Management and Failure of Large Transformation Projects: Factors Affecting User Adoption

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Abstract. Transformational e-government (t-government) aims to realize public sector reform. Yet many of the large transformation projects have not resulted in the desired outcomes, as stakeholders did not adopt the results of the projects. These projects are characterized by a large number of stakeholders, many uncertainties and complexities. Although there is a vast amount of literature available on project failure and despite its importance of this topic, little is known about factors influencing the adoption of large transformation projects by stakeholders. In this paper factors influencing and delaying the adoption of a large transformation project are identified. Adoption is hindered by a combination of factors originating from the complexity and uncertainties in combination with too high ambition levels and the neglecting existing realities. During the transformation process the focus on the users was lost and shifted towards an internal orientation.

Keywords: Transformational government, e-government, failure, project failure, adoption, diffusion, XBRL.

1 Introduction

Transformational e-government (t-government) efforts aim to move beyond creating better service delivery for citizens and businesses and realize public sector reform (Beynon-Davies, 2007; Cordella & Iannacci, 2010; Dawes, 2008; Morgeson III & Mithas, 2009). Transforming government in a complex endeavor, as it requires radical change trajectories resulting in permanent organizational change (Irani, Elliman, & Jackson, 2007; Weerakkody & Dhillon, 2008). T-Government can be defined as the "ICT-enabled and organization-led transformation of government operations, internal and external processes and structures to enable the realization of services that meet public-sector objectives such as efficiency, transparency, accountability and citizen centricity" (Weerakkody, Janssen, & Dwivedi, 2011, p. 321 p. 321). Many transformation projects do not live up to expectations (McAfee & Andrew, 2003) and e-government projects are subject to failure (Loukis & Charalabidis, 2011). Transformation projects run often over budget, over time, do not deliver functionalities and other requirements.

The cost of failure are tremendous and have been estimated in terms of billions of Euros. Project might completely fail and have to do over again or are only delayed

and are more expensive and providing less functionalities. Yet what constitutes a failure is often open to discussion. Different stakeholders might have their own metrics for determining success or failure. Transformation projects can be deemed failures due to the inability to meet requirements, or might be viewed as successful when only exceeding time and/or budget. Project failure can be ranked on a scale ranging from not delivering required functionalities to complete failure in which almost all efforts and money is wasted. Often projects are evaluated based on the delivered functionalities, budget used and time used to finish the project. In this paper we take another perspective by adopting the user view. The basic idea is that user adoption determines the success or failure of a project.

Project failure has been extensively studied in ICT projects (Daniels & LaMarsh, 2007; Lu, Liu, & Ye, 2010; Pinto & Mantel, 1990; Yeo, 2002). There are several categories of project failure, including people, process, product and technology (McConnell, 1996). Nelson (2007) uses this categorization to list classical project management mistakes. Factors like complexity, uncertainty, scope creep, opposing stakeholders requirements, lack of top-management support and resistance are frequently mentioned in the literature as project failure factors. In this paper we will study factors influencing the adoption by users.

The user perspective is often taken when discussing the adoption of technology. Well established theories such as the technology acceptance model (TAM) (Davis, 1989) diffusion of innovation (Rogers, 2003) and unified theory of acceptance and use of technology (UTAUT) (Venkatesh, Morris, Davis, & Davis, 2003) provides factors influencing user adoption. UTAUT aims to explain user intentions to use a system and subsequent usage behavior. Performance expectancy, effort expectancy, social influence, and facilitating conditions are direct determinants of usage intention and behavior. Important facilitating adoption factor are investment, support and social relationships (Venkatesh, et al., 2003). More specific adoption theories argue for the need to take into account the context and specific conditions (Orlikowski, 2000). These models look at the adoption of technology and systems once they are in place. In contrast to this literature we will analyze factors that influence adoption during a project.

We investigated a transformation project running over 6 years and which did not gain high levels of user acceptance. Based on interviews we gained in-depth knowledge of the factors influencing the adoption by users. This paper is structured as follows. In the next section the research methodology is presented followed by the case study description in section 3. From the case study we derive factors affecting the adoption which are discussed in section 4. This is followed by a discussion and overview of the factors. Finally we will draw conclusions and provide recommendations for further research.

2   Research Approach

Transformation is expected to have an enduring and long-term impact and influence organizational and technical aspects. Transformation differs from ICT project failures and private sectors projects. Gauld (2007) found that in public administration much more complex project commissioning and development is necessary due to political

and organizational elements. As such in-depth insight is necessary to understand the factors. Due to the complex nature and the need to gain a deep understanding of the factors influencing user adoption, a qualitative approach based on case study research was adopted for this research (Yin, 2009).

The case study was selected as it concerned a large transformation project in the Dutch government. A large amount of information and reports was available over the past which helped to understand the project history. We conducted a search on the Internet and search two major Dutch ICT-magazines. This helped to create a retrospective picture of the transformation project. This picture provided us the content and the scope of the project. In addition a first list of important adoption factors were derived.

Our next analyses used project failure and adoption and diffusion factors as a basis. Both literature as well as the first list of factors were used to derived an interview protocol. The interview protocol should ensure that the relevant elements were taken into account. The interview protocol contain factors like stakeholders, processes, information sharing, technology, performance expectancy, effort expectancy, social influence, and facilitating conditions investment, support and social relationships.

In the next step fifteen semi-structured interviews were carried out over the course of a three months period (Janssen et al., 2010). Publicly available documents were systematically analyzed. Such a perspective allowed us to understand the forces and factors influencing user adoption as well as how the process of change took place. The fifteen interviewees included project managers, software developers, user associations and various types of users. Representatives from both small and medium-sized enterprise (SME) and large user organizations were interviewed. This allowed us to understand the diversity of users. All interviews lasted between one hour and an hour and half. Most interviews were conducted by two researchers comparing results afterwards; some interviews were conducted by one interviewer. Transcripts of the interviews were made and all interviews were given the resulting report.

3 Case Study Description

The introduction of the international Extensible Business Reporting Language (XBRL) standard in the Netherlands was set out to transform the process of legally required financial reporting by companies. Whereas in the past a large number of documents should be submitted on paper, the vision behind this transformation project was that reports required by government could be submitted as a single report by making use of the XBRL format. XBRL was originally developed as a XML-based standard for external financial reporting. Nowadays it is also used for internal financial and non-financial reporting which makes it possible to use this for a broader range of reporting functions including the reporting of statistical, tax, and inspection data.

In the old situation business had to report all kinds of report to various governmental organizations who acted relatively independently. They all posed their own reporting standards and requirements on the companies. Figure 1 gives an overview of the desired situation in which reports are based on a shared taxonomy and submitted over a common gateway. Instead of all government agencies defining their own requirements for

these financial reports, a taxonomy was created to harmonize definitions used by the Dutch government in the financial domain. Furthermore, a common process infrastructure is under development to be used for submitting all financial reports. Although the XBRL standard can be used for financial reporting across many sectors, the current project set-up includes only a few reports; tax reporting to the Inland Revenue Service (IRS), the submission of financial year reports to the Chambers of Commerce and the submission of data to the national bureau for statistics (CBS) (Bharosa et al., 2013). The process infrastructure developed to facilitate data exchange consists of a unified gateway for transferring bulk data to various government. For the delivery of financial information the companies report financial and other information to the government and are the *end-users*. Companies use often software or Software-as-a-Service (SaaS) solutions to submit their information to the government. Furthermore, most businesses us financial intermediaries for preparing and auditing of their reports. Software provides and financial intermediaries also use the gateway and are named *users*.

As generating financial reports will be done using an open standard, organizations are able to innovate and new applications may emerge as well as new organizations developing new services. This likely results in a transformation of the situation in the traditional value chains will be changed. Especially it is expected that the role of financial intermediaries will change. Another example of this is that banks might also receive the information in the future using XBRL (See figure), although this probably will be done using a different infrastructure and accompanying gateway.
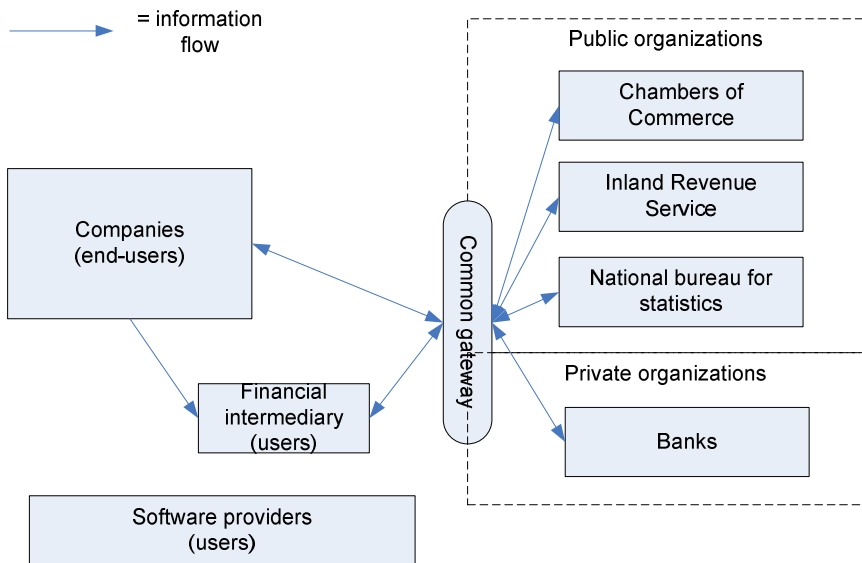

Fig. 1. The scope and the main actors involved in the architecture

The project was aimed at contributing to the central government agenda to achieve a decrease of the administrative burden of businesses. In 2007, the central government estimated that around 350 million euro's worth of administrative tasks of businesses could be cut and around a million tax filings using XBRL could be achieved yearly by 2008. Also it was expected that in 2007 the first version of the process infrastructure developed for exchanging data based on XBRL would be ready. However, it was not expected that an authentication mechanisms needed to be developed. In 2009, however, it appeared that none of the above mentioned goals were met or will be met within a short time frame. Users and end-users did not adopt the system yet. Generally, businesses and government agencies claim that they were not yet ready for implementing the XBRL standard and for submitting their reports. They often stated that they were waiting for the central government to make decisions before they will invest. A set of factors affected the adoption by users and end-users which will be discussed next.

4   Factors Affecting Adoption

Based on our understanding of the literature and the analysis of the case study we identified the following factors which contributed to the slow adoption of the transformation project. We clustered the factors in a number of categories to make them more manageable and as they depict towards a similar causes of slow adoption. The factors are related to and dependent on each other and not mutually exclusive.

4.1   Amount and Diversity of Stakeholders

In the project a large number of stakeholders were involved, who had their own interests and concerns. First of all, the public organizations that receive the reporting have a variety of interest and requirements. Smaller public organizations can gain less benefits, whereas large organization can gain many efficiency gains. Requirements differ from yearly to more frequent reporting. On the receiving side also banks are involved as they potentially can receive information from companies in the XBRL format. Although Banks are interested in different information, they share the concern of having high information quality.

Financial intermediaries, mainly comprising accountants, are a crucial stakeholder group. This stakeholder group is quite diverse, as there are a few large international accountancies and many smaller companies operating locally. In the old information they often collected and aggregated information from a business, whereas in the new situation report can be directly created from the information systems. They are affected as they can be bypassed easily by automating the process and there traditional revenue model is challenged. As they are afraid that the landscape might diminish their revenue model, they have no sense-of-urgency to collaborate. On the other hand using XBRL can make the work of accountants more efficient as they need to carry out fewer tasks and create fewer reports. There are some smaller and innovative intermediaries that see this as a source of competitive advantage and are interested in adoption.

The software companies developing (financial) software for businesses and intermediaries supporting XBRL data form another stakeholder group. They have to invest

in the technology and integrate it in their software to ensure easy adoption by businesses. As all software vendors can do this, they see it hardly as a means for gaining competitive advantage and therefore want to minimize their adoption costs.

Business that are obliged to report their financial situation to the government are the actual end-users who need to provide their information to the government to comply with the law. These business constitute organizations covering all kind of industries and sectors and having different sizes. Small and Medium Enterprises (SMEs) are often not aware of XBRL and are not interested as they are primarily users of software, but are not interested how it works. They have no time and no interest to understand the benefits of the transformation. They completely rely on their software providers and financial intermediaries to adopt. Large organization can have often different reporting obligations and are aware of the need to adopt. They have the capabilities and expertise and often view a lot of advantages. In order to make advantage of this development they have to adopt their systems and processes.

Striking is that most of the end-users are often not aware of the project, its technologies and its potential impact. They are dependent on financial intermediaries and software providers to innovate. The latter have hardly any interest to change the status quo, as they are afraid that they have to make the investments, but that they will not directly benefit from it. Although there are exceptions.

4.2   Organic Approach

In the project a large number of stakeholders coming from both the public as private sector were involved. The project was initiated at the ministerial level and a large-scale approach was taken involving as many stakeholders as possible. One reason for this large-scale involvement was to ensure commitment of all organizations and that all possible requirements would be identified and voices were heard. By involving all stakeholders, the idea is that less resistance would be created and the transformation would become more easily. What happened was the contrary. By involving a large number of various players the progress was delayed, there were struggles concerning the requirements and instead of becoming supporters of the project the resistance grew. Whereas there were supporters at the start users got disillusioned by the limited progress. The direct visible results took a long time to realize. Over time the disadvantages and risks were more and more discussed and emphasized rather than the possible benefits.

The involvement of a large and diverse set of stakeholders requires that an incremental and piecemeal approach is taken. The project is developed organically and influenced by the many stakeholders pushing and promoting certain issues. The initial project focus was not on developing and making a system work but on identifying all possible conflicting views. Consequently, the project grew of its own accord and all kinds of opinions were presented and communicated. Stakeholders were pursuing other directions and ventilate their opinions in online discussion groups and newspapers undermining the project credibility (one reason for doing this is that their core value are affected, see below).

Due to the complexity and the many stakeholders the time horizon of the project was extended and the initial IT was caught up by new technologies. The project chased the new technology, whereas the old technology was not under control yet and

became legacy. Their hope was that the new technology would solve the problem. Instead of solving the problem it was unproven and even created more delay. The focus remained on innovation instead of on implementation and ensuring for a stable and sustainable platform.

Overall, an organic and piecemeal growth resulted in muddling through, delaying and frustrating the project instead of realizing the intention of ensuring commitment and overcoming resistance.

4.3   Technology and Law Are Intertwined

The project under study shows a dependency between law and technology development. During the project the questions were raised if electronic reporting is allowed by laws and about the degree to which these financial reports created have sufficient quality to comply with the law. The conformity with law was contested several time resulting in delay. A tension is whether technology innovation is necessary before law can be changed or if law needs to be changed before a technology innovation can materialize.

In the project a main question was when legislation about reporting using XBRL-based technology would be introduced. Several interviewees indicated that they would be reluctant to adopt new technology without a clear obligation determined by law. In the case study it was chosen to develop a gateway and other facilities first. Only after the infrastructure was in place it was decided to make a change in law which state that in 2013 the use of XBRL will be obliged. This approach resulted in a project delay as the development and change in law was done in sequential instead in parallel. Having no change of law resulted in uncertainty in whether or not XBRL would be adopted. This in turn resulted in in a wait and see attitude of many stakeholders. Only after a law was introduced stating that XBRL would be mandatory by government the stakeholder gained a sense of urgency to be ready for the adoption.

The intertwinement of law and technology, makes it unclear what should be done first, a change in law or the development of a working infrastructure. Not having both in place resulted in the not making of any critical decisions by many stakeholders and resulted in ambiguity and expectations that could not be met. Ideally both should be done in parallel, however, there was a deadlock in the project. The project technology development was waiting for a change in law, whereas, a change of law was waiting for the technology innovation to be ready. Resulting in a kind of catch-22 situation.

4.4   Scope Creep and Ambition Level

The many changes during the project resulted in uncertainties by the stakeholders about the direction of the project, what it will deliver and how it will help them. The scope and size of the project changed several times. Changes in the scope influenced the business case for adopters. This influence was even strengthened by the unrealistic ambition level. The project was announced as providing a solution for companies that would enable companies to provide all required information by the government by pressing a single button. The other activities needed such as collecting and processing information by companies were not mentioned. This caused resistance as expectations were not met. Furthermore, instead of making the system work within one area

(financial reporting) the project focussed on broadening the scope and involving more companies coming from other sectors. The project tried to involve the banking sectors as these were also interested in the financial reporting. Instead of lowering the resistance and gaining of acceptance, this resulted in new requirements on the system and companies providing the information. Ultimately this scope creep resulted in more delay and resistance.

New opportunities arise through standardization of financial reporting and the implementation of a common gateway. When more and more businesses and government organizations start using XBRL for their information exchange processes business models and processes are likely to change. This is likely to result in new opportunities. For example, in the future it will also be possible to report non-financial data using XBRL, such as data on insurances or inventory systems, and to allow for process integration crossing boundaries of individual companies. This will results in benefits in other areas than initially expected. The awareness of these new opportunities resulted a scope creep.

Possible users were lured in with a very promising business case and they make often the initial arrangement to adopt. After some time it was clear that new elements were added and there was no working system that they could adopt. In order to adopt the system they would need to change their processes and systems again requiring the making of adoption investments another time. Due to the uncertainty of continuity and a lack of a working system, most users would opt for not adopting and wait for a full swing version to arrive. As a result the enthusiasm of the initial early adopters was lost.

Some development problems were tacked by adding new elements to solve the initial problems. Although this might solve the actual problem, it also results in additional complexities that need to be managed and introduces new risks. The way these risks were handled was the same way as the risks were created, by adding new elements, which again added to the complexities. This continues till the complexity reaches a level that it cannot be managed anymore.

Overall, the scope creep resulted in an increased complexity, further delay, and a blurred picture concerning the ambition level. This influenced the adoption of stakeholders, as the initial enthusiasms of most of the early-adopters was lost.

4.5   Continuous Changes and Uncertainty

In the project there were continuous changes resulting in uncertainties about outcomes and a focus on dealing with incidents. Realizing process transformation is time consuming and requires a clear vision. One interviewee expressed the project volatilely as "*I was lost in the landscape, one day it seemed to be perfectly all right, the next day the landscape look different*". The many uncertainties and incident management are expressed by the many news items that were published in magazines during the project. These news items found in the magazines was a way for stakeholders to express their opinions. This often included a lot of criticism on the project. The news items influenced not only the direction of the project, but had also a negative effect on the adoption by users.

During the project, new applications of the technology were found which could contribute to the further reducing of administrative burden. Initially these kinds of

features were added and included. After a while there was awareness that this would not progress the project. A clear scope was defined to ensure that part of the system could be developed, however, this scope would result in the need for users to have multiple processes as the system would not have all needed functionality to deal with all processes. Finalizing one component does not contribute to creating value as all components are necessary to make it work. The potential efficiency gains, however, are tightly intertwined with the implementation of the complete process infrastructure. *"XBRL as such does not realize a decrease of the administrative burden, as it is about the way in which it is applied"*. In conclusion, there is a continuous tension between expanding the project or limiting the functionalities. The first would result in a delay, whereas the second would result in less benefits for the users.

An factor contributing to the delay was the combination of innovation and system development. The innovation about how the new infrastructure would look like was never completed. Instead when new developments and technologies entered the project, they tried to include them in the system development. The mixing up of system innovation and system development resulted in unclear goals, uncertainty about what would be delivered and negatively influenced adoption decisions. One interview concluded that "*the changes contribute to less adoption … due to the many changes the project will be in the news again resulting in yet another uncertainty to adopt*".

During the project there was the uncertainty about the control and maintenance once the project would be finished. The project concerned the development of a new system, but no budget was reserved for maintaining the system. Stakeholders were reluctant to adopt as there was no certainty about its continuity. Users would have to change their processes and systems at the risk that once the project ended they could not use the system anymore. Only at a later stage long term sustainability was created by involving the control and maintenance organizations of the government, who would ensure control and maintenance to keep the system work.

Finally, due to the long-time of the project key personnel moved away and with them the knowledge they possessed. This blocked organizational learning as new staff needs first to understand what is going on. Furthermore organization memory disappeared resulting in the making of the same failure several times.

4.6   Technology Is Leading Instead of the Business Case

The project was launched with the promise that all information could be delivered by pressing one button without bringing to the attention the need to have suitable software and other facilities. The presentation of this simple business case resulted in exaggerated and unrealistic expectation.

Although the project impacts the way information is reported and needed considerable transformation from both business and companies, the project was primarily viewed as a technology project. The transformation process was only given limited attention. Instead the collaboration with software developers and vendors was given a lot of attention which reinforced the focus on technology aspects. By focussing on these types of stakeholders most attention was given to the technology, instead of on realizing the business case and creating value for the users.

Another reason for focussing on the technology was the immaturity of the technology at the start of the project. It was not proven that the technology could realize the

intended solution. The focus was on making the technology work instead of on the reduction of the administrative burden for companies.

Due to the scope creep there was a shift in the reduction of the administrative burden. Initially the anticipated reduction of the administrative burden due to the technology innovation was higher, however, due to the simplification of the requirements on reporting the benefits that could be gained were lower. This impacted the business case, however, no new business case was made. Users more and more expected that efficiency gains could not be accomplished on their side. Nevertheless they were willing to collaborate if this would result in efficiency gains on the government side. Large-scale standardized tax filing can be used to accomplish large efficiency gains for the Dutch tax organization. However, also the tax organization claimed that their investments are higher than their gains. They argued that they switched to digital tax filing for businesses already in 2005, based on a different data standard. Only switching to another standard (XBRL) will not result a large efficiency gain. As such the whole business case that was made for both companies and the government was challenged and no new business case was made. The project concentrated on the technology instead of making the system work. In short, there was a focus on the technology instead on users and transformation.

4.7   Violating Core Values

The impact of the transformation goes beyond a single organization. Some organizations might see that there existing business models are violated and there profit margin might vaporize. The changes affect the fundamental core values of organization. In the case study some accountants feared running out of business when financial reporting can be done in a standardized and digitized manner. They make their money by entering data and checking if the data is correct, which will be an automated task by introducing XBRL. The companies felt that their revenue model will change and fundamental changes in their value-adding roles and processes are necessary. Like in other industries, for example tourism, the role of intermediaries will change due to the ability to directly connect using lower transaction costs. Traditional roles vanish due to increased direct contact and new roles become into place. As there is uncertainty about the new roles and services and no clear vision how the new business model of financial intermediaries would look like, they often preferred the status quo and would avoid adoption. One interviewee commented "*the project was not able to communicate the vision .. it remained vague'*. As financial intermediaries play a pivotal role in the adoption companies often did not adopt.

This problem is further complicated as this is often not part of the rationality in which communication is done. Instead of clarifying the problem and starting the discussion about the changes and new possible roles, the changing business model of financial intermediaries was not addressed. This became visible in resistance and other motivations for not adopting. It was only found afterwards that violating of core values was a root cause of the resistance.

A factor contributing to his is how the financial intermediaries are represented. The interactions with user groups and intermediaries was limited, "*users were not sufficiently involved in the project management*". This also resulted in the focus on the technology instead on the business case. In government initiated projects a high level

of involvement and participation of stakeholders is a common approach. The case show high level of participation of organizations defending their own stakes and hardly any involvement of the users who should gain the benefits of the reduction of the administrative burden. The political influence is substantial. The government defines the problem of the users, whereas essential aspects such as violating the core values are neglected. The user problem is defined without involving users and knowing the real problems. This is one of the reasons why some stakeholders used magazines and other outlet to express their concerns and interests.

4.8   Project Governance

Governance is necessary to steer the project in the right directions. The principal is in charge of major decisions, should have a clear vision which serves as a guideline for directing progress. Project commissioning is the process of assuring that all systems and components will be developed, tested, operated, and maintained according to the desired requirements of the owner or final client. Various Ministries were involved in the project and commissioned the project by providing funding.

In the project the principals lacked expertise and had no shared vision. the system development was outsourced to external parties. Multiple sourcing parties were involved as the management and the software developments was separated and the project team was made up of individuals from various external organizations. Some public servants were added to the project team to ensure the specification of requirements and gaining the necessary input. Governance was based on high-level agreements (meeting deadline and staying in budget) and there were limited possibilities to know what is really going on and what the crucial decisions were that should be taken. In several cases the board was involved in crucial decisions making, but sometimes in a stage that was too late, i.e. stakeholders were already complaining or stepped out. If the board was involved in the decision-making there was no feedback mechanisms to understand and evaluate the impact of their decisions. Furthermore users and user associations were hardly involved which resulted that the governance was often not aware of early-warning indicators and other small signals and were only confronted with this once it hits the news. Hence they were not able to take any actions on this.

5   Discussion

The analyses of the case study shows a large number of factors which are often interrelated and affect the adoption decision. Some factors resulted in a project delay which ultimately influenced the decision whether to adopt by users. From the interviews it appeared that there is no dominating factor, but that the multitude of factors contributed to the slow adoption. One interviewee summarized this "*it is the interplay between events that resulted in our decision to postpone adoption*". The interviewee was referring to a combination of the factors that are summarized for each of the categories in table 1.

Table 1. Overview of categories and factors influencing adoption (continued on next page)

Categories	Factors affecting adoption
1. Amount and diversity of stakeholders	• Different and opposing interests of stakeholders • Homogenous approach to a diverse group • Lack of interest in XBRL by users • End-users are not aware of the impact • No sense of urgency
2. Organic approach	• Involvement of large number of players • Shifting requirements • Delay resulted in disillusionment of stakeholders • Emphasize on disadvantages and risks instead of benefits • Stakeholders expressing their concerns publicly • Focus on satisfying all stakeholder instead of ensuring for a stable and sustainable platform
3. Technology and law are intertwined	• Law blocks system development and adoption • Lack of a system creates no urgency to change the law
4. Scope creep and ambition level	• Scope and size of the project changed several times • Extending to other domains without ensuring that it works within the initial domain • New opportunities arise during the project • Users had to adopt their processes and systems multiple times • Problems were solved by expanding and extending the project
5. Continuous changes and uncertainty	• Negative publicity • Broadening and narrowing functionalities • Intertwinement of system development and innovation • Continuity is not covered • Move away of key staff (knowledge retention)
6. Technology is leading instead of the business case	• Exaggerated expectations • No attention for transformation • Focus on software development and software vendors • Immature technology • Reduction of functionality resulting in less benefits
7. Violating core values	• No insight in changes of the business models of users • No transparency of changes required for adoption • Lack of vision • Insufficient contact with users
8. Project governance	• Inability to fulfill the project commissioner role by the government • Lack of knowledge of technology and practice to proactively steer the project • Lack of leadership • No insight in users' needs and requirements • Management by focussing on deadlines and budget • No clear governance structure

The lack of adoption or delay in adoption is caused by a mix of technical, organizational and political complexity in combination with too high ambition levels and neglecting existing realities. During the project the transformation purposes were lost, the focus was shifted from transformation towards a focus on technology in which users were hardly given any attention. Some of the user who were prepared to be early adopters were disappointed by the limited progress and the many changes during the project. The many changes made it difficult for them to prepare their organization. Furthermore due to changes the initial investment in adopting their systems to submit XBRL-based reporting did not pay off and they had to make another investment. Having a working system and clear vision on how further releases would look like and how continuity can be guaranteed are key factors that should be met before users will adopt.

The initiation of the project was based on a view on the desired situation which proved to be more complicated. During the project decisions could not be made based on a sound business case. Despite the many changes the business case was not updated and could not be used as a basis for the guiding decisions. The many complexities and uncertainties resulted in a focus on managing incidents in which the focus on the user is lost. Scope creep, negative news, changes, unclear vision and other factors had a devastating effect on the entire project. Users who initially had high expectations became disappointed. For user adoption a reliable and working system should be available as a number of organizational changes are necessary and stakeholders have to agree on the necessity of this change. Furthermore continuity should be guaranteed. If users expect a short project lifetime, they will not be prepared to make any decisions favouring the adoption. The initiating stakeholders did not realize that system adoption would require a substantial transformation process. Much of the attention was focussed on making the project work, instead of on the user adoption.

6   Conclusions and Further Research

A main objective of transformational (t-government) is to realize public sector reform. Large transformation projects will likely fail due to the multiple complexities, uncertainties and amounts of stakeholders that need to be dealt with at the same time. To understand the impact on user adoption we analyzed a large transformation project. We identified 8 categories containing 38 factors affecting the adoption by users. The combination of factors resulted in neglecting the user. This had a devastating effect on the entire project, resulting in delays and disappointed users. The user should be carefully managed in such projects as adoption is necessary for making the transformation work.

When comparing the factors influencing adoption with project management failure factors (e.g. Daniels & LaMarsh, 2007; Lu, et al., 2010; Pinto & Mantel, 1990; Yeo, 2002) it shows similarities and differences. Factors like lack of leadership and vision, insufficient contact and so on are well-known in the project management literature contributing to project failure, whereas delay, intertwinement of law and technology, continuity after the project and violating core value is hardly found in this literature. These might be typical for user adoption in large transformation projects. We recommend to compare project management failure factors and adoption factors in further research, as combining both streams can contribute to more insight.

After our research ended the project continued and many of these factors are addressed in the next stage of this project. Based on the analysis a plan has been made to progress the project and ensure adoption by the users. We recommend to analyze the actions taken and the effect of user adoption in further research, as effective actions can serve as a guidance for other projects. This might result in a list of success factors that can improve user adoption, which can be tested in further research.

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