Study on eGovernment and the Reduction of Administrative Burden

FINAL REPORT
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Abstract

The "Study on eGovernment and the Reduction of Administrative Burden" was foreseen under the eGovernment Action Plan 2011-2015, which defines Administrative Burden Reduction (ABR) as a key priority towards the achievement of the "Efficient and Effective Government" objective. ABR can be attained through the integration of eGovernment tools; the smart use of the information that citizens and businesses have to provide to public authorities for the completion of administrative procedures; making electronic procedures the dominant channel for delivering eGovernment services; and the principle of the "once only" registration of relevant data. The latter ensures that citizens and businesses supply certain standard information only once, because public administration offices take action to internally share this data, so that no additional burden falls on citizens and businesses.

For this reason, this study identified policy measures to be implemented at both National and European Level over the period 2014-2018 to achieve significant ABR through eGovernment procedures and Information Communication Technology (ICT).

Contents

Acronym List

Acronym	Term
ABR	Administrative Burden Reduction
AGIMO	Australian Government Information Management Office
AGO	Attorney's General Office (United Kingdom)
AMA	Agency for Public Services Reform (Portugal)
AT	Austria
BAG	Base registry of Addresses and Buildings (Netherlands)
BBR	Cadastre, building and housing register (Denmark)
BE	Belgium
BG	Bulgaria
BGT	Base registry of Detailed Scale Map (Netherlands)
BIS	Department for Business, Innovation and Skills (United Kingdom)
BLAU	Base registry of Salary, Social Benefits and Pensions (Netherlands)
BR	Business representatives
BRI	Base registry of Income (Netherlands)
BRK	Base registry of Land Administration (Netherlands)
BRO	Base registry of Underground (Netherlands)
BRP	Base registry of Persons (Netherlands)
BRT	Base registry Topography (Netherlands)
BRV	Registry of Vehicles (Netherlands)
CBA	Cost Benefit Analysis
CBS	Cross-Border Services
CBSS	Crossroads Bank for Social Security (Belgium)
CEF - DSI	Connecting Europe Facility – Digital Services Infrastructure
CIO	Chief Information Officer
CITE	State Information Technology Centre (Luxembourg)
CMOD	Department of Public Expenditure and Reform (Ireland)
CS	Civil Society representatives
CVZ	National Health Agency (Netherlands)
CY	Cyprus
CZ	Czech Republic
DAGI	Danish Administrative and Geographical Boundaries (Denmark)
DBD	Digital-by-default
DCLG	Department for Communities and Local Government (United Kingdom)
DCNMS	Department or Culture, Media and Sports (United Kingdom)
DE	Germany
DECC	Department of Energy and Climate Changed (United Kingdom)
DEFRA	Department for Environment, Food and Rural Affairs (United Kingdom)

Acronym	Term
DFID	Department for International Development (United Kingdom)
DFT	Department for Transports (United Kingdom)
DGS	Digital Government Strategy (United Kingdom)
DIGST	Agency for Digitization (Denmark)
DK	Denmark
DNIe	National eID Card (Spain)
DVLA	Driver and Vehicle Licensing Agency (United Kingdom)
DWP	Department of Work and Pensions (United Kingdom)
EC DG Connect	European Commission Communications Networks, Contents and Technology Directorate-General
ECG	E-Commerce-Gesetz (Liechtenstein)
EE	Estonia
EGID	EGovernment Development Index
eID	Electronic Identity Card
EL	Greece
epSOS	Electronic Health Record Systems in Europe
ES	Spain
ESEE	European Society for Ecological Economics
EU	European Union
FCO	Foreign and Commonwealth Office (United Kingdom)
FI	Finland
FR	France
FTEs	Full Time Equivalents
G2B	Government to Businesses
G2C	Government to Citizens
G2G	Government to Government
GDS	Government Digital Services (United Kingdom)
HIDRA	Croatian Information and Documentation Referral Agency
HLO	High Level Officials
HMRC	Her Majesty's Revenues and Customs (United Kingdom)
HR	Human Resources
HR	Croatia
HU	Hungary
ICO	Information Commissioner's Office (United Kingdom)
ICT	Information Communication Technology
ID	Identity Card
IDeA	Improvement and Development Agency (United Kingdom)
IE	Ireland

Acronym	Term
IPS	Identity and Passport Service (United Kingdom)
IT	Information Technology
IT	Italy
KING	Quality Institute of Dutch Municipalities (Netherlands)
KomG	Kommunikationsgesetz (Liechtenstein)
KPIs	Key Performance Indicators
LA	Local Authorities (United Kingdom)
LGA	Local Government Association (United Kingdom)
LT	Lithuania
LU	Luxembourg
LV	Latvia
MOD	Ministry of Defense (United Kingdom)
MOJ	Ministry of Justice (United Kingdom)
MS	Member States
MT	Malta
NHR	Registry of Companies and Organizations (Netherlands)
NL	Netherlands
NPV	Net Present Value
NO	Norway
OECD	Organization for Economic Co-operation and Development
PA	Public Administration
PDÖ	Platform Digital Austria
PL	Poland
PT	Portugal
RNI	Non-residents registry (Netherlands)
RO	Romania
SBR	Standard Business Reporting Programme (Netherlands)
SCM	Standard Cost Model
SE	Sweden
SI	Slovenia
SigG	Signaturgesetz (Liechtenstein)
SK	Slovakia
STORK	European eID Interoperability Platform
STS	Joint Committee for Cross-Government Cooperation (Denmark)
SVB	Social Insurance Bank (Netherlands)
TUO	Tell Us Once
UDK	Udbetaling Denmark
UK	United Kingdom

Acronym	Term
UN	United Nations
UWB	Employee Insurance Implementing Body (Netherlands)
WZO	Base registry of Property Value (Netherlands)
XLM	Information Standards (Netherlands)

Executive Summary

Purpose of the study

The "Study on eGovernment and the Reduction of Administrative Burden" was foreseen under the eGovernment Action Plan 2011-2015, which defines Administrative Burden Reduction (ABR) as a key priority for achieving the "Efficient and Effective Government" objective.

Administrative burdens are the costs to businesses and citizens of complying with the information obligations resulting from government imposed legislation and regulation.

ABR can be attained through the integration of eGovernment tools, the smart use of the information that citizens and businesses have to provide to public authorities and making electronic procedures the dominant channel for delivering eGovernment services.

A possible solution would be to implement the principle of the "once only" registration of relevant data. This ensures that citizens and businesses supply certain standard information only once, because public administration offices take action to internally share this data, so that no additional burden falls on citizens and businesses.

Another effective strategy is to produce default digital services that are so compelling and easy to use that all those who can use them will choose to do so whilst those who can't are not excluded.

Although the concepts of the "once only" principle, "digital by default" and making electronic procedures the dominant channel for delivering eGovernment services can be easily understood, their practical implementation encounters many obstacles, such as policy, legal and technological issues as well as data and protection requirements. For this reason, a study examining the best ways to successfully apply these and related concepts to achieve significant ABR through eGovernment procedures and Information Communication Technology (ICT) was facilitated by DG CONNECT of the European Commission between January 2013 and January 2014.

Objectives of the study

On this basis, the "Study on eGovernment and the Reduction of Administrative Burden" pursued the following objectives:

- to find out where we stand in the EU with the "once only" registration principle and with the requirement to make electronic procedures the dominant channel for delivering eGovernment services;
- to analyse the costs and benefits of reducing the administrative burden through the use of ICT in particular when using the "once only" principle;
- to provide a roadmap for further policy measures including an outline of possible courses for future action and to identify 'quick wins' as part of this process, as well as an outline of possible future developments as a basis for dialogue among Member States.

The methodology employed was based on desk research, two web-based questionnaires (eSurvey) and interviews with government officials, business representatives and civil organisations.

The "Once Only" principle landscape

The study investigated the current status of eGovernment policies, ABR and "once only" principle initiatives across the European Union's (EU) 28 Member States (MS) and the 6 Associated Countries. In addition, 7 non-European advanced eGovernment nations with relevant ABR initiatives showing global good practices were examined. A survey has been conducted of these countries.

All 30 responding countries[1] promote ABR for businesses, citizens and governments. Businesses and citizens are seen as the main beneficiaries, whereas governments are concerned to a lesser extent. The survey also found that 70% of the analysed countries are currently implementing projects or programs related to the "once only" principle and identified a number common trends and features.

The implementation process

The "once only" principle is encompassed in a specific eGovernment policy/framework or in a legislative provision and embedded within a larger package of ABR measures (typically including digital by default, and the use of base registries). This implies that it is not possible to analyse, assess or understand the impact of the "once only" principle in isolation given that it is always designed and implemented as part of a wider package, although it is a critical and often lynch-pin component within this. Additionally, in several countries, "once only" principle implementation has a double-policy basis: it is foreseen under both a legislative provision and an eGovernment strategy/framework.

The implementation responsibilities

The Study highlighted a common trend towards **centralization.** Countries usually charge the executive branch to carry out and monitor and coordinate the "once only" principle implementation process. Every country has chosen the ministry (or sometimes the ministries) committed to lead the process. Some countries also devolve implementation to both a specific ministry and a governmental unit or agency. The centralization of the implementation process is often combined with a "whole-of-government" approach, which requires coordination, collaboration and coherence among all administrative levels/branches. For this purpose, it seems necessary to:

- designate a coordinating authority;
- integrate different administrations' online services;
- set up one-stop-government.

Regarding administrative coverage, countries involve different levels of government in "once only" principle initiatives. In 50% of countries surveyed all the administrative levels (national,

[1] With respect to the responses obtained, 30 completed the eSurvey. Specifically: 26 EU members states (all the Member States, except Luxembourg and the United Kingdom); 2 associated countries (Montenegro and Norway); 2 non EU countries (Switzerland and Australia).

regional and local) are covered by the "once only" principle[2]. Overall, national or federal institutions are always involved in applying the "once only" principle, whereas lower level governments are concerned to a lesser extent. In terms of cross-border services, the "once only" principle is only at an initial stage of development, although there is increasing need for cross-border services provision as a consequence of the growing mobility of EU Citizens[3].

The implementation procedures and tools

Some common indicators and trends also emerged with respect to implementation procedures and tools. Mere tools, such as **service level agreements, access granted by users and personalised "My Page" interfaces**, are never used alone, but always in combination with a legal or strategic framework or recommendations addressing the main issues related to the "once only" principle application.

Importantly, countries' efforts related to "once only" principle implementation are not without obstacles. According to the countries that are currently applying the "once only" principle ("Yes Countries") the most common barriers are:

- **lack of communication and division** among government departments (silos in government, that is, vertical and horizontal fragmentation across government branches and levels);
- **implementation costs** governments need to introduce the "once only" principle (which might lead to more public spending);
- privacy and data sharing constraints;
- changes needed to both organizational structures and operations as well as working practices and cultures.

By contrast, countries that are not currently applying the "once only principle" ("No Countries") mentioned **privacy and data sharing[4] legislative requirements** and **costs stemming from the introduction of new electronic tools and procedures** as the main obstacles preventing the implementation of the "once only" principle. Silos in government and other organizational aspects have a lower bearing in this case.

Another relevant finding relates to benefits obtained from "once only" principle implementation. **"Yes countries"** consider government as the category which gains less, whereas **citizens** are considered **the category which obtains the most benefits** in comparison to others. Overall, "Yes countries" are applying the "once only" principle in relation to all three categories of beneficiaries (businesses, citizens and governments), which gain the same main benefits: **cost savings, time savings, improved service quality and administrative efficiency**

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[2] This does not necessarily mean that in these countries all registries are connected but rather that when the once only principle is applied all administrative levels are obliged to internally share data, so that no additional burden falls on citizens and businesses.

[3] Capgemini, Tec h4I2, Time.lex, Universiteit van Antwerpen (2013), Study on Analysis of the Needs for Cross-Border Services and Assessment of the Organisational, Legal, Technical and Semantic Barriers, European Commission, DG Communication Networks, Contents and Technology.

[4] A clear and strong legal basis is required for data sharing. However, it takes a long time to be established, thus preventing the implementation of the "once only" principle (for more on this topic, please refer to paragraph 4.3.2).

The impact evaluation of the "once only" principle

Concerning the **methodologies applied for the evaluation of "once only" principle costs and benefits**, 76% of respondents declared that in their country a combination of several methodologies is frequently used for this purpose: the Standard Cost Model (SCM); impact analysis; customer satisfaction surveys; the business case approach.

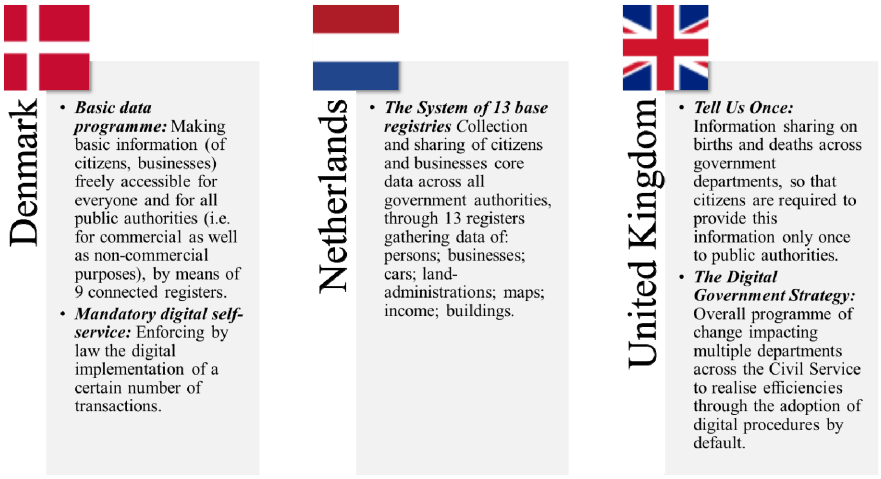
Nevertheless, a common approach has not yet been developed.

Finally, the Study also found a gap between eGovernment services availability and take-up by users. The implementation of eGovernment policies and/or strategic frameworks, and the availability of numerous, advanced online services is not sufficient in itself to ensure wide-spread use among citizens[5].

An effective solution seems to be the personalization of services to users' needs. This should enable citizens to fully exploit eGovernment services by adapting the service to each user's condition, skills and needs, given that the more user-centric and personalized eGovernment services are, the more their take-up is likely to increase.

Cost benefit assessments and projections

Based on the evidence gathered, three so-called "champion" countries were selected for an in-depth cost-benefit analysis (CBA), i.e. Denmark, the Netherlands and the United Kingdom. The CBA assessed the costs and benefits of relevant initiatives of the "once only" principle and digital by default programmes in these countries (see figure below).



Using CBA results, it was possible to evaluate the potential impact of the "once only" principle and digital-by-default initiatives at EU28 level[6].

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[5] Evidence from Eurostat (April 2013) underlines that in the EU 27 only 44% of individuals aged 16 to 74 use the Internet for interaction with public authorities. Additionally, in the last twelve months only 22% have sent an online filled form (Eurostat, April 2013). Additionally, the Study "*Public Services Online 'Digital by Default or by Detour?' Assessing User Centric eGovernment performance in Europe – eGovernment Benchmark 2012*" (DG Connect), investigated citizens' main reasons for not using e-Government channels when addressing public administrations: lack of willingness to use; lack of ability to use; lack of awareness; lack of trust to use.

[6] See Annex 5 for further details.

Projection results rely on two main hypotheses:

- **Hypothesis 1**: all countries start from the same level of development in the implementation of each programme. Countries having an enhanced level of eGovernment (evaluated through the UN E-Government Development Index - UN-EGDI) are nonetheless expected to experience reduced costs and hence higher net benefits;
- **Hypothesis 2**: all countries are expected to adopt the same planning/implementation strategy used by the three "best practices".

Three variables were used to rescale the CBA results[1]:

- the population as a proxy for the size of countries;
- the UN-EGDI as a proxy for the level of progress in the adoption of e-technologies;
- the average cost per hour of a Public Official, derived from the Cross-Border Services Study.

The three variables considered were normalized with respect to the level observed in the "best practice" countries to rescale potential costs and benefits for their respective programmes.

Estimated results are as follows:

- **Digital by default would have a positive impact across the EU**. The digitization of transactions between public administrations and users results in time savings for both of them. However, the benefits gained depend on two factors:
  - the approach followed to make digital transactions mandatory;
  - the number of digitized transactions.

  A gradual implementation of mandatory digital transactions is likely to have a lower impact than a faster and targeted shift from non-digital to digital transactions. For instance, the Danish Mandatory Digital Self-service envisages a gradual approach for the digitization of public services/communications between governments and users. It aims at achieving full digitization step-by-step, throughout 4 yearly waves of digitization, each covering specific categories of services. The 4 waves are to be implemented over a four year period (2012-2015), so that mandatory digital services are slowly phased-in. This approach is expected to produce net potential annual saving for government for around € 6.5 billion at EU28 level by 2017. It should be underlined that this result **underestimates the impact of the digital by default.** Firstly, based on data available it was only possible to include a quantitative assessment of government benefits. Secondly, the estimated benefits for governments could increase through the cross-border enablement of national services[7]. Regarding the potential impact on citizens and businesses, based on available data it was possible to develop only a qualitative assessment.

[7] However, as enabling national services to be accessible across borders is determined by a synthesis of political and economic rationale, this hypothesis was not considered.

A different approach has been undertaken by the United Kingdom Digital Government Strategy. It foresees a faster and targeted digitization of transactions between public administrations and users and among public administrations themselves. Digitization is to be realized in only two years and involves all services with over 100,000 transactions each year. These services have to meet the digital-by-default service standard by April 2014. This approach is expected to raise higher potential annual savings for both government and users. The potential impact of the UK Digital Government Strategy at EU level is around € 10 billion of annual savings. This leads to the conclusion that the economic impact of the digital-by-default strategy is higher when there is a swift digitization of transactions and when digitization involves a substantial number of transactions;

- **The "once only" principle is also expected to generate a positive economic impact at EU28 level**. However, the impact of the "once only" principle also depends on the overall strategy of implementation. If the "once only" principle is implemented within a well-structured strategy or within a comprehensive system for the delivery of public services, it is likely to produce a highly positive impact. Actually, the benefits of the "once only" principle are higher if:
    - the "only once" principle is applied to different types of data (i.e. by connecting different registries);
    - ICT is used for the transmission of data and for data sharing among public administrations. This would significantly reduce transactions costs and increase time savings.

  For instance, the Danish Basic Data Programme introduces the "once only" principle for all the following data (collected in 10 electronic registries):personal data; business data; real property data; address data; geographic data; income data.

  When data is uploaded, public authorities cannot ask users for the same data anymore and have to obtain it from the system itself. This requirement avoids the replication of information transactions between citizens and the government, and reduces substantially the burden for users in reporting information and for providers in managing information.

  The Basic Data Programme brings potential savings for Denmark in the timeline 2012-2020. The total potential savings are expected to reach € 100 million annually in 2020[8]. It is estimated that better access to data of higher quality will enhance economic growth in sectors such as real estate, telecommunications and transport. In summary, free access to basic data will bring new types of services and also more efficient digital services in the private sector.

  The extension of the Danish approach to implement the "once only" principle is likely to generate an annual net saving at the EU 28 level, amounting to around € 5 billion per year by 2017[9]. This highly positive impact depends on a complex system of registries being freely accessible by users (citizens and businesses) for commercial purposes, which additionally might foster growth in some economic sectors.

[8] Municipalities account for 23% of the public potential savings in 2020 (€ 23 million). Ministries and regions are expected to experience lower benefits in the order of € 6 million per year over the period 2017-2020. The expected benefits of the programme tend to stabilise from 2017. Afterwards, benefits exceed costs for all the public entities.

[9] See Box at page V to further details on the methodology used for the projections estimates.

The implementation of the "once only" principle based on the Dutch register for non-residents citizens (RNI) approach is expected to produce net benefits amounting to around € 550 million at EU level in a time horizon of 15 years[10]. The RNI introduces the "once only" principle for all data of:

- people domiciled in the Netherlands only for a short time;
- Dutch citizens domiciled abroad for short or long time and maintaining a relation with the Dutch government.

RNI users are required to transmit their data only once to the following public administrations and national agencies:

- Tax authorities;
- Employee Insurance Implementing body (UWB);
- Social Insurance Bank (SVB);
- National Health Agency (CVZ);
- Chamber of Commerce Administration;
- Passport Agency for citizens abroad;
- Right to vote abroad administration;
- 3 administrations dealing with Dutch students abroad.

The introduction of a digital registry allows data sharing among Ministries and National Agencies and reduces the time required to collect and manage data.

By contrast, the United Kingdom's Tell Us Once approach, based on the introduction of the "once only" principle only for births and deaths notifications, seems to be not highly profitable. This result is also due to the persistence of offline communication channels (e.g. face-to-face and telephone notification) with new online communication tools (e.g. transmission of data using a specific web portal) Therefore, the extension of the Tell Us Once approach to implement the "once only" principle at EU level seems not to be efficient because the time and costs savings gained would not cover implementation costs[11].

Nevertheless, as proved by the case of the United Kingdom, the Tell Us Once initiative needs to be considered as part of a broader eGovernment strategy, aimed at making digital all communications and transactions between government and users. Therefore, the Tell Us Once impact should not be considered only from an economic perspective: not monetizable benefits should also be taken into account. For instance, the United Kingdom government has considered it worthwhile to implement Tell Us Once because it represents a relevant tool for the full digitization of public services, by promoting a gradual shift from offline to online services usage by citizens and by enhancing public services quality.

The comparison of different approaches has led to the conclusion that the application of the "once only" principle to different types of data and the use of electronic procedures for the delivery of public services is likely to produce high benefits for both public administrations and users (citizens and businesses).

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[10] This is the net present value computed over a time period of 15 years. The present value of annual costs/benefits was computed by using a discount rate equal to 3%.

[11] This result is probably due to the smaller scale but also to the persistence of offline communication channels (e.g. face-to-face and telephone notification) with new online communication tools (e.g. transmission of data using a specific web portal).

On the basis of the main CBA findings, some **lessons learnt emerged** for both the "once only" principle and the digital-by-default strategy:

- implementation would produce a positive impact at EU level;
- implementation is not about technology alone but is a multidisciplinary operation: legal, organisational, semantic, technical, security, etc.;
- a multilevel governance approach is essential;
- it is necessary to share knowledge and to learn from "best practice" experience to maximize benefits and reduce risks;
- when implementing eGovernment, the whole process should be aligned with open data principles, in order to enable citizens and enterprises to freely access the non-sensitive data they want through electronic channels, in line with the EC communication on open data [12]. Making such high quality non-sensitive data available outside government enables citizens to be better informed and engage more readily in service co-creation and policy making, and enables businesses to enhance or develop more competitive services and products. The data can thereby provide additional benefits to society as a whole.

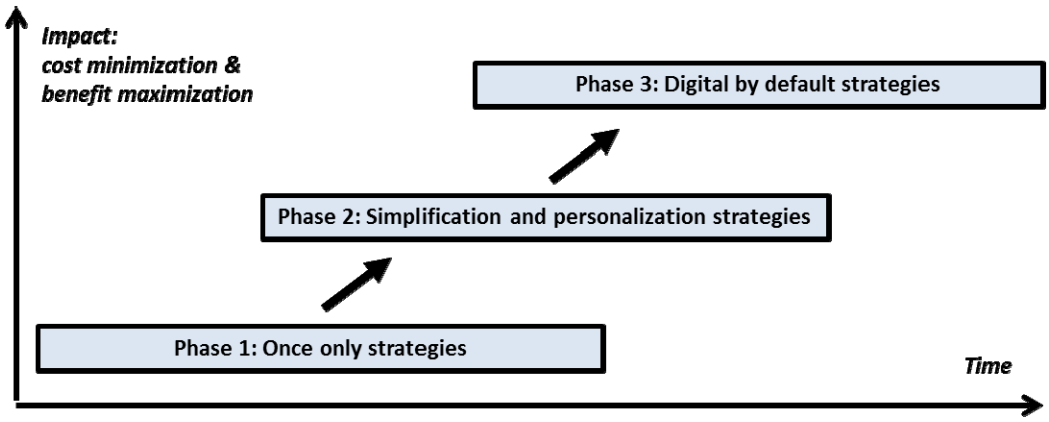
Policy roadmaps

Based on the outcomes of the CBA and its projections, policy roadmaps have been developed to identify long term solutions to reduce the administrative burden through the "once only" principle, making electronic procedures the dominant channel for delivering eGovernment services, and the use of ICT. The context is how to assist European countries to deploy ICT, together with legislation and other relevant enablers, to reduce the administrative burden by 25%[13], both in each country but also in the longer term across borders and at EU level.

The study has shown that three main policy options for the roadmap are the most commonly deployed strategies in Europe and provide the greatest potential benefits: "once-only" strategies; simplification and personalization strategies; and digital-by-default strategies. These options represent distinct types of relatively independent strategies which can and often are carried out by Member States independently from each other, although there is also considerable overlap and mutual dependence between the strategies across the three options. This shows that the options are also highly synergistic, especially if carried out in the order presented, i.e. from once only, to simplification and personalization, and then to digital by default, as shown in the figure below, with the benefits to both government and users increasing at each step, assuming that a number of conditions are met.

[12] European Commission, Open Data. An engine for innovation, growth and transparent government, COM(2011) 882, Brussels, 12 December 2011.

[13] European Commission, The European eGovernment Action Plan 2011-2015. Harnessing ICT to promote smart, sustainable & innovative government, COM(2010) 743, Brussels 15 December 2010.



Clearly each country will be at a different stage in this progression, so the roadmap is a guide assuming a given country or administration starts from scratch. Each policy option consists of a number of strategic factors and building blocks which will need different work at various stages of the roadmap.

1. **Once-only strategies** involve eliminating the unnecessary administrative burden involved when users (citizens, businesses or other public sector entities) are required to supply the same information more than once to government.

   - Strategic issues:

     - policies to ensure a long-term commitment as part of a wider ICT and eGovernment agenda;
     - governance to ensure clear roles and authority demarcations between entities;
     - legal to establish a sound legal basis ensuring mandatory compliance where necessary;
     - monitoring to track progress using a standardized approach and make on-going adjustments;
     - quick wins, e.g. analysing where and how costs are incurred and how regulation is impeding results.

     Respondents assessed the governance, legal and policy issues, in that order, as overwhelmingly very important, whilst the importance of monitoring is seen as less pronounced although still important. Similarly with the quick wins, which are seen as important but by a fewer number of respondents, perhaps because which quick wins are relevant are more likely to be dependent on very specific country circumstances which can vary significantly.

   - Building blocks:

     - interoperability and data exchange;
     - base registries;
     - data quality;
     - data protection.

     Respondents assessed the interoperability/data exchange, base registries and data quality building blocks described in the preceding text are assessed as the most effective, whilst data protection, perhaps surprisingly, is seen by fewer respondents as very effective, although still effective. This may be because, as one respondent described it, data protection is seen more as a preliminary condition than an implementation tool. It is conditional for trust in government; so in that sense it is very

important, but a too narrow interpretation of data protection can conflict with the once only principle.

2. **Simplification and personalization strategies** involve making interactions between government and user as simple (and therefore as easy, quick, efficient and effective) as possible for users, which clearly reduces their administrative burden. This phase 2 strategy is seen as subsequent to phase 1 because it is generally not possible to develop highly simplified and personalized services without once only and the existence of well-developed interoperability and base registries upon which they reply.

   - Strategic issues:

     - policies to ensure that government does the hard work to make it simple for users;
     - governance to ensure clear roles and coordination across entities;
     - legal to establish clear responsibilities for all actors including those outside government;
     - monitoring using a standardized approach and developing service design principles;
     - quick wins, e.g. analysing where and how services are used to make rapid adjustments.

     Respondents assessed all issues as overwhelmingly very important, with legal issues marginally less so and quite similar to monitoring and quick wins. This is in some contrast to the once only strategic issues where governance and legal issues are seen as the most important, perhaps because in phase 1 getting governance and the legal base right is more critical than in later phases which build on this earlier foundation.

   - Building blocks:

     - process simplification and reduction;
     - reporting simplification and reduction;
     - user-centred design;
     - personalization.

     Respondents assessed process simplification and reduction as the most effective and necessary building block, closely followed by user-centred design. The importance of both reporting simplification and reduction and personalization is seen as less marked, although in each case they are still clearly seen as important. This may be because the latter two building blocks represent perhaps later steps than the more basic simplification of processes and user-centricity and build on them.

3. **Digital-by-default strategies** involve making specified interactions between government and users digital by default, i.e. the user is obliged to use the electronic channel unless there are good countervailing reasons. When appropriate services are only or mainly used digitally, this reduces the administrative burden for government by reducing their costs and the need to provide alternative channels, as well as for users by saving them time and money and increasing convenience, for example by being available 24-7. This phase 3 strategy is seen as subsequent to phase 2 because it is generally not feasible to move to digital by default and making e-services obligatory without first providing easy, quick, efficient and effective services for users.

   - Strategic issues:

     - policies for a fast strategy for maximum impact which also supports those who cannot get online;

- governance to ensure enforcement and coordination at top level plus change and risk management;
- legal to establish enforcement but with balanced exceptions to avoid digital exclusion;
- monitoring using a standardized approach to ensure the business case of costs and benefits is realised;
- quick wins, e.g. focus first on services using registry data and on users already online with high service needs.

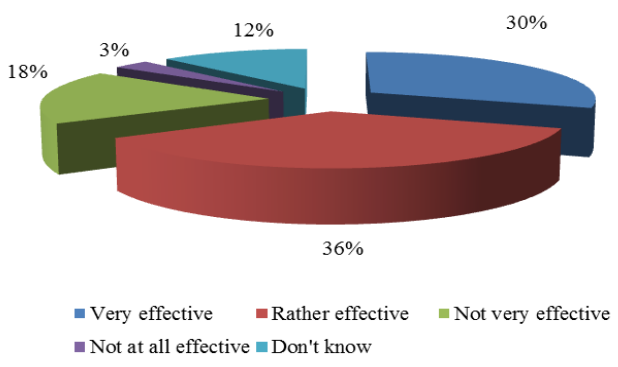
eSurvey respondents assessed the policy, governance and legal issues, in that order, as very important. Both monitoring and quick win issues are seen as somewhat less important perhaps because only a few European countries have to date embarked on such strategies, let alone begun to think about them, and these represent more detailed implementation tools compared with the first three which are more preparatory tools. As was the case with the phase 2 strategic issues, this is in some contrast to the once only strategic issues where governance and legal issues are seen as the most important, perhaps because in phase 1 getting governance and the legal base right is more critical than in later phases which build on this earlier foundation.

- Building blocks:

  - widespread, high capacity and affordable ICT infrastructures and systems;
  - widespread ICT skills and Internet use;
  - careful selection of digital by default services and the business case;
  - support to those who are not or cannot get online.

  eSurvey respondents assessed ensuring both widespread high capacity ICT infrastructures and ICT skills and internet use as the most effective and necessary building blocks in the digital by default phase. They are both sine qua non conditions for successfully moving towards a single digital channel for a significant number of eGovernment services, and both of course are likely to take many years and consistent effort, thus validating their presence in this third phase of development. Only once these first two building blocks are in place, carefully selecting appropriate services and justifying this by a sound business case, plus putting in place special support to users who need such services but who are not (yet) online, or cannot get online, can be considered. This is the reason they are perhaps seen as less important than the first two building blocks. For the reasons given above, many respondents consider digital by default as providing considerable administrative burden reduction.

The following figure shows respondents' assessment of the overall effectiveness of the proposed policy options timeline: "once only" as a first phase strategy, simplification/personalisation as a second phase strategy and digital-by-default as a third phase strategy.



The largest number of respondents (36%) see the above described actions as effective, and if this is added to those who see the roadmap as very effective, this represents almost three quarters of the total. Given the widely varying condition of eGovernment across Europe, and the very large differences

between the stages of development countries are at, this appears to be a significantly high number.

In order to support and progress these roadmap options at European level and in a cross-border context, a number of actions are proposed according to the following time line. Suggested dates are cognizant of the fact that the current Action Plan terminates in 2015 which may limit implementing new studies or large scale actions before 2016.

2014 actions:

- raising awareness of ABR and benefits realizations (*action 1*);
- using the ePractice portal and workshops (*action 2*);
- collecting good practices (*action 3*);
- facilitate an examination of the legal and regulatory constraints to ABR, and explore possible ways to overcome or circumvent these constraints (*action 4*).

Respondents assessed collecting good practices as the most effective action, followed by raising awareness and using the ePractice portal. There is clearly a link between these actions, as the portal includes good practices although rarely in great detail or in easily comparable form, and Actions 2 and 3 also have an awareness raising function.

2015 actions:

- shape the post-2015 Action Plan (or equivalent) and other instruments (*action 1*);
- ensure synergies with other on-going EU initiatives (*action 2*).

eSurvey respondents assessed shaping the post-2015 Action Plan (or equivalent) as a clear priority, whilst ensuring synergies with other on-going and relevant EU initiatives is also appreciated as effective.

2016 actions:

- study on ABR and benefits realization measurement (*action 1*);
- study on ABR and benefits legal framework (*action 2*);
- study on ABR and benefits strategies (*action 3*).

eSurvey respondents assessed these studies, which might arise from or inform the post-2015 Action Plan (or equivalent), as generally effective, although a minority of respondents also think they are not very effective.

2017 actions

- support and promote the development of trustworthy, robust and effective data protection systems (*action 1*);
- support and develop EU level reporting especially in the business sector (*action 2*);
- support and develop high quality digital public services (*action 3*).

eSurvey respondents assessed these actions for the Commission to work with Member States as very effective.

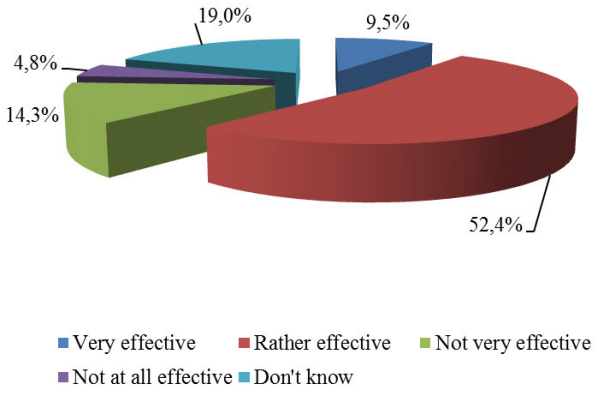
2018 actions

- report on high quality digital public services (*action 1*);

- agree a European level measurement framework for ABR and benefits realization (*action 2*);
- agree a European level legal framework for ABR and benefits realization (*action 3*);
- introduce SBR (Standard Business Reporting) across Europe in support of the Single Market (*action 4*).

Respondents assessed these actions very effective, and commissioning a report on high quality services is also well appreciated as being effective.

The following figure shows respondents views on the effectiveness of the overall 2014-2018 timeline of recommended actions.



The largest number of respondents (52%) see the generalised roadmap as effective, and if this is added to those who see the roadmap as very effective, this represents almost two thirds of the total. Given the widely varying condition of eGovernment across Europe, and the very large differences between the stages of development countries are at, this appears to be a significantly high number.

1 Study background

The "Study on eGovernment and the Reduction of Administrative Burden" was foreseen under the eGovernment Action Plan 2011-2015, which defines the Reduction of Administrative Burden (ABR) as a key priority towards the achievement of the "Efficient and Effective Government" objective.

The ABR can be attained through:

- the integration of eGovernment tools;
- smart use of the information that citizens and businesses have to provide to public authorities for the completion of administrative procedures;
- the principle of the "once only" registration of relevant data.

The latter ensures that citizens and businesses supply certain standard information only once, because public administration offices take action to internally share this data, so that no additional burden falls on citizens and businesses.

The **"once only" registration principle** entails the elimination of the unnecessary administrative burden involved when users (citizens, businesses or other authorities) are required to supply the same information more than once to government. Following the "once only" principle, the information required from citizens and businesses is collected only once, on condition that data and privacy protection requirements are met.

The study is also in line with the European Council conclusion adopted in October 2013 that calls for the Once Only Principle to be applied in the EU (conclusion 9):

The modernisation of public administrations should continue through the swift implementation of services such as e-government, e-health, e-invoicing and e-procurement.

This will lead to more and better digital services for citizens and enterprises across Europe, and to cost savings in the public sector. Open data is an untapped resource with a huge potential for building stronger, more interconnected societies that better meet the needs of the citizens and allow innovation and prosperity to flourish. Interoperability and the re-use of public sector information shall be promoted actively. EU legislation should be designed to facilitate digital interaction between citizens and businesses and the public authorities. Efforts should be made to apply the principle that information is collected from citizens only once, in due respect of data protection rules.

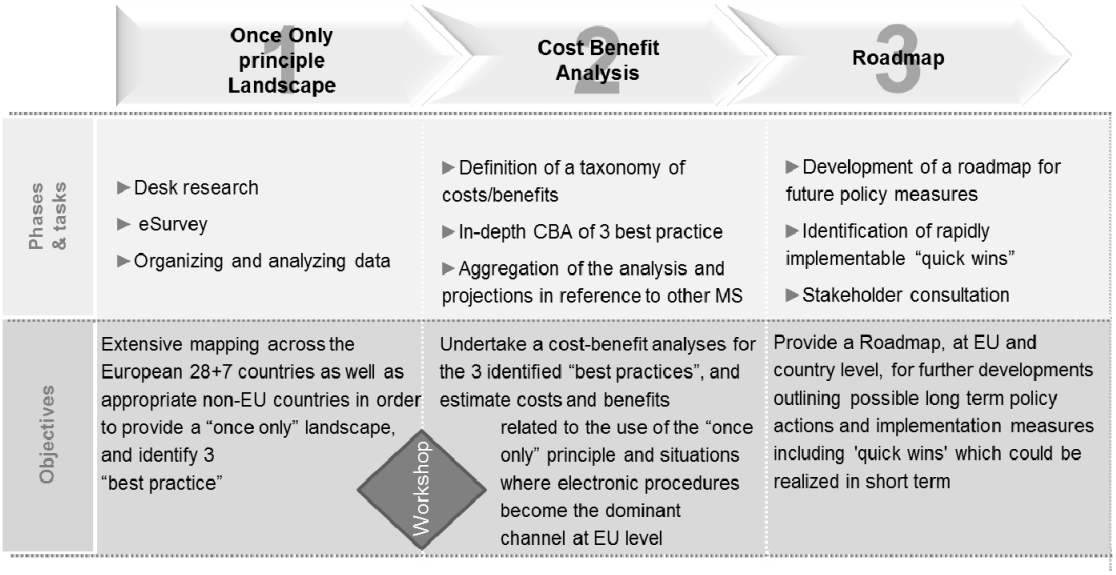
Although the "once only" principle concept can be easily understood, its practical implementation encounters several obstacles, such as policy, legal and technological issues as well as data and protection requirements. For this reason, a study concerning the best ways to successfully apply the above-mentioned principle and ABR through eGovernment procedures and Information Communication Technology (ICT) was deemed necessary.

Within this framework, the "Study on eGovernment and the Reduction of Administrative Burden" pursued the following objectives:

- to find out where we stand in the EU with the "once only" registration principle and with the requirement to make electronic procedures the dominant channel for delivering eGovernment services;
- to analyse the costs and benefits of reducing the administrative burden through the use of ICTs in particular when using the "once only" principle;
- to provide a roadmap for further policy measures including an outline of possible courses for future action and to identify 'quick wins' as part of this process, as well as an outline of possible future developments as a basis for dialogue among Member States

Therefore, three main phases were envisaged under the Study, as shown by Figure 1.

Figure 1: Study phases, activities developed and outputs gathered



1.1 Stakeholders engagement

A constant interaction with relevant stakeholders represented an important component of all the Study tasks. Stakeholder's engagement served multiple purposes, such as:

- gathering primary source information on the issues under investigation;
- disseminating and validating the Study findings;
- collecting significant suggestions;
- providing a solid evidence-base to the Study, by receiving their feedback and reactions on the main outcomes.

Overall, a wide range of relevant stakeholders (86) in the field of eGovernment, ICTs and administrative burden reduction were required to contribute to the Study activities. The engaged stakeholders were mainly representatives of three categories:

- national, regional and local governmental institutions;
- business sector;
- civil society.

Furthermore, it should be noted that some of the stakeholders involved were members of the EC eGovernment Experts Group. This allowed the Study to benefit from the feedback and contribution of stakeholders with a Europe wide vision of eGovernment related issues.

Stakeholders from EU Member States and third countries[14] actively participated and contributed to the following consultation activities:

- online survey (eSurvey) on administrative burden reduction and "once only" principle initiatives;
- interviews;
- a knowledge-sharing workshop.

Finally, all the stakeholders involved in the activities above, were invited to take part in an online public consultation on Policy Roadmap, carried out during the Study last phase. In this regard, around 60 stakeholders completed or partially filled in the consultation questionnaire. Once again, stakeholder's participation achieved a high level and proved to be fundamental for the development of sound and solid policy measures.

Thus, it is clear that the constant interaction with stakeholders provided an added value to the Study, allowing to produce evidence-base and reliable results.

2 "Once Only" principle landscape

The Study started in January 2013. The Study first phase investigated the current status of eGovernment policies, ABR and "once only" principle initiatives across European Union (EU) Member States (MS) and other non EU countries (see Table 1). The inclusion of non EU countries guaranteed a widen geographical coverage of the analysis as well as to take notice of existing practices outside the EU.

The analysis was carried out through a combination of **desk-research** and a web-based questionnaire (hereinafter **eSurvey**). The first involved the consultation of national government policy and strategy documents, as well as existing international studies on the issues of interest. The latter was addressed to institutional representatives of the countries listed in Table 1[15] and was aimed at gathering primary source information regarding policies or initiatives for both the reduction of the ABR and the "once only" principle implementation.

Table 1: Countries involved in the analysis

EU Countries (28)			Associated Countries[16] (6)	Non EU Countries (7)
Austria	France	Netherlands	Iceland	Australia
Belgium	Germany	Poland	Liechtenstein	India
Bulgaria	Greece	Portugal	Montenegro	Korea
Croatia	Hungary	Romania	Norway	Mexico
Cyprus	Ireland	Slovak	Turkey	New Zealand
Czech Republic	Italy	Republic	Serbia	Singapore
Denmark	Latvia	Slovenia		Switzerland
Estonia	Lithuania	Spain		
Finland	Luxembourg	Sweden		
	Malta	United Kingdom		

The outcomes of the desk research and the eSurvey allowed to:

[14] Please, refer to the Stakeholders map in the Annexes for the complete list of stakeholders engaged in the Study.

[15] Please, refer to the Annexes for the complete list of governmental institutions which actually completed the eSurvey, and find out more about their main responsibilities and tasks in relation to eGovernment and the ABR. The eSurvey was realised through the Ernst & Young's eSurvey tool®. The eSurvey was carried out from April to May 2013.

[16] Associated countries have a specific agreement to participate in the EU Competitiveness and Innovation framework Programme – ICT Policy Support Programme 8.

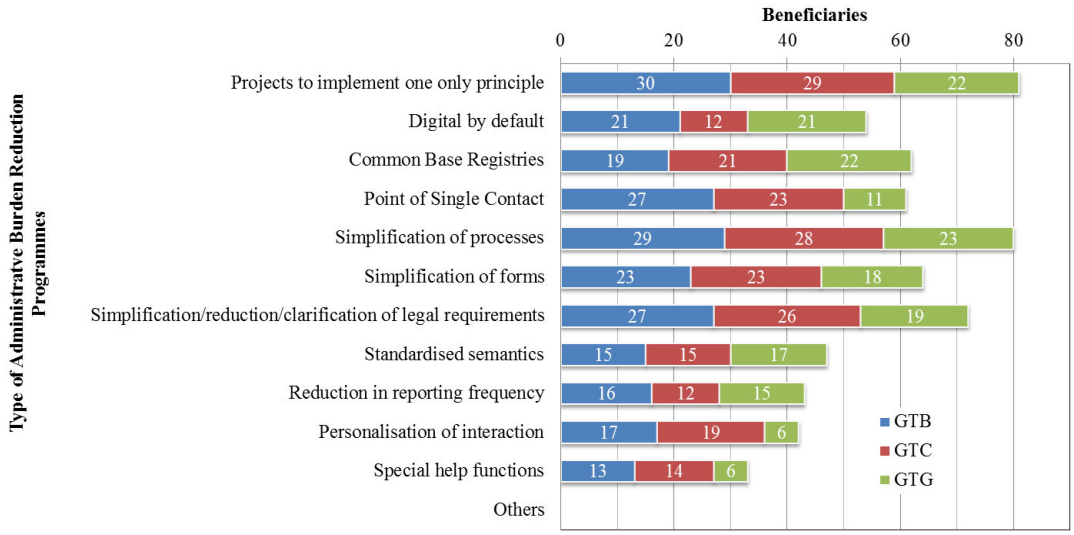
- map **existing initiatives** for Administrative Burden Reduction and define a comprehensive "once only" principle landscape in the EU, Associated Countries and non EU countries;
- select EU countries having significant initiatives in the fields of ABR and the "once only" principle (hereinafter "**Yes countries**")[17];
- identify three "**champions**"/"**countries of excellence**", namely Denmark, Netherlands and United Kingdom;
- **identify significant initiatives in the fields under analysis.** These were then classified and examined according to the specific country background and taking into account driving and obstructing factors.

2.1 Once Only principle common trends

The main result emerging from the eSurvey is that all countries make an effort for the ABR and most of them apply the "once only" principle as well:

- all of the 30 answering countries[18] deal with the reduction of the administrative burdens for businesses, citizens and governments. (Figure 2). Businesses and citizens are the main beneficiaries, whereas governments are concerned to a lesser extent;
- 21 countries out of 30 have undertaken initiatives to put in practice the "once only" principle (see Figure 3).

Figure 2: Type of Administrative Burden Reduction Programmes and beneficiaries

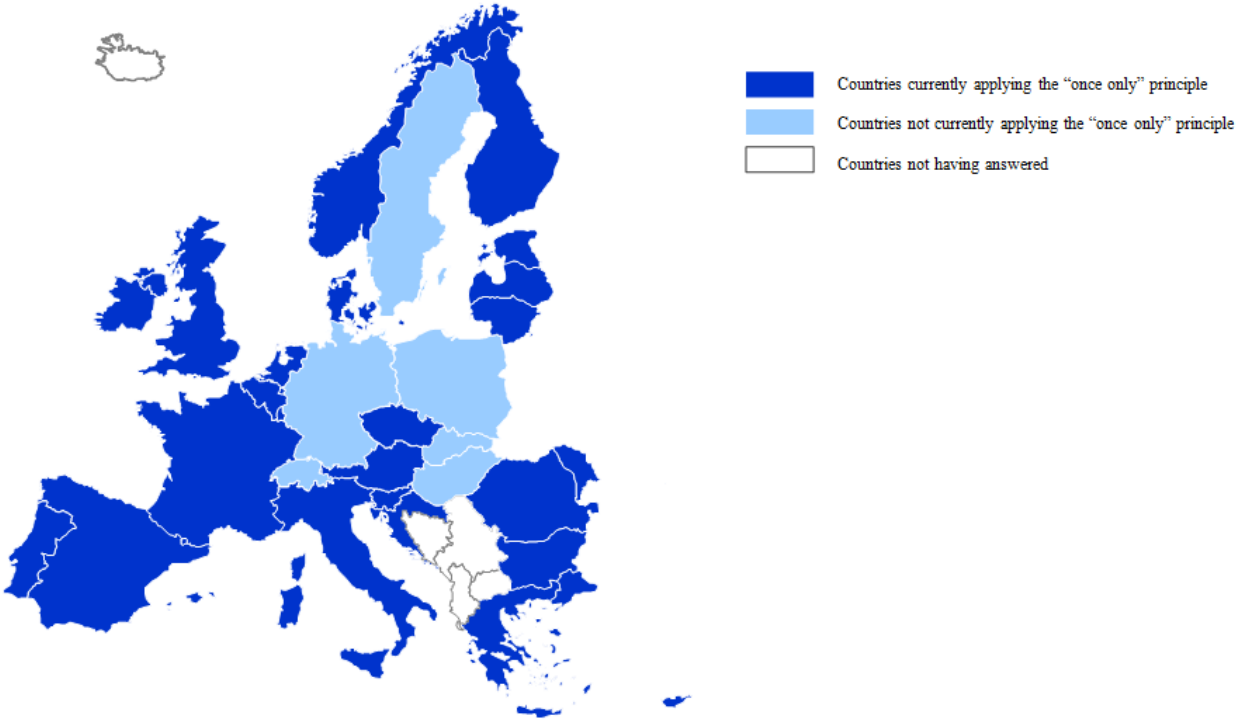


[17] The desk analysis and the eSurvey allowed to identify the following countries having interesting, well-structured eGovernment strategies and "once only" principle initiatives: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, Netherlands, Portugal, Spain and United Kingdom.

[18] With respect to the responses obtained, 30 countries out of 41 (equal to more than 70% of countries) completed the eSurvey. Specifically: 26 EU members states (all the Member States, except Luxembourg and the United Kingdom); 2 associated countries (Montenegro and Norway); 2 non EU countries (Switzerland and Australia).

Furthermore, some countries (Greece, Italy and Netherlands) answered the eSurvey more than once Explain how additional answers were handled. For this reason, a total amount of 33 responses were gathered, allowing to develop a preliminary overview of the "once only" principle implementation across the participating countries.

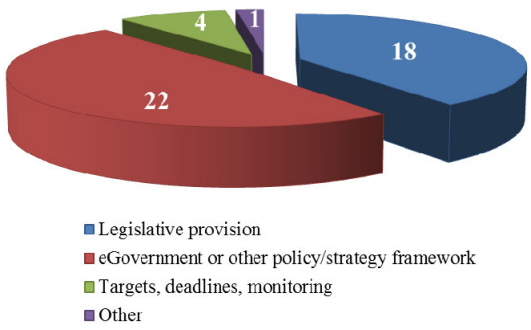
Figure 3: Countries applying the "once only" principle



The eSurvey also allowed to identify "once only" principle implementation common trends and main features[19].

Concerning the **implementation process,** the "once only" principle is encompassed in a specific eGovernment policy/framework or in a legislative provision and embedded within a larger package of ABR measures (typically including digital by default, and the use of base registries). This implies that it is not possible to analyse, assess or understand the impact of the "once only" principle in isolation given that it is always designed and implemented as part of a wider package, although it is a critical and often lynch-pin component within this wider package. Additionally, in several countries, the "once only" principle implementation has a double-policy basis: it is foreseen under both a legislative provision and an eGovernment strategy/framework.

Figure 4: Policy base for the "once only" principle

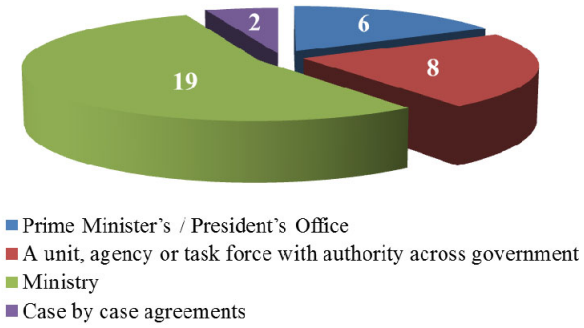


[19] Please, refer to the eSurevy report in the Annexes to get a complete overview of the results gathered.

With respect to the **implementation responsibility**, the eSurvey highlighted a common trend towards **centralization.** Countries usually charge the executive branch to carry out and monitor and coordinate the "once only" principle implementation process. Every country has chosen the ministry (or sometimes the ministries) committed to lead the process. Some countries also devolve the implementation upon both a specific ministry and a governmental unit or agency. The centralization of the implementation process is often sided by a "whole-of-government" approach, which requires coordination, collaboration and coherence among all administrative levels/branches. For this purposes it seems necessary to:

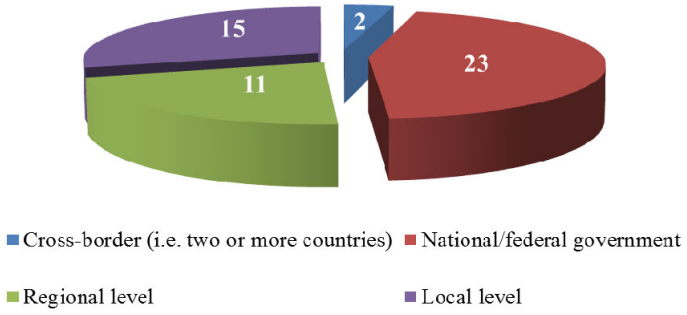
- designate a coordinating authority;
- integrate different administrations online services;
- set up a one-stop-government.

Figure 5: Part of the public sector that has the overall responsibility for the "once only" principle implementation



Furthermore, regarding the **administrative coverage,** countries involve different levels of government in "once only" principle initiatives. In 50% of countries all the administrative levels (national, regional and local) are covered by the "once only" principle. Overall, national or federal institutions are always involved in applying the "once only" principle, whereas lower level governments are concerned to a lesser extent.

Figure 6: levels of the public sector that are covered by the "once only" principle



Some common indicators and trends also emerged with respect to **implementation procedures and tools**. Mere tools, such as service level agreements, access granted by users and personalised "My Page", are never used alone but always in combination with a legal or strategic framework or guidelines addressing the main issues related to the "once only" principle application.

Importantly, countries efforts for the "once only" principle implementation are not without obstacles. Countries have to face some **relevant barriers** when attempting to introduce it. According to "**Yes countries**", the most common barriers are:

- **lack of communication and division** among government departments (silos in government, that is, vertical and horizontal fragmentation across government braches and levels);
- **implementation costs** governments should afford to introduce the "once only" principle (meaning, at a larger extent, more public spending);
- privacy and data sharing constraints;
- required changes in both organizational aspects and working practices and cultures.

By contrast, countries that have not yet implemented the "once only" principle mention privacy and data sharing, legislative requirements and costs stemming from the introduction of new electronic tools and procedures as the **main obstacles preventing the implementation of the "once only" principle**. Silos in government and other organizational aspects have a lower bearing in this case.

Another relevant finding relates to **benefits** obtained from the "once only" principle implementation. "Yes countries" consider government as the category which gains less, whereas citizens are considered the category which obtains the most benefits in comparison to others. Overall, "Yes countries" are applying the "once only" principle in relation to all three categories of beneficiaries (businesses, citizens and governments), which gain the same main benefits: cost savings, time savings, improved service quality and administrative efficiency

Concerning the **methodologies applied for the evaluation of "once only" principle costs and benefits**, 76% of respondents declared that in their country a combination of several methodologies is frequently used for this purpose:

- the Standard Cost Model (SCM);
- the impact analysis;
- the customer satisfaction survey;
- the business case approach.

Nevertheless, a common approach has not been developed yet.

Finally, it was also the existence of a gap between eGovernment services availability and the effective users take-up was also found out. Actually, the implementation of eGovernment policies and/or strategic frameworks and the availability of numerous, advanced online services it is not sufficient to ensure a wide-spread use among citizens. An effective solution seems to be the personalization of services to users' needs. This should enable citizens to fully exploit eGovernment services, by adapting the service to each user conditions, skills and demands, because the more user-centric and personalized eGovernment services are, the more their take-up is likely to increase.

2.2 Best practice countries selection

Based on the evidence gathered, specific country snapshots were drafted in order to present in details the eGovernment strategy and "once only" principle implementation features in each country. The country snapshots gave emphasis to:

- the level of eGovernment development of each country;
- the national eGovernment strategy;
- existing initiatives for the ABR and the "once only" principle;
- the "once only" principle implementation main features (responsible authority, administrative coverage);
- barriers, costs and benefits related to the "once only" principle and evaluation methodologies.

The country snapshots allowed to identify a group of countries (that includes the 10 EU "Yes Countries" and 3 non EU countries).

The landscape and the most relevant initiatives were presented and shared during a knowledge-sharing workshop that involved more than 30 relevant governmental and non-governmental stakeholders. The workshop mainly aimed at sharing "once only" principle main findings and at providing significant inputs to be taken into account in the course of the Study.

Date and place of the workshop: Brussels, Dg Connect premises, 10th July 2013;

Stakeholder involved

32 participants coming from 13 EU Member States: Austria, Belgium, Croatia, Czech Republic, Denmark, Finland, Germany, Italy, Latvia, Norway, Portugal, Sweden, The Netherlands.

Objectives

Sharing relevant knowledge and experiences on "once only" principle implementation;

stimulating discussion on the issue between governmental and non-governmental stakeholders, such as businesses and consumer/citizens organisations;

providing significant inputs to be taken into account in the further course of the Study.

Contents:

- The Belgian register of natural persons;
- The mandatory digital self-services in Denmark;
- The system of 13 base registries in Netherlands;
- The digital government strategy in United Kingdom
- The base registries in Czech Republic;
- ABR relevant aspects in Finland

Main outcomes:

- concrete examples of how the "once only" principle or a variation of it and electronic procedures becoming the dominant channel for delivering eGovernment services are working in practice;
- evidence of impacts: on businesses, citizens and administrations;
- reasons for not implementing the "once only" principle or for electronic procedures not becoming the dominant channel to deliver eGovernment services;
- collection of views and needs of non-governmental stakeholders such as business organizations and consumer/citizens organizations.

Within the group of countries with good eGovernment development and relevant "once only" principle applications **Denmark, Netherlands and United Kingdom** were selected as champions/countries of excellence. The selection was based on the following criteria:

- the presence of effective and efficient electronic procedures and general eGovernment standards and advancement, in order to ensure the significance of the selected cases;
- the centrality of the "once only" principle in national policies and strategies;

- data availability and the presence of information and reports on initiatives, policies and strategies concerning the "once only" principle and other ABR initiatives;
- replicability and reliability potentials in order for other countries to easily transfer and scale best practice initiatives and solutions;
- the extent and amount of measurements of administrative burden reduction and "once only" principle initiatives, for instance standard cost models, KPI's and business case approaches. The extent and amount of measurements are further indicating both best practice outcomes/effects and early indications of replicability potentials;
- the advancement of the countries' data infrastructure, in particular common base registries and other significant databases;
- multilevel cooperation and cross government cooperation on the national, regional and local levels of "once only" principle initiatives and solutions.

3 Cost Benefit assessment and projections

The selection of the three champions/countries of excellence was the starting point for the cost-benefit analysis (CBA).

The cost-benefit analysis assessed costs and benefits arising from the implementation of relevant initiatives of "once only" principle and digital-by-default programmes in Denmark, Netherlands and United Kingdom. The initiatives/programmes analysed were selected by means of a data collection process, based on desk-research and interviews.

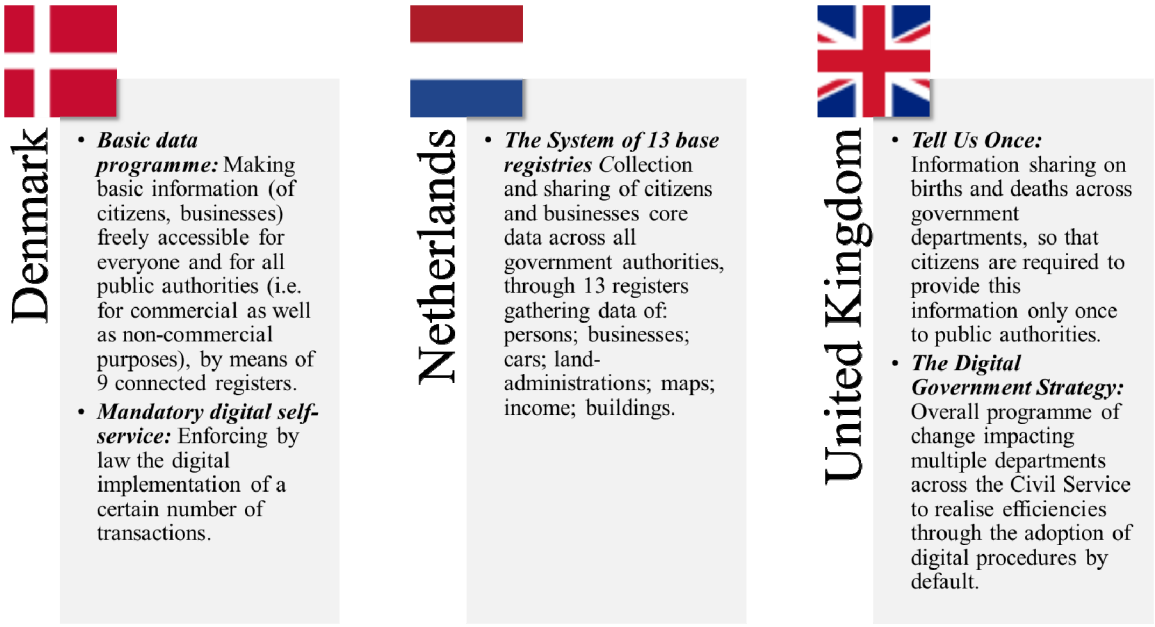
3.1 Costs Benefits assessment

The collection of necessary data for the cost-benefit analysis moved from interviews with stakeholders of the "Yes countries". The **interviews** mainly aimed at:

- investigating the eGovernment strategy, its objectives and the features of the implementation process;
- identifying the main "once only" principle initiatives or digital-by-default programs at national level;
- investigating the legislative framework and the implementation features;
- gathering qualitative and quantitative measurements of costs and benefits stemming from these initiatives/programs, with reference to different beneficiaries (e.g. government, citizens and businesses).

Interviews with Denmark, Netherlands and United Kingdom HLO have been particularly relevant in order to: collect valuable information on "once only" principle and digital-by-default initiatives and how they related to the National eGovernment strategies, gather data for the cost-benefit analysis and identify the best practice initiatives.

Figure 7: Initiatives selected for the costs-benefits case studies



Thus, the case studies for the cost-benefit analysis were finally defined.

The initiatives presented in Figure 7 proved to be reliable for the cost-benefit analysis and the projections of their impact at EU level because their implementation started years ago. Costs have been already categorized or measured, and potential benefits arising in the long term have been already identified and, whenever possible, estimated.

The interviewees quoted existing, reliable studies assessing costs and net expected savings related to specific programs (e.g. digitization of transactions or fostering information sharing across different administrative registers), whereas no specific estimates or personal considerations on costs and benefits were provided.

Thanks to these suggestions, relevant documents have been gathered and analysed (see References).

Cost-benefit estimates collected from relevant sources proved to be comparable only to a limited extent, due to:

- different underlying assumptions;
- heterogeneous categories of costs and benefits used for the analysis;
- specific features of the countries/programs.

Therefore, in order to make comparisons between different estimates, a **common assessment framework** has been built (see par. 3.2): it defines the taxonomy of costs and benefits stemming from the "once only" principle and digital-by-default initiatives, by identifying categories of costs and benefits which are common to all the "best practice" countries' initiatives, and by linking these categories with two clusters of beneficiaries: governments and users.

Finally, the findings of the case studies have been used as the basis for the projection of costs and benefits at EU level (see par. 3.3). Specifically, the projections allowed us to assess the potential net savings arising from the possible application of each initiative selected as "best practice" in each EU Member State. Thus, costs and benefits observed in relation to the three "best practice" countries have been extended at all EU MS, on the basis of existing estimates on eGovernment

users/diffusion, volume of online services, volume of transactions between government and users and existing similar initiatives[20].

3.1.1 The basic data programme (Denmark)

The **Basic Data Programme** is part of the **Danish eGovernment strategy 2011-2015** and aims at establishing a government shared registry for data distribution, called Common Public-Sector **Data Distributor**. This is based on the "once only" registration principle and involves three categories of beneficiaries: governmental institutions, businesses and citizens.

The Basic Data Distributor is based on the sharing and the re-use of **core information that public authorities use in their daily data procedures**[21], such as:

- personal data;
- business data;
- real property data;
- address data;
- geographic data;
- income data.

This data is deemed to hold the greatest potential for re-use, and thus the greatest value for both public and private sector users. For this reason, it is shared across the different governmental entities and with the private sector.

Actually, the Distributor shares citizens and businesses data among all government departments and levels. Therefore, citizens and businesses are required to upload their data in the Distributor only once. When data is uploaded, public authorities cannot ask users for the same data anymore and have to obtain it from the Distributor themselves. This requirement avoids the replication of information transactions between the citizens and the government, and reduces substantially the burden for users in reporting information.

The Distributor is also freely accessible by both public authorities and users (citizens and businesses). For these reasons, the Basic data Programme is considered a good example of "once only" principle.

- The Basic Data Distributor is composed of 10 registries (see

Table 2) and is to be realized by the **Danish central government** in cooperation with **local governments**, in the period **2013-2016**.

The most important **objectives** for developing the Basic Data Distributor are:

- basic data needs to be as correct, complete and up-to-date as possible;
- data must be harmonized in the same format;
- all public authorities must use basic data found in the Distributor in their daily procedures;
- as far as possible, basic data (excluding sensitive personal data) must be made freely available to businesses as well as the public; precisely, each department will have access exclusively to data relevant to its activities and not all data will be made available to everyone (e.g. personal data from the Civil Registration System);
- basic data must be distributed efficiently, accommodating the needs of the users.

[20] Please, refer to the Annexes to get a complete overview of the CBA and projection results.

[21] The Danish Government/Local Government Denmark (2012).

Table 2: Registries included in the Basic Data Distributor

REGISTRY	DESCRIPTION
Central Business Registry	Information on Danish businesses, including central business registration number, legal form of organization, legal name and address, owners data
Company Registry	Information on all registered companies, e.g. limited companies and limited partnerships
Cadastre	Information of both the Cadastral Register and the Cadastral Map, related to approximately 2,5 million land parcels in Denmark, including area size
Building and Dwelling Registry	Detailed information about all buildings and dwellings in Denmark
Registry of Property Owners	Data of actual owners of all real property in Denmark, and including all transfers of ownership
Map data	Description of landscape forms and special characteristics, taken from the FOT Register (common public-sector geographic data)
DAGI (Danish administrative and geographical boundaries)	Detailed geographical demarcation of a number of administrative units such as municipalities and regions
Danish Elevation Model	Digital elevation model of the terrain, with information about the elevation of the terrain above sea level;
Place and Name Information Register	Data of approximately 200,000 place names, including those that appear in the topographical maps and in the Digital Map Supply
Civil Registration System	Basic data on individuals, including civil registry number, name, address, date of birth, marital status, kinship, nationality, membership of the Danish national church, and guardianship

Source: The Danish Government/Local Government Denmark (2012), Good basic data for everyone – a driver for growth and efficiency, The eGovernment strategy 2011-2015

As a general rule, the establishment of the **Basic Data Distributor ensures** that:

- all basic data is to be made freely available for three categories of beneficiaries: all public authorities, private businesses and individuals;
- all basic data conforms to the same **technical requirements** and is compatible, so that it can be used in digital procedures and case processing.

This makes basic data a common digital resource, which can be exploited freely for all purposes, ranging from hobby-related projects to fully commercial products and services.

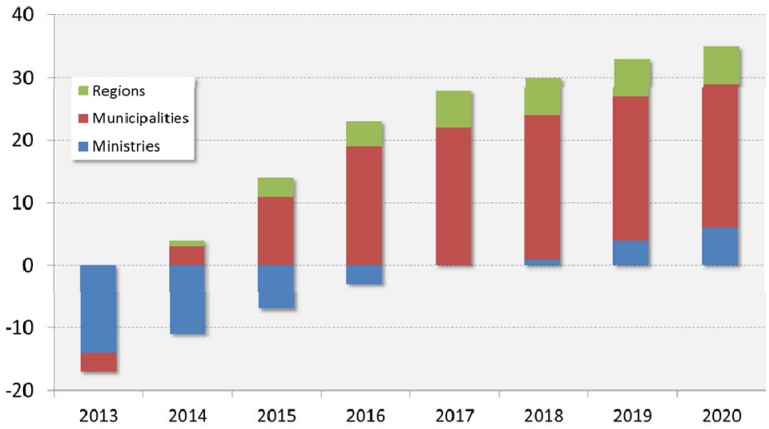
The following steps are envisaged to realize the **Basic Data Distributor**:

- **by the end of 2013,** the Basic Data Distributor will distribute data from the Digital Map Supply (maps, cadastral maps and other geographic data) as well as data from The Public Information Server, which distributes information about real property in Denmark;
- **from 2014,** the Basic Data Distributor will distribute personal data (from the Civil Registration System) and business data (from the Central Business Register);
- more data sources and registers can be included by the Data Distributor later on, so that it will be possible to phase out several existing data distribution systems.

A clear repartition of tasks has been realized across the governmental institutions to coordinate the effort and monitor progress across the different administrations participating in the programme. In addition, the cross-institutional **Basic Data Committee** has been created to coordinate development initiatives and changes to basic data, to foster efficiency improvements, to harmonize interfaces, standards and data models, to promote dialogue between the public and private sector and to ensure the full exploitation of basic data by public authorities.

The Basic Data Programme brings potential savings for society in the timeline 2012-2020. The total potential savings is expected to reach € 100 million annually in 2020. Municipalities account for 23% of the public potential savings in 2020 (€ 23 million). Ministries and regions are expected to experience lower benefits in the order of € 6 million per year over the period 2017-2020. The expected benefits of the programme tend to stabilise from 2017. Afterwards, benefits exceed costs for all the public entities. In addition to these direct economic benefits, it is estimated that better access to data of higher quality will enhance economic growth in sectors such as Real estate, telecommunications and transport. In summary, free access to basic data will bring new types of services and also more efficient digital services in the private sector.

Figure 8: Net surplus for the public sector (€ million)



NPV (i=3%)	
Ministries	- € 24,93
Municipalities	€ 105,02
Regions	€ 27,87

Source: Authors' calculation based on The Danish Government/Danish Regions/Local government Denmark (2012), Good Basic Data for Everyone – A driver for Growth and efficiency. The eGovernment Strategy 2011-2015

3.1.2 Mandatory digital self-service (Denmark)

The Danish Government has adopted a strategy regarding the digitization of the exchange of information between citizens and administrations. The ultimate objective of the mandatory digital self-service is to enforce by law the use of digital communications. The programme has been considered in this Study as an application of the digital-by-default principle. Full digitization of communications is to be achieved step-by-step and to be completely phased-in by 2015. Therefore, the mandatory digital self-service is structured around 4 yearly waves of digitization over the period 2012-2015, according to the Danish eGovernment strategy[22].

[22] According to the Danish eGovernment strategy, the digitization of services is achieved through four waves of digitization. Each wave covers specific sectors and is targeted at specific beneficiaries:

- wave 1 (2012) mainly entails the digitization of citizens' services, focused on:
  - introduction of the health card and simplification of school enrolment at the municipality level;
  - introduction of online services for student loans at state level.
- wave 2 (2013) - digitization of a broad number of services at municipal and state level and the digitization of tax services:
  - municipalities: sickness reporting, driving license services, property taxes, loans of premises and properties;
  - state: application for criminal records, reporting bicycles thefts, annual revenue tax reports;

The three principal actors of the mandatory digital self-service are the State, the Authority Payments Denmark (UDK, see the box below) and the municipalities.

Udbetaling Danmark (UDK) was established over the period October 2012 – March 2013 as a new administrative institution under the Danish Ministry of Social Affairs and Integration. UDK takes over various tasks that were previously handled at municipality and state level, with the aim of benefiting from economies of scale.

Thus, UDK is currently responsible for the administration and disbursement of social benefits in five areas:

- family benefits;
- maternity/paternity benefits;
- old-age pension;
- disability pension;
- housing benefits.

However, municipalities maintain the competence to make decisions in these areas. Therefore, UDK can be seen as a central administration of disbursements, based on municipality decisions. They might be thought as a service *for* the municipalities. Moreover, the pension company ATP handles the business on behalf of the Ministry.

UDK has five centres across the country, located in Frederikshavn, Holstebro, Haderslev, Vordingborg and Hillerød.

The reorganization and implementation of UDK has been completed and most of customer services have already been digitized, although full digitization has to be still achieved. Nowadays, the vast majority of UDK digital customer service takes place through

These institutions will contribute to the implementation of the programme according to their different competencies. The state will be mainly in charge of providing the necessary finance and legislation. For each of the four waves envisaged for the implementation of the programme, legislation will typically come into force the 1st December of each year. Municipalities and UDK will be in charge of ensuring users friendly solution for the users and preparing the appropriate set of skill through the organisation of training sessions.

The **Mandatory Digital self-service** entails expected net benefits for three government levels: state, municipalities and UDK. Municipalities appear to be the entities experiencing the largest share of net benefits - € 80 million for the year 2017. The remaining part is to be distributed equally between state and UDK - € 22 million each for the year 2017. Besides, the State and the UDK will bear the

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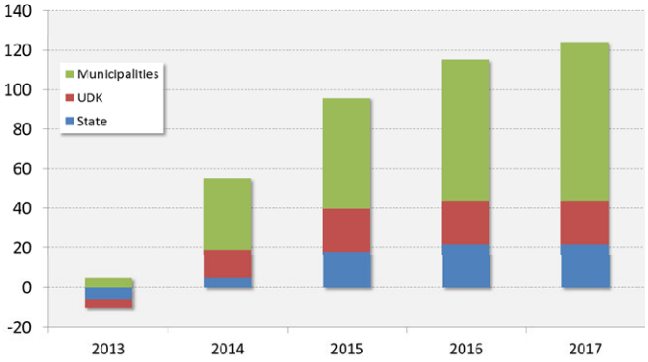
- wave 3 (2014) - digitization of services related to employment, house, construction and environment. This wave foresees:
  - a reduced number of changes for municipalities: notification of construction and building permission;
  - a wider range of digitalised services for the state: various permission relating to weapons, services for pensioners living abroad, services for adoptions, digital services connected to separation and divorce;
  - some services introduced at UDK level: maternity benefits, housing benefits, early retirement, housing allowance, children and young people benefits;
- wave 4 (2015) - digitization of employment and social services at municipality level only: residents deposits, single payments, public assistance and personal allowance.

larger part of cost during the first year of implementation of the programme - € 6 and € 4 million respectively;

Figure 9: Net benefits for the public sector (€ million)



NPV (i=3%) € mln	
State	€ 55,50
UDK	€ 70,01
Regions	€ 228,79

Source: Authors' calculation based on The Boston Consulting Group (2012), Overgang til obligatorisk digital kommunikation i den danske offentlige sector (The transition to mandatory digital communication in the Danish public sector)

3.1.3 The Register of non-residents (RNI) (Netherlands)

The RNI includes data of:

- people domiciled in the Netherlands only for a short time;
- Dutch citizens domiciled abroad for short or long time and maintaining a relation with the Dutch government.

The introduction of the RNI involves the following public administrations at national/local level:

- national agencies, managing non-residents data:
  - Tax authorities;
  - Employee Insurance Implementing body (UWB);
  - Social Insurance Bank (SVB);
  - National Health Agency (CVZ);
  - Chamber of Commerce Administration;
  - Passport Agency for citizens abroad;
  - Right to vote abroad administration;
  - 3 administrations dealing with Dutch students abroad;
- 16 municipality's offices offering the registration services for non-residents.

The costs to be afforded for the RNI can be divided into 2 main categories:

- **investment**, including the costs afforded during the development phase and aimed at introducing and making operational a new eGovernment service; they also include transition costs, incurred for the shift from an offline scenario to an online scenario[23];

[23] Transition costs are afforded to move from the offline to the online scenario. They are included in the investment costs and are relevant because the transition from offline to online permits the implementation of the "once only" principle. The online scenario entails the establishment of electronic registries which gather users' data and share this data among all public authorities. The difference between offline and online scenario is: in the first case, users have to communicate with different authorities; in the latter case, electronic registries users communicate data only once to municipalities, and data is then shared among all public authorities.

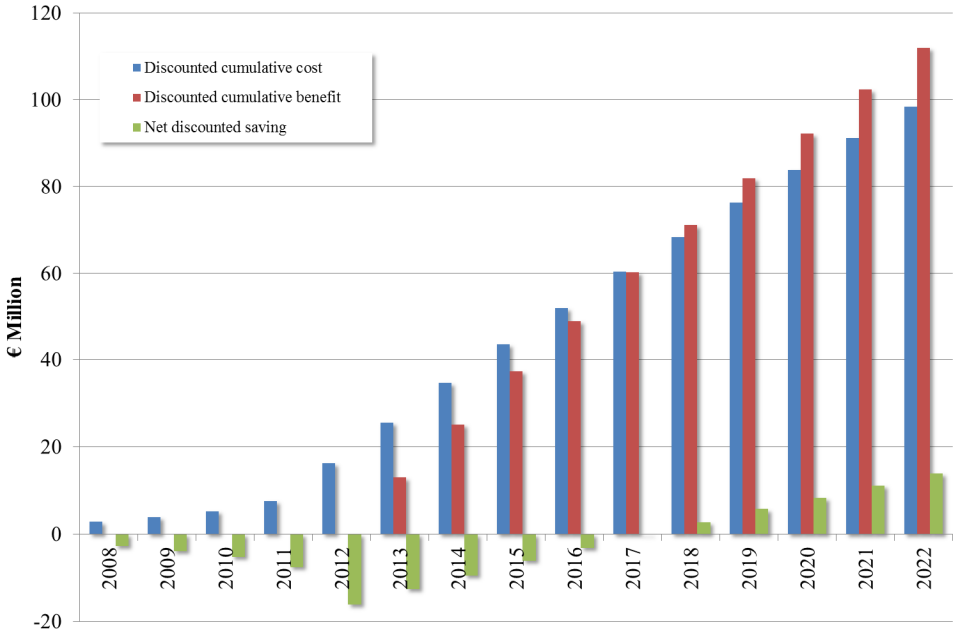
- **operating costs**, required for the management of the RNI, once it is in place.

The benefits are mainly related to time savings. This is a consequence of the application of the "once only" principle: users registered in the RNI have to communicate their data only once to public authorities. Hence, there is a 50% decrease of potential transactions between users and public authorities. Moreover, the RNI represents an effective tool to avoid fraud, and to decrease fiscal evasion as well as improper requests of welfare payments. This indirect effect is particularly difficult to monetize because it requires assumptions on the existing level of fraud.

The **base registry of non-residents (RNI)** entails total costs of € 98 million (NPV) for the government over the period 2008 - 2022. Moreover, the expected impact of RNI introduction is € 112 million in NPV. The cost-benefit settlements is € 13,9 million (NPV) in the period 2008-2022. The expected payback time of the investment is 10 years. The robustness of the estimated net benefit is confirmed by a sensitivity analysis assessing net benefits variations due to three variables: discount rate, the number of new users, and the number of transactions.

Furthermore, the RNI represents an effective tool to avoid fraud, and to decrease fiscal evasion as well as improper requests of welfare payments. This indirect effect is particularly difficult to monetize because it requires assumptions on the existing level of fraud;

Figure 10: Discounted cumulative costs and benefits and net discounted saving form the RNI in a time horizon of 15 years at a 3% discount rate (in € million)



Source: Author's calculation based on Ecorys (2007), Actualisatie kosten-batenanalyse Registratie Niet-Ingezetenen

3.1.4 The Digital Government Strategy (United Kingdom)

The genesis of the **Digital government Strategy (DGS)** relies in the **Civil Service Plan reform** of **2012**. In this plan, the need for the United Kingdom Public Service to become "Digital by Default is emphasised, in its skills, its style, how it communicates and how it enables service users to interact with it"[24]. Digital-by-default (DBD) does not exclude citizens not having access to digital services.

[24] United Kingdom Her Majesty Government (2012).

However, it "should be so straightforward that all those who can use them prefer to do so"[25]. Only 18% of the United Kingdom population never or rarely use the Internet, whereas 82% access the Internet regularly or occasionally[26].

In order to enforce a real eGovernance Strategy, the Government published the Government Digital Strategy in November 2012[27]. The objectives set out in the report are the following:

- to improve the government digital leadership;
- to develop the digital services;
- to redesign transactional services to match with the DBD standard;
- to provide services for citizens not having access to digital services;
- to improve the Government communication towards the public.

This strategy relies on 14 concrete actions[28]:

- to ensure there is an active digital leader on departmental and transactional agency boards;
- to empower skilled and experienced Service Managers to direct the redesign and operation of services;
- to ensure that appropriate digital capability exists in-house across departments;
- to improve digital capability across departments;
- to Redesign services with over 100,000 transactions each year;
- to ensure all new or redesigned transactional services meet the digital by default service standard since April 2014;
- to move the publishing activities of central government departments onto GOV.UK by March 2013, with agency and arm's length bodies' to follow by March 2014;
- to raise awareness of digital services so that more people know about, and use them;
- to take a cross-government approach to assisted digital, and help people who have rarely or never been online to access and use digital services;
- to offer leaner and more lighter tendering processes;
- to lead in the definition and delivery of a suite of common technology platforms to underpin the new services;
- to remove legislative barriers which unnecessarily prevent the development of straightforward and convenient digital services;
- to define and supply consistent management information for transactional services;
- to use digital tools and techniques to engage with and consult the public.

The digital strategy, led by the Government Digital Services, applies to all State departments. They have the obligation to comply with the 14 actions set out in the Digital Strategy report. The scale of the work and the expected benefits of the digital strategy vary across the different departments. The HM Revenues and Customs (HMRC) accounts for more than half of the total of transactions (digital and non-digital). The Foreign and Commonwealth Office (FCO), the Attorney's General Office (AGO), the Department for International Development (DFID) and the Ministry of Defence (MOD) accounts for 0[29] transactions.

The Government Digital Services' (GDS) "core purpose is to ensure the Government offers world-class digital products that meet people's needs"[30]. It is designed to digitalise government services

[25] United Kingdom Cabinet Office (2011).

[26] United Kingdom Cabinet Office (2012), Digital Landscape Survey;

[27] United Kingdom Cabinet Office (2011).

[28] Ibidem.

[29] United Kingdom Cabinet Office (2012).

[30] Digital Cabinet Office website: http://digital.cabinetoffice.gov.uk/about/.

and to ensure a large and effective implementation of the plan across all departments. The GDS has a central role in designing digital services while monitoring their quality.

The Digital government Strategy consists mainly in digitalizing transactions between the departments, the departments and the citizens, the departments and the business entities.

Potential savings stemming from the **Digital Government Strategy** were estimated through two different methodologies:

- **the top-down methodology**: it estimates figures based on transactions-related expenditures in each government department. The present analysis used data from the 13 departments accounting for 99% of the transactions of the administration;
- **the bottom up methodology**: it is based on 4 four aspects of transactional services that are supposed to be linked with savings: volume, level of digital take-up, function, customer type. 17 types of transactional services are considered in the present analysis[31].

The two methodological approaches proved that potential savings fall inside a range of € 2,0 and €2,1 billion of savings per year. Besides, potential annual savings are related to both administrations and the administered. The fiscal savings corresponds to the administration savings and the cost recovery to savings for the administered. The difference between the two totals represents less than 3% of the total estimated savings in both methods;

3.1.5 Tell Us Once Programme (United Kingdom)

The Tell Us Once (TUO) programme has been considered as an example of the implementation of the "once only" principle in the United Kingdom. The TUO program for notification of birth and death was set on a voluntary basis. **It has been firstly put in place at local level** and some municipalities have acted as pathfinders. This joined-up notification service was primarily tested through pilots in 2008. It took place in 44 local authorities (LA) for 24 services such as the Council Housing service or the Passport service. The service was originally tested by the HMRC in 11 LA. After the success of the pilots, the project was transferred to the Department for Work and Pensions (DWP) for a test at the national scale. The coalition Government approved the national implementation of the TUO service, and **national roll out of the service took place during 2011**.

The DWP designed, set up and now administers a unique IT infrastructure where all the information is centralised. The relevant information is distributed to all the concerned services in other departments. It was previously envisaged that the HMRC would run this service but it was declared unable to do so because of a lack of capability and resources to run the notification service[32]. The General Register Office now shares its own database with the DWP. The birth and death notification service, on a voluntary base, covers all the departments that are likely to need this information.

All the notification procedures are run through the IT notification system administered by the DWP. The Tell Us Once service use is **voluntary**. It provides an alternative method for notifying Government of a birth or a death. Citizens can use the service to make notification to the Secretary of State for Work and Pensions by:

- attending in person at an office of any participating Local Authority (LA);
- telephoning a dedicated **telephone line** provided by the Central government;
- use the online channel.

[31] United Kingdom Cabinet Office (2012).

[32] United Kingdom Department of work and pensions (2011).

Should a customer not want to take advantage of the TUO service, the existing processes for notifying a change of circumstances will remain. Registration of the death or birth will be carried out as normal, as prescribed under the current registration regulations. The online notification is currently available in the United Kingdom but the data used in the survey dating from 2011 does not include the online services[33].

Concerning the way TUO works, in the case of both births and deaths, the event needs to be registered at a local Register Office and if the customer only has the option of a face-to-face service it makes sense to co-locate many of the TUO services in the same or adjoining offices. Of course TUO can only be delivered with the customer's consent and they find out about the service in a number of ways: via publicity across the locality (e.g. with the local undertakers or health centres), signposting from local organisations (e.g. the hospital or Age Concern), when calling to book a Registration appointment or when visiting the Register's Office itself. In some localities they have the choice of either face-to-face, telephone, online or for the housebound, some local authorities are using their Joint Teams to deliver the TUO service. Once the customer has opted for the TUO service the officer collects some standard information and asks the customer whom they wish to inform. At the end of this process they will be provided with a letter explaining who has been informed of the event and what they should do if they have any further queries.

The Tell Us Once Programme costs and benefits were estimated over a 10 year timeline, for three notification channels envisaged: IT system, telephone service, face-to-face service. The analysis found that the total cost of the implementation of the three notification channels is expected to be around £ 111,03 million over 10 years, whereas the benefits on the same period are estimated to amount at £ 43,4 million.

Although the TUO proved to originate higher costs than benefits, it has been included among the "once only" principle "best practices" anyhow. This choice is supported by the fact that the TUO is part of a broader eGovernment strategy, aimed at making digital all communications and transactions between government and users. **Therefore, the TUO impact should not be considered apart, but within the whole impact of the eGovernment strategy. From this perspective, from the interviews it emerged that the United Kingdom government considers TUO as one of the relevant tools for the full digitization of public services because it fosters a gradual shift from offline to online services usage by citizens**. Moreover, the application of TUO, and the consequent gradual increase of digital services take-up, entails an enhanced services quality.

3.2 Costs Benefits taxonomy

Through the examination of "once only" principle and digital-by-default initiatives and the review of relevant literature on eGovernment impact, a **taxonomy of costs and benefits** has been defined**.** It includes the following categories of costs and benefits, with respect to public administration and users.

- Costs for public administration:
  - investment **costs:** including three main subcategories:
    - system **planning and development:** costs afforded for the planning and development of ICT infrastructures/networks and other tools required for service implementation;
    - **system acquisition and implementation:** costs incurred for the purchase of necessary ICT and technical tools for the service operation;

[33] United Kingdom Department of work and pensions (2011).

        - **transition costs:** costs to be afforded to shift from offline to online service provision;
    - **operating costs:** afforded yearly for managing, updating and monitoring service delivery.

- Costs for users:
    - information costs: time spent to get information about the service usage;
    - use: expenses entailed by the usage of the service.

- Benefits for public sector:
    - **direct benefits**: include all monetizable benefits arising from time saving, greater revenues (or lower money loss) and efficiency gains due to the reduction of the number of transactions and improved data/information quality;
    - **indirect benefits**: encompass non monetizable benefits related to a better service delivery and the enhancement of the decision-making process.

- Benefits to users:
    - **direct benefits**: include money savings, avoided expenses and time savings due to the reduction of the number of transactions;
    - **indirect benefits**: related to the improved efficiency and quality of the service used.

A more detailed description of each category is presented in the tables below.

Table 3: Proposed taxonomy of costs for Public Sector (National/Local Authorities)ù

Category	Subcategory	Details
Investments	**System planning and development** Planning of ICT infrastructure, data and network architecture needed for the service operation	**Hardware** **Software** **Development support** Programme management System engineering architecture design Change management and risk assessment Requirement definition and data architecture Test and evaluation **Design studies** Data and network architecture **Other development phase costs** Facilities (offices, equipment) Travel
	System acquisition and implementation Acquisition of ICT and technical tools, public sector and external workers involved in the set-up of the system and data conversion	**Procurement** Hardware Software Customized software Web hosting **Personnel** Public sector/external employees
	Transition Costs incurred to switch from an offline service to an online service	Hardware maintenance/upgrade/replacement Software maintenance/upgrade/replacement Telecommunication network changes Operation and management support
	Personnel Costs afforded to public employees to provide the service online	Internal communications Training Redeployment
Operating	**ICT Management/Maintenance** Costs incurred for the yearly management, delivery and update of the service	
	Personnel Costs afforded for the personnel payment	
	Monitoring and evaluation Costs related to the need to evaluate and monitor how the service works, its impacts and users take-up	

Table 4: Proposed taxonomy of costs for Users

Category	Subcategory	Details
Information	**Time factors** Time spent for getting informed and use the service	Web search Reading time Email and form completion Phone time
Use	**Direct costs** Costs directly attributable to the use of a specific service, product or activity	Computer hardware and software Computer operations and maintenance Telecommunications and web access charges IT training and support Digital signature set up Printing forms and information

Table 5: Proposed taxonomy of Benefits for Public Sector (National/Local Authorities)

Category	Subcategory	Details
Direct	**Direct cash** All monetizable benefits arising from time savings, greater revenues, reduced expenses and lower money loss	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, for example, through faster job searches Reduced costs through the need for reduced physical presence
	Efficiency savings All monetizable gains due to the reduced number of transaction and errors, improved information/ data quality, more efficient use of existing resources and infrastructure	**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 w+C12 working hours **Information benefits** More accurate, up-to-date and cleaner data and more reliable information Capacity for greater information cross-government sharing **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), for example, 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
Indirect	**Non monetizable benefits** All benefits that cannot be expressed in cash value and related to better service delivery and the enhancement of the decision-making process	**Improved service delivery** Enhanced customer service Improved service consistency and equality Improved user satisfaction Improved communication Greater take-up 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 (allows more, greater and new data to be collected; improved security)

Table 6: Proposed taxonomy for Benefits to users

Category	Subcategory	Details
Direct	**Direct cash** Monetizable benefits due to avoided expenses and reduction of the service costs	Price reduction of charged-for service, avoidance of future price increases Reduced cost of transmitting information – phone, post, paperless interactions, and so on Reduced travel costs Reduced associated costs (for example, professional advice, software tools, equipment, and so on, predominantly for businesses) Revenue generating opportunities for citizens, businesses and intermediaries
	Time saving Monetizable benefits related to the reduction of number of transaction and the possibility to contact the transaction online	Reduced user time (hours saved) Reduced need for multiple submission of data for different services and events Reduced travel time
Indirect	**Value based non-monetary benefits** Non monetizable benefits related to improved efficiency and quality of the service used	**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 (for example, 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 Personalized service Service integration

3.3 Projections: results

Using CBA results, it was possible to evaluate the potential impact of the "once only" principle and digital-by-default initiatives at EU level[34]. Projection results rely on two main hypothesis:

- **hypothesis 1:** all countries start from the same level of development in the implementation of each programme. Countries having an enhanced level of eGovernment (evaluated through the UN E-Government Development Index - UN-EGDI) are nonetheless supposed to experience reduced costs and hence higher net benefits;
- **hypothesis 2:** all countries are supposed to adopt the same planning/implementation strategy used by the three "best practices".

Three variables were used to rescale the CBA results[35]:

- the population as a proxy for the size of countries;
- the UN-EGDI as a proxy for the level of progress in the adoption of e-technologies;
- the average cost per hour of Public Official, derived from the Cross-Border Services Study.

The three variables considered were normalized with respect to the level observed in the "best practice" countries to rescale potential costs and benefits for their respective programmes.

Estimated results are as follows:

- **the digital-by-default would have a positive impact across the EU**. The digitization of transactions between public administrations and users results in time savings for both of them. However, the benefits gained depend on two factors:
  - the approach followed to make digital transactions mandatory;
  - the number of digitized transactions.

  A swift implementation of mandatory digital transactions is likely to have a higher impact than a gradual shift from non-digital to digital transactions. For instance, the Danish Mandatory Digital Self-service envisages a gradual approach for the digitization of public services/communications between governments and users. It aims at achieving full digitization step-by-step, throughout 4 yearly waves of digitization, each covering specific categories of services. The 4 waves are to be implemented over a four year period (2012-2015), so that mandatory digital services are slowly phased-in. This approach is expected to produce annual savings for government for around € 6,5 billion at EU 28 level by 2017. It should be underlined that this result underestimates the impact of the digital-by-default because it only includes a quantitative assessment of government benefits and does not include cross-border aspects. Regarding the potential impact on citizens and businesses, based on available data it was possible to develop only a qualitative assessment.
  A different approach has been undertaken by the United Kingdom Digital Government Strategy. It foresees a faster and targeted digitization of transactions between public administrations and users and among public administrations them-selves. Actually, digitization is to be realized in only two years and involves all services with over 100.000 transactions each year. These services have to meet the digital-by-default service standard since April 2014. This approach is expected to raise higher potential annual savings for both government and users. The potential impact of the UK Digital Government Strategy at EU level is around € 10 billion of annual savings (average value of annual savings, estimated

[34] See Annex 5 for further details

[35] Population and the CBS index were used to rescale values according to the size and the administrative officials costs across the EU 28 countries.

according to a bottom up and a top down approach)[36]. This leads to the conclusion that the economic impact of the digital-by-default is higher when there is a swift digitization of transactions and when digitization involves a substantial number of transactions;

- **the "once only" principle is expected to generate a positive economic impact at EU level as well**. However, the impact of the "once only" principle also depends on the modalities of the implementation process. If the "once only" principle is implemented within a well-structured strategy or within a comprehensive system for the delivery of public services, it is likely to produce a highly positive impact. Actually, the benefits of the "once only" principle are higher if the principle is associated to:

  - the possibility for users to transmit different types of data to public administrations only once;
  - the use of ICT for the transmission of data and for data sharing among public administrations, which significantly reduces transactions costs and increases time saving.

  For instance, the Danish Basic Data Programme introduces the "once only" principle for all the following data (collected in 10 electronic registries):

  - personal data;
  - business data;
  - real property data;
  - address data;
  - geographic data;
  - income data.

  Moreover, citizens and businesses are required to upload their data in the system only once. When data is uploaded, public authorities cannot ask users for the same data anymore and have to obtain it from the system by them-selves. This requirement avoids the replication of information transactions between the citizens and the government, and reduces substantially the burden for users in reporting information.
  The extension of a similar approach to implement the "once only" principle is supposed to generate a total net impact at the EU 28 level, amounting to around € 5 billion per year by 2017. This highly positive impact is due to the fact that the complex system of registries is also freely accessible by users (citizens and businesses) for commercial purposes and might foster growth in some economic sectors.
  The implementation of the "once only" principle based on the Dutch RNI approach is expected to produce net benefits amounting to around € 550 million at EU level in a time horizon of 15 years[37]. The RNI introduces the "once only" principle for all data of:

  - people domiciled in the Netherlands only for a short time;
  - Dutch citizens domiciled abroad for short or long time and maintaining a relation with the Dutch government.

  RNI users are required to transmit their data only once to the following public administrations and national agencies:

  - Tax authorities;

[36] The top down approach estimates figures based on transactions-related expenditures in each government department, whereas the bottom up approach is based on 4 four aspects of transactional services that are supposed to be linked with savings: volume, level of digital take-up, function, customer type.

[37] This is the net present value computed over a time period of 15 years. The present value of annual costs/benefits was computed by using a discount rate equal to 3%.

- Employee Insurance Implementing body (UWB);
- Social Insurance Bank (SVB);
- National Health Agency (CVZ);
- Chamber of Commerce Administration;
- Passport Agency for citizens abroad;
- Right to vote abroad administration;
- 3 administrations dealing with Dutch students abroad.

The introduction of a digital registry allows data sharing among Ministries and National Agencies and reduces the time required to collect and manage data.
By contrast, the Tell Us Once approach, based on the introduction of the "once only" principle only for births and deaths notifications, seems to be not highly profitable.
This result is also due to the persistence of offline communication channels (e.g. face-to-face and telephone notification) with new online communication tools (e.g. transmission of data using a specific web portal) Therefore, the extension of the Tell Us Once approach to implement the "once only" principle at EU level seems to be not efficient because the time and costs savings gained would not cover implementation costs.
Nevertheless, as proved by the case of the United Kingdom, the Tell Us Once has to be considered as part of a broader eGovernment strategy, aimed at making digital all communications and transactions between government and users. Therefore, the Tell Us Once impact should not be considered only from an economic perspective: not monetizable benefits should also be taken into account. For instance, the United Kingdom government has considered convenient to implement the Tell Us Once because it represents a relevant tool for the full digitization of public services, by promoting a gradual shift from offline to online services usage by citizens and by enhancing public services quality.
The comparison of different approaches has led to the conclusion that the application of the "once only" principle to different types of data and the use of electronic procedures for the delivery of public services is likely to produce high benefits for both public administrations and users (citizens and businesses).

On the basis of the Study's main findings, some lessons learnt emerged for both the "once only" principle and the digital-by-default:

- implementation would produce a positive impact at EU level;
- implementation is not about technology alone but is a multidisciplinary operation: legal, organisational, semantic, technical, security, etc.;
- multilevel governance approach is essential;
- it is necessary to share knowledge and to learn from "best practice" experience to maximize benefits and reduce risks;
- when implementing the eGovernment, the wholes process should be aligned with open data principles.

Based on the outcomes of the CBA and the projection, policy roadmaps have been developed to identify long term solutions to reduce the administrative burden through the "once only" principle and the use of ICTs. The policy roadmaps have also taken into account the following issues:

- how to efficiently implement eGovernment initiatives in centralised and decentralised MS;
- how to ensure transparency, privacy and personal data protection;
- how to ensure the right for citizens to correct their data;
- how to prepare governments to learn from other countries' experience and improve their governance approach.

4 National level policy roadmap

One of the purposes of the study is to develop a European roadmap for rolling out and exploiting the "once only" principle for administrative burden reduction (ABR) and how to make electronic procedures the dominant channel for delivering eGovernment services. The context is how to assist European countries to deploy ICT, together with legislation and other relevant enablers, to reduce the administrative burden by 25%[38], both in each country but also in the longer term across borders and at EU level.

This chapter presents the ABR roadmap based on 1) the background research for the study, 2 the interviews carried out, and 3) feedback on the basic features of the roadmap received after a preliminary version was made available for consultation. This validation feedback was conducted via an eSurvey receiving 58 responses, 46 from central government, 4 from local government, 4 from civil society and 4 from business. In total, responses were received from 22 European countries.

4.1 Structure of the roadmap policy options

The study has shown that three main policy options for the ABR roadmap are the most commonly deployed strategies in Europe and provide the greatest potential benefits:

- once-only strategies;
- simplification and personalization strategies;
- digital-by-default strategies.

In addition, a Europe-wide roadmap for policy and support at EU level is presented.

The evidence from the study shows that the three policy options represent distinct types of relatively independent strategies which can and often are carried out by Member States independently from each other. Each policy option consists of a number of strategic factors and building blocks and tools which will need different work at various stages of the roadmap (see below). However, there is also considerable overlap and mutual dependence between the strategies across the three options, which shows that the options are also highly synergistic, especially if carried out in the order presented, i.e. from once only, to simplification and personalization, and then to digital by default, with the benefits to both government and users increasing at each step. Even though it is possible to achieve some administrative burden reduction benefits implementing each strategy independently in any order, the evidence seems to show that the size of the benefits increases when all three are implemented and in the order suggested, assuming that a number of conditions are met.

4.2 Roadmap overview

As indicated above, the three policy options can be implemented independently, but in this case the benefits will be lower and the costs higher. Thus, a comprehensive roadmap should consider the options as a continuous process composed of three sequential as well as overlapping phases, even though each is more or less discrete. Clearly each country will be at a different stage in this progression, so the roadmap is a guide assuming a given country or administration starts from

[38] European Commission, The European eGovernment Action Plan 2011-2015. Harnessing ICT to promote smart, sustainable & innovative government, COM(2010) 743, Brussels 15 December 2010.

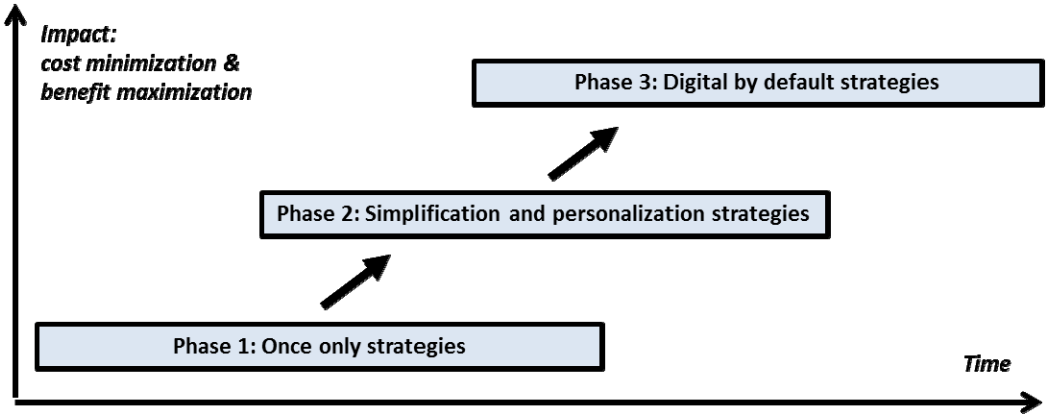
scratch.[39] In addition to the three phases, a fourth element of the roadmap addresses European level and cross-border issues. The main elements of the roadmap are indicated in the table below.

Phase	Main elements of strategy
Phase 1: Once only strategy	Strategic issues: • policy, • governance, • legal, • monitoring, • quick wins
	Building blocks & tools: • interoperability & data exchange; • base registries; • data quality; • data protection
	Conditionalities & barriers
	Costs & benefits: • government, • user, • indirect
	Validation
Phase 2: Simplification and personalization strategies	Strategic issues: • policy, • governance, • legal, • monitoring, • quick wins
	Building blocks & tools: • process simplification & reduction; • reporting simplification & reduction; • user-centred design; • personalization
	Conditionalities & barriers
	Costs & benefits: • government, • user, • indirect
	Validation
Phase 3: Digital by default strategies	Strategic issues: • policy, • governance, • legal, • monitoring • quick wins
	Building blocks & tools: • widespread, high capacity and affordable ICT infrastructures and systems; • widespread ICT skills and Internet use; • careful selection of digital by default services and the business case; • support to those who are not or cannot get online
	Conditionalities & barriers
	Costs & benefits: • government, • user, • indirect
	Validation
European level and cross-border	Context
	Building on the administrative burden win-win achieved to date
	Proposed European-level and cross-border roadmap
	Validation

[39] Specific country inputs or comments on the roadmap, derived from the interviews and the consultation process, are indicated by showing the country abbreviation in brackets.

The overall roadmap process is illustrated in the following diagram showing that subsequent phases rely on success in previous phases to fully maximize benefits and minimize costs.

Figure 11: Comprehensive administrative burden reduction roadmap - overview



The importance of interlinking between the above three policy options is underlined by the fact that most countries do not see them in isolation but as an integrated package of an administrative burden reduction and benefits realization strategy, which is in turn an integral part of their overall e-government policy.

Experience from some of the lead European countries (including Belgium, Denmark, Estonia, the Netherlands and the UK) shows that the whole roadmap if starting from scratch can take up to ten years, although it should be remembered that these countries had no good practice to refer to. Also, the technology has changed, and continues to change, often more rapidly than institutions and policies can keep up. Progress in future should, therefore, be faster, also because most countries already have some building blocks in place or under implementation, and if this can be supported and coordinated at EU level.

In the following, each policy option is laid out in turn with detailed analyses of each element, i.e. the strategies, building blocks and tools, conditionalities and barriers, and costs and benefits. These are policy options for ABR, which as stated above, are typically an important part of a broader e-government policy, Many of the detailed points made in the following have been directly contributed from the experiences of different countries as part of this study. Where relevant, country abbreviations are given in the text.[40]

4.3 Phase 1: "once only" strategies

A "once only" strategy involves eliminating the unnecessary administrative burden involved when users (citizens, businesses or other public sector entities) are required to supply the same information more than once to government. The goal is to get "the data to circulate not the user" (HR, NL).

Once only strategies require the back offices of public sector entities to be joined-up and appropriate data shared.

[40] Note, this is not intended to be a comprehensive technical or organisational handbook for implementing the three policy options, but rather a summary of the main issues which should be addressed in each case as suggested by the study, and especially by the interviews with government officials as well as business and civil society representatives.

4.3.1 Strategic issues

Policy

- a long-term and politically stable policy framework is needed which provides sufficient resources, as well as political will and support (All);
- focus on once only and its associated costs and benefits from the beginning, as well see ABR as part of the wider information society agenda (AT, EE, NL);
- once only is not a goal in itself, but a tool to make other goals possible, so consideration needs to be given to making it mandatory otherwise these other benefits will not appear. Once only is the cornerstone of making efficient e-government and, together with other elements of ABR, needs to be seen on the political as well as the strategic level (EE);

Governance

- there is a need for clear role and authority demarcations between entities, including the balance between centralization and de-centralization, especially concerning responsibility and accountability;
- coordinate and/or enforce the strategy at top level politically (prime minister's or president's office), or through a powerful cross agency task force (All), for example located in the Finance Ministry (DK);
- where there are decentralized entities involved in the strategy, these should be coordinated and supported (NL, SE);
- rigorous change and risk management programmes together with strong leadership at all levels is required (AT, DK);
- governance can also ensure robust change management which is necessary due to wide differences in how civil servants work, for example the initial needs assessments and designing e-government tools. Training in the use of new tools and in undertaking complex inter-administration communication work is also very important.

Legal

- establishing a sound forward looking legal basis is extremely important, which also ensures as much transparency as possible as well as clear lines of accountability (All);
- consider whether once only should be mandatory and whether to achieve it in steps. Some entities are reluctant as they think they may lose power (PT);
- there can be legal distinctions between legal enablement and legal obligation (UK);
- no entity should be able to request data from users if already given to another entity (AT, BE, BG, CZ, EE, ES, NL);
- get the legal relationships right with vendors and other non-public actors (CZ);
- legal basis maybe not of paramount importance compared with governance or monitoring. In principle, administrations might well enforce a once-only policy on a voluntary basis. The right mix of policy and quick wins is highly dependent on specific the political and social context (IT);
- often digitization comes after legislation, but should instead be considered before making new legislation. This will lead to closer coordination between regulation and data exchange and support the development of base registries.

Monitoring

- monitoring the roll-out of the strategy is necessary to assess and quantify both monetizable and non-monetizable costs and benefits for G2G, G2C and G2B on an on-going basis (All);

- however, benchmarking and comparing between agencies is not always easy as processes vary and are often not transparent (NL);
- use a standardized approach to monitor and analyse impacts and deploy this to develop and update the business case for implementing once only (DK);
- undertake specific studies on costs, benefits and other impacts, both nationally but also internationally, to learn from good practice (BE, EE, DK, NL, UK).

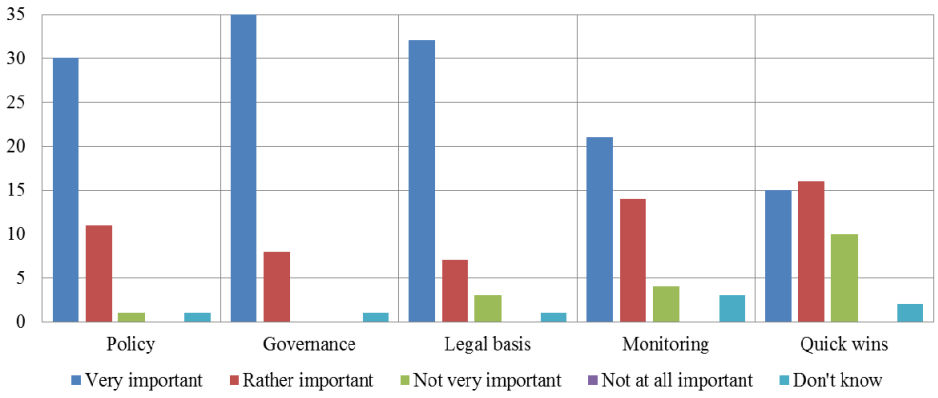
Quick wins

- quick wins need to be undertaken with care so as not to impede longer term goals;
- analyse where and how costs are incurred, the number of transactions and their costs, to distinguish those which can be rapidly changed to produce quick results from those which require longer term work (DK, UK);
- examine all relevant legal and regulatory issues to identify which can be rapidly changed to produce quick results and which require longer term work (DK, UK);
- in the absence of obligation, start only with "the willing" entities, build on those and show the benefits to others (UK);
- set up principles for how to incorporate digitization in new regulation, e.g. what areas are regulated, what data is there access to, what are users being asked to do, is it technically feasible, etc.? Also, do other authorities possess the information being requested? (DK);
- a "risk-based" approach to ID and authentication is needed, e.g. for the latter compare the efforts involved in authentication versus the risks of failure and illegality (UK).

Validation of strategic issues

The following figure shows the feedback received during the consultation related to the phase 1 once only strategic issues and how the respondents rated the different elements. [41].

Figure 12: "Once only" strategic issues



The governance, legal and policy issues, in that order, described in the preceding text are overwhelmingly assessed as very important, whilst the importance of monitoring is seen as less pronounced although still important. Similarly with the quick wins, which are seen as important but by a fewer number of respondents, perhaps because which quick wins are relevant are more likely to be dependent on very specific country circumstances which can vary significantly.

[41] Validation comments received during the consultation process are incorporated into the preceding roadmap description, including their country provenance where relevant indicated by the country abbreviation.

4.3.2 Building blocks and tools

Interoperability and data exchange

- A clear and strong legal basis is needed for interoperability, common architectures, data exchange and process automation, and it takes time to establish these (DK, NL, UK);
- consider whether to have a central data collection process (as in NL) or just sharing across databases (as in Estonia) – both are feasible but have to be compatible with governance and legal frameworks;
- consider sanctions if data is not shared adequately (FI), but do not charge for inter-agency sharing (DK, NL);
- public entities need to enter into a completely new collaboration stage in which silos are required to share information between their information systems as part of a deep back office connection and articulation effort, and this is not an easy task to accomplish (PT).

Base registries

- establishing base registers takes time (BE, DK, NL), must be managed by a legal entity (LUX) and requires long-term funding (CZ);
- whether centralised or decentralized base registries are set up, there should be back-up in case of data loss (CZ, FI);
- centralised base registries may be difficult to build in countries with a decentralized government, but they can be partially replaced by a high level of interoperability.

Data quality

- the ownership of data, including who has responsibility for data quality, data update, data loss, etc., is a critical issue (FI);
- clear instructions to agencies are needed as to how to use and re-use data, based on common standards and approaches (DK, NL);
- taxonomy (semantic) issues are important, including defining terms in law so they are equivalent, such as addresses, etc. (NL, SE);
- the only real problem is one of semantics when not everyone using the same definition for similar items;
- countries should align their business reporting systems with the global framework of Standard Business Reporting (SBR) using equivalent fields, taxonomies and definitions (DK, NL);
- enable users to see their data and apply to correct errors and improve quality (DK, EE, NL). Enable users to track which entities have used their data to increase trust (EE, SE);
- data can be of good quality in one context but not at all sufficient in another (SE);
- open data and open standards are very important;

Data protection

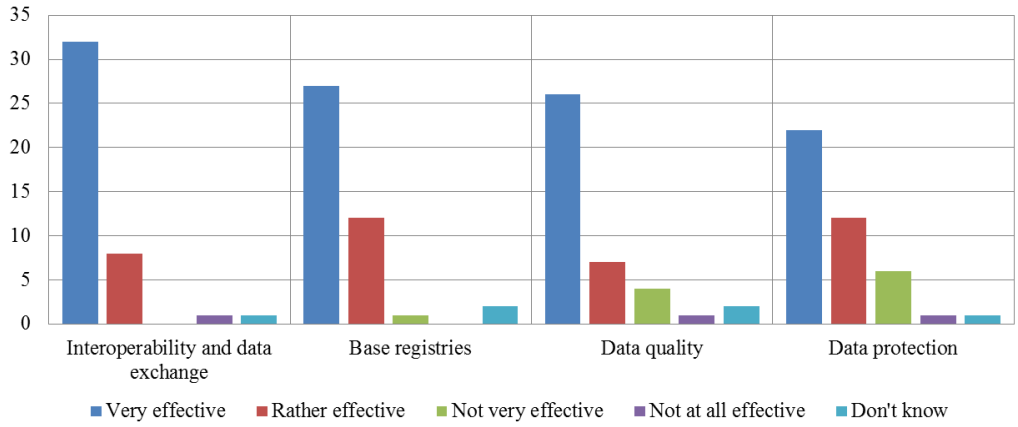
- clear, trustworthy and legally defined data protection/privacy rules and systems are necessary for once only to be successful, together with robust information management systems (All);
- a clear legal base is needed, e.g. which entities and officials can use which data. A big issue is how much control the user has over his/her own data (BE);
- conciliate the once only strategy with national regulations on privacy and data protection (NL), as well as with the current reform of the EU Data Protection Directive (BE, DK, UK);
- data protection is mandated at all levels of the administration (ES);

- where there are concerns about data protection (or there are no base registries or unique user identifier, as in the UK), one option is to consider how to allow people to control the use of their own data. For example in the UK through the Identity Assurance Programme which enables citizens or business to remain in control of their data in a personal safe box and decide which entities can see and use it. This is a policy of data re-use and processing by user consent, but can be overridden by law if necessary. One widely accepted solution to providing identity online in the UK is the development of 'identity assurance' using a federated trust 'framework', or trust 'ecosystem'. Basically, this requires an industry-agreed set of protocols, standards and certification under which organisations can collaborate to allow citizens to use assets they own to validate and verify their identity to 'relying parties'. UK) Austria is looking into systems to enable users to have better control over their own data. (AT). In Estonia users have the legal right to see their data and if necessary ask for it to be corrected, as well as track which entities have used their data (EE);
- national ID and authentication are important in allowing people to control the use of their own data. Data protection is conditional for trust in government, and in that sense it is very important, although too narrow an interpretation of data protection can conflict with the once only.

Validation of buildings blocks

The following figure shows the feedback received during the consultation related to the phase 1 once only building blocks and how the respondents rated the different elements [42].

Figure 13: "Once only" buildings blocks/tools effectiveness



The interoperability/data exchange, base registries and data quality building blocks described in the preceding text are assessed as the most effective, whilst data protection, perhaps surprisingly, is seen by fewer respondents as very effective, although still effective. This may be because, as one respondent described it, data protection is seen more as a preliminary condition than an implementation tool. It is conditional for trust in government; so in that sense it is very important, but a too narrow interpretation of data protection can conflict with the once only principle.

4.3.3 Conditionalities and barriers

- data protection issues can impede once-only if robust systems are not carefully designed and implemented to gain user trust (All), and once only initiatives have been blocked because of

[42] Validation comments received during the consultation process are incorporated into the preceding roadmap description, including their country provenance where relevant indicated by the country abbreviation.

data protection fears as in France. (FR). The new EU Data Protection Directive currently being negotiated might undermine some once only strategies (DK, UK);

- user trust is very important, especially engendered by good data protection, minimal effort and high quality service;
- effective digitization requires a solid administration capable of collecting data and maintaining databases and registries (DK);
- implementation of the once-only principle requires overcoming existing barriers such as working practices, cultural and organizational aspects (ES);
- the most common barriers derived from the study are:
    - lack of communication and division among government departments (silos in government, i.e. vertical and horizontal fragmentation across government braches and levels);
    - implementation costs governments face to introduce the "once only" principle (meaning, to a larger extent, more public spending)
    - privacy and data sharing constraints;
    - required changes in both organizational aspects and working practices and cultures;
    - over cautious attitudes to information sharing and hesitancy in cooperating on IT governance .

4.3.4 Costs and benefits

Costs for government

- Investment costs:
    - system planning and development: the planning and development of ICT infrastructures/network and other tools required for service implementation;
    - transition costs: incurred to shift from an offline to an online service provision;
    - system acquisition and development: costs incurred for the purchase of necessary ICT and technical tools for the service operation.
- Operating costs for managing, updating and monitoring service delivery.

Costs for users

- Information costs: time spent to get information about the service usage;
- Use costs: expenses entailed by the usage of the service.

Benefits for government

- direct benefits: including all monetizable benefits arising from time saving, greater revenues (or lower money loss) and efficiency gains due to the reduction of the number of transactions and improved data/information quality;
- indirect benefits: encompassing non monetizable benefits related to a better service delivery and the enhancement of the decision-making process;
- lower data storage costs if data is centralised, but do need back-up facilities as well;
- the government has immediate access to validated user data without having to wait for users to re-enter data with the risk of inaccuracies;
- the study's cost benefit analysis showed that a once only strategy at EU28 level could generate a total net impact amounting to around € 5 billion per year by 2017. This highly positive impact is due to the fact that the complex system of registries is also freely

accessible by users (citizens and businesses) for commercial purposes and might foster growth in some economic sectors;
- in Spain cost savings are estimated at € 22 billion for the years 2008-2011, surpassing the goal of 30% (€ 15 billion), where 60% arises from e-administration, 20% to the once only strategy, and 20% to interoperability platforms (ES).

Benefits for users

- direct benefits: including money savings, avoided expenses and time savings due to the reduction of the number of transactions;
- indirect benefits: related to the improved efficiency and quality of the service used;
- users save time by not having to re-enter data the government already has about them unless their data has changed.

Other Indirect costs and benefits

- accurate base registers provide value added for society, e.g. ambulances using the address and map database can save lives, there is more tax revenue, better procurement and mapping both public and private buildings to see the potential for solar energy, etc. (NL);
- Making the once only data into open government data (after appropriate control, anonymization and protection) can lead to large socio-economic benefits (DK, NL).

4.4 Phase 2: Simplification and personalization strategies

Simplification and personalization strategies involve making interactions between government and user as simple (and therefore as easy, quick, efficient and effective) as possible for users, which clearly reduces their administrative burden. This phase 2 strategy is seen as subsequent to phase 1 because it is generally not possible to develop highly simplified and personalized services without once only and the existence of well-developed interoperability and base registries upon which they reply.

There are a number of simplification and personalization strategies already being widely used by Member States:

- point of single contact;
- simplification or elimination of procedures;
- simplification of forms;
- simplification/reduction/clarification of legal requirements;
- standardized semantics;
- reduction of reporting frequency;
- personalization of interaction;
- special help functions.

Simplification and personalization strategies are most effective when they build on the once only strategies of phase 1 (joining-up back offices and sharing data, including strong data protection systems) to focus on providing high quality and very easy to use online services. This is because it is much more realistic for government to offer such services when it itself is joined-up and integrated, which means that in turn it can exhibit a single face and an effective one-stop-shop to users.

4.4.1 Strategic issues

Policy

- "The government should do the hard work to make it simple for users" (UK). "Simple processes for users but not necessarily for government; the back-office is complex, the front-office is simple" (EE);
- strong policies agreed across government entities are needed for service simplification and personalization as this reduces the administrative burden for users.

Governance

- coordinate and/or enforce the strategy at top level politically (prime minister's or president's office), or through a powerful cross agency task force (All), for example located in the Finance Ministry (DK);
- where there are decentralized entities involved in the strategy, these should be coordinated and supported (NL, SE);
- rigorous change and risk management programmes together with strong leadership at all levels are needed (A, DK);
- strong political support, robust partnerships and high quality standards are required (PT).

Legal

- establishing a sound forward looking legal basis is extremely important, which also ensures as much transparency as possible as well as clear lines of accountability (All);
- get the legal relationships right with vendors and other non-public actors (HR);
- often simplification and personalization considerations come after legislation, but instead should be considered, together with the user experience, before making new legislation. This will lead to closer coordination between regulation and lead to high quality and easier to use services (DK, UK);
- there is a need to distinguish and balance the "what" of regulation (i.e. what must be done) with "how" government and users implement it. For example, the "what" of regulation may stipulate a certain level and type of reporting, whilst the "how" implements this using ICT through either human initiated or automatic processes. Government often focuses too much on the "how" and not enough on reforming the "what" where bigger benefits can often be found. Without attention to the "what" of regulation, many legacy "how" problems accumulate over time. When using ICT as a tool to solve/ameliorate the problem (the regulation), ICT acts like a "sticking plaster" temporarily hiding the problem, rather than tackling the problem itself (UK);

Monitoring

- monitoring the roll-out of the strategy is necessary to assess and quantify service use for G2G, G2C and G2B on an on-going basis, e.g. using automatic calculators (All);
- use a standardized approach to monitor and analyse impacts and use this to develop and update the business case (DK);
- undertake specific studies on costs, benefits and other impacts, both nationally but also internationally to learn from good practice (BE, DK, EE, NL, UK);
- set up standard service design principles which are regularly assessed (DK, UK).

Quick wins

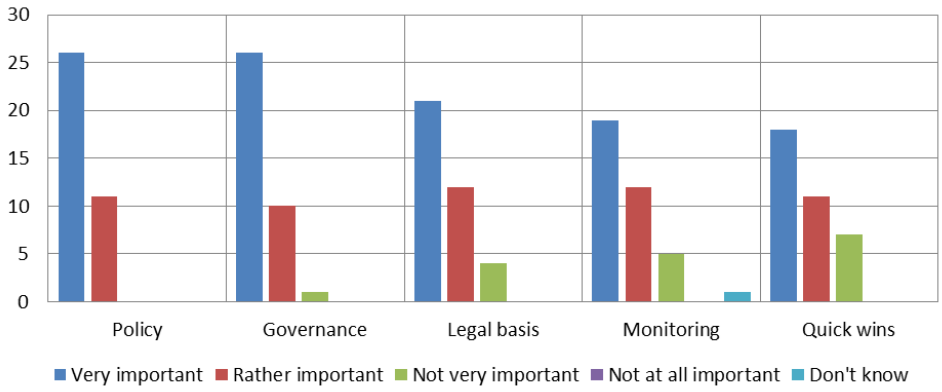
- quick wins need to be undertaken with care so as not to impede longer term goals;

- analyse where and how services are used, the number of steps, time taken, whether fulfilled or not, the overall process, etc., to identify which can be rapidly changed to produce quick results and which require longer term work (BE, DK, EE, UK);
- examine all relevant legal and regulatory issues to distinguish those which can be rapidly changed to produce quick results from those which require longer term work (DK, UK);
- in the absence of obligation, start only with "the willing" entities, build on those and show the benefits to others (UK);
- set up principles for how to incorporate simplification and personalization in new regulation, e.g. what areas are being regulated, how can services be delivered smarter, what are users being asked to do, is it technically feasible, etc.? (DK);
- users (mainly businesses) should only be required to report if there is a change from the status quo or from the previous report, even for periodic reports, i.e. a nil return should mean nothing to report (UK);
- analytical tools can be used by government to spot unusual patterns in user reported data, as well as predicting what the next report should be and to raise an alert if there is a wide deviation (UK).

Validation of strategic issues

The following figure shows the feedback received during the consultation related to the phase 2 simplification and personalization strategic issues and how the respondents rated the different elements [43].

Figure 14: Simplification and personalization strategic issues



The policy and governance issues described in the preceding text are overwhelmingly assessed as very important, with legal issues marginally less so and quite similar to monitoring and quick wins. This is in some contrast to the once only strategic issues where governance and legal issues are seen as the most important, perhaps because in phase 1 getting governance and the legal base right is more critical than in later phases which build on this earlier foundation.

4.4.2 Building blocks and tools

Process simplification and reduction

- simplification of processes, forms, legal requirements, etc., is an ongoing process, including trying to get rid of forms. There are strong synergies with once only and digital by default

[43] Validation comments received during the consultation process are incorporated into the preceding roadmap description, including their country provenance where relevant indicated by the country abbreviation.

strategies, i.e. forms often represent knowledge already existing in one entity, so if forms are removed, the entities are forced to share data and use the base registries (DK);
- the goal is to simplify forms and improve their usability by obtaining the data from the relevant base registries. The legal base must enable and support this (AT);
- make processes smarter, more intuitive and user friendly using data from the base registries, supplemented where relevant by new data from the user (DK);
- undertake initiatives to simplify procedures, e.g. by analysing processes and propose simplifications, benchmarking, etc. (BE: has set up the "Kafka rule" and an Administrative Simplification Agency; EE: uses (business) process modelling);
- integrated services are simple services which require little effort from citizens, so that complexity is kept in the back office and never in the front office (PT).

Reporting simplification and reduction

- reduce reporting frequency as much as possible as this reduces the administrative burden for users (BE, DK);
- balance reporting frequency with the value of reporting to the different stakeholders. For example, in Estonia reporting is easy and often automatic, and frequently reported data enhances other services and increases added value, so Estonian companies do not necessarily support any reduction in reporting frequency as regular reporting can increase overall growth, even though the administrative burden is increased (EE).

User-centred design

- move to fully user-centred design processes, such as through 'design thinking' employing ethnographic and anthropological approaches, as well as the analysis of personas and service pathways, which will also assist in developing very simple, highly personalized services which are of high quality and easy to use (DK, EE, FI, UK);
- for example, the Danish Business Authority is undertaking anthropological studies – observation studies – on companies engaging with the legal processes, e.g. how companies understand the information and procedures they are presented with (DK). The UK's service design principles will be fully rolled out by mid-2014 and include the proviso that no service will be launched unless the responsible minister can successfully complete it unaided and in a timely manner (UK). Working groups have been set up with stakeholders to develop style guides and similar (AT, DK);
- Estonia considers its system of base registries to be in place, so focus is now on providing services that enhance user experience and usability, and to ensure that procedures are supported by fluid and fully integrated services. The base registries provide a good foundation, so now the task is to develop business logic processes and layer these into the system (EE);
- Finland is aiming to reduce the work of the user through good service design and actual use benefits, rather than just better access and ease of use, so is developing "service design models" which will involve government doing all or most of the work, e.g. pre-filled tax form, "disappearing" services, "reducing unnecessary contact" (FI, also UK).

Personalization

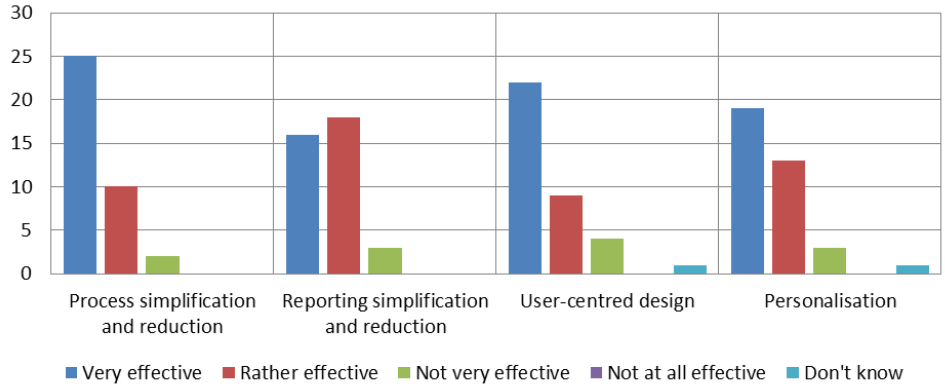
- focus on usability through segmented as well as personalized information and services, e.g. using MyPage interfaces. (DK, NL) This also includes better exploitation of multiple channels, including web, social media, mobile, kiosks, call centres, service centres, etc., as services are honed to individual needs using the most suitable means;
- ultimately simplification means personalization, as everything which is not relevant to a given user and their specific needs at a particular time and place, is removed;

- government should move to becoming like a personal assistant (and intelligent agent), as are the best commercial companies through a process of "mass customization". This involves switching between the government "pushing" pro-active services it "knows" individual users want or need (using big data, data analytics together with the base registries, etc.), and empowering users to reactively "pull" what they "want", e.g. through providing their own data, co-creation, from the cloud, etc. (trends observed plus DK, UK).

Validation of buildings blocks

The following figure shows the feedback received during the consultation related to the phase 2 simplification and personalization building blocks and how the respondents rated the different elements [44].

Figure 15: Simplification and personalization building blocks/tools effectiveness



Process simplification and reduction is seen as the most effective and necessary building block, closely followed by user-centred design. The importance of both reporting simplification and reduction and personalization is seen as less marked, although in each case they are still clearly seen as important. This may be because the latter two building blocks represent perhaps later steps than the more basic simplification of processes and user-centricity and build on them.

4.4.3 Conditionalities and barriers

- simplification and personalization strategies are most effective when they build on the once only strategies of phase 1 (joining-up back offices and sharing data, including strong data protection systems) to focus on providing high quality and very easy to use online services;
- sometimes reporting frequency increases (e.g. UK PAYE) thus raising the cost on businesses, but at the same time decreasing costs and giving benefits to government and other stakeholders (in this case the tax credit receivers). Reporting frequency can thus be a zero-sum sum game with winners and losers. (UK) Also Estonian example above. (EE) The zero-sum game might be turned into a win-win if reporting could be made automatic so as to impose extra burdens on business;
- overall, the benefits are bigger within improved service experiences compared just to deregulation. For example, by making processes smarter, more intuitive and user friendly. The Danish Business Authority is looking at the process rather than changing the law (DK). Compare to the UK "what" and "how" aspects of regulation above. (UK);

[44] Validation comments received during the consultation process are incorporated into the preceding roadmap description, including their country provenance where relevant indicated by the country abbreviation.

- the most common barriers derived from the study are:
    - lack of communication and division among government departments (silos in government, i.e. vertical and horizontal fragmentation across government braches and levels);
    - implementation costs governments face to introduce the simplification and personalization initiatives (meaning, to a larger extent, more public spending);
    - privacy and data sharing constraints;
    - required changes in both organizational aspects and working practices and cultures;
    - over cautious attitudes to information sharing and over jealous IT governance and bureaucracy;
    - over cautious attitudes to information sharing and over jealous IT governance and bureaucracy (UK).

4.4.4 Costs and benefits

Costs for government

- Investment costs:
    - system planning and development: the planning and development of ICT infrastructures/network and other tools required for service implementation;
    - transition costs: incurred to shift from an offline to an online service provision;
    - system acquisition and development: costs incurred for the purchase of necessary ICT and technical tools for the service operation.
- Operating costs for managing, updating and monitoring service delivery.

Costs for users

- information costs: time spent to get information about the service usage;
- use costs: expenses entailed by the usage of the service;
- many government savings are based on "outsourcing" work to the user, i.e. "self-service", thus potentially increasing the burden on users, so making this easy and beneficial to the user is key.

Benefits for government

- direct benefits: including all monetizable benefits arising from time saving, greater revenues (or lower money loss) and efficiency gains due to the reduction of the number of transactions and improved data/information quality;
- indirect benefits: encompassing non monetizable benefits related to a better service delivery and the enhancement of the decision-making process.

Benefits for users

- direct benefits: including money savings, avoided expenses and time savings due to the reduction of the number of transactions, better service experiences and greater incidence of service fulfilment. Less waiting time to complete the process (PT);
- indirect benefits: related to the improved efficiency and quality of the service used. Easier for citizens to identify the service needed when based on life events (PT).

Other Indirect costs and benefits

- improvements to online services, involving the participation of users and other non-government actors in initiatives like co-creation, can lead to improved public services generally as well as more activity amongst non-profits, NGOs, communities and SMEs, thus stimulating jobs and cohesion especially at local levels.

4.5 Phase 3: Digital by default strategies

A "digital by default" strategy involves making specified interactions between government and users digital by default, i.e. the user is obliged to use the electronic channel unless there are good countervailing reasons. When appropriate services are only or mainly used digitally, this reduces the administrative burden for government by reducing their costs and the need to provide alternative channels, as well as for users by saving them time and money and increasing convenience, for example by being available 24-7. This phase 3 strategy is seen as subsequent to phase 2 because it is generally not feasible to move to digital by default and making e-services obligatory without first providing easy, quick, efficient and effective services for users.

Digital by default strategies are most effective when they build cumulatively on the once only strategies of phase 1 (joining-up back offices and sharing data, including strong data protection systems), plus the simplification/personalization strategies of phase 2 (high quality and very easy to use online services) to focus on moving as many users as possible to only use the online channel for all appropriate services. This is because it is much more realistic to impose digital by default strategies when it is already providing easy to use and high quality online services for citizens and businesses.

4.5.1 Strategic issues

Policy

- digital by default is a very important and obligatory goal in Denmark. The targets have not yet been met, but most parts of government have been implementing the scheme. There is a need for strong political mandate (e.g. from Parliament), as well as a need to involve the entities which have to save money as early as possible in the process. Four waves of digitization are planned, with an estimated annual saving of €125million when complete. The timetable of mandatory digital service provision and use is: 2012 (citizen services), 2013 (municipal services and tax), 2014 (employment, housing, construction, environment), 2015 (employment, social services) – i.e. increasing complexity. However, it is also reckoned that in practice up to 20% of citizens will not be able to use digital services, so these need special assistance, but the overall savings are still very large (DK);
- in the Netherlands the goal to have most services digital by default by 2017. This will lead to massive savings for government. By that date, both businesses and citizens should be able to conduct all transactions with government digitally (although also in person where this is essential). This is the single shared vision on service delivery and a joint agenda across all entities, based on the notions of "swift and secure and on the demands of citizens" (NL);
- the UK Digital by Default strategy, strengthened in early 2013 by the publication of digital service standards and service design principles to be achieved by April 2014, means that digital services should be so straightforward and convenient that all those who can use them will choose to do so, whilst those who cannot access digital services should not be excluded. There are three key implications, the first is that government itself needs to become digital in thinking in order to deliver services which are suitable for users. The second implication is that as digital by default comes into effect the scale of government online service

provision will grow dramatically so the quality and user centricity of these services needs to do so as well. The third implication is that the use of non-digital channels will decline, but they still need to be available. This is a major strategic and planning challenge, but the potential cost savings are even larger. (UK);
- digital by default is common practice in Estonia – not something that really requires a lot of planning or discussion as it is a clear consequence of the digital strategy the country has followed over the last twenty years (EE).

Governance

- coordinate and/or enforce the strategy at top level politically (prime minister's or president's office), or through a powerful cross agency task force (all), for example located in the Finance Ministry (DK);
- where there are decentralized entities involved in the strategy, these should be coordinated and supported (NL, SE);
- governance also implies financial sustainability in the context of digital by default, as often the main driver is the need to cut costs;
- rigorous change and risk management programmes together with strong leadership at all levels is needed, for example reorganization, change of work processes, appropriate leadership, new staff competences requiring re-training, etc. (AT, DK, UK).

Legal

- establishing a sound forward looking legal basis is extremely important, which also ensures as much transparency as possible as well as clear lines of accountability (All);
- get the legal relationships right with vendors and other non-public actors (HR);
- often digital by default considerations come after legislation, but instead should be considered, together with the user experience, before making new legislation. This will lead to closer coordination between regulation and lead to better results and maximize savings and benefits (DK, UK);
- digital by default needs to be implemented on a strong and clear legal basis, and now working on new law to give citizens control though not yet implemented (NL);
- the challenges include getting the legislation right, assisting Danes who are not ready (mainly the elderly), and the business case itself which needs to be strong and positive (i.e. not digital by default for its own sake) (DK);
- in the e-government law of 2008, the Flemish government received the right from Parliament to change older laws when they prohibited digitalization (mainly because often the paper forms were described in the law itself) (BE);
- in 2002 the government undertook a major assessment on legislation – went through more than 10,000 laws, announcements, and circulars – in order to map barriers for further digitization. Because of that, the legal basis today is very strong and in general is not a barrier for either the once only principle or digital by default (DK);
- the Danish Data Protection Agency ensures that data is exchanged according to the law. Regulation is under way ensuring digital by default for businesses, with the aim of making it easier for the government (not necessarily for businesses). From November 2013, it is obligatory for all businesses to have a digital post at the business portal, whilst for citizens this will be in November 2014 on the citizen portal. This ensures obligatory communication with the public sector using very strong, easy to use and trusted data protection systems (NemID, EasyID) (DK);
- the Estonian Ministry of Economics and Communication has a new department of Public Services Development which has conducted a study of legislation to identify different areas of policy that can be enhanced within digital by default. Legislation also requires, however, that some areas still use paper forms, although changes are now being proposed (EE);

- in the Czech Republic it is obligatory for all public and business entities to have a databox (like email), and that public entities must send all official documents to the databox. Citizens can apply for a databox on a voluntary basis, but if they have one, public entities are obliged to use the databox (CZ).

Monitoring

- monitoring the roll-out of the strategy is necessary to assess and quantify service use for G2G, G2C and G2B on an on-going basis, e.g. using automatic calculators (All);
- use a standardized approach to monitor and analyze impacts and use this to develop and update the business case (DK);
- undertake specific studies on costs, benefits and other impacts, both nationally but also internationally to learn from good practice (BE, EE, DK, NL, UK);
- set up standard service design principles which are regularly assessed (DK, UK);
- there is no need to focus on whether citizens save money, as the important effect is time saved, improvements to service quality, etc. In general, government monetized savings determine all measures in Denmark, so measurement is only undertaken from the government perspective (DK);
- there will be an analysis of the Danish digital post solution in order to document potential benefits (DK);
- use a standardized approach for impact analyses on every digitization project, and especially central government activities as municipalities have different requirements. Every project needs to have a solid business case before starting (based on business case analysis), presenting the proven impacts when implemented. These are measured against a common set of indicators (DK);
- in Denmark each year the service use in each of the 98 municipalities is counted and this is then extrapolated to predict future trends. Upcoming new digital solutions are also examined to see whether this might help. The cost to the public entity of a citizen request in Denmark is estimated from surveys, workshops as well as a "man with a stopwatch". A template has been developed for all services depending on a) the complexity of the task and b) the channel used. Costs are then compared by information request and transaction request. In order to calculate savings, need to know the number of transactions and their costs. Best practice examples are also shared between the 98 municipalities (DK);
- the Estonian government is investigating the digital by default areas by undertaking a systematic survey, covering all interactions between government, businesses and citizens. Substantial time savings and money savings are accruing. For most users for most services it is much easier to submit the electronic way compared with the paper way. On behalf of businesses, however, the Chamber of Commerce is not measuring anything as the benefits are so obvious that cost-benefits analysis would simply be another burden/cost (EE).

Quick wins

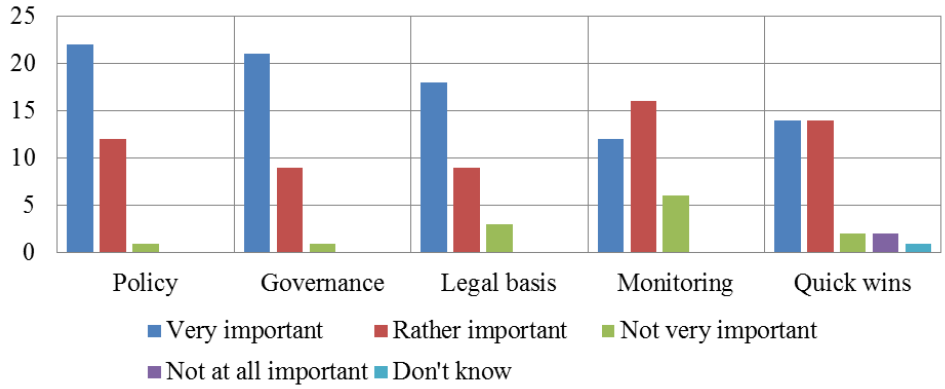
- quick wins need to be undertaken with care so as not to impede longer term goals;
- analyse where and how services are used, the number of steps, time taken, whether fulfilled or not, the overall process, etc., to identify which can be rapidly changed to produce quick results and which require longer term work (BE, DK, EE, UK);
- examine all relevant legal and regulatory issues to distinguish those which can be rapidly changed to produce quick results from those which require longer term work (DK, UK);
- set up principles for how to incorporate digital by default in new regulation, e.g. what areas are being regulated, how can services be delivered only online, what are users being asked to do, is it technically feasible, etc. (DK);
- focus first on digital by default services with over 100,000 transactions each year in order to maximize savings upfront (UK);

- focus first on user segments which are likely to be susceptible to digital by default (such as large businesses) before rolling more widely.

Validation of strategic issues

The following figure shows the feedback received during the consultation related to the phase 3 digital by default strategic issues and how the respondents rated the different elements. [45].

Figure 16: Digital by default strategic issues



The policy, governance and legal issues, in that order, described in the preceding text are overwhelmingly assessed as very important. Both monitoring and quick win issues are seen as somewhat less important perhaps because only a few European countries have to date embarked on such strategies, let alone begun to think about them, and these represent more detailed implementation tools compared with the first three which are more preparatory tools. As was the case with the phase 2 strategic issues, this is in some contrast to the once only strategic issues where governance and legal issues are seen as the most important, perhaps because in phase 1 getting governance and the legal base right is more critical than in later phases which build on this earlier foundation.

4.5.2 Building blocks and tools

Widespread, high capacity and affordable ICT infrastructures and systems

- digital by default strategies need to closely reflect the availability of high capacity and affordable ICT infrastructures and systems, as well as of the government to offer high quality and easy to use services, in order not to severely disadvantage users and impose much greater costs on public entities than might be saved. A clear strategy and balance is needed between ICT infrastructures and systems and digital by default strategies which are likely to include cloud computing and open data (Trends observed).

Widespread ICT skills and Internet use

- digital by default strategies need to closely reflect the level of ICT skills and Internet use in the population, and amongst public sector staff, in order not to severely disadvantage users and impose much greater costs on public entities than might be saved. A clear strategy and

[45] Validation comments received during the consultation process are incorporated into the preceding roadmap description, including their country provenance where relevant indicated by the country abbreviation.

balance is needed between ICT skills and Internet use and digital by default strategies (Trends observed).

Careful selection of digital by default services and the business case

- in Denmark, services are screened and selected based on their suitability to be digital by default based on a sound business case. Such services are normally those which are governed by clear rules and regulations, where all necessary data is available for example from the base registries (the once only strategy) or by very easy user input, and where the digital service can be made high quality and very easy to use (the simplification and personalization strategies). Also, the digital services should be rolled out and made obligatory in waves of increasing complexity so that users (whether citizens or businesses) can get used to only using the digital channel. In practice it is recognized that in the early years only 80% of service interactions will be digital, but this should increase in time (DK);
- the UK strategy from April 2013 to March 2015 includes focusing first on services with over 100,000 transactions each year (in order to maximize savings upfront), on three significant 'exemplar' services for each major transaction department to be agreed with Cabinet Office, and the preparation of sound delivery plans with a strong business case. Following this and using the learning from the exemplars, departments will redesign all services handling over 100,000 transactions each year, unless an exemption has been agreed (UK);
- in Austria it is not yet obligatory, as it will depend on the services each of which have different thresholds. It is easier in the business sector than the citizens sector, but is still a tough task especially for many small enterprises. Most of the benefits are related to time savings, both for government and business savings. Business representatives are heavily involved in developing these services. Selecting services to be delivered digitally by default will depend very much on the service (AT);
- in Belgium, businesses must make VAT and tax declaration using the digital channel. For citizens, more restraint is needed as not everyone is online. Not all administrations are digital by default for citizens and there must always an alternative for non-internet citizens (BE);
- in Spain businesses must make business and tax declaration with the Tax Agency and all procedures with the Social Security using the digital channel. Also in Spain all local entities have to carry out the plan of payments to providers using the digital channel (ES).

Support to those who are not or cannot get online

- Copenhagen City is addressing citizens who are not and probably will not be online with a comprehensive strategy, including awareness raising, which makes it as easy as possible for citizens to go digital. By 2015, 80% of all Copenhageners must be digital (DK):
    - chat and co-browse with call centre staff;
    - "Service2Go" – on the spot introduction to online services in universities, mosques, etc.;
    - E-guides for citizens and employees;
    - communication and marketing campaigns;
    - joint knowledge management system for staff and citizens;
    - digital assistants and "floor walkers" (staff) at entrances to service centres who approach citizens entering, take them to a PC and show them how to self-service. The aim is to train citizens so they can do it themselves in future;
    - digital education in libraries with Citizen Service satellites.
- Copenhagen City is also directly assisting those citizens who are not digital, given that an estimated 10-20% will never be digital. Legislation stipulates exemptions from mandatory

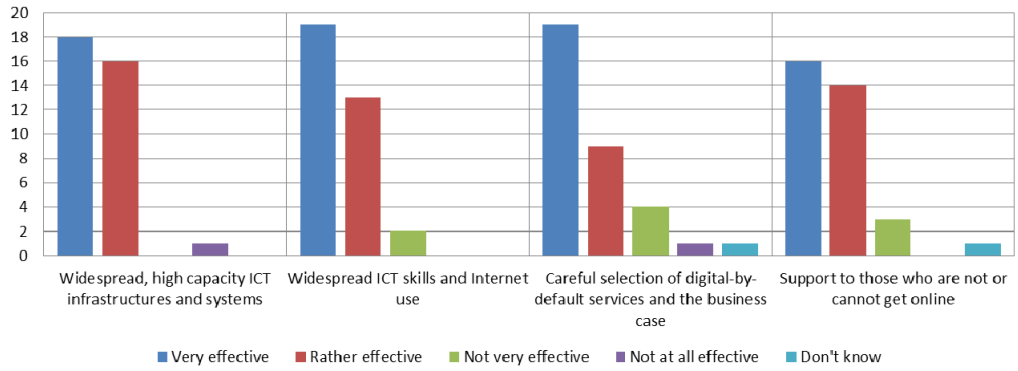
digital self-service on the grounds of handicap, lack of skills, language or technical problems. The strategy is also to accept languages other than Danish, to enhance the processing of complaints, to educate more digital ambassadors among volunteers and to gradually reduce the rest of 'the rest' (the 20%) (DK);

- civil society in Denmark welcomes digital by default, as long as these services are not forced to be used so there have to be alternative possibilities. Exemptions should be possible. These issues are of special concern regarding to the obligatory citizen digital post to be implemented by November 2014. These are costs that the government used to have which are now becoming citizens' costs. For example, many elderly might have to invest in computers and internet connections (DK);
- the UK has implemented the "Assisted Digital Team" in view that not everyone will be able to use the digital services independently, particularly those with incapacities. It will ensure that there are appropriate forms of support for 18% of UK adults who are unable, for whatever reason, to access or use digital services. Assisted digital provision will vary from service to service and will be developed based on the needs of users, not based on the way government is organized. Users will need less assistance with simpler services and more with complex services. Some services will have more people who require assistance than others. For example, government-to-business services may need less support than government-to-citizen services that serve a user group with lower levels of digital skills (UK).

Validation of buildings blocks

The following figure shows the feedback received during the consultation related to the phase 3 digital by default building blocks and how the respondents rated the different elements [46].

Figure 17: digital by default building blocks/tools effectiveness



Ensuring both widespread high capacity ICT infrastructures and ICT skills and internet use are seen as the most effective and necessary building blocks in the digital by default phase. They are both sine qua non conditions for successfully moving towards a single digital channel for a significant number of eGovernment services, and both of course are likely to take many years and consistent effort, thus validating their presence in this third phase of development. Only once these first two building blocks are in place, carefully selecting appropriate services and justifying this by a sound business case, plus putting in place special support to users who need such services but who are not (yet) online, or cannot get online, can be considered. This is the reason they are perhaps seen as less important than the first two building blocks.

[46] Validation comments received during the consultation process are incorporated into the preceding roadmap description, including their country provenance where relevant indicated by the country abbreviation.

4.5.3 Conditionalities and barriers

- digital by default strategies are most effective when they build on the once only strategies of phase 1 (joining-up back offices and sharing data, including strong data protection systems), plus the simplification/personalization strategies of phase 2 (high quality and very easy to use online services) to focus on moving as many users as possible to only use the online channel for all appropriate services;
- in the country or region, there needs to be relatively high ICT availability and capacity, as well as a high proportion of users online with widespread e-skills for digital by default to be widely rolled out;
- user resistance to digital by default can be strong, so make sure that the services are user friendly, available and high quality. Citizens have to move from the analog to the digital. Some citizens simply need to be informed, while others have to learn how to use the services. It is politically important not to lose users on the way. This demands a huge communications challenge, and a large change management programme (DK);
- in Denmark, business cases are only made from the perspective of the public sector. But what about the users (both citizens and businesses)? It is cheaper for the public sector, but is it also cheaper for the user? It can easily be a bigger burden for the user if the process is not thought through. Most users do want more digitization, but it has to work and be integrated with their daily work processes (DK);
- the most common barriers derived from the study are:
    - lack of communication and division among government departments (silos in government, i.e. vertical and horizontal fragmentation across government braches and levels);
    - implementation costs governments face to introduce the digital by default principle (meaning, to a larger extent, more public spending);
    - privacy and data sharing constraints;
    - required changes in both organizational aspects and working practices and cultures;
    - over cautious attitudes to information sharing and over jealous IT governance and bureaucracy;
    - the lack of incentives and the fact that every agency tries to get money for its own projects (DK).

4.5.4 Costs and benefits

Costs for government

- Investment costs:
    - system planning and development: the planning and development of ICT infrastructures/network and other tools required for service implementation;
    - transition costs: incurred to shift from an offline to an online service provision;
    - system acquisition and development: costs incurred for the purchase of necessary ICT and technical tools for the service operation.
- Operating costs for managing, updating and monitoring service delivery.

Costs for users

- information costs: time spent to get information about the service usage;
- use costs: expenses entailed by the usage of the service;
- acquiring high performance ICT systems and good ICT skills.

Benefits for government

- direct benefits: including all monetizable benefits arising from time saving, greater revenues (or lower money loss) and efficiency gains due to the reduction of the number of transactions and improved data/information quality;
- indirect benefits: encompassing non monetizable benefits related to a better service delivery and the enhancement of the decision-making process;
- the study's cost benefit analysis showed that a digital by default strategy at EU28 level could result in around € 10 billion of annual savings, and that the economic impact of digital by default is higher when there is a swift digitization of transactions and when digitization involves a substantial number of transactions.

Benefits for users

- direct benefits: including money savings, avoided expenses and time savings due to the reduction of the number of transactions;
- indirect benefits: related to the improved efficiency and quality of the service used.

Other Indirect costs and benefits

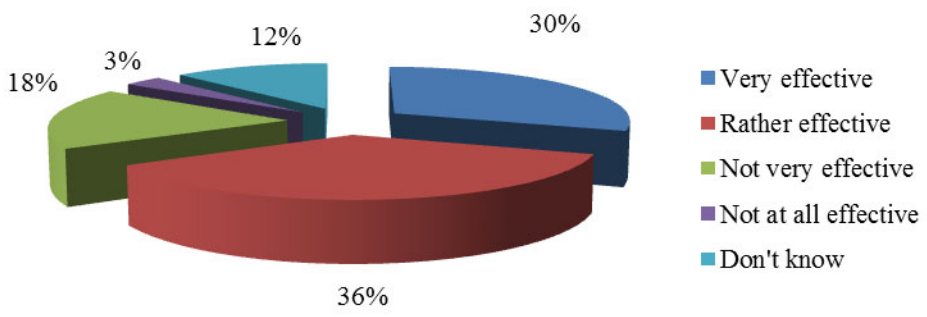
- digital by default can have big spin-off effects on the ICT industry by creating more demand on every level, and increasing and spreading digital skills further, thus also leading to an upgrade of personal and societal level capacities. It can also lead to some loss of frontline staff jobs in the public sector, though in many cases it has been shown that ICT in public sector services typically should and does lead to better quality services overall as human staff are able to focus on adding value to care and other services where people perform better than machines.

4.6 Roadmap validation

4.6.1 Effectiveness of the roadmap

The following figure shows the feedback received during the consultation concerning the effectiveness of the proposed policy options timeline: "once only" as a first phase strategy, simplification/personalisation as a second phase strategy and digital-by-default as a third phase strategy.

Figure 18: effectiveness of the proposed policy options timeline



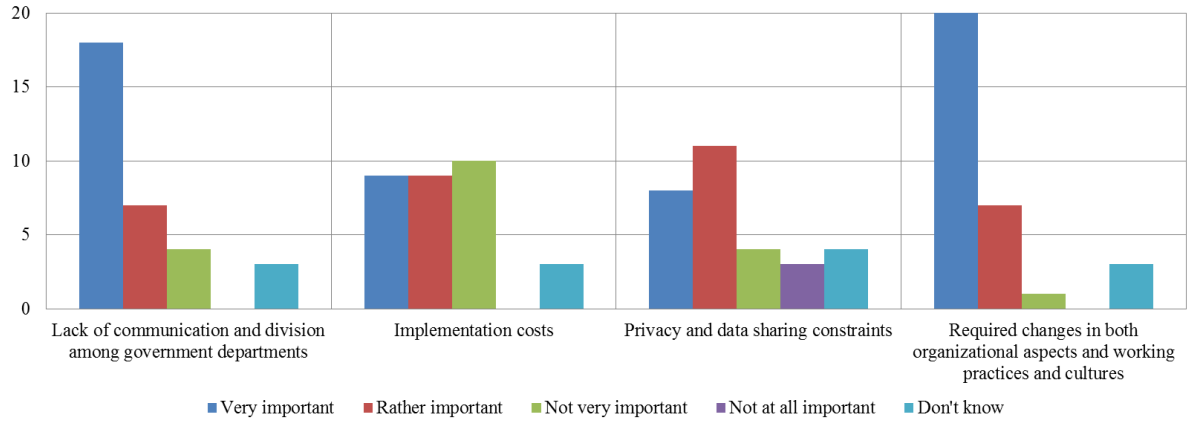
The largest number of respondents (36%) see the generalised roadmap as effective, and if this is added to those who see the roadmap as very effective, this represents almost two third of the total.

Given the widely varying condition of eGovernment across Europe, and the very large differences between the stages of development countries are at, this appears to be a significantly high number.

4.6.2 Barriers

The following figure shows the respondents views on the most important barriers in their countries to implement the "once only", simplification/personalisation and digital-by-default strategies as first, second and third phases.

Figure 19: national level strategies - barriers



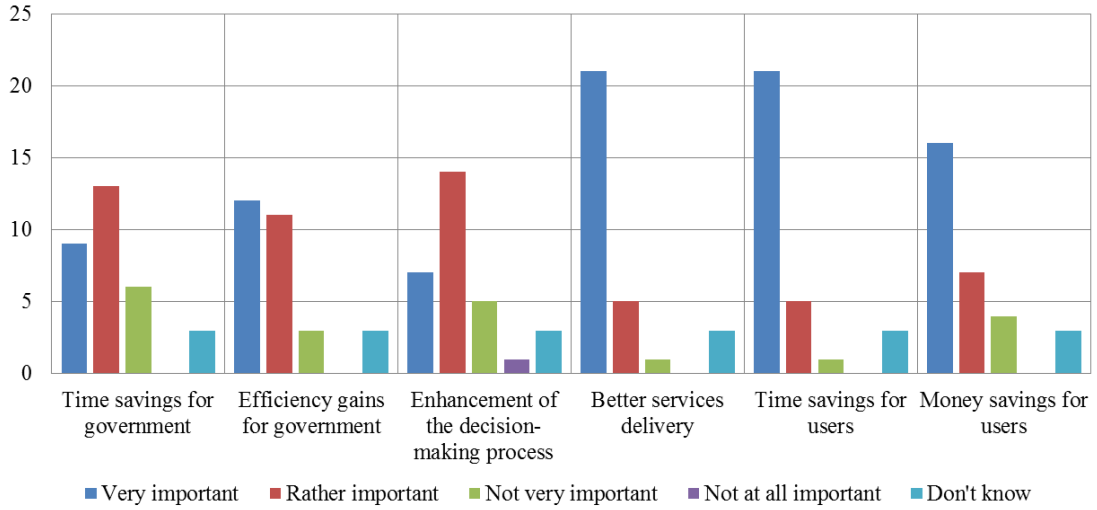
Lack of communication and division among government departments, plus required changes in both organizational aspects and working practices and cultures, are seen by respondents as by far the most important barriers to implementing the roadmap. This is perhaps unsurprising as it directly reflects human, operational and cultural issues, and the fact that these tend to be more intractable than privacy and data sharing constraints, and even implementation costs which are both more technical considerations.

Other barriers mentioned by respondents include the inter-departmental costs of buying access to data, as many agencies' budgets are based in part upon the sale of data, to both private business and other agencies. Also, implementing "once only" means the challenge of opening information to other parties and also being ready to use information from other organizations, as well as having to accept possible data quality issues and bearing in mind that cooperation and reuse should improve data quality.

4.6.3 Benefits

The following figure shows the respondents views on the most important benefits in their countries arising from implementing the "once only", simplification/personalisation and digital-by-default strategies as first, second and third phases.

Figure 20: National strategies – expected benefits



By far the most important benefits seen by respondents are better service delivery and time savings for users, closely followed by money savings for users[47]. Interestingly benefits for government, in terms of time savings, efficiency gains and enhancement of the decision-making process, are perceived as being significantly less important, although still relevant. This study has shown very high potential costs savings for government, and it is much more difficult to measure benefits for users, given their diversity as well as the operational difficulties of making such measurements.

Other benefits mentioned by respondents include fraud prevention, especially using base registries, data quality and transparency in updating and modifying data, annoyance reduction for users (which is distinct from time/money savings on an emotional level), and the possibility to automate processes and make public services "happen autonomously" without user interaction.

5 European level and cross border

5.1 Context

Responsible Ministers of EU Member States agreed a Ministerial Declaration on eGovernment, in Malmö, Sweden, on 18 November 2009, stating:

> *"Reduce the administrative burden for citizens and businesses. We will use eGovernment to reduce administrative burdens, partly by redesigning administrative processes in order to make them more efficient. We will exchange experience and jointly investigate how public administrations can reduce the frequency with which citizens and businesses have to resubmit information to appropriate authorities. We will emphasize respect for privacy and data protection with regard to the use of personal data since it is crucial for enhancing*

[47] According to the interviews and desk research, there are two main types of money, as opposed to time, savings for users. First, clearly businesses will think in monetary terms rather than citizens, even if the issue is time saved which is then translated into monetized values. Second, for users of all types (including citizens), using digital public services can save them money as well as time, for example by reducing the cost of travel.

confidence and trust. Trust and security are integral for take-up of services by citizens and businesses when creating services that rely on the electronic exchange of information."

This was followed up in April 2010 by the European eGovernment Action Plan, 2011-2015, which included an agreement between the European Commission and Member States for a "Reductions of Administrative Burdens" Action:

> *"For many people and businesses the best government is one that goes unnoticed. In practice however, many procedures and requirements make interactions with governments burdensome in terms of time and resources. Therefore simplification or elimination of administrative processes should be an important objective, as laid out in the Action Programme for reducing administrative burdens in the European Union.*
>
> *The envisaged actions should help Member States eliminating unnecessary administrative burdens. This can be achieved, e.g. through smart use by public authorities of citizens' available information and by applying the principle of 'once-only' registration of data whereby the information needed from citizens is only collected once, on condition that data and privacy protection requirements are met.*
>
> *Between 2011-2013: The Commission will organize with Member States the sharing of experiences on the implementation of the 'once-only' registration principle and, on electronic procedures and communications having become a dominant channel for delivering eGovernment services, conduct a cost-benefit analysis and design a roadmap for further implementation."*

It is clear from the above that the main thrust of the Malmö Declaration and the current Action Plan is towards reducing the administrative burden for citizens and businesses. Indeed, the present study has found evidence that this is happening, but in addition it is showing that doing this can also lead to large cost savings in the government's own expenditure. This win-win situation needs to be built upon, especially in the light of the severe financial constraints that still characterise the public sector.

For example, this study has found through a cost benefit analysis of the application of once only and digital by default strategies in Denmark, the Netherlands and the UK that[48]:

- A once only strategy at EU28 level could generate a total net impact amounting to around € 5 billion per year by 2017. This highly positive impact is due to the fact that the complex system of registries is also freely accessible by users (citizens and businesses) for commercial purposes and might foster growth in some economic sectors.
- A digital by default strategy at EU28 level could result in around € 10 billion of annual savings, and that the economic impact of digital by default is higher when there is a swift digitization of transactions and when digitization involves a substantial number of transactions.

5.2 Building on the administrative burden reduction win-win achieved to date

Despite the real achievements noted above, it is clear that administrative burden reduction efforts in Europe remain at an early stage of development and that there are huge differences between leading and lagging countries with very many still in the latter category. For example, regarding digital by default which provides the bulk of the savings, even the four main European leaders for which

[48] The study's Second Interim Report, November 2013.

evidence has been obtained (Denmark, Estonia, the Netherlands and the UK), only the Netherlands has achieved significant savings to date, whilst most other countries have hardly yet begun to plan, let alone implement, digital by default strategies.

Thus, there is much to do but also a very great potential. In this context, it is clear from the preceding analysis that the key is to ensure a strong positive virtuous circle linking cost reductions and increased benefits for the government, on the one hand, and cost reductions and increased benefits for users, on the other, whilst also looking to maximize more indirect benefits for society as a whole. It is important that both government and users benefit at the same time during the process of widespread digitization of the public sector, and of society as a whole, currently taking place. This analysis has also shown that two important factors provide the main glue which can simultaneously achieve both government and user benefits:

- trustworthy, robust and highly effective data protection and privacy systems, as well as non-technical measures providing independent oversight and redress of any incompetent use or mis-use of data by any actor;
- relevant, high quality and very easy to use digital public services that lead rapidly to successful service fulfilment.

Both factors are necessary to maximize user uptake of digital public services which is still somewhat disappointing in relation to total investments in e-government despite recent improvements. The first has been addressed by the once only strategy but is also relevant for the other two strategies, whilst the second has been addressed by the simplification and personalization strategy but is also relevant for the other two strategies. The digital by default strategy builds very directly on the other two strategies and is able to achieve maximum benefits as long as the conditionalities and barriers noted above are addressed.

5.3 Proposed European level and cross border roadmap

As stated earlier in this report, experience from some of the lead European countries (including Belgium, Denmark, Estonia, the Netherlands and the UK) shows that a complete roadmap of administrative burden reduction, if starting from scratch, can take up to ten years, although it should be remembered that these countries had no good practice to refer to. Also, the technology has changed, and continues to change, often more rapidly than institutions and policies can keep up. Progress in future should, therefore, be faster, also because most countries already have some building blocks in place or under implementation, and if this can be supported and coordinated at EU level.

A number of actions are proposed according to the following time line. Suggested dates are cognizant of the fact that the current Action Plan terminates in 2015 which may limit implementing new studies or large scale actions before 2016.

2014

- the Commission should consider facilitating a dialogue with Member States and the e-government community aimed at raising awareness about the potential massive benefits of the Reduction of Administrative Burden (ABR) approach, but also to widen its scope to one which explicitly recognizes the close mutual relationship between user savings and benefits, on the one hand, and government savings and benefits, on the other, in order to achieve win-win scenarios. This should be recognized by using the terminology of "burden reductions and benefit realizations". This reflects the October 2013 European Council Conclusions[49],

[49] European Council (2013) ""European Council, 24/25 October 2013, Conclusions", EUCO 169/13, CO EUR 13, CONCL 7, Brussels, 25 October 2013.

which state in Conclusion 9: "This will lead to more and better digital services for citizens and enterprises across Europe, and to cost savings in the public sector";

- the Commission will use this study in the context of the current eGovernment Action Plan (2011-2015) to shape awareness amongst the e-government community, for example using the ePractice portal to feature good practices, run workshops, make placements in conferences, and encourage a special edition of the *European Journal of ePractice*;
- the Commission should facilitate and encourage good practice examples to be identified and analysed given the fact that there are real as well as potential synergies and learning between the various ABR initiatives and across countries, including:
    - once-only strategies are critical elements but rarely on their own, but instead typically operate within a wider landscape of ABR initiatives, as well as with a broader e-government strategy. These packages of ABR strategies need to be better understood, as do the sequences between them, as for example analysed in this report;
    - examination of the strategies of the lead countries which have, or are, successfully navigating through the three phases, from once only, to simplification and personalization, and then to digital by default, in order to maximize benefits simultaneously for both governments and users;
- the Commission should facilitate an examination of the legal and regulatory constraints to ABR, and explore possible ways to overcome or circumvent these, given that the differences between countries are often related to legal actions and practices, including data protection, and that the barriers faced are very similar across all countries.

2015

- the Commission and Member States should consider building on the present study to help shape the post-2015 Action Plan (or equivalent) up to 2020 in line with the EU 2020 Strategy and the DAE, as well as the planning for the H2020 Programme from 2016 (given that planning is already advanced for 2104 and 2015), and other suitable instruments;
- the Commission, with the support of the Member States, should consider ensuring that appropriate longer-term synergies between the ABR area with the many current and on-going EU initiatives are in place leading to recommendations for ensuring this happens, for example:
    - European interoperable platforms such as EIF;
    - the Large Scale Pilots (LSPs) developing 'building blocks' for cross-border services, including eID (STORK), eProcurement (PEPPOL), eBusiness (SPOCS), eHealth (epSOS) and eJustice (e-CODEX). Further LSPs address other cross-border issues, such as emergency services or eCalls (HeERO). Although at the pilot scale most of these projects developed promising solutions ('building blocks'), they are currently facing the challenge of transferability and sustainability on the long-term and effective transition into the market;
    - the new financial instrument entitled the Connecting Europe Facility (CEF) planned for use to finance the sustainability of the outcomes of the LSPs, as well as the new Digital Services Infrastructures (DSI) needed to provide cross-border solutions for citizens and business in areas of public interest such as health, smart energy, and access to public administrations. The CEF should ensure the sustainability of a number of solutions, or building blocks, that were developed by the LSPs, the sustainability of which once they are completed, is part of the pilot, eSENS;
    - other relevant European platforms like the VAT and eCustoms initiative and the Service Directive (Points of Single Contacts as fully fledged e-government centres);

- the European Open Data strategy[50] which is relevant to the proposal to make certain data from base registries available as suggested by various countries, and is also endorsed in the October 2013 European Council Conclusions[51], which state in Conclusion 9: "Open data is an untapped resource with huge potential for building stronger, more interconnected societies that better meet the needs of citizens and allow innovation and prosperity to flourish".

- In relation to the above actions concerning any follow-up to the current Action Plan and synergies with other EU initiatives and instruments, the Commission should in particular assist Member States in raising awareness about the impacts of legal and regulatory frameworks which might hinder ABR and how these might be overcome without undermining the value of such frameworks in upholding, for example, data protection and privacy issues. A common position or set of guidelines as to how this might be done should be drawn up to assist Member States in their own legal and regulatory environment as well as in relation to what can usefully be undertaken at EU level.

2016

- the Commission should consider conducting one or more studies on:
  - how public sector entities measure and analyze burden reduction and benefit realization measures, for example knowing where money is currently spent, the number of transactions, etc. There is a need for a common method to benchmark ABR across Europe using common basic indicators and common data as part of the business case approach;
  - the possibility of the need for a suitable legal framework at European level to agree how Member States' base registries can be exploited within the context of the European data protection and privacy framework (see below) as well as Europe's open data policies (see above). For example, the next challenge is cross-border ABR as the number European eGovernment cross-border services increases, not necessarily to replace national services but to make them interoperate and function better. The October 2013 European Council Conclusions[52] state in Conclusion 9: "EU legislation should be designed to facilitate digital interaction between citizens and businesses and the public authorities";
  - successful "burden reductions and benefits realization strategies" as win-win strategies for modernizing the public sector and maximizing both its efficiency and effectiveness.

2017

- given its critical importance to successful ABR, the Commission should consider coordinating work, both at national and European levels which takes account of current and near future developments already planned, to support and develop:
  - trustworthy, robust and highly effective legal and regulatory systems for data protection and privacy, especially in relation to both national and European level base registries.

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[50] European Commission (2011) "Open data: an engine for innovation, growth and transparent governance", COM(2011) 882 final, Brussels, 12.12.2011.

[51] European Council (2013) ""European Council, 24/25 October 2013, Conclusions", EUCO 169/13, CO EUR 13, CONCL 7, Brussels, 25 October 2013.

[52] European Council (2013) ""European Council, 24/25 October 2013, Conclusions", EUCO 169/13, CO EUR 13, CONCL 7, Brussels, 25 October 2013.

This will also consider the need for non-technical measures which could provide independent oversight and redress of any incompetent use or mis-use of data by any actor, and might include "arms-length", "trusted third party" or "ombudsmen" types of approach. This is highly relevant also in the context of both technical and policy developments in the fields of "big data", open data (including PSI and OGD – see above), as well as of IoT, etc. In the present study, a number of Member States have pointed out that the new EU Data Protection Directive currently being negotiated could make data reuse and thus once-only much more difficult. Another option here is to consider how to allow people to control the use of their own data, as is being done in a number of countries, including the UK, Estonia, Belgium and Austria;

- better European level reporting, especially in the business sector perhaps with a study examining the proposals made by several countries (e.g. Denmark and the Netherlands) that all Member States should move to adopting Standard Business Reporting (SBI) formats using equivalent fields, taxonomies, definitions, etc., which would allow digital and automatic business reporting to public authorities, given this is also a global standard and would be a useful contribution to the Single Market;
- relevant, high quality and very easy to use digital public services that lead rapidly to successful service fulfilment. Including some of the new approaches like personalization (MyPage and similar) and service design principles, co-creation, etc., which can cope with the massive increase in the use of digital public services.

2018

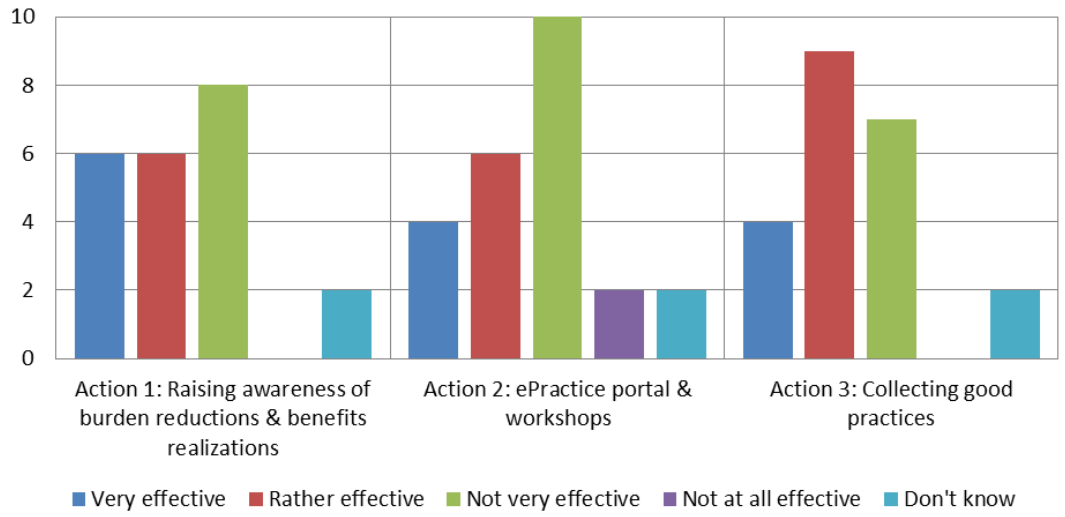
- the Commission should consider reporting on high quality very easy to use and high impact digital public services at both national and EU level in the context of burden reduction and benefits realization strategies. This is the outcome of the work undertaken in 2017;
- agreement on standard approach to burden reduction and benefits realization measurement framework. This is the outcome of the study conducted in 2016 and further consultation;
- agreement on suitable legal framework at European level for cross-border issues, including taking account of the European data protection and privacy framework and for linking MS base registries, the use of such registries for open data, etc. This is the outcome of the work undertaken in 2017;
- agreement on need to introduce SBR across Europe, including the role of legal and regulatory frameworks to underpin this. This is the outcome of the work undertaken in 2017.
-

5.4 Validation of European level and cross-border roadmap

The following figures show respondents views on the effectiveness of the proposed actions for each year between 2014 to 2018, followed by the effectiveness of the overall timeline as well as respondent suggestions for roadmap actions. As could be expected there is a somewhat varied set of views given the widely varying condition of eGovernment across Europe, and the very large differences between the stages of development countries are at. In all cases, however, actions are seen as generally effective, although often there are also some who feel the action is not very effective or even ineffective.

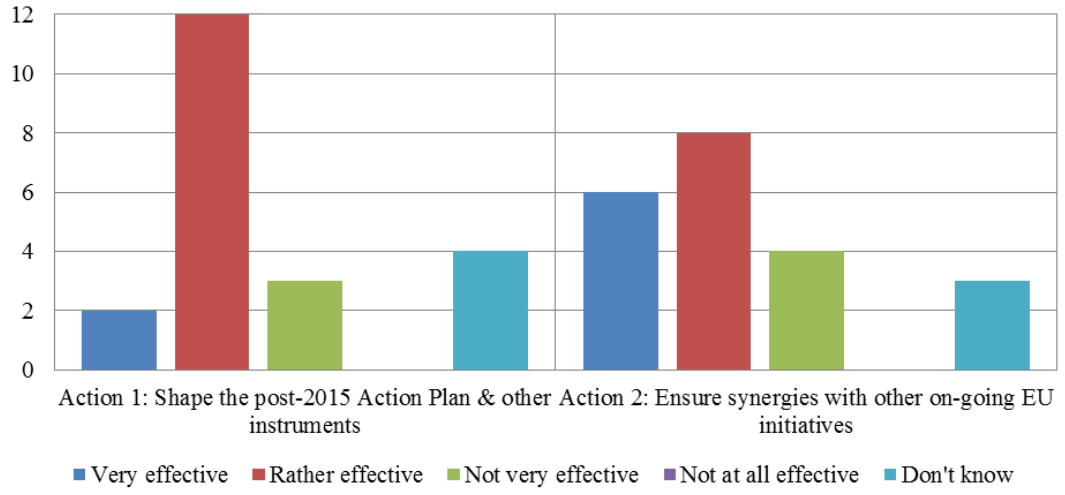
For 2014, collecting good practices seems to be seen as the most effective action, followed by raising awareness and using the ePractice portal. There is clearly a link between these actions, as the portal includes good practices although rarely in great detail or in easily comparable form, and Actions 2 and 3 also have an awareness raising function.

Figure 21: Effectiveness of proposed 2014 actions



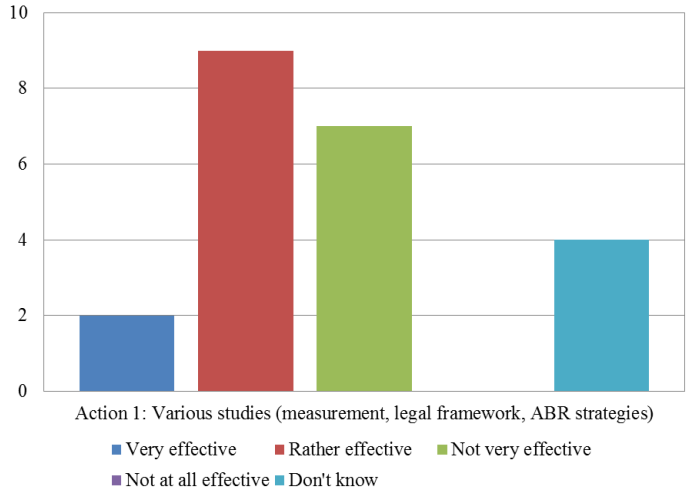
For 2015, shaping the post-2015 Action Plan is clearly seen as the priority, whilst ensuring synergies with other on-going and relevant EU initiatives is also appreciated as effective. This Action is seen as one of the most effective over the 2014-2015 period (see below).

Figure 22: Effectiveness of proposed 2015 actions



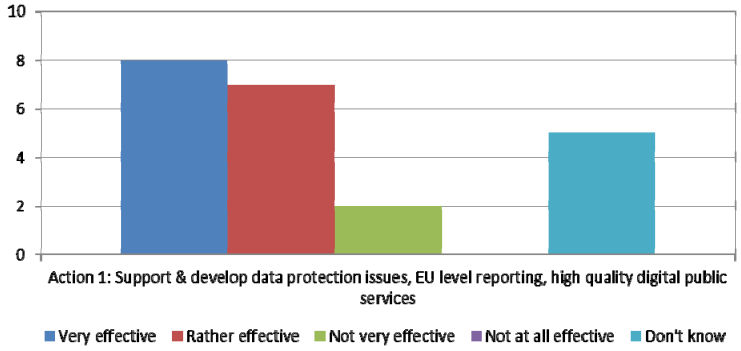
For 2016, a number of studies are proposed which might arise from or inform the post-2015 Action Plan or equivalent. On the whole these are seen as effective, although a minority of respondents also think they are not very effective.

Figure 23: Effectiveness of proposed 2016 actions



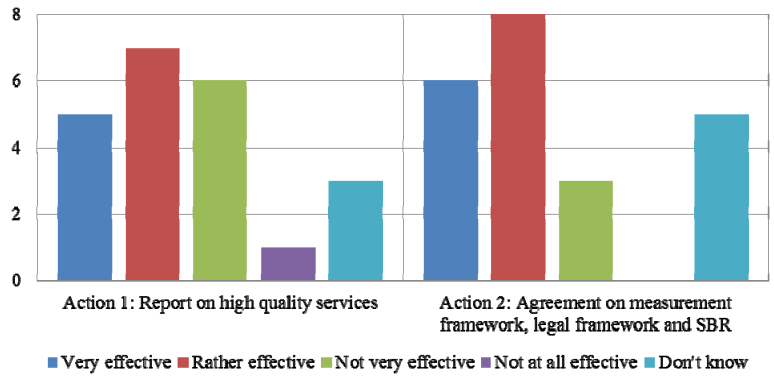
For 2017, the main actions proposed are for the Commission to work with Member States to promote high quality digital services and robust data protection in order for users to have sufficient trust to use them, as well as better business reporting at European level. Collectively, these are seen as one the most effective set of actions over the 2014-2015 period (see below).

Figure 24: Effectiveness of proposed 2017 actions



For 2018, reaching agreement on a measurement framework for administrative burden reduction, a legal framework for cross-border issues and introducing SBR (standard business reporting) across Europe is clearly seen as the most effective, and this is seen as one of the most effective actions across the 2014-2018 period (see below). Commissioning a report on high quality services is also well appreciated as being effective.

Figure 25: Effectiveness of proposed 2018 actions



5.5 Effectiveness of the overall timeline

As indicated above, all actions proposed are seen as generally effective, although often there are also some who feel the action is not very effective or even ineffective. Three actions appear to be seen as the most effective over the 2014-2018 period:

- in 2015: shaping the post-2015 Action Plan;
- in 2017: a set of actions for the Commission to work with Member States to promote high quality digital services and robust data protection in order for users to have sufficient trust to use them, as well as better business reporting at European level;
- in 2018: reaching agreement on a measurement framework for administrative burden reduction, a legal framework for cross-border issues and introducing SBR (standard business reporting) across Europe.

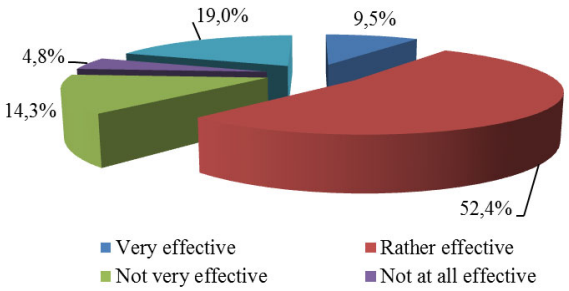
Each of these prioritises collaborative action at European level which both directly benefits individual Member States as well as promoting cross-border services and initiatives for promoting administrative burden reduction.

There are also a number of challenges identified by respondents related to European level roadmaps and action plans:

- to provide citizens with equivalent cross-border services as is happening for enterprises under the EU Services Directive;
- to find mechanisms and support to follow up on useful good practices, especially given the difficulties of raising awareness in the right places;
- the role of the EU is often limited, given the principle of subsidiarity and existing competences, and this should be acknowledged when designing European level roadmaps and action plans, especially when designed to strengthen national strategies;
- to integrate the building blocks into the work processes of all relevant government organisations, including municipalities and executive agencies.

The following figure shows respondents views on the effectiveness of the overall 2014-2018 timeline.

Figure 26: 2014-2018 Timeline effectiveness



The largest number of respondents (52%) see the generalised roadmap as effective, and if this is added to those who see the roadmap as very effective, this represents almost two thirds of the total. Given the widely varying condition of eGovernment across Europe, and the very large differences between the stages of development countries are at, this appears to be a significantly high number.

Conclusions

This study has reached a number of well documented and robust conclusions concerning Administrative Burden Reduction (ABR) in the context of the "once only" registration principle and the requirement to make electronic procedures the dominant channel for delivering eGovernment services, both at national and European levels.

1. **The "once-only" principle** is well represented across Europe with only 6 EU countries not applying it. However, there are large differences between those countries which are applying the principle in terms of their stages of development and actual achievements of ABR, with those in eastern and southern Europe often though not always lagging. There are a number of common trends and features concerning the "once only" principle:
    - once only is invariably a part of a specific eGovernment policy/framework or in a legislative provision and embedded within a larger package of ABR measures (typically including digital by default, and the use of base registries). This implies that it is not possible to analyse, assess or understand the impact of the "once only" principle in isolation given that it is always designed and implemented as part of a wider package, although it is a critical and often lynch-pin component within this wider package;
    - in terms of implementation responsibility, there is a common trend towards centralization with most countries usually charging the executive branch to carry out and monitor and coordinate it. Most countries have designated one ministry or specialized unit to lead and coordinate the process. This centralization is often combined with a "whole-of-government" approach, which requires coordination, collaboration and coherence among all administrative levels/branches;
    - regarding administrative coverage, 50% of countries cover all levels (national, regional and local), whilst national or federal institutions are always involved, with lower level governments to a lesser extent;
    - the most common barriers to the once only principle include lack of communication and division among government departments, concerns about high implementation costs, privacy and data sharing constraints, and the changes needed to both organizational structures and operations as well as working practices and cultures;
    - benefits to users (citizens and businesses) tend to be highlighted over benefits to government itself, although all are seen as important. For users these are seen as time and money savings, but also convenience, better services and greater satisfaction. For government, the greatest benefits are expected as well as realized cost savings and administrative efficiencies;
    - concerning the methodologies applied for evaluating the "once only" principle costs and benefits, 76% of respondents declared that in their country a combination of several methodologies is frequently used for this purpose, including the Standard Cost Model (SCM); impact analysis; customer satisfaction surveys; and the business case approach. Nevertheless, a common approach has not yet been developed.

2. **Cost benefit achievements and potentials** are found to be very significant in monetary terms:
    - a once only strategy at EU28 level could generate a total net impact amounting to around € 5 billion per year by 2017. The total net impact rises to € 5,4 billion with the associated countries. This highly positive impact is due to the fact that the complex system of registries is also freely accessible by users (citizens and businesses) for commercial purposes and might foster growth in some economic sectors. It is estimated that better access to data of higher quality will enhance economic growth. In summary, free access to basic data will bring new types of services and also more efficient digital services in the private sector.

- a digital by default strategy at EU28 level could result in around € 10 billion of annual savings, with the economic impact being higher when there is a swift digitization of transactions and when digitization involves a substantial number of transactions.

There are also important overall lessons learnt concerning both the "once only" principle and the digital-by-default strategy:

- implementation would produce a positive impact at EU level;
- implementation is not about technology alone but is a multidisciplinary operation: legal, organisational, semantic, technical, security, etc.;
- a multilevel governance approach is essential;
- it is necessary to share knowledge and to learn from "best practice" experience to maximize benefits and reduce risks;
- when implementing eGovernment, the whole process should be aligned with open data principles.

3. **Policy roadmaps**, based on the outcomes of the CBA and its projections, can be developed to identify long term solutions to reduce the administrative burden through the "once only" principle and making electronic procedures the dominant channel for delivering eGovernment services. These will assist European countries to deploy ICT, together with legislation and other relevant enablers, to reduce the administrative burden by the desired 25%[53] or more, both in each country but also in the longer term across borders and at EU level.
   The study has shown that three main policy options for the roadmap are the most commonly deployed strategies in Europe and provide the greatest potential benefits: "once-only" strategies; simplification and personalization strategies; and digital-by-default strategies. These options represent distinct types of relatively independent strategies which can and often are carried out by Member States independently from each other, although there is also considerable overlap and mutual dependence between the strategies across the three options. This shows that the options are also highly synergistic, especially if carried out in the order presented, i.e. from once only, to simplification and personalization, and then to digital by default, with the benefits to both government and users increasing at each step, assuming that a number of conditions are met.
   A number of quick wins are also proposed, although it is clear from the evidence gathered and especially the interviews, that these are likely to vary considerably between countries given their widely differing stages of development. They need, therefore, to be tailored to each country's specific conditions, and to be undertaken with care so as not to impede longer term goals. However, several principles for quick wins can be discerned, including highly targeted investigations and measurements of where impediments to achieving ABR exist, such as in the legal and regulatory set-up, in the costs of developing base registries and providing digital services, and in relation to service use and the business case. Such investigations are likely to highlight changes which can be relatively speedily and inexpensive made to achieve ABR impacts. Another useful approach is to work first with willing ministries and agencies across government, and/or target user segments which are likely to see quick ABR (such as businesses), rather than attempt to work with or target them all, as the results of doing so are likely to provide useful demonstration effects.
   In order to support and progress these roadmap options at European level and in a cross-border context, a number of actions are proposed over the period 2014 to 2018, cognizant of the fact that the current Action Plan terminates in 2015 which may limit implementing new studies or large scale actions before 2016. A large majority of Member State representatives, as well as

[53] European Commission, The European eGovernment Action Plan 2011-2015. Harnessing ICT to promote smart, sustainable & innovative government, COM(2010) 743, Brussels 15 December 2010.

other stakeholders, see the European level roadmap as effective or very effective, despite the widely varying conditions of eGovernment across Europe, and the very large differences between the stages of development countries are at.

All actions proposed are seen as generally effective, however three actions appear to be seen as the most effective over the 2014-2018 period:

- in 2015: shaping the post-2015 Action Plan;
- in 2017: a set of actions for the Commission to work with Member States to promote high quality digital services and robust data protection in order for users to have sufficient trust to use them, as well as better business reporting at European level;
- in 2018: reaching agreement on a measurement framework for administrative burden reduction, a legal framework for cross-border issues and introducing SBR (standard business reporting) across Europe.

Each of these prioritises collaborative action at European level which both directly benefits individual Member States as well as promoting cross-border services and initiatives for promoting administrative burden reduction.

In summary, this Study has amply demonstrated the importance of a concerted effort by countries both nationally and at European level to reap the benefits of ABR. This has been the ambition of the responsible Ministers of EU Member States when agreeing the Ministerial Declaration on eGovernment, in Malmö, Sweden, on 18 November 2009. It was also later transposed in April 2010 by the European eGovernment Action Plan, 2011-2015, which included an agreement between the European Commission and Member States for a "Reductions of Administrative Burdens" Action, including this Study. The implications of this Study are, however, also wider, for example in the context of the European Interoperability Framework (EIF)[54] which includes the proviso that only the information necessary to obtain the public service and to provide any given piece of information only once to administrations should be requested. The Horizon 2020 work programme for 2104-15 also refers to ABR and the once only Principle as part of the expected impact of an action on ICT-enabled open government[55]. It can be expected than ABR and benefits realization will continue and probably increase their importance in 2014-2020 timeframe, due to both the continuing squeeze on public finances and the need to improve public service access and quality in order to address the important social, economic and environmental problems Europe is facing and will continue to face.

[54] Underlying Principle 2 on user-centricity: http://ec.europa.eu/isa/documents/isa_annex_ii_eif_en.pdf

[55] On page: http://ec.europa.eu/research/horizon2020/pdf/work-programmes/societies_draft_work_programme.pdf#view= fit&pagemode=none

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Annex 1: Stakeholders consulted

Country	Organisation	eSurvey	Interview	WS Participation
Australia	AGIMO (Australian Government Information Management Office) - Policy Officer	X		
Austria	Austraian Fedel Chanchellery - Egovernment Expert	X		
Austria	Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR-GmbH)		X	
Austria	Austrian Federal Chancellery		X	X
Belgium	is-practice.eu		X	
Belgium	Politech		X	
Belgium	Administrative Simplification Agency		X	X
Belgium	Administrative Simplification Agency - Director General	X		
Belgium	Eforum			X
Belgium	Co-ordination Cell Flemish e-Government (CORVE) - e-government and ICT-Management (e-IB) | Administrative Affairs			X
Belgium	Wikinetix bvba			X
Belgium	Bull			X
Belgium/Luxembourg	EIPA LUXEMBOURG			X
Belgium/Germany	INIT Europe			X
Belgium	EPAPHOS ADVISORS TEAMWORK			X
Belgium	Service Public Fédéral Technologie de l'Information et de la Communication (FEDICT)		X	
Bulgaria	Ministry of Transport, Information Technology and Telecommunications	X		
Cyprus	Department of Information Technology Services - Ministry of Finance	X		
Croatia	Agency for Investments and Competitiveness			X
Croatia	Director of Sector for Competitiveness at Agency for Investments and Competitiveness			X
Czech Republic	Ministry of the Interior	X		
Czech Republic	CEO, eNovation		X	
Czech Republic	EPMA		X	
Czech Republic	Minsitry of Interior		X	X
Denmark	Agency for Digitisation -Ministry of Finance - Head of International Co-operation	X	X	X
Denmark	Agency for Digitisation -Ministry of Finance			X
Denmark	Agency for Digitisation - Ministry of Finance - Head of Departement		X	
Denmark	Danish Business Authority - Special Advisor		X	
Denmark	Danish Business Authority - Special Advisor		X	

Country	Organisation	eSurvey	Interview	WS Participation
Denmark	DaneAge Association (ÆldreSagen)		X	
Denmark	Head of Brussels Office, Danish Chamber of Commerce		X	
Denmark	DI ITEK - Senior Consultant		X	
Estonia	Ministry of Economic Affairs and Communications - Director of Division	X	X	
Estonia	Estonian Information Systems' Authority - Analyst		X	
Estonia	Estonian Information System's Authority - X-Road Area Manager		X	
Estonia	Estonian Chamber of Commerce and Industry - Services Department Director		X	
Finland	City of Vantaa, ICT enterprise infrastructure		X	
Finland	Ministry of Finance - Special Advisor			X
Finland	Vero, Finnish Tax Administration		X	
Finland	Ministry of Finance	X	X	
France	Directorate General for Government Modernisation	X		
Germany	Consortium for Economic Management (AWV e. v.)			X
Germany	Federal Ministry of the Interior			X
Germany	European representation of the German federal Employment Agency			X
Germany	Federal Ministry of the Interior	X		
Greece	Vice Minister's Office	X		
Greece	Prime Minister's Office	X		
Hungary	Ministry of Public Administration and Justice	X		
Ireland	Department of Public Expenditure and Reform (CMOD)	X		
Italy	Ministry of the Interior	X		
Italy	Italian Digital Agency	X		
Latvia	Public Services Department - Head of the Electronic Services Devision			X
Latvia	Ministry of Environmental Protection and Regional Development, Electronic Government Department	X		
Lithuania	Ministry of the Interior	X		
Malta	Mangement Efficiency Unit	X		
Montenegro	Ministry for Information Society and Telecommunications	X		
Netherlands	Ministry of the Interior and Kingdom Relations - Policy Advisor Citizenship and Information Policy	X	X	
Netherlands	Ministry of the Interior and Kingdom Relations - Senior Policy Advisor	X	X	X
Netherlands	Ministry of the Interior and Kingdom Relations	X		
Netherlands	Ministry of Economic Affairs - Senior Advisor		X	

Country	Organisation	eSurvey	Interview	WS Participation
Netherlands	Ministry of Economic Affairs - Senior Advisor		X	
Norway	The Bronnoysund Register Center			X
Norway	Ministry of Government Reform, Administration and Church Affairs	X		
Poland	Ministry of Administration and Digitization	X		
Portugal	Administrative for Public Service Reform			X
Portugal	Etidade de Serviços Partilhados da Administraçao Puliça (ESPAP)		X	
Portugal	Agency for Public Services Reform (AMA)		X	
Portugal	Agency for Public Services Reform (AMA)	X	X	
Romania	Ministry of Information Society	X		
Slovak Republic	Ministry of finance	X		
Slovenia	Ministry of the Interior Affairs and Public Administration	X		
Spain	Red.es - Director of Information Systems and Joint E-Administration Services		X	
Spain	Head Office of Administrative Modernization, Processes and Promotion of E-Administration		X	
Spain	CEOE – CEPYME CANTABRIA- Head of Business Development		X	
Spain	Autonomous Government of Madrid - General Subdivision of Service Quality in Madrid,		X	
Spain	Velentis Technologies, S.L. - Administrative manager		X	
Spain	Autonomous Government of Catalonia - Head Office of Processes and E-Administration,		X	
Spain	Ministry of Finances and Public Administration	X		
Sweden	Ministry of Entreprise, Energy and Communications	X		
Sweden	Stockholm University			X
Sweden	Swedish Association of Local Authorities and Regions			X
Switzerland	Program Office eGovernment	X		
United Kingdom	Government Digital Service - Digital Performance Officer		X	X
United Kingdom	Driving and Vehicle Licence Authority (DVLA) - Support to the Transformation Director		X	
United Kingdom	Waller Online		X	
United Kingdom	Driving and Vehicle Licence Authority (DVLA) - Transformation Director		X	

Annex 2: The once only principle final landscape

A number of European countries are applying the "once only" principle, in relation to three categories of beneficiaries: businesses (Government to Business – G2B), citizens (Government to Citizens – G2C) and the whole public sector (Government to Government – G2G). The table below lists the most relevant initiatives across the countries having answered the eSurvey and implementing the principle at hand. The description is based on both the eSurvey and the desk-research findings. Although the countries vary in national scope, strategy and technical solutions, some common indicators and trends emerge among them, their implementation procedures and tools. For instance, some countries have set up some kind of national citizen eID in order to improve citizens and business services, and many countries are focusing on the exchange of data across government bodies or departments. Moreover, well-advanced countries are also emphasizing the use of common base registries or core data in order to cut down administrative burdens.

Table 7:Administrative Burden Reduction and "once only" principle landscape

Country	Administrative burden reduction and "once only" principle
Austria	Austria has a vast number of policies, strategies and initiatives concerning administrative burden reduction in relation to eGovernment. Primarily G2B and G2C initiatives are present in Austria and include projects to implement the "once only" principle, digital by default initiatives, common base registries, point of single contact, and simplification of processes, forms and legal requirements. The "Platform Digital Austria" (PDÖ), as the coordination and strategy committee of the Federal Government for eGovernment in Austria, states the principles for a continued fruitful cooperation in the field of eGovernment. They are included in "eGovernment Vision 2020". Among the eGovernment strategy top priorities figure the establishment of an eID and advancing the inclusion with innovative public services. Furthermore, the improvement in the quality and processes of the national registers is a central theme in promoting the advancement of the "once only" principle.
Belgium	Belgium applies the "once only" principle. The policies, strategies and initiatives concerning these administrative burden reduction efforts are related to the G2B, G2C and G2G areas. Belgium is focusing on ensuring interoperability of eGovernment solutions, maximising the re-usability of eGovernment developments and services and ensuring that data would be collected only once and would be re-used to a maximum extend. This is done through re-engineered and integrated service delivery around users' needs and life events, cross government cooperation efforts and back office integration, as well as simplification of administrative procedures for citizens and businesses.
Bulgaria	Bulgaria is applying the "once only" principle in the G2B, G2C and G2G areas. Other administrative burden reduction efforts include point of single contact, simplification of processes, forms and requirements, standardized semantics and personalization of interaction. The G2G area also includes administrative burden reduction efforts such as common base registries and reduction in reporting frequency. Besides a general increase in effectiveness and efficiency, Bulgaria is looking into the technological provision of the institutions' needs and for the development of electronic registers, data bases and eServices. Its progresses in the field are clearly proved by the creation of: the official eGovernment portal (egov.bg), a National Health portal, eID cards, eHealth cards, the eSender service, and the ePayment Gateway.
Cyprus	Cyprus is applying the "once only" principle in the G2B and G2C areas. Other administrative burden reduction efforts include digital by default, common base registries and a list of simplification and standardization efforts covering the G2B, G2C and G2G areas. Cyprus has set the delivery of one-stop-shop services as the main target. This is to be realised either via the web, or via other channels, such as kiosks, call centres, citizen support centres. The structuree of these systems is to be based on three main building blocks: a front end government portal aggregating all information and services in one place, based on the life-event-cycle; a middleware tier gateway to provide interoperable, secure and authenticated web-based interconnection of back-end systems; a back-end web-enabled information

Country	Administrative burden reduction and “once only” principle
	system.
Czech Republic	The Czech Republic applies the “once only” principle in the G2B, G2C and G2G areas. Other administrative burden reduction initiatives include digital by default, common base registries, point of single contact, simplification of processes, special help functions and standardised semantics. The Czech Republic is focusing on consolidating databases used for building content and applications, a robust, secure and efficient infrastructure allowing access to data sources, with potential for further development, a set of key applications to handle businesses’ normal life events and their communication with State Administration, and a 20 % reduction in administrative costs. Among others,these measures are implemented through basic registers and identification tools, including the organisational architecture and technical support to avoid the duplication of data and to maintain the required security standards.
Denmark	Denmark is applying the “once only” principle in the G2B, G2C and G2G areas. Denmark has a vast number of other administrative burden reduction efforts, including digital by default, common base registries, simplification of processes and legal requirements, reduction in reporting frequency, point of single contact, personalization of interaction, special help functions and standardized semantics. Interestingly, the Danish focus area is the key registry (termed shared core data). Core data is authoritative data covering the fundamental information needed for effective public sector administration. The Danish government is currently investigating possibilities for a shared infrastructure for distribution of core data. This is expected to produce some benefits, such as gains in efficiency and better payment models. Other actions include the establishment of a single high-quality, easy-to-access, authoritative source for every division of the public sector administration, reusing data on property, improvements to personal data, company data and data on income.
Estonia	Estonia is applying the “once only” principle in the G2B, G2C and G2G areas. Estonia has a vast number of other administrative burden reduction efforts, including digital by default, common base registries, simplification of processes and legal requirements, reduction in reporting frequency, point of single contact, personalization of interaction, special help functions and standardized semantics. The administration is focusing on functioning efficiently while collecting, using and managing data necessary for the provision of public goods in a common and systematic manner. The public sector employs the already existing technological solutions (e.g. the eID card and the data exchange layer X-Road) and avoids duplicating. Moreover, the collection of data and the development of ICT solutions proceed from the principle of reusability.
Finland	Finland is applying the “once only” principle in the G2B, G2C and G2G areas. Other administrative burden reduction efforts include digital by default, common base registries, simplification of processes and legal requirements, reduction in reporting frequency, point of single contact, personalization of interaction, special help functions and standardized semantics. Finland is focusing on: developing solutions for electronic identification in order to enable movement between different information networks; promoting a flexible use of various electronic services by means of a single sign on, while paying special attention to the availability and compatibility of data

Country	Administrative burden reduction and “once only” principle
	infrastructure. These initiative are supposed to lead to greater consistency between services, equipment, networks and systems. Other efforts include the implementation of base data transfer between IT systems on open standards and interfaces and the development of national level solutions for the electronic service interface.
France	France is implementing a wide range of ABR initiatives, related toG2B, G2C and G2G. these include projects to put in place the “once only” principle, in the G2B, G2C and G2G areas. Other ABR projects lie in common base registries, point of single contact, simplification of processes, forms and legal requirements, standardized semantics, reduction in reporting frequency, personalization of interaction and special help functions, all addressed at businesses, citizens and the public sector. With respect to the “once only” principle implementation, it is foreseen under an eGovernment strategy, namely the “Development Plan for Digital Economy by 2012”. It is being implemented through not bounding tools, such as guidelines, service level agreement and personalized “My page”. Among others, the Plan focuses on realizing electronic eID for citizens, on the basis of a secured eSignature standard. The eID final goal is to easy the direct participation of citizens in the government decision-making process, by means of online consultation and petitions.
Greece	Greece is applying the “once only” principle in the G2B, G2C and G2G areas. Other administrative burden reduction initiatives include digital by default, common base registries, point of single contact, simplification of processes and legal requirements.
Ireland	Ireland is applying the “once only” principle in the G2B, G2C and G2G areas. Other administrative burden reduction efforts include digital by default, common base registries, simplification of processes and legal requirements, reduction in reporting frequency, point of single contact, and personalization of interaction, and special help functions. The Irish public service will seek to adopt shared approaches in the achievement of its goals. Therefore, public bodies are committed to a greater use of centralised process support systems such as identity registration and authentication, means assessment, payments, and forms services, as they become available.
Italy	Italy is applying the “once only” principle in the G2B, G2C and G2G areas. Other administrative burden reduction efforts include digital by default, common base registries, point of single contact, simplification of processes, forms and legal requirements, standardized semantics, reduction in reporting frequency, personalization of interaction and special help functions.
Latvia	Latvia is applying the “once only” principle in the G2B, G2C and G2G areas. Other administrative burden reduction efforts include digital by default, common base registries, point of single contact, simplification of processes and legal requirements, standardized semantics, reduction in reporting frequency, personalization of interaction and special help functions.
Lithuania	Lithuania is applying the “once only” principle in the G2B and G2C areas. Other administrative burden reduction efforts include common base registries, point of single contact, simplification of processes and legal requirements, standardized semantics, reduction in reporting frequency, personalization of interaction, and special help functions. Lithuania is focusing on: improving electronic signature and information society (eCommerce) services; building a national base to provide the necessary interaction for safe, effective and

Country	Administrative burden reduction and “once only” principle
	reliable data exchange among national registers; carrying out centralised, and ICT assisted modernisation of public services supplied by municipalities, through the establishment of common requirements for electronic services.
Montenegro	Montenegro have projects to implement the “once only” principle which benefit businesses, citizens and governments. Other ABR initiatives in the G2B, G2C and G2G areas include digital by default and common base registries, whereas point of single contact, simplification of processes and legal requirements and personalization of interaction only concern G2B and G2C. The “once only” principle policy basis is represented by an eGovernment strategy/framework, whose implementation is led by the central government. The main barriers encountered to put in place the principle are silos in government and other organizational aspects. However, several benefits are identified for businesses, citizens and government.
Netherlands	Netherlands is applying the “once only” principle in the G2B, G2C and G2G areas. Other administrative burden reduction efforts include digital by default, common base registries, point of single contact, simplification of processes, forms and legal requirements, standardized semantics, reduction in reporting frequency, personalization of interaction and special help functions. The program plan 2012-2014 for base registries has a clear focus on the core base registries concerning natural and legal persons, addresses/buildings, companies, maps and land administration. Every year a separate yearly plan is developed, in order to describe the various projects contributing to the deliverables for i-NUP in 2015. The goal is “no redundant questions”: users are asked to submit information only once to any part of government. Then, the information can be used anywhere else in government. The Dutch system consists of 13 core base registries of cross-departmental information sharing. These core base registries derived from the experience that it is neither efficient nor effective that every government body collects, maintains and distributes basic information themselves. A number of common principles stand behind these base registries, among them the “once only” data provision, enabling multiple re-use.
Norway	Norway is applying the once “only principle” in the G2B and G2C areas. Other administrative burden reduction efforts include digital by default, common base registries, point of single contact, simplification of processes, forms and legal requirements, standardized semantics, reduction in reporting frequency, personalization of interaction and special help functions. Norway is focusing on providing services to citizens and developing the required back-office infrastructure by addressing initiatives related to the “once only” principle. These include: contributing to innovation and value creation in the business sector, by arranging for development and use of services based on a digital content; making public data accessible for further use and distribution; promoting smart, climate-friendly ICT solutions; developing business standards to enable electronic interaction between public enterprises; introducing electronic ID enabling the exchange of sensitive information; realising advanced services for citizens and businesses.
Portugal	Portugal is applying the “once only” principle in the G2B, G2C and G2G areas. Other administrative burden reduction efforts include digital by default, common base registries, point of single contact, simplification of processes, forms and legal requirements, standardized semantics, reduction in reporting frequency, personalization of interaction and special help functions. Portugal developing a

Country	Administrative burden reduction and “once only” principle
	Citizen Card, which combines identification, social security, the national health service, the taxpayer and the voter cards. It is also proceeding with the creation of the common Knowledge Network of the Public Administration. Moreover, the Simplex programme is focusing on improving the exchange between citizens and public services, on reducing businesses’ contextual costs in their interactions with such services, and on making Public Administration more efficient. Some of these objectives are closely related with simplified administrative services and administrative burden reduction, enhanced cross-gov cooperation, and better use of existing capacities, by sharing and reusing data.
Romania	Romania is applying the “once only” principle in the G2B, G2C and G2G areas. Other administrative burden reduction efforts include digital by default, common base registries, point of single contact, simplification of processes and forms and reduction in reporting frequency. The key policy paper, “eRomania”, is leading the Romanian public sector towards the businesses and citizens identification and data standardization as well as interoperability and development of national registers.
Slovenia	Slovenia is applying the “once only” principle in the G2B, G2C and G2G areas. Other administrative burden reduction efforts include digital by default, common base registries, point of single contact, simplification of processes, forms and legal requirements, standardized semantics, reduction in reporting frequency, personalization of interaction and special help functions. Slovenia is focusing on rationalization of administrative operations. Main targets include sharing of infrastructure among public institutions, reuse of different modules and horizontal measures to aid the development of interoperable solutions to complex problems.
Spain	Spain is applying the “once only” principle in the G2B and G2C areas. Other administrative burden reduction efforts include digital by default, common base registries, point of single contact, simplification of processes, forms and legal requirements, standardized semantics and reduction in reporting frequency. The Spanish ‘Avanza’ plans are the basis of eGovernment development. They focus on improving Public eServices in order to higher the quality of services supplied by the ‘networked Public Administration’, with special emphasis on the support to Local Government and the development of the functionalities of the national eID card (DNIe). Furthermore, the Law on Citizens' Electronic Access to Public Services (2007) is addressing the “once only” principle by emphasizing the "availability, accessibility, integrity, authenticity, confidentiality and conservation" of the data. This is exchanged between the public administration and citizens/businesses, as well as among public administrations themselves. The above-mentioned law also requires data is submitted by the citizens and businesses only once. Then, public administrations must seek the needed information through their interconnections and cannot request citizens/businesses the same data again.

The following table presents a brief overview of country analysed only through desk research (as they did not answer the eSurvey), focused on the following aspects: Statistical background; Legal Framework; eGovernment policy and "once only" principle

	Countries eGovernment profile
Croatia	Statistical background Croatia results 30th in the rank of the UN eGovernment development index 2012 which classifies 190 country according to their performance in providing e-government initiatives and information and communication technologies applications for the people. The UN eGovernment development index 2012 is composed by three distinct components. The first refers to Online Service Component, and Croatia's indicator performs with a point of 0.641, in a range going from 0 to 1, ranking 40th out of the 190 evaluated countries. Another factor for the ranking is the Telecomm Infrastructure Component, with Sweden ranking 22nd out of the 190 countries with a score of 0.697. And in the end the last indicator is the Human Capital Component, with a relative good performance of Croatia, which ranks 50th among the valuated countries with a score of 0.862. Legal Framework Croatia legal framework doesn't have a specific legislation for eGovernment implementation, but disposes of a comprehensive framework of laws and regulations in place for exercising eGovernance. The principal norms for eGovernance has been introduced with the 2005 Electronic Document Act (OG 150/2005), and complemented by the Information Security and Confidentiality Act (NN 79/2007) and the Act on the Right to Access Information (NN 172/03). The institution responsible for the implementation of eGovernance and eGovernment strategy is the Ministry of Public Administration. The ministry is in charge of the promotion of the harmonisation of the national policy on information society and the development of the use of common interoperable solutions. The authority in charge of the promotion of public official data, information and documents availability, it's the Croatian Information and Documentation Referral Agency (HIDRA). eGovernment policy and "once only" principle In 2011, after the realization of the e-Croatia programme 2007-2011, the Government adopted a Decision establishing eGovernment development strategy for the period 2009-2012, in line with the EU's 'eGovernment Action Plan 2011-2015'. The programme is mainly focused on standardization of the use of ICT in Public Administration, to easier their access to citizens and ensuring efficiency and transparency. The second phase of the eGovernment programme implementation is to complete the PA's ICT infrastructure and the integration of online service, with the scope to enable the unification of the environment for the eGovernment service provisions,

	Countries eGovernment profile
	toward the affirmation of the “once only” principle.
Iceland	Statistical background Iceland ranks 22nd out of 190 in the UN eGovernment development Index 2012. The Un Government Index is the results of a set of three indicators, and the Icelandic performance is very diversified. The ranking for the Online service component is 53rd out of the 190 countries with a score of 0.543, in a range between 0 and 1. The Telecomm Infrastructure component ranking of Iceland is 4th with a score of 0.877. In the end the Human capital Component score is 0.931 resulting in the 12th position. Iceland is one of the pioneer countries in Europe in the use of digital solutions for the provision of governmental services to citizens, with 63.3% of individuals and 89.0% of enterprises using the Internet for interacting with public authorities according to Eurostat. Legal Framework The main Icelandic eGovernment framework has been set by the Public Administration Act (No. 37/1993) and amended in 2003. Lately, in 1996, the guidelines proposed for the government intervention in guiding information technology, has been drawn up in the “*Icelandic Government's Vision of the Information Society”*. Key Actors responsible for the implementation of eGovernment include: Prime Minister's Office, in charge of information society and eGovernment policy, Information Society Taskforce, for the co-ordination of the policy strategy, the Icelandic Data Protection Authority (DPA), in charge of supervising the implementation of the Act on the Protection of Privacy as regards the Processing of Personal Data and the Association of Local Authorities, to provide a perspective on the implementation policy at local authorities and municipalities level. eGovernment policy and “once only” principle In 2008, the *eGovernment Policy on Information Society* for the period 2008–2012 has been published. The strategy is based on the objective of realizing "Iceland the e-Nation" and it’s built on three main pillars: service, efficiency, and progress. The main purpose in the realization of this goal is to offer Icelanders online "self-service of high quality at a single location", endorsing the “once only”

	Countries eGovernment profile
	principle.
Liechtenstein	Statistical background Liechtenstein ranks 14th out of 190 in the UN eGovernment development Index 2012. The UN eGovernment development index 2012 is composed by three distinct components. The first refers to Online Service Component, and Liechtenstein indicator performs with a point of 0.588, in a range going from 0 to 1, ranking 44th out of the 190 evaluated countries. Another factor for the ranking is the Telecomm Infrastructure Component, with Ireland ranking 1st out of the 190 countries with a score of 1.000. And in the end the last indicator is the Human Capital Component, for which Liechtenstein ranks 37th among the valuated countries with a score of 0.891. Legal Framework The Lichtenstein's e-government national framework is articulated and entails different normative intervention: The Law on E-Commerce (E-Commerce-Gesetz; ECG) implementing the European Directive 2000/31/EC on aspects regarding Information Society services, in particular electronic commerce, in the Internal Market (Directive on electronic commerce). The *Law of Telecommunications* and the *Law on Electronic Communication* (Kommunikationsgesetz; KomG) create the framework in the area of eCommunications legislation. The Law on Electronic Signatures (Signaturgesetz; SigG) implementing the European Directive 1999/93/EC on a Community framework for Electronic Signatures. The most recent law on the issue of eGovernment is the eGovernment Act of 2011, which mainly includes provisions focused on electronic communication, identification and authentication in electronic commerce and electronic records management. Furthermore, the act envisaged that the existing Act regarding the Service of Legal Documents will be extended to electronic delivery. eGovernment policy and "once only" principle In 2002 the national Administration Portal of Liechtenstein has been instituted to provide on a centralized base eServices for citizens and enterprises. The portal is the central instrument in the eGovernment process, and provides three main categories of service: *Life*

	Countries eGovernment profile
	topics, for information on service linked to life events, such as marriage, passport, stay, etc, *Public Authorities, for* information on function and responsibilities of each public authorities, *On-line counter, to* download forms to be completed for the relevant public authorities, and in some cases to submit them electronically. Notwithstanding the presence of a unique central portal for the delivery of information on Public authorities, the "once only" principle" it's not yet implemented in the eGovernment process in Liechtenstein.
Luxemburg	Statistical background According to the UN eGovernment survey 2012, Luxembourg eGovernment development index is 0.8 out of 1. Hence, the country places 19th out of 190 in the ranking. With respect to the three components of the index, Luxembourg seems quite weak in online service (29th place) and in human capital (56th place), whereas it performs much better concerning telecommunication and infrastructure (5th place). Legal Framework There is currently no overall eGovernment legislation in Luxembourg. eGovernment policy and "once only" principle The current eGovernment strategy, the "Master Plan for the implementation of the Information Technology within the State", lies on the effort to ensure effective implementation of new Information and Communication Technologies. It is developed around three complementary lines: 1) services to the public (aimed at providing efficient public services for citizens and contractors, to ensure accessibility to all public sites and deliver customised and user-centric services.); services to government and public partners (whose goal is to define a normative framework for the exchange and archiving of citizens and businesses documents, protecting them against any abuse that may result from such exchanges.); optimisation and standardisation of practices (the launch of new services is accompanied by the introduction of new quality standards in order to standardise the delivery of public services). The Ministry of the Civil Service and Administrative Reform is responsible for eGovernment policy/ strategy in Luxembourg. Alongside, the State Information Technology Centre (CITE – an active part of the Ministry of Civil Service and Administrative Reform) has the overall responsibility for developing and updating a normative framework for IT projects and the modernisation of the State. The CITE is also in charge of the coordination and planning of IT services to government bodies, and assists those bodies in the reorganisation and optimisation of their tasks. Besides, CITE is responsible for implementing the provisions that originate directly from

	the Government programme and the eGovernment Master Plan. Finally, Government ministries and administrations are responsible for the implementation of the eGovernment projects falling within their respective fields of competence. With respect to the most relevant initiatives in the field, it is worth-mentioning the web-portal "*Le Guichet",* targeted at either citizens and enterprises. The portal provides information on various themes and related administrative procedures, grouped by theme (taxes, employment, family, education, accommodation, citizenship and transport). It allows citizens to accomplish their administrative formalities online in a simple and transparent manner. Exchanges between the State and citizens, through this portal are mandated by the Ministry of Civil Service and Administrative Reform in collaboration with the competent ministries. Thanks to the active participation of all concerned actors, the administration has progressed towards a faster, simpler and lower-budget relation with citizens and businesses.
New Zealand	Statistical background New Zealand ranks 13th out of 190 in the eGovernment development Index ranking 2012. In regard to the overall index components, New Zealand is, respectively, 21st and 15th for online services and the telecommunications infrastructure. However, it performs much better for human capital index, as it is the 2nd country in the world. Legal Framework No overall eGovernment legislation was found for New Zealand. eGovernment and "once only" principle The "Directions and Priorities for Government ICT" is a medium-term strategy for how central government will more collectively lead the use, development and purchasing of government ICT over the next three years. Three of the 15 priorities are addressing the "once only" principle: • To create market opportunities and services through the reuse of government data and information; • To reduce duplication by standardising and consolidating common business processes across government; • To establish authoritative data sources to improve efficiency of business processes.

	Countries eGovernment profile
Serbia	Statistical background Serbia ranks 51st out of 190 in the UN e Government Survey, showing an eGovernment development index equal to 0.63 out of 1. The country's performances regarding to the index three components does not differ from the overall result. As a matter of fact, Serbia ranks 48th for online service component (scoring 0.58), 51st for telecommunication and infrastructure index (with a score equal to 0.47) and gets its worse performance on human capital, placing 58th out of 190 countries. Legal Framework Nowadays, Serbia does not have a proper eGovernment legislation. However a draft legislation has been drawn: "Draft law on general rules of electronic administrative procedures and their environment" (hereinafter Law) has as a main goal to provide missing rules and institution for successful execution of administrative procedures in digital environment. At the moment such implementation is not feasible due to the necessary extensive debate in this matter which would endanger ongoing reform of administrative procedures and potentially postpone it. The concept of the Law has a goal to provide general legal framework which would enable fundamental reform of public sector and its transformation into service to citizens. Therefore the scope of the law has been limited to three following areas: the general requirements for the provision of the electronic services including the requirements for the portals, for the communication and authenticity; the basic requirements on the keeping of registers in electronic form; the basic requirements concerning the identification, authentication, and authorization in electronic form. eGovernment Strategy and "once only" principle In June 2009, the Ministry of Telecommunication and Information Society proposed the current "Strategy for the eGovernment development in the Republic of Serbia" in the period 2009-2013. It paved the way for the progresses Serbia undertook in the last years. The strategy, together with the Action Plan for its implementation, sets out several objectives, which are expected to allow more efficient and effective operation of administrative bodies and public authorities in the provision of public services to citizens, companies and other organizations. Other strategic documents defining the priorities in the field of e-government are the "Strategy for Development of Information Society in Republic of Serbia to 2020" and the "Strategy of Scientific and Technological Development of

	Countries eGovernment profile
	Serbia 2010-2015". Among the main initiatives, in March 2011 the "Digital agenda administration" was set up as part of the Ministry of Culture, Media and Information Society. It assists the completion of projects from the information and electronic sectors, such as digital cabinets, which are part of Digital Schools, and development of administration portals. It also aims at contributing to a greater use of information and communication technologies (ICT) within the public sector and to the harmonization with the EU standards. Moreover, the eGovernment portal of the Republic of Serbia supplies citizens, businesses and foreigners travelling or moving to Serbia all information they need about public services and procedures.
Turkey	Statistical background Turkey ranks 80th out of 190 in the UN eGovernment Survey 2012. The survey classifies countries according to the eGovernment development index, which ranges between 0 and 1. Concerning this, Turkey scores 0.53. With respect to the three components of the index, Turkey does not perform much better: it is 77th for the online service index, 78th for the telecommunication and infrastructure index and 93rd for the human capital index. Legal Framework Specific framework legislation on eGovernment does not exist in the Turkish legal system. However, ministries and institutions have legal arrangements in their legislations. For instance, the Right to Information Act (Law No. 4982) was prepared by the Ministry of Justice and came into force in April 2004. The law gives citizens and legal entities the right to information from public institutions and private organisations that qualify as public institutions. Consequently, all public institutions have established their freedom of information units and started to accept access to information requests including those through the Internet. eGovernment policy and "once only" principle The "e-Transformation Turkey" project, launched in 2003, aims at giving birth to an information society through a harmonious and integrated structure involving all citizens, enterprises and public segments. The project sets out three main goals: achieving efficiency and effectiveness in eGovernment projects; coordinate information society activities; align its related policies with EU standards in ICT. The objectives of the "e-Transformation Turkey" can be summarised as follows: policies, laws and regulations regarding ICT are to be re-examined and changed, if necessary, so as to comply with those of the EU; adoption of the eEurope+ Action Plan, initiated for candidate countries; good governance principles to be applied in government services through increased use of ICT; coordination,

	Countries eGovernment profile
	monitoring, evaluation and consolidation of public IT projects. Turkey's national approach to eGovernment can be characterised as centralised. Once the general policy and strategies are set, implementation is left, besides the responsible central authorities, to individual administrations within the Central Government. The Ministry of Development, among other competencies, is responsible for developing Information Society Policies' objectives and strategies. The Ministry of Development is also responsible for drafting guidelines on assessment and evaluation of public ICT projects made mandatory for all supervised activities. Instead, the implementation responsibility is shared by the Ministry of Development, the Ministry of Transportation, Maritime Affairs and Communications, the Council of Transformation Leaders and other government agencies.
United Kingdom	Statistical background UNITED KINGDOM ranks 3rd out of 190 in the UN eGovernment development index ranking 2012. Concerning the three overall index components, UNITED KINGDOM performs well for online service, placing 4th in the ranking. Moreover, it ranks 10th for telecommunications and infrastructure and only 32nd for human capital. Overall, e Governmnet development in the United Kingdom is at a good stage, especially with respect to the high level of online services provision. Legal framework In the United Kingdom there is not a proper overall eGovernment legislation yet. eGovernment and "once only" principle The "Government ICT Strategy" (March 2011) asserts the need to improve the record of f government ICT, especially in large-scale projects and programmes. On this basis, four focused strategies were published in October 2011, titled: "Government Cloud"; "Greening Government: ICT"; "Government ICT Capability"; and "Government End User Device". The main targets of the strategies are to improve productivity and efficiency, reduce waste and the likelihood of project failure, , through reuse and sharing of ICT assets. The Cabinet Office holds overall responsibility for the government's efficiency and reform agenda, with the ultimate goal to improve government function. eGovernment policy responsibility lies in the Cabinet Office under the leadership of the Minister for the Cabinet Office, who is also responsible for the development of the "Government ICT Strategy". In charge of implementing the ICT strategy and related initiatives is the Chief Information Office (CIO) Delivery Board,

supported by action from all departments.

United Kingdom has one of the most relevant initiatives in the field of the “once only” principle. It is named “Tell Us Once” (TUO) and was designed to simplify how people inform government about change of address, a birth or death, and other changed circumstances. The TUO programme is led by the Department of Work and Pensions (DWP) on behalf of government as a whole.

The countries not applying the “once only” principle include Germany, Hungary, Malta, Poland, Sweden and Switzerland. The reasons for not implementing the “once only” principle, and the barriers related to the implementation of administrative burden reduction initiatives in general vary across these countries. However, there are some clear patterns among the barriers which include legal, technological and organizational aspects. All countries address privacy and data sharing constraints as a key barrier to implementation. Additionally, Germany addresses heavy processes to counter data misuse, while Hungary addresses implementation costs and lack of IT infrastructure to exchange data. Malta and Poland both address implementation costs and silos in government. Furthermore, working practices and cultures and lack of IT infrastructure to exchange data is barriers in Malta. In Sweden, the main barriers are implementation costs, lack of legal provision and silos in government, while the main barriers in Switzerland are implementation costs, silos in government, organizational aspects, working practices and cultures, heavy processes to counter data misuse, as well as the federal structure of the cantons.

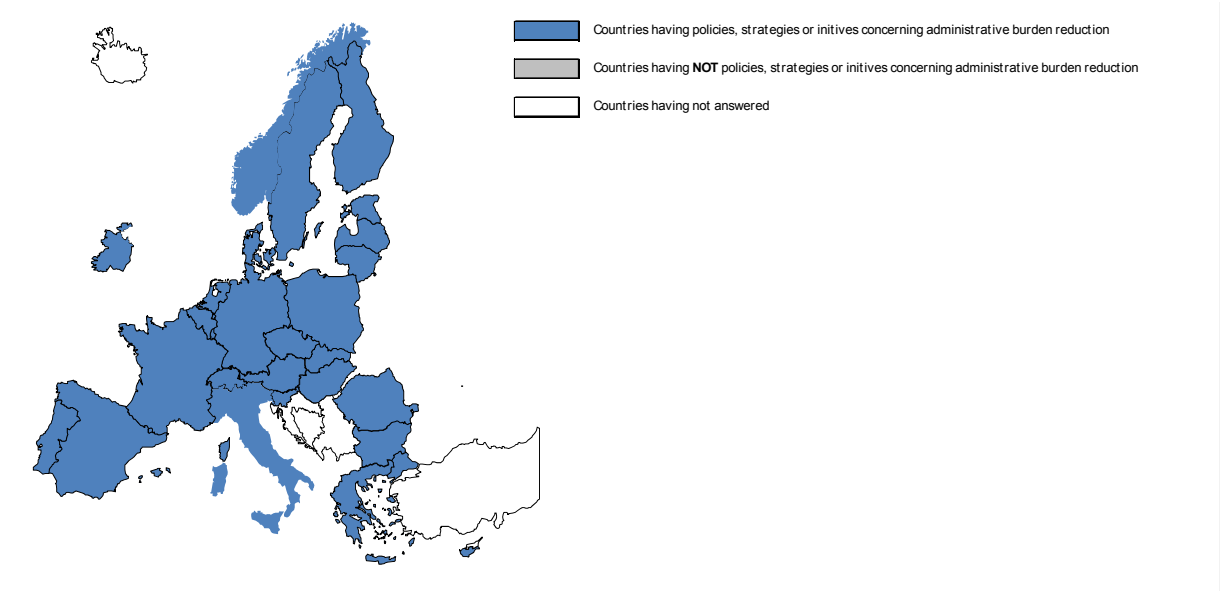
Annex 3: ABR and "once only" principle initiatives: eSurvey results overview

General Information

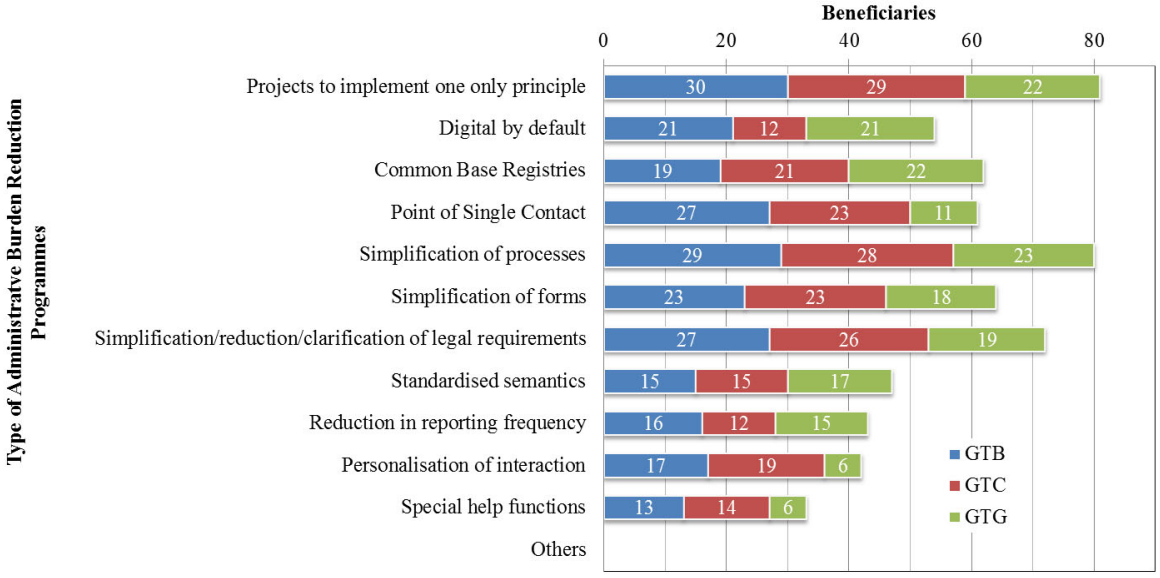
- **Launch date**: April 2103
- Closed date: May 2013
- Total number of respondents: 33
- Participating countries: 29
- **Answering Countries**: Australia, Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Hungary, Latvia, Lithuania, Malta, Montenegro, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, The Netherlands.

USE OF ADMINISTRATIVE BURDEN REDUCTION (ABR) INITIATIVES IN YOUR COUNTRY

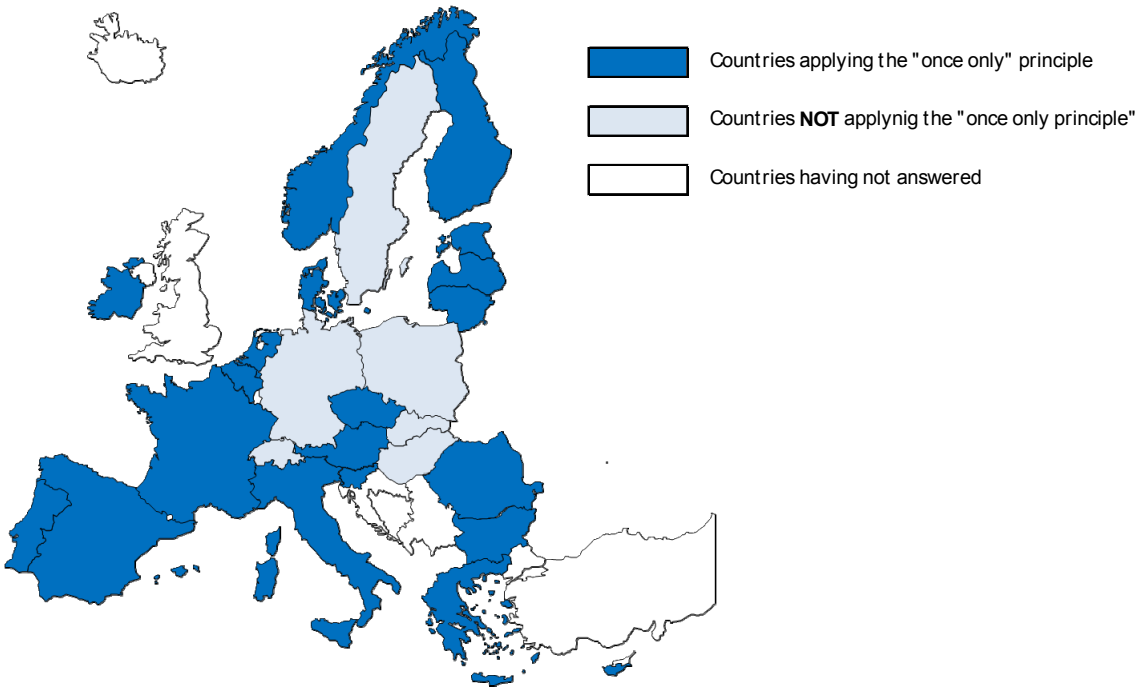
Does your country have policies, strategies or initiatives concerning administrative burden reduction?



Type of Administrative Burden Reduction Programmes and Beneficiaries

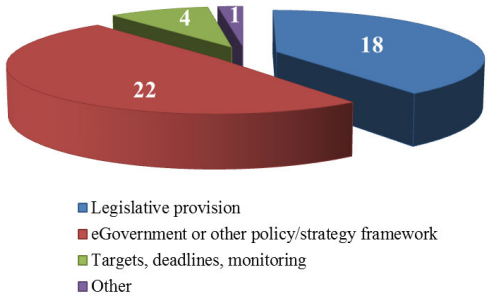


"Once only" principle application in the answering countries

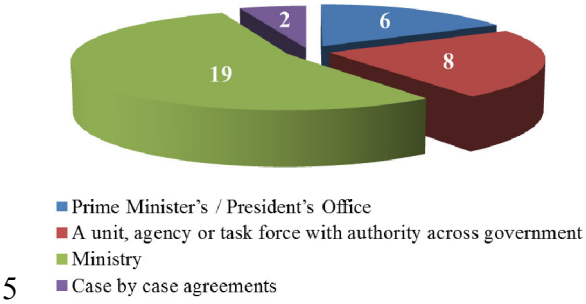


ORGANISATIONAL SET-UP OF YOUR COUNTRY'S "ONCE ONLY" PRINCIPLE

What is the policy base for the "once only" principle?

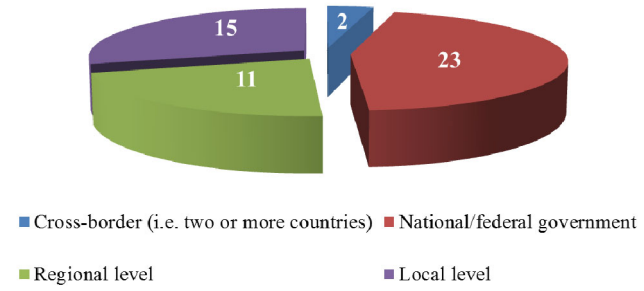


Which part of the public sector has overall responsibility for the "once only" principle?

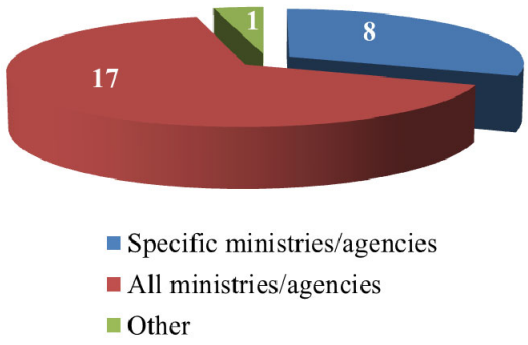


5

Which levels of the public sector are covered by the "once only" principle?

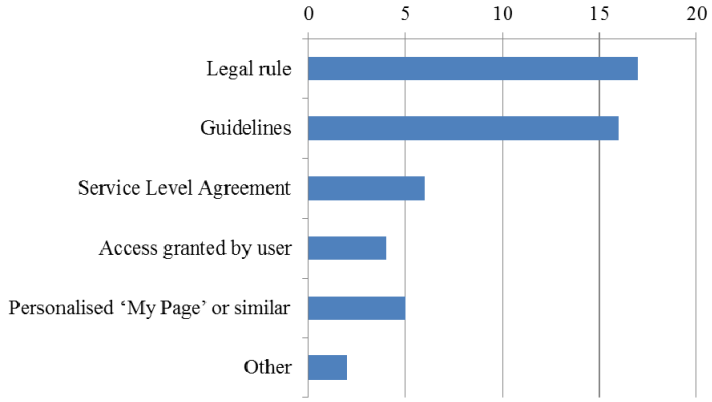


Which parts of the public sector are covered by the "once only" principle?

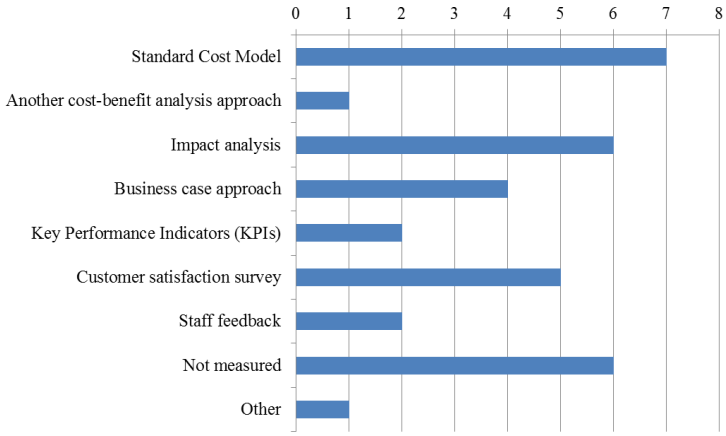


"ONCE ONLY" PRINCIPLE IMPLEMENTATION IN YOUR COUNTRY

How is the "once only" principle implemented?



How are the costs and benefits of the "once only" principle measured?

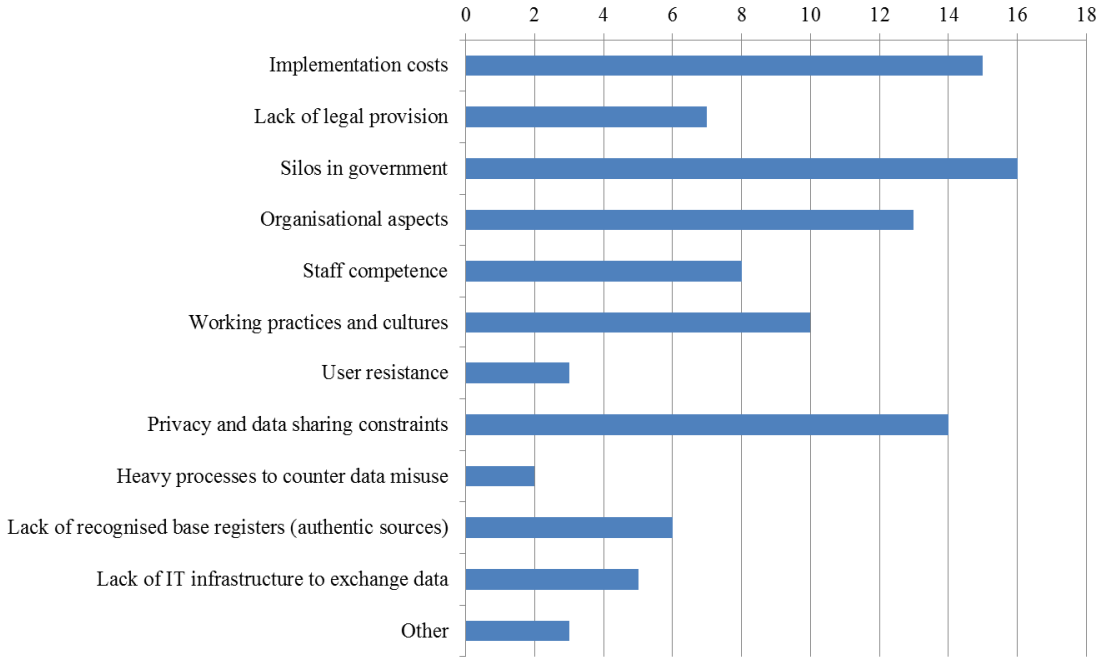


"ONCE ONLY" BENEFITS AND BARRIERS IN YOUR COUNTRY

What are the benefits of the implementation of the "once only" principle?

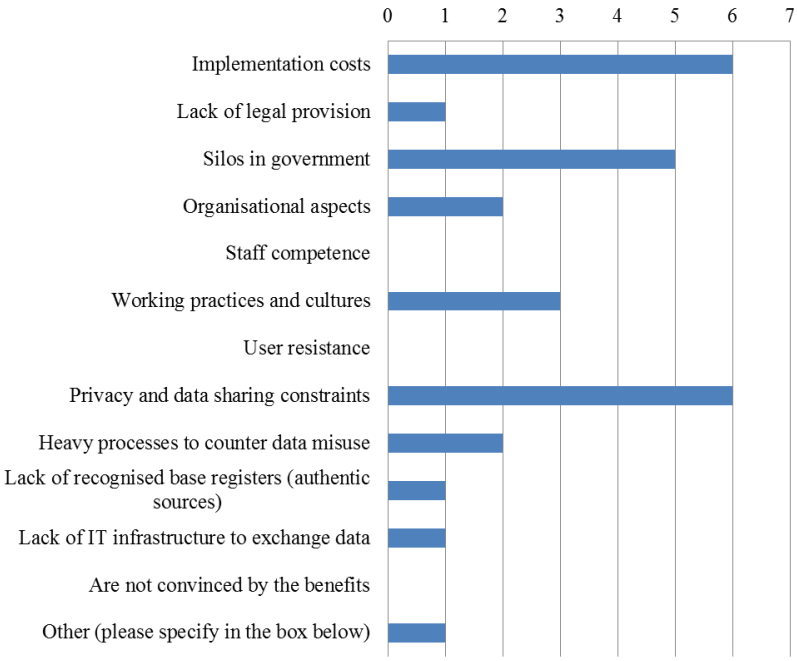
	What are the benefits of the implementation of the "once only" principle? Please, mark as many as are relevant for each category of potential beneficiaries:		%	
Government	Cost savings	16	33%	22%
	More less/value for money	9	18%	
	Administrative efficiency, effectiveness, resource use	20	41%	
	Government: staff satisfaction	4	8%	
Citizens	Time savings	23	25%	42%
	Money savings	16	17%	
	Improved service quality	22	24%	
	Reduced avoidable contact	13	14%	
	Greater satisfaction	19	20%	
Business	Time savings	22	28%	35%
	Money savings	21	27%	
	Reduced avoidable contact	16	21%	
	Greater satisfaction	19	24%	

What are the barriers related to the implementation of the "once only" principle?



IF YOUR COUNTRY DOES NOT HAVE POLICIES, STRATEGIES OR INITIATIVES CONCERNING ADMINISTRATIVE BURDEN REDUCTION

What are the barriers related to the implementation of the policies, strategies or initiatives concerning administrative burden reduction?


0
1
2
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6
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Implementation costs
Lack of legal provision
Silos in government
Organisational aspects
Staff competence
Working practices and cultures
User resistance
Privacy and data sharing constraints
Heavy processes to counter data misuse
Lack of recognised base registers (authentic sources)
Lack of IT infrastructure to exchange data
Are not convinced by the benefits
Other (please specify in the box below)

Annex 4: Cost benefit Analysis

The Basic Data Program (Denmark)

Costs and benefits estimations of the Basic Data Program are available for both the public and the private sector. Costs include investments and operating costs. The breakdown of the net potential in the public sector is presented in two documents: the Fact Sheet for basic Data[56] and the e-Government strategy 2011-2015[57]. The Public sector potential is broken down in Ministries, Municipalities, and Regions.

Table 8: Free Access to Basic Data Surplus

In € million	2013	2014	2015	2016	2017	2018	2019	2020
Ministries	-14	-11	-7	-3	0	1	4	6
Municipalities	-3	3	11	19	22	23	23	23
Regions	0	1	3	4	6	6	6	6
Public sector impact	-17	-7	7	20	28	30	33	35
Private sector impact	32	35	47	67	67	67	67	67
Total impact	15	28	54	87	95	97	100	102
Impact increase (in %)	n/a	97%	86%	62%	10%	1%	3%	2%

Source: Authors' calculation based on The Danish Government/Danish Regions/Local government Denmark (2012), Good Basic Data for Everyone – A driver for Growth and efficiency. The eGovernment Strategy 2011-2015

Table 8 shows net savings for the public and the private sectors over the period 2013-2020[58].

Net savings have been estimated as the difference between costs and benefits. Hence, negative values indicate that costs exceed benefits.

Starting from the completion of the programme in 2020, it is expected to have annual revenues of around € 102 million. This includes those allocated between the public and the private sectors.

Potential revenues for the private sector, will amount approximately to € 67 million, accounting for around 75% of the overall benefits. This will mainly result from the re-use of data for commercial purposes, as well as from efficiencies created through the adoption of the new data management system. In addition to these direct economic benefits, it is also estimated that better access to data of higher quality will enhance economic growth in sectors such as Real estate, telecommunications and transport.

Easy and open access to high-quality basic data has a huge growth potential for businesses and organisations working professionally with public-sector data. Moreover this provides good opportunities for new businesses to emerge. The price of data, and rights to it, can be a barrier for new businesses who want to exploit data commercially. Furthermore, both purchased and re-sold data has to be managed and paid for, which costs resources for both private buyers and the authorities. By contrast, with open basic data, businesses can test new ideas at low risk, which leads to a great potential for innovation within the market; innovation which in turn generates growth and

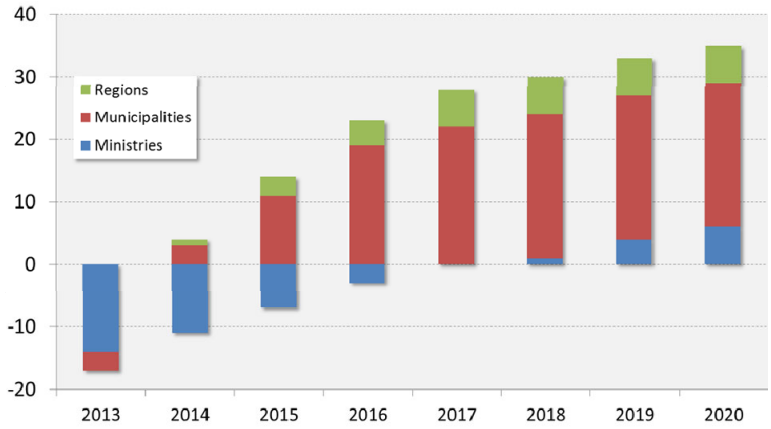
[56]Danish Ministry of Finance (2012).

[57] The Danish Government/Local Government Denmark (2012).

[58] Negative values indicate that costs exceed benefits.

improved products for users. When data is no longer expensive, products that were previously only affordable by a small circle of customers can be sold at a price which is attractive to small and medium-sized businesses. Furthermore, with open access to business data, entirely new products can be developed, such as sector-specific business data and business statistics, as well as industrial reports. Exploitation of new technologies and media enhances the opportunities for making public-sector information and technology available to businesses and the public, and for increasing collaboration between the public sector and civil society. Not to mention the fact that innovation will make for new jobs.

Figure 27: Net surplus for the public sector (€ million)



NPV (i=3%)	
Ministries	- € 24,93
Municipalities	€ 105,02
Regions	€ 27,87

Source: Authors' calculation based on The Danish Government/Danish Regions/Local government Denmark (2012), Good Basic Data for Everyone – A driver for Growth and efficiency. The eGovernment Strategy 2011-2015

The total potential revenues for the public sector are close to €35 million annually starting from 2020. Municipalities account for around € 23 million (65%) of the public potential savings in 2020. Ministries and regions are expected to experience lower benefits in the order of € 6 million in the sale year. The expected benefits of the programme tend to stabilise from 2017 onwards – over the period 2017-2020, benefits exceed costs for all the public entities. However, only for ministries the net present value of the net savings is negative.

Savings for public sector will mainly stem from data sharing among all public authorities, avoiding replication of efforts and reducing the number of transactions in demanding and providing information.

Furthermore, both the public and private sector will also benefit from non-monetized but tangible benefits.

Public authorities will experience a more efficient and effective administration:

- efficient and effective maintenance of basic data and fewer redundant registers;
- improved control e.g. of payments, so that social welfare fraud can be reduced.

For users non-monetized benefits are mainly related to smoother interaction with public authorities:

- better public services, in the form of speedier case processing and fewer errors in individual cases;
- less reporting to public authorities, for example to correct errors;
- less need for re-entering data in online self-service solutions, when forms are filled in automatically with relevant and fully up-to-date basic data.

Businesses will benefit from less red tape and more growth:

- less red tape – less reporting and registration;

- faster digitisation, fewer errors and more efficient and effective procedures;
- cheaper procurement of basic data;
- improved foundation for collaboration with the public sector due to the existence of common data.

In summary, free access to basic data will bring new types of services and also more efficient digital services in the private sector.

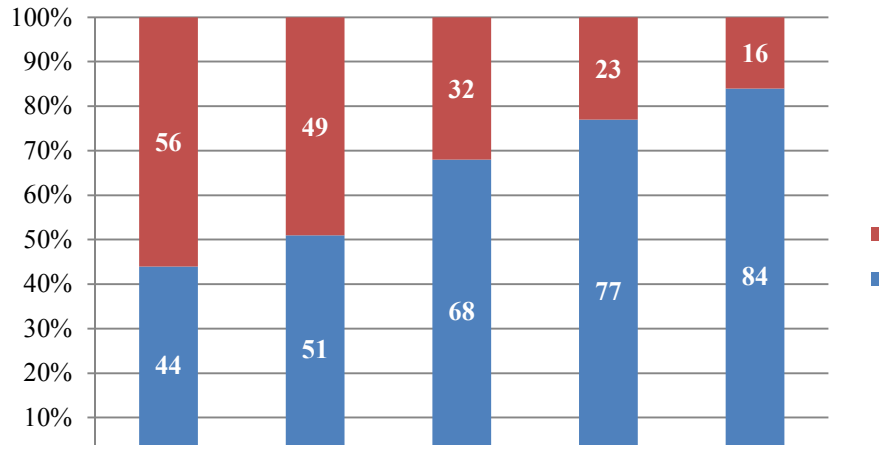
Mandatory digital self-service (Denmark)

Estimates of the net potential of the application of the mandatory digital self-service programme are based on desk review.

The Danish Government only measures costs and benefits for public authorities, specifically central government and municipalities. Costs and benefits for citizens and business are not assessed under the Danish eGovernment strategy. It is assumed that if there is a government advantage there is probably also a businesses and/or citizens advantage. This is the major critique point from the Confederation of Danish Industry who think that the government also should measure at least businesses benefits/costs (although the Confederation of Danish Industry is not measuring any costs/benefits either). [59]

Benefits have been quantified through the estimate of digital and non-digital transactions over the period 2012-2015 (see Table 9). They are related to time savings stemming from the shift from non-digital to digital transactions. Digital transactions covered 44% of total transactions in 2011; they are expected to cover up to 84% of the total number of transactions in 2015.

Table 9: Digitization of transactions (% in total transaction)



Source: The Boston Consulting Group (2012), Overgang til obligatorisk digital kommunikation i den danske offentlige sector (The transition to mandatory digital communication in the Danish public sector)

According to the Danish eGovernment strategy, the digitization of services is achieved through four waves of digitization. Each wave covers specific sectors and is targeted at specific beneficiaries:

- wave 1 (2012) mainly entails the digitization of citizens' services, focused on:

[59]The Danish Business Authority however measures businesses administrative burdens in several policy areas, mostly from a "saved time perspective". Nevertheless, measures focus on administrative burden reductions in general and do not isolate ABR gained from digital services only. Therefore, this data is not appropriate to the Study's purposes.

- introduction of the health card and simplification of school enrolment at the municipality level;
- introduction of online services for student loans at state level;

- wave 2 (2013) - digitization of a broad number of services at municipal and state level and the digitization of tax services:
  - municipalities: sickness reporting, driving license services, property taxes, loans of premises and properties;
  - state: application for criminal records, reporting bicycles thefts, annual revenue tax reports;
- wave 3 (2014) - digitization of services related to employment, house, construction and environment. This wave foresees:
  - a reduced number of changes for municipalities: notification of construction and building permission;
  - a wider range of digitalised services for the state: various permission relating to weapons, services for pensioners living abroad, services for adoptions, digital services connected to separation and divorce;
  - some services introduced at UDK level: maternity benefits, housing benefits, early retirement, housing allowance, children and young people benefits;
- wave 4 (2015) - digitization of employment and social services at municipality level only: residents deposits, single payments, public assistance and personal allowance.

In the Financing Agreement of 2013, potential benefits of digital services realized under the yearly waves 1 and 2 were estimated[60]:

- the digitization of citizens' services (wave 1) is expected to produce a net potential of € 5 million (DKK 41 million) by 2013;
- digitization of sectors covered by waves 1 and wave 2 (respectively, citizens' services and municipal/state services) is expected to entail € 34 million (DKK 255 million) in 2014;
- € 47 million (DKK 351 million) are foreseen from 2015 onwards. This includes one-time costs and increased operating costs for new solutions[61].

The net potential of the mandatory digital self-service is broken down into the three categories reflecting the main actors who participate and invest in the programme: State, UDK, municipalities. Figure 9 reports the net expected benefits with respect to them. Municipalities seem to experience the largest share of net benefits - € 80 million for the year 2017. The remaining part is to be distributed equally between state and UDK - € 22 each for the year 2017. The State and the UDK will be bearing the larger part of cost during the first year of implementation of the programme - € 6 and € 4 million respectively. These figures are obtained looking at the variation in the number of transactions and in the transformation from numerical to digital of a number of them. The number of digital transactions is expected almost to double over the period 2011-2015 (an increase of 91% is expected) and the share of digital transactions is supposed to reach 84% by 2015.

The net potential for the three institutions is further detailed in the sub-categories corresponding to the activity in which the costs and benefits are estimated:

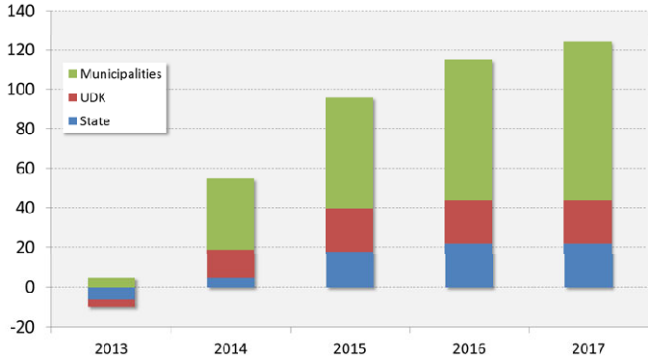
- gross potential benefits due to the digitization of transactions, running costs;
- gross potential benefits due to improvements in information and communications flows;

[60] The mandatory digital self-service foresees four yearly waves of digitization (for more details, see paragraph 3.1.2).

[61] KL- Cross-Municipality Organisation (2012).

- organizational/IT investment cost;
- other investments information developments;
- implementation costs and other cost.

Figure 28: Net benefits for the public sector (€ million)



NPV (i=3%) € mln	
State	€ 55,50
UDK	€ 70,01
Regions	€ 228,79

Source: Authors' calculation based on The Boston Consulting Group (2012), Overgang til obligatorisk digital kommunikation i den danske offentlige sector (The transition to mandatory digital communication in the Danish public sector)

Table 10 reports the potential net benefits for municipalities. The greater part of potential is expected for gross potential benefits due to the digitization of transactions (€ 59 million for 2017). IT investments will represent a sunk cost incurred for the first three years of the programme - € 2 million, € 1 million, and € 1 million, for 2013, 2014 and 2015 respectively.

Table 10: Mandatory Digital Self-service potential for Municipalities

Category	2013	2014	2015	2016	2017
Gross potential benefits due to the digitization of transactions	17	39	48	59	59
Running costs	0	-2	-3	-3	-3
Gross potential benefits due to improvements in information and communications flows	2	8	14	19	23
Organizational/IT Investment Costs	-12	-1	-1	-	-
Other investments	-2	-6	-1	-4	-
Total	5	38	57	71	79

Source: Authors' calculation based on The Boston Consulting Group (2012), Overgang til obligatorisk digital kommunikation i den danske offentlige sector (The transition to mandatory digital communication in the Danish public sector)

Table 11 presents the figures for the UDK, for which the following categories have been selected:

- net potential benefits due to the digitization of transactions;
- net potential benefits due to improvements in information flows;
- organizational/IT investment costs.

The estimated net potential imputable to transactions and information tends to stabilise at around €15 million in 2015 and €7 million in 2017. Costs and other investments tend to have a negative impact on a scale of around €4 million for 2013 and €3 million for 2014, respectively. The expected overall benefits for UDK stabilize to €22 million over the period 2015-2017.

Table 11: Mandatory Digital Self-service potential for UDK (In m€)

Category	2013	2014	2015	2016	2017
Net potential benefits due to the digitization of transactions	-	14	15	15	15
Net potential benefits due to improvements in information flows	-	3	7	7	7
Organizational/IT Investment Costs	-4	-	-	-	-
Other investments	-	-3	-	-	-
Total	-4	14	22	22	22

Source: Authors' calculation based on The Boston Consulting Group (2012), Overgang til obligatorisk digital kommunikation i den danske offentlige sector(The transition to mandatory digital communication in the Danish public sector)

Table 12 reports the expected net benefits for the State. The breakdown for costs and benefits is performed in a much more precise way:

- running costs;
- potential benefits due to the digitization of transactions;
- potential benefits due to improvements in information flows;
- potential benefits due to improvements in communication flows;
- advice and guidance;
- IT investments;
- durable additional costs.

The state bears the highest share of costs. For the years 2016 and 2017 costs stabilise at €22 million as for the case of the UDK.

Table 12: Mandatory Digital Self-service potential for State institutions (€ million)

Category	2013	2014	2015	2016	2017
Running cost	-4	0	2	3	3
Potential benefits due to the digitization of transactions	0	8	13	13	13
Potential benefits due to improvements in information flows	-	2	6	7	7
Potential benefits due to improvements in communication flows	-1	-1	-1	-	-
Advice and guidance	-	-2	-1	-	-
IT investments	-2	-1	-	-	-
Durable additional costs	-	-1	-1	-1	-1
Total	-7	5	18	22	22

Source: Authors' calculation based on The Boston Consulting Group (2012) Overgang til obligatorisk digital kommunikation i den danske offentlige sector(The transition to mandatory digital communication in the Danish public sector)

Table 14 presents aggregated figures for the three institutions –municipalities, UDK and state. In order to aggregate the figures a common taxonomy has been imposed including the following categories:

- transaction costs;
- information costs;
- development and implementation costs;
- other costs/benefits.

For instance, the development and implementation costs correspond to organizational/IT investment costs for municipalities/UDK, and to interdisciplinary communication and analysis, advice and guidance and IT investments for the State. Table 13 provides an overview of the new categories created and the corresponding categories included for each individual entity.

Table 13: Mapping of the categories of individual entities into a common set of definitions

Costs		Institutions		
Category	Sub Category	State	Municipalities	UDK
Operating Costs	Transactions	• Running cost • Potential benefits due to the digitization of transactions • Potential benefits due to improvements in information flows	• Gross potential benefits due to the digitization of transactions • Running costs	• Net potential benefits due to the digitization of transactions
	Information		• Gross potential benefits due to improvements in information and communications flows	• Net potential benefits due to improvements in information flows
Investment Costs	Development and implementation costs	• Potential benefits due to improvements in communication flows • Advice and guidance • IT investments • Durable additional costs	• Organizational/IT • Investment Costs	• Organizational/IT • Investment Costs
	Other		• Other investments	• Other investments

Overall, a net loss is experienced only in 2013 (€ 5 million). Starting from 2014 the programme produces net benefits reaching an amount of € 123 million in 2017.

Table 14: Mandatory Digital Self-service potential in Denmark (€ million)

Category	2013	2014	2015	2016	2017
Transactions	17	58	75	87	87
Information	-2	13	27	32	37
Development and implementation costs	-18	-5	-3	0	0
Other	-2	-10	-2	-5	-1
Total	-5	55	96	115	123

Source: Authors' calculation based on The Boston Consulting Group (2012), Overgang til obligatorisk digital kommunikation i den danske offentlige sector (The transition to mandatory digital communication in the Danish public sector)

System of base registries (Netherlands)

The study "Impactanalyse Financiering stelsel van basisregistraties"(2012) carries out an analysis of the funding system related to the implementation of 6 registries of the Dutch eGovernment system. The 6 registries examined are:

- BAG (Addresses and Buildings);

- BGT (Maps of high details – individual parts of the roads);
- BRK (Land administration - ownership);
- BRT (Maps - geoinformation);
- GBA/BRP (Persons);
- NHR (Companies/organizations).

The study assesses the financial risk due to changes in the funding model of the base registries system. Each registry is currently financed through a specific scheme. The existence of different funding sources prevents from potential economic scale and reduces the potential positive impact on government and users.

For each selected registry, an overview of the following costs is provided:

- **incidental costs**, including "una tantum" investments costs (e.g. one-off connection fee, conversion construction, development and innovation);
- **structural costs**, distinguished into:
  - **indirect structural costs**: encompassing any cost that cannot be directly attributed to service delivery (e.g. management and office);
  - **direct structural costs**: including any cost that can be directly attributed to service delivery. These costs can be fixed or variable[62] and can be classified as:
    - technical/IT costs, including any cost that can be directly attributed to service delivery or related to the ICT investment required (e.g. hardware, software, network, infrastructure);
    - organisational costs: embracing any cost that can be directly attributed to service delivery and are related to personnel involved (e.g. account managers and team leaders, FTE, help desk).

Table 15 shows the structure of the different categories of costs. It is necessary to make clear that two registries, BGT (registry of maps of high details) and BRK (registry of Land administration) are not included because of the lack of data on different cost categories for them (the impact analysis provides only measures related to the overall costs).

Table 15: Impact analysis of six base registries (€ mln per year)

Register	Structural costs					Structural Total costs	Incidental costs (construction, development and innovation)	
	Indirect Costs	Direct Costs		Variable costs	Municipalities		Local authorities	Registries owner
		IT	Organisational					
BAG (Address and Buildings)	0,75	0,75	0,75	0,7	50	52,95	1	84*

[62]Fix costs are deemed to change in a 3 year timeline, regardless of the usage. Variable costs change according to the usage of a service.

BRT (Maps – geo information)	2,5	5,6	7,1	0,6		15,8		1,5
GBA/BRP (Persons)	2,8	7,9	5,3	2	100	118	30*	42*
NHR (Companies/organizations)	44,3	18,2	48,7	6,5		117,7		22*

Source: Jonker E. et van der Linde X. (2012),
Impactanalyse Financiering stelsel van basisregistraties (Impact Analysis of Funding of the System of base registries)
**una tantuum costs*

For each registry, the cost structure is described in more detail below.

The **base registry of Addresses and Buildings (BAG)** stores information of all the municipal addresses and buildings in the Netherlands. The managing authority is the Ministry of Infrastructure and Environment. The Netherlands' Cadastre, Land Registry and Mapping Agency (in short Kadaster) is a non-departmental public body, operating under the political responsibility of the Minister of Infrastructure and Environment. The Kadaster collects and registers administrative and spatial data on property and the rights involved. Information is available mainly through online web services. Municipalities, instead, play the role of data holders.

BAG costs are afforded by two levels of government: national and local authorities. The annual structural costs for municipalities are estimated at around € 50 million per year plus 1 million of incidental costs for registry updating. The estimate of municipalities yearly costs is based on the assumption that municipalities afford different costs according to their dimension[63]:

- municipalities with less than 100.000 inhabitants spend on average € 100.000 per year for running the BAG;
- municipalities with more than 100.000 inhabitants spend on average € 200.000 per year for running the BAG.

This assumption does not include The Hague municipality, because its average yearly costs exceed € 1,5 million per year.

The Kadaster, instead, requires € 2,25 million annually, of which 0,75 of indirect costs, 0,75 of technical costs and 0,75 of organisational costs.

The **base registry Topography (BRT)** gathers all topographic maps. The managing authority is the Ministry of Infrastructure and Environment and the Kadaster is responsible for the registry operation. The budget for the BRT (€ 12,5 million) is provided by the Ministry of Infrastructure and Environment and is largely intended for the registry maintenance, the information and the innovation. The costs structure is presented in

Table 16 in particular, funds from the Ministry of Infrastructure and Environment are complemented with additional € 1,5 million invested in further development and innovation.

Table 16: BRT structural and incidental costs and founds in (€ mln per year)

Register	Structural costs				Structural Total costs	Incidental costs (construction, development and innovation)
	Indirect Costs	Direct Costs		Variable costs		
		IT	Organisational			
BRT	0,75	5,6	7,1	0,6	15,2	1,5

[63] Assumption developed by Jonker E. et van der Linde X. (2012), Impactanalyse Financiering stelsel van basisregistraties (Impact Analysis of Funding of the System of base registries).

Source: Jonker E. et van der Linde X. (2012),
Impactanalyse Financiering stelsel van basisregistraties (Impact Analysis of Funding of the System of base registries)

The **registry of Persons (BRP)** collects data on all individuals residing in the Netherlands or having a relationship with the Netherlands government (e.g. foreigners established in the Netherlands or Dutch citizens living abroad). The BRP is intended to replace the previous registry of persons, called GBA, and to provide higher quality data to all public administrations. The Ministry of the Interior is the managing authority, while municipalities are data holders. The modernisation of the GBA, and the transition to the BRP, is planned within a multiannual programme of € 42 million budget. The costs structure of the GBA/BRP is described in Table 17. Importantly, of the total € 118 million structural costs, € 100 million are afforded by data holders, that are municipalities; moreover, variable costs might reach an amount of € 2 million.

Table 17: GBA/BRP costs structure (€ mln per year)

Register	Structural costs					Structural Total costs	Incidental costs (construction, development and innovation)	
	Indirect Costs	Direct Costs		Variable costs	Munici-Palities		Local authorities	Registries owner
		IT	Organisa-tional					
GBA/BRP (Persons)	2,8	7,9	5,3	2	100	118	30*	42*

Source: Jonker E. et van der Linde X. (2012),
Impactanalyse Financiering stelsel van basisregistraties (Impact Analysis of Funding of the System of base registries)

The **Company and Organisations registry (NHR)** records all companies, legal firms and all other organizations involved in the economic sector. The managing authority is the Ministry of Economic Affairs, Agriculture and Innovation, and the data holder is the Chamber of Commerce Netherlands. NHR structural costs are shown in Table 18 and amount to € 117,7 million per year, of which € 6,5 million are variable costs. In addition, incidental costs for the registry development are equivalent to € 22 million and are largely afforded by the central government, specifically by the Ministry of Economic Affairs, Agriculture and Innovation.

Table 18: NHR costs structure in (€ mln per year)

Register	Structural costs				Structural Total costs	Incidental costs (construction, development and innovation)
	Indirect Costs	Direct Costs		Variable costs		
		IT	Organisa-tional			
NHR	44,3	18,2	48,7	6,5	117,7	22

Source: Jonker E. et van der Linde X. (2012),
Impactanalyse Financiering stelsel van basisregistraties (Impact Analysis of Funding of the System of base registries)

The analysis of the costs structure allows one to determine which categories weigh more on the total costs of each registry. Generally, structural costs have a higher incidence than incidental costs (except for the registries of addresses and buildings).

As a matter of fact, structural costs represent more than 50% of total costs (91% for the BRT, 62% for the BRP, 84% for the NHR); the only exception is the BAG, for which structural costs amount to 38% of total costs. Hence, government decision of implementing a specific registry might be influenced more by the annual costs to be afforded, rather than by the initial investment in the registry construction and development.

Finally, structural direct costs, directly attributable to a service delivery always entail higher expenses than indirect costs.

The base registry of Addresses and Buildings (BAG) (Netherlands)

The base registry of Addresses and Buildings (BAG) is constituted by two separate registries:

- the base Register of Addresses which lists all towns, street names and house numbers;
- the base Register of Buildings which contains data on buildings, premises, permanent locations and property rights.

Throughout the interviews, it has emerged that BAG benefits were estimated in 2004[64]. For this reason, benefits cannot be compared with the more recent cost assessment (2012).

Nevertheless, benefits estimates are useful for the purposes of this Study because they provide an overview of BAG potential impact and categories of beneficiaries.

BAG benefits are referred to:

- reduction costs of transaction;
- efficiency gains;
- indirect effects.

Reduction costs were computed as time savings for the central government and municipalities. Time savings arise from a reduction in activities required to collect, manage and monitor BAG's data. The NPV of the time saved is € 160 million in the period 2004-2018.

The BAG's NPV of total **efficiency benefits** for the central government and municipalities is € 60 million in the period 2004-2018. The central government benefits from efficiency gains, amounting to € 31,3 million (NPV). Municipalities benefit from time savings related to the reduction of total number of transactions. Time savings have been estimated at around a yearly cash benefit of € 4 million (NPV= € 28,8 million for the period 2004-2018).

Benefits for citizens and businesses have been assessed through the Standard Cost Model, taking into account: time needed by citizens and businesses to comply with information obligation, frequency of complying with information obligation, minimum wage per hour. Thus, estimate of the reduction of the administrative burden is based on the following assumptions:

- the average yearly number of contact between citizens and public administration is 0,8;
- the average yearly number of contact between business and public administration is 4,4;
- BAG system allows to save around 15 minutes for every contact;
- the hourly wage varies from € 33 (minimum) to € 45 (maximum), depending on different qualification levels;
- the number of contacts between users and public administration decreases with the time.

The reduction of administrative burden is equivalent to € 5,3 million and its NPV is € 26,5 million in the period considered.

Fraud saving is correlated to an increase of 1% of the collection of Property and tax revenues[65] resulting in a NPV of € 168 million.

Table 19: NPV of BAG Benefits from 2004 to 2018 (in € million)

Benefits	NPV 2004-2018

[64] Ecorys (2004).

[65] In 2002 property and tax revenues amounts on a total collection of 3,4 € billion.

Reduction Costs of Transaction processing and management	Data Management	39,3
	Data Collection	69,6
	Data monitoring	51,2
Efficiency	Time saving for municipalities	28,8
	Efficiency gains for central government	31,3
Indirect effect	Administrative burden reduction for business	12,3
	Administrative Burden reduction for citizens	14,3
	Fraud reduction for public authorities	168,6
Total benefits		415

In addition to BAG benefits listed above, it is appropriate to consider several not evaluable indirect effects. In particular:

- **increased public order and safety.** Public bodies, responsible for maintaining public order and security, emphasize the importance of the availability of updated and accessible data and information on buildings and addresses;
- **better crisis/disaster management.** The daily improved quality of public order and safety services provision is much more valuable in case of disaster events. For example, the presence of a database providing all the information on a local area linked to a map, allows to manage calamity or incident management;
- **improved monitoring/enforcement/compliance**. An important public administration's task is monitoring and ensuring compliance with laws and regulations, even in the buildings and properties regulation framework. BAG is crucial to achieve inter-municipal cooperation through a common approach in the data collection, improving efficiency of monitoring of citizens/business compliance;
- **strengthening regional policy.** The availability of uniform and unique dataset would support policy makers in planning and implementing customer oriented policy.

The Register of non-residents (RNI) (Netherlands)

The RNI includes data of:

- people domiciled in the Netherlands only for a short time;
- Dutch citizens domiciled abroad for short or long time and maintaining a relation with the Dutch government.

The introduction of the RNI involves the following public administrations at national/local level:

- national agencies, managing non-residents data:
  - Tax authorities;
  - Employee Insurance Implementing body (UWB);
  - Social Insurance Bank (SVB);
  - National Health Agency (CVZ);
  - Chamber of Commerce Administration;

- Passport Agency for citizens abroad;
- Right to vote abroad administration;
- 3 administrations dealing with Dutch students abroad;

- 16 municipality's offices offering the registration services for non-residents.

The costs to be afforded for the RNI can be divided into 3 main categories:

- **investment**, including the costs afforded during the development phase and aimed at introducing and making operational a new eGovernment service; they also include transition costs, incurred for the shift from an offline scenario to an online scenario[66];
- **operating costs**, required for the management of the RNI, once it is in place.

The cost-benefit analysis of the RNI is based on a previous study (Ecorys, 2007). It estimates: investment, transition and operating costs for the period 2008-2022; benefits for government and citizens arise once the register is fully phased-in (envisaged in 2012). Since the RNI implementation started one year later than foreseen, we have taken into account previous and new assumptions to perform an updated cost-benefit analysis (see Table 20). Cost-benefits timeline is shown by Table 21.

Table 20: Assumptions underlying the RNI cost-benefit analysis

Initial assumptions (2007)	New assumptions
• Timeline 2008-2022 • Costs and benefits estimates refer to 2008 prices • The net number of productive hours per FTE is equal to 1.372 hours • The hourly rates for staff deployment are based on government rates Guide 2008, of the Dutch Ministry of Finance (see Table 22)	• Investment costs are afforded in the period 2008-2011 • Transition costs are afforded in 2012 • Operating costs and benefits arise in 2013 and will continue until the end of the timeline considered (2022)

Table 21: Timetable of the RNI realization

Timing		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Costs	Investment															
	Transitions															
	Operational															
Benefits	Citizens															
	Governement															
	Efficiency															

Table 22: Hourly rate per employee

Categories	Hourly rate
Tax counters employee	43,00€

[66] Transition costs are afforded to move from the offline to the online scenario. They are included in the investment costs and are relevant because the transition from offline to online permits the implementation of the "once only" principle. The online scenario entails the establishment of electronic registries which gather users' data and share this data among all public authorities. The difference between offline and online scenario is: in the first case, users have to communicate with different authorities; in the latter case, electronic registries users communicate data only once to municipalities, and data is then shared among all public authorities.

Municipalities employee	53,00€
Project management and organization	61,00€
External employee	150,00€
Non-resident Citizens for administrative expenses	24,75€

Source: Dutch Government Guidelines for Cost-Benefit Analysis (2007) [67]

Based on the hypotheses presented above, the Net Present Value (NPV) of the Government total costs is € 99,6 million over the period 2008 - 2022.

The NPV of RNI **investment costs**, sustained from 2008 and 2011, are € 7,6 million and includes (see Table 23):

- costs of new software and new hardware purchased by government;
- costs related to software updating.

Table 23: Investment costs and relative hypothesis (in € million)

Investment costs		NPV	Hypothesis
Software	Software development	1,4	Only afforded in 2008
	Software distribution	0,5	- 9 National Agencies Involved (4 in 2009; 5 in 2010); - 0,2 FTE of external employee for each Agency
	Software updating	0,6	Only afforded in 2008
	Municipalities software personalization	0,2	Only afforded in 2008
Hardware	Hardware	0,1	Only afforded in 2008
Staff	Coordination office staff	1,5	2 FTE of external employee (2008-2011)
	Other costs coordination offices	0,3	Afforded in 2008-2011
	Project management	0,1	0,25 FTE (2009-2010), 0,5 FTE (2011)
	Project Management (National Agencies)	0,5	For 4 agencies involved - 0,25 FTE (2009-2010), 0,5 FTE (2011) - 0.25 FTE for 2009 and 2010, 0.5 FTE for 2011 for the remaining 5 agencies - 0.5 FTE in 2010

[67]The 2007 guideline of the Dutch government for the cost benefit analysis indicates 2,5% discount rate for the NPV computation (the value utilized by Ecorys for their study), and 3% as an alternative to consider the macroeconomic risk. We chose this second hypothesis in the light of the worsening of the macroeconomic situation incurred in the last years.

	Project Management (Municipalities)	1,3	- 0,25 FTE (2009-2010), 0,5 FTE (2011) for all municipalities
Communication	Direct and indirect information campaign for non-residents	1,1	Only afforded in 2011
Transition	For details see Table 24	8,7	
Total		16,3	

Transition costs and relative hypothesis are shown in details by Table 24. The total **transition costs** estimated for the coordination and project management officers[68] amount to € 8,7 million (NPV) in the period 2008 - 2011. They include necessary costs afforded to shift from offline to online service delivery.

[68] The Software implementation, hardware installation and communication operations are supported by coordination and project management officers. They act at central level, in each of the 9 central administration agencies and in the 16 municipalities.

Table 24: Transition costs and relative hypothesis (in € million)

Transition costs		NPV	Hypothesis
Data migration	Coordination	0,2	1 FTE of an external employee
	Data mining	0,2	Software for data migration
	National agency involvement	0,4	0,2 FTE for 9 administrative agencies
	Coordination with other existing registries	0,4	-Migration of 5% of 1 mln transactions -10 min of a Municipalities employee for each transactions
	File Monitoring	0,7	Cost of a single message 0,17€ 4,6 million of total messages
	Administrative agency settlement	2,6	41 FTE of Municipalities employees
Counters/Building	Support Office	0,5	Coordination costs
	Counters Office (for registration)	1	1 counter for each municipalities Cost of 1 counter: 65.000,00€
Staff	Friction cost	0,9	17 FTE
	Training Municipalities officer	0,7	Training 129 persons at the cost of 6.000€ each
	Management	1,1	50% of the cost total management costs
Total		8,7	

Operating costs are sustained annually at all administrative levels for the daily functioning of the system. The annual costs amount to € 10,8 million in the period 2013-2022 (that is a NPV of € 83,3 million).

Table 25: Operating costs and relative hypothesis (in € million)

Operating costs		NPV	Hypothesis
ICT management	ICT system	17,9	17,5 FTE per year
	Management systems	0,8	Fixed cost
Data Management	Data migration	4,5	
	Staff	50,0	73 FTE per year
Back Office	Monitoring	1,4	2 FTE per year
	National agencies' coordination	1,2	0,2 FTE for each of the 9 National Agencies
	Municipalities' coordination	7,5	10,5 FTE
Total		83,3	

The analysis of potential benefits stemming from the implementation of RNI is based on the following assumptions:

- in 2008 the number of actual users was about 3,1 million;
- the estimated number of new potential users is 190.000 per year;
- in the off line scenario, potential users interact 1,9 times a year with the National Agencies;
- in the on line scenario, potential users interact once a year with the National Agencies;
- time saving is monetized with the following hourly rate:
    - 24,75€/h for citizens;
    - 53€/h for public administration employees.

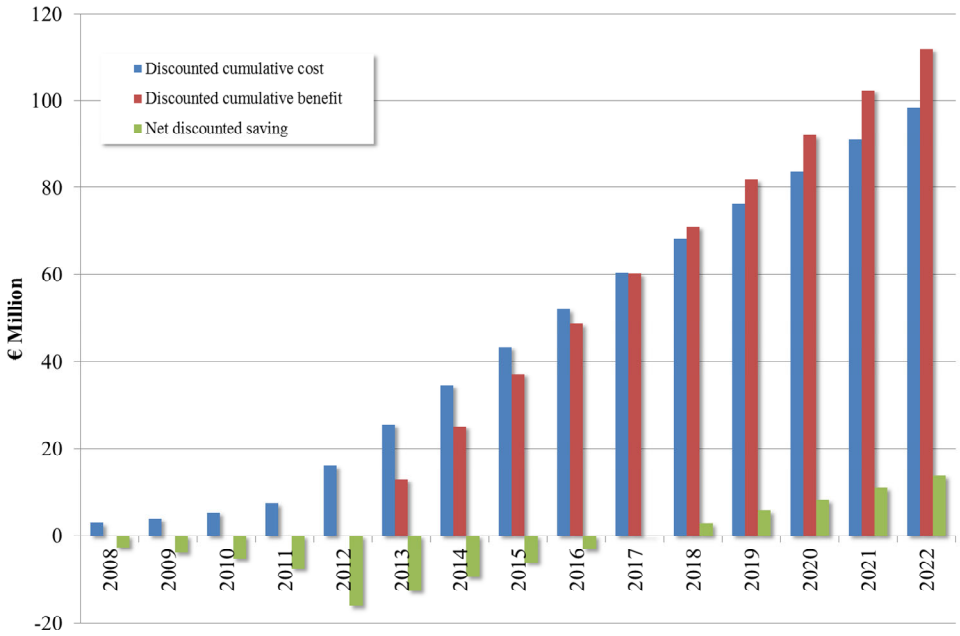
Table 26: Benefits and relative hypothesis from 2013 to 2022 (in € million)

Benefits		NPV	Hypothesis
Citizens	Time saving	10,7	- 0,9 unnecessary transaction per new potential users Time saving: 20 minutes per transaction
		23,6	- 0,9 unnecessary transaction per actual user Time saving 27,5 min
		0,6	-unnecessary transaction realized by 35.000 users every 2 years -Every transaction takes 10 minutes
Government	Time saving	22,9	- 0,9 unnecessary transaction per new potential users Time saving: 20 minutes per transaction
		1,2	-unnecessary transaction realized by 35.000 users every 2 years -Every transaction takes 10 minutes
		16,8	- 0,9 unnecessary transaction per new potential users Time saving: 20 minutes per transaction
	Efficiency	25	56 FTE at the cost of 59.000€/year
		7,6	fixed costs
		3,6	-10% error in data management on actual user -each transactions take 20 min and at costs of 61€/h
Total Benefit		112	

Time savings are related to the reduced number of transactions. This is a consequence of the application of the "once only" principle: users registered in the RNI have to communicate their data only once to public authorities. Hence, there is a 50% decrease of potential transactions between users and public authorities.

Moreover, the RNI represents an effective tool to avoid fraud, and to decrease fiscal evasion as well as improper requests of welfare payments. This indirect effect is particularly difficult to monetize because it requires assumptions on the existing level of fraud.

Figure 29: Discounted cumulative costs and benefits, and net discounted saving form the RNI in a time horizon of 15 years at a 3% discount rate (in € million)



According to our estimation, the RNI introduction entails NPV benefits of € 112 million and NPV costs of € 99,6 million. This results in a total settlements of € 12,4 million (NPV) in the period 2008-2022. The measurable results are showed in Figure 29: the expected paid back time of the investment is 10 years.

The cost-benefit analysis developed in the previous paragraph depends on a set of hypothesis, which influences the final result. This paragraph presents how the cost-benefit analysis' results would change according to a variation of the hypothesis on:

- the discount rate applied;
- the number of new users;
- the number of transactions.

Figure 30 shows how the results change according to different hypothesis:

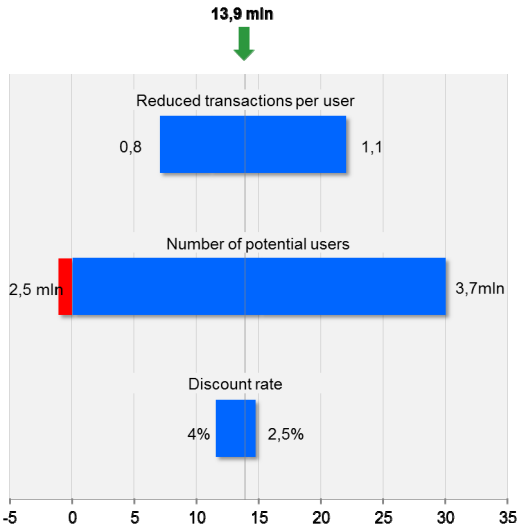
- the **discount rate** selected for the analysis is 3%. This is useful to take into account the macroeconomic risk, as suggested by the Dutch government guidelines for CBA[69]. By contrast, when the macroeconomic risk is not considered, a discount rate of 2,5% is suggested by the Dutch government. In addition, the EC guidelines for the Cost Benefit analysis indicate at 2,8% the discount rate to be used to evaluate Dutch initiatives. The different discount rates considered do not change the results of the analysis substantially. Only in the case of a 4% discount rate[70] the payback time shifts from 2017 to 2018 and the NPV decreases at € 11,5 million. In all the other cases, the NPV of the introduction of the RNI varies from € 14,7 million (for a discount rate of 2,5%) to € 13,9 million (when the chosen discount rate is equal to 3%);
- the **number of potential users** is variable that most affect results of cost benefit analysis: a 20% reduction of users cause a negative NPV;

[69] Ministry of Finance (2007).

[70] 4% is the social discount factor suggested by EC in the Impact Assessment Guidelines and used to evaluate economic impact of regulatory provision.

- benefits estimated in Figure 29 are computed considering that RNI register reduces the **number of transaction between non-resident and public institutions** (from 1,9 to 1 contact per year). A lower reduction (from 1,9 to 1,1 contact per year) void saving for the society.

Figure 30: Sensitivity analysis results



Digital Government Strategy (United Kingdom)

The costs and benefits of the Digital-by-default program have been assessed by the Cabinet Office in its Digital Efficiency Report of 2012[71]. The measurement has been conducted following two different methodologies

- **the top-down methodology**: it estimates figures based on transactions-related expenditures in each government department. The present analysis uses data from the 13 departments accounting for 99% of the transactions of the administration;
- **the bottom up methodology**: it is based on 4 four aspects of transactional services that are supposed to be linked with savings: volume, level of digital take-up, function, customer type. 17 types of transactional services are considered in the present analysis[72].

According to the two approaches, potential savings fall inside a range of € 2,0 and € 2,1 billion of savings per year.

The potential annual savings can be divided into two subcategories: the savings realized by the administered and those realized by the administration. Administration's savings are referred to as fiscal savings, whereas savings for the administered are referred to as cost recovery. In Table 27 the difference between the two totals represents less than 3% of the total estimated savings in both methods. The proportion of fiscal savings and costs recovery is similar according to the two approaches with respectively 65% - 35% and 64% - 36% for the bottom-up and the top-down approach, respectively.

[71] United Kingdom Cabinet Office (2012).

[72] United Kingdom Cabinet Office (2012).

Table 27: Projected total annual savings, split public spending/cost recovery in €million

Methodology	Fiscal	Cost recovery	Total
Bottom up	1.381	727	2.108
Top Down	1.307	740	2.047

Source: United Kingdom Cabinet Office (2012), Digital Efficiency Report

In the Top down approach, the savings can be allocated between different State departments. The following information affects the Mid-range-estimates of total potential by department. The public spending corresponds to the savings realized by the administration and the cost recovery the savings by the service users.

Table 28 presents the figures in mid ranges estimates of annual savings for the 15 departments that amounts for 99% of the transaction. The savings on transaction for four departments (DWP – BIS – HMRC – Home Office) accounts for nearly 70% of total savings. The savings on exclusively the DWP, the HMRC and the DFE transactions are realised on public spending. On the other hand, the savings made on DFT services come exclusively from cost recovery.

Table 28: Mid-range-estimates of total potential annual savings by department in €million

Department	Public Spending	Cost recovery	Total
DWP	387	0	387
BIS	195	209	404
HMRC	303	0	303
Home Office	49	222	271
Defra	210	19	229
DFT	0	138	138
DFE	99	0	99
DCMS	0	75	75
MOJ	58	0	58
DECC	32	0	32
FCO	0	2	2
AGO	2	2	5
DCLG	0	0	0
DFID	0	0	0
MOD	0	0	0
Total	1336	668	2003

Source: United Kingdom Cabinet Office (2012), Digital Efficiency Report

In the Top down approach, the savings can be divided into the different State departments. In Table 29, the savings on staff costs account for 77%, followed by accommodation (12%), printing and postage (7%) and IT and equipment, accounting for less than 5%.

Table 29: Percentage of estimated savings, by sources

Sources	Percentage

Staff costs	77%
Accommodation	12%
Printing & postage	7%
IT and equipment	4%
Total	100%

Source: United Kingdom Cabinet Office (2012), Digital Efficiency Report

The Tell us once Programme (United Kingdom)

The scope of government costs covers three items of expenditures:

- IT system (at a development stage);
- telephone service;
- face-to-face service.

On the individual side, the non-monetized cost taken into consideration is the time spent using the telephone and the face-to-face service.

Concerning benefits measurement, the government savings are mainly the reduction of overpayment, fraud and error. Efficiency as a whole is also taken into consideration. Individuals' savings are mainly time, postage and telephone savings. The non-monetized benefits are a better accuracy and efficiency for the government and a better service experience for the citizens.

Data provided by the DWP services[73] gives us an overview of cost and benefits over a 10 year period. The total cost of the implementation of the three notification channels over 10 years is supposed to be around £ 111,03 million. In the same period, benefits are estimated to be £ 43,5 million (for the birth notification service), of which £ 6,5 million in respect of government and £ 37 in respect of individuals.[74]

If DBD savings are largely from reduction of staff cost[75], there is no staff reduction in the TUO as it currently exists[76].

Table 30 reports the net expected benefits of the implementation of the TUO program on a 10 year period. The net benefit is negative and covers less than 40% of the total cost. The total estimated benefits are distributed unequally between the government and the individuals: nearly 90% of the savings are enjoyed by individuals. Furthermore, the program is largely unprofitable over a 10 year period.

Table 30: TUO: Costs and benefits over 10 years for birth and death, in €million

Typology	Amount
Total costs (A)	132
Total benefits (B)=(C+D)	52

[73] United Kingdom Department of Work and Pensions (2011).

[74] Ibidem.

[75] United Kingdom Cabinet Office (2012).

[76] United Kingdom Department of Work and Pensions (2011).

(C) Individuals benefits	44
(D) Government benefits	8
Net benefit (A-B)	-80

Source: United Kingdom Department of Work and Pensions (2011), Function of registration service

Although the TUO proved to originate higher costs than benefits, it has been included among the "once only" principle "best practices" anyhow. This choice is supported by the fact that the TUO is part of a broader eGovernment strategy, aimed at making digital all communications and transactions between government and users. Therefore, the TUO impact should not be considered apart, but within the whole impact of the eGovernment strategy. From this perspective, from the interviews it emerged that the United Kingdom government considers TUO as one of the relevant tools for the full digitization of public services because it fosters a gradual shift from offline to online services usage by citizens. Moreover, the application of TUO, and the consequent gradual increase of digital services take-up, entails an enhanced services quality.

Annex 5: Projections results

The purpose of this section is to present methodologies and results of the projections at the EU28 level of costs and benefits estimated for five eGovernment initiatives implemented in the United Kingdom, Denmark and the Netherlands. Results also include potential net saving in the six Associated Countries (Iceland, Liechtenstein, Montenegro, Norway, Serbia and Turkey).

To obtain projected results, we considered each programme individually.

Three variables have been used to rescale the results: the population[77], as a proxy for the size of countries, the UN E-Government Development Index (EGDI[78]), as a proxy for the level of progress in the adoption of e-technologies, and the average cost per hour of Public Administration Officials[79] (PAOW). Moreover, the Member States administrative structure is also an important factor influencing the successful implementation of eGovernment initiatives. Actually, the presence of a decentralised administration makes more challenging the management of eGovernment services. Due to the lack of an appropriate and homogeneous proxy variable, differences in the MS administrative structure will only be considered from a qualitative point of view and included in the policy roadmaps.

Therefore, the three variables considered have been normalized with respect to the level observed in Denmark, in the United Kingdom and in Netherlands to rescale potential benefits for their respective programmes. The normalized variables have been used to pre-multiply the levels observed in each programme.

For illustrative purposes, we present our projection methodology for Belgium with respect to the Mandatory Digital Self-Service results obtained for Denmark. The corresponding net potential in Denmark is € 123 million. The population, the EGDI and the average cost per hour of public official are approximately 11 million, 0,772 and € 27,58 for Belgium and 6 million, 0,889 and € 35,96 for Denmark. This allowed us to compute the normalized values of population and EGDI for Belgium: 1,98 million, 0,87 and € 0,77, respectively. These variables have enabled us to rescale the net benefits of Denmark and to obtain an estimated value of around € 163 million for Belgium.

To project the results of each programme two main assumptions have been made:

- all countries start from the same level of development in the implementation of each programme. Countries having an enhanced level of eGovernment are nonetheless supposed to experience reduced costs and hence higher net benefits thanks to the use of the UN-EGDI;
- all countries have the same type of administrative structure and are supposed to adopt the same planning strategy for the implementation of the programmes considered. We used the population and the PAOW to rescale values according to the size and the administrative official's costs across the EU 27 countries. For Croatia and the six associated countries included in the analysis the PAOW have been estimated based on a regression coefficient computed using data on GDP per capita (in euro at current prices) and the available costs per hour of Public Official at EU 27 level.

[77] We have used population figures published by Eurostat for the year 2012.

[78] The EGDI is a composite indicator of Capacity and Willingness of governmental organisations to use information and communication technologies for the provision of public services. It is a weighted average of three normalized scores on the following factors: online services,telecommunication infrastructure, inherent human capital. For more details on the construction of the UN-EGDI please consult:

http://www.un.org/en/development/desa/publications/connecting-governments-to-citizens.html.

[79] Capgemini, Tec h4I2, Time.lex, Universiteit van Antwerpen (2013).

In the case of Netherlands, given the specificity of the programme considered, a bespoke approach has been adopted. We will elaborate on this when introducing the projections for the RNI.

Digital Self-Service Program Potential in 2017

Table 31 reports the estimate of net expected benefits for the implementation of the mandatory digital self-service programme for all the 28 EU MS and for the six Associated Countries, based on the values provided for Denmark. With the biggest population of 82 million inhabitants and a relatively strong UN EGDI of 0,808, Germany has the highest estimated net potential of € 1,2 billion. At the EU28 level, the estimation of the net benefits is close to € 6,5 billion. The overall impact is around € 6,9 billion if we also include the Associated Countries.

Table 31: Projected Mandatory Digital Self-Service Program Potential in 2017

	Country	Annual Savings Bottom up	Annual savings Top Down	Average Top & bottom
EU COUNTRIES	Denmark	197,87	192,18	195,03
	United Kingdom	2.108,06	2.047,46	2.077,76
	Belgium	261,97	254,44	258,21
	Bulgaria	9,37	9,1	9,24
	Czech Republic	45,54	44,23	44,88
	Germany	2.074,25	2.014,62	2.044,44
	Estonia	6,26	6,08	6,17
	Ireland	103,76	100,77	102,27
	Greece	135,98	132,07	134,03
	Spain	700,38	680,24	690,31
	France	1.789,64	1.738,19	1.763,91
	Croatia	36,82	35,77	36,29
	Italy	1.379,59	1.339,93	1.359,76
	Cyprus	9,56	9,28	9,42
	Latvia	6,49	6,3	6,4
	Lithuania	10,99	10,67	10,83
	Luxembourg	14,24	13,83	14,04
	Hungary	51,38	49,91	50,65
	Malta	3,48	3,38	3,43
	Netherlands	439,79	427,15	433,47
	Austria	197,96	192,27	195,11
	Poland	185,86	180,52	183,19
	Portugal	101,63	98,71	100,17
	Romania	70,06	68,04	69,05
	Slovenia	18,98	18,43	18,71
	Slovakia	15,73	15,28	15,5
	Finland	138,91	134,92	136,91
	Sweden	275,52	267,6	271,56
	EU 28	10.390,07	10.091,37	10.240,74
Associated Countries	Iceland	9,15	8,88	9,02
	Liechtenstein	3,57	3,47	3,52
	Montenegro	3,1	3,01	3,05
	Norway	368,69	358,09	363,39
	Serbia	21,82	21,2	21,51
	Turkey	328,63	319,19	323,91
	Associated Countries	734,96	713,84	724,4
Total EU 28 + Associated Countries		11.125,03	10.805,21	10.965,14

Source: Authors' calculations based on Eurostat data for population, UN data on the EGDI, and from The Boston Consulting Group (2012), Overgang til obligatorisk digital kommunikation i den danske offentlige sector(The transition to mandatory digital communication in the Danish public sector)

Basic Data Program Potential in 2017

Table 32 reports the estimated figures of net expected benefits for the implementation of the Basic Data Programme for all the 28 EU MS and the six Associated Countries based on the values available for Denmark. The total impact of this programme for Slovakia, which has a population approximately the same size as Denmark, is € 87 million lower than Denmark. This result is due to the low level of e-technology development in Slovakia, which scores 0,629 for the EGDI, as opposed to the Danish score of 0,889. The estimation of the total impact of the Basic Data Programme exceeds € 5 billion at the EU 28 level and . The net estimated impacts are broken down into private and public sector. The latter is in turn sub-divided into ministries, municipalities and regions.

Table 32: Projected Basic Data Program Potential in 2017 (in mln €)

	Country	Ministries	Municipalities	Regions	Public sector impact	Private sector impact	Total impact
EU COUNTRIES	**Denmark**	0,4	22,13	5,77	28,29	67,05	95,34
	United Kingdom	4,29	235,72	61,43	301,43	714,29	1015,72
	Belgium	0,53	29,29	7,63	37,46	88,77	126,23
	Bulgaria	0,02	1,05	0,27	1,34	3,17	4,51
	Czech Republic	0,09	5,09	1,33	6,51	15,43	21,94
	Germany	4,22	231,93	60,44	296,6	702,83	999,43
	Estonia	0,01	0,7	0,18	0,89	2,12	3,01
	Ireland	0,21	11,6	3,02	14,84	35,16	49,99
	Greece	0,28	15,2	3,96	19,44	46,08	65,52
	Spain	1,42	78,31	20,41	100,15	237,31	337,46
	France	3,64	200,11	52,15	255,9	606,39	862,29
	Croatia	0,07	4,12	1,07	5,27	12,48	17,74
	Italy	2,8	154,26	40,2	197,27	467,45	664,72
	Cyprus	0,02	1,07	0,28	1,37	3,24	4,61
	Latvia	0,01	0,73	0,19	0,93	2,2	3,13
	Lithuania	0,02	1,23	0,32	1,57	3,72	5,29
	Luxembourg	0,03	1,59	0,41	2,04	4,83	6,86
	Hungary	0,1	5,75	1,5	7,35	17,41	24,76
	Malta	0,01	0,39	0,1	0,5	1,18	1,68
	Netherlands	0,89	49,18	12,82	62,89	149,02	211,9
	Austria	0,4	22,13	5,77	28,31	67,08	95,38
	Poland	0,38	20,78	5,42	26,58	62,98	89,55
	Portugal	0,21	11,36	2,96	14,53	34,44	48,97
	Romania	0,14	7,83	2,04	10,02	23,74	33,75
	Slovenia	0,04	2,12	0,55	2,71	6,43	9,14
	Slovakia	0,03	1,76	0,46	2,25	5,33	7,58
	Finland	0,28	15,53	4,05	19,86	47,07	66,93
	Sweden	0,56	30,81	8,03	39,4	93,36	132,75
	EU 28	**21,1**	**1161,77**	**302,76**	**1485,7**	**3520,56**	**5006,18**
Associated Countries	**Iceland**	0,02	1,02	0,27	1,31	3,1	4,41
	Liechtenstein	0,01	0,4	0,1	0,51	1,21	1,72
	Montenegro	0,01	0,35	0,09	0,44	1,05	1,49
	Norway	0,75	41,23	10,74	52,72	124,93	177,64
	Serbia	0,04	2,44	0,64	3,12	7,39	10,52
	Turkey	0,67	36,75	9,58	46,99	111,35	158,34
	Associated Countries	**1,5**	**82,19**	**21,42**	**105,09**	**249,03**	**354,12**
Total EU 28 + Associated Countries		**22,6**	**1243,96**	**324,18**	**1590,79**	**3769,59**	**5360,3**

Source: Authors' calculations based on Eurostat data for population, UN data on the EGDI, and The Danish Government/Danish Regions/Local government Denmark (2012),Good Basic Data for Everyone – A driver for Growth and efficiency, Projected Digitization Program Potential

United Kingdom Digital Government strategy potential impact at EU level

Table 33 reports the projection of the annual savings for the implementation of the United Kingdom digitization programme for all the 28 EU MS and the six Associated Countries. Estimates are based on United Kingdom figures. United Kingdom have the highest potential benefit (€ 2,07 billion), followed by Germany (around € 2,04 billion). The overall estimate of the annual savings of the Digitization Programme is around € 10,2 billion at the EU 28 level and around € 720 million at Associated Countries level. The annual savings are presented for both the top down and the bottom up approaches, as previously presented in the cost benefits analysis of this programme.

Table 33: Projected Digitization Program Potential (in mln €)

	Country	Annual Savings Bottom up	Annual savings Top Down	Average Top & bottom
EU COUNTRIES	Denmark	197,87	192,18	195,03
	United Kingdom	2.108,06	2.047,46	2.077,76
	Belgium	261,97	254,44	258,21
	Bulgaria	9,37	9,1	9,24
	Czech Republic	45,54	44,23	44,88
	Germany	2.074,25	2.014,62	2.044,44
	Estonia	6,26	6,08	6,17
	Ireland	103,76	100,77	102,27
	Greece	135,98	132,07	134,03
	Spain	700,38	680,24	690,31
	France	1.789,64	1.738,19	1.763,91
	Croatia	36,82	35,77	36,29
	Italy	1.379,59	1.339,93	1.359,76
	Cyprus	9,56	9,28	9,42
	Latvia	6,49	6,3	6,4
	Lithuania	10,99	10,67	10,83
	Luxembourg	14,24	13,83	14,04
	Hungary	51,38	49,91	50,65
	Malta	3,48	3,38	3,43
	Netherlands	439,79	427,15	433,47
	Austria	197,96	192,27	195,11
	Poland	185,86	180,52	183,19
	Portugal	101,63	98,71	100,17
	Romania	70,06	68,04	69,05
	Slovenia	18,98	18,43	18,71
	Slovakia	15,73	15,28	15,5
	Finland	138,91	134,92	136,91
	Sweden	275,52	267,6	271,56
	EU 28	10.390,07	10.091,37	10.240,74
Associated Countries	Iceland	9,15	8,88	9,02
	Liechtenstein	3,57	3,47	3,52
	Montenegro	3,1	3,01	3,05
	Norway	368,69	358,09	363,39
	Serbia	21,82	21,2	21,51
	Turkey	328,63	319,19	323,91
	Associated Countries	734,96	713,84	724,4
Total EU 28 + Associated Countries		11.125,03	10.805,21	10.965,14

Source: Authors' calculations based on Eurostat data for population, UN data on the EGDI, and The Cabinet Office (2012), Digital Efficiency Report

Tell us once potential impact at EU level

Table 34 reports the projection of the net benefits of the implementation of the Tell Us Once programme across the 28 EU MS and the six Associated Countries. Costs and benefits are based on the United Kingdom experience. The net benefits are negative for all the countries. This reflects the negative impact measured in the United Kingdom for the Tell us once programme. The estimation of the net cost of the Digitization Programme is around € 0,4 billion at the European level (€ 0,65 billion for costs and € 0,25 billion for benefits) and around € 28 million for the Associated Countries (€ 46 million for costs and € 18 million for benefits).

Table 34: Projected Tell us once Program Potential in 2017 (in € Mln)

	Country	Total costs	Total benefits	Net benefit
EU COUNTRIES	Denmark	-12,38	4,85	-7,53
	United Kingdom	-131,94	51,69	-80,25
	Belgium	-16,4	6,42	-9,97
	Bulgaria	-0,59	0,23	-0,36
	Czech Republic	-2,85	1,12	-1,73
	Germany	-129,82	50,86	-78,96
	Estonia	-0,39	0,15	-0,24
	Ireland	-6,49	2,54	-3,95
	Greece	-8,51	3,33	-5,18
	Spain	-43,83	17,17	-26,66
	France	-112,01	43,88	-68,13
	Croatia	-2,3	0,9	-1,4
	Italy	-86,34	33,83	-52,52
	Cyprus	-0,6	0,23	-0,36
	Latvia	-0,41	0,16	-0,25
	Lithuania	-0,69	0,27	-0,42
	Luxembourg	-0,89	0,35	-0,54
	Hungary	-3,22	1,26	-1,96
	Malta	-0,22	0,09	-0,13
	Netherlands	-27,53	10,78	-16,74
	Austria	-12,39	4,85	-7,54
	Poland	-11,63	4,56	-7,08
	Portugal	-6,36	2,49	-3,87
	Romania	-4,38	1,72	-2,67
	Slovenia	-1,19	0,47	-0,72
	Slovakia	-0,98	0,39	-0,6
	Finland	-8,69	3,41	-5,29
	Sweden	-17,24	6,76	-10,49
	EU 28	- 650,27	254,76	- 395,54
Associated Countries	Iceland	-0,57	0,22	-0,35
	Liechtenstein	-0,22	0,09	-0,14
	Montenegro	-0,19	0,08	-0,12
	Norway	-23,08	9,04	-14,03
	Serbia	-1,37	0,54	-0,83
	Turkey	-20,57	8,06	-12,51
	Associated Countries	**-46**	**18,03**	**-27,98**
Total EU 28 + Associated Countries		**-696,27**	**272,79**	**-423,52**

Source: Authors' calculations based on Eurostat data for population, UN data on the EGDI, and Department of Work and Pensions (2011), Function of registration service

Non-Residents Register potential impact at EU level

The cost benefit analysis for the Dutch register for non-residents citizens (RNI) resulted in a NPV for the community of € 13,9 million in a time horizon of 15 years.

This result could be used to estimate potential impact of implementing a similar eService at EU 28 level and in the six Associated Countries.

The costs estimated in the Dutch case are related to the following drivers:

- staff costs (to be afforded during both Investment phase and Transition phase);
- fixed costs (to be afforded during both Investment phase and Transition phase);
- operating costs.

Staff costs cover wages for the workers involved in the investment and transition phases[80]. The projection of these costs has been performed through the normalized (with respect to Netherlands) PAOW.

Fixed costs are independent from wages but are directly related to system planning, development and implementation (e.g. hardware/software procurement, maintenance, upgrade and replacement). These costs are likely to be correlated to each country eGovernment attitude. Thus we used the UN eGovernment index to re-scale fixed costs to all EU MS.

As previously described, operating costs are afforded yearly for system maintenance and service delivery. They strictly depend on the number of transactions managed by public officials.

In order to project operating costs at EU level, we followed the steps below for each country included in the analysis:

- estimation of potential users, using data on average migration flows (OECD, 2013) and average population (Eurostat) in 2006 – 2010[81].
- estimation of potential transactions, based on the average number of transaction per users, found in RNI case study;
- computation of total operating costs combining potential transactions and users.

In RNI case study we emphasized that benefits are related to:

- number of transactions;
- monetisation of time saved for all transactions.

In order to estimate the total benefits for all EU MS we have assumed that:

- the average time saving per transaction does not change across countries;
- money value of time saving is proportional to the PAOW.

For illustrative purposes, we present our projection methodology in Belgium with respect to the RNI results obtained with reference to Netherlands.

[80] These costs account for the 50% of the total investment and transition costs.

[81] For Croatia, Cyprus, Malta, Montenegro and Turkey data on migration flow is not available. Thus we used the average level of migration flow of Countries that entered EU after 2004 (i.e. Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland , Romania, Slovakia and Slovenia). For Liechtenstein we used the average migration flow of EU 15.

Table 35: Belgium Staff/Operating Costs Estimation

Country	Pop,	Migration flows	Potential Users	Potential transaction	Public Administration Official wage		Staff costs (Investment + transaction costs)	Operating Costs
	A	B	C	D		E	G	H
	2006-2012	(2006-2010)	B/1000 x A	C(BE) x D(NL) / C(NL	CBS	Norm,	G(NL)*E	H(NL)/D(NL) x D(BE)
BE	10.671.153	1,58%	168.604	192.864,55	27,58	1,06	9,09	108,82
NL	16.431.675	7,7%	126.524	190.000	25,97	1	8,18*	81,66**

**50% of Investment and Transition costs (RNI case study)*
***Operating Costs (RNI case study)*

Table 36: Belgium Fix Costs/net Benefits Estimation

Country	Un eGov Index		Fix Costs (Investment + Transaction)	Total Costs	Total Benefit	Net Benefit
	I	J	K	L	M	N
	2012	Norm,	K(NL)/J	G + H + K	M(NL)/D(NL) x D(BE)/E(BE)	M – L
BE	0,77	0,85	9,67	127,18	158,44	31,26
NL	0,91	1,00	8,18	98,02	111,95	13,93

Table 37 shows estimated impact of implementing the RNI register in all EU MS and in the six Associated Countries.

Using data from Netherlands, it is possible to assess how aggregate net saving decreases in a less optimistic scenario. Our assumption is a delay in RNI implementation, due to a doubled transition period (from one to two years). Results are presented in last column of Table 37.

Table 37: Potential impact of RNI at EU level

		eGov. index	Population (2006-2012)	Potential Users	Potential transaction	PA officials normalized hourly rate	Fix Costs (Investment + Transaction)	Staff costs (Investment + transaction costs)	Operating Costs	Total Costs	Total Benefit	Net Benefit *(on time scenario)*	Net Benefit (delay scenario)
	Country				**No.**		**€ million**	**€ million**	**€ million**	**€ million**	**€ million**	**€ million**	**€ million**
EU COUNTRIES	**Austria**	0,86	8.317.285	185.475	278.527	1,04	9,52	8,49	119,71	137,72	170,37	32,65	17,02
	Belgium	0,85	10.671.153	168.604	253.192	1,06	9,67	8,69	108,82	127,18	158,44	31,26	15,63
	Bulgaria	0,67	7.641.708	23.689	35.574	0,07	12,17	0,59	15,29	28,05	1,52	-26,54	-36,40
	Croatia	0,80	4.436.265	11.575	17.382,00	0,40	10,19	3,25	7,47	20,90	4,07	-16,84	-26,18
	Cyprus	0,71	790.076	2.061	3.096,00	0,59	11,47	4,84	1,33	17,64	1,08	-16,56	-27,53
	Cz. Republic	0,71	10.378.751	78.879	118.451	0,23	11,5	1,9	50,91	64,31	16,18	-48,13	-55,26
	Denmark	0,97	5.479.305	53.697	80.637	1,38	8,4	11,33	34,66	54,38	65,79	11,41	-0,83
	Estonia	0,88	1.341.714	2.415	3.627	0,2	9,35	1,66	1,56	12,56	0,43	-12,13	-20,81
	Finland	0,93	5.302.152	23.329	35.034	1,05	8,78	8,59	15,06	32,42	21,67	-10,75	-20,32
	France	0,95	63.978.195	134.354	201.759	1,1	8,64	9,01	86,72	104,37	130,92	26,55	12,56
	Germany	0,89	82.155.070	1.125.524	1.690.192	1,09	9,24	8,91	726,44	744,59	1084,5	339,91	287,48
	Greece	0,75	11.215.245	45.983	69.052	0,61	10,86	4,98	29,68	45,52	24,75	-20,76	-30,78
	Hungary	0,79	10.046.688	31.145	46.770	0,25	10,37	2,03	20,1	32,5	6,86	-25,65	-34,02
	Ireland	0,78	4.367.980	110.947	166.608	1,1	10,44	8,99	71,61	91,04	107,92	16,88	2,17
	Italy	0,79	59.577.537	381.296	572.590	1,1	10,38	8,96	246,1	265,44	369,48	104,04	78,89
	Latvia	0,72	2.271.291	3.180	4.775	0,17	11,3	1,37	2,05	14,72	0,47	-14,25	-24,68
	Lithuania	0,80	3.366.686	5.387	8.089	0,17	10,18	1,41	3,48	15,07	0,82	-14,25	-23,52
	Luxembourg	0,88	484.928	23.228	34.881	1,18	9,31	9,61	14,99	33,92	24,15	-9,76	-30,65
	Malta	0,78	410.217	1.070	1.607	0,41	10,47	3,32	0,69	14,48	0,38	-14,1	-24,02
	Netherlands	1	16.431.675	126.524	190.000	1	8,18	8,18	81,66	98,02	111,95	13,93	2,01
	Poland	0,71	38.140.276	38.140	57.275	0,26	11,59	2,13	24,62	38,33	8,77	-29,56	-38,80
	Portugal	0,79	10.610.245	29.709	44.613	0,47	10,42	3,82	19,17	33,41	12,28	-21,13	-30,39
	Romania	0,66	21.532.952	8.613	12.934	0,19	12,32	1,54	5,56	19,41	1,43	-17,98	-29,09
	Slovakia	0,69	5.404.199	16.753	25.158	0,16	11,86	1,31	10,81	23,99	2,38	-21,61	-31,82
	Slovenia	0,82	2.020.668	11.316	16.993	0,43	9,96	3,5	7,3	20,77	4,28	-16,48	-25,68
	Spain	0,85	45.066.666	896.827	1.346.758	0,68	9,61	5,54	578,83	593,98	537,49	-56,49	-63,61
	Sweden	0,94	9.188.193	101.070	151.776	1,17	8,68	9,59	65,23	83,51	104,89	21,39	7,92
	UK	0,98	61.201.054	728.293	1.093.671	1,29	8,33	10,56	470,06	488,95	832,02	343,07	292,01
	EU 28	**22,95**	**501.828.174**	**4.369.083**	**6561021**	**18,85**	**283,19**	**154,1**	**2819,91**	**3257,18**	**3805,29**	**548,12**	**141,3**
Associated Countries	**Iceland**	0,86	312.004	2.800	4.205	1,27	9,53	10,37	1,81	21,71	3,14	-18,57	-28,31
	Liechtenstein	0,91	35.382	484	727	4,12	9,03	33,67	0,31	43,02	1,76	-41,25	-52,21
	Montenegro	0,68	624.507	1.629	2.447	0,26	12	2,13	1,05	15,19	0,38	-14,81	-26,04
	Norway	0,69	7.366.052	19.219	28.861	0,17	11,83	1,36	12,4	25,59	2,82	-22,77	-32,82
	Serbia	0,58	71.374.780	186.223	279.650	0,29	14,13	2,36	120,19	136,69	47,63	-89,06	-94,72
	Turkey	0,94	4.743.195	99.133	148.867	2,99	8,69	24,44	63,98	97,1	262,03	164,92	132,64
	Associated Countries	**4,66**	**84455920**	**309488**	**464757**	**9,1**	**65,21**	**74,33**	**199,74**	**339,3**	**317,76**	**-21,54**	**-101,47**
Total EU 28 + Associated Countries		**27,61**	**586284094**	**4678571**	**7025778**	**27,95**	**348,4**	**228,43**	**3019,65**	**3596,48**	**4123,05**	**526,58**	**39,8**

Annex 6: Public consultation on Policy Roadmap: results overview

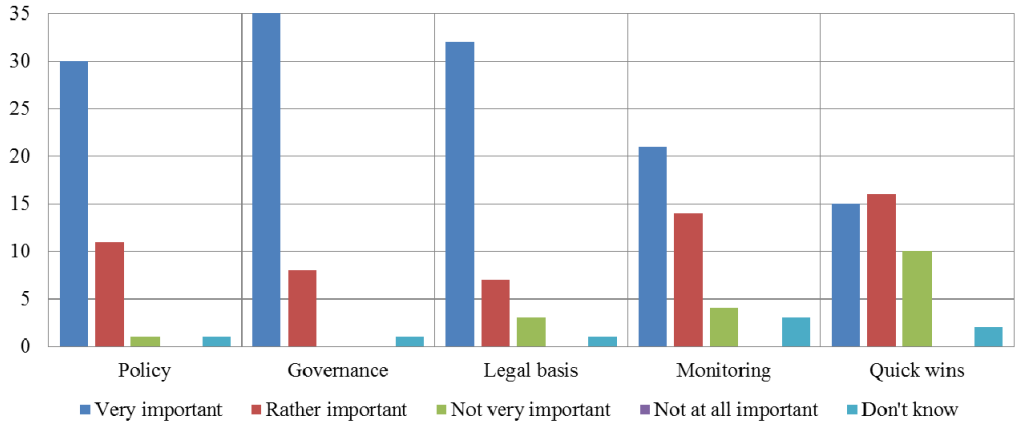
General Information

- **Launch date** December 2103
- **Closed date** January 2013
- Total number of respondents 60
- Participating countries 22
- **Answering countries:** Albania, Austria, Belgium, Bulgaria, Croatia, Denmark, Estonia, Finland, France, Germany, Italy, Latvia, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, The Netherlands, United Kingdom.
-

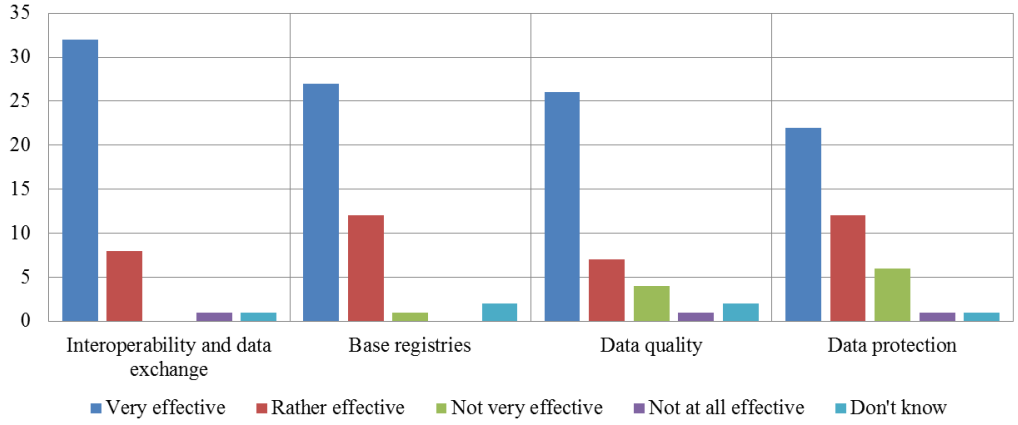
NATIONAL LEVEL STRATEGIES

Policy option 1: "once only" strategy

How important are the following STRATEGIC ISSUES in helping your country to implement the "once only" strategy?

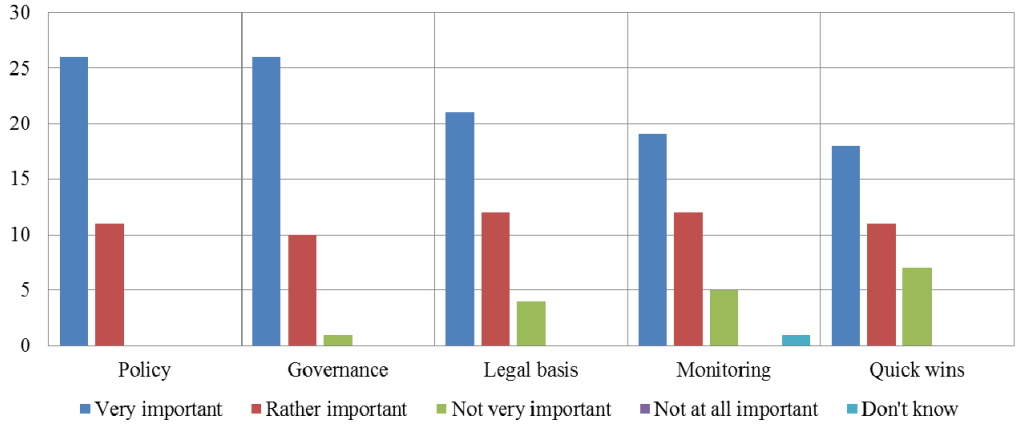


How effective are the following BUILDING BLOCKS AND TOOLS in helping your country to implement the "once only" strategy?

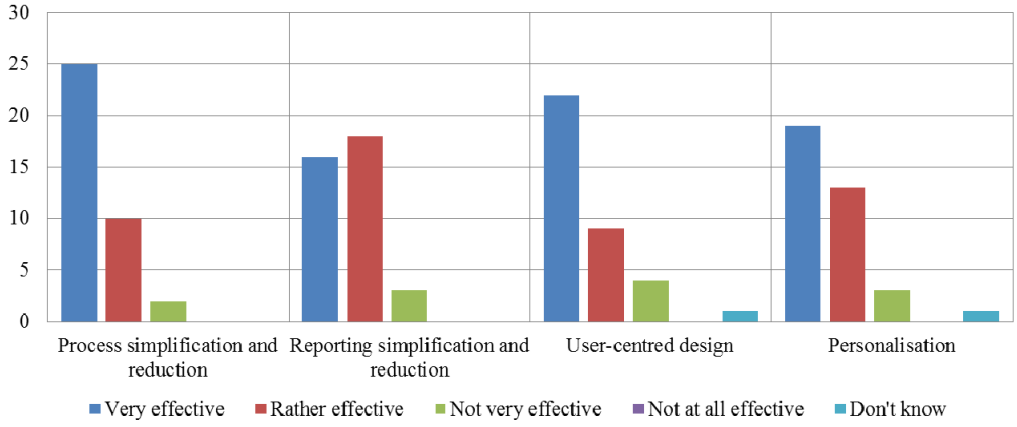


Policy Option 2: simplification/personalisation strategy

How important are the following STRATEGIC ISSUES in helping your country to implement the simplification/personalisation strategy?

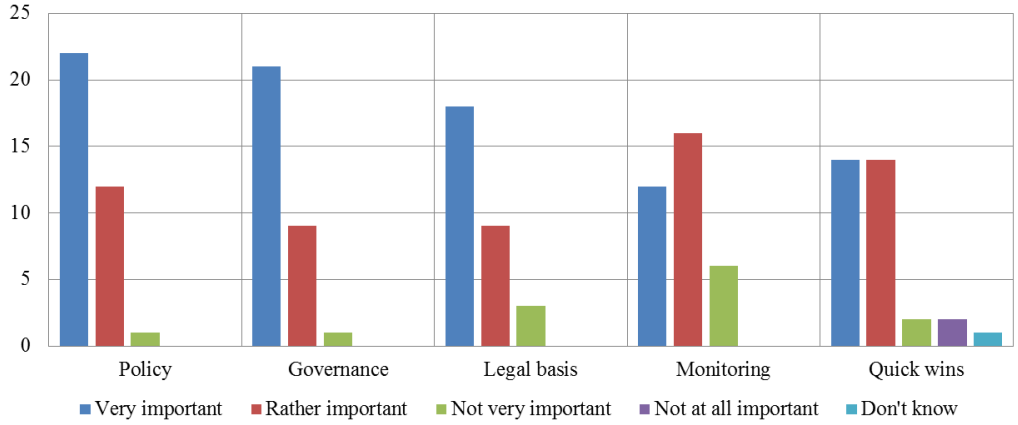


How effective are the following BUILDING BLOCKS AND TOOLS in helping your country to implement the simplification/personalisation strategy?

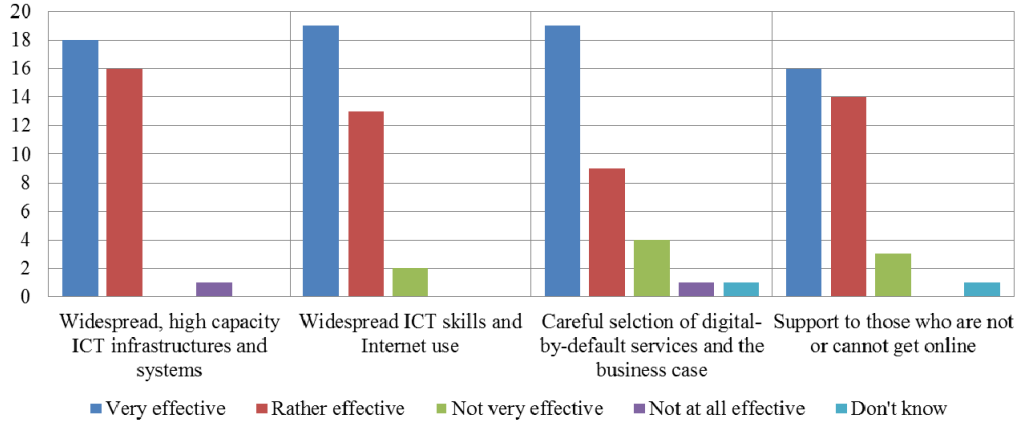


Policy Option 3: Digital-by-.default strategy

How important are the following STRATEGIC ISSUES in helping your country to implement the digital-by-default strategy?

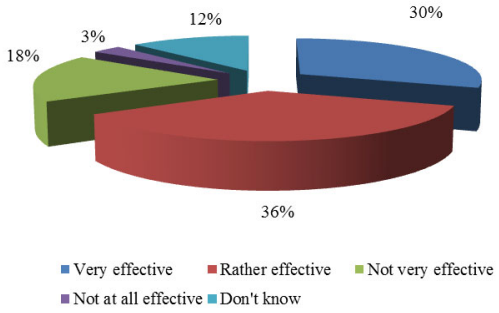


How effective are the following BUILDING BLOCKS AND TOOLS in helping your country to implement the digital-by-default strategy?



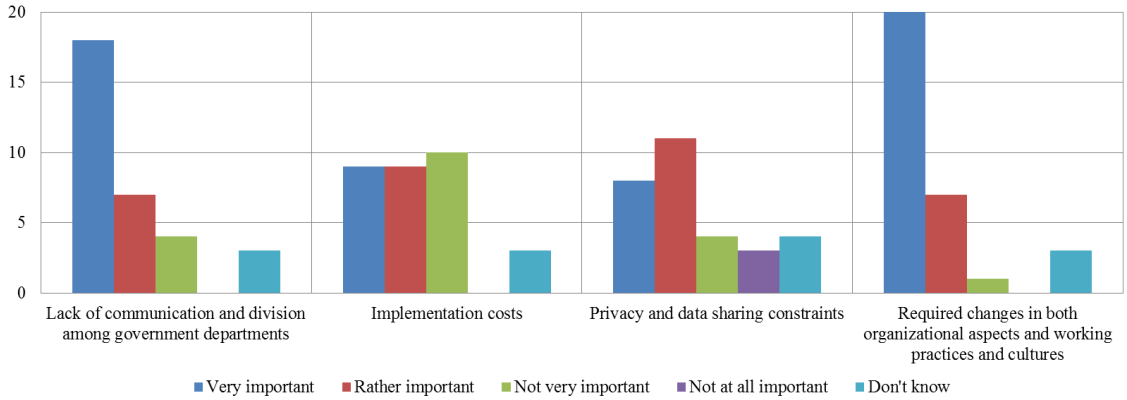
National level strategies timing

How effective is the proposed policy options timeline: "once only" as a first phase strategy, simplification/personalisation as a second phase strategy and digital-by-default as a third phase strategy?

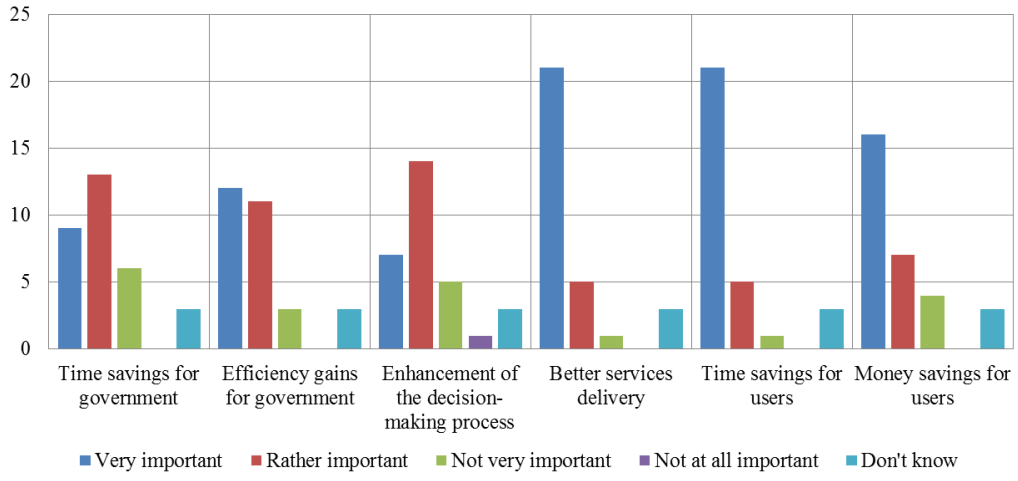


National level strategies: barriers and expected benefits

Which are the most important BARRIERS to implement in your country the "once only", simplification/personalisation and digital-by-default strategies?

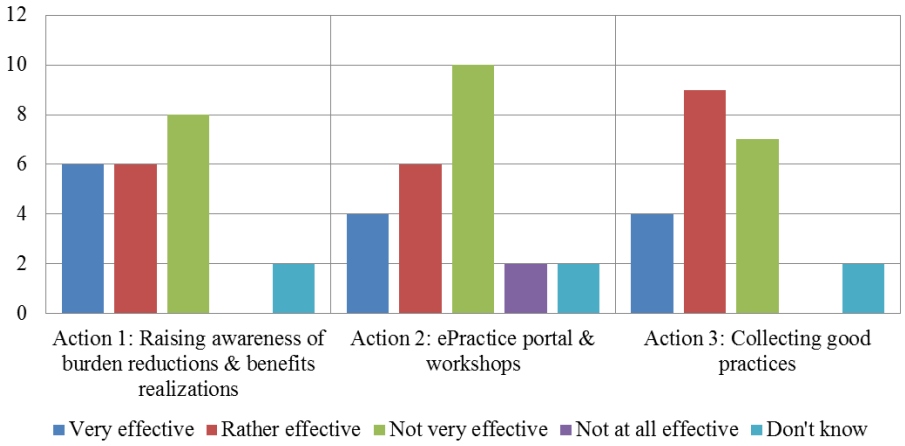


Which are the most important EXPECTED BENEFITS which will result from the implementation of the "once only", simplification/personalisation and digital-by-default strategies in your country?

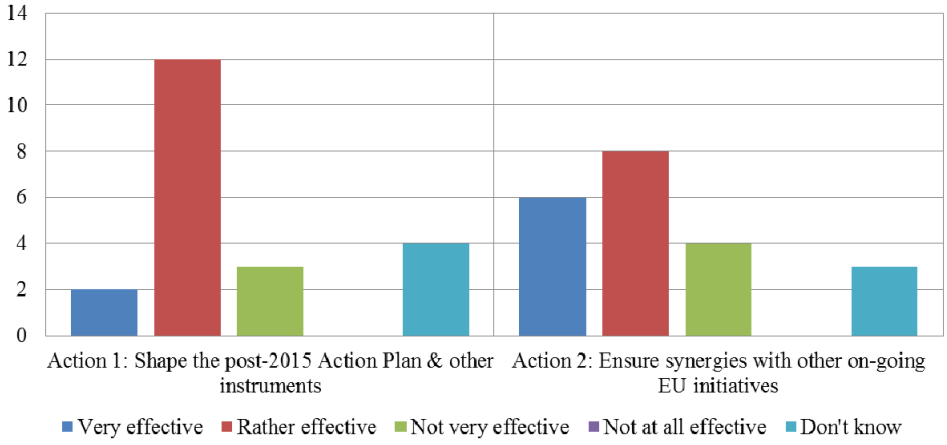


European level and cross border strategy

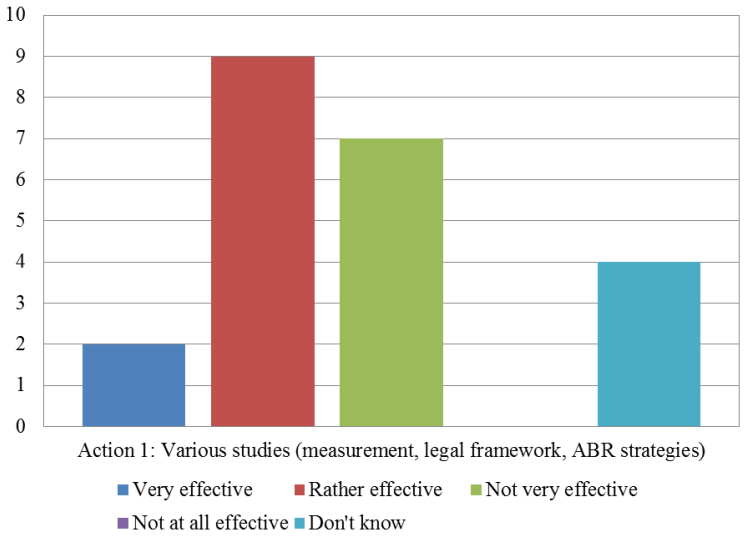
How effective are the 2014 proposed actions at EU and cross border level in helping your country to achieve administrative burden reduction?



How effective are the 2015 proposed actions at EU and cross border level in helping your country to achieve administrative burden reduction?

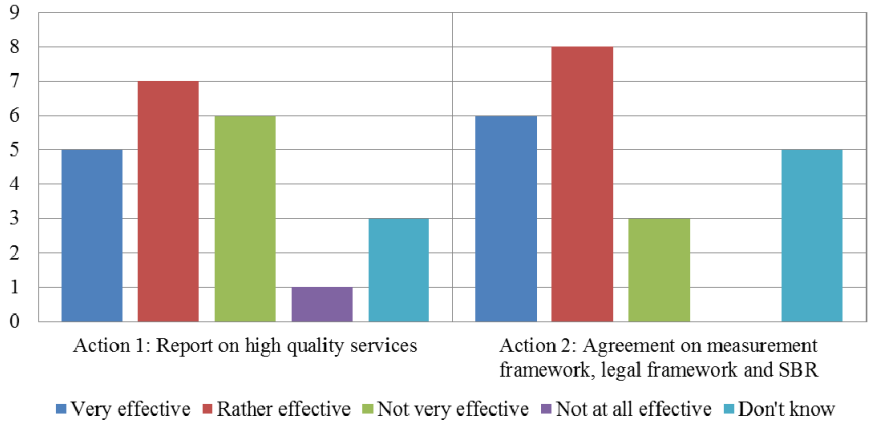


How effective is the 2016 proposed action at EU and cross border level in helping your country to achieve administrative burden reduction?

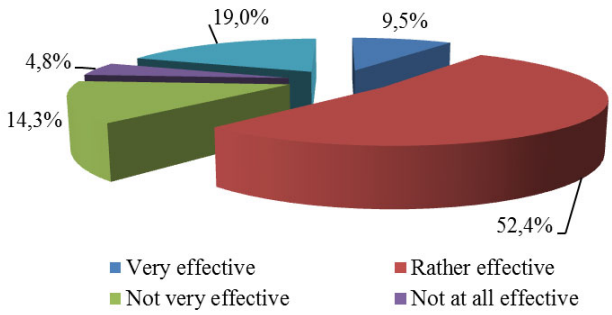


How effective is the 2017 proposed action at EU and cross border level in helping your country to achieve administrative burden reduction?

How effective are the 2018 proposed actions at EU and cross border level in helping your country to achieve administrative burden reduction?



How effective is the proposed timeline 2014 – 2018 to implement the policy options in your country, with the support of the European Commission?



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