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Are public projects doomed to failure from the start?

Transformation Assurance

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Introduction

Amidst globally increasing project budgets and the necessity for transformation initiatives to cope with global macroeconomic megatrends – both impending and already visible – success rates continue to disappoint.

Especially when it comes to governmental and public initiatives, the number of spectacular failures, budgets spiralling out of control and apparent incompetence on the part of project management and sponsors seems endless. This impression is often exacerbated by sensationalist press coverage and exploitation for political agendas and conflicts.

The result of this are usually enraged taxpayers coupled with a general loss of faith in governments and public organisations. Some authors even go so far as to declare the public sector incapable of successfully delivering any project.[1]

In this paper we are going to focus on two questions:

- What are the main reasons for this disappointing situation?
- What can be done to remedy it?

To answer these questions we will first deduce the influencing factors and a definition of project success in the public sector, and then identify the differences and the specific challenges facing public projects. Our aim is to come up with distinct conclusions as to what is required to ensure the success of a public-sector project.

Influences on the public sector

Why does the public sector need to transform? To identify reasons and needs for public transformation, let us take a more detailed look at the influences of global macroeconomic megatrends.

Megatrends and changing demand structure call for strategic transformations

Macroeconomic megatrends, which can be observed today, and which will continue to prevail in the future (e.g. demographic shifts, rapid urbanisation, resource scarcity), continue to force governments and public organisations to address change. This pressure to rapidly adapt is exacerbated by changes in the needs and wants of recipients of governmental and public services. This necessity is affecting all public areas, from healthcare, to infrastructure and transport, to defence and e-government.

Due to the influence of these global economic drivers, public organisations have to question their existing shape and transform themselves, resulting in a comprehensive change in strategy, operating model, structure, people and processes where appropriate. These far-reaching changes are more important and urgent than ever for organisations of the public hand to ensure an adequate provision of services in changing environments and conformance to ever-mounting budgetary constraints. This demand and necessity for change is usually met with the instrument of information technology (IT) and business transformations, which usually have significant budgetary and resource needs.

Demographic and social change | Shift in global economic power | Rapid urbanisation | Climate change and resource scarcity | Technological breakthroughs

[1] Goldfinch, S. (2007). Pessimism, Computer Failure, and Information Systems Development in the Public Sector. Public Administration Review. Pages 917–929.

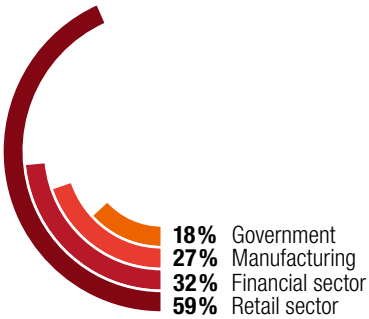
Propensity for failure in public projects

Transformation initiatives at public agencies and organisations take a significant share of global governmental budgets.

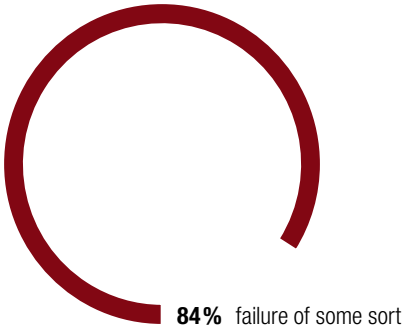
With taxpayers increasingly demanding reductions in perceived wasteful spending, these huge investments are coming under growing public scrutiny. Unfortunately, as the literature shows, many of these initiatives fail or at least experience significant disruptions and problems – often spectacularly and amidst public criticism or ridicule.

Figure 1: Success rates of public projects.[2]

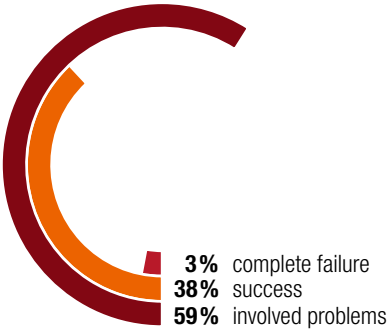
A US survey of IT projects conducted by the Standish Group found that **success rates** varied from sector to sector:



The Royal Academy of Engineering and the British Computer Society found that **84%** of public-sector projects resulted in **failure** of some sort.



A New Zealand government study judged **38%** of government projects a **success,** while **59% involved problems** and **3%** were a **complete failure.**



[2] Goldfinch, S. (2007). Pessimism, Computer Failure, and Information Systems Development in the Public Sector. Public Administration Review. Pages 917–929; Royal Academy of Engineering, and British Computing Society (2004); The Challenges of Complex IT Projects. London: Royal Academy of Engineering.

Despite the heightened importance and necessity of success, transformation initiatives and the accompanying projects continue to fail, often in spectacular fashion – especially if they involve information systems or information technology. The most infamous cases of government and public project failure include many household names (see below).

With so many sources detailing and revelling in project failure, the questions have to be how to determine project success and **what constitutes a successful project.**

As no single universal definition of project success exists, nor a method to measure it, we first have to deduce these things. One classic definition, the so-called iron triangle (also known as project management success), is adherence to the cost, time, and quality constraints of a project. The trouble is that there is a distinct difference between project management success and project success.

Project success can be defined as the delivery of expected outcomes. However, project management success alone is not sufficient to achieve this, and can be considered subordinate.

In public-sector projects, outcomes and resulting benefits can come in many forms: an increased range of services, smoother or more cost-effective delivery of services, or other not easily quantifiable or non-financial outcomes in line with the political objectives set by the government or public organisation. It can therefore be difficult to argue on the basis of this broader definition, especially when dealing with adverse political agendas, interagency strife or the media.

Against this backdrop we will now identify specific dimensions that illustrate the difference between project success in the public sector and the general definition; in the next chapter we will further elaborate on the definition of success.

TollCollect: German toll system (2005)

The project was delayed by around 16 months, and resulted in a decrease in technical functionality and a loss of income of approximately EUR 1.6 billion.[3]

National Health Service: NHS Care Records Service (2010)

GBP 4.6 billion was originally budgeted for the introduction of a new patient records system. But because the scope and costs were underestimated, the budget increased to GBP 24 billion, with some observers estimating that the spend could have grown to as much as GBP 40 billion. In addition, a lack of user training and issues relating to culture change hampered the rollout at the first pilot site.[4]

Department of Primary Industry: smart meters (2010)

The installation of smart electricity meters for all households and small businesses in Victoria, Australia, was initially expected to cost AUD 800 million. But owing to lack of governance and over-sight, this figure increased to AUD 2.25 billion.[5]

Swiss Federal Tax Administration: integrated tax system Insieme (2012)

Because of ballooning costs and various issues such as irregularities regarding procurement, the introduction of a new integrated tax system was stopped after more than CHF 102 million had been spent. Deficiencies in oversight, management and monitoring were identified as the main reasons for failure.[6]

[3] Mertens, P. (2012). Schwierigkeiten bei IT-Grossprojekten der Öffentlichen Verwaltung. Universität Erlangen-Nürnberg, pp. 19–25.
[4] https://www.theguardian.com/society/2013/sep/18/nhs-records-system-10bn
[5] http://www.computerworld.com.au/article/335280/vic_oppposition_calls_smart_meter_halt
[6] http://www.tagesanzeiger.ch/schweiz/InsiemeInformatikdesaster-kostet-1024-Millionen-/story/17807191

How do public projects differ?

The statistics and project failures presented in the previous chapter highlight various difficulties faced by public projects.

To determine the specific challenges of projects in public environments, we will first define such public endeavours in more detail. Then we will identify the specific characteristics of the public-sector to describe the differences versus private sector projects. After that we will formulate a comprehensive definition of project success.

What is a public project?

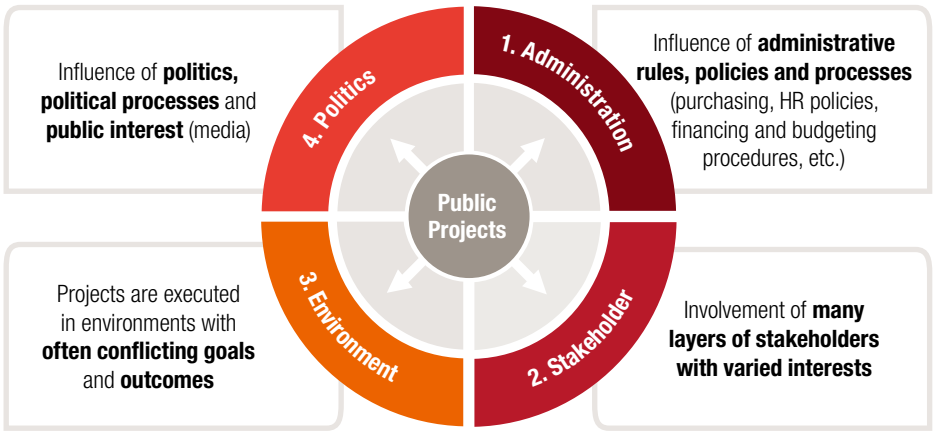
Various definitions of public projects can be found in the literature. In general, projects can be considered as typically "public" if they are owned by a public entity and financed with public funds.[7] Another definition refers to projects undertaken by public-sector organisations operating to serve the broader public.[8]

This leads to a very heterogeneous project landscape, ranging from infrastructure to healthcare, IT and defence.

What are the specific influencing factors in public projects?

In general, private- and public-sector projects face similar risks. Nevertheless, there are discernible differences between public- and private-sector environments. As shown in Figure 2, the influencing factors often identified in the public environment fall into four areas: administration, stakeholders, environment and politics.

Figure 2: Influencing factors in the public environment.[8]



1. Administrative rules, policies and processes

Public projects are intended to serve public interests and are generally financed with public funds. Public agencies are therefore obligated to follow various administrative rules and procedures affecting business processes to guarantee transparent and fair procedures and clear decision-making, and avoid conflicts of interest. For example, agencies purchasing goods and services above specific financial limits have to comply with a standardised public-tender process with defined deadlines and procurement documentation. Such public tenders are published in Switzerland on the electronic platform simap.ch.[9]

2. Many stakeholders with varied interests

Managing project stakeholders is an important and challenging task for project managers in both the private and public sectors. In each case, project managers have to deal with a wide array of stakeholders with various interests. Added to this, public-project environments often include a wide array of additional stakeholders, such as legislators, political opposition, agencies, interest groups and broader public groups, who can influence the outcome of the project. Depending on the stakeholders' individual situation, they may support a project, request changes or even block it, which makes the business of managing project stakeholders more complex.

3. Environment with often conflicting goals and outcomes

In general, the goals and outcomes of private-sector projects are defined in line with the purpose of the company. The goals of public projects, by contrast, are intended to serve the public interest. Because of the wide array of stakeholders in public environments, numerous different expectations regarding project goals and outcomes have to be aligned. This can lead to conflicting demands and complex processes to define goals, outcomes and benefits.

4. Influence of politics, political processes and public interests

In private organisations a body such as the management board can act as the final decision-maker. In the public sector, consensus has to be reached on the purpose, outcome and scope of a project. Depending on the public laws, regulations and processes involved, stakeholders such as elected politicians, individual citizens or interest groups have various ways of influencing the project – for example by electing their desired representatives, participating in expert groups, committees and commissions, or raising objections. In addition, public projects are often monitored closely by the media, which may influence behaviour and the opinions of stakeholders.

[7] Klakegg, O. J. (2009). Pursuing relevance and sustainability: Improvement strategies for major public projects. International Journal of Managing Projects in Business, Vol. 2 (4). Pages 499–518.

[8] Adapted from: Wirick, D. W. (2009). Public-Sector Project Management. John Wiley & Sons, 2009.

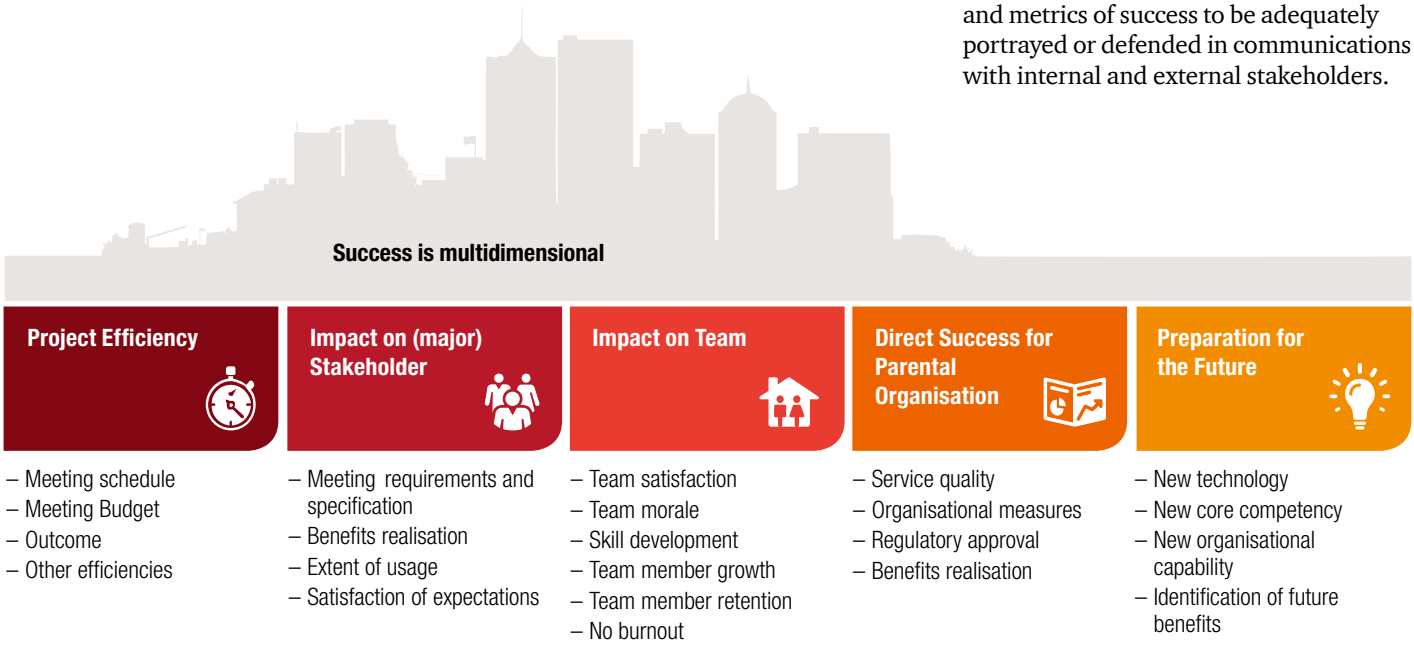
[9] https://www.simap.ch/shabforms/COMMON/application/applicationGrid.jsp

Comprehensive definition of project success

As we have seen, the complexities of a public project basically preclude determining its success or failure solely in terms of the iron triangle.

Instead we need an encompassing framework to assess the various dimensions of success – including, but not limited to, project management efficiency – taking account of the various stakeholder groups, the strategic objectives and future capabilities. This is a very important factor when determining the objectives of a project, as it enables the various aspects and metrics of success to be adequately portrayed or defended in communications with internal and external stakeholders.

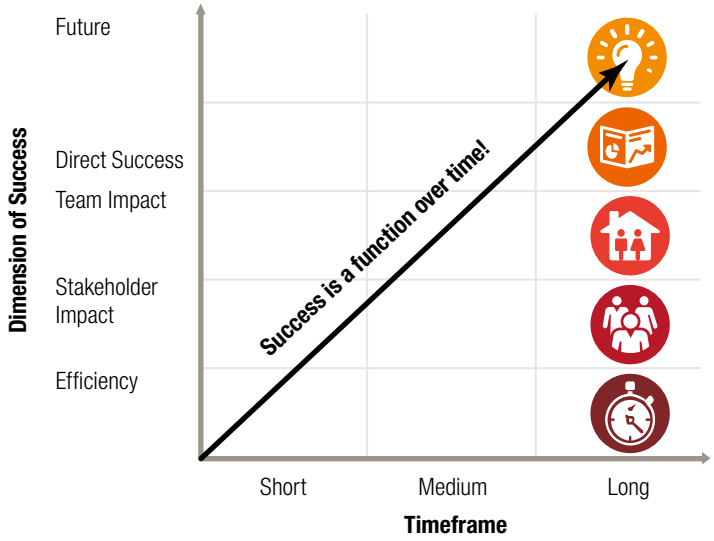
Figure 3: Dimensions of project success.[10]



Success and time

It is not sufficient to assess the multitude of dimensions that determine success or failure only during the project life cycle or immediately after go-live. The various determinants of project success need to be tracked over certain periods of time – which in the case of public projects may run into decades. The different timeframes for the various dimensions of success can be ordered as shown in Figure 4. They range from project efficiency, which can be ascertained during and immediately after the project, to the creation of future capabilities, usually manifest only after longer periods of time. But these timeframes need to be appraised beforehand, and with the proper metrics.

Figure 4: Influencing factors in the public environment.[11]



An example illustrating this multitude of dimensional success is the Sydney Opera House. It started as a huge failure in regard to project efficiency, with initial budgeted costs of AUD 7 million rising to more than AUD 100 million. However, it ultimately turned out to be a major success for Sydney and the whole of Australia.[12]

[10] Adapted from: Shenhar, A.J., Dvir, D. (2007). Reinventing Project Management: The Diamond Approach to Successful Growth and Innovation, Harvard Business School Press: Boston, 2007.

[11] Adapted from: Wirick, D. W. (2009). Public-Sector Project Management. John Wiley & Sons, 2009.

[12] http://www.couriermail.com.au/news/why-sydneys-opera-house-was-the-worlds-biggest-planning-disaster/news-story/9a596cab579a3b96bba516f425b3f1a6

What are the specific challenges?

With so many different reasons for difficulties and failure in projects in general, it is fairly difficult to determine the core reasons for failure that apply specifically to projects in the public environment.

However, we have observed distinct areas that prove challenging for public projects – mainly because of the multi-dimensional layers of success discussed earlier and the timeframes over which success in public projects becomes visible. On the basis of the literature, our own experience and best practice, we have identified the following groups of key challenges that potentially hinder or enable the success of public projects. We will go on to examine these challenges in more detail:

- **Methods and processes**
- **Stakeholder and leadership**
- **Complexity and uncertainty**

Figure 5: Adoption rates of PMM.[13]

Methods and processes

Project management methods

In all kinds of projects, but especially those with an IT context, the methods for project management are not appropriately applied or adhered to. Reviews of failed or severely troubled public projects confirm this, but reveal violations of best-practice project management principles, and lack of common sense, in an even higher percentage of cases.

These methodological and capability-related problems on the project level are exacerbated by a general lack of effective programme and portfolio management in public environments. Often such capabilities and methodologies are not sufficiently present, and there is a failure to recognise the necessity for them in the first place.

Strategic alignment and control

Usually no clear, detailed definition of the strategic objective or business case is available; in particular, there is no definition of clear and robust success criteria. In many cases there is no effective benefits management either.

There is a general lack of alignment between strategic or political objectives and actual project efforts. Surveys and reviews of public failures suggest that uncoordinated individual projects are not adequate when it comes to realising complex strategic political objectives.

This can be seen especially in cases where the political objectives showed absolutely no correlation with the results of the projects undertaken to achieve them.

A good example of this is the Department of Education for the state of Victoria, Australia. It spent around AUD 10 billion on projects between 1997 and 2007 without improving defined key strategic goals such as literacy and numeracy, which even declined in this timeframe.[14]

As for the influence of project managers on the performance of projects, there is frequently a (perceived) lack of influence in terms of cost management, as regulations and policies are often determined by the organisation in the public sector. The same goes for public procurement procedures, which are also highly rigid and regulated, and in many cases geared strictly to minimising costs rather than maximising value – which leads to less than optimal procurement decisions and results. The money saved in procurement is then easily wasted because of insufficient service quality, delays or outright failure. Effective KPI frameworks for measuring objectives and results, for example return on investment (ROI) and earned value analysis (EVA), are often either not available or not used in public environments.

These kinds of problems are exemplified by the US Federal Aviation Administration's attempt to establish an advanced automation system. The effort was shelved after USD 2.6 billion had been spent unsuccessfully. The intention was to update the complete IT infrastructure at all American air traffic control locations. But the project failed, primarily because of an unrealistic schedule, insufficient budgeting and cumbersome governmental procurement – together with a lack of sufficient oversight and control.[15]

[13] Mohan, K., Ahlemann, F. (2013). Committed Use of Project Management Methodologies: Understanding the Role of Costs, Benefits, and Psychological Needs, Thirty Fourth International Conference on Information Systems, Milan 2013.

[14] Young, R. et al. (2012). Is strategy being implemented through projects? Contrary evidence from a leader in New Public Management. International Journal of Project Management 30 (2012). Pages 887–900.

[15] http://www.nytimes.com/1994/04/14/us/faa-is-threatening-to-cancel-new-air-traffic-system.html, https://www.bloomberg.com/news/articles/1993-04-25/flying-in-place-the-faas-air-control-fiasco

"Only then can we truly determine if and how a public project can be considered a success or failure!"

Stakeholder and leadership

Sponsor and top-management support

A lack of top-management support is regularly given as a reason for failure in public projects.

Often, political leaders overestimate the capabilities of IT and project management and underestimate the challenges. Not only this, but their time in charge is usually shorter than the project life cycle, resulting in changes in major stakeholders and sponsors, often followed by major changes in the scope and objectives as well.

A recurring topic is the culture of blame in public organisations, instead of a readiness to learn from past mistakes and concentrate on problem-solving.

Tangible vs. intangible and inexplicit expectations

Stakeholders assume that their implicit requirements will be reflected in project specifications and delivery. These outcomes, often intangible, are usually not discussed or defined. The difference between explicit and implicit expectations in terms of project output and intangible outcome can be considerable. This perceived discrepancy leads to disappointed stakeholders and the labelling of the project as a failure.

Acceptance of failure in public projects

There is a lack of incentive for project success, which is typical for public organisations. Successful completion results in fewer personnel and a budget reduced by the expected efficiency savings, and the manager being expected to deal with further IT projects.

In the event of failure, however, personnel and the budget remain as before, and the manager will not have to manage further IT projects.

Lose-lose situation, in which the only sensible thing for the manager to do is to distance themself from the project!

Repeated experiences of failure in the past result in lowered faith or reduced expectations of successful completion in future endeavours, both at top-management level and within the workforce. This reduces people's willingness to work on projects or accept new software or processes, and can even lead them to expect failure as basically a certainty.

Complexity and uncertainty

A major challenge in public projects, for example projects in an information technology context, are political, organisational and technical complexities that can render a project unmanageable.[16]

- **Political complexity**
  Political decision-makers and senior civil servants often have misconceptions about the capabilities and boundaries of project management. Project deadlines are often set on the basis of political debate rather than a realistic planning effort. Political agendas frequently mean there is an unwillingness to change or end projects that no longer fit the business case.
- **Organisational complexity**
  Often many different independent organisations have to (i.e. have to be forced to) cooperate on public projects, and the organisational and procedural changes necessary for a project to succeed often meet with major resistance in the organisations affected.
- **Technological complexity**
  There is an inherent mismatch in flexibility between IT systems and political and public organisational processes. A heterogeneous landscape within and between public organisations means that interfaces and data formats have to meet additional requirements, sometimes preventing easy and fast solutions.

The extent of technical complexity is illustrated by Land Forces Command Information System, an ICT project to establish a new command and information tool for the Swiss armed forces. Because technological interdependencies with communication technologies were underestimated, the systems, involving investment of CHF 700 million, could not be deployed as fully as initially planned owing to the limited bandwidth of existing communication systems.[17]

[16] Leydesdorff, E., Wijsman, T. (2007). Why government ICT projects run into problems?. N. C. o. Audit, Ed., Netherlands, 2007.
[17] http://www.tagesanzeiger.ch/schweiz/standard/schweizer-armee-im-funkloch/story/20984556 (10.1.2017)

Resulting imbalance of objectives with available time, resources, and budget

The inherent complexities can very easily lead a project to a state where proper management and governance are no longer possible and the intended objectives can no longer be achieved within the given constraints.

The example of the Berlin-Brandenburg BER airport shows very dramatically what can happen if these three types of complexity are left unchecked. The divergent interests of politicians in Berlin and Brandenburg and their unwillingness to take responsibility, a lack of cooperation between the planning organisations and the agencies involved, and the decision to hire many different small (sub)contractors rather than have a general contractor oversee construction of the terminal – coupled with the technical complexities of the planned design – all added up to a major failure.[18]

Uncertainty

Uncertainty is a negative consequence of project complexity. It can be related to the duration of a task, the cost of a deliverable, or any dimension of any component of the project system.

A complex project involves interdependencies and interconnectivities between its components (tasks, resources, etc.). If there is uncertainty with respect of a single parameter, this uncertainty can be transmitted to neighbouring parameters and spread through the entire system.

An additional effect of uncertainty can be explained with the help of prospect theory.

In conditions of uncertainty, normal behaviour will be (overly) optimistic regarding the iron triangle of cost, quality and time. This includes a tendency to underestimate obstacles and expected problems. Precisely this behaviour can be observed among public-project sponsors and stakeholders.[19]

This results in disappointed stakeholders and the impression of failure even though the project has been delivered with near-optimum results.

[18] Drucksache 17/3000 14.06.2016 Bericht des 1. Untersuchungsausschusses des Abgeordnetenhauses von Berlin – 17. Wahlperiode – zur Aufklärung der Ursachen, Konsequenzen und Verantwortung für die Kosten- und Terminüberschreitungen des im Bau befindlichen Flughafens Berlin Brandenburg Willy Brandt (BER).

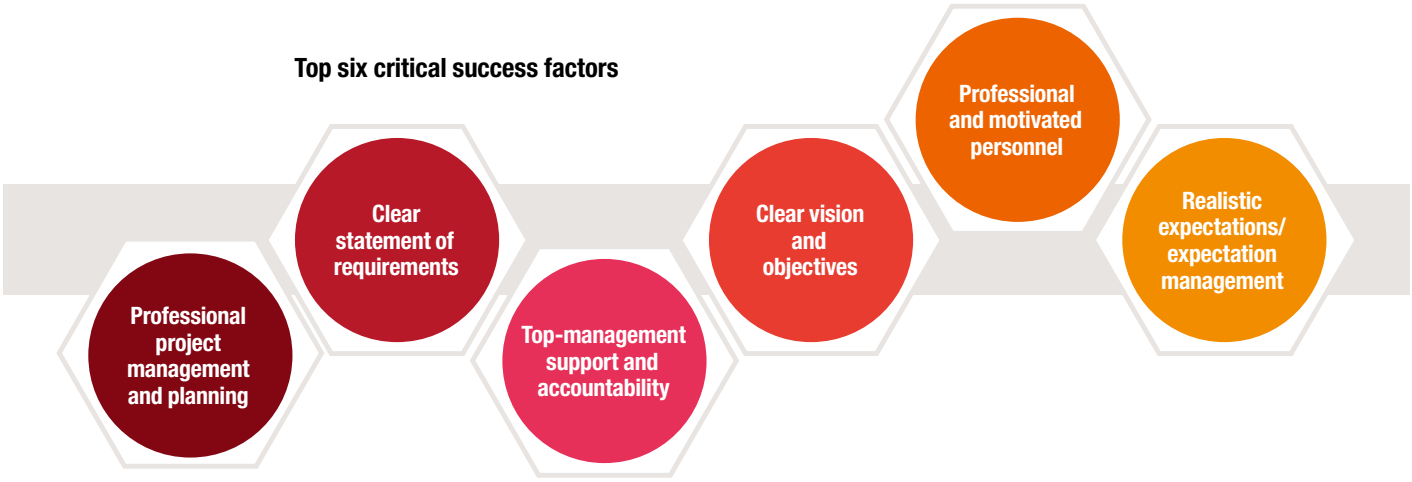
[19] Kahneman D., Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. Econometrica, Vol. 47, No. 2. (Mar., 1979), pp. 263–292.

Our view on the success of public projects

What are the most important steps and actions to avoid the challenges and risks specific to public projects described in the previous chapter?

The most critical success factors identified to ensure the successful delivery of projects in governmental and public organisations are as follows:

Figure 6: Critical success factors for public projects.[20]



If we take these generic critical success factors and break them down into our three categories, we can identify the following detailed actions for each category:

Methods and processes

- Application of a project management methodology built for the needs of the organisation's projects and scalable on the basis of project risk
- Awareness and profound understanding of government processes

Stakeholder and leadership

- Support from management regarding the project management process
- Proactive communication to a variety of different audiences (press, negative stakeholders)
- Management of conflicts among stakeholders and recognition of their interests (political awareness and sensitivity)
- Interactive dialogue among stakeholders during all project phases

Complexity and uncertainty

- Detailed process for identifying and defining user and supplementary requirements, scope and benefits
- Close collaboration among a vast array of stakeholders
- Interactive dialogue among stakeholders during all project phases
- Strict change management process

In conclusion we would like to reiterate that both from a theoretical point of view and in our practical experience, there is no inherent, automatic reason why a public project should be less successful than any other type. As we have seen, they may face very unique challenges, but with the proper management and diligence none of these is insurmountable.

If you would like more information on how to successfully manage public projects or programmes, or how to design and implement benefits or portfolio management tailored to your specific needs, please feel free to contact our experts.

[20] SIMPL Group, and New Zealand Institute of Economic Research (NZIER) (2000). Information Technology Projects: Performance of the New Zealand Public Sector, in: Report to the Department of the Prime Minister and Cabinet. Wellington, 2000. SIMPL/NZIER Survey 2000.

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