delivery, from their users. Also it has observed a decrease in response time and a dramatic increase in the number of documents and services submitted in electronic form. For NAFIN NPV has to be positive, IRR greater than 19%, and the payback of a minimum of five years.	Direct and measurable results expected from the project to attain the purpose of the project and its outputs.

1.5 Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): Most agencies selected information and e-services, followed by data collection and distribution networks and back office automation. eParticipation was not selected at all. **U.** back office automation **V.** data collection & distribution networks **W.** information & e-services **X.** e-participation	A project is a temporary endeavour undertaken to create a unique product or service ideally characterized by specific objectives, planned activities, a scheduled completion date, and an established budget with a specified source of funding.
1.6 Responsible Government Body / Beneficiary 1.6.1 Name responsible government body: Which government body(ies) is responsible for delivering the benefit measured by this indicator? In the case of SRE all Representations (Embassies and Consulates). For the projects that SEGOB manages, the Congress and Central Government as a whole are also responsible. SCT is responsible for the eMexico project. In the case of SEMARNAT, Consejería Jurídica de la Presidencia and IMSS, their respective ICT Departments are responsible for it. In NAFIN de Business Units and the Planning and Technology Committee are responsible.1.6.2 Name beneficiary government body: Which government body(ies) receives the benefit measured by this indicator? Beneficiaries are SRE, SEMARNAT, Presidencia as a whole, SCT, SEP (Ministry of Education for the eMexico project), the Congress, the Federal Public Administration as a whole, the Ministry of Foreign Affairs, IMSS and NAFIN. 1.6.3 Is the cost or benefit government-wide? Costs are always local, but benefits are sometimes shared. Such is the case of the eMexico and the Segob initiatives which are related to improving media.	Refers to both central (consisting of Parliament, Departments and Ministries) and local government (City Councils and Municipalities).
1.10. Timeframe and Milestones 1.10.1. What was the timeframe for the collection of data on the indicator? Time frame varies widely from two to six years. Sometimes it goes from 4 to 12 months. Were there any milestones identified for checking progress of the project before the end of the timeframe? Most of the time information was reviewed annually. IMSS reports quarterly reviews, NAFIN semester reviews and SRE monthly reviews.	Project intended results – what has been accomplished at various stages of the project.
1.8 Use of information ▪ In SRE it is currently in use in an effective and unencumbered way to design and develop programs to help the migrants. ▪ In SEMARNAT the indicator allows decision makers to know the current status of ICT deployment in the organization, and identify the gaps between the real and the desirable future. This is a very simple way of delivering a report to directive board, without having to explain complex technical issues. ▪ In the Consejería Jurídica de la Presidencia the information has helped to improve the library service. ▪ In IMSS it has been used to initiate changes in other areas within the agency ▪ SEGOB has used the information to improve the quality of the service delivered, and to identify patterns in media usage (specifically the time used by the government) NAFIN uses the information to justify the project	
1.9 Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis. SRE significantly increased the issuing of Passports (1,138,986), of Matrículas (3,708,023), of Citizenship registry (4,308,331) and of visas (31,355) For SEMARNAT, the Five Star indicator has provided a simple way to assess current status, measure gaps for what is needed and show advances in the development of the ICT programme. The most important difficulty regarding this indicator is the construction and maintenance of the five star matrix, because change in technology requires the constant review of the guidelines that make the indicator. Up until today the indicator has been used only in SEMARNAT as an internal tool that has been given almost no diffusion elsewhere. So there are no available citations or reports other than the ones made by the Information Technologies office from SEMARNAT.	Reference citations and source of analysis should briefly cover relevant information such as facts, statistics, background information, etc. and should be sufficiently specific for the OECD to find follow-up information on the indicator if needed, including urls, bibliographical citations or a contact name and contact information.

16. SWITZERLAND	Federal Strategy Unit
1.11. Indicator(s) Provide the relevant measure	**Answer**: The most important indicators used by the SFSO, are: - - access to the internet - usage of the internet by households - usage of the internet by enterprises (SMEs) - broadband coverage
1.12. Checklist Theme Under which theme(s) does the measure fall?	In Switzerland the non-monetisable benefits are considered to be very important, for governments: concerning administrative services: - enhanced customer service - improved user satisfaction - improved communication concerning e-democracy: - e-voting as an additional form of voting for users: - more reliable and up-to-date information - improved response time - range of access channels - e-voting as an additional form of voting. Calculating cost reductions: In general, authorities are cautious about the calculation of cost reductions. Especially, concerning citizens, the enhanced services are important. This is not the same situation for enterprises (SMEs), which can reduce their administrative costs considerably by dealing with the authorities electronically based on intelligent forms. For SMEs the reduced time for grants and allowances is also important.
1.13. Data Source and collection mechanism List the sources and availability of data	Already mentioned: - date of the SFSO (annually) and of two academic institutions (published annually or every second year).
1.14. Indicator(s) Measurements Provide the results of the evaluation against this measure	Direct and measurable results expected from the project to attain the purpose of the project and its outputs.
1.15. Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **Y.** back office automation **Z.** data collection & distribution networks **AA.** information & e-services **BB.** e-participation	**Answer:** For the different projects various variables are important. For instance: - www.ch.ch: The main goal is easy access for citizens to the online content provided by the Swiss authorities (information and e-Services, if available). - Forms: Online availability of forms (tax forms are well used by individuals and SME's) simplifies the administrative life of the user. For the receiving authority there is a need to reorganise the back office and integrate the form within a working process inside the administration.
1.16. Responsible Government Body / Beneficiary 1.16.1. Name responsible government body: Which government body(ies) is responsible for delivering the benefit measured by this indicator? 1.16.2. Name beneficiary government body: Which government body(ies) receives the benefit measured by this indicator? 1.16.3. Is the cost or benefit government-wide?	**Answer:** Each project at national, cantonal or communal level has its own organisation and its own responsible government body. There is no centralised body for controlling or receiving the benefits measured by defined indicators.
1.17. Timeframe and Milestones 1.17.1. What was the timeframe for the collection of data on the indicator? 1.17.2. Were there any milestones identified for checking progress of the project before the end of the timeframe?	Project intended results – what has been accomplished at various stages of the project.
1.18. Use of information Describe how the indicator was used.	As mentioned, the indicators of the SFSO are used as instruments to formulate the national goals and policies in the information society sector.
1.19. Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	For the SFSO: see above.

17. TURKEY	**National Judiciary Network Project**
1.1 Indicator(s) Provide the relevant measure For direct cash benefits theme: 1. Reduced costs for mailing the records of judicial register 2. Reduced costs for mailing the identity records 3. Reduced number of personnel for judicial register office For other non-monetisable benefits theme: 4. Reduced time for preparing work schedule 5. Reduced time for document exchange between departments	A quantitative or qualitative measure used to show the degree of presence of an observable fact (*i.e.* level of Internet penetration) and/or gauge progress towards an agreed-upon objective (*i.e.* meeting a minimum threshold rate of satisfaction).
1.2 Checklist Theme Under which theme(s) does the measure fall? - Benefits to government - Direct cash benefits - Other non-monetisable benefits	See Annex to this questionnaire – E-Government Cost and Benefit Checklist
1.3 Data Source and collection mechanism List the sources and availability of data - Administrative data obtained from the decision support system of the project (for indicators 1-3) - Administrative statistics (for indicators 4,5)	The data source and method of data collection (i.e. survey, budget process, administrative data) to assess project progress and/or outcome(s). How often is indicator data available?
1.4 Indicator(s) Measurements Provide the results of the evaluation against this measure 1. 11.000 EURO/yr savings for the records of judicial register 2. 20.000 EURO/yr savings for the identity records 3. 13.300 EURO/yr savings for two personnel 4. From 3 days to one minute 5. From half day to one minute	Direct and measurable results expected from the project to attain the purpose of the project and its outputs.
1.5 Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **CC.** back office automation **DD.** data collection & distribution networks **EE.** information & e-services **FF.** e-participation - National Judicial Network Project (A, B, C)	A project is a temporary endeavour undertaken to create a unique product or service ideally characterized by specific objectives, planned activities, a scheduled completion date, and an established budget with a specified source of funding.
1.6 Responsible Government Body / Beneficiary - Name responsible and beneficiary government body: - Ministry of Justice - The benefits are not government-wide.	Refers to both central (consisting of Parliament, Departments and Ministries) and local government (City Councils and Municipalities).
1.7 Timeframe and Milestones What was the timeframe for the collection of data on the indicator? - Annual	Project intended results – what has been accomplished at various stages of the project.
1.8 Use of information Describe how the indicator was used. For indicators 1-3 : Realized savings support the financial case of the Ministry for new ICT investment For indicators 4,5 : Saving time used for other activities	How is the information on the project results used: i.e. to support the business cases of the agency, to initiate changes in other areas within the agency, across the sector or across government as a whole. Does the indicator have particular relevance to local or central government?

1.9 Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis. Head of ICT Department: Mr. Ali Kaya, e-mail: akaya@adalet.gov.tr Indicators 1-3: Establishment of National Judiciary Network improved the efficiency and effectiveness of Justice services by enhancing the communication between central and local government agencies, speeding up the work processes and establishing an electronic archive. Indicator 4: Assignment of dossiers to courts is done electronically through a system function codified into program. Indicator 5: The communication between departments of Ministry is enhanced by the common XML standards that allow data sharing between departments to make the justice services more effective and efficient. The system has other improvements for time savings. The total annual number of transactions is 843.000. It is not possible to calculate the total amount of time savings because decomposition of transactions has not been counted by the relevant organization.	Reference citations and source of analysis should briefly cover relevant information such as facts, statistics, background information, etc. and should be sufficiently specific for the OECD to find follow-up information on the indicator if needed, including urls, bibliographical citations or a contact name and contact information.

18. TURKEY	**E-Declaration Project**
1.1. Indicator(s) Provide the relevant measure For other non-monetisable benefits theme: - Reduced declaration time (for insurance premiums of employees done by employers)	A quantitative or qualitative measure used to show the degree of presence of an observable fact (i.e. level of Internet penetration) and/or gauge progress towards an agreed-upon objective (i.e. meeting a minimum threshold rate of satisfaction).
1.2. Checklist Theme Under which theme(s) does the measure fall? - Benefits to government - Other non-monetisable benefits	See Annex to this questionnaire – E-Government Cost and Benefit Checklist
1.3. Data Source and collection mechanism List the sources and availability of data - Administrative statistics	The data source and method of data collection (i.e. survey, budget process, administrative data) to assess project progress and/or outcome(s). How often is indicator data available?
1.4. Indicator(s) Measurements Provide the results of the evaluation against this measure - From 8-10 hours to 5 minutes	Direct and measurable results expected from the project to attain the purpose of the project and its outputs.
1.5. Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **A.** back office automation **B.** data collection & distribution networks **C.** information & e-services **D.** e-participation - e-Declaration Project (A, B, C)	A project is a temporary endeavour undertaken to create a unique product or service ideally characterized by specific objectives, planned activities, a scheduled completion date, and an established budget with a specified source of funding.
1.6. Responsible Government Body / Beneficiary - Name responsible and beneficiary government body: - Social Insurance Institution (Ministry of Labour and Social Security) - The benefits are not government-wide.	Refers to both central (consisting of Parliament, Departments and Ministries) and local government (City Councils and Municipalities).
1.7. Timeframe and Milestones What was the timeframe for the collection of data on the indicator? - One-time	Project intended results – what has been accomplished at various stages of the project.
1.8. Use of information Describe how the indicator was used. - Saving time used for other activities	How is the information on the project results used: i.e. to support the business cases of the agency, to initiate changes in other areas within the agency, across the sector or across government as a whole. Does the indicator have particular relevance to local or central government?
1.9. Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis. Head of ICT Department: Mr. Menderes Varol e-mail: mvarol@ssk.gov.tr Indicator : Before the project, the process of monthly payment and salary documents of each employee in 950 thousand firms was taking about 8-10 hours. Now, it takes just 5 minutes with the use of internet and the data obtained from the system are used for the determination of social security policies. Additionally the sub-system of this project, e-no debt service, provides a common database, which is used for obtaining a document declaring that the firm does not have any debt. Before the establishment of this project, monthly 50 thousand firms were requesting this document from the institution by fax.	Reference citations and source of analysis should briefly cover relevant information such as facts, statistics, background information, etc. and should be sufficiently specific for the OECD to find follow-up information on the indicator if needed, including urls, bibliographical citations or a contact name and contact information.

19. TURKEY	E-Ministry Project
1.1. Indicator(s) Provide the relevant measure For direct cash benefits theme: 1. Reduced costs due to software licenses of accounting programs. 2. Reduced costs for mailing the documents. For other non-monetisable benefits theme: 3. Reduced circulation time of documents between central and local administrations	A quantitative or qualitative measure used to show the degree of presence of an observable fact (*i.e.* level of Internet penetration) and/or gauge progress towards an agreed-upon objective (*i.e.* meeting a minimum threshold rate of satisfaction).
1.2. Checklist Theme Under which theme(s) does the measure fall? - Benefits to government - Direct cash benefits - Other non-monetisable benefits	See Annex to this questionnaire – E-Government Cost and Benefit Checklist
1.3. Data Source and collection mechanism List the sources and availability of data - Administrative payments data (for indicator 1,2) - Administrative statistics (for indicator 3)	The data source and method of data collection (i.e. survey, budget process, administrative data) to assess project progress and/or outcome(s). How often is indicator data available?
1.4. Indicator(s) Measurements Provide the results of the evaluation against this measure 1. 1.3 M EURO savings 2. 1.1 M EURO savings 3. From 15 days to just couple of seconds	Direct and measurable results expected from the project to attain the purpose of the project and its outputs.
1.5. Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): **A.** back office automation **B.** data collection & distribution networks **C.** information & e-services **D.** e-participation - e-Ministry Project (A, B, C)	A project is a temporary endeavour undertaken to create a unique product or service ideally characterized by specific objectives, planned activities, a scheduled completion date, and an established budget with a specified source of funding.
1.6. Responsible Government Body / Beneficiary - Name responsible and beneficiary government body: - Ministry of Interior - The benefits are not government-wide.	Refers to both central (consisting of Parliament, Departments and Ministries) and local government (City Councils and Municipalities).
1.7. Timeframe and Milestones What was the timeframe for the collection of data on the indicator? For indicator 1 : Annual For indicator 2 : Annual For indicator 3 : Monthly	Project intended results – what has been accomplished at various stages of the project.
1.8. Use of information Describe how the indicator was used. For indicator 1-2 : Savings support the financial case of the Ministry for new ICT investment For indicator 3 : Saving time make the Ministry transactions more efficient and quick	How is the information on the project results used: i.e. to support the business cases of the agency, to initiate changes in other areas within the agency, across the sector or across government as a whole. Does the indicator have particular relevance to local or central government?
1.9. Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis. Head of ICT Department: Mr. Mehmet Oduncu e-mail: mehmet.oduncu@icisleri.gov.tr Indicator 1: Annually about 1.3 M Euro used to be paid for software licenses of all of accounting programs by the Ministry before the project. With the project software costing 0.8 M Euro has been developed as a standard common accounting software and this provides a reduction in the expense for accounting software programs. Indicator 2 - 3: Almost 3 million documents are circulated between central and local administrations through surface mail or fax. With the project, document circulation in paper form will be eliminated and all documents will be exchanged electronically within a few seconds.	Reference citations and source of analysis should briefly cover relevant information such as facts, statistics, background information, etc. and should be sufficiently specific for the OECD to find follow-up information on the indicator if needed, including urls, bibliographical citations or a contact name and contact information.

APPENDIX B: BENEFITS REALISATION SURVEY

Introduction

At the OECD E-Government Expert Seminar on the Cost and Benefit Analysis of E-Government (Paris 6-7 February), participants agreed to the OECD approach to examining the methodologies used by OECD countries to analyse and ensure benefits from e-government projects.

The purpose of this questionnaire is to collect a set of descriptive data on benefits realisation methodologies for e-government projects. This data will be further analysed in order to provide a report to countries which will present and analyse the differing methodologies and approaches taken by countries, including whether or not they have developed national methodologies and/or guidelines to assist in benefits realisation studies at the project level.

Members of the OECD Network of Senior E-Government Officials, as well as experts who attended the E-Government Expert Seminar are kindly requested to ensure that the different sections of the questionnaire are answered by the relevant experts and practitioners within their governments. Please co-ordinate your responses through the Network contact person that we have identified – see the attached list for your country's co-ordinator (please be sure to let us know if you would like to change your national co-ordinator).

Responding to the Questionnaire

The questionnaire is divided into four areas: 1) *Context and Administration* examines the context for benefits realisation studies and the management and administration of these assessments; 2) *Methodology and Evaluation* investigates the actual methodologies used in benefits realisation studies; 3) *Use of Results* considers how results are used; and 4) *Examples of major benefits realised at project level* seeks information about major benefits that have been identified through studies undertaken in each country.

For further background information and guidance in filling out the questionnaire, please see the following accompanying documents which can also be found on OLIS: "Benefits Realisation: A draft framework for analysis and case studies" [GOV/PGC/EGOV(2006)2] and "Proposal for Work on an Inventory of E-Government Business Case Indicators" [GOV/PGC/EGOV(2006)3].

As your country responds to this questionnaire, please keep the following in mind:

- The deadline for responding is **8 March 2006**.
- Each country should submit **one co-ordinated response**.
- We strongly encourage you to provide a considered and thoughtful response, as the quality of the lessons and examples we produce for you -- as well as your own country's visibility -- will depend on your input.
- Please contact Jude Hanan at +33.1.45.24.90.67 or jude.hanan@oecd.org with any further questions.

Questionnaire Questions

Please use the space provided in the questionnaire for further description and examples drawn from your country's situation.

A response from countries not undertaking benefits realisation studies would also be greatly appreciated. This will enable the adoption and utilisation of studies to be more accurately analysed. Non-respondents will not be assumed to be undertaking studies

Context and Administration

Are benefits realisation studies undertaken in your government? In which public organisations? (*Benefits realisation* is the pre-planning for, and ongoing management of benefits promised to be enabled by the successful implementation of an ICT or e-government project.) If the studies are known by another name, please list it here.

What is the purpose of your benefits realisation studies? (you can select more than one) Please provide examples. If there is more than one purpose for benefits realisation studies, please provide details of the relative merits and magnitudes of the different types of studies undertaken.

- To facilitate accountability (information about the performance of government)
- To improve project management and delivery of results (feedback tool to manage risks)
- To promote future improvements to policy design and development
- Other reasons. Describe.

Are the preceding purposes for benefits realisation studies associated with the achievement of particular targets? For example, a 10-% reduction in administrative costs or a 6-% reduction in waste? If yes, what are your key targets?

Is the study mandatory or voluntary? What incentives or enforcement methods have been adopted? Please provide examples.

Is there centralised or localised "control" of the benefits realisation process? Which department or section of government controls or co-ordinates benefits realisation studies? Which department or section of government is responsible for realising benefits?

Methodology and Evaluation

Is there a centrally designed and clearly defined methodology/guidance for benefits realisation studies, or have methods been developed locally to fit each purpose? Please provide examples.

Which of the following key methodologies are used in central guidance? Which are used for local approaches? (you can select more than one)

- Transaction costs
- Key performance indicators
- Breakeven analysis
- Initial rate of return
- Return on investment

- Net present value
- Cost benefit analysis
- Cost effectiveness analysis
- Portfolio analysis
- Value assessment methods.
- Other, Please provide details

Are toolkits or other support documents, materials or assistance available to those undertaking benefits realisation studies? Which part of government (department and/or section) provides this assistance? Please provide examples.

Is the methodology undertaken as part of a staged process with clear administrative requirements, or is it an *ad hoc* approach? Please provide examples.

Is the study a one-off, snapshot review or is it part of continual evaluation process? Please provide examples.

- Who undertakes the study?
- Central government
- Treasury team
- Independent government auditors
- External consultants/auditors
- Local organisation staff
- Others

What is the average cost of undertaking a benefits realisation study? Is there any relationship between the amount spent on a benefits realisation study and either the estimated cost of the project being evaluated or the expected benefits of that project (i.e. a threshold value amount for projects to be evaluated)?

Use of Results

Are the results used in such a way that best practices are shared? If so, how are results co-ordinated? Which part of government (department and/or section) oversees and/or facilitates the sharing of best practices? Please provide examples.

At what level are the results used? (you can select more than one)

- Local project level
- "Centralised" policy makers or a treasury department
- Independent audit offices
- Made publicly available

Is there any aggregation of results from benefits realisation studies to discern common strengths, weakness, opportunities or threats? If so, how is it used? Is this information shared widely? Please provide examples.

What differences do benefits realisation studies make to the operational, strategic and policy making activities of government? Please provide examples.

Does the rigour of an approach that forecasts *ex ante* benefits lead to ongoing change to enhance benefits or a higher level of benefits after the implementation of a project? Please provide examples.

Examples of major benefits realised at project level

The tables below provide an example (in the second column) of the key costs and benefits that might be observed through benefits realisation studies. Please provide details of these costs and benefits for two projects that have been examined in your country. (If relevant, please cross-reference your response to the same benefit in the accompanying OECD Questionnaire: *Business Case Indicators*)

Table 14. Project And Realisation Study Details

Project Details	Example	Project 1	Project 2
Date e-government project started operating	January 2003		
Service or activity provided by the project	Online VAT submissions		
Primary users of the project – government employees, citizens, businesses, other (provide details)	Businesses		
Total investment in the project	EUR 11 million		
Date of the benefits realisation study	March-April 2005		
Cost of the benefits realisation study	EUR 450 000		
Reference, citation or url	www.vat.gov		

Table 15. Major Benefits Realised

Costs and Benefits	Example	Project 1	Project 2
Description of the Benefit to be Achieved	Efficiency savings from reduced data processing costs; greater transparency of procedures; greater user satisfaction		
Category of Benefits (Government financial, User financial, Government non-financial, User non-financial, Good governance)	Government financial, User financial, Government non-financial, User non-financial		
Person Responsible for Realising the Benefit	Head of Tax Authority		
Description of Current Situation/ Performance of the Business Process	Internal data processing fully automated, but electronic reporting of VAT only with a few large businesses		
Current Cost/Performance Measure of the Business Process	EUR 25 million/year; no data on user administrative burden		
Target Cost/Performance Measure after the Planned Change	EUR 23 million/year		
Triggers or events that will cause the Benefit to be Realised	Planned uptake threshold of 80% of businesses		
Ex ante Estimate of the Benefit or Saving	EUR 2 million or 25 staff		
Comment about the *Ex ante* Estimate	Expected savings to accrue to audit department due to staff transfer		
Value of the Actual Benefit Realised and Date Achieved	February 2005		
Strategic and Corporate Objectives and Outcomes Supported by this Benefit	1) More efficient public service; 2) customer satisfaction; 3) greater transparency & accountability		
Contribution of this Benefit to Achieving the Strategic and Corporate Objectives and Outcomes	Simplified procedures increase efficiency; Greater transparency of reporting and processes		
Key factors enhancing benefits realisation	High business sector support and Internet penetration		
Key factors hindering benefits realisation	Regulations regarding re-allocation of public servants		

*** Please fill out and return the questionnaire to the Secretariat by 8 March 2006. E-mail your completed response to: **jude.hanan@oecd.org** or **edwin.lau@oecd.org**. Thank you.**

APPENDIX C: BUSINESS CASE INDICATORS SURVEY AND CHECKLIST

Introduction

At the OECD E-Government Expert Seminar on the Cost and Benefit Analysis of E-Government (Paris 6-7 February), participants agreed to the OECD approach to broadening and deepening the Checklist of E-Government Costs and Benefits laid out in Chapter 4 of *E-Government for Better Government*.

The purpose of this questionnaire is to collect information on what indicators are being used to measure the costs and benefits of e-government projects that have been identified in the Checklist (see Annex to the Questionnaire). This data will be further analysed in order to provide an inventory of business case indicators used across OECD countries. This should be a valuable resource for those beginning work on e-government business cases as well as for those seeking to refine their business case methodologies, including improving their understanding of the potential benefits for different user groups.

Members of the OECD Network of Senior E-Government Officials, as well as experts who attended the E-Government Expert Seminar are kindly requested to ensure that the different sections of the questionnaire are answered by the relevant experts and practitioners within their governments. Please co-ordinate your responses through the Network contact person that we have identified – see the attached list for your country's co-ordinator (please be sure to let us know if you would like to change your national co-ordinator).

Responding to the Questionnaire

Using the provided template, respondents are asked to provide examples of indicators from e-government projects from the national, organisational or project levels where applicable. While countries are encouraged to provide as many examples as possible, a minimum of five to ten indicators per country are requested. As indicated in the questionnaire, respondents should focus on identifying indicators which meet at least one of the following criteria:

- Indicators most frequently used in business cases;
- Indicators currently in use that have been tested and proven reliable;
- Indicators for which common definitions have been developed, and are therefore in use in multiple projects or across government, or for which a common data source has been identified;
- Indicators which are innovative in terms of the approach or data source.

For further background information and guidance in filling out the questionnaire, please see the following accompanying documents which can also be found on OLIS: "Benefits Realisation: A draft framework for analysis and case studies" [GOV/PGC/EGOV(2006)2] and "Proposal for Work on an Inventory of E-Government Business Case Indicators" [GOV/PGC/EGOV(2006)3].

As your country responds to this questionnaire, please keep the following in mind:

- The deadline for responding is **4 April 2006.**
- Each country should submit **one co-ordinated response**.

- We strongly encourage you to provide a considered and thoughtful response, as the quality of the lessons and examples we produce for you -- as well as your own country's visibility -- will depend on your input.

Please contact Jude Hanan at +33.1.45.24.90.67 or jude.hanan@oecd.org with any further questions.

Description of Data fields for Inventory of E-Government Business Case Indicators

Please provide examples of business case indicators under the various themes of the Cost and Benefit Checklist (see Annex to this questionnaire). Provide a minimum of five to ten indicators currently used in e-government business cases in your country, focusing on indicators which meet at least one of the following criteria:

- Indicators most frequently used in business cases;
- Indicators currently in use that have been tested and proven reliable;
- Indicators for which common definitions have been developed, and are therefore in use in multiple projects or across government, or for which a common data source has been identified;
- Indicators which are innovative in terms of the approach or data source.

For each indicator identified, please provide the information described in the following table:

Table 16. Inventory of E-Government Business Case Indicators

Datafields	Glossary
1.1 Indicator(s) Provide the relevant measure	A quantitative or qualitative measure used to show the degree of presence of an observable fact (*i.e.* level of Internet penetration) and/or gauge progress towards an agreed-upon objective (*i.e*. meeting a minimum threshold rate of satisfaction).
1.2 Checklist theme Under which theme(s) does the measure fall?	See Annex to this questionnaire – E-Government Cost and Benefit Checklist
1.3 Data source and collection mechanism List the sources and availability of data	The data source and method of data collection (i.e. survey, budget process, administrative data) to assess project progress and/or outcome(s). How often is indicator data available?
1.4 Indicator(s) measurements Provide the results of the evaluation against this measure	Direct and measurable results expected from the project to attain the purpose of the project and its outputs.
1.5 Project Provide a one-line description of the project which this indicator is assessing. Is it a project involving (select one or more): A. back office automation B. data collection & distribution networks C. information & e-services D. e-participation	A project is a temporary endeavour undertaken to create a unique product or service ideally characterized by specific objectives, planned activities, a scheduled completion date, and an established budget with a specified source of funding.
1.6 Responsible government body/beneficiary 1.6.1 Name responsible government body: Which government body(ies) is responsible for <u>delivering</u> the benefit measured by this indicator? 1.6.2 Name beneficiary government body: Which government body(ies) <u>receives</u> the benefit measured by this indicator? 1.6.3 Is the cost or benefit government-wide?	Refers to both central (consisting of Parliament, Departments and Ministries) and local government (City Councils and Municipalities).
1.7 Timeframe and milestones 1.7.1 What was the timeframe for the collection of data on the indicator? 1.7.2 Were there any milestones identified for checking progress of the project before the end of the timeframe?	Project intended results – what has been accomplished at various stages of the project.
1.8 Use of information Describe how the indicator was used.	How is the information on the project results used: i.e. to support the business cases of the agency, to initiate changes in other areas within the agency, across the sector or across government as a whole. Does the indicator have particular relevance to local or central government?
1.9 Description (+ reference citation and source of analysis) Provide a short description of results and difficulties identified and cite the source of analysis.	Reference citations and source of analysis should briefly cover relevant information such as facts, statistics, background information, etc. and should be sufficiently specific for the OECD to find follow-up information on the indicator if needed, including URLs, bibliographical citations or a contact name and contact information.

Key Indicators

Of the indicators provided in section 1, please list those indicators that you consider to be the most useful for measuring cost and benefits of e-government.

Who is responsible for the choice of each indicator?

Describe recent initiatives to use indicators in e-government policies and the efforts undertaken to promote their use.

Design and Quality of the System of Indicators

What are the main constraints in building a set of statistical indicators for e-government policies? Rank in order of importance (1 being the most important).

- availability of data
- data quality issues at different levels
- time delay in delivering indicators
- reliability of statistical sources
- other (please explain)

What initiatives are being undertaken to extend the range or improve the quality of indicators? Please describe purpose and time frame.

ANNEX TO QUESTIONNAIRE

Checklists to record variables examined in benefits realisation studies of e-government

Previous OECD research has revealed that most benefits realisation studies adopt a simple framework for investigating the benefits for e-government:

(government benefits + user benefits) - (government cost + user cost) = economic impact

The four checklists below document the constituent items of the above equation. Please tick those items that are usually investigated in e-government business cases in your country. If the checklists omit variables used in studies please add at them at the end of each section.

Checklist 1: Benefits to government

Direct cash benefits	**Tick Box**
Greater tax collection, revenue	
Reduced fraud	
Reduced travel costs, field force expenditure	
Reduced publication and distribution costs	
Lower fines to government from international bodies	
Additional revenue from greater use of commercial services and data (*e.g.* use of electoral roll data)	
Additional revenue from newly available services and newly charged-for services	
Reduced need for benefits, *e.g.* through faster job searches	
Reduced costs through the need for reduced physical presence	
Efficiency savings (monetisable benefits)	**Tick Box**
Time savings	
Reduced processing through common standards for data and processes	
Time saving of public servants	
Reduced error rates, re-work, complaints	
Reduced need for multiple collections of data from single customers	
More flexible working hours	
Information benefits	
More accurate, up-to-date and cleaner data and more reliable information	
Capacity for greater information sharing across government	
Risk benefits	
Improved risk management	
Improved security and fewer security breaches	
Future cost avoidance	
Lower costs for future projects through shared infrastructure and valuable knowledge	
Reduced demand for service (through better information provision), e.g. health	
Reduced need for future government capacity expansion	
Encouragement of increased take-up of other e-services	
Resource efficiency	
Reduced redundancy through integrated systems	
More effective use of existing (e and non-e) infrastructure and reduced capacity wastage	
Other non-monetisable benefits	**Tick Box**
Improved service delivery	
Enhanced customer service	
Improved service consistency and equality	
Improved user satisfaction	
Improved communication	
Greater takeup of entitlements	
Improved reputation and increased user trust and confidence	

Integrated view of customer	
Enhancements to policy process	
Enhanced policy alignment and outcomes	
Better information to facilitate policy making	
Enhancements to democracy	
Increased user involvement, participation, contribution and transparency	
Miscellaneous and other benefits	
Allows more, greater and new data to be collected	
Improved security	
Other government benefits not listed above (please provide details):	

Checklist 2: Benefits to users

Monetary benefits	**Tick Box**
Price reduction of charged-for service, avoidance of future price increases	
Reduced cost of transmitting information – phone, post, paperless interactions, etc.	
Reduced travel costs	
Reduced associated costs (*e.g.* professional advice, software tools, equipment, etc., predominantly for businesses)	
Revenue generating opportunities for citizens, businesses and intermediaries	
Time-based non-monetary benefits	**Tick Box**
Reduced user time (hours saved)	
Reduced need for multiple submission of data for different services and events	
Reduced travel time	
Reduced user time (hours saved)	
Value-based non-monetary benefits	**Tick Box**
Quicker response	
Reduced application processing time (elapsed time saving)	
Improved response time to events	
Improved interactive communication, particularly between government and remote communities	
Improved information	
More reliable and up-to-date	
Faster and easier access	
Transparency (e.g. status of "live" applications)	
Can be live or real time	
Enhanced democracy and empowerment	
Improved reliability	
Reduced error rates	
Greater confidence and certainty of transaction	
Service consistency	
Overall reliability	
Choice and convenience	
Range of access channels – increased choice and ease of access	
Greater user convenience (24/7 service delivery)	
Decrease in abandoned transactions and complaints	
Premium service	
Extra tools and functionality for users	
Improved customer service	
Personalised service	
Service integration	
Other benefits to users	
Other user benefits not listed above (please provide details):	

Checklist 3: Costs to government

Market planning and development	**Tick Box**
Business planning and options analysis	
Market research	
Due diligence and plan audit	
Tendering	
System planning and development	**Tick Box**
Hardware	
Software licence fees	
Development support	
Programme management	
System engineering architecture design	
Change management and risk assessment	
Requirement definition and data architecture	
Test and evaluation	
Design studies	
Customer interface and usability	
Transformation or business process redesign	
System security	
User accessibility	
Data architecture	
Network architecture	
Other development phase costs	
Facilities: offices, office equipment, etc.	
Travel	
System acquisition and implementation	**Tick Box**
Procurement	
Hardware	
Software	
Customised software	
Web hosting	
Personnel	
Additional programme management	
Internal communications	
Process redesign	
System integration	
System engineering	
Test and evaluation	
Data cleaning and conversion	
IT training	
System operations and maintenance	**Tick Box**
Hardware	
Maintenance	
Upgrades and replacement	
Software	
Maintenance	
Upgrades	
Licence fees	
Telecoms network charges	
Operations and management support	
Programme management	
Operations	
Back-up and security	
IT helpdesk	
On-going training	
On-going monitoring and evaluation	
Other operations and maintenance	

Financing costs	**Tick Box**
Market and process implementation	
Personnel	
Internal communications	
Training	
Redeployment	
Customer helpdesk	
Call centres	
Marketing and communications	
Customer inducements and rebates	
Legal advice	
Other costs to government	
Other government costs not listed above (please provide details):	

Checklist 4: Costs to users

Direct costs	**Tick Box**
Computer hardware and software	
Computer operations and maintenance	
Telecoms and Web access charges	
IT training and support	
Digital signature setup	
Printing forms and information	
Time factors	**Tick Box**
Web search	
Reading time	
E-mail and form completion	
Phone time	
Other costs to users	
Other user costs not listed above (please provide details):	

***** Please fill out and return the questionnaire to the Secretariat by 3 March 2006. E-mail your completed response to : jude.hanan@oecd.org or edwin.lau@oecd.org. Thank you.*****

APPENDIX D: SURVEY TABULATED RESULTS: BENEFITS REALISATION SURVEY

(SEE APPENDIX B FOR FULL SURVEY)

Detailed data for Table 4

QUESTION	AUS	AUT	BEL	CAN	CZE	DNK	FIN	FRA	DEU	GRC	HUN	ISL	IRL	ITA	JPN	KOR	LUX	MEX	NLD	NZL	NOR	POL	PRT	SVK	ESP	SWE	CHE	TUR	GBR	USA	CHL	Yes	No	don't know
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				
C/B analysis ex ante required	yes	no	no	no		yes							yes		yes	yes		yes	yes	yes	yes					yes	yes	yes	yes	yes		14	3	1
Monitoring info required	yes	no	no	no		no							yes			yes				yes	yes					no	yes	yes	yes	yes		9	5	4
C/B ex post required	yes	no	no	no		no										yes			no	yes	yes					no	yes	no	yes	no		5	8	5
Formal guidelines for C/B	yes	no	yes			yes							yes		yes	yes		yes	yes		yes					yes	yes	yes	yes	yes		14	1	3
Formal guidelines for monitoring?	yes	no	no													yes		yes	no	yes						no	no	no	yes	yes		6	6	6
Formal guidelines for BR	yes	no	no	yes		yes									yes			yes	no	yes	no					yes	no	no	yes	yes		9	6	3
Is BR plan mandatory?	no	no	no	yes		no							yes			yes		yes	no	no	no					no	no	no	yes	no	no	5	12	1
Gateway process for large projects	yes	no	no	yes		yes												no	no	no						no		no	yes	yes	no	5	8	5
Are there toolkits for C/B analysis?	yes	no	yes			yes							yes		yes			yes	no	yes							yes	yes	yes	yes		11	2	5
…toolkits for Benefits realisation?	yes	no	yes	yes		yes							yes					yes	no	yes	yes					no	no	no	yes	no	no	9	7	2
YES	9	0	3	4		6							6		4	6		7	2	7						3	5	4	10	7				
NO	1	10	7	3		3							0		0	0		1	7	2						6	4	6	0	3	3			
Don't know	0	0	0	3		1							4		6	4		2	1	1						1	1	0	0	0	7			

Detailed data for Table 5: Evaluation Methods Used by Responding Countries

QUESTION	AUS	AUT	BEL	CAN	CZE	DNK	FIN	FRA	DEU	GRC	HUN	ISL	IRL	ITA	JPN	KOR	LUX	MEX	NLD	NZL	NOR	POL	PRT	SVK	ESP	SWE	CHE	TUR	GBR	USA	CHL	Yes	No	don't know
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Transaction costs	1	1	1	1		1							1		0	0		1	1	1	0					0	0	1	0	1	0	11	7	0
KPI	1	0	1	1		1							1		1	1		1	0	1	1					0	0	1	0	1	1	13	5	0
Breakeven analysis	0	0	1	0		1							0		0	0		0	0	1	0					0	1	0	0	1	0	5	13	0
Internal rate of return	0	0	1	0		1							0		0	0		0	0	0	0					0	0	1	0	1	0	4	14	0
Net present value	1	0	0	1		1							0		0	0		0	0	1	0					0	0	1	0	1	0	6	12	0
Return on Investment	0	0	0	1		1							0		1	1		1	0	0	0					0	0	0	0	0	0	5	13	0
Cost/benefit	1	0	0	1		1							1		0	1		1	0	1	1					1	1	1	0	1	1	13	5	0
Cost/effectiveness	0	0	1	1		0							1		0	0		1	0	0	1					0	0	1	0	0	0	6	12	0
Portfolio analysis	0	0	0	1		0							0		0	0		1	0	0	0					0	1	0	0	1	0	4	14	0
Value assessment	1	0	0	0		0							1		0	0		1	0	1	0					0	0	0	0	1	0	5	13	0
Other																																		18
Total	5	1	5	6		6	0	0	0	0	0	0	5		1	2		6	1	6	3	0	0	0	0	1	3	6	0	8	2	72	108	

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