

# Rethinking the Public Spending on ICT projects

By Hans Mulder and Ilias Kontakos



## INTRODUCTION

Recently the announcement of the “conclusions and recommendations of the Dutch temporary committee on government ICT projects” revealed an inconvenient truth: The investment in ICT projects has not produced the useful and valuable results expected. On the contrary, the reality is far from what was expected, leading the committee to refer to failures in a series of central government ICT projects and subsequently conclude that taxpayers’ money has been wasted.

The Dutch committee on government ICT projects was honest enough to describe a situation that is a global phenomenon. For this reason, we would like to take advantage of this report to explain the framework within these failures occurring not only in the Netherlands but worldwide. At the same time, we would like to suggest some ideas as rough guidelines to achieve the expected or better-than-expected results from government ICT projects.

## Scope: Is clear vision possible in a foggy environment?

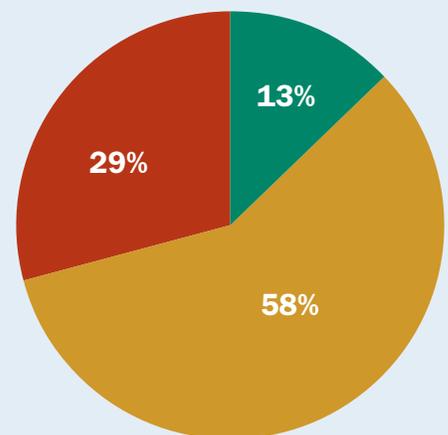
What was described in the Dutch report concerning the failure of ICT spending troubles governments around the world, turning the matter into a global phenomenon. For example, a simple glance at e-government benchmarking data and Eurostat statistics about usage of e-government services clearly shows this mismatch, where the supply-side index scores high levels—nearly more than 80% on average—while the average usage percentage is now reaching a 40% threshold of the adult population. Similarly, the average usage in OECD countries does not exceed 45%. So the low use leads to low value on public service delivery e-government services are consequently low.

Most projects regarded as a failure usually do not manage to meet one or more criteria of scope, time, and quality, resulting in low return on investment (ROI). Failure in government ICT projects is to be expected, as the scope of ICT project investment usually fails to take into account the ongoing and significant transition to a more wired and mobile population.

## LARGE GOVERNMENT PROJECTS

- Successful 13%
- Challenged 58%
- Failed 29%

Caption: The resolution of large government software projects from fiscal 2010 to 2014 within The Standish Group’s CHAOS database. In this case large is defined as labor cost over 5 million euros or 6 million dollars. Classic CHAOS metrics define successful projects as on time, on budget, and are on target. Challenged projects are over budget, late, and/or have an unsatisfactory target. Failed projects are projects that were either canceled prior to completion or not used after implementation.





As a result of this transition, government needs to transform from a simplistic, mechanistic provider of services to a more adaptive, result-oriented, and citizen-centric platform. Government needs to do so without losing its institutional powers. Rather than “vending” decisions and documentations, government can become more proactive by focusing on the management of situations. This requires government to involve a series of stakeholders, most of which are outside traditional public administration.

Despite the plethora of terms and definitions like e(lectronic)-government, i(nformational)-government, m(obile)-government, and T(ransactional)-government (regarding the idea of ICT-based modernization of the public sector), government investment in ICT has focused, and still does, on the old bureaucratic, heavily segmented style of government. This style serves neither the needs within the government (improving communication between departments), nor the needs of its businesses and citizens. This leads to low uptake and usage levels, registered in numerous reports both within and outside the government, leading to what was honestly described in the Dutch temporary committee on government ICT projects as “unnecessary waste of taxpayers’ money.”

Added to this foggy environment, technology determinism, which has been hidden behind most of these terms, has created an extra puzzle of what technological choices should be made by government. In turn, this has led to technological incompatibilities, costly overlapping, duplication of infrastructure and services, and purchase of services or infrastructure without any added value, which eventually wasted valuable resources both in terms of personnel and money.

Given that governments around the world have invested significant amounts on ICT modernization of the public sector (estimated at 6% of GDP), it has been an expensive lesson to learn. However, the “conclusions and recommendations of the Dutch temporary committee on government ICT projects” have made for a good starting point in the process of changing the way we spend public money for ICT, from fragmented “mega” projects to “ICT investment for value-added public services.” Such an investment implies savings (in terms of time and costs), convenience, transparency in transactions, fair audit to all parts, and new ideas and services—dimensions that are more associated with value for the user rather than cost. In addition, such an investment will increase levels of accountability and transparency of public expenditure utilizing performance and impact assessment as a more appropriate framework for measurement.

## **Value for the user means value for money**

The “conclusions and recommendations” of the Dutch committee is a clear call for the Dutch State to stop the “unnecessary waste of taxpayers’ money.” Although what was referred to in the text is true, we would like to wrap up the conclusions in a meaningful way, add new ideas, and create a resourceful framework for investment in ICT for value-added public services. Those services will provide accurate, verifiable, timed, organized, meaningful, and cost-effective information for the users, internal and external to the government. In addition, these services will be perceived as useful and valuable, not only in the matter of cost but in the wider context of wrapping, reusing, reshaping, reselling, and transmitting such information by any means of communication (G2G, G2C, G2B).

In order to achieve value-added services, government must devise an ICT investment strategy for value-added public service delivery. Such strategy will set clear objectives, focus on long-term achievements and



sustainability, avoid fragmentation and departmentalization of government, and protect public spending from questioning. Provided such an investment strategy is in place, economies of scale can be achieved through the minimization of costs associated with the duplication of infrastructure and services, overlapping of project results, purchase of services or infrastructure without any added value, and the release of organizational resources that have been either underutilized or blocked in unnecessary activities.

Within such a framework we can reassess the role of ICT constituents in delivering value-added services. Procurement of ICT projects for the public sector usually takes the form of “mega” in terms of size and “integrated” in terms of design. Both of those characteristics limit the success of ICT project delivery. On one hand, “mega-projects” require the availability of vast resources, which usually don’t exist, both from the organization and the contractor. On the other hand, “integrated” solutions amplify the sense of departmentalization and fragmentation of government, wasting valuable resources due to the duplication multiplication and overlapping. However, if we consider the ICT constituents according to their functionality in the delivery of services, then we can achieve both economies of scale and a higher degree of customization with greater uptake percentages and more sustainability. For example, infrastructure’s role is to serve as a medium through which information flows unobstructed. A layered architecture is needed for sustainable software, which has layers where primary and secondary data is kept and processed. Finally, end-user applications (interfaces) are the most crucial for the take-up or rejection of ICT public services.

With a clear strategic framework for ICT investment, as we move from infrastructure to end-user services, a big range of procurement possibilities are at the disposal of the government to get the value-added services required while at the same time remain competitive and abreast of technological choices. Costs, for example, can be significantly lower if infrastructure purchase is designed upon the criterion of reach, while demand concentration (bulk use) can help to raise performance standards, such as speed, capacity, etc. In building an architecture, an appropriate needs assessment can reduce cost of storage of primary data, avoiding fragmentation and data replication between government departments. On the other hand, performance can be raised if investment in data processing systems (data warehouse) can respond to data requests satisfying higher levels of perceived value by the user. Finally, end-user applications need to respond to high-value expectations of the users; either this is internal to government (G2G) or external to it (G2B, G2C). Here, flexibility in procurement processes such as framework contracts, or more advanced procedures such as challenge-based acquisitions, staged contracts, etc., can help to achieve the desired result.

An appropriate framework design both at the strategic and design level can also produce significant positive economic impact. Such impact is related to public sector delivery of promised services and raises the performance. For example, shared services can allow significant synergies to appear between different departments of the government with up-to-date information support.

The usage of multiple communication channels allows the customization of the way and time that business and citizens choose to communicate with the government. Thus, government can operate and be accessible 24/7 without unnecessary extra costs. At the same time, personalized services raise the sense of security and trust in digital public services as public service provisioning becomes more effective, transparent, and responsible.

## CLOSING STATEMENT

ICT investment for public services has returned a very low ROI, primarily because this investment has not transformed government into a more inclusive and efficient entity. ICT investments need to produce something of value for government users and their citizens. Thus, governments need to adjust their strategic approach to services based on value. This value must have impact that is measurable. ICT solutions and services must take advantage of the availability of choices for cost reduction and value maximization.

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